

# A STUDY ON THE CORRELATIONS AMONG ORGANIZATIONAL SUPPORT, PROFESSIONAL COMMITMENT, AND EMPLOYEE ENGAGEMENT IN CATERING INDUSTRY

Chun-Hsien LO<sup>1</sup> – Fang-Pei NIEH<sup>2</sup>

<sup>1</sup>*Department of Food and Beverage Management, Taipei College of Maritime Technology,  
Taiwan, R.O.C. No. 212, Sec. 9, Yenping N. Rd. Shihlin, Taipei, Taiwan (11174), R.O.C.  
E-mail: mason@mail.tcmt.edu.tw*

<sup>2</sup>*Department of Hotel Management, Vanung University, Taiwan, R.O.C.,  
No. 1 Van-Nung Rd., Chung-Lin Tao-Yuan (32061), Taiwan, R.O.C.  
E-mail: pei5675@mail.vnu.edu.tw (corresponding author)*

The gross product of catering industry in developed countries often exceeds most other industries because of changing styles of societies, economic development, increasing national income, frequent international trade, and convenient and rapid transportation. The economic development in Taiwan has stepped in service-oriented phase from industrial economy and is approaching the mature economy of advanced countries. The marketing and management strategies for catering industry have become important as it is a business related to “people”, with more personnel than other industries, mainly providing delicate food, which is regarded as the key in tourism industry, and offering better products and services for customers.

Aiming at the staff in Landis Hotels & Resorts as the research subject, total 280 copies of questionnaires are distributed, and 176 valid copies are retrieved, with the retrieval rate 63%. The research findings show the significant correlations between 1. Organizational Support and Professional Commitment, 2. Professional Commitment and Employee Engagement, and 3. Organizational Support and Employee Engagement.

**Keywords:** organizational support, professional commitment, employee engagement, vitality, devotion

## 1. INTRODUCTION

The economic development in Taiwan has changed from traditional manufacturing to service industry, of which catering industry is a primary sub-industry. The business scale and business model in catering industry grow with economic development as the business requires long-term planning. The enhancement of national income has promoted private consumption that domestic demands are

largely expanded, especially the increasing demands for labor. The booming domestic catering industry and the rapidly growing GDP of service industry have largely surpassed industrial output value, revealing that the economic development in Taiwan has stepped into service-oriented phase from industrial economy and the marketing and management in catering industry have become primary.

Services are the source of competitiveness in catering industry. However, service personnel and services can hardly be separated as the front-line service personnel have to present professional capabilities. The empathy and the active service spirit would also greatly affect the quality of services and marketing effects. Based on the characteristics of intangibility and difficulty in prediction, the service delivering and providing process lead the customer evaluation of service quality, where front-line service personnel plays the critical role. It is important for a staff offering extra efforts, extra concerns, and active services in the service delivery to please customers and acquire customer satisfaction and positive emotional responses. Such behaviors are not covered in the behaviors regulated for the job and the services in catering industry can hardly be standardized as it is rather difficult to present systematic norms for service personnel. When the employees perceive the organization emphasizing the contributions and concerning about the welfare, the employees, based on reciprocity, would work harder to help the organization achieve the objectives. Consequently, this study aims to discuss the correlations among Organizational Support, Professional Commitment, and Employee Engagement in catering industry.

## 2. DEFINITION AND HYPOTHESIS DEDUCTION

### 2.1. Organizational Support

The research on Perceived Organizational Support used to be based on Social Exchange Theory proposed by Blau (Wang 2009; Han et al. 2009). Blau considered that any exchange relations could be divided into economic exchange and social exchange, and social exchange was established based on trust and goodwill, with which an individual expected to receive return (Ahmad and Oranye 2010).

Cheung et al. (2011) indicated in Social Exchange Theory that anyone would present exchange behaviors, which tended to acquire beneficial return, and the relationship among people would gradually become the reliable, loyal, and mutual commitment. To achieve such an objective, both parties should follow the exchange rules; basically, the stable exchange relation relied on the establishment of reciprocity. Any related parties participating in exchange should follow the ethic norms; and, under the principle of mutual benefits, both parties could ex-

change valuable resources, including economic value or socio-emotional value of affection, identification and status, information, money, goods, or services. The mutual benefits could be established through exchange behaviors, and reciprocity could reinforce the value of exchanged objects, as affective commitment would be deepened with the time for exchange relation (Eisenberger et al. 2010).

