

## **INNOVATION RESEARCH AND MANAGERIAL IMPLICATIONS: THE NEED TO ‘LEARN’, ‘UNLEARN’ AND ‘RE-LEARN’ FOR ORGANIZATIONS**

**Ms. Stuti Saxena**

*Data Analyst, Siraj Quryat Trading LLC., Muscat, Oman*  
[stuti.razia@gmail.com](mailto:stuti.razia@gmail.com)

### **Abstract**

Whereas the managerial/practical implications gleaned from the quantitative empirical understanding of the atypical causalities in the innovation research plethora serve to provide the ‘do’s’ and the ‘don’t’s’ for the organizations, it is needed that the extant literature of such ‘advisory’ implications be scanned through and significant lessons be learnt and/or experimented by the HRD/managers/organizations. The present study delves in one such endeavor vis-à-vis research in innovation development and implementation. Vis-à-vis the significance of innovation studies in the research context, the paper seeks to underscore the need to ‘learn’, ‘unlearn’, and ‘re-learn’ some lessons for the organizations. To the best of the author’s understanding, this is the first such bottom-up approach where the literature on managerial implications is being scanned, and, analyzed. In a bid to fortify the HRD of the organizations, such directly-derived understanding of the innovation research in organizations shall serve as the pointers for the managers as well as future research as well.

**Keywords:** Innovation; Managerial implications; Practical implications; HRD

### **Introduction**

Veering around two key words- ‘creativity’ and ‘innovation’- in the extant literature and aiming to contextualize them in diverse environs; this has been the thrust of the creativity-innovation research till now. Whereas quantitative empirical research is amplified in the creativity domain, that in the innovation domain is still being assembled. Innovation is considered to be the successor of creativity (Baer, 2012; West, 2002) and may be re-defined as the acted-upon/enacted creativity. In other words, it is the action or the implementation component of creativity. The paper shall serve to scan the literature vis-à-vis the innovation research with its locus on the managerial/practical implications section of these papers. It is worthwhile to note that such a bottom-up approach of appreciating the prescriptive lessons for the HRD is the first such attempt in the research context. The section on managerial/practical implications figures towards the close of the quantitative empirical investigation in research. Albeit a very significant component of a research paper, this section probably captures the minimal words and paragraphs. This is unexpected since these implications are important lessons which the organizations may have to ‘learn’ and ‘unlearn’ for efficiency and effectiveness. Instead of sermonizing on some of the abstract injunctions, this section sheds direct light on the ‘should’s’ which an organization may like to delve further upon. The quantitative empirical studies scanned in the paper rest their edifice on an

individual, team/group, and, organizational level. The following section shall deal with a review of the significant innovation models. Thereafter, the significant managerial/practical implications gleaned from the papers shall be summarized and analyzed. Finally, a critical analysis of the paper along with future research directions shall serve as its logical denouement.

### **Re-bridging Creativity→ Innovation: In search of a ‘hyphen’**

Unanimity exists among researchers regarding the defining components of creativity and innovation. Creativity implies novelty and usefulness (Amabile, 1983; Shalley, 1991) and innovation is equated with the execution of creativity in the form of products or services (Baer, 2012: 1102; West, 2002). Further, divergent thinking is regarded as the precursor to creativity, and, convergent thinking prefaces innovation (Im et al., 2013). Thirdly, whereas creativity is investigated at the individual level; innovation is a team or an organization level process/outcome (Amabile et al, 1996; West, 2002). From such distinguishing marks, it seems that creativity and innovation are diverse. However, the 4 P's approach to define creativity (the Person(s) who creates, the cognitive Processes involved in the creation of ideas, the Press or environmental influences, and lastly the Product that results from creative activity) seeks to subsume the innovation component in creativity (Rhodes (1987), as cited in Batey, 2012). Waples and Friedrich (2011: 368) argue that creativity and innovation constructs should be differentiated for the HRD professionals. This paper argues otherwise. Both the constructs have their own defining features but seclusion is certainly not warranted. If such be the case, then why does research speak of aggregation or continuum in many constructs? True, the search of that specific stage/point where creativity gets translated or transformed to innovation is blurred. However, there is an imminent need to re-bridge the two. For instance, Somech & Drach-Zahavy (2011) investigate the ‘transition’ of team creativity to innovation implementation underscoring the role of team composition and innovation climate in effecting this transition. As implied earlier, innovation is nothing but the acted-upon, implemented, formalized and ‘visible’ outcome of the ‘invisible’ creativity construct.

Linkage between creativity and innovation in terms of causal variables has been a subject of increasing interest among scholars theoretically (Cokpekin & Knudsen, 2012; Mumford & Gustafson, 1988) and empirically (See, Baer, 2012; Im et al., 2013; Sohn & Jung, 2010; Somech & Drach-Zahavy, 2011). There are five main models on creativity→innovation which are particularly relevant to the present study – Amabile's (1988) componential model; Woodman, Sawyer and Griffin's (1993) interactionist model, Sternberg et al's (1997) investment model, Csikszentmihalyi's (1988) "systems" model, and, Ford's sensemaking model (1996). This is nowhere indicative of the non-existence of models apart from these. For instance, stand-alone models based on a particular construct (e.g., leadership→innovation; teamwork→ innovation model) have been proposed elsewhere. However, a comprehensive take of the creativity→ innovation link within the organizational context have best been summated in these models.

The componential model (with its three components as domain-relevant skills, creativity-related processes, and, intrinsic task motivation) serves to establish a linkage between creativity and innovation in the sense that employee motivation, provision of resources, risk-orientation, proactive approach to development, expressing pride and enthusiasm in employee's efforts, encouragement to employee innovative behavior and management of work environment by the firm induce innovation. Specifically, the model underscores three broad organizational factors which foster organizational innovation; viz., organizational motivation to innovate; resources (e.g., sufficient time for producing novel work in the domain, and the availability of training), and, management practices (e.g., allowance of freedom or autonomy in the conduct of work, provision of challenging, interesting work, specification of clear

overall strategic goals, and formation of work teams by drawing together individuals with diverse skills and perspectives) (Amabile et al., 1996).

The interactionist model of Woodman, Sawyer and Griffin (1993) looks at creativity as a phenomenon which is affected by environmental/situational and personal/behavioral factors. The model particularly studies intra-organizational influences which catalyze or inhibit organizational creativity. Specifically, the model delineates organizational creativity as an interactive system establishing linkages between creative persons, processes, situations and products. At the input stage, the interactive constituents are individual characteristics (cognitive abilities/styles, personality, intrinsic motivation, knowledge); group characteristics (norms, cohesiveness, size, diversity, roles, task, problem-solving approaches); and, organizational characteristics (culture, resources, rewards, strategy, structure, technology). The input undergoes transformation (creative behavioral process) contingent upon situational variables (enhancers and constraints) to give creative product. Finally, creative output (novel ideas, products, services, procedures, or processes) defines the organizational creativity. "The gestalt of creative output (new products, services, ideas, procedures, and processes) for the entire system stems from the complex mosaic of individual, group, and organizational characteristics and behaviors occurring within the salient situational influences (both creativity constraining and enhancing) existing at each level of social organization" (Woodman, Sawyer, & Griffin, 1993: 296).

