The Moderating Role of Organizational Storytelling in the Relation between Organizational Memory and Innovative Work Behaviors

Duygu SEÇKİN HALAÇ
Tutku SEÇKİN ÇELİK

Abstract

This study investigated the relation between organizational memory and innovative work behaviors of employees from a social information processing approach considering the moderating effect of organizational storytelling. Data from banking sector revealed the positive effects of procedural memory and declarative memory on innovative work behavior and the moderation effect of storytelling on emotional memory. Post-hoc analysis also indicated that in the relation between storytelling and innovative work behavior, an organization’s innovativeness tendency is significant. Furthermore, since there was not an organizational storytelling measurement in the literature, a new measurement was formed in accordance with the aim of the research.

keywords: Innovative work behavior, organizational memory, organizational storytelling
Résumé

L'effet modérateur de la narration organisationnelle dans la relation entre la mémoire organisationnelle et le comportement de travail innovateur

Cette étude examine la relation entre la mémoire organisationnelle et les comportements de travail innovateurs des employés à partir d’une approche de traitement de l’information sociale qui prend en compte l’effet modérateur de la narration organisationnelle (story telling). Les données provenant du secteur bancaire ont révélé les effets positifs de la mémoire procédurale et de la mémoire déclarative sur le comportement de travail innovateur et l’effet de la modération de la narration sur la mémoire émotionnelle. L’analyse post-hoc a également indiqué que la tendance à l’innovation d’une organisation est significative sur la relation entre la narration et le comportement de travail innovateurs. En outre, une nouvelle mesure a été constituée conformément à l’objectif de la recherche.

mots-clés: comportement de travail innovateur, mémoire organisationnelle, story telling

Öz

Örgütsel Hafıza ve Yenilikçi İş Davranışı İlişkisinde Örgütsel Hikaye Anlatımının Aracı Rolü


anahtar kelimeler: yenilikçi iş davranışları, örgütsel hafıza, örgütsel hikayeler
Introduction

Globalization, expansion of technology in transportation and communication, and intensification of knowledge have generated challenges for the organizations. In today’s dynamic and fast-changing competitive business world, survival of the organizations depends mostly on their ability to continuously innovate. Having recognized this necessity, most firms are craving to innovate. However, building an innovative work environment is not confined to aspirations of top management and R&D units. All individual efforts matter in continuous innovation and improvement, and innovation can come from anywhere in the organization. Employees are the ones, who are directly affected from the problematic work processes, and who have closer contacts with customers or end users of the products. Thus, employees can more easily sense the potential needs for innovation. From this point, the base unit of innovation is individuals. According to resource based view of the firm (Barney, 1991) employees’ Innovative Work Behaviors (hereafter IWB) could be taken into account as one of hard to imitate, hard to substitute, valuable and rare resource which can provide a sustainable competitive advantage over competitors.

Innovation results from the mutual efforts of individuals, groups, and organizations as a whole. It requires a set of tasks to be performed in different levels of the organization. Individual and group efforts to innovate have to be supplemented by more macro level tasks through enhancing structural and social factors (Kanter, 1988). Firms, whose major concern is to attain the distinctive competences, need to evaluate firm capabilities in terms of organizational structures and managerial processes that support change-oriented behaviors or more specifically IWBs (Teece & Pisano, 1994). In order to understand how organizations can enhance such behaviors through their organizational arrangements and the reasons of why individuals engage in IWBs, past researches on innovative work behavior have focused on different individual and organizational determinants, such as individual attributes, job design, organizational climate, justice, and leadership (e.g., Devloo, Anseel, Beuckelaer, & Salanova, 2015; Imran, Saeed, Anis-Ul-Haq, & Fatima, 2010; Janssen, 2000; Ramamoorthy, Flood, Slattery, & Sardessai, 2005; Scott & Bruce, 1994; Yidong & Xinxin, 2013; Young, 2012).

From a social information processing perspective (Salancik & Pfeffer, 1978), this paper argues that organizational memory (hereafter OM), which is affected by social context, can be an antecedent of IWBs of individuals. OM consists of “stored information from an organization’s history that can be brought to bear on present decisions,” (Walsh & Ungson, 1991, p. 61). People learn what constitutes facts, knowledge, problems, and how to react, behave through their social context (Salancik & Pfeffer, 1978), more specifically work environment. Memories of an organization stored in individuals, systems, processes and culture are retrieved when necessary. Thus, individuals decide to
innovate according to the stance of the organization to improvements, and they acquire this information through OM. To date, no research has examined OM as an antecedent of innovative work behavior, thus it could be considered as a unique contribution to the literature.

Moreover, enhancing IWBs requires mechanisms to enable productive social interactions where organizational culture, more specifically, organizational storytelling (hereafter ST) can play a key role (Bartel & Garud, 2009). In the literature, ST is used as one of the communication tools to narrate essential organizational values, assumptions and norms such as how things need to be done, the expectations, what can (not) be tolerated, what can be punished (Boje, 1991, 1995). Thus, they are to improve socialization, to strengthen organizational communication and culture. From this point of view, storytelling in organizations are anticipated to further enhance the relationship between OM and employees’ IWBs.