Social Exchange Theory was explained as the adjustment mechanism and reciprocal norms for the social transaction generated for human survival. Based on reciprocal norms, it was claimed that an employee would make efforts and contribute to the organization for exchanging real rewards, such as salary and welfare, or emotional responses, like appraisal or concerns, in order to maintain the relationship between the employer and employees. When the reciprocity is destroyed, the employee would not precede such exchange behaviors because of perceived discomfort (Hassanreza and Keyvan 2011). According to the above literatures, Organizational Support, referred to Jiang et al. (2012), could be divided into Emotional Support (perceiving love, concerns, understanding and emotion being comforted and encouraged) and Material Support (required tangible objects) in this study.

## **2.2. Professional Commitment**

Professional Commitment is the specialization of commitment, i.e. extending commitment to the professional field (Anand et al. 2010). Based on the discussion of Organizational Commitment, most of the definitions are revised from Organizational Commitment. In Brandstätter's (2011) commitment model, Professional Commitment was regarded as the relative strength of personal agreement with and investment in the profession and the factors in Professional Commitment were classified into Organizational Commitment, Professional Organizational Conflict, and Satisfaction with Reward. From the definition of Organizational Commitment, Lin (2014) pointed out Professional Commitment as individual agreeing with and investing in specific profession and performing "the firm belief and acceptance of professional objectives and value, the willingness to pay more efforts to the profession, and the desire to continuously be a part of the profession". Nevertheless, in Erdogan and Bauer's (2010) definition of Organizational Commitment, Professional Commitment should contain the elements of 1. the firm belief and acceptance of the value and objective of engaged profession, 2. willing to pay more efforts to the engaged profession, and 3. being eager for becoming a member of the engaged profession.

Aranya and Ferris measured Professional Commitment with Professional Agreement, Intention to Stay, Acceptance of Professional Objective and Norms.

Hornung et al. (2010) proposed to study the value of Professional Commitment with the three dimensions for Organizational Commitment so that a person could more completely understand the profession. The three dimensions for Professional Commitment are utilized for this study. 1. Affective Professional Commitment refers to the affective attachment and agreement with an employee investing in the profession, intending to stay in the professional field. When Professional Investment enhances Job Satisfaction, such Affective Commitment would be promoted. 2. Continuance Professional Commitment is the commitment of staying in the profession when perceiving the great cost for leaving the professional field. However, a person staying in the profession because of high Continuance commitment, compared to the others staying with different reasons, would not invest in the professional activities. 3. Normative Professional Commitment refers to an employee staying in the profession because of the obligation to the professional loyalty generated by internal normative stress or, based on reciprocity, benefits from the profession (Zhou et al. 2012).

### **2.3. Employee Engagement**

Employee Engagement was originated from Role Theory proposed by Kahn in “A Study on the Psychological Conditions of Personal Engagement in Job” in *Management Research* in 1990, in which “personal engagement” was defined as an organizational member controlling oneself to combine ego and job role. An individual harnessing ego and job role was the state of self-in-role, i.e. self-employment and self-expression of the organizational member in the job role and the degree of self-performance in completing the job with affection, recognition, and practice. Kahn also pointed out Employee Engagement as better self-performance of an employee on the task behaviors, which would involve in the job or interaction with others, personal presentation (physiological, cognitive, and affective) and role performance. Consequently, an employee would present the role performance when the organization provided proper conditions. Furthermore, Employee Engagement was also defined as an experiential state, containing the cognition and emotion of vitality with personal enthusiasm (Breugh 2011) as well as the popularly new trend, positive psychology (Crawshaw et al. 2012). Accordingly, positive psychology developed with Employee Engagement and focused on personal advantages and the optimal functions, rather than the description of personal weakness and obstacles (Grant 2012).

Moreover, Employee Engagement has been defined and measured with distinct methods, such as organizational commitment and organizational citizenship behavior (Hwang and Chang 2009). The affective and rational organizational

commitment is mostly defined, which is related to automatic devotion and contribution of employees (Klassen and Chiu 2011; Huang 2014).

Loi et al. (2011) indicated that Employee Engagement presented the characteristics of Vitality, Concentration, and Devotion and was a mind model with positive thought, personal ambition, and job relevance. Such characteristics are used for this study.