According to the investment model of Sternberg (in Sternberg et al, 1997), a company should invest in six components to be creative: knowledge (e.g., company should adopt a long-term perspective and give adequate time for employee to develop himself and acquire expertise in the domain), intellectual abilities (involving the right kind of people in the idea-generation to idea-implementation stages possessing synthetic, analytical and practical skills), thinking styles (company should promote inventing and implementing styles in employees), motivation (making project fun to work at), personality (organization should encourage employee diversity by having 'outcasts' on board), and environment (creating opportunities by managing uncertainty).

Csikszentmihalyi (1988) took a different "systems" approach and highlighted the interaction of the individual, domain, and field. An individual draws on information in a domain and transforms or extends it through cognitive processes, personality traits, and motivation. The field consists of people (judges), who in turn control or influence a domain (e.g., scientific organization). They evaluate and select the new ideas. The domain is a culturally defined symbol system which preserves and transmits creative products to other individuals and future generations. In other words, creativity is a resultant of the interactive equation between a person's thoughts and his socio-cultural context. Also, creativity must be defined with respect to a system that includes individual, social and cultural factors that influence the creative process and help to bring about a creative outcome.

Ford's (1996) sensemaking model emphasizes how sensemaking (e.g., problem finding, interpretation), motivation (e.g., goal orientation, capability beliefs), and knowledge and ability (e.g., domain-related knowledge, creative thinking) interact to produce creative actions. Sensemaking processes operate across levels of analysis and the tension between competing habitual and creative responses plays a central role in determining innovation. Ford's model does not, however, aim to delineate the factors that affect innovation across different levels of analysis, nor explain how variants of innovation at different levels of analysis (individual, group, organizational, societal) may influence each other.

To add to the aforementioned models, Sears and Baba (2011) have framed a four-tier innovation model, where innovation evolves across levels and over time. Their theory draws on 'the premise that innovation is a multilevel phenomenon that emerges through individual creative efforts that are

transformed into innovative outputs at the individual, group, organizational, and societal levels' (Sears & Baba, 2011: 367). The four levels are individual, group, organizational and societal where the innovative output at each of these levels fosters creativity (i.e., the production of novel and useful ideas; Amabile, 1988), invention (i.e., the product, technology, or process stemming from the creative process; Damanpour, 2002, as cited in Sears & Baba, 2011), adoption (i.e., the discrete outcome resulting from commercializing or implementing an invention/rendering an invention successful), and organizational/technological change (i.e., broader-scale diffusion of innovations that stimulate organizational, technological, and industry change) respectively. The innovative impetus originates from one's motivation to innovate (i.e., factors reflecting a high value placed on innovation in the organization—e.g., climate factors), resources in the task domain (i.e., knowledge, expertise, and material resources to support innovation—e.g., broad work experience, absorptive capacity), and innovation management skills (i.e., individual characteristics and management capabilities that foster innovation—e.g., creative thinking, conflict management)—the expressions of which vary across levels. The variables that constitute these components jointly and multiplicatively determine innovative output. In sum, it is argued that each successive level of analysis and sequential manifestation of innovation reflects a progression from factors that drive the generation of innovation to those facilitating the adoption of innovation.

Instead of wedging creativity and innovation in stand-alone strongholds, it is worthwhile to appreciate that in all the aforesaid models, the exact point, where the creativity→innovation transformation happens, needs to be explored in future research. For instance, where does one draw a line between 'creative behavior' and 'innovative behavior'? Similarly, when does team creativity gets translated to team innovation? At a more aggregate level, why should not an associative link derive between organizational creativity and organizational innovation? Keeping the facilitative (or, inhibiting) factors constant, will creativity transform into innovative outcome? But then, why do we follow a systems approach to explain the transformation of creativity to innovation, if environmental factors are snoozed? And, in the systems approach, the single-headed arrow may also operate in the reverse direction. So, where would that precise point be located where innovation gets transformed into creativity? Even if it is acknowledged that the original creative idea may need to be rehashed in the middle and result in creativity abortion, the path from creativity to innovation remains more of a continuum or a sequence where one aspect leads to the next one. For instance, McLean (2005: 240) views creativity and innovation as two 'ends of a process' where creativity 'fuels the innovation pipeline'. Would the same systemic and environmental factors come into play in the reverse transformation? These questions need to be delved further in future research. Nevertheless, the models serve as sound theoretical bases in helping re-bridge creativity and innovation. The environmental and situational factors facilitate the transformation. These models leave significant trails which need empirical investigation. While it is appreciated that a specific model would not be able to encompass all the antecedents, processes and consequences, the cumulative analysis of the aforementioned models helps the researcher in underlining the necessary causality between creativity and innovation.

In all of the aforementioned models, innovation was the outcome. For our purpose, we will analyze selected papers where innovation figures as an antecedent, mediator/moderator or the consequent factor and concluded with managerial/practical implications. Specifically, the paper shall integrate the managerial implications section of the papers which shall serve as significant guideposts for the HRD. Since these practical/managerial implications are gleaned post-empirical analysis, they are worth pondering for the HRD. Further, although there is no foolproof evidence for the empirically-conducted

studies, nevertheless they give significant cues to the HRD in developing and furthering the organizational cause. It may be pertinent to note that there was no specific criterion for selection of papers, as long as they suited the objective of this research paper.

### **Innovation- What is it?**

Etymologically, the term originates from Latin 'innovare', (which means to come up with something new). Joseph Schumpeter was one of the first economists to define innovation. He defines five possible types of innovation. These five types are: the introduction of a new product or a qualitative change in an existing product; process innovation new to an industry; the opening of a new market; development of new sources of supply for raw materials or other inputs; and; changes in industrial organization. Innovation is 'the intentional introduction and application within an organization of ideas, processes, products or procedures, new to the unit of adoption, designed to significantly benefit the organisation or wider society' (West and Farr, 1990).

