

SUPPLEMENTARY MATERIALS

THE INNOVATIVE WORK RELATED
BEHAVIOR SCALE (INNWB)

A scale was developed and used in this research paper to measure innovative work-related behavior (INNWB) of employees following the guidelines of prior scholars (MacKenzie et al., 2011). The development had two stages. In the first stage, we generated items in English to adequately capture the theoretical domain of INNWB and translated those items into Greek. Following this, we used a sample of professional workers ($N = 31$) in Greece to assess the internal validity of the new measure. In the second phase, we assessed basic psychometric properties of the INNWB scale utilizing an EFA and a confirmatory factor analysis (CFA) using a larger sample of Greek bankers ($N = 215$) (from time 1 survey).

JUSTIFICATION FOR SCALE
DEVELOPMENT

Generally, innovation is considered to be “generating, spreading, and implementing ideas and solutions” (Janssen, 2000). Although there is a plethora of typologies of innovation (e.g., Hughes et al., 2018) and several existing innovative performance measures (Table S1), these measures mainly capture whether employees engage in innovative actions and did not measure tendency and willingness to engage in innovative behavior. Therefore, based on prior definitions (Amabile, 1983, 1996; Scott & Bruce, 1994), findings on innovation (e.g., Hughes et al., 2018), and guided by existing scales of individual innovative behavior (Ng et al., 2010; Parker et al., 2006), we developed a scale to assess bank employees’ tendency to engage in innovative behavior in their job tasks (INNWB). Since innovative behavior is an intentional act (Janssen, 2000) (Table S1), our items reflect the willingness to engage in interrelated work tasks that involve discretionary extra-role behavior (e.g., implementation of new solutions to solve a work problem) that would be considered innovative.

SCALE DEVELOPMENT

ITEM GENERATION AND INTERNAL
RELIABILITY (STUDY 1)

Twelve items were written in English. These were translated to Greek through a back translation process (Berslin, 1980) by two independent bilingual PhD students at a university business school. We administered a paper and pencil questionnaire to thirty-one Greek professionals employed full time in a bank

in Greece located in Athens. The language used in the questionnaire was Greek, and these participants did not participate in the main study. All participants worked full-time in the bank and managed multiple tasks daily. Their work required innovation to effectively serve customers and resolve work-related problems. 31 employees were asked to indicate on a five-point Likert scale (1 – *never* and 5 – *always*) how often they perform innovative behavior at work. On average, participants were primarily women (87.1%), and 12.9% male, 32 years of age ($M = 32.1$, $SD = 6.47$), 58% had an MSc degree, single (71%), and 32% they had just over 12 months of full-time work experience ($M = 5.66$, $SD = 6.43$). One week later, the completed questionnaire was returned to the researcher. The reliability of the 12-item scale was $\alpha = .73$.

Using this sample, we conducted exploratory factor analysis (EFA, see Preacher & MacCallum, 2003) in SPSS 23.0 (IBM Corp, 2015) using principal axis factor extraction and orthogonal rotation (Hinkin, 1998). Following commonly used and recommended criteria (e.g., eigenvalues > 1.00 , factor loadings $\geq .40$ with no significant cross-loadings, scree plot examinations; Hayton et al., 2004; Hinkin, 1998), we noted that a two-dimension scale was the best solution. After checking again internal consistency of items, we eliminated two items (i.e., “I know how to be flexible and adaptable to the changes” and “I do not stick in what others do during workday”) that had low-item-to-total correlation ($r < .3$) and ambiguous meanings. The reliability of the remaining 10 item-scale was $\alpha = .77$, in this sample

INTERNAL CONSISTENCY ASSESSMENT
ANALYSIS (STUDY 2)

In the main study, we employed another and larger bankers’ sample ($N = 215$, the sample used in the main study in my dissertation, the time 1 survey) to re-test EFA and to conduct confirmatory factor analysis of the new 10-item INNWB scale. All items were provided in Greek. This sample consists of bankers working in various positions in a Greek bank covering areas such as customer service, back office, tellers, HRM management, administration, and marketing. On average, participants were 39 years old ($M = 39.04$, $SD = 9.10$), had a Bachelor degree, and had just under 13 years of work experience ($M = 12.57$, $SD = 9.20$). Just over half (50.2%) were male. 50 supervisors assessed their employee innovative work behavior on a five point Likert scale ranging from 1 (*never*) to 5 (*always*).

The internal reliability of the 10-item INNWB scale was $\alpha = .74$. Two reverse-coded items (i.e., “In this bank the best way to get ahead is to think the same way the rest of the employees do” and “Does not

Table S1

Comparison between INNWB and constructs in the employee innovative behavior literature that address innovation

| Construct | Definition | Focus of behavior | Intentionality and benefits | Illustrative behavior |
|---|---|---|--|---|
| Individual innovative work related behavior (INNWB) | <i>Individual's willingness to intentionally search out and implement new ways and solutions in job tasks in a bank</i> | Recognition of the problem (e.g., something needs to be done better), creating and implementing new ideas/solutions in response to problems concerning procedures and approaches within their work tasks and job role | Employees are only intentionally engage in innovative work related behavior | Willingness to search out and implement new and improved ways of doing things and solving problems when working in a bank |
| Individual innovative work behavior (IWB) | <i>Individual's behavior that aims to achieve the initiation and intentional introduction (within a work role, group or organization) of new and useful ideas, processes, products or procedures</i> (Farr & Ford, 1990; Yuan & Woodman, 2010) | The idea generation, coalition building and implementation (Scott & Bruce, 1994; Kanter, 1988) | Employees can be expected to have IWB The idea generation aims to solve problems or to improve employees' or organization's performance | Search out new techniques, technologies, and/or product ideas |
| Individual proactive behavior | <i>Individuals' self-initiated, anticipatory action that aims to change and improve the situation or oneself</i> (Parker et al., 2006; Grant & Ashford, 2008) | Initiating change, taking control of, and bringing about change within, the internal organizational environment (Griffin et al., 2007) | It ensures effectiveness in light of frequent changes Career success | Taking charge Voice |
| Individual creativity | <i>The production of new and useful ideas concerning products, services, processes & procedures</i> (Amabile, 1988) | Ideas are generated in response to a perceived need for innovation (West, 2002) | Innovation | New ideas |

