

CONSIDERING NONLINEAR CONNECTIONS IN THE INDIVIDUAL PERFORMANCE MANAGEMENT MODEL

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ABSTRACT

To discuss nonlinear connections between constructs of the conceptual model of individual employee performance management in Slovenian service sector.

Constructs were analyzed with the validated measurement instrument, adapted to the Slovenian context due to preliminary research. Existence of significant nonlinear connections between them was checked by structural equation modeling. The software tool Warp PLS 5.0. based on the Warp2 algorithm was used. Holistic employee development methods significantly improve employees' work satisfaction, individual performance, and well-being. The quality of the conceptual model obtained with Warp PLS 5.0 supports the consideration of nonlinear connections between constructs. They exist between the constructs of the conceptual model of the individual employee performance management system in e.g. the Slovenian service sector. Results make employees and managers aware that existing performance management systems are inadequate. Hence, one must place this knowledge of the situation and trends of individual work performance as the basis for sensible management action, including

new performance management systems based on a requisitely holistic approach, focusing on the individuals and their performance, not on the performance management system. The designed employee performance model is individually oriented and applies mentoring, coaching, sponsorship and intergenerational cooperation. It clarifies how one can use holistic employee development to improve individual employee performance, job satisfaction, and well-being.

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1. INTRODUCTION

Authors discuss nonlinear connections between constructs of the conceptual model of individual employee performance management, using the structural equation modeling (SEM) tool Warp PLS 5.0 and the model quality, based on nonlinear connections. The case presents individual employees' performance management in the survey among employees in Slovenian service companies. The traditional performance management methods failed in individual employee performance management; they demoralize employees, create hatred among them, and encourage prospective and key employees (talents) to start looking for work elsewhere (Garr, 2011). The basic aim here is to identify methods of individual employee performance management to increase individual work performance and improve employees' mental well-being and satisfaction at work, to enable creativity and innovation (Šarotar Žižek et al., 2011). The theoretical knowledge and lessons from the empirical research helped authors answer their research question: R1: Does introducing individual employee performance management model with requisitely holistic employee-development methods improve their job-satisfaction, psychic well-being and individual work performance?

Authors focused on individual employee performance management with requisitely holistic employee-development methods and their impact on employee psychic well-being, job-satisfaction and individual work performance. Constructs in the conceptual model are requisitely holistic employee-development

methods, e.g. coaching, mentoring, intergenerational cooperation and sponsorship; employee satisfaction at work; psychic well-being, and individual work performance. Here, they first present the theoretical viewpoint of individual work performance, and hypothesis. Then they describe their research methodology and the empirical research on individual work performance in Slovenian service sector companies. They discuss the obtained results and outline limitations and further research possibilities, too.

2. LITERATURE REVIEW, DEVELOPMENT OF HYPOTHESES AND METHODS

2.1 Literature review

Individual work performance

The individual employee performance management addresses a problem within human resource management; it covers individual employee performance management with requisitely holistic employee-development methods in terms of psychic well-being and employee satisfaction. The model applies to the service sector. One assumes life in a knowledge society where more than 70% of employees work in the services sector (see, e.g. Hinssen, 2017).

Individual work performance is a multi-dimensional construct with three generic dimensions (Koopmans *et al.*, 2011). First, task performance refers to the professionalism with which employees perform their core jobs. Almost all frameworks find job performance an important dimension of individual work performance. It expresses proficiency (i.e. competency) with which one performs central job tasks (Campbell, 1990), including, e.g. work quantity, work quality, and job knowledge (Koopmans *et al.*, 2011). Second, contextual individual work performance covers employee behavior that supports the organizational, social and psychological environment in which one works. Various authors describe contextual individual work performance as non-work professionalism which includes additional efforts aimed at success, organizational behavior and interpersonal relationships (*ibid.*). Third, counterproductive behavior destroys psychic well-being of employees and the organization with e.g. absenteeism, late work,

refusal to fulfill tasks, theft, conflicts with colleagues, deviant behavior, destructive/dangerous behavior, failure to comply with rules, lack of personal discipline, abuse of various substances at work, etc. (Koopmans, 2011). These three types of individual work performance dimensions capture the full spectrum of behaviors in individual work performance in almost every working environment and at each workplace, although they may vary per specific workplaces or work contents (Koopmans et al., 2014).

Individual employee performance management must help organizations adapt to environmental change proactively by identifying and designing change. For change in an organization to occur, employees need training, knowledge, competence and necessary behavior (Koopmans et al., 2014; Armstrong, 2015).

