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Classic or Modern? Enhancement of Job Satisfaction Scale for Green Job Workers

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Green jobs, in environmental and eco-friendly sectors, are defined as jobs where decent work conditions are presented. The green jobs, significantly increasing all over the world, support the protection of natural resources and also provide high quality work life for workers. The goal of this research is to improve the job satisfaction scale for green job workers by using the Structural Equation Model with model development strategy. Within this research SPSS 21 has been used for internal consistency rate and exploratory factor analysis and smartPLS 2.0 has been used for Structural Equation Model. Analysis results show that contingent reward, supervision, co-workers and communication effect job satisfaction of green job workers.

Key words: green jobs, job satisfaction, Structural Equation Model, smartPLS 2.0

Introduction

The importance of green jobs in the world is increasing rapidly (UNEP 2008). In recent years, 2% of the employment in the European Union (ECORYS 2012, 25–6) and 2.4% of the employment in the United States constitute of these jobs (Clayton 2013). While there were 2.3 million existing green job workers worldwide in the year 2006 (UNEP 2008, 7), this number has reached up 6.3 million people in the year 2014 (International Renewable Energy Agency 2014, 4) and by the year 2030, 21 million people worldwide are expected to be green job workers (UNEP 2008, 7–9). Green jobs are not only growing in the Europe and North America continents, but also in other continents (Cosbey 2012, 43). Furthermore, ILO has expressed that in the next 30 years existing and newly created green jobs will directly or indirectly affect 1.5 billion people from a global perspective (ILO 2013a, 22).

Rapidly increasing number of green jobs affects the dynamics of the labour market closely (UNEP 2009; ILO 2012; ILO 2013a; UNEP

2013). One of the issues to be discussed in this context is the workers' perception of green jobs. Due to their structures, green jobs not only reduce environmental problems, but also try to ensure the sustainability of work life (Linton 2008, 233; Peters, Eathington, and Swenson 2011, 12; Delmas and Pekovic, 2012: 13). In the scope of job satisfaction concept as a part of sustainability of work life, one of the questions to find an answer is whether conventional job satisfaction structure is suitable for green job workers or not. Thus the aim of this research is to examine if the conventional job satisfaction structure is valid for green job workers. In the light of previous researches (Chan and Lam 2012; OECD 2012; ILO 2013a; ILO 2013b), this paper puts forward that the job satisfaction structure of green job workers is different than conventional job satisfaction structure.

Green Jobs

Even though there is not one globally accepted definition, the most general form of green jobs are decent jobs that contribute to preserve or restore the environment in traditional sectors such as manufacturing and construction, or in new ones such as renewable energy and energy efficiency (ILO 2014, 2). The United States Department of Labor (2013) defines green jobs as jobs producing goods or services considering the environmental interests or the protection of natural resources and workers fulfilling their duties in the production process in an environmental friendly manner and completing the production process using less natural resources. The National Technical Assistance Registry (NTAR) defines green jobs as jobs resulting from traditional sectors like production, infrastructure, tourism and logistics equipped with environmental and business priorities with decent work conditions (National Technical Assistance Registry 2008, 4).

While Peters, Eathington, and Swenson (2011, 11) see green jobs as protecting environmental and natural resources, mitigating climate changes and housing objectives ensuring energy security, Raymond, Svendson, and Campbell (2013, 287) evaluate green jobs as offering decent job standards to low-income workers who work in fields having environmental priorities with activities like reducing energy demand or carbon emissions.

As it is seen, green jobs are built on two basic concepts. The first concept is the protection of the environment or to reduce environmental damage to a minimum level; the second is to offer decent job opportunities to workers. From this point it can be said that only jobs providing these two criteria at the same time can be considered as green jobs.

Job Satisfaction

Job satisfaction as a concept came up for Hawthorne research in 1924 (Muchinsky 2006). As a concept for the first time it was defined by Hoppock as 'a combination of a person's psychological, physical and environmental events from his job to obtain job satisfaction/be satisfied' (Yew 2008). Vroom (1964) defines job satisfaction as the orientation of the emotional state an individual already is in for the job role; Locke (1976), the worker obtaining the emotional gratification after making the assessments belonging to the work; Levy and Davis (1988); the satisfaction or dissatisfaction workers get from their work; Schermerhorn, Hunt, and Osborn (1994), the degree in which expectations in the psychological agreement are being met; Spector (1997), the degree of enjoyment workers get from their job; Hellman (1997) defines it as the combination of the worker's emotional and cognitive reactions it gets from the difference between what they already receive and what they want. Job satisfaction of a worker is defined by the financial and moral satisfaction a worker gets (pay, richness of social life and meaning of work) from its job, if a person is financially and morally content from his/her job, it is possible to speak of job satisfaction (Çivilidağ 2011, 56). A worker that is satisfied enough by its job, enjoys life, displays positive actions, has a healthy psychology and is valued as an individual having a growing success in business and private life (Demirel 2014, 4925). On the other hand, a worker that does not get enough satisfaction by its job experiences negative feelings, tends to move away from its job, is indifferent towards its job and is valued as an individual that bears hopeless thoughts about the future (Rice, Near, and Hunt 1980, 44; Tett and Meyer 1993; Spector 1997; Saari and Judge 2004, 400; Duyan 2007, 27; Randstad 2012, 11; Sageer, Rafat, and Agarwal 2012, 35).

In the literature the early form of job satisfaction contains 5 dimensions such as pay, nature of work, operating procedures, supervision and co-workers (Keser 2005). Due to the change in the meaning of job, 4 more dimensions were added to job satisfaction structure which are promotion, fringe benefits, contingent reward and communication (Spector 1985; 1997; Currivan 1999; Friday and Friday 2003; Crossman and Abou-Zaki 2003). As a result, conventional job satisfaction structure includes 9 dimensions in total, which are explained in a detailed way in research method part in this paper.

Relationship between Green Jobs and job Satisfaction

Green jobs aim to create a sustainable economy sensitive towards people and environment. Economic systems that do not have sustainable goals (brown economy) will have a clear effect on individuals and the quality of their job (Muhaisen and Ahlback 2012, 6; Chan and Lam 2012, 191; Bowen 2012, 2; OECD 2012, 5; ILO 2013a, 17; ILO 2013b, 24). A research done by EUROFOUND focuses on the expectations of workers on the newly established jobs. The obtained results show that global climate changes affect the working quality of workers in a negative manner. According to this, workers experience anxiety regarding their working quality (decreasing of decent jobs standards) after climate changes and it is reported that in parallel to climate changes there will be a decline in working quality (EUROFOUND 2012, 12).

In order to determine the attitudes of individuals towards green jobs, Work and Life Quality in New & Growing Jobs (2009; 2011) investigation group has performed studies and within these studies, the group focuses on the working quality of workers in low paid sectors in Europe and one of the sectors investigated in the report is the construction sector. This section of the report compares the attitudes of workers towards their jobs and work quality of workers that are working in green and brown construction sectors. Accordingly, individuals employed in the construction sector encounter seven main problems. These problems are:

- illicit work or seasonal unemployment,
- underpaid,
- overtime work,
- no appropriate trainings are given for specialist areas,
- materials as a threat to health,
- the absence of occupational health and safety conditions and
- the lack of trade union organizations.

Green construction businesses propose permanent employment contracts to workers. These contracts avoid workers to do illicit work like seasonal unemployment and so on. Green construction sectors pay hourly more (between 20% and 120%) to workers compared to equal brown jobs. Thus, it is plausible to say that workers in the green construction sector receive more pay compared to brown jobs. This payment level is an indication that workers receive social payment instead of minimum wage. Organizations that perform green construction jobs also avoid overtime work. These organizations that conform to the daily one-hour at most overtime work law, are changing into organizations where work-life balance is provided. Green construction organizations giving appropriate expert area education to workers, have managed to reduce employee turnover rate. The materials used during construction works also not containing toxic substances provide workers less exposure to harmful substances. Green construction organizations provide better occupational health and safety standards. Results show that green construction workers face less barriers when it comes to trade union organization (Work and Life Quality in New & Growing Jobs 2009, 86–101; 2011, 3–11). Therefore, it has been detected that European workers in green construction sectors have better working conditions than workers in similar sectors (brown construction).

The similar results can be found in another research of the same research group (Work and Life Quality in New & Growing Jobs). According to this, searching for a job, especially searching for decent job is difficult (Tejari 2011, 218) for middle or low skilled workers (for example, carpenters) expressing that green jobs offer good conditions and that they want to stay in this sector (Work and Life Quality in New & Growing Jobs 2012a, 52–9). Another study shows that green jobs have a healing effect on both environment and working conditions (Work and Life Quality in New & Growing Jobs 2012b, 25–6). When examining all the obtained findings, it can be said that green jobs offer decent job standards and are perceived as positive.

Workers evaluate green jobs with two different views. The first one is that workers evaluate green jobs as jobs that improve working conditions and working life quality compared to other jobs and therefore are better (Omar et. al. 2013, 411–2). The second one is that workers express that brown jobs worry them about the future when it comes to the environment and therefore they tend to orient towards environmental friendly jobs (EUROFOUND 2012, 12). Working in a green job means receiving a good payment, effective health services, career progression and learning opportunities and doing an enjoyable job (Drobnic, Beham, and Prag 2010, 207). Furthermore, workers consider green jobs as sustainable in terms of environmental and human aspects (Work and Life Quality in New & Growing Jobs 2011, 31).

Purpose of the Research

The information above gives clues about green job satisfaction structure might be different than the conventional job satisfaction structure. Thus the aim of this research is to examine if the conventional job satisfaction structure is valid for green job workers. In the light of previous researches (Chan and Lam 2012; OECD 2012; ILO 2013a; ILO 2013b), this paper puts forward that the job satisfaction structure of green job workers is different than conventional job satisfaction structure. The hypothesis of the research is as in the following;

H1 *Job satisfaction structure of green job workers is different from classic job satisfaction structure.*

Research Method

Within this research, mixed method strategy was used. In order to determine if the business is green or not, structured interview technique was used; to measure the job satisfaction, survey technique was used.

The questions in the structured interview form have been created on the basis of green business measurement criteria. The first of these criteria is environment measurement (i.e. The organization should have the ISO 14001 certificate); the second is decent jobs (i.e. Working hours should be well organized; there should be no long and exhausting work). The environment measurements that determine whether a business is green were created from related articles (Jabbour, Santos, and Nagano 2010; ILO 2011; Renwick, Redman, and Maguire 2013; ILO 2013b). Decent job measurements are determined as the indicators that developed by Jarvis, Varma, and Ram (2011).

The survey form used within the research consists of two parts. In the first part, participants were asked to indicate their gender, position, marital status, educational level, age, work years and weekly working hour. In order to determine the demographical specifications of the participants, seven questions were asked in this part. In the second part however the aim was to measure job satisfaction of the participants and job satisfaction scale of Paul Elliot Spector (1997) has been used.

Job satisfaction scale consists of thirty-six items and is evaluated on six point measurements (1: I totally do not agree, 2: I do not agree, 3: I partially do not agree, 4: I partially agree, 5: I agree, 6: I totally agree) and consists of nine dimensions. These are:

- *Pay:* consists of the views of the participants upon pay levels. It is plausible to say that when this sub scale evaluation rate increases, the individual gets a higher job satisfaction from its pay. Within this sub scale; there are items like 'I believe I receive a fair pay compared to the work that I am performing.'
- *Promotion:* reflects the thoughts regarding promotion policies

within the organization. It is shown that participants who value this sub scale with a high rate, the satisfaction received from the promotion system within the organization is high. Within this sub scale; there are items like 'It is low for me to be promoted.'

- *Supervision:* contains the evaluation of managers by participants. It is shown that participants who value this sub scale with a high rate feel a high satisfaction from its managers. Within this sub scale; there are items like 'My manager is not fair towards me.'
- *Fringe Benefits:* contains the thoughts of participants regarding fringe benefits and additional rights within the organization. It is shown that an individual valuing this sub scale with a high rate receives a high satisfaction from fringe benefits and additional rights. Within this sub scale; there are items like 'The rights and benefits within my organization are better than many other organizations.'
- *Contingent Rewards:* the goal is to measure the views of the participants regarding rewards and appreciation system within their organization. It is shown that a worker valuing this sub scale with a high rate receives a high satisfaction from reward system. Within this sub scale; there are items like 'When I do my job right, I receive appreciation.'
- *Operating Procedures:* describes the area in which participants evaluate the working terms and working rules within the organization. It is shown that a high rate for this sub scale creates a high satisfaction on the worker regarding working terms and rules. Within this sub scale; there are items like 'The rules at my working place make it hard for me to do my job worthy enough.'
- *Co-Workers:* defines the thoughts of participants regarding their co-workers. It is shown that a high rate for this sub scale means that an individual receives high satisfaction from its relationship with its co-workers. Within this sub scale; there are items like 'I love the people with whom I work with.'
- *Nature of Work:* is an area that evaluates the thoughts of participants regarding nature of work (meaning of work). It is shown that a high rate for this sub scale means that the work itself means a high satisfaction for the individual. Within this sub scale; there are items like 'I like the work that I am doing at my work place.'
- *Communication:* is an area that shows how participants evaluate communication channels within their organization. It is shown

that a high rate for this sub scale means that communication channels within the organization create a high satisfaction for the individual. Within this sub scale; there are items like 'I believe communication at my work place is good.'

Research Sample

Within the scope of the research, a list of organizations has been prepared that are in business in Thrace region, Turkey (Kırklareli, Edirne, and Tekirdag provinces). 53 organizations that have more than 500 workers were found in Thrace region (Thracian Development Agency 2011, 28). The organizations in the list were alphabetically ordered and called by phone. Among 53 organizations, only 2 organizations agreed to be volunteers for research.

The organization that was detected to be a green organization had a total of 533 workers at its production facilities. After the meeting, necessary approvals were taken in order to perform the survey in the production facility and the surveys were completed. Amongst all workers 533 survey forms for green jobs have been distributed, but only 401 workers agreed to participate in the research. From the survey forms that came back, 22 survey forms were found to be missing or incorrect and these have been left out of the evaluation and the evaluation was conducted with a total of 379 surveys.

Table 1 shows the demographics of green job workers. According to this table, participants that represent the green organization are 15% female (57 people) and 85% male (322 people). 83.6% of participants (317 people) are blue-collar and 16.4% (62 people) are white-collar workers; 71.8% (272 people) of these participants are married

TABLE 1 Demographics of Green Job Workers

Category		Frequency	Percent
Gender	Female	57	15.0
	Male	322	85.0
Work Type	Blue collar	317	83.6
	White collar	62	16.4
Marital Status	Married	272	71.8
	Single	107	28.2
Educational Status	Primary school	122	32.2
	High school	170	44.9
	Short cycle	30	7.9
	Bachelor	36	9.5
	Master and above	21	5.5

and 28.2% (107 people) are single. 32.2% (122 people) has a primary school education, 44.9% (170 people) a high school, 7.9% (30 people) a short cycle, 9.5% (36 people) a bachelor and 5.5% (21 people) have a master or doctorate educational level. Average age of the participants is 34, their average tenure is 8 years and they work weekly 45 hours.

Structural Equation Modeling

In the model developed by Spector, job satisfaction is measured by averaging the whole scale. Yet, in this study, the variable 'nature of work' is presupposed as representing the job satisfaction. Similarly, in the literature, it is seen that many researchers have preferred to use 'nature of work' instead of 'job satisfaction' (Eğinli 2009; Keser 2005; Saari and Judge 2004; Toker 2008). Though the variable 'nature of work' is measured by a different measurement tool, the implied topic by the researchers is the satisfaction gained by work life of the individual. In addition to that, 'I like my job,' 'I am proud of my job' items are included in the variable 'nature of work' in the Spector's job satisfaction scale, so that it seems possible for this variable to be used instead of job satisfaction.

First step of structural equation model is exploratory factor analysis and SPSS 22 was used to perform this analysis.

