# ORGANIZACIJA

Journal of Management, Informatics and Human Resources

Volume 53, Issue 3, August 2020

ISSN 1318-5454

Poštnina plačana pri pošti 4102 Kranj

Revija za management, informatiko in kadre

# ORGANIZACIJA

Organizacija (Journal of Management, Informatics and Human Resources) is an interdisciplinary peer-reviewed journal which is open to contributions of high quality, from any perspective relevant to the organizational phenomena.

The journal is designed to encourage interest in all matters relating to organizational sciences and is intended to appeal to both the academic and professional community. In particular, journal publishes original articles that advance the empirical, theoretical, and methodological understanding of the theories and concepts of management and organization. The journal welcomes contributions from other scientific disciplines that encourage new conceptualizations in organizational theory and management practice.

We welcome different perspectives of analysis, including the organizations of various sizes and from various branches, units that constitute organizations, and the networks in which organizations are embedded.

Topics are drawn, but not limited to the following areas:

- organizational theory, management, development, and organizational behaviour;
- human resources management (such as organization & employee development, leadership, value creation through HRM, workplace phenomena etc.);
- managerial and entrepreneurial aspects of education;
- business information systems (such as digital business, decision support systems, business analytics etc.);
- enterprise engineering (e.g., organizational design, business process management, enterprise transformation paradigms etc.);
- papers that analyse and seek to improve organizational performance.

Organizacija (Revija za management, informatiko in človeške vire) je interdisciplinarna recenzirana revija, ki objavlja visoko kakovostne prispevke z vseh vidikov, ki so pomembni za organizacijske procese in strukture.

Revija je zasnovana tako, da spodbuja zanimanje za različne vidike v zvezi z organizacijskimi vedami in je namenjena tako akademski kot strokovni skupnosti. Revija objavlja izvirne članke, ki spodbujajo empirično, teoretično in metodološko razumevanje teorij in konceptov managementa in organizacije. Pozdravljamo tudi prispevke iz drugih znanstvenih disciplin, ki spodbujajo nove koncepte v organizacijski teoriji in praksi. Objavljamo članke, ki analizirajo organiziranost z različnih vidikov, so usmerjeni na organizacije različnih velikosti in iz različnih sektorjev, na enote, ki sestavljajo organizacije, in na mreže, v katere so organizacije vpete.

Teme so pokrivajo predvsem naslednja področja:

- organizacijska teorija, upravljanje, razvoj in organizacijsko vedenje;
- management človeških virov (kot so organizacija in razvoj zaposlenih, vodenje, ustvarjanje vrednosti s pomočjo človeških virov, organizacijski pojavi na delovnem mestu itd.);
- vodstveni in podjetniški vidiki izobraževanja;
- poslovni informacijski sistemi (kot so digitalno poslovanje, sistemi za podporo odločanju, poslovna analitika itd.);
- podjetniški inženiring (npr. organizacijsko oblikovanje, upravljanje poslovnih procesov, paradigme preoblikovanja podjetij itd.);
- članki, ki analizirajo organizacijsko uspešnost in prizadevanja za izboljšanje le-te.

Organizacija, Volume 53, Issue 3
August 2020

# Contents 3/2020



Editorial office: University of Maribor, Faculty of Organizational Science, Založba Moderna Organizacija, Kidriceva 55a, 4000 Kranj, Slovenia

Telephone: +386-4-2374-295 , E-mail: organizacija@fov.uni-mb.si, URL: http://organizacija.fov.uni-mb.si. Organizacija is co-sponsored by the Slovenian Research Agency.

Published quarterly. Full text of articles are available at http://www.degruyter.com/view/j/orga and http://organizacija.fov.uni-mb.si.

Papers for publication in Organizacija can be submitted via journal website at http://organizacija.fov.uni-mb.si. Before submission authors should consult. Guidelines available at https://content.sciendo.com/view/journals/orga/orga-overview.xml . You can contact the editorial via e-mail: organizacija@fov.uni-mb.si or joze.zupancic@um.si

Articles are currently abstracted/indexed in: Cabell's Directory, CEJSH (The Central European Journal of Social Sciences and Humanities), Celdes, Clarivate Analytics - Emerging Sources Citation Index (ESCI), CNPIEC, Die Elektronische Zeitschriftenbibliothek, DOAJ, EBSCO - TOC Premier, EBSCO Discovery Service, ECONIS, Ergonomics Abstracts, ERIH PLUS, Google Scholar, Inspec, International Abstracts in Operations Research, J-Gate, Microsoft Academic Search, Naviga (Softweco), Primo Central (ExLibris), ProQuest - Advanced Pol mers Abstracts, ProQuest - Aluminium Industry Abstracts, ProQuest - Ceramic Abstracts/World Ceramics Abstracts, ProQuest - Composites Industry Abstracts, ProQuest - Computer and Information Systems Abstracts, ProQuest - Corrosion Abstracts, ProQuest - Electronics and Co mmunications Abstracts, ProQuest - Engineered Materials Abstracts, ProQuest - Mechanical & Transportation Engineering Abstracts, ProQuest - METADEX (Me tals Abstracts), ProQuest - Sociological Abstracts, ProQuest - Solid State and Superconductivity Abstracts, Research Papers in Economics (RePEc), SCOPUS, Summon (Serials Solutions/ProQuest), TDOne (TDNet), TEMA Technik und Management, WorldCat (OCLC).

**EDITOR / UREDNIK**

**Jože Zupančič**
University of Maribor, Faculty of Organizational Sciencies, Slovenia

**CO-EDITORS / SOUREDNIKI**

**Petr Doucek**
Prague University of Economics, Faculty of Informatics and Statistics, Czech Republic

**Matjaž Maletič**
University of Maribor, Faculty of Organizational Sciencies, Slovenia

**Włodzimierz Sroka**
WSB University, Department of Management, Dąbrowa Górnicza, Poland

**EDITORIAL BOARD / UREDNIŠKI ODBOR REVIJE**

**Hossein Arsham,**
University of Baltimore, USA

**Franc Čuš,**
University of Maribor, Slovenia

**Sasha M. Dekleva**
DePaul University, School of Accountancy and MIS, Chichago, USA

**Vlado Dimovski,**
University of Ljubljana, Slovenia

**Daniel C. Ganster,**
Colorado State University, USA

**Jože Gričar,**
University of Maribor, Slovenia

**Werner Jammernegg**
Viena University of Economics and Business Administration, Austria

**Marius Alexander Janson,**
University of Missouri-St. Louis, USA

**Stefan Klein,**
University of Münster, Germany

**Aleksandar Marković,**
University of Belgrade, Serbia

**Hermann Maurer,**
Technical University Graz, Austria

**Matjaž Mulej,**
University of Maribor, Slovenia

**Valentinas Navickas,**
Kaunas University of Technology, Lithuania

**Ota Novotny,**
University of Economics, Prague, Czech Republic

**Milan Pagon,**
Independent University, Bangladesh (IUB), Dhaka, Bangladesh

**Björn Paape,**
RWTH-Technical University Aachen, Germany

**Matjaž Perc**
University of Maribor, Slovenia

**Dušan Petrač,**
NASA, Jet Propulsion Laboratory, California Institute of Technology, USA

**Nataša Petrović**
University of Belgrade, Serbia

**Tetyana Pimonenko,**
Sumy State University, Balatsky Academic and Scientific Institute of Finance, Economics and Management, Ukraine

**Hans Puxbaum,**
Vienna University of Technology, Austria

**Vladislav Rajkovič,**
University of Maribor, Slovenia

**Gábor Rekettye,**
University of Pécs, Hungary

**Henk G. Sol,**
Faculy of Economics and Business, University of Groningen, Netherlands

**Eugene Semenkin**
Reshetnev Siberian State University of Science and Technology, Krasnoyarsk, Russian Federation

**Velimir Srića,**
University of Zagreb, Croatia

**Paula Swatman,**
University of Tasmania, Australia

**Brian Timney,**
The University of Western Ontario, Canada

**Maurice Yolles,**
Liverpool John Moores University, UK

**Douglas R. Vogel,**
Harbin Institute of Technology-HIT, School of Management, China

**Gerhard Wilhelm Weber,**
Middle East Technical University, Turkey

**Stanisław Wrycza,**
University of Gdańsk, Poland

**Yvonne Ziegler,**
Frankfurt University of Applied Sciences, Germany

**Hans-Dieter Zimmermann,**
FSH St. Gallen University of Applied Sciences, Switzerland

DOI: 10.2478/orga-2020-0012

# Fostering Frontline Employees' Innovative Service Behavior: The Role of Workplace Friendship and Knowledge Sharing Process

**Irfan HELMY[1], Wiwiek Rabiatul ADAWIYAH[2], Harini Abrilia SETYAWATI[1]**

[1]Putra Bangsa Economics College, Department of Management, Kebumen, Indonesia, risetirfan@gmail.com, harini.abrilia.setyawati@gmail.com

[2]Jenderal Soedirman University, Faculty of Economics and Business, Purwokerto, Indonesia, wiwiekra@gmail.com (corresponding author)

**Background and purpose:** The hospitality industries need to create benevolent work environment and social activities that stimulate frontline service employees (FLEs) innovative behavior. Drawing on social capital theory, this study aims to examine the influence of workplace friendship on promoting FLEs' innovative service behavior. This study also examines the mediating role of knowledge sharing process (knowledge collecting and knowledge donating) on the relationship between workplace friendship and FLEs' innovative service behavior.
**Design/Methodology/Approach:** For data collection, the convenience sampling method is applied to survey 163 frontline employees in 3- and 4-stars tourist hotels located in Yogyakarta, Indonesia. The present study performed structural equation modelling (PLS-SEM) software Smart-PLS v3.0 to test the hypotheses.
**Results:** The result showed that workplace friendship has significant influence on FLEs' innovative service behavior. Also, this study empirically found that workplace friendship influence FLEs' innovative service behavior directly and indirectly trough knowledge collecting. Interestingly, knowledge donating has insignificant effect on FLEs innovative service behavior.
**Conclusion:** We conclude that workplace friendship could create a favorable work environment that fostering FLEs innovative service behavior trough knowledge sharing process. Therefore, this research adds to the body of knowledge by pointing out the influence of workplace friendship and knowledge sharing process on FLEs innovative service behavior. This present study also provides the human resource practice regarding how to nurturing workplace friendship that stimulates FLEs innovative work behavior.

