Psychological empowerment and support for innovation in Turkish manufacturing industry: Relations with individual creativity and firm innovativeness*

*Hülya Gündüz Çekmecelioğlu, Gönül Kaya Özbağ***

Creativity and innovation is generally considered to be one of the important factors in the competitiveness and success of organizations. The managers of an organization can positively affect individual creativity and firm innovativeness by supporting employees creative behaviour and also empowering employees. The current study, therefore, proposes and tests a structural model including four dimensions of psychological empowerment and support for innovation in predicting individual creativity and firm innovativeness. The model is tested on 181 managers at 48 Turkish manufacturing companies. The results suggest that support for innovation and all four of psychological empowerment dimensions have significant effects on employees which in turn increases firm innovativeness.

Key words: psychological empowerment, support for innovotion, indiviual creativity, firm innovativeness (JEL: L20, O30, M12)

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1. Introduction

Especially in today's rapidly changing business environment it is more desirable to be able to innovate and sustain competitive advantage (Woodman et al., 1993). Among the factors that increases creativity and innovativeness, support for creativity and innovation through organizational climate has been identified by many researchers as being one of the most important (Abbey/Dickson, 1983; Amabile, 1988, 1996, 1997; Woodman/Sawyer/Griffin, 1993; Shalley, 1995; Shalley et al., 2000; Amabile et al., 1996; Cummings/Oldham, 1997). While extant research has effectively identified the effects of organizational climate on creative behavior, another important concern for organizations is how to empower employees since research on psychological empowerment has indicated a wide set of important outcomes for employees and organizations.

For instance, psychological empowerment components including meaning, competence and impact are found to be significantly related to individual outcomes such as job satisfaction, job strain, job stres (Spreitzer et al., 1997) organizational commitment (Lashinger et al., 2000, 2009; Kirkman/Rosen, 1999; Joo/Shim, 2010; Chiang/Hsieh, 2012) innovative behaviour (Knol/Van Linge, 2009; Spreitzer, 1995), performance (Siegler/Pearson, 2000; Chiang/Hsieh, 2012) intrinsic motivation and creativity (Zhang/Bartol, 2010). For that reason, researchers consider psychological empowerment as one essential factor for all industries.

On the other hand, since it is the foundation of organizational creativity and innovation, scholars and the practitioners have focused on individual creativity in general, and how work environments can foster employee creativity in particular (Abbey/Dickson, 1983; Amabile, 1988, 1996, 1997; Woodman/Sawyer/Griffin, 1993; Shalley, 1995; Shalley et al., 2000; Cummings/Oldham, 1997). Organizational behavior literature widely emphasizes individual characteristics as important determinants for firm innovativeness but only a few studies have examined the impact of individual creativity on firm innovativeness (Bharadwaj/Mennon, 2000; Gümüşlüoğlu/İlsev, 2009; Çekmecelioğlu/Günsel, 2013). Creative individuals are worth to examine because they identify original and better ways to accomplish some purpose (Amabile, 1988; Abbey/Dickson, 1983) and develop solutions to job-related problems that are judged as both novel and appropriate for the situation (Shalley, 1995, p. 483).

Reviewing the literature reveals that psychological empowerment, creativity and innovation have been studied intensively by organizational behaviour researchers in recent years. Some studies have tested the impact of psychological empowerment on creative behavior (Kanter, 1983; Spreitzer, 1995; Knol/Van Linge, 2009; Zhang/Bartol, 2010; Sun/Zhang/Chen, 2012) but no emprical research exists that investigates seperately the impact of four dimensions of psychological empowerment on individual creativity. In addition, to our knowledge,

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there exist no published studies exploring how organizational climate arranged in support of innovation influence both individual creativity and firm innovativeness. Another contribution of this article is that it provides important findings and guiding related to innovation management practices for companies and managers specifically from the perspective of a developing country, Turkey.

Turkish culture has long been described as being high on collectivism and power distance which is defined as "The extent to which the less powerful persons in a society accept inequality in power and consider it as normal" (Hofstede, 1983). Researchers has reached conflicting results between individualism and collectivism to interpret creativity and innovation in organizations. Some claim individualistic societies may be more appropriate for innovation because they recognize, praise, and reward for inventive and useful ideas. Morover they provide more tolerant environments in which individuals feel free to express their own ideas and solutions, more inclined to take risks and are therefore expected to achieve higher degrees of innovation (Shane et.al., 1995; Taylor/Wilson, 2012; Černe et al., 2013). On the other hand, collectivism leads to create and leverage knowledge by nurturing social relationships in which employees trust one another and more willing to share knowledge and ideas and thus increasing the possibility of inventing or adopting something new (Lin, 2007; Swart/Kinnie, 2003). For that reason, although numerous studies have explored the phenomenon of creativity and innovation, Turkish collectivistic culture with high-power distances may be different from individualistic Western cultures with low-power distances. Although culture was not included as a variable to our research model, the question we investigate is whether findings from Western theories on these concepts can be extended to collectivist societies.

In sum, the prior literature provides the basis for expecting specific relationships among support for innovation, psychological empowerment, individual creativity, and firm innovativeness. We specify these expectations as the basis for focusing our empirical investigation and organize the study as follows. First, the paper begins by discussing the theoretical background and research hypotheses of the main constructs (support for innovation, psychological empowerment, individual creativity and firm innovativeness). Thereafter, it describes the research model, methods and results of the research. In conclusion, it discusses the implications of the study with regard to existing literature.