In the literature, by putting a growing importance on OM, it is mostly seen as a tool for supporting a company’s competitive position, whereas possible counterproductive effects are largely ignored (Dunham & Burt, 2011; Johnson & Paper, 1998; Kransdorff & Williams, 2000). Likewise, ST could also restrain change and avoid IWBs if strong cultural values, beliefs and norms are so ingrained that confined the employees into strict unwritten rules (Sole & Wilson, 2002). Thus, a strong culture and information sharing that strengthened by ST may transform organizations into conservative ones, which may discourage employees’ IWBs. This study is also questioning the influence of ST as a deeply ingrained cultural transmitter whether it is always favorable for organizations, specifically when it comes to IWBs as one of the significant tools for maintaining competitiveness. This research aims to understand the relation between OM and IWBs, through a social information processing approach. In addition, examining the role of ST on the relationship between OM and IWB is another purpose of the current research. Previous researches mostly focused on IWBs in manufacturing organizations and R&D (e.g., Janssen, 2000; Ramamoorthy et al., 2005; Scott & Bruce, 1994). On the other hand, present study focuses on banking employees, and, thus process and service innovations. So, this work could be considered to extent the related literature by increasing the understanding of IWB in service industry. Moreover, ST has been evaluated through qualitative research up to present time. This paper also contributes to the literature by proposing a quantitative measure of ST.

Literature Review

Innovative Work Behaviors (IWBs)

Janssen (2000, p. 288) defined IWBs as “the intentional creation, introduction and application of new ideas within a work role, group or organization,
in order to benefit role performance, the group, or the organization.” Therefore, in order to consider any efforts as IWBs, they need to be “intentional” and in the end lead to a “novel” solution and a benefit in return. Thus, creativity or generating ideas is not sufficient, innovation also requires championing and implementation of ideas (De Jong & Den Hartog, 2010). Some authors have made a clear distinction between creativity and innovation. Creativity refers to “creation of something absolutely new”, while IWB focuses on “something new, for the relevant unit of adoption” (De Spiegelaere, Van Gyes, De Witte, & Hootegem 2015, p. 126). Besides, creativity is the production of novel and useful ideas by an individual”; while “innovation is the successful implementation of creative ideas” within an organization (Amabile, 1988, p. 126) Individual creativity is a crucial element in IWB, and idea generation phase may include creativity, but promotion and application of new ideas are also necessary elements in IWBs (Yidong & Xinxin, 2013). In other words, “IWBs are explicitly intended to provide some kind of benefit” (De Jong & Den Hartog, 2010, p. 24). Therefore, IWBs include “behaviors of employees that directly or indirectly stimulate the development and introduction of innovation at the workplace” (De Spiegelaere et al., 2015, p. 126).

Scott and Bruce (1994) proposed a multistage process of individual innovation drawing on Kanter’s (1988) work. Idea generation, idea promotion, and idea realization are considered as three stages of individual behaviors in the literature (e.g., Devloo et al., 2015; Veenendaal & Bondarouk, 2015; Young, 2012), where these phases are labeled as IWB (as in Janssen, 2000). Innovation process begins with recognizing the problems and generating ideas or solutions to those problems. These ideas can both be novel or adopted. In the second stage, individuals who have innovative ideas seek support for the implementation of their ideas. They may attempt to build coalitions of potential allies for their ideas to be implemented. In the last stage, individuals, who have generated the ideas and found support for them, produce a prototype or a model of their ideas that can be experienced, produced, and used.

The importance of IWBs is evident for the organizations. However, there is no legal necessity for employees to engage in innovative work behaviors. Employees’ IWBs are neither part of their formal role nor contractually obliged. Therefore, failing to engage in IWBs do not violate written contracts, and not necessarily rewarded by the organization (Ramamoorthy et al., 2005). Performing innovative behaviors rather considered as an extra-role behavior (Janssen, 2000; Ramamoorthy et al., 2005). In order to understand this dilemma, several studies in the literature were interested in the antecedents of IWBs. There found diverging reasons as to why employees perform IWBs. Individual attributes and intrinsic motivation (e.g., Devloo et al., 2015; Ramamoorthy et al., 2005; Scott & Bruce, 1994; Yidong & Xinxin, 2013); job design and characteristics (De Jong & Kemp, 2003; De Spiegelaere et al., 2015; Janssen, 2000); organizational justice
(Janssen, 2000; Ramamoorthy et al., 2005; Young, 2012), organizational climate (Imran et al., 2010; Scott & Bruce, 1994), leadership (Basu & Green, 1997; Lee, 2008; Scott & Bruce, 1994; Yidong & Xinxin, 2013) were found to affect IWB.