***Keywords:*** *Frontline service employees, Innovative service behavior, Workplace friendship, Knowledge collecting, Knowledge donating*

## 1 Introduction

Existing literature focuses on the hospitality industry has primarily emphasized the critical role of frontline employees (FLEs) on service performance. Frontline workers interact with the customer personally (Ordanini & Parasuraman, 2011) and create impressive guest-host interaction, rather than narrowly focusing on routine operational work as a means of building customer experience and loyalty. They have to capture customers' needs and capable of improving products and services innovatively. Innovation is a key competency that helps workers dealing with their unpredictable novel tasks. Medallia Institute surveyed frontline employees of hospitality, retail and financial ser-

Received: 20th March 2020; revised: 27th May 2020; accepted: 28th June 2020

vices companies in the U.S. The result concluded that 56% of FLE possessing brilliant ideas that could improve their companies' practices, and 43% alleged that their insights could reduce costs of service delivery (Benjamin, 2016). The Medallia study punctuated FLEs as a wealth of an organization. The workers dazzling knowledge and intuition may be used as the organizational think-tank to face the fast-paced nature of business competition.

Despite the conventional wisdom, there is an ongoing debate on the importance of fostering innovative behaviors among frontline employees in service settings. The management literature highlights the need for business firms to doggedly foster innovative behaviors among frontline employees, no matter the cost in order to survive the constant state of radical transformation (Santos-Vijande et al. 2016; Engen, & Magnusson, 2015). Recent studies pinpoint the prominence of nurturing FLEs innovative behavior in service organizations. Leaders should encourage their FLEs to be more innovative (Ozkok et al. 2019; Al-Hawari, Melhem, & Shamsudin, 2019) to survive the onslaught of business competition.

In the meantime, pieces of literature revealed the factors that might inhibit FLEs' innovative service behavior. Lack of support from the organization and the absence of reward for creative behaviors are among the factors that hinder employees' innovative service behavior (Yeşil & Hırlak, 2013). Most frontline employees are anxious about risk, and they are reluctant to propose new ideas at work, which slows down the service innovation process (Melton & Hartline, 2010). Addressing this point, managers should create favorable workplace environments aiming at solving the obstacles and, in turn, encourage FLEs' innovative service behavior.

Past studies have massively explored the antecedents of FLEs' innovative service behavior, such as learning goal orientation (Montani, Odoardi, & Battistelli, 2014), knowledge sharing (Kim & Lee, 2013), managerial support (Wynen et al. 2019), leadership (Yidong, & Xinxin, 2013) and social interaction (Michael, Hou, & Fan, 2011). In this study, we focus on the relationship between workplace friendship and FLEs innovative service behavior. The focus of the study is motivated, particularly by the fact that the research is still reported inconsistent and inconclusive findings. For instance, Okoe et al. (2018) examined the relationship between human resource practice outcomes and service innovation from across service industries in Ghana. Contrary to previous studies, They found that the interaction of workplace friendship and knowledge sharing had no significant effect on service innovation. Another study, Maria, Jong, & Zacharias (2017), also stated that support form colleagues weakened the relationship between job engagement and FLEs innovative service behavior in the banking and finance sector. This research gap calls for more studies to reinvestigate the correlation between workplace friendship and FLEs innovative service behavior in different context (Okoe et al., 2018). Testing the model in wider context shall increase the generalizability of the theory, therefore adds value to the body of knowledge in the field. This research was conducted in tourist hotels located in Indonesia. Data released by the National Bureau of Statistics of Indonesia (BPS) showed a proliferation of occupancy rates of hotels in Indonesia by 4,54% in 2019, and approximately 28% of hotel guests were a foreign tourist. Thus, the following research is necessary to assist professionals in finding the best way to promote FLEs innovative behavior to face the increasing complexity oh hotel guests' demands and to anticipate the uncertain novel duties of their jobs.

Furthermore, in building a relationship between workplace friendship and FLEs' innovative service behavior, this study posits the role of the knowledge sharing process as a mediating variable. The new insight may resolve the inconclusive findings on workplace friendship-innovation relationship observed in the most relevant literatures. This study provides research contributions in several primary ways. First, this study extends prior research on the connection between workplace friendship and FLEs innovative service behavior. Second, by integrating the knowledge sharing process, this study has investigated the underlying process of how workplace friendship leads to FLEs' innovative service behavior via knowledge collecting and knowledge donating. Third, this study extended the generalization of the research model by the context tourist hotel sector in Indonesia. Finally, the findings of this paper can bring attention to the tourist hotel's management in the case of nurturing the friendly work environment that increasing FLEs innovative service behavior.

## 2 Literature Review

### 2.1 Innovative Service Behavior

Innovative behavior is a form of individual engagement in the innovation process, including initiative and application of an idea, product, or procedure (Scot & Bruce, 1994). Previous studies agreed that innovation is different from creativity; even some research are often used the terms interchangeably (Farr & Ford, 1990; Scot & Bruce, 1994). Creativity is a process of creating an idea, while innovative subsequent provided an idea until an implementation or application process. Accordingly, creativity is a component of innovation. Based on their seminal work, Scot & Bruce (1994) stated that innovative behavior is viewed as a multi-stage process that is starting from problem recognition, generating an idea or solution, and seek a coalition to support the idea. Finally, the last stage is completing the concept by producing the model or product of innovation. De Jong & Hartog (2010) developed four distinctive stages of innovative behavior, namely idea exploration, idea-generating, idea championing, and idea implementation. First stage, idea exploration includes looking for ways to improve current products, services, or processes. Idea generation is the stage where individuals use their creativity to create something new and beneficial to the progress of an organization or company. Idea promotion is the stage of finding and gathering partners, sponsors, or supporters of ideas that have been generated. Moreover, the last stage after idea promotion is idea realization, which includes implementing or realizing ideas in the work environment. This study explored the effect of workplace friendship on innovative service behavior. According to Wang & Hou (2015), individual innovative behavior strongly depends on their quality network relationship (e.g., friendship) at the workplace because this kind of relationship provided the necessary information, resources, and support which help an employee to promote and realize their new ideas.

## 2.2 Workplace Friendship, Knowledge Sharing Process and Innovative Service Behavior

Sias & Cahill (1998) have a focus on developing a friendship relationship in the workplace. They found that increasing frequent and intimate interaction in the workplace shall foster workplace friendship. Berman, West, & Richter (2002) defined workplace friendship as a non-exclusive relationship at work that involves mutual trust, commitment, reciprocal liking, and shared interest and values. Morrison (2004) also mentioned that workplace friendship colored by voluntary, reciprocal, and equality relationships. Recently, Pillemer & Rothbard (2018) explained four distinctive characteristics of workplace friendship, namely informality, voluntary, socio-emotional, communal norms. The first element, voluntary and informality, means that friendship among co-workers is not formally initiated by the organization, and there is a lack of standard (non-hierarchical) in the relationship (Berman, West, & Richter, 2002; Sias et al. 2004). Second, workplace friendship is characterized by the communal norm and social support. The main goal of relationship is to provide support among friends and foster affective and relational wellbeing (Morrison & Cooper-Thomas, 2016). Previous researches have acknowledge several benefits of workplace friendships, such as reduced stress, turnover intention, and increased job satisfaction and organizational commitment (Morrison, 2004). Further, workplace friendship has improved performance (Hsu et al. 2016; Berman, West, & Richter, 2002) and job involvement (Riordan & Griffeth, 1995). However, several studies also pointed out the negative outcomes of friendship at work. For instance, negative gossip, instrumental goal conflict, decreased loyalty, low productivity, and negative politic in the organization (Song & Olshfski, 2008; Pillemer & Rothbard, 2018). But overall, friendship has a beneficial effect on individuals and organizations (Zarankin & Kunkel, 2019). In their study Kratzer, Leenders & Engelen (2006) assert that human interaction in the organization was the critical antecedent to innovation. It means that employees' innovativeness depends on collaboration among employees (Gottfridsson, 2014). Besides, workplace friendship, as a social collectiveness, motivates employees to share ideas and method in order to solve problems or to generate new products (Faraj & Wasko, 2001). Thus, we proposed the following hypothesis:

*H1: Workplace friendship has a significant influence on FLEs' innovative service behavior.*

*H2: Workplace friendship has a significant influence on knowledge collecting.*

*H3: Workplace friendship has a significant influence on knowledge donating.*

## 2.3 Mediating Role of Knowledge Sharing Process

Knowledge sharing is defined as a process where individuals mutually exchange tacit or explicit knowledge to create new knowledge (Van Den Hooff & De Ridder's, 2004). However, conceptually, terminology of knowledge sharing is often interchangeable with the concept of knowledge transfer and knowledge exchange (Zheng, 2017). Several studies have provided clear limitations about the differences between knowledge sharing and knowledge transfer in the knowledge management literature (Tangaraja et al., 2016). Knowledge sharing is a series of actions carried out by an individual (people to people process) within an organization member while knowledge transfer is used primarily to describe the movement of knowledge between larger entities in the organization, such as between departments or divisions or organizations themselves. On the other hand, knowledge exchange is an individual activity within organizations that do knowledge sharing and knowledge-seeking (individuals who seek knowledge from their colleagues) (Paulin & Suneson, 2015).