- (1) Vitality, showing high energy and flexible mind on the job, being willing to pay efforts to the job, and being able to persist in difficulties.
- (2) Devotion, indicating personal understanding of the importance and meaning of the job and the passion and honor of the job.
- (3) Concentration, referring to being glad to invest in the job, without being affected by other affairs.

#### **2.4. Research hypothesis**

Dawley et al. (2010) found out the expectation gap of an employee between company regulations and welfare measures. In addition to the direct effects on Organizational Commitment and pressure response, expectation gap would indirectly influence Professional Commitment and Job Attitude through Perceived Organizational Support. Ebstrup et al. (2011) also found out the significant correlations among Perceived Organizational Support, Affective Commitment, Continuance Commitment, Job Satisfaction, Turnover Intention, and Job Performance. In other words, an employee with higher Perceived Organizational Support would show higher commitment and job satisfaction, but lower turnover intention.

Nonetheless, Professional Commitment is the commitment under the viewpoint of self-agreement, stressing on the higher commitment of an individual to the affective attachment and agreement with a certain profession (Gentry et al. 2012). Since Professional Commitment is based on such professional value and affective agreement, it also agrees with what the members do in the profession (Komaraju et al. 2011) and involves in affective investment which presents positive correlations with job satisfaction and citizenship behaviors (Restubog et al. 2011), but negative effects on employee turnover intention and positive effects on employee participation intention (Sadeghi and Pihie 2012). Professional Commitment is generated when an employee perceives positive correlations between professional norms or professional obligation and job satisfaction (Venkataramani et al. 2010), which appears to have negative effects on employee turnover intention and positive effects on employee participation intention (Zhang et al. 2012). A person would be full of Vitality and is willing to retain enthusiasm and concerns with the profession and to invest in the professional role with active

Devotion for job Concentration, when paying more efforts to the profession. Vitality, Devotion, and Concentration therefore are the major contents of employee engagement and contribution (Zhao et al. 2010).

Based on the above literatures, the following hypotheses are deduced in this study.

H1: Organizational Support presents notable correlations with Professional Commitment.

H2: Professional Commitment shows significant correlations with Employee Engagement.

H3: Organizational Support reveals remarkable correlations with Employee Engagement.

### 3. RESEARCH METHOD

#### 3.1. Model

The test of goodness-of-fit in LISREL model could be generally measured by overall model fit (extrinsic quality of the model) and intrinsic quality of the model. For testing the overall model fit, the most commonly used goodness-of-fit indices include (1)  $\chi^2$  ratio (Chi-Square ratio), standing for the difference between the actual theory model and the expected value, which is better less than 3, (2) goodness-of-fit index (GFI) and adjusted goodness-of-fit index (AGFI), which are better approaching 1, (3) root mean square residual (RMR), showing the residual variance of the fit being divided by the mean of covariance, which is better less than 0.05, and (4) incremental fit index (IFI), showing the favorable model fit when the value is larger than 0.9 (Hair et al. 1998).

The intrinsic quality indices in LISREL contain (1) SMC (square multiple correlation) of individual manifest variables, as the R<sup>2</sup> value of manifest variables and latent variables, which should be larger than 0.5, (2) composite reliability ( $\rho$ ) of latent variables, as the Cronbach's  $\alpha$  of the observation indices of latent variables, which should be larger than 0.6, and (3) the average variance extracted of latent variables, as the R<sup>2</sup> sum of a latent variable and various manifest variables divided by the number of manifest variable, showing the percentage of manifest variables being able to measure the latent variable, which is better above 0.5 (Sharma 1996).

### 3.2. Research sample and subject

Aiming at Landis Hotels & Resorts, the employees are distributed 280 copies of questionnaires, and 176 valid ones are retrieved, with the retrieval rate 63%. Landis Hotels & Resorts (Liz Dining Group), aiming to create characteristic food and beverage, mainly deals with the refreshment of The Landis Taipei and other restaurants, including three Liz Bakeries and two restaurants of The Story Tea House and Brasserie Liz, where Liz Bakery offers classical European cakes and bread, The Story Tea House and Brasserie Liz combine the fine services and traditional French cuisine and provide comfortable and relaxing French atmosphere.

### 3.3. Reliability and validity test

Based on the past theories and referred to the current situations of the research subjects, the questionnaire in this study is designed to truly express the essence and the completeness of an object in order to confirm the content validity. The final communality of Factor Analysis is applied to testing the construct validity of the dimensions. The received validity appears in 0.783~0.866, presenting the favorable validity of this questionnaire.