**Organizational Memory (OM)**

OM is different from the sum of individual memories (Spender, 1996), rather a type of collective memory shared by organizational members (Nissley & Casey, 2002). Even when key individuals left the organization, these memories are preserved and used in the organization (Walsh & Ungson, 1991). Besides, individuals within the organization no longer individually remember what generated the stored knowledge, but continue to use same information to conduct their work (Chang & Cho, 2008). On the basis of the assumption that organizations resemble information-processing systems, Walsh and Ungson (1991, p. 61) define OM as “the stored information from an organization’s history that can be brought to bear on present decisions.” By “allowing organizations to store and retrieve knowledge of facts, processes or experiences”, OM is considered as one of the key capabilities of an organization (Yates, 1990, p.172).

Stein (1995, p. 20) noted the necessity of defining OM in terms of effectiveness; and defined OM as “the means by which knowledge from the past is brought to bear on present activities, thus resulting in higher or lower levels of organizational effectiveness”. Effectiveness approach is consistent with the expectation of business world from management scholars. The reason why organizations are dealing with organizational knowledge, learning and memory is due to their desire to improve business performance (Cross & Baird, 2000). However, Stein (1995) also warns researchers and practitioners to be cautious about the direction of the effectiveness; high levels of OM may lead to low levels of effectiveness due to rigidity and inflexibility resulting from accumulated knowledge rooted in routine practices. Information related to past events retrieved from memory is concerned to deteriorate an organization’s learning attempts. According to this view, high levels of OM will prevent alternative evaluations and decisions, and lead to blindness and rigidity (Walsh & Ungson, 1991). Although the proponents of positive effects of OM recognize that a complete reliance on the past can produce undesirable outcomes (Walsh & Ungson, 1991), they claim that it can also enhance efficiency through reducing transactional costs associated with search and experimentation when facing routine decisions. Remembering policies and procedures of the past allows organizations to identify more or less efficient processes and individuals, makes it easier to abandon inefficient practices (Yates, 1990).

Moorman and Miner (1997, p. 93) argue that indicators of OM in the form of shared beliefs, behavioral routines and physical artifacts (Rowlinson, Booth, Clark, Delahaye, & Procter, 2010) perform two essential roles: “interpretation by filtering the way in which information and experience are categorized and
sorted”, and “action guidance by dictating or influencing individual and group actions”. The question of how people interpret the information and guide their actions bring us to the process of OM. From an information processing perspective, three interwoven stages of OM include acquisition, retention and retrieval. When a problem occurs or a decision must be made in an organization, individuals retain the information and given response about this particular situation. That is they acquire this knowledge with regard to their individual or organizational schemata in a unique way. This decision information is stored in five storage bins consist of individuals, culture, transformations occur in the organizations, collective social structures, workplace ecology (physical structure), and external archives such as former employees, competitors, governments and governmental regulatory bodies, media and business historians. When previous practices and experiences are shared and encoded in above mentioned retention facilities, they are retrieved when necessary. Retrieval may occur completely automatic or controlled (Walsh & Ungson, 1991).

There is a consensus on the content of OM in the literature. Here, content refers to the meaning of shared knowledge/information/experience, and it is classified as procedural and declarative memory (Moorman & Miner, 1997). Procedural memory (hereafter PM), or as expressed synonymous with tacit knowledge in some cases (Dunham & Burt, 2011; Nonaka, 1994), is defined as the memory “for how things are done” and it is relatively automatic and inarticulate (Cohen & Bacdayan, 1994, p. 554), it “allows us to learn skills and acquire habits” (Schacter, 1997, p. 17). On the other hand, declarative memory (hereafter DM), is defined as the “memory for facts, events, or propositions” (Cohen, 1991, p. 137), and “contains conceptual and factual knowledge” (Schacter, 1997, p. 17). Information about competitive structure and the characteristics of the industry can be thought of examples of DM, and organizations that have been operating in an industry for some time will accumulate this kind of factual knowledge about the environment. While dealing with such problems related to the environment of organizations, some standard procedures and practices may also accumulate. Such practices are examples of PM that allows us to learn routines (Moorman & Miner, 1998).

Our memories are formed by past events in our lives, however two people witnessing the same situation would end up two different memories regarding the experience. Because, memories are not simply recalling past events, and not synonymous with history, but reflects individuals’ feelings and emotions about the experiences (Lowenthal, 1986, p. 200; Schacter, 1997, p. 7). However, emotional aspect of OM has long been ignored. Lately, Akgün, Keskin and Bryne (2012a, p. 99) introduced organizational emotional memory (hereafter EM), concept. It is “the memory of past strong episodic emotional experiences or events that are unconsciously embedded and imaged for use in present and future actions, and operations of organizations.” Most of the experiences individuals confronted in organizations are often imbued with
feelings and emotions, thus emotional content of memory should not be omitted while evaluating organizations. EM integrates the other content types of OM, namely PM and DM. But it does not stored in written documents, rather distributed through stories and dialogs among organizational members (Akgün et al., 2012a).