There are diverse categories of innovation-types: administrative-technical, technological-business, simple-complex, product-process, explorative-exploitative, high-low cost, and, radical-incremental innovations (See Cokpekin & Knudsen, 2012; Crossan & Apaydin, 2010). Crossan and Apaydin (2010) have classified innovation types as a dimension of process [Level (Individual/Group/Team); Driver (Resources/Market/Opportunity); Direction (Top-down/Bottom-up); Source (Invention/Adoption); Locus (Firm/Network); Nature (Tacit/Explicit)] and outcome [Form (Product/Service/Process/Business Model); Magnitude (Incremental/Radical); Referent (Firm/Market/Industry); Type (Administrative/Technical); Nature (Tacit/Explicit)].

This paper would like to add a new dimension to this typology, which would presumably subsume all the aforementioned typologies. Innovations may, at best, be classified as temporal and spatial. Temporal innovations are time-dependent and may be short-term or long-term in their nature (duration of innovation development) and scope (longevity of innovation implementation). Nature-wise, some innovations are unpredictable or serendipitous and the journey from creativity to innovation implementation is too long (long-term) and may take years together for yielding outcomes (for instance, medicinal research); others are relatively easy to create and implement and may take few hours or months (short-term) for giving results (for instance, Google doodles). Scope-wise, some innovations have shorter shelf-life, whereas others linger on for centuries together with incremental improvisations upon them. Spatial innovations are origin-based and may be locale-customized or locale-universal. Again, in the former category (locale-customized), one will appreciate the degree of indigenouness in them. Hence, this may be further categorized as indigenous-customization and non-indigenous customization. That is, some innovations are adaptable in their original form everywhere (for instance, heavy machinery), whereas others are customized depending upon the usage (for instance, beverages). Both the categories along with their sub-categories may intersect resulting in hybrid innovations. For instance, in the telecommunications sector, pager is a short-term innovation, and, the cellphone is a long-term innovation. Again, in the food and beverages industry, a particular company may be offering a different variant of its food-item in diverse locations. Hybrid innovations may be a wrist-watch or an automobile category. Considering the depth of these innovation-types, the paper shall limit its scope to analyzing 'innovations' as such, without thread-baring their finer types, unless specified.

### **Managerial/Practical implications: Guideposts for HRD to 'unlearn', 'learn' and 'relearn'**

The managerial/practical implications section of the quantitative empirical papers constitutes the concluding section where the 'lessons' are drawn based on the empirical investigations in the paper. By

quantitative empirical research, one refers to systematic theory-based studies utilizing positivistic methodology and statistical methods of data analysis. This section appears in the conceptual/theoretical papers as well. However, inclusion of the latter set of papers is beyond the purview of the present paper. These implications are not all-encompassing or conclusive given their underpinning limitations, however, they serve as significant reminders for the HRD to revisit their efforts and channelize them in the appropriate direction for the overarching objective of employee satisfaction and organizational success. Keeping this view, the lessons gleaned from the selected papers shall analyze the managerial/practical implications at two levels: organization and group/team. Quite appropriately, the individual level of analysis has been obviated here in line with the conclusions made before that creativity is individual-emanating and innovation is a group/team- and organization- emanating aspect. Now, this brings us back to my argument of hyphenating creativity and innovation because research also talks of group/team- and organization- creativity. Individuals generate ideas which are filtered and refined in a team/group and organizational setting. Therefore, this paper assumes that the ideation process is complete, and, the creative ideation has reached its maturity stage of filtering, refinement and processing to yield innovative outcome. Also, the present study is indeed a significant contribution to organizational research and methodology for its bottom-up approach, as stated earlier. In a nutshell, this paper shall be-brief the managers/HRD/organizations to cater to building up of the creative and innovative facets in their employees and adsorbing these dimensions in their work- culture.

#### ***Organizational-level analysis***

To be able to respond to the environmental changes and opportunities, it behooves the organizations to spearhead the implementation of innovations (Garcia-Zamora, Gonzalez-Benito, & Munoz-Gallego, 2013). Innovation generation is impacted by fostering the right organizational culture (Uzkurt et al, 2013). “An organizational which recognizes and nurtures the uniqueness of its employees and empowers the managers to follow their vision will have an innovative culture” (Uzkurt et al, 2013). Organizational values, norms, and artifacts determine organizational culture and encourage and support innovative behaviors (Hogan & Coote, 2013). Such a culture will exhibit openness to the opportunities and the challenges as well as risks posed by novel ideas and innovations. Therefore, organizations should pay attention to developing an organizational learning culture where the employees may be able to continually learn and share their knowledge (Skerlavaj, Song, & Lee, 2010). Spirit of tolerance for vagueness, ambiguity, uncertainty and the unfamiliar should be stressed upon alongside collaborative efforts (Henkin & Davis, 1991). An environment of experimentation should be encouraged where the employees may toy with novel ideas and innovations. Organizational resilience and flexibility in the face of disposable resource availability assumes immense significance in its bid to be innovative (Weiss, Hoegl, & Gibbert, 2011). In another study covering a sample of employees (n=198) from R&D organizations, eight components of organizational culture (viz., teamwork and knowledge sharing, empowerment and recognition, conformity and impediments to R&D, risk-taking, customer orientation, autonomy, social networking, and organizational design) impacted R&D performance (Asmawi & Mohan, 2013) giving a clear indication to management to focus on these dimensions.

Humanistic HRM practices should be emphasized by the organization where the employees perceive autonomy, empowerment, fairness, democracy and returns (psychological and financial) in return for their innovative efforts (Cooke and Saini, 2010). Identification and procurement of employees with unique and firm-specific knowledge should be done such that conducive HRM practices are being followed (selection processes based on interpersonal abilities, training and development activities focused on team building, and appraisals based on team performance and/or employees’ ability to work

in groups) (Lopez-Cabrales, Perez-Luno, & Cabrera, 2009; Shipton et al, 2005). Selection and recruitment processes in an organization should hire individuals with an intrinsic desire to learn and acquire knowledge (Lu, Lin, & Leung, 2012) and innovative potential (Madrid et al, 2013). In other words, a close Person-Organization fit needs to be ascertained in the process (McEntire & Greene-shortridge, 2011). “HR system alone may not be able to elicit innovation performance. Thus, the need to build up shared schemas and mindsets around innovation in organizations is critical for new product development. More emphasis could also be given to the fit of this type of culture with HR system in order to develop an effective organization” (Engelen et al, 2013).

Organizations should focus on continuous cultivation and selection of transformational leaders at the business-unit levels (Chen et al, 2012). A much deeper view suggests that in individualist cultures, transformational leaders should focus on vision articulation, keep high performance expectations and provide individualized support while eschewing intellectual stimulation; in high power-distance cultures, leaders should pursue intellectual stimulation and individualized support but avoid high performance expectations; in high uncertainty-avoidance cultures, harboring high expectations is deemed conducive whereas intellectual stimulation is aversive to innovation stimulus (Engelen et al, 2013). This implies that cultural dimension assumes a significant role in an organization’s bid to foster innovation.