2. Literature review

2.1 Psychological empowerment and individual creativity

Although, many studies of the concept of empowerment and just as many definitions of the term exist in the literature (Conger/Kanungo, 1988; Randolph, 2000; Spreitzer, 1995; Thomas/Velthouse, 1990; Wilkonson, 1998), no consensus occurs in defining and applying the concept (Honald, 1997; Spreitzer et al., 1996). Empowering practices are very common in work environments, academic re-

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search on the meaning but consequences of this concept has not kept pace (Ergeneli et al., 2007, p.42). Maybe it is because many scholars still reduce the meaning of it to delegate or share power with subordinates. Conger & Kanungo (1988), critically analyze this idea of delegation and the decentralization of decision-making power and propose that empowerment should be viewed as a motivational construct that means "to enable" rather than simply "to delegate". Afterwards Thomas and Velthouse (1990) described empowerment using motivational assumptions of the job design literature (Deci, 1975; Hackman/Oldham, 1976; Bandura, 1977, 1986). In parallel both Conger and Kanungo (1988) and Thomas and Velthouse (1990), Spreitzer (1995) defined empowerment more broadly as increased intrinsic task motivation manifested in a set of four cognitions reflecting an individual's orientation to his or her work role: meaning, competence, self-determination and impact (Spreitzer, 1995, p. 1443).

The aforementioned dimensions of psychological empowerment are sufficient set of cognitions for intrinsic motivation that is necessary for creative behaviour. Accordingly, employees feel fully powered when they perceive that the task is worthwhile (meaning), they have the necessary skills and abilities (competence) for better job performance, their behavior will have some influence on what happens in the environment (impact) and they have a choice about how to do their jobs (autonomy) (Siegler/Pearson, 2000; Robbins et al., 2002). These four dimensions are expected to increase individual's intrinsic motivation and intrinsicly motivated people are likely to spend more time on creative cognitive processes to develop problem solutions that are qualitatively high as well as the generation of ideas or solutions and make serious efforts to seek sponsorship for ideas and produce prototypes. Morover, they can perform specific tasks successfully and achieve organizational innovation goals in the face of obstacles (Hsu/Hou/Fan, 2011, p.260-261). Therefore, it is important to build a model linking four dimensions of psychological empowerment and individual creativity.

The first dimension, meaning was described as "the value of a work goal or propose, judge in relation to an individual's own ideals or standards "(Spritzer, 1999, p.40). It involves the individual's intrinsic caring about a given task. This enhanced interest in a task itself would enable followers to search for new and better ways of doing things, which is likely to lead to high levels of creativity (Amabile, 1996; Woodman et al., 1993; Oldham/Cummings, 1996). Furthermore, when an employee perceives that his or her job requirements are meaningful and personally valuable, the employee will persist in carrying out the assigned role and spend more effort on understanding a problem from various perspectives, searching for a solution using a wide variety of alternatives by connecting diverse sources of information (Gilson/Shalley, 2004; Zhang/Bartol, 2010) that could be linked to generation of new ideas and creativity. Thus, we

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expect meaning dimension of psychological empowerment to be positively related to individual creativity and hypothesize;

H1a: Meaning is positively related with individual creativity.

Competence, the second cognition was equated with self efficacy, and described as "an individual's belief in his or her capability to perform activities with skill" (Spritzer, 1999, p.40). The higher an individual's level of self-efficacy, the more committed to achieve difficult goals and the more persistent to succeed. They also exhibit initiative, high effort, and persistence when they encountered difficulties (Bandura, 1977), a necessary trait in creative process. On the other hand, individuals who are the most skilled and competent at the technical aspects of work are the most likely to broaden their roles and engage in expanded jobs. The higher levels of job-related competence will broaden their roles, leading to receptivity to new ideas and creativity since employees learn about and introduce ideas applied successfully in enriched tasks and roles (Morgeson/Klinger/Hemingway, 2005, p. 400). Thus, we expect competence dimension of psychological empowerment to be positively related to individual creativity and hypothesize;

H1b: Competence is positively related with individual creativity

Third, self-determination was described as "an individual's sense of having choice in imitating and regulating action" (Spritzer, 1999, p. 41). Self-determination that bears close resemblance to the 'choice' dimension of Thomas and Velthouse leads to 'greater flexibility, creativity, initiative, resilience and self-regulation' (1990, p. 673). When an employee has a certain degree of autonomy and can shape desired outcomes through his or her behaviors, the employee is likely to focus on an idea or a problem longer and more persistently (Deci/Ryan, 1991; Spreitzer, 1995). Autonomy, as opposed to supervisory control, relates to higher levels of intrinsic motivation, higher degrees of interest in work, flexibility and increased persistence of behavior change (Amabile et al., 1996; Deci/Ryan, 1987; Oldham/Cummings, 1996; Scott/Bruce, 1994). Thus, we expect self-determination dimension of psychological empowerment to be positively related to individual creativity and hypothesize;

H1c: Self-determination is positively related with individual creativity.

Finally, impact was defined as "the degree to which an individual can influence strategic, administrative or operating outcomes in the organization or larger environment" (Spritzer, 1999, p. 43). Impact is seen as control over one's environment or the belief that his/her actions are influencing the system (Thomas/Velthouse, 1990, p. 672). When employees believe they have influence on organizational processes, they are more likely to put effort into generating, promoting and realizing creative ideas for innovation than when they feel they are unlikely to make a difference due to a lack of impact (Janssen, 2005, p. 574).

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Thus, we expect impact dimension of psychological empowerment to be positively related with individual creativity and hypothesize;

H1d: Impact is positively related to individual creativity.