Requisitely holistic employee development methods

Requisitely holistic employee-development methods include mentoring, coaching, sponsorship and intergenerational cooperation as ways of developing skills of employees. The definition of requisitely holistic employee-development methods stems from findings (Mulej et al., 2008) that holism includes the whole, parts, relationships, and realism as a system (all methods are grouped under a single concept of requisitely holistic employee-development methods). Therefore, with requisitely holistic employee-development methods, one approaches the intrapersonal methods of individual development in a requisitely holistic way: the coherent and integrated functioning of methods supports the individual's personal development of potentials and abilities to help him/her gain more holism. When designing requisitely holistic employee-development methods, authors of this article followed other authors advocating the importance of strategic workplace relationships, which requisitely holistic employee-development methods encourage (Murphy and Kram, 2014).

Requisitely holistic employee-development methods affect employees' psychic well-being, satisfaction and success, although requisitely holistic employee-development methods should primarily reduce the gap between abilities, knowledge, values and desirable behavior (Murphy and Kram, 2014). Individuals use requisitely holistic employee-development methods to develop new skills, better their identity and more easily face changes and challenges (Dobrow

et al., 2012). One can further upgrade their reflections with the requisitely holistic employee-development methods tools for training, socialization, support for development, and developmental relationships among employees (Noe *et al.*, 2003).

Psychic well-being

Psychic well-being is a multidimensional concept covering three models: subjective emotional well-being, psychological well-being and self-determination (Musek, 2008). People want to feel well at work and be healthy, which is often difficult to achieve in the modern business world, causing often mismatches between an individual's desires for his/her psychic well-being and the daily work overload and stress at work (Podjed, 2014). As a concept, psychic well-being has close links to individual employee performance management; many authors found that positive mentality and psychic well-being of employees are associated with better individual work performance results (Kooij *et al.*, 2012). In this study, authors determined the positive impact of psychic well-being on individual work performance - a connection which various authors have highlighted (*ibid.*).

Individual employee performance management supports the employee development, and requisitely holistic employee-development methods influence psychic well-being of employees by reducing stress (Goncalves and Neves, 2012), increasing awareness and self-awareness (Kingston *et al.*, 2007), and enhancing their ability to manage their behavior (Danna and Griffin, 1999), which improves physical health and psychic well-being.

Employee satisfaction at work

Employee satisfaction at work is a multidimensional concept, covering psychological responses of employees to their workplace (Judge and Klinger, 2007; Bockerman *et al.*, 2012). It includes general, internal and external satisfaction. All three forms of satisfaction have close links to internal and external motivational factors (Košir *et al.*, 2016). Satisfaction at the workplace is one's pleasant and positive emotional reaction to one's experience with one's work, importance of the inner perception of one's values, and their connection with one's perception of current working conditions (Jayasuriya *et al.*, 2012). Many researchers

clearly associated methods of employee development with increasing employee satisfaction at work and happiness (Wright *et al.*, 2007; Jayasuriya *et al.*, 2012).

Research shows that employee satisfaction is largely based on psychic well-being at work (Judge and Ilies, 2002): Employees with a positive psychic well-being are more satisfied with their work. Positive experiences, subjective well-being, and opportunities for promotion (Kraimer *et al.*, 2011) contribute to promotion, too, as does increased employee satisfaction with job and individual's reduced feeling of emotional distress.

2.2 Development of hypotheses

Individual work performance and requisitely holistic employee-development methods

Kraimer *et al.* (2011) studied the role of employee attitudes and development perceptions, in connection with the results of individual work performance. Employee perceptions of support critically improve their individual work performance (Aguinis *et al.*, 2013). Employee individual work performance and development share close links; employee development is an integral part of requisitely holistic employee-development methods because it is directly related to the individual's everyday experience (Aguinis *et al.*, 2011). Employee training and development enable the desired individual work performance and help achieve organizational goals (Aguinis *et al.*, 2011). The performance management approach, based on requisitely holistic employee-development methods, emphasizes a continuous growth over a longer period by identifying the strengths, developmental areas and needs of individuals. With requisitely holistic employee-development methods, one supports the achievement of organizational goals (Aguinis, 2013). A long-term approach to employee development is crucial to achieving individual performance (Herb, 2015).

Authors predict that requisitely holistic employee-development methods improve individual work performance. By promoting learning through workplace practice, requisitely holistic employee-development methods directly stimulate learning at work and behavior toward individual work performance (Baldwin and Ford, 1988).

Hypothesis 1: Requisitely holistic employee-development methods support individual work performance.