Organizations should make investments in instilling transformational leadership and trust in organizations by instituting training and development modules or organizational development (OD) interventions (McLean, 2005) for leaders to result in the development of innovation implementation behavior in followers (Gumusluoglu & Ilsev, 2009; Michaelis, Stegmaier, & Sonntag, 2009; 2010; Rank et al, 2009). Building and sustaining trust in top management fosters innovation. Therefore, trust should permeate across the organization’s reward system, leadership guidelines and overall company policies (Michaelis, Stegmaier, & Sonntag, 2009). Followers should evaluate their supervisors on the latter’s trustworthiness. Given the potential uncertainty and complexity associated with the novel processes, practices, or structures, a climate of trust should be built up amidst the leaders and their followers ensuring a greater degree of autonomy and increased work commitment vis-à-vis followers’ engagement in innovation development and implementation.

Employees’ knowledge may be developed through professional employee training, and, the consequent outcome would be promotion of technological innovations and advancement of an organization’s competitive advantage and performance (Li, Zhao, & Liu, 2006). Apart from the leaders, training should also be given to the employees to foster learning orientation in them (Carmeli & Spreitzer, 2009; Lu, Lin, & Leung, 2012). People management practices should be adopted in organizations where organizations implement mechanisms meant to develop employees’ knowledge, skills and attitudes (Shipton et al, 2006). Thus, training in skills such as critical thinking, problem-solving skills, as well as education and communication regarding the wider organization and other activities beyond the technical core of employee jobs facilitates participation of employees in innovation (Axtell et al, 2000). Organizations can influence supportive behavior for innovation by promoting a transformational leadership style among team leaders through selection and leadership development programs (Eisenbeiss, Knippenberg, & Boerner, 2008). Opportunities for personal as well as professional advancement should be afforded by the organizations (Henkin & Davis, 1991).

Since leaders serving as role models vis-à-vis innovations would be emulated by their followers, the latter would be influenced in so far as their innovation development and implementation behavior is concerned. Rightly stated, “Innovative leaders are often depicted as managers of creative minds rather

than originators of creative ideas... There are times when leaders are the idea generators and not simply the shepherds of novel thinking” (Hunter & Cushenbery, 2011: 256). Leaders should serve as propellers in so far as the organizational objective to foster an innovation culture is concerned. Problem-solving may be facilitated by leader’s participative style. And, even the leaders should be adept in problem-solving skills pertaining to creativity (Waples & Friedrich, 2011). Leaders should show respect for employees by acknowledging the latter’s contribution to outcomes. There are innovation-development instances, as in the case of technological innovations, where the goals and outcomes may be hazy; leaders may instill the necessary drive for ensuring the constant and continuous tempo of the followers (Chen et al, 2012). Further, leaders should monitor and reward management innovations once the pre-set goals are attained. In another context, though, transactional leadership impeded innovation (Rank et al, 2009). Nevertheless, a balanced approach is needed for formulating organizational policy. Morality at workplace should be highly encouraged; this would be facilitated by the leaders’ respecting their followers’ nature and dignity as well as empowering and enriching the job significance to encourage the followers to think of creative ideas and to implement them as well (Yidong & Xinxin, 2012). A leader, high on ethical values and morality, fosters motivation in his followers, which, in turn, facilitates innovative work behavior. In fact, to predict innovation related behavior (IRB), it is needed to attend to the diverse constellations of motivation underlying its occurrence/absence (Ng & Feldman, 2013).

Open horizontal communication should be given impetus and cross-departmental integration should be encouraged during communication. During the innovation-inception or product-development stage, employees should be provided adequate freedom to share their knowledge (Akgun et al, 2010) as well as an open climate favoring risk-taking, trust, and, open interaction (Bertels, Kleinschmidt, & Koen, 2011). Organizations should foster an environment where the new ideas are accorded their due place and are openly and freely exchanged among the employees. For instance, physical arrangement of an organization can support innovation by providing employees with opportunities to exchange their ideas or share information (Hogan & Coote, 2013).

Even the risks associated with the innovation implementation failure may be cushioned in the presence of an effective leader (Leung et al, 2011). Even in the case of abrupt termination during innovation implementation by a team, leaders should make a realistic assessment of the situation and set future goals, which are appropriate, but not overly difficult (Moenkemeyer, Hoegl, & Weiss 2012). Quite understandably, not all innovations are successful. In view of the risks taken for innovation development and implementation amidst environmental dynamism, rewards and recognition may not be hinged solely on the innovation outcome. If it is so, that would be demoralizing and blocking the confidence to get on with further experimentation with new ideas. Re-building the self-efficacy of the affected employees becomes a *sine qua non* for the leader. Since building psychological connections with followers assumes importance vis-à-vis innovation enactment, leaders’ coaching (Wang, 2012) and mentoring skills should also form a constituent of the training modules. Also, innovation failures should be perceived as a part of on-the-job learning experiences (Ligon et al, 2011) instead of being subjected to castigation.

Followers should perceive an existence of a climate for taking initiatives and risks as well, and, the same should get reflected in the organizational reward mechanisms too. Investment-reward balance is a dynamic process (Janssen, 2004), where the employees’ investment in innovation and the commensurate organization’s reward systems are intertwined. Interestingly, leaders may serve as a conduit for diverting the focus of the followers from monetary rewards and incentives to challenges,

underlying interest and the significance of their tasks (Chen et al, 2012). Nevertheless, human resource practices should be so designed which reward employees for “thinking out-of-the-box” and their positive contribution towards innovations (Axtell et al, 2000; Wang et al, 2010). It should be borne in mind that process appraisal is no less insignificant than outcome appraisal as far as boosting technological innovations is concerned (Li, Zhao, & Liu, 2006). “An outcome orientation may therefore be a more effective cultural norm when complemented with the assurance that the firm also values and rewards contributions made in earlier stages of the innovation process” (Wang et al, 2010). Implicitly, employees would feel less insecure when it comes to taking personal risks (real or perceived) in the course of developing and implementing innovation. Therefore, there should be clarity regarding the evaluation of employees’ performance and employees should be made aware whether innovation failure would be accounted for in their performance assessment. Employees should not be penalized for their failures in innovation implementation; they should be acknowledged and recognized for their innovative ideas and behaviors as well. For instance, both monetary and non-monetary interventions (cash rewards; recognition; performance feedback, etc.) should be stressed upon judiciously by the transformational leaders for boosting technological innovation outcomes (Chen et al, 2012). Summing up, “... Firms can be innovative by employing either high-commitment (*emphasized internal cohesiveness*) or high-collaboration (*building external connections*) HRM systems, or a balanced combination of the two, taking into consideration the resource scarcity in organizations. This is analogous to the strategy commonly used in boxing. To produce the most powerful hit, a boxer would not use both fists simultaneously. Instead, he/she would advance one fist with the balance of the other at the back... “(Italics added) (Zhou, Hong, & Liu, 2013).