In this current study, social capital theory was employed in linking workplace friendship, knowledge sharing process, and innovative service behavior. The concept of social capital explains the organizational resources that arose from the interaction between members, involving knowledge exchange or knowledge management activities (Nahapiet & Ghoshal, 1998, p. 243). Recent knowledge management literature has considered social capital as the main instrument that facilitates knowledge sharing and innovation in the organization. For instance, Weerakoon et al. (2019) investigated the linkage between links between social capital, opportunity-motivation-abilities, knowledge creation, and innovativeness within R&D teams in Iran. They found that strength of the ties among the organizational members leads to knowledge creation, and significantly promoted innovativeness. Another study, Akhavan & Hosseini (2015), indicated that social capital was associated with knowledge sharing behavior that, in turn, was significantly related to innovation capability. Past studies has recognized interpersonal trust as the critical component of workplace friendship that motivate employee to participate in knowledge sharing activity (Sias et al. 2004; Wu et al. 2009). In this view, this present study analyzed the role of workplace friendship as the form of social capital on delivering knowledge sharing process and innovative work behavior in organization.

Knowledge management literature showed that the knowledge sharing process involve both efforts of bringing and getting knowledge. Ardichvili, Page & Wentling (2003) noted that knowledge sharing consists of “knowledge supply” and “knowledge demand” while Oldenkamp (2001) divided knowledge sharing process into “knowledge carrier” and “knowledge requester”. Another study by Van Den Hooff and De Ridder’s, (2004: 118) proposed knowledge sharing process as “knowledge donating” and “knowledge collecting” activity. Knowledge donating is an activity of communicating intellectual capital to other colleagues, while knowledge collecting is about strengthening colleagues so they can persuade them to share their intellectual capital.

This study investigates the role of knowledge collecting and knowledge donating as mediating variables between workplace friendship and FLEs innovative service behavior. The nomological validity of the model was based on the previous research model addressing the antecedents and consequences of innovative service behavior (Tierney & Farmer, 2002). Akram et al. (2018) mentioned that these two forms of knowledge sharing have their own individual standing and effects in the literature. For instance, Kim & Lee (2013) examined the effects of goal orientation on innovative service behavior with knowledge sharing as the mediator in a survey on 418 FLEs hotel in Korea. They found the positive association between learning goal orientation and innovative service behavior via knowledge sharing process. In addition, the study indicated that knowledge collecting is a more reliable predictor of innovative service behavior. Another study, Kamasak, and Bulutlar (2009) emphasized that knowledge donating did not have any impact on innovation. Similarly, Lin (2007) found a significant positive relationship between ICT use and knowledge collecting, but no significant relationship with knowledge donating. These different findings revealed that knowledge collecting and knowledge processing were two distinct types of knowledge sharing processes that have a different and separated effect in research literature.

Previous studies revealed that knowledge sharing significantly improve individual innovation, absorptive capacity, and innovativeness (Yesil & Hirlak, 2013; Hau, Kim, Lee & Kim, 2013). The success of knowledge sharing process relies on employees who are actively sharing their knowledge. In the service context, the employee who engages in knowledge sharing activity are willingly to share more information (e.g., customer needs, market trend) to their colleagues. Astonishingly, a person who share information are also collect information from counterparts simultaneously. Another attributing factor that drives knowledge sharing behavior is individual perceptions of social interaction within the organization (Intezari, Pauleen, and Taskin, 2017). Positive perceptions lead to better sharing acts compared to the negative one. In addition, the closeness of relationships between individuals, beliefs, friendship relationships, and informal communication patterns are factors that encourage individuals to share knowledge (Janet and Alton, 2013). On the base of above literature and arguments, we proposed hypothesis:

*H4: Knowledge donating have a positive relationship on the innovative service behavior.*

*H5: Knowledge collecting have a positive relationship on the innovative service behavior.*

*H6: Knowledge donating mediates the relationship between workplace friendship and innovative service behavior.*

*H7: Knowledge collecting mediates the relationship between workplace friendship and innovative service behavior.*

# 3 Methodology

## 3.1 Sample and Procedure

The participant of the study were frontline employees of hotels located in Yogyakarta, one of the provinces with the most significant growth of creative industries and tourism in Indonesia. The targeted hotels were located in the vicinity of well-known tourist destinations in the area including Parangtritis, Malioboro and Keraton. Respondents were limited to frontline workers of the hotels that deal directly with customers in their jobs. Thus, included participants were those in the front office, in charge of room services, as well as serving food and beverages to the hotel guests. Before data collection, the research team initially contact the HR managers in each hotel for permit. Out of fifteen hotels invited to participate in the survey, three refused to take part due to their confidential policy. Self-administered questionnaires were distributed to frontline employees via the hotels’ human resource managers. To ensure valid response, the researchers briefs the hotel managers on the content of the questionnaires beforehand. Then, the frontline employees filled in the self-administered questionnaire immediately under the manager’s supervision. The length of the data collection was approximately three months starting from March until June 2019.

According to the above explanation, this study investigated the empirical model as follows:

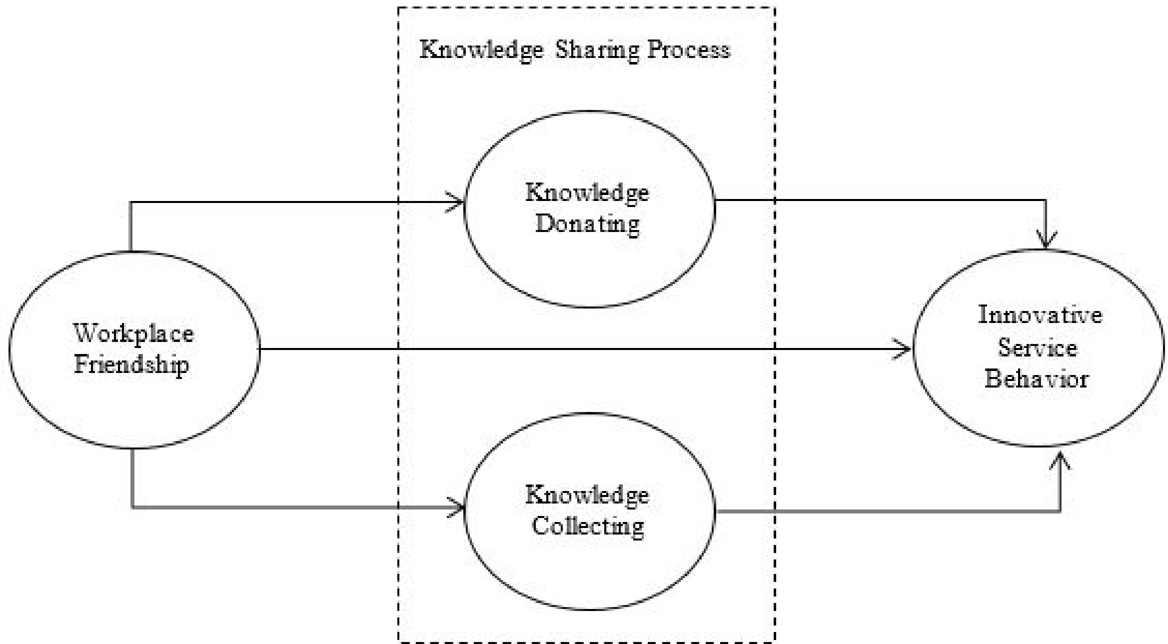



*Figure 1: Research Model*

This study utilized a convenience sampling method. This design was employed because not all tourist hotels provided access to the survey. Moreover, frontline employees are working in different shifts and different days that hinder the possibility of involving every employee in the study. Convenient sampling is among the least chosen method due to its deficiency in support studies that seek to generalize the findings. To resolve the deficiency, Landers & Behrend (2015) proposed that the feature of the sample and the setting of the study should be provided. In view of this, we have provided the demographic data of the respondents described as Table 1.

### 3.2 Measurement and Analyses Approach

This present study employed self-reported questionnaire to measure each variable. All of the survey items were translated from English into Indonesian language using a method of forwarding and backward translation (Brislin, 1970). The measurement of innovative service behavior (six items) was a contextualized version of Luoh, Tsaur, & Tang (2014). Workplace friendship was measured using a workplace prevalence instrument (six items) developed by Nielsen, Jex & Adam (2000). Knowledge sharing process measurement in this research was used two-dimensional developed by Van Den Hooff and De Ridder (2004); knowledge donating (three items), and knowledge Collecting (four items) (see table 2). All items were rated from 1 (strongly disagree) to 5 (strongly agree). This research used Smart PLS to analyze of the hypotheses and testing of the proposed model. Smart PLS was employed because of it provide support for research with relatively small samples. Moreover, Smart PLS is appropriate to build causal modeling for future testing purposes (Hair et al. 2017).

## 4 Results

### 4.1 Demographic Characteristics

The questionnaires were distributed and collected from 225 employees, and 163 were completed and adequately filled. Thus, the usable response for this study was 72,4%. The demographic data of the respondents are presented in Table 1.

As indicated in Table 1, out of 163 respondents, 97 respondents equivalent to 58.90% were males. The majority of the respondents (59.1%) were secondary and high school graduates while 15.34% were vocational school holders and 25.15% were possessed bachelor’s degree. Most of the respondents (38.65%) worked as room service employees and 38.13% were at the food and beverage department. According to job tenure, most of the respondents (30.06%) had work experience between 12-15 years.