Requisitely holistic employee-development methods and psychic well-being

Requisitely holistic employee-development functions include maintaining of relationships of cooperation and interpersonal assistance and development. Interpersonal assistance is an empathic relationship that helps reduce the distress of individuals and improves psychic well-being (Goetz *et al.*, 2010). Potential psychological benefits of requisitely holistic employee-development methods also include clients who receive support from their mentors, coaches, or sponsors, thereby improving their self-confidence, self-image, and self-efficacy (Seibert *et al.*, 2001). An individual's learning desire and ability are crucial in understanding the effectiveness of developmental relationships and, thus, the use of requisitely holistic employee-development methods. Requisitely holistic employee-development methods improve individual's (1) physical health, (2) psychic well-being, and (3) the permanently desired change (Boyatzis *et al.*, 2012). Therefore, we highlight the link between requisitely holistic employee-development methods and psychic well-being.

Hypothesis 2: Requisitely holistic employee-development methods improve psychic well-being.

Requisitely holistic employee-development methods and job satisfaction

There is evidence of a positive relationship between requisitely holistic employee-development methods and job satisfaction, as requisitely holistic employee-development methods provide a sense of sophistication and complacency and affect the quality improvement of work life (Allen and Eby, 2007). The interpersonal relationships strengthened with requisitely holistic employee-development methods are important sources of social support and contribute to the satisfaction of individuals from the social aspects of the working environment (Gerstner and Day, 1997).

Many researchers noted that requisitely holistic employee-development methods increase the organizational productivity and financial benefits, and job satisfaction of employees (Wright and Bonnet, 2007). A positive link exists between the

employee development perceptions and their job satisfaction as employee assessment regarding their work-related feelings (Rahman *et al.*, 2015; Robbins, 2012).

Hypothesis 3: Requisitely holistic employee-development methods improve job satisfaction of employees

Job satisfaction and psychic well-being of employees

In organizational science, job satisfaction of employees is probably the most common and oldest operationalization of job happiness (Wright, 2005). Studies focusing on positive effects (Fisher, 2000; Fernandez and Moldogazier, 2015) showed that the positive mood is more related to internal job satisfaction. Job-satisfaction of employees is largely based on psychic well-being at work (Judge and Ilies, 2002): a positive psychic well-being makes employees more satisfied with their work.

Positive experiences and subjective well-being and opportunities for promotion (Kraimer *et al.*, 2011) also support promotion, as does increasing job satisfaction and reduced feeling of emotional distress. Psychic well-being moderates the relationship between job satisfaction and job performance. Consistent with Fredrickson's model, performance is highest when employees like their psychic well-being and job satisfaction (Wright *et al.*, 2007).

Hypothesis 4: Psychic well-being improves job satisfaction of employees.

Individual work performance and job satisfaction of employees

Employees with a high level of job satisfaction generally love their job; when they are happy at work, they devote private time to their work activities (Bakotić, 2016). These employees perform extraordinary, and companies with them are successful (Bakotić, 2016). Research revealed a positive correlation between job satisfaction and individual work performance (Harter *et al.*, 2003). The change in the individual work performance task and contextual performance scale was expected to correlate moderately positively (0.30–0.50) with the change in job satisfaction and work engagement (Koopmans *et al.*, 2014). The change in the

individual work performance by counterproductive work behavior scale was expected to correlate moderately negatively (-0.50 – -0.30) with the change in job satisfaction (Judge *et al.*, 2001).

Although studies show that motivation, work satisfaction, and individual work performance are interconnected and interdependent, their relationship is not linear but circular (Jalagat, 2016). We can conclude that effective individual employee performance management methods improve the performance of tasks, individual work performance, and positive well-being, by increasing overall job satisfaction (Herb, 2015).

Hypothesis 5: Individual work performance methods improve employee satisfaction at work.

2.3 Methodology

Measurement instrument

A measurement instrument for the constructs of the conceptual model of individual employee performance management was developed. An existing and validated measurement instrument was used and adapted to the Slovenian context based on preliminary research. The measurement instruments used in the research were:

- Individual Work Performance Questionnaire (IEPQ) (Koopmans *et al.*, 2014);
- Short version of Minnesota Satisfaction Questionnaire (MSQ) (Weiss *et al.*, 1967);
- Positive and Negative Affect Schedule (PANAS)(Watson *et al.*, 1988);
- Scales of Psychological Well-Being Measure (SPWB) (Ryff, 1989);
- The Satisfaction with Life Scale (Diener *et al.*, 1985);
- The Self-determination Questionnaire based on Basic Psychological Needs (Ryan and Deci, 2001).

A 5-point Likert scale, ranging from 1 (absolutely disagree) to 5 (completely agree), was used. The final questionnaire for the employees together with identification issues included 14 questions.