#### **Team-level analysis**

Team composition figures in the consideration-set when one probes the innovation outcome’s feasibility and success. A large/small number of individuals in a team may be acerbic for innovation outcome. An optimum number of team members would be ranging from 4 to 7, which may increase as familiarity and wavelength among the members improves with time (Hunter & Cushenbery, 2011). Team constitution should be conducted in such a way that knowledge diversity becomes the core of the innovation process; this can be attained through the inclusion of diverse task-relevant experts (Post, 2012; Somech & Drach-Zahavy, 2011), which also implies the benefits of networking (Rodan & Galunic, 2004). Of course, domain expertise remains important. Thus, the leaders should ensure that individuals with connective thinking are identified and included in the team. At the same time, diverse backgrounds and the agenda of the team may better be checked and monitored to obviate conflicting scenarios. For instance, the dynamics of inter- and intra-relationship of cross-functional personnel participation vis-à-vis product development, top management should set priorities and wield control to obviate the functional department members from ruling the roost (Atuahene-Gima & Evangelista, 2000: 1283). This does not preclude healthy debate, discussion and brainstorming among the members, though. Team leaders should take the responsibility of securing and providing training to members for skills linked with conflict resolution, stress management, negotiation and communication, which would lead to better team functioning and aid in goal-accomplishment (Barczak & Wilemon, 2003).

Charismatic dimension of transformational leadership fosters team innovation (Paulsen et al, 2009; 2013). Should the teams be functionally homogenous, a directive leadership style would work best; and, in the case of functionally heterogeneous teams, participative leadership style is apt for spurring team innovation (Somech, 2006). Further, a supportive and participative team climate for innovation should be harbored with inculcation of shared norms ingrained in their vision and mission right from

inception of their constitution (Somech & Drach-Zahavy, 2011). Group environment should be pro-innovation by creating more broadly defined roles for teams and permitting teams to exercise greater control over the methods used for development and implementation of innovation (Axtell et al, 2000). Team members should be given ample exposure to other individuals with high creative abilities, as well as to diverse individuals, who pose different organizational roles, with new kinds of information, diverse viewpoints, and, hail from different functions (Alexiev et al, 2010; Somech & Drach-Zahavy, 2011). Vis-à-vis knowledge exchange and external sourcing of knowledge, enhancing external advice leads to higher exploratory innovation for homogeneous teams, while increasing internal advice seeking leads to higher exploratory innovation for heterogeneous teams (Alexiev et al, 2010). It is important to have the relevant strategic leadership skills for being able to influence innovation strategy and its outcomes and a team's diverse constitution influences the effectiveness of strategic leadership behaviors (Elenkov, Judge, & Wright, 2005).

Team Climate for Innovation (TCI) is enhanced through promotion of transformational leadership style in team leaders (Weiss, Hoegl, & Gibbert, 2011). For instance, product-market innovations are promoted when the leaders lay stress on vision development and intellectual stimulation; administrative innovations are fostered when the leaders focus their efforts on vision development, intellectual stimulation and contingent reward leadership (Elenkov, Judge, & Wright, 2005). Teams, fostering a climate of innovation, are influenced by leader's creative behaviors. Leaders should formulate collective norms and develop mutual interest for encouraging team innovation (Yoshida et al, 2013). For team innovation, it is important to have a shared vision (Pearce & Ensley, 2004). Succinctly put, "If it is possible to teach individuals how to enhance their vision creation abilities, it is not much of a stretch to imagine the possibility of teaching teams how to enhance their collective ability to create a shared vision of the particular innovation they are undertaking" (Pearce & Ensley, 2004). In a similar vein, team coaching- as a leadership style- encapsulating such behaviors like setting clear expectations, providing recognition, identifying team weaknesses, giving suggestions, and stimulating problem solving, should be fostered in organizations to ensure result-oriented team innovation outcomes (Rousseau, Aube, & Tremblay, 2013). Teams should be provided the required emotional support and encouragement, especially in times of urgency, to solve problems, speed up the product development process and launch it successfully (Akgun et al, 2007: 635).

Leaders should instill a climate of trust, identification and perceptions that they are representative of the team's beliefs, norms and attitudes. A leader should be sincere, build open and transparent relations as well as lead by example. Strong interpersonal skills are a must in team leaders, which would go a long way in forging positive relationships with senior management and with other functional groups (Barczak & Wilemon, 2003). Team leaders should ensure that the members identify themselves with their teams. There should be goal clarity and the cooperative goals should be encouraged. Such a team climate would foster confidence and persistence to innovate. Leaders can inculcate the confidence and persistence in the team for overcoming obstacles, completing different tasks and innovating. Leaders should not engage in close monitoring, which would impede creativity. Team leaders should be sensitive to how individual members perceive their relationship with the team as a whole. This nexus between the self and the team may be enhanced by instituting practices which give rise to team member identification (Paulsen et al, 2009; 2013). Leaders should enhance team members' individual as well as collective motivation to engage in innovation through transformational leadership and identification of members with a proactive personality (Chen et al, 2013).

Further, apart from making suitable adjustments for the members' expected individual and collective contribution to the team, members should be accorded place in due proportion contingent upon their propensity to be creative (to foster an innovative team culture), conformist (to result in team harmony, reduction of team conflict, and increase team potency), and, attentive-to-detail (for their contribution to low tolerance of risk and mistakes) (Miron-Spektor, Erez, & Naveh, 2011). Team collaboration, defined by a measure called knowledge-based risk taking with its emphasis on open expression of differences and encouragement of calculated technical risks, eventually leads to technical performance (Aram & Morgan, 1976:1135). The frequency of team communication, discussion and contact should be increased (Paulsen et al, 2009) to ensure more cohesion among the members (Im, Montoya, & Workman Jr., 2013). Besides, the team members should be proactive enough to seek goal clarity; look for and participate in training seminars in areas such as team building and interpersonal communication; and, 'hunt' for mentors by identifying and developing relationships with those who possess strong interpersonal and team skills (Barczak & Wilemon, 2003). Senior management should provide resources, protect teams from political in-fighting and develop activities to help team members deal stress (Barczak & Wilemon, 2003). Management should facilitate regular team meetings for facilitating knowledge exchange and to induct customers and outside experts in these meetings and enable the customers to assess the prototypes prior to the market launch (Akgun et al, 2012). In this way, teams may keep themselves abreast with information regarding the customers and competitors. Team membership should be symbolized through a display of visible artifacts in the office (See, Hogan & Coote, 2013). Team members should be reminded of the value of their teamwork, team performance, and team achievements. Besides, an individual's perceptions, of his/her team's interdependency vis-à-vis the other teams, also needs to be attended to by the leader (Glynn, Kazanjian, & Drazin, 2010). This is important because an individual's team identification is influenced when it is transgressed across the team boundary in the other teams in the course of dependency relationship. Thus, the leaders should try to reframe the perceived interdependencies as challenges rather than constraints. Team leaders should be able to drive home the point that a climate of cooperation across subsystems would increase the flow of knowledge and creative idea-generation and exchange (Lu, Lin, & Leung, 2012). Thus, the leader should exhibit social support and foster a safe and supportive climate for innovation (Nijstad, Berger-Selman, & De Dreu, 2012).