In basic research, the reliability coefficient above 0.8 shows high reliability; while the reliability being 0.7 is acceptable in exploratory research. The measured Cronbach's  $\alpha$  appears in 0.814~0.923, conforming to what Wortzel (1979) claimed that the Cronbach's  $\alpha$  between 0.7 and 0.98 was the range of high reliability.

## 4. EMPIRICAL RESULT ANALYSIS

### 4.1. Test of model fit

Maximum Likelihood (ML) was utilized for the estimation in this study, and the LISREL results achieved the convergence. The overall model fit indices standing for the extrinsic quality revealed (1)  $\chi^2$  ratio =  $\chi^2 = 1.766$ , less than 3, (2) goodness-of-fit index (GFI) 0.94, larger than 0.9, and adjusted goodness-of-fit index (AGFI) 0.88, larger than 0.8, (3) root mean square residual (RMR) 0.026, less than 0.05, and (4) incremental fit index 0.95, larger than 0.9. Overall speaking, the number of 176 samples was larger than the basic requirement of 135.73, and

the overall model fit indices passed the tests that the extrinsic quality of the LISREL model was favorable.

Regarding the test of intrinsic quality of the model, the square multiple correlation (SMC) of manifest variables was larger than 0.5 (*Table 1*), presenting the favorable measurement indices of latent variables. Moreover, the composite reliability of Organizational Support, Professional Commitment, and Employee Engagement was larger than 0.6 and the average variance extracted larger than 0.5 (*Table 2*) conforming to the requirements for intrinsic quality test.

*Table 1.* SMC of variables and dimensions

Organizational Support		Professional Commitment			Employee Engagement		
Emotional Support	Material Support	Affective Professional Commitment	Continuance Professional Commitment	Normative Professional Commitment	Vitality	Devotion	Concentration
0.71	0.78	0.73	0.76	0.81	0.75	0.80	0.86

*Table 2.* Composite reliability and average variance extracted of variables

Item	Organizational Support	Professional Commitment	Employee Engagement
Composite reliability	0.811	0.832	0.784
Average variance extracted	0.75	0.78	0.72

#### 4.2. Test of path relation

When the latent variables of Emotional Support, Affective Professional Commitment, and Vitality were regarded as the reference indicators with fixed value 1 (Bollen and Long 1993), the estimates between other dimensions and the variables were significant, according to the casual path in *Table 3*. In brief, Material Support = 1.12 presented better explanation than Emotional Support, Continuance Professional Commitment = 1.05 showed better explanation than Affective Professional Commitment, and Devotion = 1.15 revealed high Vitality on Employee Engagement. The hypothesis test results are showed in *Table 4*.

### 5. CONCLUSION

The research results show remarkable correlations between Perceived Organizational Support and Professional Commitment when the employees in catering industry perceive organizational or supervisor emotion and the degree of Ma-



Table 3. Test of path relation

Factors facets / assessment standards		Estimates
Organizational Support	Emotional Support	1.00
	Material Support	1.12
Professional Commitment	Affective Professional	1.00
	Continuance Professional	1.05
	Normative Professional	1.03
Employment Engagement	Vitality	1.00
	Devotion	1.15
	Concentration	1.07
Organizational Support→Professional Commitment		0.846
Professional Commitment→Employment Engagement		0.859
Organizational Support→Employment Engagement		0.827
GFI		0.94
AGFI		0.88
RMR		0.026

Table 4. Verification of hypothesis

Research hypothesis	Correlation	Empirical result	P	Result
H1	+	0.382	0.00	supported
H2	+	0.316	0.00	supported
H3	+	0.427	0.00	supported

terial Support. However, the higher Professional Commitment of an employee in catering industry presents the higher Employee Engagement. Since catering industry is a highly enthusiastic work, Professional Commitment would enhance an individual keeping enthusiasm, concerns, and investment in the profession as the high performance of engagement. Affective commitment is the commitment under the viewpoint of self-agreement, stressing on higher commitment of a person with affective attachment and agreement to certain profession. Affective commitment is formed based on the agreement with the professional value and affection and the agreement with what the members do in the profession, involving affective investment, that it presents positive effects on Participation Intention of the employees in catering industry. When a person is willing to pay more efforts to the profession, he/she is full of Vitality, willing to retain enthusiasm and concerns about the profession, revealing active Devotion and showing Concentration on the job when willing to invest in the professional role. In this case, Vitality, Devotion, and Concentration are the major contents in employee engagement. Apparently, high Organizational Support in catering industry seems