Procedure

Preliminary research

Preliminary research is a critical phase, an integral part of the main research and an important component of the development of the final questionnaire. Researchers should not undertake research without prior preliminary testing and evaluation (Callegaro *et al.*, 2015). A pilot study was thus chosen as the method of preliminary research, to check the clarity of statements, the duration of the questionnaire, and the pilot study. Data for the preliminary survey were collected in October and November 2015. In-depth interviews also took place during the same period. The preliminary research was identified as an exploration, aimed to check and deepen the knowledge gained from scientific literature.

To promote insights into and understanding of the problem studied and the precise definition of the statements, data were first collected through written questions along the preliminary quantitative research. On a random sample, we surveyed 151 respondents. They were (1) M. Sc. students at the University of Maribor, Faculty of Economics and Business (at least 21 years old) and (2) employees at various jobs in selected Slovenian service companies. An exploratory factor analysis was performed and the Cronbach's α calculated to verify the reliability of individual constructs and sub-constructs. Based on the analysis, 7 statements were excluded from the questionnaire. Callegaro and co-authors (2015) advised using in-depth interviews in a preliminary study to help clarify important constructs and sub-constructs; one can use results of in-depth interviews to evaluate the draft questionnaire. Authors undertook 5 in-depth interviews with experts and managers to check their understanding of individual constructs. During the in-depth interviews, respondents pointed out some unclear issues that were better explained in the final questionnaire. Thus, the number of statements in the final questionnaire was reduced from 129 to 122, including identification issues.

Data collection and participants

Slovenian business services companies were researched. Based on a random selection, 334 organizations were included in the final sample, considering the 95% confidence level and 5% standard error; 258 (77%) of them were micro and small companies, 62 (19%) were mid-sized, and 14 (4%) were large companies.

The questionnaire was electronic, using the open-source Web application 1Ka that provides support for online surveys. The survey was done on March 1, 2016 –May 31, 2016. Employees returned 418 completed questionnaires; 401 with answers to all questions, 17 responded to at least 80%. The collected data were processed with IBM SPSS 23.0 and Warp PLS 5.0.

Data analysis

SEM was applied as a relatively simple tool for verifying the connections (Bollen, 1989). SEM is in practice most often performed with software tools LISREL, Smart PLS, Warp PLS 5.0, and AMOS. Warp PLS 5.0 was used; it identifies the non-linear relationship among the studied latent variables (Kock, 2015). When they are non-linear, the coefficients obtained with Warp PLS 5.0 are often higher than coefficients presented by other software tools; algorithm Warp PLS 5.0 uses partial least squares (PLS) regression, which reduces multicollinearity between the latent variables (Šebjan, 2015).

Consideration of nonlinearity sometimes leads to results, markedly different from the corresponding linear results, particularly when the underlying relationships take the form of U-curves (Kock and Gaskins, 2016). The ability of Warp PLS 5.0 to establish a non-linear relationship among the variables (if any) was used; its advantage is calculating automatically the values of the individual coefficients, too (Kock, 2015).

Kock (2016) listed the following advantages of Warp PLS 5.0 compared to other tools: it

- Automatically evaluates the value of the statistical significance (p) of the coefficients of connections, thereby determining the appropriateness of statistically significant correlations;
- Automatically builds the structure of indicators;
- Allows the user to display warped relationship charts for each connection among the variables in the regression curve (the term “warped” is used for relationships that are clearly nonlinear (Kock, 2015)); and
- Enables the verification of multicollinearity.

The basic measured conceptual model was evaluated for reliability and validity. Content validity was used to determine the affiliation of the variable in the measurement model to a particular construct. Indicator validity determined how much of the variance can be explained with the basic latent variable. With this respect, the criterion was that a latent construct should explain at least 50% of the indicator's variance (Šebjan, 2015). Composite reliability was measured with Cronbach's α ; it was beyond 0.6 (Tavakol and Dennick, 2011). Convergent validity was measured with the coefficient AVE or the average of the excluded variances. Discriminatory validity was studied with maximum shared variance (MSV) and average shared variance (ASV) indices. To ensure discriminant validity, the conditions that $AVE > ASV$ and $AVE > MSV$ (Hair et al., 2010) had to be satisfied.

For the final research model, one must determine the measure of fitting the data to the research model. Hence, one checked the goodness of fit (GoF) index with the Warp PLS software support. GoF should take values between 0 and 1 (Tenenhaus et al., 2005).

Ten global model fit and quality indices are provided: average path coefficient (APC), average R-squared (ARS), average adjusted R-squared (AARS), average block variance inflation factor (AVIF), average full collinearity VIF (AFVIF), Tenenhaus' goodness of fit (GoF), Simpson's paradox ratio (SPR), R-squared contribution ratio (RSCR), statistical suppression ratio (SSR), and nonlinear bivariate causality direction ratio (NLBCDR) (Kock, 2015).