Further, human resource policies should encourage team cohesion through appropriate recruitment, selection and tenure processes. Selection and recruitment of heterogeneous members should be fostered for ensuring innovation (Alexiev et al, 2010). For R&D teams or production-line teams, transactional leadership should be encouraged (Liu, Liu, & Zeng, 2011). Therefore, reward mechanisms should be so designed for the teams which benefit the team innovation efforts. And, even the team leader should be recognized for his/her contribution towards the team development for enforcing, sustaining and promoting innovation through his/her coaching behaviors (Rousseau, Aube, & Tremblay, 2013).

### **Conclusion**

Prefacing this paper's objective, it was stated that there is a need to look into the innovation research via bottom-up approach of exploring the managerial/practical implications sections in the quantitative empirical studies. This novel approach is being followed for two reasons. For one, these implications are like the essential HRD juices which are extracted after a careful research. Organizations would do well by refining and implementing them, as they are not mere sermons. Second, this paper deciphered some contradictions in empirical findings vis-à-vis sector and context where the research was being conducted. However, they may serve as significant pointers for customization contingent upon the

cultures and other factors during implementation in organizations. The author began her probing underscoring the necessity to re-bridge the creativity→ innovation path, and, proposed that there is an impending need to search and identify the precise point where the transformation of creativity into innovative outcome commences. This would facilitate the much-needed hyphenation of this very significant causality. Thereafter, the author tried to summarize the defining traits of innovation and the extant typologies of innovation, with my contributing another line of typology-temporal and spatial innovations. Finally, the author scanned through the managerial/practical implications of the empirical research on innovation and here the author derive six important lessons to ‘un-learn’, ‘learn’, and ‘re-learn’ for promoting innovation in organizations and teams:

1. Organizations should provide the appropriate climate for innovation and make all the necessary efforts to sustain the innovation culture in its letter and spirit.
2. HRM practices (selection and recruitment, training and coaching, reward management, etc.) should be aligned with the innovative culture of the organizations.
3. Organizational climate of trust, risk-taking, autonomy and experimentation should be favored.
4. Leadership fosters innovation: Model leaders do not exist in reality; Leader models do. Therefore, identification of the right and appropriate leadership behavior assumes importance to foster innovative behavior in followers.
5. Team cohesion is as important as team understanding and constructive sharing of ideas/information/knowledge.
6. Environmental and systemic factors foster or impede innovations: innovation development and implementation may teach hard lessons, but the show must go on.

It may be pertinent to note that these are not conclusive statements. There are other aspects which may have been overlooked in the course of the study (financial aspects, core Organizational Behavior dimensions, for instance) keeping in mind that the author may not have been able to scan through many other empirical investigations relevant to our research objective. Nevertheless, the study, it is hoped, shall throw significant challenges for the academicians and the practitioners alike. The integration of the managerial/practical implications at organization and team levels of analysis, as extracted from the quantitative empirical papers, are more realistic for the organizations/HRD/managers to imbibe and/or worth giving an experimental attempt, to say the least.

## References

- Akgun, A.E., Byrne, J.C., Lynn, G. S., Keskin, H. (2007). Team stressors, management support, and project and process outcomes in new product development teams. *Technovation*, 27, 628-639.
- Akgun, A.E., Keskin, H., & Byrne, J.C. (2010). Procedural justice climate in new product development teams: Antecedents and consequences. *Journal of Product Innovation Management*, 27, 1096-1111.
- Akgun, A.E., Keskin, H., Lynn, G., & Dogan, D. (2012). Antecedents and consequences of team sensemaking capability in product development projects. *R&D Management*, 42(5), 473-493.
- Alexiev, A.S., Jansen, J.J.P., Van Den Bosch, F.A.J., & Volberda, H.W. (2010). Top management team advice seeking and exploratory innovation: The moderating role of TMT heterogeneity. *Journal of Management Studies*, 47(7), 1343-1364.
- Amabile. T. M. (1983). *The social psychology of creativity*. New York: Springer-Verlag.
- Amabile, T. M. (1988). A model of creativity and innovation in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*, 10, Greenwich, CT: JAI Press, 123-167.