Table 2 shows the results of KMO and Bartlett test results for job satisfaction scale. According to that, p value of Bartlett test is 0.00 and KMO value is 0.835. Thus, the scale is proper for exploratory factor analysis where principal component was preferred as the extraction method. Varimax with Kaiser Normalization was preferred as the rotation method and the least factor loading was determined as 0.50 (Costello and Osborne 2005, 4; Afthanorhan 2013, 200).

Table 3 shows the results of rotated matrix for job satisfaction scale. According to results, it is indicated that structure of job satisfaction scale has not altered radically. In comparison to original scale, fringe benefits factor was replaced within pay factor because of similar meanings, the name of new factor did not need to be changed. Item 5 and 13 were out of evaluation because of low fac-

TABLE 2 KMO and Bartlett Test Results for Job Satisfaction Scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.835
Approx. Chi-Square		5820.531
Bartlett's Test of Sphericity	*df*	561.000
	p	0.000

TABLE 3 Rotated Matrix for Job Satisfaction Scale

Items	1	2	3	4	5	6	7	8
I10	0.777							
I1	0.766							
I19	0.720							
I28	0.665							
I4	0.643							
I22	0.638							
I29	0.532							
I13	0.390							
I12		0.730						
I21		0.729						
I3		0.667						
I30		0.527						
I25			0.803					
I16			0.802					
I34			0.753					
I7			0.742					
I11				0.845				
I20				0.816				
I2				0.761				
I33				0.645				
I18					0.741			
I26					0.688			
I9					0.648			
I36					0.533			
I17						0.804		
I8						0.796		
I35						0.550		
I27						0.523		
I24							0.850	
I15							0.761	
I31							0.727	
I6							0.528	
I23								0.866
I32								0.807
I14								0.560
I5								0.410

tor loadings (Costello and Osborne 2005; Afthanorhan 2013) and it is possible to see results of exploratory factor analysis at table 4.

TABLE 4 Summary of Exploratory Factor Analysis Results

Variables	Items
Pay	I10, I1, I19, I28, I4, I22, I29
Operating Procedures	I6, I15, I24, I31
Promotion	I2, I11, I20, I33
Supervision	I3, I12, I21, I30
Contingent Reward	I14, I23, I32
Coworkers	I7, I16, I25, I34
Nature of Work	I8, I17, I27, I35
Communication	I9, I18, I26, I36

TABLE 5 Rotation Sums of Squared Loadings

Variables	Rotation Sums of Squared Loadings	
	% of variance	Cumulative %
Pay	10.678	10.678
Operating Procedures	8.645	19.323
Promotion	7.948	27.271
Supervision	7.930	35.201
Contingent Reward	7.706	42.907
Coworkers	7.003	49.910
Nature of Work	6.959	56.868
Communication	6.615	63.483

Table 5 shows rotation sums of squared loadings and 63% of the variance explained by model.

Table 6 shows the internal consistency and correlation results of the variables. Cronbach's Alpha of the whole model was calculated as 0.892.

TABLE 6 Internal Consistency and Correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1)	0.840							
(2)	0.307*	0.763						
(3)	0.202**	0.042	0.806					
(4)	0.331**	0.266**	0.183**	0.779				
(5)	0.333**	0.256**	0.326**	0.380**	0.706			
(6)	0.037*	0.292**	0.136**	0.237**	0.311**	0.810		
(7)	0.191**	0.218**	0.086*	0.458**	0.432**	0.337**	0.758	
(8)	0.192**	0.276**	0.279**	0.537**	0.380**	0.323**	0.499**	0.774

NOTES Column/row headings are as follows: (1) Pay, (2) Operating Procedures, (3) Promotion, (4) Supervision, (5) Contingent Reward, (6) Coworkers, (7) Nature of Work, (8) Communication. * $p < 0.05$, ** $p < 0.01$.

TABLE 7 Endogenous and Exogenous Variables for Structural Equation Model

Endogenous	Exogenous
Job satisfaction	Pay
	Promotion
	Supervision
	Contingent Reward
	Operating Procedures
	Coworkers
	Communication

TABLE 8 Endogenous and Exogenous Variables for New Structural Equation Model

Endogenous	Exogenous
Job Satisfaction	Supervision
	Contingent Reward
	Coworkers
	Communication

Table 7 shows endogenous and exogenous variables for structural equation model by taking into consideration of factor structure obtained in consequence of exploratory factor analysis. According to this model, job satisfaction is explained by pay, promotion, supervision, contingent reward, operating procedures, co-workers and communication.

Figure 1 shows *t*-scores for structural equation model. Bootstrapping method has been used in SMARTPLS 2.0, 5000 samples and 379 cases were arranged for analysis. Using a two-tailed *t*-test with a significance level of 5%, the path coefficient will be significant if the *t*-statistics is larger than 1.96. According to results; pay, operating procedures and promotion were not significant in the model because of low *t*-scores; because of these three variables were eliminated.

After eliminating the low *t*-scored variable, a new model was proposed in table 8. According to the new model, job satisfaction was explained by supervision, contingent reward, co-workers and communication.

Figure 2 shows *t*-values of the new model and results show that communication, supervision, contingent reward and co-worker variables are significant in the model.

Figure 3 shows path coefficient of the new model. The coefficient of determination, R^2, was 0.392 for job satisfaction which means communication, supervision, contingent reward and co-worker explain 39.2% of the variance of job satisfaction.

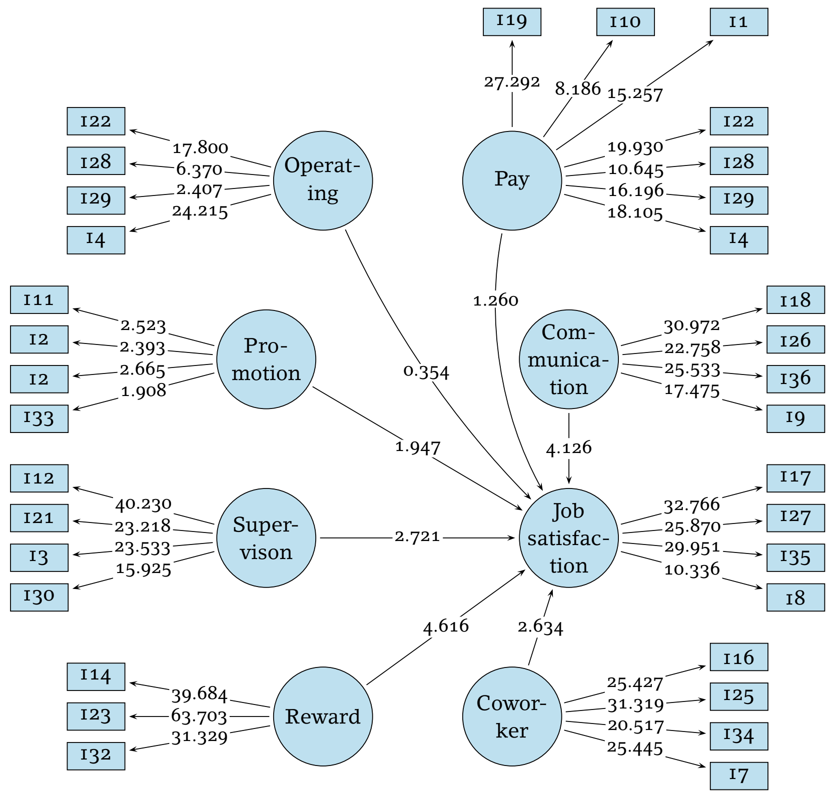

FIGURE 1 *t*-Values of the Model

After all, it is possible to say that hypothesis 1 is accepted. Conventional job satisfaction structure includes 9 factors but job satisfaction for green job worker structure includes 4 dimensions of job satisfaction.

- The most important variable for job satisfaction of green job workers is contingent reward. Contingent reward positively affects job satisfaction (0.265). Results show that having award system, effectiveness of award system and feedback mechanism of award system positively affects job satisfaction of green job workers.
- Communication positively affects job satisfaction (0.262). Results show that the importance of successful communication channel, quality of communication with co-workers and supervisors, multiple and coordinated communication type positively affect job satisfaction of green job workers.

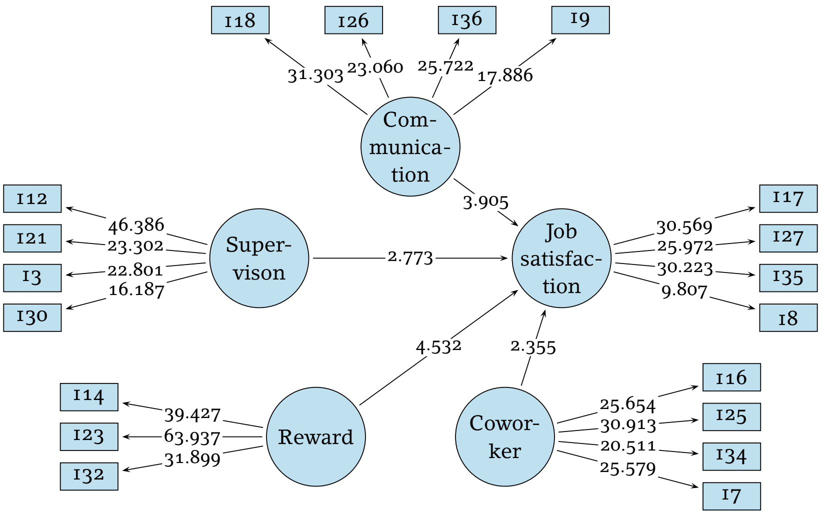

FIGURE 2 *t*-Values of the New Model

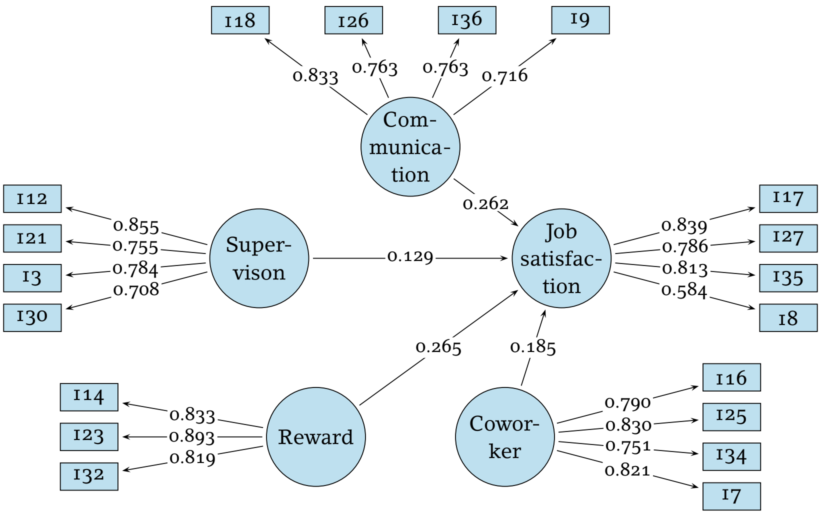

FIGURE 3 Path Coefficients of the New Model

- Supervision positively affects job satisfaction (0.185). Results show that increase of codetermination possibilities and good communication with supervisors affect job satisfaction of green job workers in a positive way.
- Coworkers positively affect job satisfaction (0.128). Results show that being in good relations with co-workers, being in a success-

ful group and being in team work positively affect job satisfaction of green job workers.

Results and Discussion

Green jobs are defined as eco-friendly and decent jobs. Most of the researches in the literature focus on the development and also economic and environmental effects of the green jobs. Only limited numbers of researches examine the relationship between green jobs and individual. Job satisfaction of green job workers gives crucial clues upon sustainability of work life. In this point, the usage of right measurements in order to measure the job satisfaction of green job workers supports the literature on the subject of being scientific and accurate of these measurements. This study shows that only 4 factors (supervision, contingent reward, co-workers, and communication) affect the job satisfaction of the green job workers instead of conventional 9 factors job satisfaction scale.

Some of the studies in the literature put forward that the expectations of the workers in green industries might be different than the ones in classical industries (Muhaisen and Ahlback 2012; Chan and Lam 2012; Bowen 2012; EUROFOUND 2012). Thus, comparative analyses show that green job workers' work life expectations might be different as they do not face the problems (e.g. low wages, overtime work, etc.) that the classical industry workers do (Work and Life Quality in New & Growing Jobs, 2009; 2011; 2012a; 2012b).

Comparing to equivalent classical jobs, due to being much of the wages as 20–120% for green job workers, it might be possible that the pay and fringe benefits variables seem insignificant. On the other hand, as the promotion turns the workers to authorized signatory individuals, it might be possible to say that this variable is also insignificant on job satisfaction. The physical and psychological working conditions might be insignificant in green job workers' job satisfaction as this variable is already happened in their working conditions.

Bitsch and Hogberg (2004, 12), realizing one of the pioneering researches in this topic, indicate that the variables most affecting the job satisfaction of green industry workers are personal life, supervision and compensation. Hence, in this present research, the variables 'contingent reward, communication, supervision and coworker' are resulted as the factors affecting the job satisfaction of green job workers.

The similar results of the researches done in different years and different countries show the necessity to do more research about that the structures of the job satisfaction of the green job workers might be different.

Limitations and Future Research

This survey was built on the data obtained from only one region and one sector. In order that the data had a qualified validity, it is required to increase the number of participants and sectors.

For future surveys, it will be much particular to measure the job satisfaction of the green job workers by using questionnaire and interview methods together. In addition, the future surveys – by considering the differences in sectors (e.g. labour-intensive or technology intensive) – will contribute to the literature on the subject that individuals tend to be interested much whether on green jobs or brown jobs.

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The Effect of Relation-Specific Investments in the Supply Chain Triad on Innovation Performance

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Using a comprehensive survey, this paper analyzes the effect of committed and heavy supply chain relationships characterized by high levels of relation-specific investments in innovation performance in Hungary, an emerging economy in Central and Eastern Europe. For this research, we carry out a two-step analysis. First, we investigate the effect of Relation Specific Investments (RSI) on four different innovation-related performance dimensions of a focal firm. In contrast to previous research, we did not limit our analysis to the dyadic relationship level, but rather, we analyzed the triadic supply chain relationships. Uniquely, this paper conceptualizes and measures innovation performance in a complex way, both product and process, but also analyzes incremental and radical innovations. As a second step, the effect of internationalization on the focal firm is tested. Triad level RSI has a positive effect on all innovation related performance dimensions. A test of the moderation effect produced mixed results, indicating the need to treat innovation in a complex, sophisticated way in future research.

Key words: relation-specific investments, triadic supply chain relationship, innovation, emerging region, SEM model

Introduction

Innovation seems to still be one of the distinguishing features of competitiveness in highly developed economies compared to emerging economies. Central and Eastern Europe – including Hungary – was not able to catch up with their highly developed counterparts, and innovation related performance in this region is still lagging behind. Although Hungary's innovation performance has increased in recent years, the country, together with most countries in the region, is a moderate innovator. Their performance along the Summary Innovation Index (SII) slightly exceeds half of the EU 27 average (European Commission 2015). The reasons for this are diverse. From inappropriate and insufficient regional innovation systems (Radosevic 2002) to firm specific aspects (Leskovar-Spacapan and Bastic 2007), which all may be contributors. Our paper focuses on the latter approach. Triadic supply chain relationships form our unit of analysis because the general understanding is that firms on their own are no longer capable of successful innovation. Cooperation with supply chain partners (Sivadas and Dwyer 2000) is a trigger for innovation. It is therefore especially disconcerting that Hungarian firms perform poorly with respect to cooperation with business partners in innovation related projects (European Commission 2015).

Central and Eastern European firms have been through enormous changes related to business relationships. Twenty-five years ago, when the socialist-communist regime became a free market economy, established business relationships and complete supply chains dissolved and vanished. Most Hungarian firms lost their traditional partners and markets. Newly established companies strengthened their internal market positions, but it became more and more important for them to join international corporations that have established themselves in Hungary and the region. One of the most important and often cited reasons for this is the spillover effect. This effect was expected to guarantee that the institutional knowledge accumulated in these corporations would be acquired by less developed local firms. Twenty-five years have passed since this transition started and since firms reconfigured their supply chains. Newly developed business networks are no longer politically determined, but they still have crucial importance. In our global business network economy in general, supply chain relationships are important sources of competitive advantages (Krause, Handfield, and Tyler 2007). Successful and committed business relationships have particular importance for innovation (Dyer 1996; Fawcett, Jones, and Fawcett 2012).