to be the critical asset of an organization. When an employee perceives the job being highly supported, Organizational Support would enhance the employee's positive attitudes and behavioral performance. Organizational Support refers to manager concerns and support to the subordinates, presenting supportive, trustable, and assistant atmosphere; and Organizational Support is primary for the psychological security of workers. As a result, an employee would pay more efforts to exchanging more Emotional Support and Material Support. Emotional Support, on the other hand, could establish Professional Commitment, reduce Turnover Intention, and promote performance of employees; and Material Support reveals less role stress and job burnout and enhances Job Performance and Professional Commitment.

## 6. SUGGESTION

The research results and findings are concluded for the following practical suggestions.

1. Flexible shift system. In regard to shift systems, a catering business should allow certain proportion of employees adjusting the schedule, without affecting the operation, to take care of both job and family. In this case, the employees in catering industry perceive Emotional Support, could cope with the job requirements, would not easily appear job burnout, enhance Professional Commitment, and engage more in the job.
2. Complete salary and welfare system. A catering business could establish or enhance performance awards and annual bonus to compensate insufficient salaries and have the employees thoroughly understand that they could receive rewards when the company makes profits. With such incentives, the employees would be willing to pay more efforts to the profession and the company could make profits to create the win-win situation. A catering business should also award or encourage the employees when a difficult task is completed, such as personal performance prize or annual leave, to reinforce the employee's Perceived Organizational Support.
3. Practice of high-commitment human resource management. Catering businesses are suggested to build the atmosphere with psychological support, such as high-commitment human resource management. High-commitment human resource management focuses on internal development of human resources and establishes long-term employment with the employees by providing rich educational trainings and assisting them with career development. High-commitment human resource management could reinforce Job Satisfaction and Pro-

fessional Commitment of the employees in catering industry to show positive points of view and perceive Organizational Support, further release the negative responses to job stress, and finally promote the business performance.

## REFERENCES

- Ahmad, N. and Oranye, N.O. (2010). Empowerment, job satisfaction and organizational commitment: a comparative analysis of nurses working in Malaysia and England. *Journal of Nursing Management*, 18(5), 582–591.
- Anand, S., Vidyarthi, P.R., Liden, R.C. and Rousseau, D.M. (2010). Good citizens in poor-quality relationships: Idiosyncratic deals as a substitute for relationship quality. *Academy of Management Journal*, 53(5), 970–988.
- Bollen, K.A. and Long, J.S. (1993). *Testing Structural Equation Models*. Newbury Park, CA: Sage Publications.
- Brandstätter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. *Personality and Individual Differences*, 51(3), 222–230.
- Breaugh, J.A. (2011). Modeling the managerial promotion process. *Journal of Managerial Psychology*, 26(4), 264–277.
- Cheung, F.M. et al. (2011). Toward a new approach to the study of personality in culture. *American Psychologist*, 66, 593–603.
- Crawshaw, J.R., van Dick, R. and Brodbeck, F.C. (2012). Opportunity, fair process and relationship value: career development as a driver of proactive work behaviour. *Human Resource Management Journal*, 22(1), 4–20.
- Dawley, D. et al. (2010). Perceived Organizational Support and Turnover Intention: The Mediating Effects of Personal Sacrifice and Job Fit. *Journal of Social Psychology*, 150(3), 238–257.
- Ebstrup, J.F. et al. (2011). Association between the Five Factor personality traits and perceived stress: is the effect mediated by general self-efficacy? *Anxiety, Stress & Coping*, 24(4), 407–419.
- Eisenberger, R., Karagonlar, G., Stinglhamber, F., Neves, P., Becker, T.E., Gonzalez-Morales, M.G. and Steiger-Mueller, M. (2010). Leader–member exchange and affective organizational commitment: the contribution of supervisor’s organizational embodiment. *Journal of Applied Psychology*, 95(6), 1085–1103.
- Erdogan, B. and Bauer, T.N. (2010). Differentiated leader–member exchanges: The buffering role of justice climate. *Journal of Applied Psychology*, 95(6), 1104.
- Gentry, W.A., Gilmore, D.C., Shuffler, M.L. and Leslie, J.B. (2012). Political skill as an indicator of promotability among multiple rater sources. *Journal of Organizational Behavior*, 33(1), 89–104.
- Grant, A.M. (2012). Leading with meaning: Beneficiary contact, prosocial impact, and the performance effects of transformational leadership. *Academy of Management Journal*, 55(2), 458–476.
- Hair, J.F., Anderson R., Tatham R.L. and Black, W.C. (1998). *Multivariate Data Analysis*. N. J.: Prentice Hall Inc., 5th ed.
- Han, Tzu-shian, Chiang, Hsu-hsin and Yang, Tun-cheng (2009). High commitment HRM, Perceived Organizational Support, trust, and knowledge sharing: A multiple-level analysis. *Management Review*, 28(1), 25–44.