## 4.2 Measurement Model Evaluation

All minimum requirements are fit with the measurement model, as illustrated in Table 2. First, this study used a cut-off value of 0.70 significance for the loading factor of all items above 0.70. Higher levels of outside loading factors indicate a higher level of indicator reliability (Hair et al. 2017). Second, all extracted mean values (AVE) exceed the 0.50 threshold, supporting the convergent validity of the construct steps. Composite reliability (CR) precisely explains the convergence and internal consistency of the developed measures. CR estimates the degree to which the respective indicators signal the latent construct. The CR estimates of the latent variables of the present study ranged from 0.859 to 0.925 (Table 2), which exceeded the cut-off value of 0.7.Third step, to asses discriminant validity, we examined by comparing of the square root of the AVE to each variable relation (Fornell & Larcker, 1981). The result showed that discriminant validity is established between two constructs association among indicators and greater than that between a construct and any other construct (Hair et al. 2012). Cronbach's alpha coefficients for the multiple-item workplace friendship, knowledge donating, knowledge collecting, and innovative service behavior were 0.807, 0.892, 0.793, and 0.876, respectively, indicating an acceptable level of reliability.

*Table 1: Characteristics of respondents (n=163)*

| Demographic Characteristic | Frequency | Percentage |
|---|---|---|
| Gender | | |
| Male | 96 | 58.90% |
| Female | 67 | 41.10% |
| Total | 163 | |
| Education | | |
| Secondary and High School | 97 | 59.51% |
| Vocational school | 25 | 15.34% |
| University | 41 | 25.15% |
| Total | 163 | |
| Hotel Department | | |
| Food and Beverage | 56 | 34.36% |
| Room service | 63 | 38.65% |
| Frontdesk | 44 | 26.99% |
| Total | 163 | |
| Job Tenure (year) | | |
| Under 3 | 3 | 1.84% |
| 3-5 | 24 | 14.72% |
| 6-9 | 32 | 19.63% |
| 9-12 | 40 | 24.54% |
| 12-15 | 49 | 30.06% |
| above 15 | 15 | 9.20% |
| Total | 163 | |

*Table 2: Convergent, Divergent validity, and Reliability*

| Instrument | CA | CR | AVE | Instrument | | | |
|---|---|---|---|---|---|---|---|
| | | | | 1 | 2 | 3 | 4 |
| Workplace friendship (1) | 0.807 | 0.859 | 0.695 | **0,834** | | | |
| Knowledge donating (2) | 0.892 | 0.925 | 0.755 | 0.603 | **0,869** | | |
| Knowledge collecting (3) | 0,793 | 0.864 | 0.701 | 0.764 | 0.486 | **0,837** | |
| Innovative service behavior (4) | 0,876 | 0.890 | 0.715 | 0.558 | 0.108 | 0.442 | **0,846** |

Note: CR, composite reliability; AVE, average variance extracted; CA, cCronbach's alpha; Values above the diagonal in bold are squared inter-construct correlations for Fornell–Larcker criterion.

*Table 3: Measurement Model Evaluation Result*

| Factor | | Measurement Item | Mean | Standard Deviation | Factor Loading |
|---|---|---|---|---|---|
| Workplace Friendship | WF.1 | I have formed strong friendships at work. | 3.84 | 0.52 | 0.715 |
| | WF.2 | I socialize with coworkers outside of the workplace. | 3.80 | 0.66 | 0.738 |
| | WF.3 | I can confide in people at work. | 3.85 | 0.58 | 0.769 |
| | WF.4 | I feel I can trust many coworkers a great deal. | 3.35 | 0.87 | 0.771 |
| | WF.5 | Being able to see my coworkers is one reason why I look forward to my job. | 3.45 | 1.16 | 0.724 |
| | WF.6 | I do not feel that anyone I work with is a true friend. (R) | 3.45 | 1.01 | 0.735 |
| Knowledge Donating | KD.1 | When I've learned something new, I tell my colleagues about it. | 3.47 | 0.71 | 0.879 |
| | KD.2 | I share information I have with my colleagues. | 3.55 | 0.84 | 0.860 |
| | KD.3 | I think it is important that my colleagues know what I am doing. | 3.32 | 0.99 | 0.876 |
| | KD.4 | I regularly tell my colleagues what I am doing. | 3.25 | 0.98 | 0.861 |
| Knowledge Collecting | KC.1 | When I need certain knowledge, I ask my colleagues about it | 3.97 | 0.54 | 0,821 |
| | KC.2 | I like to be informed of what my colleagues know | 3.65 | 0.65 | 0,727 |
| | KC.3 | I ask my colleague about their abilities when I need to learn something | 3.58 | 0.60 | 0,775 |
| | KC.4 | When a colleague is good at something, I ask them to teach me how to do it | 3.44 | 0.77 | 0,812 |

*Table 3: Measurement Model Evaluation Result (continues)*

| Factor | | Measurement Item | Mean | Standard Deviation | Factor Loading |
|---|---|---|---|---|---|
| Innovative Service Behavior | ISB.1 | I come up with innovative and creative notions | 3.74 | 0.65 | 0,705 |
| | ISB.2 | I try to propose my own creative ideas and convince others | 3.45 | 0.70 | 0,826 |
| | ISB.3 | I seek new service techniques, methods, or techniques | 3.48 | 0.58 | 0,755 |
| | ISB.4 | I provide a suitable plan for developing new ideas | 3.65 | 0.75 | 0.892 |
| | ISB.5 | I try to secure the funding and resources needed to implement innovations | 3.28 | 0.86 | 0.813 |
| | ISB.6 | Overall, I consider my self a creative member | 3.49 | 0.74 | 0.863 |

Note: WFS, workplace friendship; KD, knowledge donating; KC, knowledge collecting; ISB, innovative service behavior.

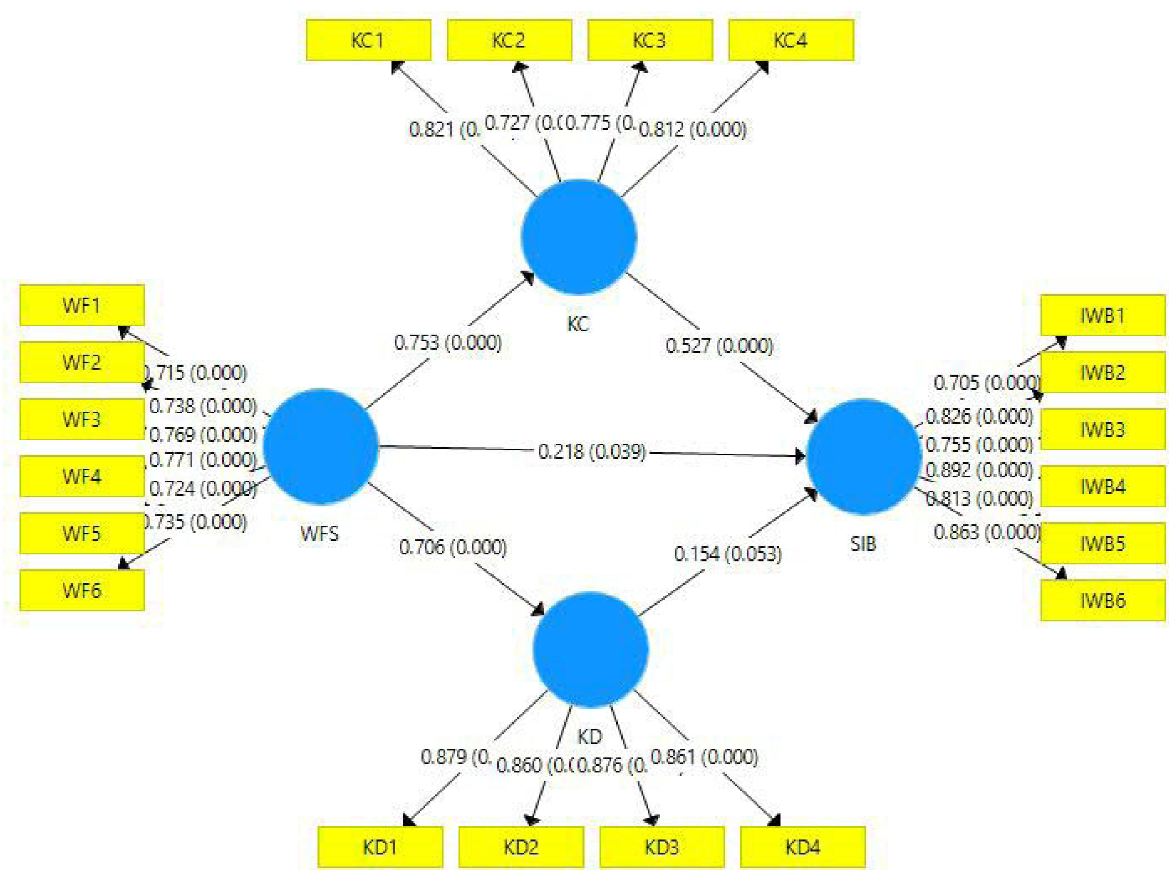



*Figure 2: Measurement model*

## 4.3 Findings

For this study, structural equation modelling using a Partial Least Squares (PLS) was used to test the hypotheses. Smart PLS 3 Version 2.0 software was used to perform the analysis.

Table 4 summarizes the results of the best-fit model and explains the direct and indirect relationship between exogenous variables and endogenous variables. In hypotheses H1, H2, and H3, authors examined the effects of workplace friendship on knowledge donating, knowledge collecting, and innovative service behavior. The results found that workplace friendship had significant effect on ISB (t=2.074; ρ=.039), knowledge donating (t=16.379; ρ<.001) and knowledge collecting (t= 16.741; ρ<.001). Therefore, H1, H2, and H3 were supported. Furthermore, knowledge collecting was found to positively influence innovative service behavior (t=5.387; ρ<.001) and providing support for H5. However, the result also revealed that knowledge donating has no significant relationship with innovative service behavior (t=1.941; ρ=.053). Thus, H4 was unsupported. Next, according to specific indirect effect test (Hair et al. 2017), this result showed that knowledge collecting partially mediate the relationship between workplace friendship and innovative service behavior (t=1.826; ρ=.068), providing support for H7. On the other hand, the mediating effect of knowledge donating was not significant (t=1.826; ρ =.068). Consequently, H6 was not supported.