The objective of this paper is to investigate the role and effect of supply chain relationships on innovation in the case of Hungary, an emerging economy in Central and Eastern Europe. We carry out a two-steps analysis. First, we analyze the effect of relation-specific investments (RSI) that the focal firms have accumulated in their key supply chain networks as they relate to the innovation-related performance of these firms. Then, the moderating effect of the focal firm's international networking is examined. In contrast to previous research, we do not limit our analysis to the dyadic relationship level, but rather focus on triadic supply chain relationships. Although the limitations of the dyadic approach have become more and more apparent (Choi and Wu 2009), the theoretical and empirical implications of a triadic approach are still limited. The triadic relationship focuses on the partnership of a focal firm with its most important customer and supplier. We also take the unique approach of conceptualizing and measuring innovation performance in a complex way, analyzing both product and process but also incremental and radical innovations. This article has the following sections: Section 2 presents the theory and hypotheses; Section 3 introduces the applied methods; and Section 4 presents the results. The paper closes with discussion and conclusions.

Literature Review and Development of the Theoretical Model

Our analysis is built on three interlinked theoretical areas: literature related to (1) RSI, (2) innovation performance and (3) internationalization. After discussing these, we close the section with a description of the theoretical model developed.

RELATION-SPECIFIC INVESTMENTS

Relation-specific (or idiosyncratic) investment is a key concept in business relationships and supply chain management literature. It represents those investments that have been made by cooperating actors and are sticky to the given relationship. These investments cannot be mobilized and transferred easily to other relationships (Williamson 1985; Anderson and Weitz 1992). The level of accumulated RSI is closely linked to several relational constructs. It is understood as an indicator for relationship heaviness (Håkansson and Ford 2002), one of the two factors influencing relationship stability. However, RSI is also used as a proxy for relationship commitment, which is interpreted as a key predictor of the successful future development of relationships (Dyer and Singh 1998). Both heaviness and commitment help the partners to sustain and competitively develop ongoing business relationships. Long lasting relationships tend to strengthen interaction, making relational bonds richer and supporting more complex and innovative types of cooperation (Zhao et al. 2014).

Our paper differs from previous research with respect to the scope of relationships involved in the analysis. RSI is originally a dyadic concept. During recent decades, the literature has produced a rich understanding of how buyers and suppliers interact in dyads and how this affects performance (Autry and Golicic 2010). However, this dyadic perspective has severe limitations, especially when a firm's innovation performance is the object of research. Both customers (Hallen, Johanson, and Seyed-Mohamed 1991) and suppliers (Haffmans and van Weele 2003) influence the capabilities of a focal firm and its innovation performance. A classic dyadic approach is not able to capture both of these influences. To overcome the limitations inherent in a dyadic approach, we extended the scope of analysis to a supply chain triad. This triad consists of (1) a focal firm, (2) its most important first tier supplier (3) and also its most important direct customer (S1 – FF – C1).

This paper investigates a so-called open triad and applies the structural interpretation to triads (Vedel, Geersbro, and Ritter 2012). Triadic research is underdeveloped in the literature. Näslund and Hulthen (2012) carried out an extensive literature review and found that only 12 articles applied a triadic approach to supply chain management issues, including only 5 that analyzed a S1 – FF – C1 triad; none of them quantitatively investigated RSI and its impact on performance.

THE EFFECT OF RSI ON INNOVATION PERFORMANCE

Performance is a highly complex phenomenon. Our interpretation originated in b2b literature, suggesting that firm competitiveness is determined by its capability to generate value for its customers (Anderson, Narus, and van Rossum 2006). Customer value can be increased in two basic ways: (1) increasing the quality level of the product and service supplied; and/or (2) decreasing the associated cost of creating and using that product and service package.

On the other hand, customer value creation is driven by the expectations of the customers (Parasuraman, Zeithaml, and Berry 1994). Transaction level customer expectations are those that are directly linked to buying and using a given product and service package, especially for (i) the quality of the product/service and (ii) its associated cost. These are the same avenues through which customer value can be increased as interpreted by Anderson, Narus, and van Rossum (2006). Relational expectations can only be fulfilled by a company through tight cooperation with a partner. According to Möller and Törrönen (2003) these expectations are either radical (1) products/services or (2) process innovations. Based on the relationship dimensions of possible customer expectations and the way customer value can be created, we identified four types of performance dimensions (see also figure 1):

		How the innovation is linked to customer value generation	
		Increasing product/service quality	Decreasing costs of processes
Type of innovation	Radical	Developing new product/services	Developing new complex processes
	Incremental	Increasing the quality of existing products/services	Increasing productivity of existing process solutions

FIGURE 1 Innovation-Related Performance Dimensions in the Empirical Analysis

1. Transaction level:
   - Changing/increasing the quality of a product and service package – that is incremental product innovation;
   - Changing/increasing the productivity of the process of creating the product and service package – that is incremental process innovation;
2. Relationship level:
   - Developing completely new products/services – that is radical product innovation;
   - Developing completely new business processes – that is radical process innovation.

The above interpretation and classification is line with Schumpeter's (1939) widely accepted output oriented approach to innovation.

Overall, the literature suggests that an increase in RSI is expected to positively influence performance (Dyer 1996). In spite of numerous studies on performance, only limited research (Autry and Golicic 2010; Cao and Zhang 2010) uses innovation as an outcome, and we have not found any that systematically classified and used these outcomes along with the specific types of innovations.

In our research, we empirically examine the effect of the focal firm's RSI that was accumulated in its supply chain triad through four types of innovation performance outcomes. We hypothesize that reconfiguration of the supply chains over the last 25 years in Hungary has led to the formation of heavy, committed relationships that are measured by the level of RSI; furthermore, this positively influences not only incremental types of innovation (both product and process innovations) but radical innovations too.

Based on the theoretical considerations we developed the following hypotheses:

H1a *Supply triad level* RSI *of the focal firm positively influences the focal firm's incremental product (or/and service) innovation performance.*

H1b *Supply triad level* RSI *of the focal firm positively influences the focal firm's incremental process innovation performance.*

H2a *Supply triad level* RSI *of the focal firm positively influences the focal firm's radical product (and/or service) innovation performance.*

H2b *Supply triad level* RSI *of the focal firm positively influences the focal firm's radical process innovation performance.*

INTERNATIONALIZATION

Developing committed and strong ties with supply chain partners may lead to a competitive edge because firms can leverage their complementary resources (Grant 2002); this would be expected to yield increased innovation capabilities. On the other hand, the internalization of firms is also expected to yield a competitive edge through intensified innovation (Kotabe, Srinivasan, and Aulakh 2002). One of the rationales for this is the increased pool of resources available through a wider network of cooperating partners (Kumar, Mudambi, and Gray 2013). However, widening the net of cooperating firms means increasing the number of partners that might lose ties with existing ones. Consequently, the two streams of research seem to have contradicting results. Therefore, in the second step of our analysis we tested the effect of internationalization of the focal firm on the relationship between the supply triad level RSI and the focal firm's innovation performance. We hypothesize as follows:

H3 *The degree of internationalization of the focal firm moderates the relationship between supply triad* RSI *and innovation performance.*

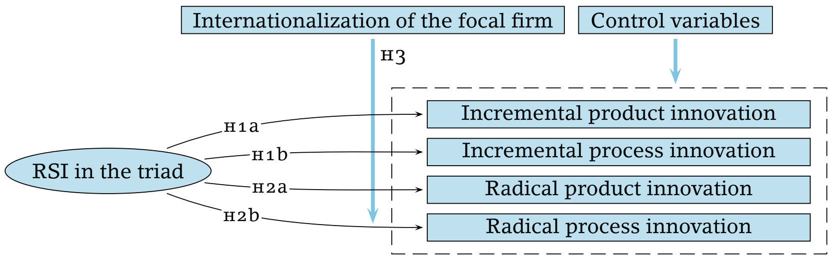

FIGURE 2 The Theoretical Model

Based on our hypothesis, we formulated our theoretical model (figure 2). Control variables were included in the model to check for the effect of company size, company age and ownership (Hsieh and Hsieh 2015).

Method

SAMPLE

Three-hundred Hungarian companies were presented with a questionnaire in the form of a comprehensive survey developed by the Hungarian Competitiveness Research Center at the Corvinus University of Budapest. Data collection was carried out by a professional market research company. The method of administration was personal interview in the office of the respondents. The survey consisted of four linked questionnaires, filled in by different managers (CEO, head of sales, head of operations, CFO) of the company. The questionnaire that was filled out by the head of operations was used in our analysis. From the 300 responses, we had 175 usable questionnaires with data on our focal constructs (related to the RSI).

We checked for non-response bias and did not find any differences. The sample is characterized in table 1.

MEASURES

To observe the constructs, the actual survey incorporated multiple items for each of the five constructs in the model. The items for each construct were developed or adopted from available supply chain management and relationship marketing literature.

Relation-specific investments are not easy to measure. They are

TABLE 1 Demographic Data for the Sample (%)

Size	Small	13.7
	Medium	70.3
	Large	16.0
Main owner	State	7.4
	Private/Hungarian	72.0
	Private/Non-Hungarian	20.6
Sector	Agriculture	6.9
	Energy industry	5.1
	Processing industry	47.4
	Construction industry	7.4
	Retailing	17.1
	Services	16.0

usually not recorded in company records; therefore, it is acceptable to measure them through the perceptions of key informants. These investments are also very diverse and are generated by different transactions, episodes and interactions that occur between partners over the life cycle of the business relationship (Ford et al. 2003). Otto and Obermaier (2009) argue that the AAR model developed by Håkansson and Johanson (1992) is appropriate for capturing the investments generated and accumulated in business relationships. The model identifies three building blocks of any business relationship: actor bonds (Yu, Liao, and Lin 2006), activity links (Batonda and Perry 2003) and resource ties (Ford et al. 2003).

The development of actor bonds, activity links and resource ties is parallel. The overall level of RSI in a given relationship is consequently determined by the sum of RSIs generated by the three AAR constructs over time between partners. Based on the AAR model, the level of RSI between a focal firm and its most important customer and supplier was operationalized as follows: (1) the perceived level of RSI in actor bonds/social capital; (2) tied up in operational routines, activities; and (3a) in current but also (3b) long-term assets. These four items were measured in both relationships in the triad on a five point Likert-scale.

On the basis of the literature review and the matrix shown in figure 1, incremental product innovation was operationalized through increases in the quality level of the product and/or service of the focal company. Following Knemeyer, Corsi, and Murphy (2003), the quality of products/services was measured with a four-item scale where respondents assessed improvements compared to three years ago in several key areas: (1) the level of customization of products/services; (2) the quality of products/services; (3) the level of timeliness of orders; and (4) the level of specialized services. Incremental process innovation was operationalized by measuring the increase in the productivity of the process of creating the product and service package on a three-item scale. The respondents compared, on a five point Likert-scale, the level of operational efficiency of their company compared to three years ago. Based on Nyaga, Whipple, and Lynch (2010), three items were used to assess the constructs: improvement in (1) efficiency of the workforce; (2) efficiency of operations; and (3) efficiency of capacity utilization. Both product/service quality and productivity of process are traditional operational performance measures. Because none of these can be increased without incremental innovation, they prove the presence of incremental innovation of the focal firm.

Radical product innovation was measured with a single-item dichotomous question (based on Koberg, DeTienne, and Heppard 2003) ('Were there any new products or services launched in the company within the last three years?'), whereas process innovation was measured with four items based on Koberg, DeTienne, and Heppard (2003), asking respondents if there were any radically new (1) knowledge management systems, (2) production processes, (3) distribution systems or (4) logistics systems launched within the past three years.

ANALYSIS OF THE MEASUREMENT MODEL

The data were analyzed using a 'two-step approach' to structural equation modeling. The measurement model was found to fit the data at a satisfactory level (χ^2/df = 1.58, p < 0.001, CFI = 0.95, IFI = 0.95, TLI = 0.93, RMSEA = 0.041). The reliability of the four scales was then assessed: Cronbach's Alpha coefficients were above the threshold level of 0.7, except for the radical process innovation scale (table 2). The value could have been increased by leaving only two items in the scale, but from a theoretical point of view we retained the four-item scale with a 0.69 value. Our decision was reinforced by the composite reliability values because all were above the threshold level of 0.7. Convergent validity was confirmed for all scales where all variables were shown to have significant weighting (factor loadings were all significant and greater than 0.50). AVE values were all above the 0.5 threshold level (Bagozzi and Yi 1988).

Lastly, an assessment of discriminant validity was conducted by comparing the shared variances between factors with the AVE of the individual factors (Fornell and Larcker 1981). Table 2 provides the inter-construct correlations and the square roots of the AVEs. It

TABLE 2 Reliability and Validity Analysis

	α	CR	AVE	(1)	(2)	(3)	(4)	(5)
(1)	0.90	0.91	0.555	0.745				
(2)	0.81	0.83	0.555	0.280**	0.745			
(3)	0.82	0.83	0.635	0.303**	0.326**	0.797		
(4)	0.69	0.71	0.553	–0.338**	–0.331**	–0.317**	0.744	
(5)		–	–	–0.206**	–0.231**	–0.208**	0.539**	–

NOTES Column/rpw headings are as follows: α – Cronbach's Alpha, CR – composite reliability, AVE – average variance extracted, (1) supply triad level, (2) RSI incremental process innovation, (3) incremental product innovation, (4) radical process innovation, (5) radical product innovation. Diagonal elements are square roots of the AVE values of the constructs; ** p < 0.01.

shows that the square root of the AVE was higher than their shared variances. Table 2 indicates that there is acceptable discriminant validity for each construct in this study.

RESULTS

To test the basic model, SEM was used to simultaneously measure the hypothesized relationships between constructs (with IBM SPSS AMOS 20.0). AMOS provides a covariance-based structural equation modeling tool that uses maximum likelihood function to obtain parameter estimates. The model indicated an acceptable fit.

The results indicate that all of our hypothesized relationships are significant and positive. This means that higher levels of accumulated RSI in the supply chain triad were positively related to incremental product and process innovations, thus confirming H1a and H1b. In addition, the results showed that the RSI in the triad were also positively correlated to the level of radical product and process innovations, thus confirming H2a and H2b.

We checked for the control variables (size, age, ownership), but none of them had a significant influence on the dependent variables.

TESTING THE MODERATION EFFECTS

After confirming the influence of the four postulated main effects, we tested for moderator effects. Specifically, we conducted a Chi-square difference test for all four possible moderator effects in which we compared restricted and non-restricted models. To investigate the moderating effects of integration in the global supply chain, the sample was divided into high and low groups, and a multi-group moderation analysis was performed (Baron and Kenny 1986). To

TABLE 3 Results for the Main Effects

Hypothesized relationships, basic model	(1)	(2)	(3)	Results
Supply triad level RSI ⇒ Incremental product innovation	0.307**	0.10	3.03	H1a is supported
Supply triad level RSI ⇒ Incremental process innovation	0.169*	0.68	2.50	H1b is supported
Supply triad level RSI ⇒ Radical product innovation	0.302**	0.09	3.83	H2a is supported
Supply triad level RSI ⇒ Radical process innovation	0.173**	0.04	3.84	H2b is supported

NOTES Column headings are as follows: (1) estimated coefficients (std.), (2) str. error, (3) t-values. ** $p < 0.01$; * $p < 0.05$; ($\chi^2(285) = 526$; $\chi^2/df = 1.85$, $p < 0.001$; RMSEA = 0.0649 CFI = 0.92, IFI = 0.92, TLI = 0.90).