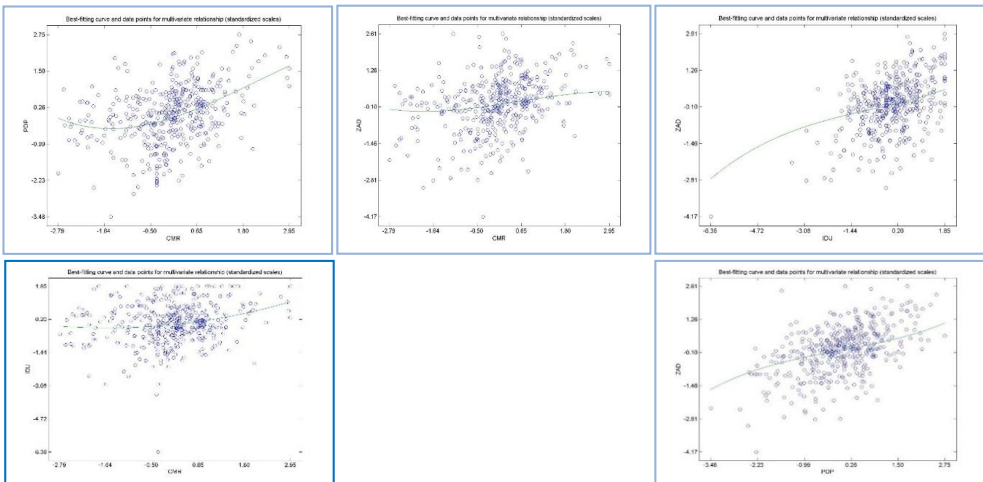
3. RESULTS

First, authors tried to build a model to study individual employee performance management based on the linear connections. Hence, they used the Smart PLS tool with the quality assessment of key indicators of a conceptual model lower (not statistically significant, $p > 0.05$) than those obtained with Warp PLS 5.0. As indicators obtained with Smart PLS showed no significant connections between the constructs, Warp PLS 5.0 was used to examine the nonlinear connections between them.

Linear relationships between the pairs of latent variables—that is, those relationships best described by the line - are relatively easy to interpret (Kock, 2015).

They suggest that an increase in one variable leads to either an increase (if the slope of the line is positive) or decrease (if the slope is negative) in other variable. Figure 1 shows that the relationship between the basic constructs in the conceptual model are nonlinear and could provide a much more nuanced view of the data and are much more difficult to explain (Kock, 2011). The ability to divide each figure into two parts according to the average value of the standard deviation for each latent variable separately can explain data in Figure 1. Each section of the curve, presented in each picture, is treated separately (Kock, 2015). Figure 1 presents the best fitting curves and data points for multivariate relationships between psychic well-being and comprehensive development methods (top left), employee satisfaction and comprehensive development methods (top middle), employee satisfaction and individual work performance (top right), individual work performance and comprehensive development methods (bottom left), and employee satisfaction and psychic well-being (bottom right).

Figure 1. Forms of connections between the constructs of basic conceptual model



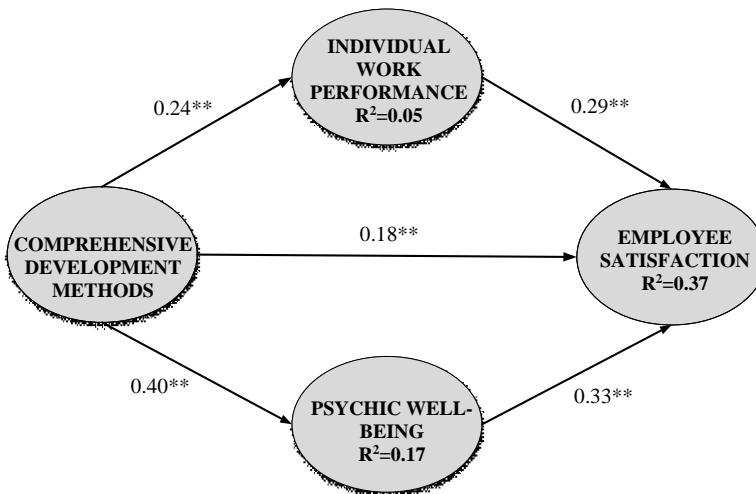
Source: Authors' calculation

Authors applied Warp PLS 5.0 in these steps: (1) determining the structural model, (2) determining the measurement models, (3) collecting and reviewing the data, (4) evaluating the PLS model, (5) evaluating the results of the PLS SEM, (6) evaluating the results of the PLS SEM model structure, (7) conducting

an advanced PLS analysis, and (8) interpreting the results and conclusions (Hair et al., 2014). A summary of the results obtained in this survey follows. In this article, we focus more on presenting the results of steps (6), (7), (8).