This paper argues that not only EM but also DM and PM are affected from the social context in which the employee belongs. How memories of individuals would be stored and coded is determined by previous encounters of people with the world (Schacter, 1997, p. 7). Individuals store and retrieve their memories with regard to their social context including family, ethnic group, nation, and organizations (Halbwachs, 1992, p. 43; Zerubavel, 2003, p. 3). From the social information processing approach, individuals adapt attitudes, behavior, and beliefs to their social context, and to the reality of their own past and present behavior and situation. Social context effects attitude and behaviors by providing a direct meaning construction through guiding socially acceptable beliefs, attitudes, needs, and acceptable reasons for action; and indirectly by focusing an individual’s attention on certain information, and making that information more salient, providing expectations and justifications about the behavior (Salancik & Pfeffer, 1978). So, individuals acquire, retain and retrieve what is a problem, how to react problems, how to find solutions, what to expect, and how to behave in an organization through their social context. Thus, employees decide whether to innovate or not innovate according to their social context. For example, if the past reactions to improvements and novel ideas were appreciated, and further realized as useful business applications, employees might engage in IWBs. On the other hand, if the organization gave signals of intolerance to new ideas and innovations in the past, and stick to their traditionalist procedures, employees might never even propose a slightest improvement in their product line or work processes. Following the literature, it is hypothesized that:

\[ H_1: \text{Organizational Procedural Memory (PM) is associated with Innovative Work Behavior (IWB)} \]
\[ H_2: \text{Organizational Declarative Memory (DM) is associated with Innovative Work Behavior (IWB)} \]
\[ H_3: \text{Organizational Emotional Memory (EM) is associated with Innovative Work Behavior (IWB)} \]

**Organizational Storytelling (ST)**

ST in organizations “encompasses both the stories that are told within organizations by its members and the stories that organizations create in the form of official speeches, brochures, advertisement and so on” (Adorisio, 2009, p. 7). Boje (1991, p. 106) sees organizations as collective storytelling systems, and hence defines storytelling organizations as “a collective system in which performance of stories is a key part of members’ sense making and a means to
allow them to supplement individual memories with institutional memory. “ There are several definitions and interpretations of ST. Authors have conceptualized the term with regard to their epistemological foundations and the purposes of their analysis (Adorisio, 2009, p. 7). According to Boyce (1996), the literature on ST can be evaluated from three different lenses: social constructivism, organizational symbolism, and critical theory. From the social constructivist perspective, ST is instrumental as a social control tool for new members’ socialization, acceptance, and adaptation processes. From an organizational symbolism perspective, stories carry an organization’s tacit or hard-to-decipher characteristics that distinguish the organization from others. As for, critical theory, stories are again a tool, but for the maintenance of extant power hegemony within the organization by giving voice to the dominant ones, while the other voices are silent or less frequently heard. ST is used to increase the motivation and provide identification with the organization or the leader (Boyce, 1996).

Storytelling have several functions in organizations, including entertainment, conveying information, nurturing communities, promoting innovation, preserving organizations, but also changing organizations (Brown, Denning, Groh, & Prusak, 2005, p. 110). Sometimes organizations deliberately tell and disseminate stories to inspire and guide employees in order to achieve business success. Denning (2006) asserted that organizations must effectively use ST, but diverging organizational objectives require different types and styles of stories. ST may be used as a tool for eight different objectives: sparking action, communicating who you are, transmitting values, branding, fostering collaboration, strengthen the communication, sharing knowledge, and leading people into the future.

ST can also be harmful for the organization, especially for the ones who desire to innovate. Geiger and Antonacopouluou (2009) claim that it can be a source of both change and stability in organizations. In their research, they found that some dominant and hegemonic discourses such as “customer intimacy is the basis of our success” did not change over the years. So, they concluded that ST reinforces the status quo, and limit the scope for organizational learning, hence lead to inertia and create blind spots in organizations. In a similar vein, Sole and Wilson (2002) asserted that if ST is reinforced by strong deeply ingrained cultural values, it might discourage innovative behaviors, and turn the organization into a conservative one. On the other hand, Bartel and Garud (2009, p. 114) argue that organizational stories may sustain organizational innovation through “the recombination of ideas to generate novelty, real-time problem solving to promote commercial development, and the sustenance of innovation by coordinating present innovation efforts with past experiences and future aspirations”. However, they specifically examine innovation narratives as an antecedent of sustaining innovation.

The stance of this study differs from the previous literature. The role of organizational culture, more specifically the role of ST is expected to moderate
the relationship between OM and IWBs. Memory is carried through culture, structure, systems and procedures. So, ST makes a particular memory more salient, when a relevant problem occurs, and the more easily memory will develop and learning occur (Van Der Bent, Paauwe and Williams, 1999). Socialization processes that result to an association between OM and IWBs are fostered further through ST. Thus, the degree to which organizations depend upon ST is anticipated to make the relationship between OM and IWBs stronger. Therefore, following hypotheses were also presented for the present research:

- **H4**: Storytelling (ST) moderates the relation between Organizational Procedural Memory (PM) and Innovative Work Behavior (IWB)
- **H5**: Storytelling (ST) moderates the relation between Organizational Declarative Memory (DM) and Innovative Work Behavior (IWB)
- **H6**: Storytelling (ST) moderates the relation between Organizational Emotional Memory (EM) and Innovative Work Behavior (IWB)

Therefore, based on the literature, the research model was constructed as seen on Figure 1.