TABLE 4 Results of the Moderation Analysis

Hypothesized relationships, moderating effects	(1)	(2)	(3)	Results
Supply triad level RSI ⇒ Increment. product innovation	0.158	0.316	6.05**	Internat. weakens the relationship
Supply triad level RSI ⇒ Increment. process innovation	0.162	0.231	4.69*	No significant difference
Supply triad level RSI ⇒ Radical product innovation	0.310	0.266	1.31	No significant difference
Supply triad level RSI ⇒ Radical process innovation	0.268	0.06	7.10**	Internat. strengthens the relationship

NOTES Column headings are as follows: (1) global supply chain, (2) local supply chain, (3) χ^2 difference ($df = 2$). ** $p < 0.01$; * $p < 0.05$.

measure the level of internationalization, we analyzed two questions (on a 1–5 Likert-scale): 'What is the level of your effort to increase (1) the level of global supply and (2) the level of global sales.' The high and low groups were formulated. Companies that had neither supplies nor sales from/to global partners (answering 1 to any of the questions) belonged to the 'local supply chain group' ($N = 78$) and those that had either supplies or sales from/to global partners were members of the 'global supply chain group' ($N = 84$). The results of the moderation analysis are summarized in table 4.

Based on a chi-square difference test, the relationship between triad level RSI and incremental product innovation was weaker in companies that are part of the global supply chain (have international partners), but stronger in local supply-chain member companies (have only national partners). In the case of incremental process innovation, the situation was similar, but the significant difference was only at the 0.1 level, indicating that there is no real difference between the two groups in this respect.

The link between triad level RSI and radical product innovation is stronger for companies that are part of a global supply chain, though at a non-significant level. Finally, the link between triad level RSI and radical process innovation is significantly stronger for global supply chain members than for companies operating with local supply chain partners.

Discussion

Our results support previous knowledge but have added value from both a theoretical and practical perspective. This research was unique from a theoretical perspective because a triadic set of supply chain relationships, rather than a dyadic set, formed the unit of analysis. The complex way we conceptualized and measured innovation performance is also unique in empirical research. The triadic level analysis supported all of the hypotheses related to the basic model investigating the relationship between triad level RSI and the focal firm's innovation performance. Although the level of RSI accumulated in the triad for all four items and in both key supply chain relationships were quite low. None of these RSIs exceeded a value of 2.87. Still, this relatively low level of RSI was sufficient to leverage successful innovations of all types in the focal company.

The Innovation Union Scoreboard in 2015 (also in previous innovation related studies from the EU) noted that Central and Eastern European firms in general, but Hungarian firms in particular, are weak in mobilizing their business networks and leveraging the skills and capabilities of their partners. The 2015 study indicated, for example, that only 54% of SMEs collaborate with others to successfully innovate (page 61) (let us note that 80% of our companies in the sample belong to SMEs, see table 1.) This EU analysis indicated that only 54% of all SMEs were involved in any type of close partnerships, which indicates that the ratio of firms intensively cooperating with supply chain partners must be even lower. This means that building committed relationships is an important untapped opportunity for SMEs to promote further development and increased performance, especially innovation performance. This is an important practical result of the analysis and has direct relevance for both firms and policy makers in Hungary but also in other Central and Eastern European countries with similar development path. Managers and policy makers should find the means of overcoming the obstacles hindering the development of committed, heavy relationships. This could help increase innovation performance and consequently the economic activity of the whole region.

Our results are especially interesting when considering the moderating effect of internationalization. The effect of triad level RSI on incremental product innovation was negatively moderated by internationalization, as expected. Incremental product innovation is usually triggered by the requirements of a key customer(s). Internalization of firms, in our analysis, seems to weaken the effect of these key actors, probably due to internalization resulting in increasing numbers of customers, thereby lowering the level of dedication to key customers. On the other hand, the effect of triad level RSI on radical process innovation was positively moderated by internationalization. We think this is probably because operation at an international scale with increased numbers of supply chain partners cannot be managed effectively without intensely and radically innovative processes. We obtained significant results in only these two concrete innovation performance dimensions. However, the level of internationalization seems to generally weaken the positive effect of supply level RSI on incremental innovation and strengthens it in the case of radical innovations.

Previous studies have treated innovation as one general phenomenon. The fact that different types of innovation performance dimensions behave differently in our analysis reflects the added value of our compound approach to innovation. It is significant to understand the way how certain management efforts – such as for example internationalization – effect the different types of innovation performance dimensions. We have pointed out previously that two contradictory theories on the link between internationalization and its effect on innovation are present in literature. Empirical results based on our multidimensional interpretation of innovation support both theories, internationalization of a company has various effects on different types of innovation. This is the main theoretical contribution of this paper to literature. Future research should overcome the practice of simplification in this respect and treat innovation performance systematically in a more sophisticated way.

This study does have certain limitations. The cross-sectional nature limits longitudinal analysis of the influence of relation-specific investments. Self-reported data may lead to subjective evaluation of RSI. The results of this study are limited to Hungary, thus the generalizability of the results have limits. This study generated data about relation-specific investments that provides only one aspect of relationships; other characteristics, such as commitment, power and trust, were not measured. Future studies may incorporate these variables and link them to the different innovation dimensions.

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Payment Discipline Depends on Management Ethics

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The main aim of the study was to identify if management ethics have a positive impact on payment discipline. Our sample includes 273 Slovene enterprises, which represent 9.1% of 2978 Slovenian enterprises with 10 or more employees, selected from the database of the Slovenian rating agency I d.o.o. To determine management ethics, we used the Corporate Ethical Virtues measurement instrument questionnaire. The data concerning average late payments were also obtained from the database the Slovenian rating agency I d.o.o. We conducted a factor analysis using the enter method. We confirmed that the influence of management ethics have a positive impact on average payment delays expressed in days.

Key words: management, ethics, late payments

Introduction

'A company with unethical behaviour cannot become (nor remain) permanently successful' (Belak, Thommen, and Belak 2014, 84). Indeed, ethical behaviour in the company is a source of competitive advantage (MacDougall et al. 2015). From the theoretical point of view, 'ethics must deal both with companies' social and economic issues, with the behaviour of all stakeholders of the company' and 'with the relations among companies' stakeholders on all organisational levels, among interest groups of internal and external stakeholders of the company' (Belak, Thommen, and Belak 2014, 84). Sims (1992) predicted in the 1990s that companies in this century would undergo numerous changes and encounter many challenges greatly influencing the dynamics and effectiveness of companies. He identified six key challenges, decisive for the survival and progress, or the failure of companies. Among these six challenges, he mentioned ethical behaviour. According to him, many managers and experts in social sciences are concerned about the ethics crisis undermining the competitiveness of the West and consider unethical behaviour a cancer corroding society and something that is present in a large number of companies and outside of them. Just as different individuals react differently to ethical issues, there are also differences in companies' reactions to ethical issues (Logsdon and Yuthas 1997; Peterlin et al. 2011). If companies want to achieve long-term success, they must earn reputations as credible and trustworthy partners and the prerequisite for this is their ethical behaviour (Duh, Belak, and Milfener 2010).

Nevertheless attention to the business ethics have been increased over the last few decades (Tenbrunsel and Smith-Crowe 2008), ethics are not as influential as they should be. Between 1975 and 1985, 62% of companies from the Fortune 500 list were involved in some kind of forbidden activity (Etzioni 1985). Sims (1992) wrote in 1992 that unethical behaviour by companies was shockingly frequent. Circumstances have not changed considerably in the meantime. Research conducted in 2008 on a sample of 1,752 managers and employees from five countries showed that 16% of participants had noticed blackmail, 15% had noticed discrimination, 11% thievery and 7% forgery of cost reports in the last 12 months (Kaptein 2011). Another study, which was also conducted in 2008, included 5,065 American managers and employees and showed that 74% had noticed unethical behaviour in their company in last 12 months (Kaptein 2011). Based on these results, we can conclude that companies do not take enough account of ethics and laws. Applying business ethics should be part of the change in company policy and should be present at all levels of the control and management process, both at the implementation level of that process and working routine (Belak and Milfener 2011).

Wolfe (1998) explained that managers have developed ways of thinking (sometimes not even being aware of it) that promote unethical behaviour. In this regard, he presented the mentality (called the 'bottom-line mentality') where the only important value is financial success. This mentality encourages short-term solutions, which are good from a financial point of view, despite the fact that they cause difficulties for others in company or for the company as a whole. Such a mentality promotes the irrational belief that indeed everything is a money game where moral rules are only a barrier to the achievement of set and desired financial success.

'Decisions on ethical issues are complex and influenced by individual differences, as well as situational limitations' (Kurtines 1986,

790) and 'pressures within companies are the best predictor for ethical or unethical behaviour' (Ferrel and Gresham 1985, 90). The circumstances in which companies operate are often hostile and highly challenging; therefore, it is difficult to overcome tendencies to make ethical compromises, especially when resources are limited, and there is no room for errors (Longnecker 2006). Examples of such situations include time constraints, lack of money, mind-set that the compromise in ethical behaviour can be decisive for the company's survival or failure, unclear limits between ethical and unethical behaviour, as well as hiding unethical behaviour from the public (Morris et al. 2002).

The risk from adverse effects provoked by the lack of payment discipline is significantly increased in times of economic crisis (European Parliament and the Council 2011), and this is reflected in the decrease of investments, reduced trading volume and increased interest rates (Lin and Martin 2010), and it is harder to obtain sufficient financial resources to ensure liquidity (Vojinović, Mikac, and Oplotnik 2013). The directors of companies, who often justify unethical behaviour to themselves (Dean, Beggs, and Keane 2010), e.g. a lack of payment discipline, have an important role in this issue. In addition, companies often derive no benefit from ethical behaviour (Dean, Beggs, and Keane 2010).

The lack of payment discipline, which is defined as late payments and debtors' failure to settle their liabilities (Commission of the European Communities 2009), is a massive problem all European companies encounter, and it causes the greatest difficulties mostly among small and medium-sized companies. Managers are aware that the effect is greater if one euro is saved than if one additional euro is earned (Rottig, Koufteros, and Umphress 2011), and companies with late payments save on interest payments, since, as a rule, late payments are a free source of financing. If late payments are actually intentional, according to 63% of companies (Intrum Justitia 2011), then this is very unethical. Our assumption is that precisely the management of the company is responsible for this.

Heavy administrative and financial burdens are placed on companies because of excessive payment periods and late payments (European Parliament and of the Council 2000). The situation in Europe regarding payment discipline is presented in tables 1 and 2.

In Slovenian companies late payments are the main reason for the lack of payment discipline (Prašnikar, Pahor, and Cirman 2010). This phenomenon can be defined as an unfair commercial practice among companies (Commission of the European Communities

TABLE 1 Average Payment Terms Allowed to Customers, Average Time for Actual Payment and Average Payment Delay in European Countries in 2015 for Business to Customers Market (B2C), Business to Business Market (B2B) and Business to Public Market

Country	Average payment terms allowed to customers			Average time for actual payment			Average payment delay		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Austria	17	21	25	18	25	32	1	4	7
Belgium	21	31	42	23	44	69	2	13	27
Bosnia-Herzegovina	15	19	25	18	31	42	3	12	17
Bulgaria	16	30	33	17	39	52	1	9	19
Croatia	29	33	37	38	48	48	9	15	11
Czech republic	17	21	23	17	26	29	0	5	6
Denmark	16	21	22	19	25	27	3	4	5
Estonia	10	15	18	12	20	21	2	5	3
Finland	13	18	18	15	23	22	2	5	4
France	23	38	43	33	51	62	10	13	19
Germany	14	18	19	13	17	19	0	0	0
Greece	16	26	35	21	31	49	5	5	14
Hungary	18	22	28	20	28	42	2	6	14
Ireland	18	23	24	18	27	28	0	4	4
Italy	33	55	79	48	80	144	15	25	65
The Netherlands	19	23	23	19	29	32	0	6	9
Norway	18	21	26	21	27	32	3	6	6
Poland	22	22	22	33	32	33	11	10	11
Portugal	34	49	55	40	70	94	6	21	39
Slovakia	15	19	18	12	23	23	0	4	5
Slovenia	17	27	30	20	36	35	3	9	5
Spain	44	56	70	45	70	103	1	14	33
Sweden	22	27	29	24	31	32	2	4	3
Switzerland	26	28	30	33	37	40	7	9	10
United Kingdom	15	18	18	15	21	24	0	3	6

NOTES Column headings are as follows: (1) customers market, (2) business to business market, (3) business to public market. Adapted from Intrum Justitia (2015, 20–48).

2008). Therefore, we assumed that the ethics of the management influenced the timely or delayed settlement of the company's liabilities to suppliers.

Many authors have confirmed the influence of management on the ethical behaviour of companies (e.g. Ferrel and Gresham 1985; Posner and Schmidt 1992; Wimbush and Shepard 1994; Kaptein

TABLE 2 Average Payment Delay in Main Industries in 2013 for Business to Customers Market (B2C), Business to Business Market (B2B) and Business to Public Market

Industry	Average payment delay		
	B2C	B2B	Public
Professional services	12	15	16
Construction	17	25	33
Manufacturing	12	22	26
Education	13	13	12
Media	14	20	17
Business services	12	17	17
Wholesale & Retail	9	12	18
Real estate	6	10	15
Telecom	11	14	24
Transport	10	18	19
Financial services	10	10	12
Utilities	10	12	17
Health care industry	25	17	35

NOTES Adapted from Intrum Justitia (2013, 11–23).

2011; Hawkins, Lewis, and Amos 2012). If we observe payment discipline as a counter-norm, then the ethical behaviour of management should influence the payment discipline of the company.

Despite numerous studies on the general issue of ethics among managers, our systematic review of literature reveals a gap in the research and the evident need for empirical study of the relationship between management ethics and payment discipline. The study presented in this article was conducted within a working environment and attempts to narrow this gap.

The goal of this article is to determine if management ethics influences companies' financial discipline. The paper is structured as follows. After the introductory part of the paper, the second part of the paper explores the methodology of the research. Third part of the paper discusses results. Fourth part of the paper includes discussion. Finally, managerial implications and conclusions are presented.

Method

SAMPLING AND SAMPLE

A total of 2978 Slovenian micro, small, medium and large enterprises were randomly selected from the database of the Slovenian rating agency I d.o.o. Micro-sized enterprises is defined as enterprises with less than 10 employees, small enterprise is enterprise from 10 to 50 employees, medium from 50 to 250 employees and large enterprise includes more than 250 employees.

Persons responsible for accounting or financial data from these companies were contacted via email with a request to participate in an online survey. In addition to the answers about ethical culture, respondents only had to provide the name of the company, so that the data about a company's ethical culture could later be compared with the data about its payment discipline. Average payment delay was calculated using the Dun & Bradstreet rating agency methodology (average delay was calculated taking into account a sample of invoices).

Our sample includes 273 Slovene enterprises, which represented 9.1% of all companies invited to take part in the survey. The share of companies with late payments is 64.6% and the average late payment is 8.07 days. According to the company size there were 26.6% micro, 35.1% small, 18.1% medium and 20.3% large size companies.

DESCRIPTION OF THE MEASUREMENT INSTRUMENT FOR MEASURING MANAGEMENT ETHICS

To determine the management ethics, we used 10 items for measuring management ethics from the measurement instrument for assessing the ethical culture (Kaptein 2008). We used item from Kaptein's measuring instrument for determining the ethical culture (2008) since his measuring instrument is developed, implemented and valid measuring instrument. Our measuring instrument consisted of claims on which the respondents gave an assessment of agreement or disagreement with the help of Likert 6-point scale.

In order to avoid mistakes due to the translation process (original questionnaire was in English, but the research was conducted in Slovenian language) we translated measurement instrument first into Slovene, and then back into English. Then we compared both sets of items (the original ones with items translated back into English) and finally, we test our measurement instrument on a small sample and we confirmed that no additional changes to the item were needed.