The key indicators for assessing the quality of the conceptual model by Warp PLS 5.0 are presented hereinafter (Kock, 2015). For a final research model, one must determine the degree of data fit to research model. To attain this in the framework of PLS modeling one usually verifies communalities index, the Redundancy Index and GoF (Milfelner et al., 2006), but in the context of software support from Warp PLS 5.0 one could only check the GoF index, keeping in mind the criteria of 0.1, 0.25 and 0.36 (Kock, 2015). In the PLS model, the composite reliability coefficient (CR), where $CR > 0.60$, and AVE index, where $AVE > 0.50$, are also crucial. The measure of a critical evaluation of the structural model is presented by the adjusted R-squared coefficient (R^2), which should be reviewed for each latent variable; in this case, it was beyond 0.15, reflecting the percentage of explained variance of latent variables in the structural model (Sharma and Kim, 2012). See Figure 2.

Figure 2. The conceptual model with the results of the links between constructs



Note: ** $p < 0.01$

Source: Authors' calculation

Values of the Cronbach's α are beyond 0.6 except for the individual work performance construct, where the Cronbach's α is slightly below 0.6 (0.584). Based on these values, the criterion was met demonstrating the reliability of the measurement instrument. When checking the reliability of the composite, authors considered that all CR values of all constructs were beyond 0.6. This criterion was met, as all CR values in individual constructs were higher than 0.7. When verifying the convergent validity measured with AVE, all values were found beyond the prescribed value 0.5, (Fornell and Larcker, 1981). The criterion $CR > AVE$ was also met for all constructs. The variance inflation factor (VIF) helped authors examine multicollinearity. When the VIF is below 3.3, there is no multicollinearity. The other more conservative condition for determining multicollinearity is $VIF > 5.0$ or $VIF > 10.0$ (Hair et al., 2005). VIF of all constructs is less than 1.6: the criterion of low multicollinearity was met.

Discriminant validity was verified with the highest total variance (MSV) and average total variance (ASV). When checking the MSV and ASV, the criteria $MSV < AVE$ and $ASV < AVE$ were considered (Hair et al., 2010). These results indicate that one can accept discriminant validity for measuring the conceptual model. Nomological validity was evaluated with the correlation between the constructs verifying the consistency of theoretical constructs; a criterion that the correlation coefficients are statistically significant was used (Šebjan, 2015). The correlation coefficients for all constructs were statistically significant and positive; therefore, the nomological validity was accepted. Modeling the structural equation found that all connections between the constructs were positive and statistically significant, with a risk rate of $p < 0.01$. Table 1 shows the values of indicators evaluating the quality of the advanced conceptual model and the data consistency with the conceptual model.

Table 1. Key quality assessment indicators of conceptual model with Warp PLS 5.0

Coefficient	Criterion of coefficients	Calculated values of indicators for model
Average path coefficient (APC)	$p < 0.05$	0.279. $p < 0.001$
Average R-squared (ARS)	$p < 0.05$	0.190. $p < 0.001$
Average adjusted R-squared (AARS)	$p < 0.05$	0.187. $p < 0.001$
Average block variance inflation factor (AVIF)	AVIF ≤ 5.0 or AVIF ≤ 3.3	1.279
Average full collinearity (AFVIF)	AFVIF ≤ 5.0 or AFVIF ≤ 3.3	1.434
Tenenhaus goodness of fit (GoF)	GoF ≥ 0.1 (low) GoF ≥ 0.25 (medium) GoF ≥ 0.36 (high)	0.339
Simpson's paradox ratio (SPR)	SPR ≥ 0.7 or SPR = 1.0	1.000
R-squared contribution ratio (RSCR)	RSCR ≥ 0.9 or RSCR = 1.0	1.000
Statistical suppression ration (SSR)	SSR ≥ 0.7	1.000
Nonlinear causality direction ration (NLBCDR)	NLBCDR ≥ 0.7	1.000

Source: Authors' calculation

Table 1 shows that the coefficients of the APC, ARS, and AARS were statistically significant at $p < 0.05$; AVIF and AFVIF were below the prescribed values of 3.3 or 0.5 and were suitable. GoF showed the power of the underlying conceptual model; it was medium powerful (0.339), which shows the model is moderately appropriate. The values of other coefficients (i.e., SPR, SSR, and NLBCDR) were beyond the prescribed value of 0.7, being exactly 1.000. The value of the Simpson's paradox ratio coefficient (SPR) was equal to 1, indicating that no examples of Simpson's paradox existed in the model (see Table 1).