*Table 4: Structural Equation Model Assessment*

| Variable | Original Samples | STDEV | *t*-Statistics | ρ *-Values* | Hypothesis |
|---|---|---|---|---|---|
| WFS → ISB | 0.218 | 0.105 | 2.074 | 0.039* | H1: Supported |
| WFS → KD | 0.706 | 0.043 | 16.379 | 0.000** | H2: Supported |
| WFS → KC | 0.753 | 0.045 | 16.741 | 0.000** | H3: Supported |
| KD → ISB | 0.154 | 0.079 | 1.941 | 0.053 | H4: Unsupported |
| KC → ISB | 0.527 | 0.098 | 5.387 | 0.000** | H5: Supported |
| *Specific Indirect Effect* | | | | | |
| WFS → KD → ISB | 0.147 | 0.081 | 1.826 | 0.068 | H6: Unsupported |
| WFS → KC → ISB | 0.397 | 0.077 | 5.164 | 0.000* | H7: Supported |

Note: *ρ < .05; ** ρ <.001;
STDEV, standard deviation; WFS, workplace friendship; KD, knowledge donating; KC, knowledge collecting; ISB, innovative service behavior.

# 5 Discussion and Implications

The research findings have confirmed the critical role of friendship relations in shaping service innovation. In this study, workplace friendship found to be the key facilitator in promoting FLEs innovative service behavior. These findings imply that a friendly work environment has an essential role in creating innovation opportunities and develop new services. Workplace friendship was also found a significant influence on both knowledge collecting and knowledge donating. Social capital theory supports our findings that when frontline employees build up friendly relations with others, their willingness to share and collect an idea, information, or method will be stronger. Further, workplace friendship is provide trust and emotional support. Interpersonal trust encourage more effective communication, open discussion and understanding work- related problems. Therefore, workplace friendship motivates frontline employees to work collectively in the problem-solving process. When frontline employees see each other as real friends, they will voluntarily share ideas to find a solution to the problems.

Our study also empirically indicated that knowledge collecting has a mediating effect on the relationship between workplace friendship and FLEs' innovative service behavior. Friendship at work provides opportunities for frontline employees to learn and gather valuable information from coworkers; for example, various customer characteristics and customer complaints on hotel services, which is vital for service encounter innovation. Despite the significant effect of knowledge collecting, this study concluded that knowledge donating was not related to FLEs innovative service behavior. This study is partially in line with previous studies that empirically found knowledge collecting as a better contributor in facilitating the employee innovative work behavior (Akram et al. 2018; Hussein et al. 2016; Kamasak & Bulutlar, 2009). However, regarding this inconsistent findings, we should not rule out the possible impact of inadequate sample size that invariably introduces errors into the final findings (Schoemann, Boulton & Short, 2017)

This study provides several implications for both hospitality management and theoretical development. First, hotel managers should consider workplace friendship as a rewarding tool for increasing FLEs› innovative service behavior. Hence, as a way of improving workplace friendship, the manager ought to provide an opportunity for employees to socialize with others in a more pleasant environment, for example, comfortable face to face meetings and informal briefing before starting up their work. Furthermore, hotel managers should consider social activities that improve collective intelligence by strengthen the interpersonal trust and emotional connection among coworkers. Second, it implies that FLEs experiencing good quality workplace friendship are more likely to involve in the knowledge collecting and, in turn, trigger higher innovative service work behavior. Thus, managers should consider the mechanism to accelerate the implementation of knowledge sharing collecting process. For instance, managers ought to develop a flexible and build openness knowledge-sharing climate that enable FLEs to collect informations or experinces and also they can learn service delivery from others. This strategy can enlarge employees' knowledge repository which is critial for idea generating on innovation service process.

The third implication, this study theoretically contributes to the social capital literature by enriching the model that predicts innovative service behavior. This research is among the first that attempt to integrate the association among workplace friendship, knowledge sharing process, and innovative service behavior in hospitality service literature. This study also advances previous research by examining two distinctive dimensions of knowledge sharing (knowledge donating and knowledge donating) related to innovative service behavior. However, we have overlooked to capture possible interaction between knowledge donating and knowledge collecting. Therefore, these findings open the doors for further research to investigate the nature of knowledge sharing process related to innovative service behavior.

## 5.1 Conclusion, Limitation and Future Research

This study concludes the importance of workplace friendship to encourage FLEs' innovative service behavior. Workplace friendship promotes a friendly work environment that becomes a trigger for collective intelligence in knowledge sharing behavior. Workplace friendship also provides favorable interaction among FLEs that positively nurturing innovative service behavior trough the knowledge collecting process. However, this research has several limitations and suggestions for future research. First, the sample size was relatively small. A larger sample is suggested to provide a more accurate, precise, and comprehensive result. Second, the limitation of this study is related to the use of a convenience sampling method. We suggested a probability sampling method in order to leverage the generalization of findings. Third, it would be interesting to replicate this study in a longitudinal method to understand the cause and effect relationship. In addition, a longitudinal study helps scholars discovering factors to sustain workplace friendship, knowledge sharing, and innovative service behavior relationships. Fourth, this study only focuses on the mediating effect of knowledge donating and knowledge collecting on innovative service behavior. However, we suggest the extensive research to investigate the possible interaction between knowledge donating and knowledge collecting. Fifth, this study only concentrated on frontline employees within the hotel service sector. Future research could extend the investigation to different industries to obtain a broader generalization of the study. Moreover, this research was conducted in Indonesia, a developing country with specific cultural features, future research should reinvestigate this current model in various settings (e.g., European or western countries) to reveal any differences or similarities from the present study.

## Literature

Al-Hawari, M., Bani-Melhem, S. and Shamsudin, F. (2019). Determinants of frontline employee service innovative behavior: The moderating role of co-worker socializing and service climate, *Management Research Review*, 42(9), 1076-1094. https://doi.org/10.1108/MRR-07-2018-0266

Akhavan, P., & Mahdi Hosseini, S. (2016). Social capital, knowledge sharing, and innovation capability: an empirical study of R&D teams in Iran. *Technology Analysis & Strategic Management*, *28*(1), 96-113. https://doi.org/10.1080/09537325.2015.1072622

Akram, T., Lei, S., Haider, M. J., & Hussain, S. T. (2018). Exploring the impact of knowledge sharing on the innovative work behavior of employees: A study in China. *International Business Research*, 11(3), 186-194. https://doi.org/10.5539/ibr.v11n3p186

Ardichvili, A., Page, V., & Wentling, T. (2003). Motivation and barriers to participation in virtual knowledge-sharing communities of practice. *Journal of Knowledge Management*, 7(1), 64-77. https://doi.org/10.1108/13673270310463626

Benjamin, B. (2016). Listen to Your Employees, Not Just Your Customers. Available at https://hbr.org/2016/08/listen-to-your-employees-not-just-your-customers

Berman, E. M., West, J. P., & Richter, Jr, M. N. (2002). Workplace relations: Friendship patterns and consequences (according to managers). *Public Administration Re-*

*view*, 62(2), 217-230. https://doi.org/10.1111/0033-3352.00172

Boyd, N. G., & Taylor, R. R. (1998). A developmental approach to the examination of friendship in leader-follower relationships. *The Leadership Quarterly*, 9(1), 1-25. https://doi.org/10.1016/S1048-9843(98)90040-6

Brachos, D., Kostopoulos, K., Soderquist, K. E., & Prastacos, G. (2007). Knowledge effectiveness, social context and innovation. *Journal of Knowledge Management*, 11, (5), 31–44. https://doi.org/10.1108/13673270710819780

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of cross-cultural psychology*, 1(3), 185 - 216. https://doi.org/10.1177/135910457000100301

Cao, F. and Zhang, H. (2020), Workplace friendship, psychological safety and innovative behavior in China: A moderated-mediation model, *Chinese Management Studies*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/CMS-09-2019-0334

Chang, H. T., Chou, Y. J., Liou, J. W., & Tu, Y. T. (2016). The effects of perfectionism on innovative behavior and job burnout: Team workplace friendship as a moderator. *Personality and Individual Differences*, 96, 260-265. https://doi.org/10.1016/j.paid.2016.02.088

De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behavior. *Creativity and Innovation Management*, 19 (1), 23-36. https://doi.org/10.1111/j.1467-8691.2010.00547.x

Engen, M., & Magnusson, P. (2015). Exploring the role of front-line employees as innovators. *The Service Industries Journal*, 35(6), 303-324. https://doi.org/10.1080/02642069.2015.1003370

Hair, J., Hollingsworth, C., Randolph, A. and Chong, A. (2017). An updated and expanded assessment of PLS-SEM in information systems research. *Industrial Management & Data Systems*, 117(3), 442-458. https://doi.org/10.1108/IMDS-04-2016-0130

Hau, Y. S., Kim, B., Lee, H., & Kim, Y. G. (2013). The effects of individual motivations and social capital on employees' tacit and explicit knowledge sharing intentions. *International Journal of Information Management*, 33(2), 356-366. https://doi.org/10.1016/j.ijinfomgt.2012.10.009