- Hassanreza, Z. and Keyvan, S. (2011). Role of procedural justice, trust, job satisfaction, and organizational commitment in Organizational Citizenship Behavior (OCB) of teachers: Proposing a modified social exchange model. *Procedia - Social and Behavioral Sciences*, 29, 1472–1481.
- Hornung, S., Rousseau, D.M., Glaser, J., Angerer, P. and Weigl, M. (2010). Beyond top-down and bottom-up work redesign: Customizing job content through idiosyncratic deals. *Journal of Organizational Behavior*, 31(2–3), 187–215.
- Huang, S.P. (2014). A study on the relations among the human resource management system, organizational commitment and business performance. *Acta Oeconomica*, 64(Supplement 2), 275–288.
- Hwang, J.I. and Chang, H. (2009). Work climate perception and turnover intention among Korean hospital staff. *International Nursing Review*, 56(1), 73–80.
- Jiang, K., Lepak, D.P., Hu, J. and Baer, J.C. (2012). How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal*, 55(6), 1264–1294.
- Klassen, R.M. and Chiu, M.M. (2011). The occupational commitment and intention to quit of practicing and pre-service teachers: Influence of self-efficacy, job stress, and teaching context. *Contemporary Educational Psychology*, 36(2), 114–129.
- Komarraju, M. et al. (2011). The Big Five personality traits, learning styles, and academic achievement. *Personality and Individual Differences*, 51(4), 472–477.
- Lin, P. C. (2014). A study on the expatriates, organizational justice, organizational commitment, job engagement, and organizational effectiveness. *Acta Oeconomica*, 64(Supplement 2), 53–68.
- Loi, R., Ngo, H.Y., Zhang, L. and Lau, V.P. (2011). The interaction between leader–member exchange and perceived job security in predicting employee altruism and work performance. *Journal of Occupational and Organizational Psychology*, 84(4), 669–685.
- Restubog, S.L.D., Bordia, P. and Bordia, S. (2011). Investigating the role of psychological contract breach on career success: Convergent evidence from two longitudinal studies. *Journal of Vocational Behavior*, 79(2), 428–437.
- Sadeghi, A. and Pihie, Z.A.L. (2012). Transformational leadership and its predictive effects on leadership effectiveness. *International Journal of Business and Social Science*, 3(7), 186–197.
- Sharma, S. (1996). *Applied Multivariate Techniques*, N. Y.: John Wiley & Sons, Inc.
- Venkataramani, V., Green, S.G. and Schleicher, J.D. (2010). Well-connected leaders: The impact of leaders' social network ties on LMX and members' work attitudes. *Journal of Applied Psychology*, 95(6), 1071.
- Wang, Mei-ling (2009). The effects of organizational support and market-focused human resource management on service-oriented organizational citizenship behaviors. *Soochow Journal of Economics and Business*, 64, 57–92.
- Wortzel, R. (1979). New life style determinants of women's food shopping behavior. *Journal of Marketing*, 43, 28–29.
- Zbrank, P. (2013). Data envelopment analysis as a tool for evaluation of employees' performance. *Acta Oeconomica et Informatica*, 16(1).
- Zhang, Z., Wang, M. and Shi, J. (2012). Leader–follower congruence in proactive personality and work outcomes: the mediating role of leader–member exchange. *Academy of Management Journal*, 55(1), 111–130.
- Zhao, H. et al. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, 36(2), 381–404.
- Zhou, L., Wang, M., Chen, G. and Shi, J. (2012). Supervisors' upward exchange relationships and subordinate outcomes: Testing the multilevel mediation role of empowerment. *Journal of Applied Psychology*, 97(3).