In conclusion, there is substantial theoretical support for expecting that psychological empowerment plays a significant role in facilitating creativity and innovation in organizations. On the other hand, support for innovation that is regarded as a climate characteristic should also play a role in influencing perceptual and attitudinal reactions both to psychological empowerment and to innovate. It is likely to influence the amount of power and authority that managers transfer to their employees, as well as employees' realm of control over the tasks for which they are held responsible. Therefore in the next section perceptions of support for innovation are linked with elements of psychological empowerment and individual creativity.

2.2 Support for innovation and psychological empowerment

Research conducted in the area of organizational behavior supports the proposition that employees' perceptions of the work environment or climate perceptions influence the empowerment perceived by an employee (Robbins et al., 2002; Martin/Bush, 2006, p. 421). For instance, Spreitzer (1995) found a few antecedents of empowerment some of which are individual and some organizational. Variables at the work unit level, such as strong socio-political support from subordinates, work group, peers, and superior; access to information; a participative climate; and little role ambiguity emerged as antecedents of empowerment. Correspondingly, Kanter (1993) found that work environments that provide access to information, resources, support and oppurtunity to learn and devolop are empowering and enabling employees to accomplish their work (Mok/Yeung, 2002, p. 130). Furthermore, Siegal and Gardner (2000) found that communication with managers and general relations within a company were significantly related to the empowerment components of meaning, self-determination and impact. Consequently, evidence indicates that some organizational climate characteristics including supportive work relationships (Corsun/Enz, 1999), participative work climate (Kirkman/Rosen, 1999; Spreitzer, 1996), supervisory and organizational encouragement (Keller/Dansereau, 1995), leadership and teamwork (Mok/Yeung, 2002), rewards (Bowen/Lawler, 1992), feedback (Johns/Xie/Fang, 1992), autonomy (Sabiston/Laschinger, 1995) are positively related to empowerment. Nevertheless, the role of support for innovation in influencing perceptual and attitudinal reactions to psychological empowerment is not much investigated.

Support for innovation refers to employees' beliefs that an organization encourages change and creativity (Martin/Bush, 2006, p. 420). In other words, it can be simply defined as sending a signal to employees about how innovation and creativity valued in the company. It focuses on the individual's subjective assess-

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ment of flexibility, encouragement, tolerance for change in innovation processes. Perceptions of such internal support in their work environment make up the psychological context of creativity and innovation (Amabile et al., 1996). Morover, the degree of the support for innovation influences employees' levels of delegation, autonomy, control and responsibility over their work and in turn, they perceive greater latitude, confidence in the capabilities, and feelings of contribution. Further, employees voluntarily share the superior's responsibility; participate in the change process and assume personal ownership of the job. This process potentially gives an employee a feeling of greater control over the work and an enhanced sense that his or her own behaviors can make a significant difference in work results, thus promoting the sense of impact. As a result, the role of the manager shifts from controlling to guiding and coordinating the tasks of subordinates (Jha/Nair, 2008, p. 148). Taken together, we expect perceived support for innovation positively effects employees' perception of meaning, competence, self-determination, and impact in their work and hypothesize;

H2a: Support for innovation is positively related with meaning dimension of psychological empowerment.

H2b: Support for innovation is positively related with competence dimension of psychological empowerment

H2c: Support for innovation is positively related with self determination dimension of psychological empowerment

H2d: Support for innovation is positively related with impact dimension of psychological empowerment

2.3 Support for innovation, individual creativity and firm innovativeness

Gopalakrishnan and Damanpour defined innovation as "programs, policies, systems, equipment, service, product, behavior or idea which is newly adapted to organization" (2000, p. 15). According to Hult et al. (2004) innovativeness is the capacity to introduce of some new process, product, or idea in the organization. Accordingly, in this study, firm innovativeness is described as to create new products and services; to make improvements for processes; to develop new management approaches; to be more successful than its competitors about the provision of new products and services.

A widely accepted definition states that creativity is development of novel and valuable ideas about products, practices, services or processes by an individual or group that are useful to the organization (Amabile, 1996; Oldham/Cummings, 1996; Woodman/Sawyer/Griffin, 1993; Shalley/Gilson/Blum, 2000). Shalley, Gilson, and Blum, have suggested that creative work can be generated by employees in almost any job at any level of any organization and added that creative activities can be ranged from minor adaptations to major breakthroughs (2000, p. 215). Relatedly, Beesley and Cooper states that creativity can be ap-

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peared in two ways by originally recombining the common understandings for novel ideas or by converting existing concepts through the reorganisation of existing knowledge networks' (2008, p. 55). In other words, ideas are novel when they emerged out of the recombination of existing materials or the development of materials that are completely new (Oldham/Cummings, 1996).

Creativity and innovation are closely related concepts but in essence, creativity is the generation of novel and useful ideas, primarily at the individual level where innovation can be described as the successful implementation of these creative ideas within an organization (Amabile et al., 1996). From this point of view, individual creativity is the key ingredient for innovation, and firm innovativeness muchly depends on succesfull application of novel ideas produced by individuals (Amabile et al., 1996; Shalley et al., 2004). Because innovation involves aplicable new ideas and alternative solutions, it is logical to predict that individuals novel and valuable ideas about products, practices, services or processes are (Amabile, 1996; Oldham & Cummings, 1996; Woodman, Sawyer, & Griffin 1993; Shalley, Gilson & Blum 2000) critical for firms desiring to be innovative. Accordingly, here we focus on individual creativity, which refers to the ability to suggest new ways to achieve goals or objectives; to search out new technologies, processes, techniques, and/or product ideas; to approach problems with an open mind, to be unafraid of taking risks, to develop adequate plans and schedules for the implementation of new ideas.