Helmy, I., Adawiyah, W. R., & Banani, A. (2019). Linking Psychological Empowerment, Knowledge Sharing, and Employees' Innovative Behavior in SMEs. *The Journal of Behavioral Science*, 14(2), 66-79. Retrieved from https://so06.tci-thaijo.org/index.php/IJBS/article/view/172180

Hussein, A., Singh, S., Farouk, S. and Sohal, A. (2016). Knowledge sharing enablers, processes and firm innovation capability, *Journal of Workplace Learning*, 28(8), 484-495. https://doi.org/10.1108/JWL-05-2016-0041

Intezari, A., Taskin, N., & Pauleen, D. J. (2017). Looking beyond knowledge sharing: An integrative approach to knowledge management culture. *J. Knowledge Management*, 21(2), 492-515. https://doi.org/10.1108/JKM-06-2016-0216

Janet, W.C.N. and Alton, C.Y.K. (2013), The peculiarities of knowledge management processes in SMEs: the case of Singapore, *Journal of Knowledge Management*, 17(6), 958-972. https://doi.org/10.1108/JKM-04-2013-0163

Kamaşak, R. & Bulutlar, F. (2010), The influence of knowledge sharing on innovation, *European Business Review*, 22(3), 306-317. https://doi.org/10.1108/09555341011040994

Kim, T. T., & Lee, G. (2013). Hospitality employee knowledge-sharing behaviors in the relationship between goal orientations and service innovative behavior. *International Journal of Hospitality Management*, 34, 324-337. https://doi.org/10.1016/j.ijhm.2013.04.009

Kratzer, J., Leenders, R. T. A., & Van Engelen, J. M. (2006). Team polarity and creative performance in innovation teams. *Creativity and innovation management*, 15(1),96-104. https://doi.org/10.1111/j.1467-8691.2006.00372.x

Liu, H., Shi, J., Liu, Y., & Sheng, Z. (2013). The moderating role of attachment anxiety on social network site use intensity and social capital. *Psychological Reports*, 112 (1), 252-265. https://doi.org/10.2466/21.02.17.PR0.112.1.252-265

Liyanage, C., Elhag, T., Ballal, T. and Li, Q. (2009), Knowledge communication and translation – a knowledge transfer model, *Journal of Knowledge Management*, 13(3), 118-131. https://doi.org/10.1108/13673270910962914

Lu, Jackson & Hafenbrack, Andrew & Eastwick, Paul & Wang, Dan & Maddux, William & Galinsky, Adam. (2017). "Going Out" of the box: Close intercultural friendships and romantic relationships spark creativity, workplace innovation, and entrepreneurship. *Journal of Applied Psychology*. 102(7), 1091–1108 https://doi.org/10.1037/apl0000212

Luoh, H., Tsaur, S. and Tang, Y. (2014), Empowering employees: job standardization and innovative behavior, *International Journal of Contemporary Hospitality Management*, 26(7), 1100-1117. https://doi.org/10.1108/IJCHM-03-2013-0153

Melton, H. L., & Hartline, M. D. (2010). Customer and frontline employee influence on new service development performance. *Journal of Service Research*, 13(4), 411-425. https://doi.org/10.1177/1094670510369378

Michael, L.A.H., Hou, S.-T. & Fan, H.-L. (2011), Creative Self-Efficacy and Innovative Behavior in a Service Setting: Optimism as a Moderator. *The Journal of Creative Behavior*, 45, 258-272. https://doi.org/10.1002/j.2162-6057.2011.tb01430.x

Montani, F., Odoardi, C., & Battistelli, A. (2014). Individual and contextual determinants of innovative work behavior: Proactive goal generation matters. *Journal of Occupational and Organizational Psychology*, 87(4), 645-670. https://doi.org/10.1111/joop.12066

Morrison, R. L. (2004). Informal relationships in the workplace : associations with job satisfaction, organisational commitment and turnover intentions. *New Zealand Journal of Psychology*, 33(3), https://doi.org/10179/1666

Morrison, R. L., & Cooper-Thomas, H. D. (2016). Friendship among coworkers. *The Psychology of Friendship*, 123-140. New York: Oxford University Press.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of management review*, 23(2), 242-266. https://doi.org/10.5465/amr.1998.533225

Nielsen, I. K., Jex, S. M., & Adams, G. A. (2000). Development and validation of scores on a two-dimensional workplace friendship scale. *Educational and Psychological Measurement*, 60(4), 628-643. https://doi.org/10.1177/00131640021970655

Oldenkamp, J. H. (2001). *Succesvol overdragen van kennis* (Successful knowledge transfer), Utrecht, Netherlands: Lemma.

Ordanini, A., & Parasuraman, A. (2011). Service innovation viewed through a service-dominant logic lens: a conceptual framework and empirical analysis. *Journal of Service Research*, 14(1), 3-23. https://doi.org/10.1177/1094670510385332

Ozkok, O., Bell, S. J., Singh, J., & Lim, K. (2019). Frontline knowledge networks in open collaboration models for service innovations. *AMS Review*, 9 (3), 268-288. https://doi.org/10.1007/s13162-018-00133-5

Paulin, D., & Suneson, K. (2015). Knowledge transfer, knowledge sharing and knowledge barriers–three blurry terms in KM. *Leading Issues in Knowledge Management*, 2 (2), 73-94. Unique Identifier: 2012-18129-007

Pillemer, J., & Rothbard, N. P. (2018). Friends without benefits: Understanding the dark sides of workplace friendship. *Academy of Management Review*, 43 (4), 635-660. https://doi.org/10.5465/amr.2016.0309

Riordan, C. M., & Griffeth, R. W. (1995). The opportunity for friendship in the workplace: An underexplored construct. *Journal of Business and psychology*, 10 (2), 141-154. https://doi.org/10.1007/BF02249575

Santos-Vijande, M. L., López-Sánchez, J. Á., & Rudd, J. (2016). Frontline employees' collaboration in industrial service innovation: routes of co-creation's effects on new service performance. *Journal of the Academy of Marketing Science*, 44(3), 350-375. https://doi.org/10.1007/s11747-015-0447-4

Schoemann, A. M., Boulton, A. J., & Short, S. D. (2017). Determining power and sample size for simple and complex mediation models. *Social Psychological and Personality Science*, 8(4), 379-386. https://doi.org/10.1177/1948550617715068

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37 (3), 580-607. https://doi.org/10.5465/256701

Sias, P. M., & Cahill, D. J. (1998). From coworkers to friends: The development of peer friendships in the workplace. *Western Journal of Communication (includes Communication Reports*, 62(3), 273-299. https://doi.org/10.1080/10570319809374611

Sias, P. M., Heath, R. G., Perry, T., Silva, D., & Fix, B. (2004). Narratives of workplace friendship deterioration. *Journal of Social and Personal Relationships*, 21(3), 321-340. https://doi.org/10.1177/0265407504042835

Song, S. H., & Olshfski, D. (2008). Friends at work: A comparative study of work attitudes in Seoul city government and New Jersey state government. *Administration & Society*, 40(2), 147-169. https://doi.org/10.1177/0095399707312827

Tangaraja, G., Mohd Rasdi, R., Abu Samah, B., & Ismail, M. (2016). Knowledge sharing is knowledge transfer: a misconception in the literature. *Journal of Knowledge Management*, 20(4), 653-670. https://doi.org/10.1108/JKM-11-2015-0427

Van den Hooff, B. and de Ridder, J. (2004), «Knowledge sharing in context: the influence of organizational commitment, communication climate and CMC use on knowledge sharing", *Journal of Knowledge Management*, 8 (6), 117-130. https://doi.org/10.1108/13673270410567675

Wah, C. Y., Menkhoff, T., Loh, B., & Evers, H. D. (2007). Social capital and knowledge sharing in knowledge-based organizations: An empirical study. *International Journal of Knowledge Management* (IJKM), 3(1), 29-48. https://doi.org/10.4018/jkm.2007010103

Weerakoon, C., McMurray, A. J., Rametse, N. M., & Arenius, P. M. (2019). Social capital and innovativeness of social enterprises: opportunity-motivation-ability and knowledge creation as mediators. *Knowledge Management Research & Practice*, 1-15. https://doi.org/10.1080/14778238.2019.1590138

Wang, W. T., & Hou, Y. P. (2015). Motivations of employees' knowledge sharing behaviors: A self-determination perspective. *Information and Organization*, 25 (1), 1-26. https://doi.org/10.1016/j.infoandorg.2014.11.001

Wu, W. L., Lin, C. H., Hsu, B. F., & Yeh, R. S. (2009). Interpersonal trust and knowledge sharing: Moderating effects of individual altruism and a social interaction environment. *Social Behavior and Personality: an international journal*, 37(1), 83-93. https://doi.org/10.2224/sbp.2009.37.1.83

Wynen, J., Boon, J., Kleizen, B., & Verhoest, K. (2019). How multiple organizational changes shape managerial support for innovative work behavior: Evidence from the Australian Public Service. *Review of Public Personnel Administration*, 10(2), 491-515. https://doi.org/10.1177/0734371X18824388

Yeşil, S., & Hırlak, B. (2013). An empirical investigation into the influence of knowledge sharing barriers on knowledge sharing and individual innovation behavior. *International Journal of Knowledge Mana-*

*gement (IJKM)*, 9(2), 38-61. https://doi.org/10.4018/jkm.2013040103

Yidong, T., & Xinxin, L. (2013). How ethical leadership influence employees' innovative work behavior: A perspective of intrinsic motivation. *Journal of business ethics*, 116(2), 441-455. http://dx.doi.org/10.1007/s10551-012-1509-x

Zarankin, T. G., & Kunkel, D. (2019). Colleagues and Friends: A Theoretical Framework of Workplace Friendship. *Journal of Organizational Psychology*, 19(5). https://doi.org/10.33423/jop.v19i5.2517

Zheng, T. (2017). A literature review on knowledge sharing. *Open Journal of Social Sciences*, 5(3), 51-58. https://doi.org/10.4236/jss.2017.53006

**Irfan Helmy** is an assistant professor at the Departement of Management, Putra Bangsa Economics College, in Indonesia. He obtained a Doctoral Scholarship Program from The Indonesian Ministry of Research, Technology, and Higher Education (Ristekdikti). Currently, he is completing the dissertation about innovation in Indonesian small and medium enterprises. His research interest mainly focuses on organizational behavior, human resource management, and small-medium enterprises.