PROCESS DESCRIPTION

An electronic questionnaire with a request to participate in an online survey was sent via email to the people responsible for accounting or financial data. The first part of the questionnaire, which also asked for the name of the company so that the data could later be compared with the data about its payment discipline, gathered information about the companies' management ethics, measured using ten statements from the Corporate Ethical Virtues measurement instrument (Kaptein 2008).

DATA ANALYSIS

For testing reliability of the questionnaire the criterion of internal consistency Cronbach's alpha Cronbach (1951) was used.

Whether our measuring instrument meets the criterion validity of the construct (whether items in the measuring instrument have one or more common category of higher order – construct) was checked with factor analysis.

Since the average delay was expressed in days (tense variable) and because we assumed that between it and the independent variables is a linear dependence, we have models of payment discipline formed by linear regression analysis. In linear regression, we analyzed the multicollinearity. It is generally accepted rule says that the problem of multicolinearity factors indicate an increase in variance is greater than 10 (Gujarati 1995, 339) and tolerance of less than 0.1 (Lin 2006, 422), some authors have labelled as troublemakers factors increase the variance of greater than 4, and tolerance of less than 0.25 (O'Brien 2007, 674).

Results

FACTOR ANALYSIS, RELIABILITY, AND VALIDITY

Using factor analysis variability a potentially lower number of unobserved variables called factors is described. With the factor analysis, we get one factor, which contains the variables of management ethics. The factor contains nine variables that are substantial in this set. The variable 'My supervisor fulfils his responsibilities' was discarded due to the lack of communalities.

Bartlett's test was statistically significant ($\alpha = 0.000$) and the value of KMO test came to 0.712, which makes the data suitable for factor analysis. The construct 'management ethics' ($\alpha = 0.956$) was analysed and confirmed with factor analysis. Table 3 presents the factor structure and loadings.

From the factor analysis, using the PAF method and varimax rotation, we get one factor, named 'management ethics,' which has an eigenvalue of greater than 1. Only one item was abandoned: 'My supervisor fulfils his responsibilities.' All of the items included in the factor explained 74.09% of the total variance.

TABLE 3 Factor Analysis

The Board and (senior) management sets a good example in terms of ethical behavior.	0.895
My supervisor communicates the importance of ethics and integrity clearly and convincingly.	0.891
My supervisor does as he says.	0.887
My supervisor would never authorize unethical or illegal conduct to meet business goals.	0.884
My supervisor sets a good example in terms of ethical behavior.	0.867
The Board and (senior) management communicates the importance of ethics and integrity clearly and convincingly.	0.849
My supervisor is honest and reliable.	0.836
The Board and (senior) management would never authorize unethical or illegal conduct to meet business goals.	0.820
The conduct of the Board and (senior) management reflects a shared set of norms and values.	0.812

TABLE 4 ANOVA

Item	Sum of Squares	df	Mean Square	F	Sig.
Regression	951.017	5	190.203	3.320	0.006
Residual	15126.450	264	57.297		
Total	16077.467	269			

NOTES Predictors: (constant), management ethics, quick ratio, debt to equity ratio, return on equity, three-firm concentration ratio. Dependent variable: average payment delays.

LINEAR MULTIPLE REGRESSION

With multivariate regression analysis, the descriptive measures for each variable were calculated: measures of correlation, parameter values of the regression model, table of variance analysis, parameter estimates of regression function, values of related tests of independence of parameter estimates, and values of remains. Analysis was conducted on how the independent variables influence the dependent variable. When the regression model was accepted and the independent variable values examined, we were able to forecast the emergence or values of dependent variables.

The ANOVA analysis provides the statistical test for overall model fit in terms of the F ratio. The total sum of squares (190.203) is the squared error that would accrue if the mean of management ethics has been used to predict the dependent variable.

The linear regression model with enter method is presented in table 5. In this model variables management ethics, quick ratio, debt to equity ratio, return on equity and three-firm concentration ratio

TABLE 5 Linear Regression Model Using Enter Method

	Unstand. coeff.		Std. coeff.	t	Sig.	Collinearity stat.	
	B	Std. err.	β			Tolerance	VIF
(a)	7.054	1.010		6.986	0.000		
(b)	−1.106	0.469	−0.143	−2.358	0.019	0.968	1.033
(c)	−0.124	0.195	−0.039	−0.633	0.527	0.950	1.052
(d)	0.193	0.109	0.111	1.777	0.077	0.916	1.092
(e)	0.764	1.313	0.036	0.582	0.561	0.943	1.061
(f)	−4.940	1.747	−0.170	−2.828	0.005	0.987	1.014

NOTES Row headings are as follows: (a) constant, (b) management ethics, (c) quick ratio, (d) debt to equity ratio, (e) return on equity, (f) three-firm concentration ratio. a. Dependent variable: average payment delays.

can explain 5.9% of the variability of average payment delays. In the regression model in table 5, there are no multicollinearity issues (all variances are higher than 0.25 and all factors of increased variance are lower than 4). Management ethics is significantly statistically related to average payment delays expressed in days ($\beta = -0.143$, $p < 0.05$). With regards to the control variables, only a significant negative relationship between the three-firm concentration ratio and average payment delays expressed in days is statistically reliable ($\beta = -0.170$, $p < 0.01$).

Discussion

The aim of this article is to determine if management ethics influences companies' financial discipline. This study was constructed on valid models and contributes to theory on management ethic and payment discipline.

With the factor analysis, we get one factor, which contains the variables of management ethics. The factor contains nine variables that are substantial in this set. The variable 'My supervisor fulfils his responsibilities' was discarded due to the lack of communalities.

Through regression analysis, we examined the relationship between management ethics and financial discipline. Using the enter method, we yield a model that is statistically significant, with which we explain 5.9% of the variability of the dependent variable. The hypothesis regarding the positive impact of the management ethics on payment discipline was confirmed, since management ethics have impact on average payment delay.

The role of managers in creating an ethical working environment in a company is very important. They encounter different ethical dilemmas in their work and must be able to solve them successfully. Solving such complications is often difficult, since they are required to take decisions where they cannot refer to laws, regulations, statutes, and absolute truths. Namely, ethical dilemmas always cast doubts, and because of them, some people can be strongly affected or harmed. The consequences of unethical behaviour are often reflected in the loss of trust and goodwill. Loss of trust has a significant impact on the business operations of a company as it changes the attitude to work which in turn affects creativity, productivity, motivation and/or the workflow and climate in the company, which is also reflected in stunted communication and decreased commitment and loyalty. The loss of goodwill also has a high price, especially if the information about unethical behaviour is made public. Unethical behaviour can easily damage a reputation that was difficult to earn. The reputation of a company is built up over years, but can be destroyed in a single day by irresponsible behaviour (McAlister 2003, 46; Tierney 1997, 18–34).

Conclusion

Considering the results of our research, we suggest the improvement of payment dimensions by strengthening the management ethics. This can be achieved with training. In light of the results of our research, we suggest that managers behave ethically so they can also improve the financial discipline of the companies they work for. Here, managers should follow this sequence (Tierney 1997, 76–96):

1. They have to take the decision to act ethically. They need resources to create an ethical atmosphere. In addition, managers must concern themselves with values and include everyone in the creation of an ethical work environment, and at the same time, they must set an example to follow.
2. Managers must be aware that they, with the leadership position, set an example for others through their actions and values. Managers are a role model simply due to their position and they have a huge impact on other members of the company. The role of managers affects relations with the people they do business with, and with the people who are their subordinates, whose work must reflect quality and accuracy if they want to meet the expectations of the manager who assigned them a task. The manager's assessment and evaluation of subordinates influences their career and salary. If managers want to create an ethical climate, they must set an example to others with their values.

3. Managers must take responsibility to encourage ethical behaviour. Responsibility for promoting ethical behaviour starts at the top. Words alone are not enough.
4. They must provide their own definitions of ethical behaviour. Managers should place ethics high up on the list of priorities in business operations in all areas, e.g. when hiring people, in advertising, accounting, research.
5. Managers must articulate their values. They must be aware of their values, which are an example for employees, and be able to articulate them.
6. Managers must educate employees about ethics. Some sort of education is also required to create an ethical environment. Employees must also be informed about the business of the company, as well as about the company's business ethics. Managers must encourage ethical thinking and demonstrate its importance to employees.
7. They must encourage open communication. Managers must promote communication among employees and they must feel that they can openly discuss criteria, values, and ethics, without fear of consequences.
8. Consistency also matters. Managers must have at their disposal resources to give warnings for unethical behaviour or punish such actions. If there are no consequences for unethical actions, this indicates that what is preached is not practiced. Therefore, respect for criteria must also be very visible when rewarding. Ethics, in addition to excellence, is crucial for the success of the company.

Taking into consideration results of our research, it would be necessary to find appropriate forms of the incorporation of ethical behaviour-related training in business studies (in the cases in which such contents have not yet been included in curriculum). In this way, the moral judgement of future managers and financiers would be improved.

In the case of any research in the future, we propose comparisons between results obtained in different countries. Taking into consideration that there are considerable differences in payment discipline throughout Europe, any research on comparisons between the impacts of ethical climate and ethical culture in different countries with varying levels of payments discipline would be welcome. Within such research to be simultaneously conducted in more countries, it would be reasonable to verify the impact of national culture, defined as a 'set of beliefs and values that distinguishes one nationality from the other and it is extremely stable' (Lažnjak 2011, 1018), on payment discipline.

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Hybrid Management in Preparedness: Utilizing Cooperation and Crowdsourcing to Create Joint Performance in the Logistic Society

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The key challenges in the public sector are to find new ways to operate horizontally between different levels of administration and being prepared sudden changes. The purpose of this paper is merging society in the development of customer-oriented hybrid organization. Methodology is the literature review. Preparedness is a process, which connects logistic society, its public, private and the third sector organizations, and their operations with households and individuals. This paper presents a conceptual model of hybrid management and applies it to the preparedness. The management resulted in preparedness analysis and classification system (PACS), which conduct transformational leadership, hybrid organization, and crowdsourcing to secure the overall value chain. The PACS shed light to local hybridity and crowdsourcing usage in preparedness. Crowdsourcing can be employed to provide resources before the incident, which will speed recovery. Introduced hybrid management is a significant contribution to the logistic society and its preparedness.

Key words: crowdsourcing, hybrid management, joint performance, preparedness

Introduction

Houston, we've had a problem here.

Apollo 13 moon flight

The Topic of the Paper. According to the Hallberg Committee (2010), the key challenge in the public sector is to find new ways to operate horizontally between different levels of administration. The Municipal Development Foundation (Kunnallisalan kehittämissäätiö KAKS 2013) in 2013 presented a survey's results in which more than 2,000 Finnish local government decision-makers and municipal managers have replied. Based on the responses, municipal management is one of the main targets for development that are being prepared for sudden changes. The conclusion of the study was that municipalities are weakly prepared for the changes. The most important starting points for the development of municipal management are the operating environment, the management of change, and the tightening of the economy.

The Problem Statement. On the other hand, strategies have been made. Over 300 municipal councils have strategies and their annual municipal sector's action plans. Every year, the financial statements state the situation of the municipalities divisions. Even the 'Security Strategy for Society' (Ministry of Defence 2010) has been existing several years. Juuti and Luoma (2009) outline that strategy is what the organization wants, talking and doing about. Will and speech can be found. According to KAKS the problem is in strategy's implementation. Therefore, there is a reason to believe that another, more vital problem exists; implementation of the security strategy for society has been lacking too.

The Problem to be Solved. It should be noted that in Finland every taxpayer participate in financing the social system. As a secured value chain management point of view, there is keen interest to know the availability of services, for example facilities utilization, even in exceptional circumstances. In order to secure value chain, this paper develops security strategy execution. This is done by shedding light on is peoples' interest in preparedness, on how citizens could be a part of the situation awareness in preparedness, and on a resource as a part of a customer-oriented hybrid organization.

Methodology

The target organization is the Facilities Services Unit in the province centre of South Ostrobothnia, Western Finland. The facilities, as all other organization's functions, are involved in fulfilling a customer request (Chopra 2012; Russel and Taylor 2010). The Facilities Services Unit is a security actor and a critical service in terms of society's vital functions. The study limitation is to secure the value chain

TABLE 1 Citizens' Jury Statements

No.	Title of proposal
1	Community's strengthening
2	Development of citizens' self-motivated activity
3	Improvement of self-preparedness
4	Attention to specific groups of the population
5	Electricity distribution major disruptions
6	Development of dissemination of preparedness knowledge
7	Official communic. development disorder, and in exceptional circumstances
8	Opening the role of the different authorities
9	Cyber security is for everyone – more networking and co-operation
10	Defence forces' local defence concepts inspire confidence
11	The police must not become too distant in relation to citizens
12	Regional precautions notifications message via SMS to mobile phones
13	'Lighter' emergency number to use
14	Media accountability emphasis on social safety
15	Safety cultures strengthening
16	Confidence in the authorities is important – official communications timeliness
17	Municipal knowledge-based registry
18	Increase open NATO issue discussion
19	Preventing young person's exclusion
20	Personal data registers better management

of public owned by real estate user, from the point of view of the Facilities services unit's operating environment and from the point of view of the management of change.

The research is based on literature reviews and ongoing studies by the authors. The corresponding author's research is action research (Lewin 1946; Kasanen, Lukka and Siitonen 1991), with a strong pragmatic extract; what works, is true. Hence, the research approach is inductive. Literature reviews approach the subject from the chosen directions to secure value chain; to manage the demand chain, and to manage the supply chain. The paper is divided in the same way, and ends at the managerial implications and conclusion parts, which connected these to secure customer's value chain.

A wide preparedness exercise realized in the Tampere region, western Finland in 2014. The exercise included the citizens' perspective. Table 1 summarizes the Tampere regions Citizens' Jury's Statements (University of Vaasa 2014). This study uses crowds as a customer-orientation point of view to solve the problem.

The proposal sorting is based on the content analysis (Krippen-

TABLE 2 The Sorting and Classification Table

<table>
<tr><td rowspan="3">Primary Activities</td><td colspan="4">Customer-Oriented Value Chain</td></tr>
<tr><td>Customers</td><td>Marketing, Communications</td><td>Logistics, Operations</td><td>Supplier Network</td></tr>
<tr><td>2, 3, 15, 19</td><td>6, 7, 11, 14, 16</td><td>4, 5, 9, 12, 13, 17, 20</td><td>1, 8, 10, 18</td></tr>
<tr><td rowspan="3">Support Activities</td><td>Procurement</td><td>Human Resource</td><td>Technology</td><td>Infrastructure</td></tr>
<tr><td colspan="2">Manage Demand Chain</td><td colspan="2">Manage Supply Chain</td></tr>
<tr><td colspan="4">Secure Customer's Value Chain</td></tr>
</table>

dorff 2004). Classification is based on the value chain (Porter 1985). Table 2 presents the grouping method, which is utilized in securing the customer's value chain.

Research, Part 1 (2): Manage the Demand Chain

According to Ministry of Interior (2014), the valid legislation requires Finnish municipalities to anticipate the disruptions. Ministry of Social Affairs and Health (2014) underlines that the joint municipal authority in the social welfare and health care region will be responsible for ensuring that the residents in the region and others entitled to use the services receive the services they need. The Ministry of Environment (1999) instructs that the real estates and premises must be kept constantly healthy and safe.

The task of the National Emergency Supply Agency (NESA) is to promote and coordinate the preparedness of the authorities to steer the country's economy for crisis situations and serious disturbances. The NESA (2014) reminds households that they have the obligation to be prepared. Households are an integral part of the society and its capabilities.

The Prime Minister's Office (2011) states that as the operating environment and threat scenarios change, preparedness must be based on the broadest security thinking possible, that of comprehensive security, and on harnessing the resources of the whole of society. In preparedness, better account should be taken of the strong role played by the business sector and the significance of non-governmental organizations. In securing the functions vital to society, the commonly accepted and observed principles of the Finnish society are mentioned in the 'Security Strategy for Society' (Ministry of Defence 2010).