Assuming that individual creativity often helps drive innovation many researches has acknowledged that organizational climate, or individuals' perceived support for innovation, facilitate or inhibit their creativity and innovativeness since individuals usually respond to their cognitive representations of environments rather than the environments per se (James and Sells, 1981; Amabile, 1988; Scott & Bruce, 1994). The more organization members believe that their organizations support innovation, the more they tend to show innovative behaviors (Scott & Bruce, 1994; Abbey and Dickson, 1983). Aspects such as task meaning and challenge, freedom and autonomy, team cooperation and friendliness, leadership support and organizational encouragement, sufficient resources have been brought forward as important features to perceive the organizational climate as being supportive of creativity and innovation (Abbey/Dickson, 1983; Scott/Bruce, 1994; Amabile et al. 1996; Anderson/West, 1998; Woodman/Sawyer/Griffin, 1993; Shalley, 1995; Cummings/Oldham, 1997).

A study by Scott and Bruce (1994) found evidence that innovative behavior is related to supervisor-subordinate relationship, support of innovation, and role expectations. Oldham and Cummings (1996) found that high job complexity, supportive supervision, informational feedback, freedom and low oversight control facilitate creative and innovative behaviour of the employees (Oldham/Cummings, 1996). Some others have noted that innovative organizations are characterized by an orientation toward creativity and innovative change,

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support for their members in functioning independently in the pursuit of new ideas (Kanter, 1983; Siegel/Kaemmerer, 1978), and a tolerance for diversity among their members (Siegel/Kaemmerer, 1978). According to Dunegan et al. (1992) divisional affiliation, work group interactions, and the quality of exchange between leader and subordinate significantly predict the perceptions of employees of climate factors believed to encourage innovative activities in the firm (Mohammad/Rickards, 1996, p. 110).

Tidd and Bessant (2009) claim that trust and openness, challenge and involvement, support and space for ideas, conflict and debate, risk-taking, and freedom are critical for support innovation. Krause's (2004) research testing 399 immediate managers of German organizations revealed that there is a positive effect on innovative behaviours when managers deliver autonomy and freedom and introduce specialized knowledge and information. Wei and Morgan (2004) also found a significant relationship between supportive climate and market orientation which in turn found to have a significant effect on new product performance. Morover, Bertels, Kleinschmidt, and Koen (2011) found higher supportiveness of business unit climate improves front end of innovation performance. Anderson and West (1998) also examined the climate for innovation in 27 hospitals and found that support for innovation at a team level was a significant predictor of overall innovation at the organizational level and also relative novelty of the innovation. Finally, Hurley (1995) investigated the link between group culture and innovative productivity and found that higher levels of innovativeness in group culture is associated with more innovative productivity. Thus, consistent with the previous researches it is hypothesized;

H3: Support for innovation is positively related with individual creativity.

H4: Support for innovation is positively related with firm innovativeness

Theoretical arguments have suggested no innovation is possible without the creative processes that mark the front end of the process: identifying important problems and opportunities, gathering information, generating new ideas, and exploring the validity of those ideas (Amabile, 2004, p. 1). Accordingly, it can be concluded that individual creativity is important in and of itself and can be conceptualized as a necessary first step or precondition required for innovation (Scott, 1995; Shalley/Gilson, 2004). Such creativity at the individual level, through idea generation and implementation, is likely to lead to the development of innovative products at the organizational level (Gümüşlüoğlu/İlsev, 2009, p. 465). Shalley et al., (2004) state that creative employees' new ideas are transferable to other employees in the organization for their own use and development. Creative individuals can mobilize the motivation needed to meet innovative demands.

Morover, they are likely to spend more time on creative cognitive processes to develop problem solutions that are qualitatively high as well as the generation of

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ideas or solutions, and they make serious efforts to seek sponsorship for ideas and produce prototypes. Therefore, they can perform specific tasks successfully and achieve organizational innovation goals in the face of obstacles (Hsu/Hou/Fan, 2011, p. 260-261). Since foundation of organizational creativity and innovation is ideas, and it is people who "develop, carry, react to, and modify ideas" (Van de Ven, 1986, p. 592), we expect individual creativity will be positively related to firm innovativeness, and suggest the following hypothesis.

H5:Individual creativity is positively related with firm innovativeness.

3 Method and results

3.1 Questionnaire development

To test the above hypotheses, multi-item scales adopted from prior studies for the measurement of constructs were used. Support for innovation was measured by 11 items adopted from the study of Scott and Bruce (1994). Psychological empowerment was measured by 12 items developed from the study of Spreitzer (1995). The scale contains three items for each of the four components of psychological empowerment: meaning, competence, self-determination and impact. Individual creativity was measured by 10 items adopted from the creativity measures of Tierney et al. (1999). Firm innovativeness was measured by 6-items developed from the study of Hult et al., (2004). All items were rated using a 5-point scale ranging from 1 ("Very strongly disagree") to 5 ("Very strongly agree"). The items used in our study are part of a large-scale questionnaire and therefore the respondents would likely not have been able to grasp the purpose of the study and force their answers to be consistent. Morover, instead of presenting items sequentially, they are dispersed among other items to cope with social desirability bias as suggested by Nederhof (1985).