- Amabile, T.M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal*, 39(5), 1154-1184.
- Aram, J.D., & Morgan, C.P. (1976). The role of project team collaboration in R&D performance. *Management Science*, 22(10), 1127-1137.
- Asmawi, A., & Mohan, A. V. (2013). Unveiling dimensions of organizational culture: An exploratory study in Malaysian R&D organizations. *R&D Management*, 41(5), 509-523.
- Atuahene-Gima, K., & Evangelista, F. (2000). Cross-functional influence in new product development: An exploratory study of marketing and R&D perspectives. *Management Science*, 46(10), 1269-1284.
- Axtell, C.M., Holman, D.J., Unsworth, K.L., Wall, T.D., Waterson, P.E., & Harrington, E. (2000). Shopfloor innovation: Facilitating the suggestion and implementation of ideas. *Journal of Occupational and Organizational Psychology*, 73, 265-285.
- Baer, M. (2012). Putting creativity to work: The implementation of creative ideas in organizations. *Academy of Management Journal*, 55(5), 1102-1119.
- Barczak, G., & Wilemon, D. (2003). Team members experiences in new product development: Views from the trenches. *R&D Management*, 33(5), 463-479.
- Batey, M. (2012). The measurement of creativity: From definitional consensus to the introduction of a new heuristic framework. *Creativity Research Journal*, 24(1), 55-65.
- Bertels, H.M.J., Kleinschmidt, E.J., & Koen, P.A. (2011). Communities of practice versus organizational climate: Which one matters more to dispersed collaboration in the front end of innovation? *Journal of Product Innovation Management*, 28, 757-772.
- Bharadwaj, S., & Menon, A. (2000). Making innovation happen in organizations: Individual creativity mechanisms, organizational creativity mechanisms or both? *Journal of Product Innovation Management*, 17, 424-434.
- Biedenbach, T., & Muller, R. (2012). Absorptive innovative and adaptive capabilities and their impact on project and project portfolio performance. *International Journal of Project Management*, 30, 621-635.
- Carmeli, A., & Spreitzer, G.M. (2009). Trust, connectivity, and thriving: Implications for innovative behaviors at work. *Journal of Creative Behavior*, 43(3), 169-191.
- Chen, G., Farh, J., Campbell-Bush, E.M., Wu, Z., & Wu, X. (2013). Teams as innovative systems: Multilevel motivational antecedents of innovation in R & D teams. *Journal of Applied Psychology*, (), --. DOI 10.1037/a0032663.
- Chen, M.Y., Lin, C.Y., Lin, H., & McDonough III, E.F. (2012). Does transformational leadership facilitate technological innovation? The moderating roles of innovative culture and incentive compensation. *Asia Pacific Journal of Management*, 29, 239-264.
- Cokpekin, O., & Knudsen, M.P. (2012). Does organizing for creativity really lead to innovation? *Creativity and Innovation Management*, 21(3), 304-314.
- Cooke, F.L., & Saini, D.S. (2010). (How) Does the HR strategy support an innovation oriented business strategy? An investigation of institutional context and organizational practices in Indian firms. *Human Resource Management*, 49(3), 377-400.
- Crossan, M.M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of literature. *Journal of Management Studies*, 47(6), 1154-1191.
- Csikszentmihalyi, M. (1988). Society, culture, and person: a systems view of creativity. In R.J. Sternberg (Ed.), *The Nature of Creativity*. New York: Cambridge University Press, 325-339.

- Egan, T.M. (2005). Factors influencing individual creativity in the workplace: An examination of quantitative empirical research. *Advances in Developing Human Resources*, 7(2), 160-181.
- Eisenbeiss, S. A., van Knippenberg, D., & Boerner, S. (2008). Transformational leadership and team innovation: Integrating team climate principles. *Journal of Applied Psychology*, 93(6), 1438-1446.
- Elenkov, D.S., Judge, W., & Wright, P. (2005). Strategic leadership and executive innovation influence: An international multi-cluster comparative study. *Strategic Management Journal*, 26(7), 665-682.
- Engelen, A., Schmidt, S., Strenger, L., & Brettel, M. (2013). Top management's transformational leader behaviors and innovation orientation: A cross-cultural perspective in eight countries. *Journal of International Management*, (), --. DOI 10.1016/j.intman.2013.04.003.
- Ford, C.M. (1996). A theory of individual creative action in multiple social domains. *Academy of Management Review*, 21(4), 1112-1142.
- Garcia-Zamora, E., Gonzalez-Benito, O., Munoz-Gallego, P.A. (2013). Organizational and environmental factors as moderators of the relationship between multidimensional innovation and performance. *Innovation: Management, policy & practice*, 15(2), 224-244.
- Glynn, M.A., Kazanjian, R., & Drazin, R. (2010). Fostering innovation in complex product development settings: The role of team member identity and interteam interdependence. *Journal of Product Innovation Management*, 27, 1082-1095.
- Gumusluoglu, L., & Ilsev, A. (2009). Transformational leadership and organizational innovation: The roles of internal and external support for innovation. *Journal of Product Innovation Management*, 26, 264-277.
- Henkin, A.B., & Davis, J.H. (1991). Perceived organizational support for innovation in the high technology sector. *International Review of Modern Sociology*, 21(1), 73-91.
- Hogan, S.J., & Coote, L.V. (2013). Organizational culture, innovation, and performance: A test of Schein's model. *Journal of Business Research*, (), --. DOI 10.1016/j.jbusres.2013.09.007.
- Hunter, S.T., & Cushenbery, L. (2011). Leading for innovation: Direct and indirect influences. *Advances in Developing Human Resources*, 13 (3), 248-265.
- Im, S., Montoya, M.M., & Workman Jr., J.P. (2013). Antecedents and consequences of creativity in product innovation teams. *Journal of Product Innovation Management*, 30(1), 170-185.
- Janssen, O. (2004). How fairness perceptions make innovative behavior more or less stressful. *Journal of Organizational Behavior*, 25, 201-215.
- Leung, K., Chen, Z., Zhou, F., & Lim, K. (2011). The role of relational orientation as measured by face and renqing in innovative behavior in China: An indigenous analysis. *Asia Pacific Journal of Management*, (), --. DOI 10.1007/s10490-011-9277-1.
- Lopez-Cabrales, A., Perez-Luno, A., & Cabrera, R.V. (2009). Knowledge as a mediator between HRM practices and innovative activity. *Human Resource Management*, 48(4), 485-503.
- Li, Y., Zhao, Y., & Liu, Y. (2006). The relationship between HRM, technology innovation and performance in China. *International Journal of Manpower*, 27(7), 679-697.
- Ligon, G.S., Wallace, J.H., & Osburn, H.K. (2011). Experiential development and mentoring processes for leaders for innovation. *Advances in Developing Human Resources*, 13(3), 297-317.
- Liu, J., Liu, X., & Zeng, X. (2011). Does transactional leadership count for team innovativeness? *Journal of Organizational Change Management*, 24(3), 282-298.
- Lu, L., Lin, X., & Leung, K. (2012). Goal orientation and innovative performance: The mediating roles of knowledge sharing and perceived autonomy. *Journal of Applied Social Psychology*, 42(S1), 180-197.