searching out new working methods and techniques for the job in the bank”) were removed because of low item-to-total correlations and what appeared to be a reverse-coding bias. After removing those two items, the alpha of the scale improved ($\alpha = .87$). As with the pilot study, we conducted exploratory factor analysis (EFA, see Preacher & MacCallum, 2003) in SPSS 23.0 (IBM Corp, 2015) using principal axis factor extraction and orthogonal rotation-varimax (Hinkin, 1998).

Following commonly used and recommended criteria (e.g., eigenvalues > 1.00, factor loadings $\geq .40$

with no significant cross-loadings, scree plot examinations; Hayton et al., 2004; Hinkin, 1998), results from this sample showed (Table S2) a one factor solution of the 8-item INNWB scale (see scree plot in Figure S1). This factor explained 54.70% of the total variance in INNWB. The items exhibited factor loading ranging from .39 to .83. Additionally, the EFA results (Table S3) using the supervisor-rated INNWB sample (from time 2 survey that consists of 121 employees and 30 managers ($N = 121$)) provide evidence for the 8-item INNWB scale as a unidimensional construct (see scree plot in Figure S2).

Table S2

Summary of exploratory factor analysis results for the 8-item INNWB Scale (N = 215)

| Items | Factor 1 Tendency to actively support innovative work behavior |
|--|---|
| 1. Being an innovator | .827 |
| 2. Pursues creative ideas and promoting those ideas to the colleagues in the bank | .821 |
| 3. Spends a lot of time at work to develop plans for implementing new ideas | .766 |
| 4. Applies new strategies into the job in this bank | .754 |
| 5. Adopts novel solutions for conventional problems in this bank | .685 |
| 6. At work is trying to solve the same problems in different ways than others | .676 |
| 7. Does not hesitate to challenge the status quo of the bank (regarding traditional procedures and approaches in pay and promotions) | .567 |
| 8. Is open and responsive to changes provided by the department | .397 |
| Eigenvalues | 4.37 |
| % of variance | 54.70 |

Note. $N = 215$. Factor loadings over .40 appear in bold and factor loading < .30 are omitted. The factor analysis was conducted using maximum-likelihood extraction and orthogonal varimax rotation with Kaiser normalization

Figure S1

Scree plot of the 8-item Innovative Work Behavior Scale (N = 215)

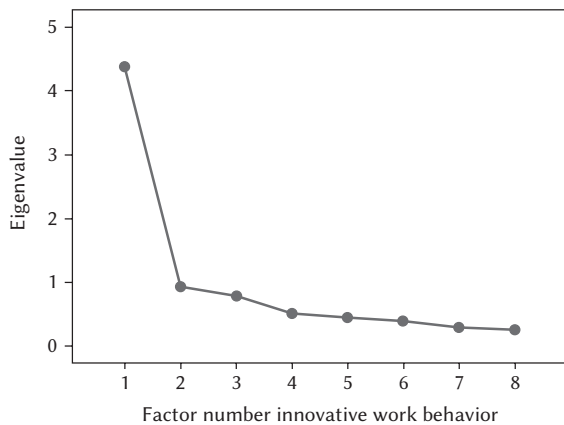


Figure S2

Scree plot of the 8-item Innovative Work Behavior Scale (N = 121)

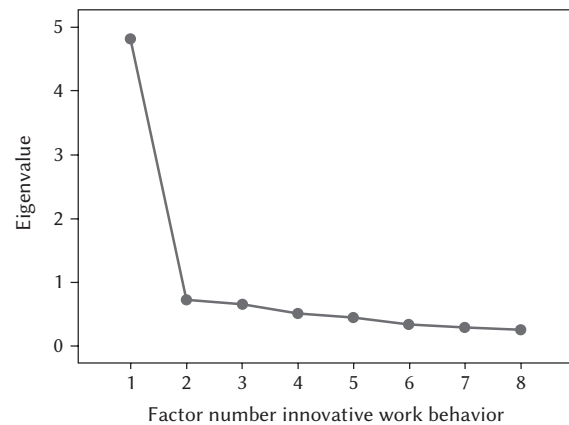


Table S3*Summary of exploratory factor analysis results for the 8-item INNWB Scale (N = 121)*

| Items | Factor 1 Tendency to actively support innovative work behavior |
|--|--|
| 1. Is an innovator | .842 |
| 2. Pursues creative ideas and promoting those ideas to the colleagues in the bank | .828 |
| 3. Spends a lot of time at work to develop plans for implementing new ideas | .784 |
| 4. At work is trying to solve the same problems in different ways than others | .776 |
| 5. Applies new strategies for the job in this bank | .735 |
| 6. Adopts novel solutions for conventional problems in this bank | .680 |
| 7. Does not hesitate to challenge the status quo of the bank (regarding traditional procedures and approaches in pay and promotions) | .663 |
| 8. Is open and responsive to changes provided by the department | .585 |
| Eigenvalues | 4.82 |
| % of variance | 60.30 |

Note. N = 215. Factor loadings over .40 appear in bold and factor loading < .30 are omitted. The factor analysis was conducted using maximum-likelihood extraction and orthogonal varimax rotation with Kaiser normalization