3.2 Sampling

The purpose of this paper is to describe and analyze the mutual relationships among support for innovation, dimensions of psychological empowerment, individual creativity and firm innovativeness. Based on the assumption that empowerment is a rising phenomenon in management literature; it is mainly recognised by medium sized and big firms who have professional and well educated managers instead of amatur owners of micro and small firms; we decided to conduct our reserach on medium sized and big firms. In addition, they may be more innovative due to their appropriate resources, such as facilities or funds, are better able to have an environment that encourages employees to contribute new ideas, and management systems that support the use of new technologies and administrative processes at works, thus aiding the achievement of organizational innovation (Amabile et al., 1996; Scott/Bruce, 1994, Oldham/Cummings, 1996). Thus, in order to empirically investigate the hypotheses, medium sized and big firms located around Kocaeli, operating in manufacturing industry were surveyed. 650

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medium sized and big firms operating in manufacturing industry were recorded on the documents of Kocaeli Chamber of Commerce. We checked the websites of these 650 firms. 100 among 650 are identified as the target group, as they involve some issues or topics about creativity and innovation in their website.

The managers of the selected firms were initially contacted by telephone and the aim of the study was explained to them. Out of the 100 firms contacted, 72 agreed to participate in the study. Out of the 72 firms that agreed to participate, 48 firms completed the survey in full. Respondent firms were distributed across the following areas of manufacturing industry; metal industry, automotive industry, petroleum products, plastics and rubber industry, paper and paper products.

To avoid single-source bias, at least two respondents at middle management level and/ or top management level participated in the survey from each firm. The selection was based on the assumption that these individuals were knowledgeable about the firm level variables in their respective organizations. All respondents were informed that the data would remain anonymous and would not be linked to them individually, to their company, or to the company products. In addition, we assured respondents that there were no right and wrong answers and that they should answer questions as honestly and forthrightly as possible. Further, we developed a cover story to make it appear that the measurement of the predictor variable was not connected with or related to the measures of the criterion variable. These procedures reduced the evaluation apprehension and made the subjects less likely to edit their responses to be more socially desirable, lenient, and consistent with how they think the researchers wanted them to respond (Podsakoff et al., 2003).

An overall adjusted response rate of 48 percent was achieved, with 181 completed questionnaires returned. The mean age of the participants were 28.47; the proportion of men, 68%, and married 50,8%. Of the participants, 48,1% had university educations and 19,3% had master education, 82,9% were first line managers, 11% were middle managers and 6,1% were top managers.

3.3 Analysis

We used the partial least squares (PLS-Graph 3,0, Chin, 2001) approach to path modeling to estimate the measurement and structural parameters in our structural equation model (SEM) (Chin, 1998). The reason for using this technique is that PLS method can operate under limited number of observations and more discrete or continious variables. Therefore PLS method is an appropriate method for analysing operational applications. PLS is also a latent variable modeling technique that incorporates multiple dependent constructs and explicitly recognizes measurement error (Karimi, 2009). Also PLS is far less restrictive in its distributional assumption and PLS applies to situations where knowledge about the distribution of the latent variables is limited and requires the estimates to be

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more closely tied to the data compared to covariance structure analysis (Fornell/Cha, 1994).

3.4 Measurement validation

In this study, following Kleijnen, Ruyter and Wetzels (2007), we used reflective indicators for all our constructs (see, Appendix 1). To assess the psychometric properties of the measurement instruments, we estimated a null model with no structural relationships. We evaluated reliability by means of composite scale reliability (CR) and average variance extracted (AVE). For all measures, PLS-based CR is well above the cut-off value of .70, and AVE exceeds the .50 cut-off value. In addition, we evaluated convergent validity by inspecting the standardized loadings of the measures on their respective constructs and found that all measures exhibit standardized loadings that exceed .60. We next assessed the discriminant validity of the measures. As suggested by Fornell and Larcker (1981), the AVE for each construct was greater than the squared latent factor correlations between pairs of constructs (see Table 1).

3.5 Hypothesis testing

We used PLS path modeling which allows for explicit estimation of latent variable (LV) scores, to estimate the main effects in our model (see Figure 1). We used PLS Graph 3,0 and Bootstrapping resampling method to test their statistical significance. This procedure entailed generating 500 sub-samples of cases randomly selected, with replacement, from the original data. Path coefficients were then generated for each randomly selected subsample. T-statistics were calculated for all coefficients, based on their stability across the subsamples, indicating which links were statistically significant.

Figure 1: Proposed model

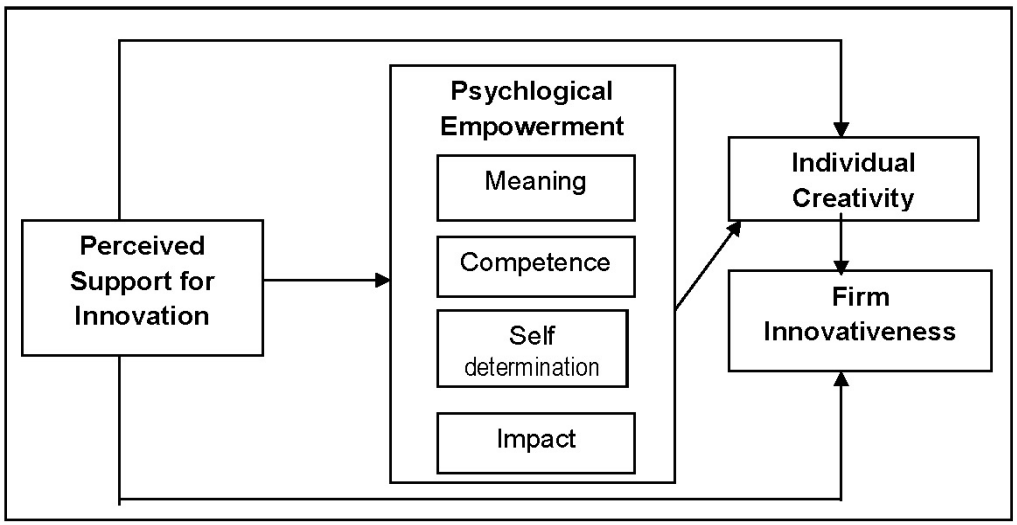

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Table 1: Correlations of latent variables