**Figure 1.** Research Model

![Research Model Diagram](image)

**Methodology**

**Research Goal**

The aim of this study is to investigate the relation between OM and IWBs of employees considering the moderating effect of ST. A field study in which survey method is used was realized to collect data. ST is mostly discussed in narrative studies and, if empirically analyzed in any research, only case studies were used. Therefore, there is not any previously validated scale to be used in our study. Therefore, to construct a single dimensional organizational ST scale is another aim of this paper.
Scale Development

To measure IWBs, we used a previously validated, single dimensional scale of Janssen (2000 as used in Clercq, Dimov, & Belausteguigoitia, 2014). To measure OM a multidimensional scale of Akgün et al., (2012b) was used, which includes DM, PM and EM components. Both scales were adapted to the Turkish culture, if necessary, by translation and back-translation procedure. The construction of ST scale was mostly based on Sole and Wilson’s (2002) discussion paper. In the end, 9 items were used to utilize for IWBs, 8 items for ST, and 41 items for OM, where the distribution was realized as 9, 8, 24 for DM, PM and EM in a row. Five-point Likert style anchor was used in parts where the format was used from one to five 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree.

Sample and Data Collection

The studies of IWBs mostly examined in the samples of manufacturing industry in the literature. However, the importance given to service industries also in the rise lately (as in Chen, Li, & Leung, 2016; De Jong & Den Hartog, 2010; Montani, Odoardi, & Battistell, 2015; Stock, 2015). Therefore, in this study, service industry, specifically; banking sector was in the focus. For the field study, headquarters and branches of 3 government-owned and 12 private banks located in Istanbul were visited. A total of 650 survey forms were handed out to contact people of the organizations. Field study was ended after three-rounds of sending reminders to those contact people. In the end, voluntarily participated 111 employees were included to field study where 46.4% of them were women. 34.5% of the participants work for 1 to 3 years and 32.7% of them work for 3 to 5 years for their organizations. The total work experience of 3 to 10 years consisted of 62.7% of all. 41.4% of them had bachelor’s degree, where 56.8% had graduate degrees. Participants also were also asked to evaluate their organizations on the basis of being open/close/slowly adapted to innovation. Results showed that, 35 of the participants perceived their organization as open to innovation, 27 of them perceived as close to innovation and 49 of them perceived as slowly adapted to innovations.

Analysis and Findings

The analyses were based on the data collected from 111 participants. SPSS 20 statistical package were used to assess data. To determine the appropriateness of factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy and Barlett’s test of sphericity were used. At first, ST and IWBs items were included together to the analysis where OM was analyzed alone with its dimensions. The results of the KMO measure for ST and IWBs showed a level of .848, which is acceptable for further analysis. Barlett’s test revealed a significance at a level of .000 ($\chi^2(78) = 730.938$, p < .000).
Kaiser’s Varimax Rotation was conducted for factor analysis procedure. Factor loadings of .45 and above were considered satisfactory. Some of the items of ST (ST5, ST6, ST7, ST8) were excluded as to their detrimental effects on the factor structure, where all IWBs items were saved. Factors and related factor loadings can be seen in Table 1.

**Table 1. Factor Loadings of ST and IWB Scales**

<table>
<thead>
<tr>
<th>Items</th>
<th>Factors</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>IWB2</td>
<td>.811</td>
</tr>
<tr>
<td>IWB8</td>
<td>.799</td>
</tr>
<tr>
<td>IWB1</td>
<td>.798</td>
</tr>
<tr>
<td>IWB4</td>
<td>.794</td>
</tr>
<tr>
<td>IWB3</td>
<td>.778</td>
</tr>
<tr>
<td>IWB5</td>
<td>.763</td>
</tr>
<tr>
<td>IWB7</td>
<td>.754</td>
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<tr>
<td>IWB9</td>
<td>.743</td>
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<tr>
<td>IWB6</td>
<td>.719</td>
</tr>
<tr>
<td>ST3</td>
<td>.847</td>
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<tr>
<td>ST2</td>
<td>.822</td>
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<td>ST1</td>
<td>.708</td>
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<tr>
<td>ST4</td>
<td>.650</td>
</tr>
<tr>
<td></td>
<td>Total explained variance 60.861</td>
</tr>
</tbody>
</table>

In the literature, OM has been considered in a multidimensional construct with the dimensions of DM, PM and EM where EM also have three sub factors, namely emotional experience level (EEL), emotional experience dispersion (EED) and emotional experience storage (EES) (Akgün et al., 2012b). The results of the KMO measure for OM showed a level of .746, which is acceptable for further analysis. Barlett’s test revealed a significance at a level of .000 ($\chi^2(406) = 1652.403, p < .000$). Some of the items (DM3, PM3) were excluded as to their disruptive effects. All OM dimensions were loaded to related factors in line with the literature. Factors and related factor loadings can be seen in Table 2.
Table 2. Factor Loadings of OM Subscales