- Madrid, H.P., Patterson, M.G., Birdi, K.S., Leiva, P.I., & Kausel, E.E. (2013). The role of weekly high-activated positive mood, context, and personality in innovative work behavior: A multilevel and interactional model. *Journal of Organizational Behavior*, (),--DOI: 10.1002/job.1867.
- McEntire, L.M., & Greene-Shorridge, T.M. (2011). Recruiting and selecting leaders for innovation: How to find the right leader. *Advances in Developing Human Resources*, 13(3), 266-278.
- McLean, L.D. (2005). Organizational culture's influence on creativity and innovation: A review of the literature and implications for human resource development. *Advances in Developing Human Resources*, 7(2), 226-246.
- Michaelis, B., Stegmaier, R., & Sonntag, K. (2010). Shedding light on followers' innovation implementation behavior: The role of transformational leadership, commitment to change, and climate for initiative. *Journal of Managerial Psychology*, 25(4), 408-429.
- Michaelis, B., Stegmaier, R., & Sonntag, K. (2009). Affective commitment to change and innovation implementation behavior: The role of charismatic leadership and employees' trust in top management. *Journal of Change Management*, 9(4), 399-417.
- Miron-Spektor, E., Erez, M., & Naveh, E. (2011). The effect of conformist and attentive-to-detail members on team innovation: Reconciling the innovation paradox. *Academy of Management Journal*, 54(4), 740-760.
- Moenkemeyer, G., Hoegl, M., & Weiss, M. (2012). Innovator resilience potential: A process perspective of individual resilience as influenced by innovation project termination. *Human Relations*, 65(5), 627-655.
- Mumford, M.D., & Gustafson, S.B. (1998). Creativity syndrome: Integration, application, and innovation. *Psychological Bulletin*, 103(1), 27-43.
- Ng, T.W.H., & Feldman, D.C. (2013). Age and innovation-related behavior: The joint moderating effects of supervisor undermining and proactive personality. *Journal of Organizational Behavior*, 34, 583-606.
- Nijstad, B.A., Berger-Selman, F., & De Dreu, C.K.W. (2012). Innovation in top management teams: Minority dissent, transformational leadership, and radical innovations. *European Journal of Work and Organizational Psychology*, (), 1-13. DOI 10.1080/1359432X.2012.734038.
- Paulsen, N., Callan, V.J., Ayoko, O., & Saunders, D. (2013). Transformational Leadership and innovation in an R & D organizational experiencing major change. *Journal of Organizational Change Management*, 26(3), 595-610.
- Paulsen, N., Maldonado, D., Callan, V.J., & Ayoko, O. (2009). Charismatic leadership, change and innovation in an R & D organization. *Journal of Organizational Change Management*, 22(5), 511-523.
- Pearce, C.L., & Ensley, M.D. (2004). A reciprocal and longitudinal investigation of the innovation process: The central role of shared vision in product and process innovation teams (PPITs). *Journal of Organizational Behavior*, 25, 259-278.
- Post, C. (2012). Deep-level team composition and innovation: The mediating roles of psychological safety and cooperative learning. *Group & Organization Management*, 37(5), 555-588.
- Rank, J., Nelson, N.E., Allen, T.D., & Xu, X. (2009). Leadership predictors of innovation and task performance: Subordinates' self-esteem and self-presentation as moderators. *Journal of Occupational and Organizational Psychology*, 82, 465-489.
- Rodan, S., & Galunic, C. (2004). More than network structure: How knowledge heterogeneity influences managerial performance and innovativeness. *Strategic Management Journal*, 25, 541-562.

- Rousseau, V., Aube, C., & Tremblay, S. (2013). Team coaching and innovation in work teams. *Leadership and Organization Development Journal*, 34(4), 344-364.
- Ryan, J.C., & Tipu, S.A.A. (2013). Leadership effects on innovation propensity: A two-factor full range leadership model. *Journal of Business Research*, 66, 2116-2129.
- Sears, G.J., & Baba, V.V. (2011). Toward a multistage, multilevel theory of innovation. *Canadian Journal of Administrative Sciences*, 28, 357-372.
- Shalley, C.E. (1991). Effects of productivity goals, creativity goals, and personal discretion on individual creativity. *Journal of Applied Psychology*, 76(2), 179-185.
- Shipton, H., Fay, D., West, M.A., Patterson, M., & Birdi, K. (2005). Managing people to promote innovation. *Creativity and Innovation Management*, 14(2), 118-128.
- Shipton, H., West, M.A., Dawson, J., Birdi, K., & Patterson, M. (2006). HRM as a predictor of innovation. *Human Resource Management Journal*, 16(1), 3-27.
- Skerlavaj, M., Song, J.H., & Lee, Y. (2010). Organizational learning culture, innovative culture and innovations in South Korean firms. *Expert Systems with Applications*, 37, 6390-6403.
- Sohn, S.Y., & Jung, C.S. (2010). Effect of creativity on innovation: Do creativity initiatives have significant impact on innovative performance in Korean firms? *Creativity Research Journal*, 22(3), 320-328.
- Somech, A. (2006). The effects of leadership style and team process on performance and innovation in functionally heterogeneous teams. *Journal of Management*, 32(1), 132-157.
- Somech, A., & Drach-Zahavy, A. (2011). Translating team creativity to innovation implementation: The role of team composition and climate for innovation. *Journal of Management*, 39(3), 684-708.
- Sternberg, R.J., O'Hara, L.A., & Lubart, T.I. (1997). Creativity as investment. *California Management Review*, 40(1), 8-21.
- Uzkurt, C., Kumar, R., Kimzan, H.S., & Eminoglu, G. (2013). Role of innovation in the relationship between organizational culture and firm performance. *European Journal of Innovation Management*, 16(1), 92-117.
- Wang, S., Guidice, R.M., Tansky, J.W., & Wang, Z. (2010). When R & D spending is not enough: The critical role of culture when you really want to innovate. *Human Resource Management*, 49(4), 767-792.
- Wang, Y. (2012). R&D employees' innovative behaviors in Taiwan: HRM and managerial coaching as moderators. *Asia Pacific Journal of Human Resources*, (), (), 1-25. DOI 10.1111/j.1744-7941.2012.00049.x.
- Waples, E.P., & Friedrich, T.L. (2011). Managing creative performance: Important strategies for leaders of creative efforts. *Advances in Developing Human Resources*, 13 (3), 366-385.
- Weiss, M., Hoegl, M., & Gibbert, M. (2011). Making virtue of necessity: The role of team climate for innovation in resource-constrained innovation projects. *Journal of Product Innovation Management*, 28(S1), 196-207.
- West, M.A. (2002). Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation in work groups. *Applied Psychology: An International Review*, 51, 355-424.
- West, M.A., & Farr, J.L. (1990). Innovation at work. In West, M.A. & Farr, J.L. (eds.), *Innovation and Creativity at Work: Psychological and Organizational Strategies*, Wiley, Chichester, 3-13.
- Woodman, R.W., Sawyer, J.E., & Griffin, R.W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*, 18(2), 293-321.

- Yidong, T., & Xinxin, L. (2012). How ethical leadership influence employees innovative work behavior: A perspective of intrinsic motivation. *Journal of Business Ethics*, (), --. DOI 10.1007/s10551-012-1455-7.
- Yoshida, D.T., Sendjaya, S., Hirst, G., & Cooper, B. (2013). Does servant leadership foster creativity and innovation? A multi-level mediation study of identification and prototypicality. *Journal of Business Research*, (), --. DOI 10.1016/j.jbusres.2013.08.013.
- Zhou, Y., Hong, Y., & Liu, J. (2013). Internal commitment or external collaboration? The impact of human resource management systems on firm innovation and performance. *Human Resource Management*, 52(2), 263-288.