Variables		Mean	Std D.	1	2	3	4	5	6	7
Meaning	1	4.16	2.10	0.83(cr)	.182*	.235**	.235**	.222*	.259**	.260**
Competence	2	4.37	0.65		0.90(cr)	.438**	.343**	.458*	.171*	.215
Self determination	3	3.80	0.87			0.87(cr)	.631**	.415**	.423**	.358**
Impact	4	3.45	0.97				0.94(cr)	.496**	.427**	.354**
Support for innovation	5	3.54	0.80					0.94(cr)	.384**	.644**
Individual Creativity	6								0.91(cr)	.309**
Firm innovativeness	7	3.69	0.77							0.90(cr)

As shown in Table 2, the results illustrate that our hypotheses are largely confirmed. The results indicate that support for innovation positively affects meaning ($\beta = .46$, $p < .01$), competence ($\beta = .20$, $p < .05$), self determination ($\beta = .45$, $p < .01$) and impact ($\beta = .42$, $p < .01$), Therefore H1 is supported. With regard to effects of dimensions of psychological empowerment on individual creativity, we found that meaning ($\beta = .32$, $p < .01$), competence ($\beta = .24$, $p < .01$), and impact ($\beta = .27$, $p < .01$) are positively related to individual creativity. Therefore H2 is partially supported. However, the results did not provide any empirical evidence in support of the effects of support for innovation on individual creativity and also individual creativity on firm innovativeness. Therefore H3 and H4 are not supported. Further we found that support for innovation affects positively firm innovativeness in a very high rate ($\beta = .67$, $p < .01$) and therefore, H5 is supported.

Finally, findings in Table 2 indicate that support for innovation explains 21% of variance in meaning, 4% of variance in competence, 20% of variance in self determination, 18% of variance in impact dimensions of psychological empowerment. Support for innovation and dimensions of psychological empowerment and together explain 45% of variance in individual creativity, and finally the whole model explain 50% of variance in firm innovativeness.

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Table 2: Hypothesis testing results

Hypothesis	Relationship	Path coefficient (*β*)	Results
H1a	Support for Innovation → Meaning	.46**	*Supported*
H1b	Support for Innovation → Competence	.20*	*Supported*
H1c	Support for Innovation → Self determination	.45**	*Supported*
H1d	Support for Innovation → Impact	.42**	*Supported*
H2a	Meaning → Individual Creativity	.32**	*Supported*
H2b	Competence → Individual Creativity	.24**	*Supported*
H2c	Self determination → Individual Creativity	-.04	*Not Supported*
H2d	Impact → Individual Creativity	.27**	*Supported*
H3	Individual Creativity→ Firm Innovativeness	.05	*Not Supported*
H4	Support for Innovation→ Individual Creativity	.10	*Not Supported*
H5	Support for Innovation→ Firm Innovativeness	.67**	*Supported*

Fit measures	Endogenous construct	Final model
R^2	Meaning	.21
	Competence	.04
	Self determination	.20
	Impact	.18
	Individual Creativity	.45
	Firm innovativeness	.50s

Path coefficients are not standardized.
$^{**}p < .01$, $^{*}p < .05$

4. Conclusion

This paper has both theoretical and methodological contributions to the psychological empowerment, creativity and innovation literature. First, this study have tested a conceptual model that exceptionally integrates psychological empowerment theory with innovation supporting climate theories. Although considerable evidence indicates that some organizational climate aspects have the capacity to influence psychological empowerment, no previous research has been an attempt to assess potential connections between a climate designed in support of innovation and psychological empowerment. In general, work environments that provide access to information and resources (Kanter, 1993), social political support, participative climate (Spreitzer, 1996), supportive work relationships (Corsun/Enz, 1999), supervisory and organizational encouragement (Keller/Dansereau, 1995), rewards (Bowen/Lawler, 1992), feedback (Johns/Xie/Fang, 1992), communication with managers and general relations

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within a company (Siegal/Gardner, 2000), collective culture (Siegal/Pearson, 2000), leadership and teamwork (Mok/Yeung, 2002) were some issues significantly related to empowerment. Yet, the impact of organization members' perceived assessment of organizational climate as supportive of innovation on psychological empowerment has been absent from consideration.

For that reason this study is contributes to literature by suggesting that support for innovation has significant positive effects on all dimensions of psychological empowerment. The results suggest that when managers arrange the organizational climate in support of innovation, employees experience greater feelings of psychological empowerment. Accordingly, issues related to support for innovation such as recognizing the creative individual in the organization, supporting the creative ideas, allocating organizational resources, encouraging to change and innovate promote the employees sense of empowerment in such a way that it increases the perceptions of employees that their job requirements are meaningful and personally valuable; they have the ability to successfully perform tasks; they have a certain degree of autonomy and can shape desired outcomes through their behaviors; they have the power to influence their jobs and organizational processes.