**Wiwiek Rabiatul Adawiyah** is a professor at the Department of Management, Faculty of Economics and Business, Universitas Jenderal Soedirman, Indonesia. Her research interest is focused on human resource management, entrepreneurship, quality management, and Islamic banking. She is currently appointed as a reviewer in some nationally accredited journals and some reputable international journals. She also actively written scientific articles, textbooks, and conducts international conferences as a keynote speaker.

**Harini Abrilia Setyawati** is an assistant professor at the Departement of Management, Putra Bangsa Economics College. Currently. She holds a Ph.D. candidate from Jenderal Soedirman University. Her research is focused on the areas of strategic management, marketing and consumer behavior. By collaborating with other researchers, she has published research papers in domestic and international journals.

**Spodbujanje inovativnega vedenja uslužbencev, ki delajo neposredno s strankami: vloga prijateljstva in izmenjave znanja na delovnem mestu**

**Ozadje in namen**: Gostinstvo zahteva takšno delovno okolje in socialne dejavnosti, da spodbujajo inovativno vedenje zaposlenih, ki delajo neposredno s strankami (Front Line Employees - FLE). Namen te študije je na osnovi teorije socialnega kapitala preučiti vpliv prijateljstva na delovnem mestu na spodbujanje inovativnega vedenja zaposlenih FLE. Študija preučuje tudi posredovalno vlogo procesa izmenjave znanja (zbiranje in dajanje znanja) na povezavi med prijateljstvom na delovnem mestu in inovativnim vedenjem zaposlenih (FLE).
**Metodologija**: Za zbiranje podatkov smo uporabili metodo vzorčenja in anketirali 163 zaposlenih v hotelih s tremi in štirimi zvezdicami v mestu Yogyakarta v Indoneziji. Za statistično obdelavo zbranih podatkov smo uporabili programsko opremo za modeliranje strukturnih enačb (PLS-SEM) Smart-PLS v3.0.
**Rezultati:** Prijateljstvo na delovnem mestu pomembno vpliva na inovativno vedenje zaposlenih, ki delajo neposredno s strankami (FLE). Poleg tega je raziskava empirično ugotovila, da prijateljstvo na delovnem mestu neposredno in posredno, preko zbiranja znanja, vpliva na inovativno vedenje zaposlenih. Zanimivo je, da darovanje znanja nepomembno vpliva na inovativno vedenje zaposlenih, ki delajo neposredno s strankami (FLE).
**Zaključek:** Sklepamo, da bi prijateljstvo na delovnem mestu lahko ustvarilo ugodno delovno okolje, ki bi spodbudilo inovativno vedenje zaposlenih prek postopka izmenjave znanja. S tem raziskava prispeva k poznavanju vpliva prijateljstva na delovnem mestu in izmenjave znanja na inovativno vedenje zaposlenih. Študija predlaga tudi kadrovsko prakso glede negovanja prijateljstva na delovnem mestu, ki spodbuja inovativno delovno vedenje zaposlenih.

***Ključne besede:*** *Inovativno vedenje storitev FLE, Prijateljstvo na delovnem mestu, Zbiranje znanja, Dajanje znanja.*

DOI: 10.2478/orga-2020-0013

# The CSR Perception of Front-line Employees of Luxury Fashion Businesses

**Robert K. MACGREGOR[1], Włodzimierz SROKA[2] & Radka MACGREGOR PELIKÁNOVÁ[1]**

[1]Metropolitan University Prague, Prague, Czech Republic, robertkmacgregor@yahoo.com & radkamacgregor@yahoo.com

[2]WSB University, Dąbrowa Górnicza, Poland & North West University, Potchefstroom, South Africa, wsroka@wsb.edu.pl

**Background and Purpose:** The sustainability projected into Corporate Social Responsibility (CSR) is pivotal for luxury fashion businesses and they heavily refer to it. However, do their front-line employees follow this trend? To achieve an effective and efficient CSR, the front-line employees have to share the CSR perception advanced by their businesses. The main objective of the study is to discover, critically assess and compare the CSR perception of the front-line employees of the top luxury fashion industry businesses located in Prague, Czech Republic.
**Design/Methodology/Approach:** An investigative case study of the CSR approach of such employees of all ten top luxury fashion businesses in Prague is performed while using a holistic Meta-Analysis, a manual Delphi method and three rounds of interviews, along with mystery shopping techniques.
**Results:** The heterogenous conglomerate of data reveals: (i) problematic awareness of these employees, (ii) their ignorance of the legal setting, (iii) an imbalance and preferential focus, along with ignorance of certain CSR categories, (iv) direct and indirect contradictions and (v) a preoccupation with the fur issue.
**Conclusions:** This alarming inconsistencies and ambiguity have strong implications for both science and practice, they call for more studies, a deeper understanding of causes and a prompt correction in order to make the CSR perception of these important inside stakeholders be in line with expectations.

***Keywords:*** *Corporate Social Responsibility (CSR), EU law, Luxury fashion, Sustainability.*

## 1 Introduction

The concept of sustainability emerged in the context of the economic globalization, dominated by more productivity, as well as social and ecological damage (Schüz, 2012). It reflects the value judgments about justice in the distribution and use of resources and rests on three pillars: economic (profit), environmental (planet) and social (people) dimension‘s continuity (MacGregor Pelikánová, 2019a). The leading force behind this newly launched trend were the United Nations (UN) which issued two milestone documents: (i) the Report of the World Commission on Environment and Development; Report: Our Common Future prepared by the Brundtland Commission, published as the UN Annex to document A/42/427 in 1987 (“Brundtland Report 1987”) and (ii) the Resolution made during a historic UN Summit in September 2015 and entitled Transforming our world: the 2030 Agenda for Sustainable development (“UN Agenda 2030”), which brought with it the 17 Sustainable Development Goals (“SDGs”) and 169 associated targets. These two documents are the outcome of International Law and are not per se enforceable vis-à-

Received: 5th May 2020; revised: 28th June 2020; accepted: 5th July 2020

vis businesses (MacGregor Pelikánová, 2019a).

The initial focus on sustainability has been progressively paralleled by corporate responsibility concerns (MacGregor Pelikánová, 2019a). Indeed, the original distinction between (i) sustainability in the narrow sense, with rather systematic and visionary features and designed for soft law and self-regulation, and (ii) corporate responsibility, with rather normative and moral features and designed for national law regulation, have converged in Corporate Social Responsibility ("CSR") (Bansal & Song, 2017).

For the EU and EU member states, sustainability in the large sense represents a current multi-stakeholder relationship of virtually all members of society and even the society itself. Although the resulting CSR is only partially covered by mandatory EU law provisions and national law provisions (MacGregor Pelikánová, 2019b), the CSR that came of this represents a transparent dialogue and interaction between businesses and other stakeholders which should be materialized, among others, by publicly available financial reporting and non-financial reporting, i.e. CSR reporting (MacGregor Pelikánová, R. & MacGregor, 2017).

There are extensive studies about the (lack of) CSR and CSR reporting progress in the automotive (MacGregor Pelikánová, 2019a), food (Haski-Leventhal, 2018), agricultural (Vveinhardt et al, 2019) and other industries (Sroka & Szántó, 2018).

Sustainability is a central challenge of the fashion industry (Cerchia & Piccolo, 2019). For luxury fashion businesses, the key values and competitive advantage determinants are linked to their luxury brands protected as trademarks (MacGregor Pelikánová & MacGregor, 2019) and other Intellectual Property („IP") assets (MacGregor Pelikánová, 2019c). Such brands represent scarcity, exclusivity and overflowing resources pointed to the top goals and priorities, such as CSR. They perfectly match the concept of a competitive advantage with a competitive target while engaging in „capturing the core and broadening without diluting" (Moon et al, 2014). So, they desperately need to come across as standing up for CSR and as able to afford CSR, at least based on the expectations of their customers (Olšanová et al., 2018) and their potential investors (Morgan Stanley, 2017). Consequently, their commitment to CSR needs to be effectively and efficiently conveyed on all levels, including the bottom. However, what is the reality? How do front-line employees of luxury fashion businesses perceive CSR? Does their perception of the CSR match the indicated expectations of luxury fashion customers and investors?

This logically leads to the need to perform a deep micro-case study about the CSR perception of these inside stakeholders – front-line employees. Consequently, the main objective is to discover, critically assess and compare the CSR perception of the front-line employees of the top luxury fashion industry businesses in Prague. In order to address this pioneering objective, after the Literature and Legislative Review (2.), Data and Methods (3.) needs to be discussed and this should be followed up by an engagement with explicit and implied CSR statements collected through the pioneering micro-case study performed in Pařížská regarding top luxury fashion businesses. Thus, Research findings and Discussion address interviews (4.1.), the observations gained via mystery shopping techniques (4.2.) and the comparison of the implied information (4.3.). The presented data and arguments culminate in the Conclusion (5.) which points to an unbalanced CSR perception of these internal stakeholders and a fragmentation that ultimately has a negative impact for society. Therefore, the reasons for this heterogeneity need to be understood and overcome.