In accordance with the Emergency Powers Act (1552/2011, §12), municipalities must ensure, by means of emergency plans, prior preparation of emergency operations and other measures, that their duties are performed with minimum disruption, including in emergency conditions. This is based on preparedness in the normal conditions and by normal activities.

Learning from past experience and well-trained field operations that key factors are, for example, armed forces and in humanitarian logistics (Myyryläinen 2009). Defence forces' dependence on society during the normal time, or even the worst crisis, is very significant. Civil society is particularly important for a logistic system, which is in the last decade far partnering. For example, the Finnish Air Force has been a part of this business days from the beginning. What is critical to society, it is also critical to national defence. For armed forces, it is much broader mutual synergy. The Finnish Defence Forces are itself a part of society (Hyytiäinen 2014).

Safran (2003) describes a strategic approach for disaster and emergency assistance as a process which has three major phases: prevention, transition and recovery. Preparedness and continuity management standard (ISO 22399) deviates a bit: prevention, response, continuity and recovery. ISO 22339 models (2007) are graphs where operations level and time relates according to the incident moment. The risk management model (ISO 31000) has three peripherals as the ILO's published ILO-OSH 2001 system. A common feature of the systems is combining the continuous development in the specified form of the processes, for example, internal and external marketing.

Internal marketing refers to internal activities of an organization and its aims for motivating operations, which have affection to the customer. Brink and Berndt (2004) claim that an organization's internal marketing is shared in eight parts, and all parts have connected and are part of internal marketing. Internal customers include all stakeholders, which are part of an organization that are, for example, employees and distributors. Piercy (1994) argues that internal customer satisfaction lies at the heart of all the endeavours of all organizations.

Internal customer satisfaction is related directly to working conditions and job satisfaction. A satisfied customer will tend to show repeated behaviour to the advantage of the organization (Brink and Berndt 2004). Service quality is a customer's overall impression of the relative of the organization and its products or services (Brink and Berndt 2004).

Lings (1999) claims that internal marketing aims to ensure that quality is progressively built into the product or service as it passes through the company so that the external customer is also satisfied. Thus, internal and external markets are connected and have therefore affection to each other. Brink and Berndt (2004) highlight that internal customer orientation means that the customer is the focus of all attention on the activities in an organization.

Conduit and Mavondo (2001) argues that an internal customer orientation should be part of an organizational culture, and guide the attitudes and behaviours of organization members to deliver quality to other employees. Internal customer orientation has critical affection on how an organization is providing products and services for external customers and end users.

Job satisfaction has connections to other internal marketing areas, which are customer satisfaction and customer orientation (Brink and Berndt 2004). Job satisfaction has significant impact on organizational performance thanks to its ability to form a base for competitive advantage, through improved service quality and decreased costs (Huang and Rundle-Thiele 2014).

If an organization wants to provide high quality of products and service, the employees needs to be satisfied with their work. Brink and Berndt (2004) argue that employee motivation will in turn affect the job satisfaction and the customer orientation of the employee.

Mishra and Sinha (2014) argue that motivation of employees is a prerequisite for success of internal marketing. Thus, if employees are not motivated, then the results may be weaker and therefore motivations of employees are in crucial role. Internal marketing is affected by cooperation that takes place between the several functions within an organization (Brink and Berndt 2004). Inter-functional coordination and integration has therefore affection which product or service end user receives.

Empowerment refers to the initiative that employees can show in their job situation (Brink and Berndt 2004). Blanchard, Carlos, and Randolph (1996) illustrate key that organizations can use to open the knowledge, experience, power and motivation that people there already have. The keys that managers can use are: information sharing, cross-border autonomy creation and hierarchy replaced with self-managed teams.

Marketing-like approach highlights how external customers are treated and the way in which functions interact with each other (Brink and Berndt 2004). Marketing-like approach can be seen as a part of an organization's crowdsourcing activities. Sivula and Kantola (2014) argue that crowdsourcing can be utilized for gaining knowledge about internal and external markets of an organization.

Primary and support activities of an organization can employ crowdsourcing, for instance, for finding customer clusters (Sivula and Kantola 2014). Managers require knowledge about internal and external crowd of an organization.

Crowdsourcing can be carried out, for instance, between different departments, if an organization is large enough (Howe 2006). Howe's definition (2014) sheds light to crowdsourcing-based tasks. Other crowdsourcing forms exist as well, which includes, for example, crowdfunding. Sivula et al. (2014) argue that crowdsourcing can be used effectively to provide knowledge for an organization's strategic planning and execution. These tasks can be divided in an organization's internal and external crowdsourcing activities. Internal crowdsourcing can be utilized to provide views of employees' to managers. Internal crowdsourcing activities can be, for instance, crowd value creation and strategy formulation with an organization's internal crowd (Sivula et al. 2014). External crowdsourcing activities include scanning the weak signals, finding new markets, and product or service definition (Sivula et al. 2014). Commonly crowdsourcing is implemented through cloud services. Cloud services are not necessary in crowdsourcing and other connectivity types can be utilized for crowdsourcing as well (Sivula and Kantola 2014).

Research, Part 2 (2): Manage the Supply Chain

The municipality of Nokia's Water disaster-case in the Tampere region (2007) showed that municipal preparedness must be seen in relation to the rapidly emerging joint organizations, cost-effective network's structures and joint obligations. After the incident, there have been proposals that preparedness allows municipalities to develop their processes (Nurmi 2009). In order to achieve wider objectives as in total quality management, preparedness training should be based on recognizing contingency factors (Tuomi 2012).

The environmental changes to create at least two kinds of demands for the managers. First, there are internal demands to measure their transformational leadership factors to recognize opportunities in the service network. Managers need information about how to identify types of partner organizations and how to develop dynamic capabilities in their network. Secondly, external people-perspective needs attention too.

Juntunen, Nurmi and Stenvall (2009) emphasize the basic municipal tasks and preparedness convergence so that the preparedness and security management are a natural part of the municipality's core business. The problem is in strategy implementation. There is a need for effective operations strategy, which could be more accurate than execution of an annual municipal sector's action plan.

The competence of the local authorities, and their preparedness planning, face a growing challenge. From the strategy implementation point of view, the customer relationship management have a significant role to improve the vertical and horizontal integration (Chopra 2012; Russel and Taylor 2010). The networks' joint performance varies, which challenges the equality of the municipalities. Evacuations and temporary evading manoeuvre planning should be extended beyond municipal boundaries. Common training can be used in ready-made, tried and tested models.

According to Barney (1991), a sustainable competitive advantage (SCA) is the prolonged benefit of implementing some unique value-creating strategy not simultaneously being implemented by any current or potential competitors along with the inability to duplicate the benefits of this strategy. A new model approach in order to understand the value-added processes comprised of dyadic and network inter-firm activities, which foster each firm's SCA. By combining resources in unique and enduring ways, organizations can collectively focus on learning how to coordinate all employees' efforts in order to facilitate growth of specific core competencies.

By maintaining and developing capabilities, it is possible to prepare for the management of disturbances. The previous papers (Vornanen, Takala, and Liu 2013; Vornanen and Takala 2014) presented an analytical model of transformational leadership (Takala, Kukkola, and Pennanen 2008) utilization in a public sector's organization and the results of usage. This calculation method (Liu and Takala 2010) is used in this context to provide a network of actors from the management point of view, what appears to be the decision-making ability.

Data, information and knowledge have become valuable resources for societies, organizations, actors and governments of all kinds. Many organizations have recognized the importance of data that is accumulated over time and seek ways to increase its value. Hence, the need for both organizations and government agencies to generate, to collect and to utilize the data in public and private sector activities is increasing (Syväjärvi et al. 2009).

All disturbances occur in the municipalities. Therefore, an important task is to prepare for disruptions. One of the most important public services is technical infrastructure. Maintenance is to keep them useful in all situations. The municipally owned buildings are critically important for regions. They form a cross-border service network. Crowdsourcing could be a useful tool in strategic implementation, for instance, providing knowledge about the customer needs (Sivula et al. 2014).

The probability increases to face the crisis. Buildings' renovation debt is up to a tenth of the entire building stock worth € 350 billion (Confederation of Finnish Construction Industries RT 2014). Untreated repair debt leads, for example, indoor climate problems, which directly affect the utilization rate of building and building alternative use opportunities.

Vornanen (2013) underlines cross-border interoperability and operational flexibility. Unlike larger cities, smaller municipalities do not have alternative locations for the services, if their critical assets are run down. Municipalities need in this case common and extra efforts. The need for broader situational and resource-awareness is obvious. Premises usefulness and utilization rates for alternative purposes are needed for steering ability. It is particularly important to identify in advance, of the organization and its partners the ability to operate under different conditions.

Even though vandalism and terrorist attacks against the technical infrastructure, there is a new thought-provoking threat, which employs preparedness experts overseas. A growing part of the technical infrastructure of the local monitoring devices will be connected to the web by the cost-effectiveness requirement. Therefore, disturbances spectrum is getting wider. Limnéll (2014) warns cyber security should be everywhere and always in mind when planning any digital solutions. The cyber threats underline the significance of hybrid management in preparedness.

Hyyryläinen and Viinamäki (2011) argue that the key benefits of the hybrid organizations, which are situated between the public and private ones, relate to a market, culture, governance and performance – again, the key challenges of hybrids are an unambiguity of value-based, absence of clear goals, difficulties to use rewards, difficulties in establishing a new identity. Originally, Miller (2001) introduced the framework of hybrid management to explain the activities of boundary organizations in the more complex, contingent, and contested settings of global politics.

Wehrens, Bekker, and Bal (2014) argue that hybrid management strategies may be used by different groups or at different moments, may reinforce or contradict each other, and may be more or less effective at different points in time.

According to NATO (2014), the implementation of NATO's contribution to a comprehensive approach is a permanent feature of the Alliance's work. NATO is working to make improvements in several key areas of work, including the planning and conduct of operations; lessons learned, training, education and exercises; cooperation with

TABLE 3 Integrity of Hybrid Organization

<table>
<tr><td colspan="2">↓ Threats</td><td colspan="5">Threats which primarily affect the state, society and population
Threats which primarily affect the households and individuals</td></tr>
<tr><td colspan="7">→ Value Chain →</td></tr>
<tr><td rowspan="5">Ability, Volition ↑</td><td>Hybrid organizations</td><td colspan="4">Hybrid Management</td><td>Performance-rel. benefits</td></tr>
<tr><td>Third-sector organizations</td><td rowspan="3">Planning and conduct of operations</td><td rowspan="3">Lessons learned, training, education and exercises</td><td rowspan="3">Enhancing cooperation with external actors</td><td rowspan="3">Crowdsourcing and communication</td><td>Culture-rel. benefits</td></tr>
<tr><td>Market-rel. organizations</td><td>Market-rel. benefits</td></tr>
<tr><td>Local public organizations</td><td>Governance-rel. benefits</td></tr>
<tr><td>Suppliers</td><td colspan="4">Input-Process-Output</td><td>Customer satisfaction</td></tr>
</table>

external actors; and public messaging. As the literature reviews and table 1 sheds light, there is a need for common resource-awareness and operationalizing network resources (Vuorinen et al. 2006). The hybrid organizations' operations strategy should produce actions in such a way that the impact of the incident on the cause, be able to minimize – and vice versa – preparatory efforts to obtain the maximum benefit from vertical integration.

Table 3 conducts the research parts 1 and 2. This is done by SIPOC-value chain, which works, for example, with external and internal customer identification (Kearns and Nadler 1992). Table 3 is a tool for reinventing society as a coopetitive (Ritala 2010) nation to preserve its affluent nature.

Managerial Implications

This section highlights the Hybrid management, which the authors of the paper propose. This paper presents a model for hybrid management – aiming to expand customer relationship management – and sheds light for opportunity of crowdsourcing between the stakeholders to provide joint performance. Management in hybrid organization is constructed with public and private actors, which contribute knowledge and other assets to provide preparedness in-depth. The key managerial implication for hybrid management in preparedness is the model of preparedness analysis and classification system (table 4).

The management of a hybrid organization could be based on cloud services, which are acting as an interface between the actors. The PACS model aims at the continuous development of a joint performance, which contributing to the preparedness and securing the value chain. The PACS model can be implemented locally in augmented reality by a cloud service and mobile devices. Thus, a hybrid organiza-

TABLE 4 The Preparedness Analysis and Classification System (PACS)

Transformational Leadership	Citizen Identification	Hybrid Organization	Citizen Identification	Crowdsourcing
Data Gathering		Inter-Func. Co-Ordin. and Integ.		Knowledge Gathering
Data Analysis		Employee Motivation		Task Defining
Risk level Calculations		Job Satisfaction		Specified Resource Allocation
Resource Levelling		Customer Orientation		Task Population
Presenting Results		Service Quality		Coordination
Discussion		Customer Satisfaction		Evaluation
		Benchmarking		
		Public-Private-People Co-Opetitive		
		Joint Performance before, during and after an incident		

tion is reborn in a variety of training scenarios and simulations. The system requires login with citizen identification, and then convert all actors into hybrid organization's customers.

Citizens are part of the crowd and they are managed through crowdsourcing methodologies. Crowdsourcing can be utilized widely in the context of preparedness and activities can be connected to public and private organizations. Therefore, public and private organizations and citizens are hybrid managed for joint vision and performance.

First and most important asset is knowledge about the resources and people who could act during the threat situation. Such resources are, for example, knowledge of the persons, devices and vehicles.

Crowdsourcing provides a method for connecting to all citizens in a specific local area. Information is provided by citizens and it can use for developing the processes of preparedness to set tasks more focused. Knowledge gathering, however, is not enough because tasks require definition for threat situations.

Tasks are defined by public and private organizations, which are acting as a leader in threat situation. These tasks are based on the knowledge, which has been collected earlier of the resources which crowd could provide in threat situation. Crowdsourcing should extend public and private organizations resource needs and critical activities needs to be achieved by public and private organizations. However, the crowd can be part of critical activities as well.

During the knowledge-gathering crowd express its resources. These resources can be allocated in threat situation and use them as a part of the process. On the other hand, resources are not necessarily available, and this should be considered when allocating resources. There can be, however, multiple kinds of resources available for the specific threat situation. This can be, for instance, different kind of vehicles to support for rescue operation. Tasks need to be populated when the threat situation occurs.

Moreover, tasks need to have several owners to be more definite about that all tasks have achieved. Crowdsourced task can be minor or major based on results, which are assumed to achieve. On the other hand, most critical tasks need to have public or private organization's owner, but can be supported by the crowd. When tasks are populated they need coordination for achievement.

Coordination can be implemented via cloud-based system utilizing modern technologies, for instance, mobile technologies. Cloud is a rapid communication channel between actors, which may include multiple user interfaces. Coordination of the crowd is achieved by public or private organizations, which are responsible for the operation. Crowd provides knowledge among other resources for operation, but is acting as a crowd worker role in threat situation.

Therefore, management of crowd workers is required during the operation. Every activity conducted by a crowd worker needs to be evaluated. Evaluation should be implemented by different parties, which are involved in the operation. Thus, public and private organizations, among the crowd are required for evaluating themselves and other parties as well. This knowledge gained can be utilized in the future for developing the preparedness and provide more effective services in the future.

Transformational leadership calculations were presented in an earlier research paper of the corresponding author (Vornanen 2013; 2014). The paper developed the preparedness in the target organization by strategy's resource-based identification for implementing sustainable competitive advantages to the public sector's management system. The research methods used are a case study and surveys, which were connected by the analytical hierarchy process based form and two senses and respond (S&R) based forms. The longitudinal data from the surveys were collected in two phases and analyzed with the balanced critical factor index method and transformational leadership indexes (TLI) with technology levels (Takala 2005; Nissinen 2001). The BCFI & TLI method identifies and clarifies the unit's development and risk factors. According to Liu (2010) during the process of sense and respond, it is important to develop an operational strategy adjustment system by utilizing critical factor evaluation. Presented hybrid management provides sustainable competitive advantage as illustrated in figure 1.