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
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<tr>
<td>PM5</td>
<td>.775</td>
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<tr>
<td>PM8</td>
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<td>PM2</td>
<td>.678</td>
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<tr>
<td>DM6</td>
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<td>DM4</td>
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<td>DM2</td>
<td>.710</td>
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<td>DM5</td>
<td>.699</td>
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<tr>
<td>EEL4</td>
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<td>.762</td>
</tr>
<tr>
<td>EED4</td>
<td>.717</td>
</tr>
<tr>
<td>EED1</td>
<td>.670</td>
</tr>
<tr>
<td>EED2</td>
<td>.578</td>
</tr>
<tr>
<td>EED3</td>
<td>.567</td>
</tr>
</tbody>
</table>

Total variance explained 61.591

Unidimensionality as a validity indicator was provided considering the factor analyses results. The variables concerning every factor were found to be highly loaded on a single factor with an eigenvalue of 1 is considered as cutting point, which is the indicator of factor unidimensionality. Significantly loaded
variables (as in Table 1 and Table 2) also confirmed convergent validity of the scales.

Cronbach’s alpha coefficient is supposed to be .70 or more to consider the scale is reliable. All scales were satisfactory (Cronbach’s alpha coefficient values of ST(α) = .76, IWBs(α) = .92, DM(α) = .89, PM(α) = .89, EEL(α) = .84, EED(α) = .69, EES(α) = .88). EEL, EED and EES were the sub dimensions of EM. Hereafter, EM variable was used in all analysis as the average of these three variables in order to simplify the analyses and provide a general view on OM-IWB relation. Table 3 shows the mean, standard deviation and correlation coefficient values of the variables in question.

### Table 3. Mean, Standard Deviation and Correlation Coefficient Values of the Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ST</td>
<td>3.48</td>
<td>0.84</td>
<td>.179</td>
<td>.204*</td>
<td>.243*</td>
<td>.286**</td>
</tr>
<tr>
<td>2. IWBs</td>
<td>3.17</td>
<td>0.84</td>
<td>.574**</td>
<td>.593**</td>
<td>.303**</td>
<td></td>
</tr>
<tr>
<td>3. DM</td>
<td>3.38</td>
<td>0.73</td>
<td></td>
<td>.612**</td>
<td>.355**</td>
<td></td>
</tr>
<tr>
<td>4. PM</td>
<td>3.09</td>
<td>0.89</td>
<td></td>
<td></td>
<td>.461**</td>
<td></td>
</tr>
<tr>
<td>5. EM</td>
<td>3.36</td>
<td>0.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Correlation is significant at 0.05 level for all variables
**Correlation is significant at 0.01 level for all variables

In order to test the hypotheses, multiple regression analyses were utilized. As shown in Model 1 of Table 4a, in which direct effects of the variables were included, the results illustrate that the hypotheses H1 and H2 were supported, while H3 was not supported. The model is significant as a whole (F = 19.311, ρ = .000) and variables explains 43.1% of IWBs change as to R² value. DM (β = .331; ρ < .01) and PM (β = .385; ρ < .01) had positive effects on IWBs. Findings indicated that EM has no significant effects on IWBs.

The interaction (or moderator) effect in a moderated regression model may cause multicollinearity and Aiken and West (1991) recommended mean-centering the variables in order to alleviate such collinearity related concerns. In the procedure, centered ST variables were multiplied by PM, DM and EM variables and new interaction variables, PM*ST, DM*ST and EM*ST were reached. After transforming variables to centered terms and multiplying them, in order to see if there is a moderating effect of ST on the relation of OM and IWBs, again a standard multiple regression analysis were resumed at first. Although the model was significant as a whole (F = 11.746, ρ = .000) with a R² value of 45.3%, the coefficient results indicated that there is not a moderating effect at
all. Again, only DM (β = .325; ρ < .01) and PM (β = .393; ρ < .01) had positive effects on IWB.

**Table 4a. Results of the Hypotheses**

<table>
<thead>
<tr>
<th>Model</th>
<th>Fit Measures</th>
<th>Independent variable</th>
<th>β</th>
<th>t</th>
<th>ρ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.431</td>
<td>Zscore(DM) .331</td>
<td>3.513</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zscore(PM) .385</td>
<td>3.860</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zscore(EM) .014</td>
<td>1.58</td>
<td>.875</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zscore(ST) .034</td>
<td>4.40</td>
<td>.661</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>.453</td>
<td>Zscore(DM) .331</td>
<td>3.569</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zscore(PM) .392</td>
<td>3.988</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zscore(EM) -.019</td>
<td>-.226</td>
<td>.822</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Zscore(ST) .080</td>
<td>.996</td>
<td>.322</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EM*ST .157</td>
<td>2.034</td>
<td>.045</td>
<td></td>
</tr>
</tbody>
</table>

**Table 4b. Excluded Variables of Model 2 in Step-wise Regression**

<table>
<thead>
<tr>
<th>Model 2</th>
<th>Beta In</th>
<th>t</th>
<th>Sig.</th>
<th>Partial Correlation</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD*ST</td>
<td>.021C</td>
<td>.232</td>
<td>.817</td>
<td>.023</td>
<td>.679</td>
</tr>
<tr>
<td>DM*ST</td>
<td>.019C</td>
<td>.240</td>
<td>.811</td>
<td>.024</td>
<td>.901</td>
</tr>
</tbody>
</table>