Results of SEM and structural coefficients of links of basic conceptual model are presented in Table 2.

Table 2. Structural coefficients of links of basic conceptual model

The link between constructs	Link direction	Shape of link	Direct effect (γ)	f^2	Standard error
RHDM→IEP	+	nonlinear	0.24**	0.047	0.049
RHDM→PWB	+	nonlinear	0.40**	0.156	0.046
RHDM→SAT	+	nonlinear	0.18**	0.064	0.048
PWB→SAT	+	nonlinear	0.33**	0.175	0.047
IEP→SAT	+	nonlinear	0.29**	0.135	0.046

Note: ** $p < 0.01$; f^2 – size effect, SAT – employee satisfaction at work, RHDM – comprehensive development methods, IEP – individual employee performance, PWB – psychic well-being

Source: Authors' calculation

The requisitely holistic employee-development methods have a positive, statistically significant, and weak impact on individual work performance ($\gamma_{RHDM \rightarrow IEP} = 0.24$, $p < 0.01$). In addition, the strength of the f^2 effect is greater than 0.02 ($f^2 = 0.047$). Cohen's coefficient ($f^2 = 0.047$) showed that the effect of the predictive latent variable was small-sized. Hypothesis 1 can therefore be confirmed.

One can also confirm hypothesis 2. The results in Table 2 indicate that requisitely holistic employee-development methods improve psychic well-being ($\gamma_{RHDM \rightarrow PWB} = 0.40$, $p < 0.01$). The value of Cohen's coefficient ($f^2 = 0.156$) shows that the effect of predictive latent variable is medium strong.

Hypothesis 3 can be confirmed, too. Results in Table 2 show that requisitely holistic employee-development methods statistically significantly improve employee satisfaction ($\gamma_{RHDM \rightarrow SAT} = 0.18$, $p < 0.01$). Cohen's coefficient ($f^2 = 0.064$) shows that the effect of the predictive latent variable is small.

Hypothesis 4 can also be confirmed. The results show that psychic well-being statistically significantly improves job satisfaction of employees ($\gamma_{PWB \rightarrow SAT} = 0.33$, $p < 0.01$). Cohen's coefficient ($f^2 = 0.175$) shows medium effect of the predictive latent variable.

Finally, results show that individual work performance statistically significantly improves employee satisfaction ($\gamma_{IEP \rightarrow SAT} = 0.29$, $p < 0.01$). Cohen's coefficient

($f^2 = 0.135$) shows medium strong effect of the predictive latent variable. Therefore, one can confirm hypothesis 5.

4. DISCUSSIONS

Modeling structural equations showed nonlinear connections (influences) between the constructs in the basic conceptual model, as demonstrated by the Warp PLS 5.0. Normally, there are several explanations, based on content and other data, indicating why links are non-linear. They are so due to opinion and current well-being of respondents. Everybody can perceive the presented constructs differently, and his/her answers depend on his/her environment, personality, experiences, and other important factors.

The study demonstrated that connections are statistically significant and positive. We confirmed all hypotheses. With requisitely holistic employee-development methods, e.g. coaching, mentoring, sponsorship, and intergenerational cooperation, one can improve psychic well-being, individual work performance, and employee job satisfaction. Individuals who are more individually successful in their work are also more satisfied at work. The psychic well-being of employees at work improves their job satisfaction.

The results of this research significantly contribute to the enrichment and implementation of individual work performance management, and will focus the organizational attention on the integrated and uniform use of requisitely holistic employee-development methods for the development of individuals and organizations. This research could be used in other industries, without limit to the service sector. Findings can also support action changing existing, traditional requisitely holistic employee-development methods.

5. CONCLUSIONS

Historically, researchers who conducted multivariate quantitative analyses could use only linear algorithms in their estimation of association coefficients. This situation changed with the availability of software tools for nonlinear analysis, such as the Warp PLS 5.0 (Kock, 2011). Researchers in other fields employing multivariate statistical methods can now account for the existence of underlying

nonlinearity when estimating association coefficients of linked variables. The research shows that the quality of the conceptual model obtained with Warp PLS 5.0 supports the consideration of nonlinear connections between constructs. Furthermore, one can conclude that significant nonlinear connections exist between the constructs of the conceptual requisitely holistic employee-development methods in e.g. the Slovenian service sector. As we considered psychological constructs, we can explain that the cause of non-linearity in quantitative terms lies in the current opinion and well-being of individual respondents. Persons can perceive the presented constructs differently; therefore, the environment, personalities and experience of respondents, as well as other relevant factors influence the answers.