Second, our study is scarce since it analyzes the connection of support for innovation with not only psychological empowerment but also individual creativity and firm innovativeness. Surprisingly, the results of current research indicated that the impact of perceived support for innovation on individual creativity were not statistically significant although previous literature convincingly supported the impact of organizatinal climate on individual creativity (Amabile et al., 1996; Scott/Bruce, 1994, Oldham/Cummings, 1996; Shalley/Zhou/Oldham, 2004). It is noteworthy that the stronger effect of support for innovation on psychological empowerment indicates that the first is an important determinant of later. Perhaps, this high correlation between support for innovation and psychological empowerment might have diminished the contribution of perceptions of support for innovation in predicting individual creativity, resulting in a nonsignificant relationship. Nevertheless, perceived support for innovation has a significant effect on firm innovativeness. This result is important because although past researches indicate a positive association between organizational climate and creative behavior, there is a lack of studies examining specific connection between support for innovation and firm innovativeness.

Morover, consistent with our expectations based on Spreitzer's (1995) model of empowerment three of the four psychological empowerment components including meaning, competence and impact are found to be significantly and positively related to individual creativity. Accordingly, when an employee perceives that his or her job requirements are meaningful and and personally valuable, s/he can increase his or her creative activities by willingly spending time and effort necessary to thoroughly identify a problem, search for extensive information, and

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generate multiple ideas from different perspectives (Sun/Zhang/Qi/Zhen, 2012; Zhang/Bartol, 2010). Also psychologically empowered subordinates see themselves as more capable of shaping work roles and work context (Spreitzer, 1995), and are therefore motivated to try creative approaches to solving problems and performing tasks. In addition, researches revealed that increased self-efficacy beliefs by enhancing perceptions of competence resulted in higher levels of creativity since it nourishes intrinsic motivation (Redmond et al., 1993; Bandura, 1997). This connection is remarkable because according to Amabile's (1988) compenential model of creativity domain expertise, creative-thinking skills, and intrinsic motivation is considered to be the most exclusive factors that have the potential to affect creativity.

On the other hand, this study found no significant relationship between self-determination and individual creativity consistent with the study of Ertürk (2012). Similarly, he found positive relationship between three of the four psychological empowerment components including meaning, competence and impact and innovation capability but the relationship between self determination and innovation capability was not found to be statistically significant. Relatedly, in a research carried out in a luxury hotel group by Amenumey and Lockwood (2008) reconceptualised the original psychological empowerment construct into three factors, producing results similar to those of Fulford and Enz (1995), Sigler and Pearson (2000), Hancer and George (2003), and Dimitriades (2005). They claim that there has been a merging of the self-determination and impact constructs since in some organisations, employees do not distinguish clearly between their influences at the work / departmental level as opposed to their influence at the organisational level.

Although many researchers have emphasized the importance of individual creativity and stated that individual creativity is the starting point and key ingredient for the success of organizational innovation (Amabile et al., 1996; Shalley/Zhou/Oldham, 2004; West/Farr, 1990), we found no correlation between individual creativity and firm innovativeness. Supporting this idea, individual creativity was not significantly correlates with organizational innovativeness in a research conducted in Turkey by Gümüşlüoğlu and İlsev (2007). The similar results of these two separate studies conducted in Turkey reinforces argument that Turkish collectivistic culture with high-power distances may be different from those that influence innovation in individualistic Western cultures with low-power distances. Consequently, findings of this study highlights the importance of support for innovation and implies that individual creativity by itself may not be sufficient to promote firm innovativeness. Our findings also indicate that managers of an organization are more effective in innovation process by encouraging followers to think about old problems in new ways, increasing their willingness to perform in creative process, providing adequate amounts of resources and challenging them to adopt innovative approaches in their work.

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To sum up, although psychological empowerment, creativity and innovation have been studied intensively by organizational behaviour researchers across cultures, to our knowledge there have been no prior empirical studies of the application of these theories in a Turkish culture. Turkey is regarded as a developing country and like countries with similar developing economies need to be innovative to be able to compete in the global arena successfully. According to the reports of Republic Of Turkey Ministry Of Industry and Trade (2010) innovation management initiatives are not getting well grounded in Turkish manufacturing firms although top management is aware about the need for innovation culture needed for the corporate success and business survival. It's obvious that innovation is systematic in nature and must be managed and thus it is crucial to identify the obstacles to innovate. We also hope the findings of this study might be of interest to other developing countries and future work in other cultures seems necessary to improve our understanding of the role that support for innovation, psychological empowerment and individual creativity play in innovation process.

Limitations and future research

There are some methodological limitations to this study. Specifically, our research is prone to common method bias since the same respondents answered the dependent variable that answered the independent variable, as well as the individual level and organizational level variables in a cross-sectional manner. We checked this potential problem with the Harman one-factor test (Podsakoff/Organ, 1986). The results of an unrotated principal component analyses indicate common method variance is not a problem because several factors with eigenvalue greater than 1 were identified – explaining 64.93% of the total variance, and because no factor accounts for almost all the variance (i.e., highest single variance extracted is 29.75%). In addition, following Lindel and Whitney (2001), we partialed out the smallest correlation of the remaining correlations in order to remove the effect of common method bias. Given that all unadjusted correlation coefficients remain statistically significant at $p < .05$ after adjusting for common method bias, even under the strictest conditions applied in our sensitivity analysis, we feel more confident that the findings of our analysis are not due to common method bias. Moreover the literature on firm innovativeness abounds of researches in which the individual and organizational level variables are tested based on date from the same respondents (e.g. Hsu/Hou/Fan, 2011; Bharadwaj/Menon, 2000; Wattanasupachoke, 2012; Im/Montoya/Workman, 2013; Çokpekin/Knudsen, 2012; Noruzy/Azhdari/Shirkouhi/Rezazadeh, 2013; Hunga/Bella/Lienb/Fangc/McLean, 2010). Thus, it was concluded that common method bias does not present itself a major source of bias in this research.