Then, as a second step, in order to find out the best combination of independent variables to predict the dependent variable, a step-wise multiple regression analysis was executed. As it is the case in step-wise regression, not all predictor variables entered the equation in stepwise regression. As shown in Table 4a-b, because adding PD*ST and DM*ST statistically found meaningless when added to the regression equation, the analysis stopped and those two variables were excluded from the model (Oswego State University, n.d.). The model was significant as a whole (F = 16.751, ρ = .000) with a R² value of 45.3%. Therefore, Model 2 with including the interaction term, R² value increased (R² change= .022) as expected as a sign for a potentially significant moderation effect. The findings indicated that, DM (β = .331; ρ < .01) and PM (β = .392; ρ < .01) still had positive effects on IWBs. While EM insignificant, interaction term (EM*ST) is significant where a positive effect also detected (β = .157; ρ < .05). As shown in Model 2 of Table 4a, in which moderating effect of ST on EM included to the model, the results illustrate that the hypotheses H6 was supported. However, the hypotheses H4 and H5 were not supported.
To clarify the nature of this interaction effect, the relationship between EM and IWBs at three level of ST, where 1 indicates “storytelling is not used around the organization”, 2 indicates “a moderate level of storytelling is used” and 3 indicates “high level of storytelling is used” was plotted (see Figure 2). In the grouping of ST, survey items of ST were grouped into three categories. In creating this new variable, aggregated ST items were named as 1 if the participants chose within 1=strongly disagree, 2=disagree, 3=undecided in the likert type measure, named as 2 if 4=agree was chosen, and named as 3 if 5=strongly agree was chosen. Figure 2 shows that with a simple slope analysis, if there is not any usage of ST, there is almost a flat line, means no relation between EM and IWBs. If ST is used in an organization it is likely that EM leads to an increase in IWBs. Although both group 2 and group 3, has a positive slope, the difference between two slopes is explicit. In other words, the higher the usage of ST, the higher the effect of EM on IWBs.

**Figure 2.** Moderating effect of ST

In addition to hypotheses testing, as post hoc analysis, a comparison was considered necessary for the purpose of this study. The relations between ST-EM and ST-IWBs were plotted in which the participants’ perceptual evaluations of their organization on the basis of being (1) open (2) close or (3) slowly adapted to innovation were set as the marker. As can be seen in Figure 3, while ST leads to a perceptionally diverse increase in three categories of the organization, its effect on IWBs turn negative in organizations that implied as “close to innovation”.
Figure 3. ST-EM and ST-IWBs relations based on organizations’ innovation tendency
Discussion

Research Implications

This study specifically examined the relationship between OM and IWBs through the moderating role of storytelling. Earlier studies on OM mostly associated with organizational learning and business/new product performance (e.g., Walsh & Ungson, 1991; Cohen, 1991; Cohen & Bacdayan, 1994; Moorman & Miner, 1998; Fiedler & Welpe, 2010; Camison & Villar-Lopez, 2011). There are only few OM - firm level innovation research (e.g., Akgün et al., 2012b), and still the relation between OM and employees’ IWBs not in the focus yet. Moreover, although PM and DM dimensions of OM have been argued for a while (Anderson & Sun, 2010; Cohen, 1991; Moorman & Miner, 1997), EM as one of the OM component was a newly proposed concept, and there are only two studies that discussed and empirically tested it (Akgün et al, 2012a; 2012b). On the other hand, as one of the primary means to pass on organizational culture, ST mostly discussed at conceptual papers or in case studies and merely associated with strategic management concepts like innovation (Bartel & Garud, 2009; Escalfoni, 2011) or learning/remembering (Sole & Wilson, 2002; Adorisio, 2014). Therefore, regarding the possible impacts of ST in transferring tacit knowledge, enabling learning and unlearning, and leading emotional connections throughout the organization, it was proposed as the moderator in the proposed relation between OM and IWBs.

This research empirically showed the significance of PM and DM on IWBs. DM is more conceptual than PM; it is about the facts, events or propositions. DM provides an accumulated, general understanding about the market, competitive environment or customer needs and wants. On the other hand, PM is about how to do things and it allows employees to learn skills and to adapt to the environment. Therefore, tacit knowledge to become competent in the job and being aware of the ongoing trends especially in the competitive environment play an essential role on employees innovative work behaviors. The findings of Akgün et al. (2012b) also parallel with the DM – innovation relation even the focus was firm innovativeness in that study.

Second, this study also showed the fundamental role of ST on EM in the relation between EM and IWBs. EM is mentioned with “episodic, unconscious, unwritten storage of past emotional experiences” (Akgün et al., 2012b, p. 432). Imaginary feature of EM associates it with stories. ST gives way to construct and reconstruct the past experiences (Adorisio, 2014). Therefore, even communicating the emotionally stored past experiences, needs, successes or failures and transfer that knowledge to current cases, provide more effective reflexes. In case of IWBs, sharing emotionally stored past experiences by strong stories, it will influence the employees’ innovative behavior capacity/motivation. Even though the term “remembering” was used in the study of Adorisio (2014),
the content is almost the same with EM that strengthen with stories. In that study, narratives were stated as the key to access rich imaginary feature of past differently overtime with a “humanly comprehensible meaning”. Although, Adorisio’s (2014) study was based on a case study, the underlying discussion still supports the findings of the moderator effect of ST on EM of this study.