5.1 Contributions to the theory

The design of requisitely holistic employee-development methods, which is individual-oriented and based on methods of mentoring, coaching, sponsorship and intergenerational cooperation, contributes to the understanding of how one can use requisitely holistic employee-development methods to improve employee individual performance, job satisfaction, and well-being. The study showed the positive impact of requisitely holistic employee-development methods on individual work performance, job satisfaction, and psychic well-being, and confirmed findings from similar studies from elsewhere (Jones, Woods and Guillaume, 2015; Aguinis, 2013, Boyatzis et al., 2012). Findings of different authors confirm (Bakotić, 2016; Herb, 2015) that individual work performance and psychic well-being improves job satisfaction of employees (Fernandez and Moldogazier, 2015; Kraimer et al., 2011).

The model is not based on the output or work results of the individual, as in the current employee performance management models, but focuses on the individual's input—that is, on improving skills and competences by using requisitely holistic employee-development methods.

5.2 Contributions to practice

Results raise awareness of employees and management about the inadequacy of existing performance management methods. Consequently, one must place this knowledge of the situation and trends in the field of individual work performance

as the basis for sensible management action and the introduction of new performance management methods based on a requisitely holistic approach, focused on the individual and his/her performance, not on the performance management system. Businesses should adjust their performance management to the developmental cycle rather than derive information from an annual employee performance assessment. At the forefront of the new individual work performance there is a change in leadership style, as traditional performance management systems no longer work, being closely linked to transaction management, where performance is rewarded and failure is sanctioned. Therefore, one should move toward a requisitely holistic approach to employees, e.g. transformational, authentic, or health-friendly leadership, which is closely linked to the concept of “healthy” employees and healthy jobs.

The initial step of introducing the new individual work performance management should be the design of an internal communication system based on continuous feedback and informal interviews between employees and managers, focused on the social recognition of the individual and the use of the requisitely holistic employee-development methods.

5.3 Limitations and further research possibilities

The most important research limitations are the authors’ own measurement instruments for comprehensive development methods. The authors investigated only service sector companies, not all sectors. It would be worth applying the presented individual work performance model to other industries, e.g. the manufacturing sector. Due to the heavy burden and the increasing demands of employers, the psychosocial risks of the employed in the production sector are increasing; so it would be wise to consider individual work performance models that do not cause additional stress and other work-related risks to employees but improve satisfaction, psychic well-being, and individual work performance. Therefore, one should explore the possibilities of using the proposed individual work performance model in the production sector, too.

Authors also see an opportunity for further research in (1) designing the national psychic well-being indices of individuals as employees, (2) investigating the impact of the holistic individual work performance model using requisitely holistic

employee-development methods, and (3) examining the links between neuroscience and requisitely holistic employee-development methods.

Since people are aging, one should study the individual work performance employee management model in the context of aging workforce, to cover the key tasks and new roles (coach, sponsors, and mentors) in the new, agile model of employee performance management.

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Conflict of interests

The authors declare there is no conflict of interest.

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РАЗМАТРАЊЕ НЕЛИНЕАРНИХ ВЕЗА У МОДЕЛУ УПРАВЉАЊА ИНДИВИДУАЛНИМ ПЕРФОРМАНСАМА

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САЖЕТАК

Расправа о нелинеарним везама између елемената концептуалног модела управљања перформанси запослених у словеначком услужном сектору. Елементи су анализирани помоћу потврђеног мјерног инструмента, прилагођеног словеначком контексту захваљујући прелиминарним истраживањима. Постојање значајних нелинеарних веза између њих проверено је моделирањем структуралних једначина. Кориштен је софтверски алат Warp PLS 5.0. заснован на алгоритму Warp2. Холистичке методе развоја запослених значајно побољшавају задовољство радника, индивидуалне перформансе и благостање. Квалитет концептуалног модела добијеног помоћу Warp PLS 5.0 подржава разматрање нелинеарних веза између елемената. Оне постоје између елемената концептуалног модела система управљања перформансама запослених, нпр. у словеначком услужном сектору. Резултати омогућавају запосленима и менаџерима свијест да су постојећи системи управљања перформансама неадекватни. Дакле, ово знање о ситуацији и трендовима индивидуалних радних перформанси треба поставити као основу за разумно управљање, укључујући нове системе управљања перформансама засноване на неопходно холистичком приступу, фокусирајући се на појединце и њихове перформансе, а не на систем управљања перформансама. Дизајнирани модел учинка запослених је оријентисан према појединцу и примјењује менторство, подучавање, спонзорство и међугенерациску сарадњу. Он појашњава како се може користити холистички развој запослених за побољшање индивидуалних перформанси, задовољства послом и благостање запослених.

Кључне ријечи: управљање перформансама радника, нелинеарне везе, услужни сектор, моделирање структуралних једначина, Warp PLS 5.0.