The process adaptive loop is based on the PDCA-quality cycle (Haeckel 1999), which is a scalable managerial framework for the ability to adopt improvement (Bradley and Nolan 1998). With the help of real-time sensors, organizations can constantly research

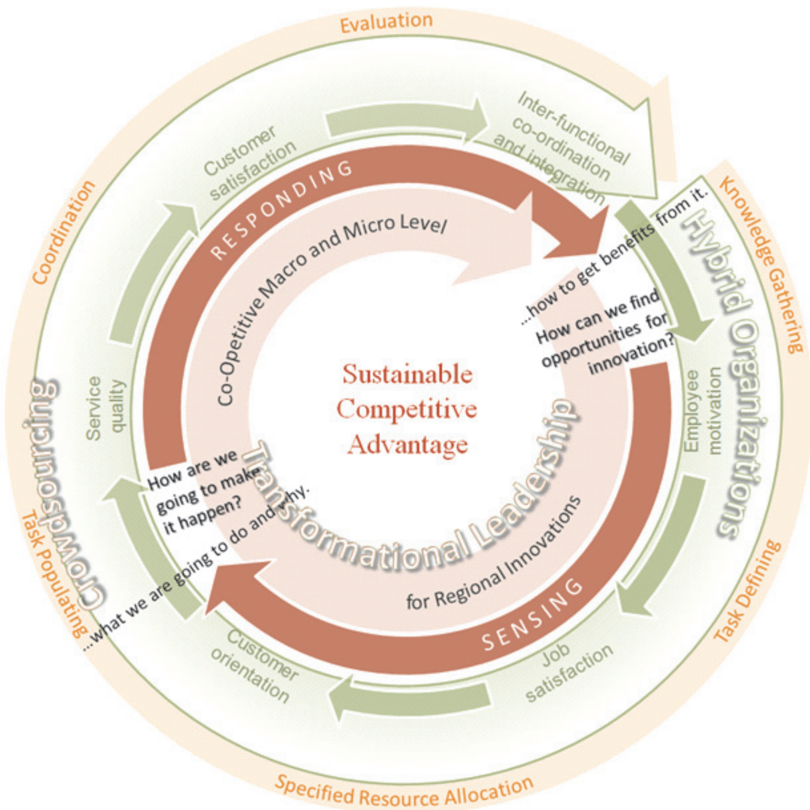

FIGURE 1 The Hybrid Management Cycle

what kind of actions interest groups has and after that try to react those needs. Organizations have to be flexible and react to the changes happening in the environment as an opportunity and as well as a threat. This means that processes have to be able to learn from the environment, as a linear sense and respond strategically.

All management activities are in key role and provide important assets in the hybrid management. Continuous development of these three partitions are based on the benchmarking. This aims at sustainable development in Public-Private-People Co-Opetitive. Several advantages can be foreseen, as cost reductions, resources' complementarity and technological transfer.

Conclusion

This conceptual paper introduced hybrid management in preparedness, and the preparedness analysis and classification system (PACS).

Hybrid management consists of multiple organizations and it is a strategically significant cooperative model, which can employ transformational leadership with technology levels and crowdsourcing in strategic planning and execution to improve joint performance.

Crowdsourcing provides knowledge and resources for public and private actors in incident situation. This paper introduced six-phase crowdsourcing process in the hybrid management. Phases are knowledge gathering, task defining, specified resource allocation, task population, coordination and evaluation. Every phase has key role in crowdsourcing in preparedness and during incident situation. Although the national service bus and the PACS cloud service are still in the plan, both provide a new research field for strategy implementation. PACS is a central point for crowdsourcing in the hybrid management model. Moreover, ownership and roles in PACS cloud service should be clarified before cloud service implementation.

The study limitation is to secure the value chain of real estate, from the facilities services unit's operating environment and the management of change point of view. To end up with, the extended model of hybrid management is a scalable solution, which connects to the macro and micro levels to hybrid organization's objectives, and its resources. By doing it in the different states of the incident, the model speeds up the recovery of the entire society.

The scientific contribution of the paper is the customer-oriented value chain securing by the strategy implementation. The societal security standard guidelines preparedness as an *xy* graph. Introduced hybrid management PDCA-like model is strategically and practically a significant contribution.

The subject for further research shall be: Any small country, limited resources on preparedness is considered as a whole – does the hybrid organization and management of hybrid meet this requirement?

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Qualitative Analysis of the Digital Marketing Influence on the Behaviour of the Organizational Consumer

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The aim of the present study is to try to understand the behaviour of the organisational consumers in the online environment. We have attempted to identify specific activities undertaken in the online acquisition process by the persons responsible for purchasing within the companies located in Iasi district (Romania). The results obtained within this preliminary analysis, using a sample of 15 persons so far, show that the internet is used especially for informing and placing the orders, and less for the actual payment and contacting of potential suppliers.

Key words: IT&C technologies, online environment, organizational consumer behaviour, Web sites

Introduction

At the present time, the IT&C technologies became a daily necessity for all of us. Without taking into consideration the specific aim we follow when using these technologies, or the time and advantages they bring, it becomes apparent the role they play within the online communication environment, as well as the personal and professional life of any individual.

Given the growing importance of the IT&C sector not only in the personal life of the individuals but also the activities undertaken by the judicial persons, it has been recently observed a predilection among researchers from various fields towards studies which aim at determining the effect of using online means of communication on the consumer's behaviour.

Because the advancement of the informational technologies, and especially that of the internet, have modified the acquisition behaviour of the consumers, numerous analyses have been done regarding the influence of the online environment on the consumer's behaviour, a fact which, for example, for the Romanian market, indicates an increase of 17% of the electronic commerce oriented towards the consumer, compared to 6% estimated in the case of the traditional commerce practiced by stores.

According to the study provided by Ernst and Young (2014), for approximately 45% of the Romanians, the online environment is mostly a source of influence in the search and selection of useful information, having a powerful impact on the entire shopping experience.

Literature Review

The influence of the online environment in the modelling of the purchasing decisions of the consumers makes the object of numerous papers in the speciality literature. Taking into consideration the considerable number of studies in the field presented in this section, we will provide a succinct summary of the most relevant works.

Understanding the purchasing behaviour is essential when attempting to achieve efficient decisions regarding the marketing mixture. Adcock (2000) observed that this had become a fundamental element in many marketing programs within the academic world and that it has roots especially in the social sciences, such as psychology, sociology and economics.

Many authors of papers regarding the buyer's behaviour refer to Maslow's pyramid of needs model, which is seen as a key instrument in the classification of the various levels of wishes and needs of the clients, with the conviction that the lowest level of needs can be first satisfied, before the ones with a higher level.

The nature of the buyer's behaviour is various, from the purchasing of basic products, such as bread, milk and the SIM card for the mobile phone, until the products with a higher degree of implication such is, for example, choosing a holiday or purchasing a car.

Solomon et al. (2012) described this fact as a continuous effort, with usual decision from one end (typical to the daily grocery-shopping), namely with the solving of ampler problems, until the other end (typical important and implicit decisions such as products of the financial services on the long term). The study suggests that many purchasing decisions situate themselves between two extremes, requiring certain labour and thinking for purchasing. He refers to them as the solving of limited problems.

Normally, the effort done by the customer in order to purchase something is variable and has implications on the design of the website, for example, on the degree of detail of information regarding the product, information regarding the insurance of the service by another partner, images of the products, warranties, sales and other elements useful for the building of trust and credibility, especially at the furthest end of the continuous process.

Schmidt and Hollensen (2006) suggest that the personality and lifestyle are not linked to the purchasing of basis products, which presupposes weak implications, related to the routine, because there are not linked powerfully enough to convictions, self-esteem and identity. However, these change significantly in the case of the purchases with major implications, when the product has a major importance for the individual because it satisfies superior needs. Consequently, the client's expectations rise and the quality of the online offer must be at the level required in order offer satisfaction to the client not only at the first purchasing, but also the next ones.

Understanding the client and the efficient usage of the knowledge in the creative and logical marketing plans are essential for the marketing's success. When taking a decision related to a purchase, the client confronts a large range of stimuli, to which he/she can answer or not, based on the selection criteria.

Jayawardhena (2004) claims that the stimulant which initiates the recognition of the need may appear from various sources which, initially, can be online or offline, especially given the fact that many organisations use both channels for communicating. Later on, Jayawardhena, Tiu Wright, and Dennis (2007) supported the idea that a website must attract the interest of the consumers for the online shop and that the information gathered from the customers is the absolute value for the development of the interest of a long lasting relation.

A client can enter the store online without being advised that there is a problem and, in the same fashion, he/she can exist it without recognising this fact, but he/she has searched for information, evaluated the results of the search and acted towards resolving it. The inner peace is an important aspect of the occasional search. For many users, the internet is an instrument used to search information which can help solve a problem. In the first place, the internet can be used by the marketer as a promotional instrument. For example, the online publicity or the direct marketing, via email, can stimulate the consumers' interest. The advantage of the internet is that it allows the client to use the same website in order to purchase something, a fact which the other media channels cannot do it.

Cotte et al. (2006) claimed that the internet, given its unique features, offer new ways of interacting between the consumers, organisations and the ever larger space of the electronic market. It facilitates the dialogue between customers, who constitute different aims and who show different behavioural types and who take into account different benefits.

Brennan et al. (2007) suggested that the efficient strategic marketing requires that the business planners should be almost 'obsessive' regarding the understanding of the clients' needs. For this, the marketing decisions must be based on the knowledge of the processes and influences that dictate the purchasing habits not only of the consumers, but also of the organisations. This can imply the gathering of data referring to the general needs, motivations, attitudes and other stimuli modelling the behaviour or other variables such as time, which can determine the purchasing of a certain category of products or of a certain brand.

To summarize, the main works identified in the literature regarding the consumer's behaviour in the online environment are as follows:

1. Cotte et al. (2006) provides an empirical study based on the questions of 310 residents from the North-East side of the United States. The results show that, compared to the persons with a spontaneous behaviour, the analytical persons target more readily the utilitarian benefits rather than the hedonistic ones. The study reveals that the internet is used especially in order to access faster the required information when taking certain decisions and not for the personal pleasure.
2. Jayawardhena (2004) uses an empirical study based on the questionnaires applied online. Here, the need of knowledge can be launched not only by the offline sources but also the online ones. It seems that the consumers are tempted to satisfy these needs using the online sources.
3. Jayawardhena, Tiu Wright, and Dennis (2007), based on the same methodology mentioned above, shows that the way the site is presented influences the online consumer's behaviour. A website must be more attractive in order to be accessed by a higher number of users.
4. Lian and Lin (2008) use a regression analysis to emphasize that the factors which influence the behaviour of the online consumers differ according to the products or services offered, thus between the consumers' features and the products/services offered online different relations are established;
5. Constantinides (2004) provides a comparative study in which the factors influencing the consumers' behaviour prove to be different to the 'traditional' environment. Therefore, the identification and understanding of the factors typical to the internet will con-

stitute the first step into the development and the delivering of an attractive presence among the consumers.

From the short description provided above, it can be observed that the studies related to the online consumer's behaviour followed a rather similar path, and there appears to exist, according to Gay and Charlesworth (2009), three significant motives, namely:

- The internet developed fast, especially when it comes to the technical side.
- Partially, as a result of the internet's development, the way in which this was used has changed not only as a result of the internet development, but also the way in which this is used by the marketers and regular users has changed.
- The current users have changed. The technical users, mostly youngsters, who adopted it early, towards the middle of the 1990s, have managed later to become the main stream of the users, within a large range of ages.

A significant improvement to the business is the clear impulse of the shift in the marketers' objectives from 'let us help the seller sell' to 'let us help the purchaser purchase.' The customers expect to be helped in searching the products or services which better match their own desires and needs. The internet is important from this point of view because it is a 'source' media channel, this signifying that users, to which any marketing message is being addressed, request information rather than be obliged to read the information – or be 'pushed' towards searching for it – as it is being done in the TV commercial or posters. For the marketer, this means that the client is the only one who selects which marketing messages he/she desires.

A major important aspect of the marketing process lies in the understanding of why a purchaser makes a certain acquisition. Without understanding this fact, businesses will not be able to satisfy completely the needs and wishes of the customers.

With regard to the organisational consumers, identifying their preferences and actions in the online environment becomes even more difficult in the context in which the majority of the companies do not divulge specific information regarding the manner in which the internet and other information technologies are used in order to satisfy the need for certain products, services or works. Within this context, it is imposed the usage of a qualitative type of analysis in order to have access to relevant information with regard to determining the behaviour of the organizational consumer within the online environment. Taking into account the aspects mentioned, we continue by formulating the aim, objectives and the hypotheses of the research in the following section.

Aim and Objectives

The aim of the research is the identification of the organizational consumer's behaviour located within the online environment of the Iasi district. The expression *organisational consumer* relates to the judicial person who purchases products, services and works either with the aim of unfold, in optimal conditions, its own activity, either with the aim of reselling on the market, to a final consumer or other companies. Within this process, we consider that companies use mainly the internet in order to inform themselves, contact suppliers, place orders and, finally, pay using the electronic payment instruments. Starting from this assumption, the specific objectives become the following:

- identify the general perception of the organizational consumers regarding the use of internet for the purchasing activity;
- identify the extent to which the organizational consumers use, are predisposed and perceive using the internet;

Methodology

In the qualitative research there are many methods which can be used in order to explore the premises from which this study has started from. To the extent that it relates to use, given the title of the proposed research, namely the influence of the online environment on the behaviour of the organizational consumer, we considered as the most suitable one using a direct interview because we wish to have access to internal information belonging to companies, information which the persons referred to would not have made them known within, for example, a focus group.

Our choice is justified also by the opinions found among the specialists (Munteanu et al. 2006), who identify the main features of the in-depth interview as follows:

- It is a technique suitable to approaching certain subject which are more sensible;
- A lot of information is obtained in a relatively short period of time (between one and two hours);
- Compared to focus-group, there is no dynamics of the group, a fact which reduces the possibility of influencing the opinions;
- Such research is adequate in case studies in a professional field (e.g.: doctors, engineers and other specialists) or of the business

to business studies, because the time and place of the unfolding of the interviews can be easily adapted to the subjects' schedule.

These specialists emphasize also the advantages of using this method, among which we enumerate:

- The attitudes and emotions of the investigated persons, which can be explored in detail and close to reality without appealing to pre-established alternative answers;
- The motivation and opposition towards certain brands, markets, products or services can be determined;
- Ensure the analysis of certain complex research subjects or of new problems for which there was initially insufficient information;
- Development of trust connections between the interviewer and the subject in order to approach also other subjects considered taboo.

For the present paper, we opted for the interview because, since it was a preliminary analysis, we aim at easily processing the answers of the interviews' participants. (The content of the interview's guide is presented fully in the appendix.)

In order to undertake the interview, we have used as instrument for data gathering the interview guide, for the formulation of which we dedicate major attention to the following aspects:

- identifying and logically ordering the features included in the research's objectives and their logical ordering;
- drafting questions which were to be addressed to the interview's participants. While drafting them, we aimed at respecting certain criteria such as: be sufficiently specific, have a simple vocabulary, avoid ambiguity, be non-hypothetical and be without presumption.

In order to process the interview' answers of the participants we used the ATLAS.ti software instrument (the demo version, available at http://atlasti.com/).

We started by transcribing all the answers provided by the participants. Following that, we have created an Excel file, in which we have grouped the questions based on each question (this was imported in the ATLAS.ti software from the Documents Menu, options New and Import Survey Data).

Questions 1–3 have been used as categories, based on which we will be able to make further analysis regarding the orientation towards the online environment of the interviewees, according to the size of the company, the sector in which the company they represent unfolds its activity or the position occupied within the company.

The rest of the questions (4–9) have been changed into super-codes, each containing other codes within its contents. We have not used a predefined set of codes, each code being allotted according to the answers provided by the interviewees. The coding was done at the level of the phrase, within the same phrase existing one or more codes.