**Managerial Implications**

There is no legal necessity for employees to engage in innovative work behaviors (Ramamoorthy et al., 2005), as mentioned before. Thus, organizations may purposefully try to retrieve or cause to forget past recollections in a controlled way, in order organizational members behave in a certain way (Walsh & Ungson, 1991). Therefore, innovative efforts require novel cultural mechanisms in which stories have the capacity to promote it (Bartel & Garud, 2009). ST has been “an indispensable element of communication throughout history of organizations” (Forster et al., 1999, p. 16). It is a good way of communication in the organization, because it grasps the attention of the listener. Rather than explaining something in an abstract and conceptual way, telling stories make people live and feel the experience, hence with more attention and identification (Brown et al., 2005, p. 111-113). As an effective medium of communication, ST captivates both emotions and intuitions (Forster et al., 1999), and help people make sense of organizations. They are quick and powerful. They communicate naturally, collaboratively, persuasively, intuitively, feelingly, interactively, and persuasively (Brown et al., 2005, p. 167-172).

It is also underlined that not all stories are well-designed for knowledge sharing and motivating for innovative behaviors. Even more, if storytelling does not facilitate unlearning, which is associated with openness to change/new/innovation, their effectiveness decline by the means of innovativeness (Sole & Wilson, 2002). This study also showed that in organizations, the higher the usage of ST, the higher the EM. However, organizations’ tendency toward innovativeness has a significant impact on IWBs. This research showed that organizations that positioned as “close to innovativeness” could have a higher EM with a strong use of ST, but this high level of ST has negatively related to IWBs. On the other hand, in the organizations that positioned themselves as “open to innovativeness” and “slowly adapted to innovativeness”, if the usage of ST increases, both the level of EM and IWBs increase. Therefore, using ST throughout the organizations are the reflections of the organizations’ culture, and in the case of “close to innovativeness”, stories unconsciously strengthen the barriers even further for employees’ IWBs.

Gallo (2016), a corporate communication coach, shared some anecdotes from his latest book *Storyteller’s Secret*. In the magazine article those sentences highlighted: “Storytelling is the most underrated skill by a partner of a venture capital and “professional investors agree: ideas that catch on are wrapped in
Therefore, it seems that effective usage of ST is becoming one of the new trends in the business world. Choosing appropriate story types with regard to the goal of the organization (Denning, 2006), and using these as a medium of communication is a must for effective functioning of organizations (Forster et al., 1999).

According to the results of this research, management should provide a work environment where all types of OM could be increased, and try to transform the organizational culture to a more flexible and more open to innovativeness, if not in the current situation. If a cultural transformation is needed, which is harder, it could be a better way to get some external help for change management, such as firm doctors or institutional coaching services. It is inevitable to invest on a state-of-the-art technology based infrastructure to speed up and store PM and DM elements. In order to increase communication, shared emotions and the attachments of employees throughout creating a co-operative culture is required where trust and justice play significant roles in building it (Goh, 2002). In addition to that, employee activities and events could also facilitate social connections.

**Limitations and Future Research**

This study had a number of limitations as in every social sciences research, although it provided valuable insights for future research as well as contributed to current literature. First, the reliance on subjective data based on self-reporting in measuring the variables. Survey method itself, as a data collection technique; also have limitations that can affect the quality of the findings. The survey depended on participants’ perceptions, thus the findings in a sense would not reflect the facts, but how participants make sense of the facts. Although the results of validity and reliability tests brought sufficient confidence in these measures, combined data collection methods could also be used in future studies. On the other hand, because ST only discussed in narrative studies in the literature, one-dimensional ST measure was constructed for the study. Therefore, construction of country specific ST measure can also be in the focus of future studies.

Besides, our results were based on a specific industry (banking) in one city (Istanbul) of a country (Turkey). Our arguments were all generic and not industry or country specific. Therefore, it is possible that industrial or cultural differences may interfere with the empirical results. Field studies focusing on service industries and manufacturing industries on a broader sense may also provide more generalized insights into industries. Moreover, industry comparisons and cross cultural studies may also ensure different viewpoints.

Moreover, repeating the analyses with a larger sample size could provide more detailed picture. When it comes to generalization, a cautious interpretation would be necessary. In addition, the influence of EM on PM and DM was revealed
in the study of Akgün et al. (2012b). Therefore, there is a possibility of Baron and Kenny’s (1986) mediating effect. With a larger data, a structural analysis could be appropriate in order to achieve a holistic picture including the mediating effects beyond direct relations.

References


Appendix

Storytelling Scale Items

In our organization, stories consist of:

– the norms and values of the organization

– the management’s expectations and workplace rules

– the expectations about what task to do with which method

– the new ways of executing tasks, new rules or changes