Utilizing a cross-sectional design with questionnaires was also one of the limitations of this study. Even though "surveying is a large and growing area of re-

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search in the natural environment" (Graziano/Raulin, 1997), the method used (only a questionnaire) may not provide objective results about the physlogical empowerment, which is an inherently dynamic phenomena, throughout the organization. However, we should also mention that, as a cross-sectional field study, this research provides some evidence of associations. In this regard, Podsakoff and Organ (1986, p. 539) stated that, ". . . because correlational field studies often provide useful information about relationships among important variables in actual organizational settings, few would advocate that they be totally discarded." A future research strategy that may overcome this limitation is one that involves longitudinal studies in which one can follow the physocogical empowerment over time. In addition, using objective measures, archival data for some variables, such as the amounts of registered patents, may give results that are more objective.

In addition to the nature of data, the generalizability of sampling is another limitation of this study. The study was conducted in a specific national context, Turkish firms. It is important to note that readers should be cautious when generalizing the results to different cultural contexts. For instance, environmental uncertainty variable is country bonded. In Turkey, which has a developing economy, technology and market uncertainties are less intensive and complex than the Western and developed countries' ones. Also, having a near-eastern culture, empathy among people and a sense of identification to the organization may be more intense than other nationalist cultures. However, tolerance for risk and mistakes is less acceptable than other cultures. In this regard, a Turkish sample, like that of any culturally bound research, imposes some constraints on the interpretation and application of the results. Therefore, it would be beneficial if future studies replicate these findings in different cultures and industries to confirm generalizability in other settings.

Second, we did not include personality type into our investigation and predicted that all employees desired the same degree of empowerment. However, some researches (e.g. Zhang/Bartol, 2010) indicates that employees with certain specific traits or of a particular personality type are more likely to experience psychological empowerment and thereby respond favorably to empowerment. Third, our study has only examined the role of innovation supporting climate in fostering individual creativity and innovativeness. Yet, the behaviors of organizational members occur in a far more complex environment and could be affected by many additional factors such as leadership, reward system, resource allocation, job design and etc. Therefore, it can be suggested to other researchers who wants to study in this subject to investigate these factors. Last but not least this study includes a wide variety of manufacturing industries such as metal industry, automotive industry, petroleum products, plastics and rubber industry, paper and paper products. The relations among psychological empowerment, support for innovation, individual creativity and firm innovativeness are investi-

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gated via the sample comprising different areas of manufacturing industries and thus the findings are rendered on behalf of the manufacturing industry.

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Appendix 1

Table 3: The standard loading, composite reliability and AVE values of the items

Psychology empowerment	
Meaning (CR: 0,83, AVE: 0,653)	
The work I do is very important to me	0,96
My job activities are personally meaningful to me	0,95
The work I do is meaningful to me	0,97
Competence (CR: 0,90, AVE: 0,75)	
I am confident about my ability to do my job	0,90
I am self-assured about my capabilities to perform my work activities	0,87
I have mastered the skills necessary for my job	0,83
Self-determination (CR: 0,88, AVE: 0,70)	
I can decide on my own how to go about doing my work	0,84
I have considerable opportunity for independence and freedom in how I do my job	0,84
I have significant autonomy in determining how do I my job	0,84
Impact (CR: 0,95 AVE:0,85)	
My impact on what happens in my department is large	0,93
I have a great deal of control over what happens in my department	0,95
I have significant influences over what happens in my department	0,89
Perceived Support for Innovation (CR: 0,91, AVE: 0,63)	
Creativity is encouraged here	0,80
The people in charge around here usually get credit for others' ideas	0,55
Our ability to function creatively is respected by the leadership	0,73
The people in charge around here usually get credit for others' ideas	0,75
This organization can be described as flexible and continually adapting to change	0,83
This organization is open and responsive to change	0,84
Around here, people are allowed to try to solve the same problems in different ways	0,77
Assistance in developing new ideas is readily available	0,80
This organization gives me free time to pursue creative ideas during the workday	0,79
This organization publicly recognizes those who are innovative	0,86
Around here, a person can get in a lot of trouble by being different	0,85
Individual Creativity (CR: 0,91, AVE: 0,50)	
I suggest new ways to achieve goals or objectives	0,76
I come up with new and practical ideas to improve performance	0,70
I search out new technologies, processes, techniques, and/or product ideas	0,71
I suggest new ways to increase quality	0,75
I am not afraid to take risks	0,66
I develop adequate plans and schedules for the implementation of new ideas	0,73
I exhibit creativity on my job when given the opportunity to	0,76
I often have new and innovative ideas	0,60
I suggest new ways of performing work tasks	0,67
I often have a fresh approach to problems	0,70
Firm Innovativeness (Composite Reliability = 0,899, AVE = 0,600)	
Our new products and services are often perceived as very novel by customers	0,72
New products and services in our company often put us up against new competitors	0,67
In comparison with competitors, our company has introduced more innovative products and services during the past five years	0,77
In comparison with competitors, our company is faster in bringing new products or services into the market	0,87
The nature of the manufacturing process in our company is new compared with that of our main competitors	0,75
We are constantly improving our business process	0,82

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