For example, in interview no. 12, question 4, the interviewee answered thus:

> My responsibilities regarding the suppliers refer to: identifying suppliers, contacting them, sending them requests for offers and placing specific orders. The due payments placed are done by the financial-accounting department [and] I have no responsibilities in this regard.

At the level of the whole answer we have initially defined a large code, called 'Duties related the suppliers.' Following that, we have defined the following codes:

- 'identifying suppliers' was changed to 'search for potential suppliers;'
- 'contacting them' was changed to 'contacting potential suppliers;'
- 'sending requests for offer' was changed to 'sending offer requests;'
- 'secure orders' was changed to 'orders placed;'
- 'the due payments placed are done by the financial-accounting department [and] I have no responsibilities in this regard' was changed to 'no payment of orders.'

The coding process was similar to all the answers of the interviewees to the questions no. 4–9. The five major codes created for the questions no. 4–9 are the following:

- Duties related to suppliers (which contains other 27 codes);
- Online contact of the suppliers (which contains other 9 codes);
- Placing orders to the suppliers (which contains other 5 codes);
- Online information regarding the suppliers (which contains other 18 codes);
- Payment of the suppliers (which contains other 8 codes);
- Overall appreciation of the internet (which contains other 9 codes).

In total, 82 codes were created.

The analysed population represents the group of individuals from which information is gathered. Within our study, the group is represented by the persons responsible with the acquisition of products, services or works within the companies located within the Iasi district, which use the internet in order to obtain information related to the products and services which they intend to purchase, contacting potential suppliers, placing orders and paying for them.

Given the fact that an exact dimension of the sample representative for the entire population taken into consideration is practically impossible (it would require from us to provide, initially, a questionnaire to all companies in Iasi, to determine how many of them actually use the internet in the activities previously mentioned or in activities related to them), the analysis we propose is a preliminary study, the persons responsible with the acquisition being the ones who accepted to participate in the study.

The actual unfolding of the research took place in the month of December 2015, at the headquarters of the companies who accepted to participate in the study. Initially, we have contacted 30 companies, we discussed with their managers, explaining the aim of the study and, in the end, only 15 persons from the contacted companies accepted to participate. The persons who were interviewed occupy, within the company, either a high-end position (general manager, marketing director) or are directly in charge with the acquisition (responsible with the acquisitions).

The average length of the interview was 20 minutes; the answers of the participants were audio recorded. Later on, these were transcribed in order to be processed with the ATLAS.ti software.

Results and Discussion

After we transcribed and codified the answers of the participants to the study, we decided to present the results in two major sections: one comprising the most frequent codes encountered in the participants' answers to each question, the other one in which to emphasize a series of answers according to the categories defined at the beginning of the study (e.g.: company size, activity sector, position occupied by the participants).

Out of the 27 codes defined as representing the attributes of the interviewees in relation to the suppliers, only 4 were the most frequently mentioned, namely: search for potential suppliers (expression mentioned by 12 out of 15 participants), contacting potential suppliers (expression found in 11 out of 15 answers), sending request for offer (sentence found in 11 out of 15 answers) and placing of orders (expression mentioned by 13 out of 15 participants).

With regard to the online information related to the suppliers, we have codified the answers of the participants in 18 items. Their opinion was very different, the most often encountered options being: accessing the suppliers' website (7), online search of the suppliers' contact information (5) and those needed to make a comparison between companies (5).

Out of the 9 identified codes related to the online contacting of the suppliers, the most often encountered answers to which the participants to the study referred to were the fact that the first contact with the supplier is done via the telephone (8 answering), while only 5 interviewees mentioned that they prefer to contact the supplier via email. In the same way, 4 participants declared that they request an offer via email, after previously contacting the supplier via the telephone. Therefore, according to the answers provided by the interviewees, we notice that there is a high preference for a telephonic contacting, at least at the first stage, and, later on, they pass to stage of sending emails.

Regarding the orders shipped by the suppliers, according to the most frequent answers provided by the interviewees, out of the 5 initial options, when we defined the codes, only two appear most often. The first one, shipping the order via email, was mentioned by 10 out of 15 participants to the interview, while the shipping of a specific order, after a previous telephone contact with the suppliers, was found 5 times in the answers provided by the interviewed persons.

The payments continue to remain a major problem related to the internet. The most often encountered answers are found related to the payments done on commercial credit (10) and bank payments (6). The idea of using in the future electronic payment methods was found in only 3 out of the 15 answers. Furthermore, 6 of them do not use at all the online payment method, with reimbursement to the suppliers.

Out of the 9 codes defined for the overall appreciation of the internet in connection to the suppliers the most often found answers are two, namely that it is useful for information (6 answers) and that it is good for placing orders (5 answers).

Next, we tried to identify whether there the sector in which the company unfolds its activity, its side or the position occupied by the employees in the acquisition influences. The preferences revealed for the use of internet in the relation with the suppliers. Using the Codes-Primary Documents Table function from the Analyse menu

TABLE 1 Preference for Contacting and Placing Orders According to the Activity Sector of the Companies in Which the Participants at the Interview Work

Category	Commerce	Production	Services
Contacting the suppliers via email	1	2	1
Placing orders via email	5	1	0
The first contact wit the supplier is via phone	0	1	1

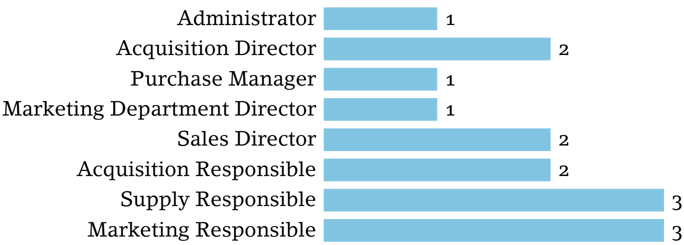

FIGURE 1 Appreciation of the Internet According to the Positions Occupied by the Participants at the Interview

in the ATLAS.ti software, we generated a series of tables and graphs in Excel (see the table 1 and figure 1).

Analysing the above figure, it can be observed that there is a larger preference for the contact of the suppliers via email in the case of the manufacturing companies, while the shipping of the order via email is often found in the companies with commercial activities. Phone contact is preferred by the manufacturing and service companies.

Out of the 15 persona participating to the study, in the end we were interested in finding out from what perspective they shared the opinions related to the use of internet regarding the supply in general and the relations with the suppliers. We realised that the position of responsible with acquisitions and marketing responsible were the most frequently declared by the interviewees (3), 2 participants occupying the position of responsible for acquisitions, marketing director and directors of acquisitions, while, towards the end, we faced an interviewee occupying each one of the following positions: administrator, acquisition director and financial department director.

Conclusions

Following the analysis of the answers given by the 15 participants to the interview, we have reached the conclusion that when the participants to the interview talked about their tasks related to suppliers, they considered mostly the search for suppliers, contacting them, sending them requests for offers and placing orders. With regard to the online information, it was noted that the most frequent activities they referred to was accessing the websites of the potential suppliers, making comparisons between existing and potential suppliers and searching for the contact details. In the majority of the cases, it is preferred the phone contact, followed by the connection via email, namely sending the request for offer.

We also realized that the online environment is used for the shipping of orders by a considerable part of the interviewees, even when previously there was a telephone contact with the suppliers. Unfortunately, with regard to the online payments, an insignificant part of the interviewed ones is thinking to start using it; the majority of the participants in the study still using the classical reimbursement means.

Finally, we appreciate that the majority of the interviewed persons consider the internet and the associated technologies more as a mean of gathering information and a medium in which to place the orders, the electronic payment methods not being yet used.

Based on the analysis done we think that a more in-depth analysis needs to be undertaken regarding the motives for which the companies do not make online payments, why they do not trust and maintain a contact via email with the suppliers, as well as why a company places an order without previously making any phone calls.

Another research area to be explored in the future may take into consideration the technologies known and actually made use of by the persons responsible with the purchasing within a company, namely the way in which they appreciate its efficiency in the work done through the perspective of the mentioned technology.

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Appendix 1: Interview Guide

Subjects. The persons responsible with the acquisition within the companies located in the Iasi district.

Objective. Finding out the habits of information gathering, contacting the suppliers, acquisition of products, services or works and online payment.

Introduction

> Good day! My name is Daniela Ichim and I am a doctoral student at the Doctoral School of Economics and Business Administration of the 'Alexandru Ioan Cuza' University in Iasi (the marketing section). I am currently undertaking a field study regarding the influence of the internet on the behaviour of the organisational consumers in Iasi.
>
> Any information from you would be useful to understand the companies' preferences in using the internet for the related services in order to obtain information related to products, services and works which you might want to purchase, to contact potential suppliers and place orders, and pay for the goods or services purchased. I would like to ask you, should you desire it, to award us approximately half an hour of your time in order to answer a series of questions.

After the consent is expressed by the interviewee, continue with the following sentences:

> Also, I would like you to accept to audio record the interview in order to be able later on to process your answers. I assure you that

nobody besides me will have access to the recording of today's discussion, and that what we will discuss will be exclusively used to identify the organisational consumer's behaviour in the online environment.

After consent is expressed by the interviewee, go on addressing the questions themselves from the interview guide.

UNFOLDING OF THE INTERVIEW ITSELF

Questions addressed to the participants at the interview are the following:

1. Please mention the activity sector in which the firm you represent is active.
2. According to the criteria imposed by the present legislation, in what category is you company included? [Micro business, small and medium business, large business – options are provided if the interviewee cannot identify the category in which the company he/she represents is included.]
3. State the position you hold in the company.
4. According to the position held, what tasks related to the acquisition of products, services and/or works do you have?
5. What internet services do you use in order to obtain information related to products, services and/or works you wish to purchase?
6. What means do you prefer of contacting the identified potential suppliers?
7. In what way to you place orders to the suppliers?
8. What method of payment for the suppliers do you usually choose?
9. Generally characterize the use of internet in the acquisition process and the related activities.

ENDING THE INTERVIEW

Thank you for the dedicated time and the information you have shared. Should you desire, please provide us with an email address in order to electronically ship you the results of the study once it has been concluded! Have a nice day!

Abstracts in Slovene

Klasično ali moderno? Okrepitev lestvice zadovoljstva s službo pri okoljevarstvenih delavcih

Oğuz Başol

Okoljevarstvene službe v ekoloških in ekološko prijaznih sektorjih so definirane kot službe, kjer obstajajo spodobni delovni pogoji. Število okoljevarstvenih del se je po svetu občutno povečalo, podpirajo pa zaščito naravnih virov in tudi visoko kvaliteto življenja delavcev. Cilj te raziskave je pri okoljevarstvenih delavcih povečati raven zadovoljstva s službo z uporabo modela strukturalne enačbe skupaj z modelom razvojne strategije. V raziskavi je bil uporabljen SPSS 21 za interno konsistentno raven, raziskovalni faktor analize, smartPLS 2.0 pa je bil uporabljen za model strukturne enačbe. Rezultati analize prikazujejo, da je skupina nagrad, nadzora, sodelavcev in komunikacije posledica zadovoljstva s službo, ki ga čutijo okoljevarstveni delavci.

Ključne besede: okoljevarstvena dela, zadovoljstvo s službo, model strukturalne enačbe, smartPLS 2.0
Management 11 (2): 103–122

Učinek odnosno specifičnih investicij v triado preskrbovalne verige na učinkovitost inovacij

Andrea Gelei in Zsófia Kenesei

Z uporabo obširnega vprašalnika pričujoča raziskava analizira učinke predanih in velikih dobaviteljskih odnosov, ki jih določajo visoki nivoji odnosno specifičnih investicij v performanco inovacij na Madžarskem, v uveljavljajoči se ekonomiji v srednji in vzhodni Evropi. Naredimo analizo v dveh korakih. Najprej raziščemo učinek odnosno specifičnih investicij (RSI) na štiri različne z inovacijo povezane dimenzije performance osrednjega podjetja. V nasprotju s prejšnjimi raziskavami se pri naši analizi nismo omejili na dinamične nivoje odnosov, ampak smo analizirali triadne odnose v preskrbovalnih verigah. Članek na edinstven in zapleten način konceptualizira ter meri performanco inovacije, tako produkta kot procesa, hkrati pa tudi analizira postopne in radikalne inovacije. Drugi korak je testiranje učinkov internacionalizacije na osrednja podjetja. Triadna raven RSI ima pozitiven učinek na vse z inovacijo povezane dimenzije performance. Test moderacijskega učinka je prinesel mešane rezultate in nakazal potrebo po zapletenem in prefinjenem ravnanju z inovacijo v prihodnjih raziskavah.

Ključne besede: odnosno specifične investicije, triadni odnosi v preskrbovalni verigi, inovacija, regija v nastanku, model SEM
Management 11 (2): 123–138

Plačilna disciplina je odvisna od etike upravljanja

Tanja Sirk in Maja Meško

Glavni cilj študije je ugotoviti, ali ima etika upravljanja pozitiven učinek na plačilno disciplino. Naši primeri vključujejo 273 slovenskih podjetij, izbranih iz baze Slovenske ocenjevalne agencije I, d. o. o.,ki predstavljajo 9.1 % od 2978 slovenskih podjetij z 10 ali več zaposlenimi. Za definicijo upravljalnih etik smo uporabili vprašalnik Corporate Ethical Virtues. Podatki, ki se nanašajo na povprečna pozna plačila, so bili pridobljeni tudi iz baze Slovenske ocenjevalne agencije I, d. o. o. Z uporabo vstopnih metod smo izvedli analizo dejavnikov. Vpliv upravljalnih etik smo potrdili kot pozitiven na povprečne zamude s plačilom, izražene v dnevih.

Ključne besede: upravljanje, etika, zakasnjena plačila
Management 11 (2): 139–152

Hibridno upravljanje in pripravljenost: uporaba kooperacije in javnih virov za ustvarjanje skupne performance v logistični družbi

Vesa-Jukka Vornanen, Ari Sivula in Josu Takala

Ključna izziva v javnem sektorju sta iskanje načinov, kako delovati horizontalno med različnimi nivoji administracije in kako biti pripravljeni na nenadne spremembe. Namen tega članka je predstavitev združitve družbe oz. razvoja na porabnike osredotočenih hibridnih organizacij. Metodologija je oblikovana na podlagi uporabljene literature. Pripravljenost je proces, ki povezuje logistično družbo, njeno javnost, zasebne sektorje in sektorje tretjih organizacij ter njihovo delovanje z gospodinjstvi in posamezniki. Članek predstavlja konceptualen model hibridnega upravljanja in ga nanese na pripravljenost. Upravljanje je rezultiralo v analizi pripravljenosti in klasifikaciji sistema (PACS), ki vodi transformacijsko vodenje, hibridne organizacije in javne vire, da zagotovi splošno vrednost verige. PACS osvetli lokalno hibridnost in uporabo javnih virov ter pripravljenosti. Javni viri so lahko uporabljeni za zagotovitev virov pred nekim dogodkom, kar bo pospešilo okrevanje. Predstavljeno hibridno upravljanje pomeni pomemben prispevek k logistični družbi in njeni pripravljenosti.

Ključne besede: javni viri, hibridno upravljanje, skupna učinkovitost, pripravljenost
Management 11 (2): 153–170

Kvalitativna analiza vpliva digitalnega marketinga na obnašanje organizacijskega porabnika

Contantin Sasu in Daniela Ichim

Cilj študije je poskusiti razumeti obnašanje organizacijskega porabnika v spletnem okolju. Poskusili smo identificirati specifične aktivnosti, ki jih med procesom spletnega nakupovanja opravljajo osebe, odgovorne za nakupovanje znotraj podjetij, lociranih v okrožju Iasi (Romunija). Rezultati, pridobljeni v preliminarni analizi, kjer je bil zaenkrat uporabljen vzorec 15 ljudi, pokažejo, da se internet uporablja predvsem za informiranje in naročanje, in manj za dejansko plačevanje ali vzpostavljanje stikov s potencijalnimi dobavitelji.

Ključne besede: IKT tehnologije, spletno okolje, obnašanje organizacijskega porabnika, spletne strani
Management 11 (2): 171–184