## 2 Literature and Legislative Review

Both the concept of sustainability and CSR have grown with globalization, and the apparently unrestricted growth in the power of corporations has led to the proposition that global companies, as powerful economic, social and political actors, must increasingly be brought within the law´s domain (Bunn, 2004). CSR is about the all-encompassing responsibility towards society, i.e. addressing all three sustainability pillars (Olšanová et al, 2018). CSR principles are a demonstration of moral obligations of the given business towards the entire society and this goes way beyond the mere concept of profit maximization. CSR emerged originally rather as an "ethical responsibility" than a "legal liability" and represented virtue ethics, utilitarian ethics, and deontological ethics (Schüz, 2012). Responsibility, as such, has Latin roots, see "respondere", and means that someone has to answer for the effects caused by him to an authority and this authority evaluates its damages (Schüz, 2012). If this regime is incorporated into the legal system and this authority is a judge, we deal with a special type of responsibility called 'liability'.

States have demonstrated various approaches to sustainability and accordingly have "delegated" some CSR tasks and duties to stakeholders, including businesses (MacGregor Pelikánová, 2019a). Therefore, CSR goes through a process of progression from none, to an over facultative one, to a mandatory regime (MacGregor Pelikánová, 2019a). Currently, CSR consists of many types of social responsibility: economic, legal, ethical, etc. (Sroka & Szántó, 2018), i.e. it is a set of duties to adhere to in a certain manner because it is either morally or legally right or at least expected (MacGregor Pelikánová, 2019a). Herein, the movement from the soft sphere of ethics to the hard sphere of law with regard to what is to be, depends upon the jurisdiction.

The EU motto is "united in diversity" and the underlying idea is "Europe can succeed if it acts collectively, as a Union", especially regarding CSR, which is a dialogue and interaction between businesses, corporations and their stakeholders (MacGregor Pelikánová, 2017) that enjoys full EU endorsement via policy support (Šebestová et al, 2018). The primary EU law, especially the Treaty on the Functioning of the EU ("TFEU") underlines the social and environmental dimensions (Polcyn et al, 2019), along with the economic dimension of life (MacGregor Pelikánová & MacGregor, 2018). Secondary sources, such as Regulations and Directives, and supplementary sources, must be in-compliance with primary sources, while carrying on strategic priorities (Piekarczyk, 2016). Regarding CSR, they include predominantly general and special Directives (MacGregor & MacGregor Pelikánová, 2019), such as Directive 2013/34/EU of 26 June 2013 on annual financial statements and consolidated financial statements, as well as Directive (EU) 2017/1132 of 14 June 2017 relating to certain aspects of company law. EU and EU law priorities, targets and flagship initiatives are intra-related and arguably develop technological potentials (Balcerzak, 2016), recognize the R&D and IP impact on competitiveness (Marčeta & Bojnec, 2020), the awareness and commitment with respect to CSR (MacGregor Pelikánová, 2018) and ephemeral philosophical-economical categories of ethics and fairness (Sroka & Lörinczy, 2015). However, the ultimate choice remains up to European businesses, in how much they would go for CSR and report about it. They do not exhibit a unified trend, i.e. for some, their commitment towards sustainability via CSR is a mere imposed duty and a negative burden, while for other businesses, CSR is a vehicle for improvement in all three spheres of sustainability (economic, environmental and social) and an instrument to improve their own financial performance (Rodriguez-Fernandez, 2016).

Arguably, in the 21st century EU, business ethics is regarded as a significant factor influencing the success and profits of modern businesses (Sroka & Lörinczy, 2015). The related CSR represents the recognition of shared value policies and principles and aims at "a more sophisticated from of capitalism" (Porter & Kramer, 2011). Consequently, if a business wants to be perceived as reliable and attract not only customers, but as well, employees, business partners and investors, it should demonstrate a high level of institutionalization of sustainable and ethical principles and practices (Sroka & Szántó, 2018) and engage in a proper communication of the same externally and internally (Szanto, 2018). These arguments are covered by the stakeholder theory that proposes that the business engagement with CSR implies (at least indirectly) value creation through improvement of the business's reputation (Gallardo-Vázquez et al, 2019) and branding (Osei-Tutu, 2019) and ultimately an increase in market share (Ting et al, 2019) and enhanced financial performance (Rowley & Berman, 2000). The originally simplistic CSR, thus, becomes strategic CSR and the evolution phases are: CSR cultural reluctance, CSR cultural grasp and CSR cultural embedment (Olšanová et al, 2018).

However, there are also some opponents of the overly positive CSR perception in the EU (Chwistecka-Dudek, 2016). They refer to traditional theories, are more sceptical, point to limitations due to possible agency conflicts between managers, shareholders, environmental activists, etc., and underline that resource allocation due to CSR, especially for social goals, may add to the costs, and, consequently, prevent profit maximization (Friedman, 2007). Pursuant to this, businesses should not automatically jump to the conclusion that more CSR and more CSR reporting must lead to an ultimate and global success. Several studies documented the negative impact of CSR activities and spending by indicating that CSR practices can generate unnecessary costs, cripple financial results (Barnett, 2007) and thus undermine competitive advantage (Scherer & Palazzo, 2011).

Regardless of all these discourses, all modern businesses need to reconcile the profitability, growth and social relationships, i.e. CSR cannot be totally avoided and, according to the prevailing opinion stream, positively impacts financial performance (Ting et al, 2019). Each and every business in the EU must make a choice and implement it consistently.

The sphere of the luxury fashion industry is well suited to be a prima facia great platform for a CSR engagement by all stakeholders. The term "luxus" has a double meaning: it positively connotes such concepts as beauty, prestige, and power, but also implies excessive and ostentatious displays of wealth (Kapferer, 2012). The fashion luxury industry was traditionally linked to the allure of a limited access, heritage, sophistication, high desirability, excellent quality, high price and the extraordinary (Olšanová et al, 2018). It has also been associated with concepts like excessive consumerism, extremely high costs, elitism, opulence or guilty pleasures (Deloitte, 2019). However, recently it seems that two new luxury fashion customer groups have appeared – the HENRYs (High-Earners-Not–Rich-Yet) and youngsters (Millennials and Gen Z) (Deloitte, 2019; Dabija et al, 2019). Customers from these two groups, and perhaps even other customers, check online CSR reports, as well as the CSR direct manifestation in these shops, and they search for demonstrations of "their" ethical and moral values. Naturally, only motivated and committed internal stakeholders can extend these values and lead to satisfied business partners and customers.

In today's EU, luxury fashion businesses opted for a strong CSR commitment and their owners´ and top-management statements explicitly confirm a developed pro-CSR perception while addressing the mentioned expected values (Olšanová et al, 2018). Obviously, this pro-CSR strategy can be effective and efficient only if all internal stakeholders share it (Bunn, 2004). Properly tailored CSR practices can be cost effective (Osei-Tutu, 2019) only if internal stakeholders know about them, agree upon them and consistently inform others about them in a unified manner (Ikram et al, 2019). Since the sustainability drive is strongly culturally influenced, it is pivotal to reconcile the

CSR perception by all internal stakeholders (Burksiene et al, 2018) regarding CSR categories. These categories are indirectly implied by the EU law on non-financial (CSR) reporting, especially Directive 2013/34/EU as updated, and have been recently established by academia (MacGregor Pelikánová, 2019a):

- environment protection (MacGregor Pelikánová, 2019a),
- employee matters (Dvouletý, 2017),
- social matters and community concerns (Mallin, 2018),
- respect for human rights (Osei-Tutu, 2019),
- anti-corruption and bribery matters (Sroka & Szántó, 2018) and
- R&D activities (Marčeta & Bojnec, 2020).

However, there is a lack of studies about the reality and dynamics of these internal CSR perceptions. Namely, there are basically no studies about the CSR perception of front-line employees of luxury fashion businesses. This situation is amazing because these businesses rely much more on face-to-face interaction than do anonymous online sales, and their ambassadors vis-à-vis customers - their front-line employees - play a critical role with respect to the consistency and ultimately effectiveness and efficiency of their pro-CSR perception.

## 3 Data and Methods

The data and methods used in this paper are determined by the main objective, which is, via an investigation, to discover, critically assess, and compare the CSR perception of front-line employees of the top luxury fashion industry businesses in the Czech Republic. Specifically, it is about obtaining direct and indirect information about CSR perceptions conveyed by the employees facing customers in Pařížská street in Prague. This case study is based upon a research of predominantly primary data and the processing of such by methods that are both critical and comparative (Yin, 2008). It allows for retaining the holistic and meaningful characteristics of real-life events (Yin, 2008). The parameters were obvious, i.e. the case study included all businesses located in Prague‘s “Luxury Fashion Street”, AKA “Prague´s 5th Avenue”, which sell luxury clothing brands and specifically, leather handbags. The criterion of leather handbags is used because they are indicators and/or the “engine that drives luxury brands today” (Han et al, 2010). The primary data about the statements of the employees was directly obtained by interviews and indirectly by mystery shopping techniques. Each interview had two parts – structured (posing four questions) and unstructured (invitation for providing further information about products, brand and CSR). Namely, each of these front-line employees was asked to show a woman’s leather bag size A4 and to explain (i) the product´s material and functional advantages, (ii) its brand advantages, (iii) business relation to CSR and (iv) the employee´s knowledge about CSR regulations. They were then induced to provide any other relevant CSR information. Mystery shopping techniques, i.e. mystery consumer methods and techniques (Osterweil, 2012), included observations of CSR positive and negative indices, such as social (un)friendliness (co-operation, competition and arrogancy between employees and vis-à-vis customers), environment (un)friendliness of the shop setting (used materials, light fixtures, etc.) and packaging material (recycling, etc.), concept design and human interaction. Table 1 lists those businesses examined by the case study, which are all businesses meeting the set requirements (luxury fashion – leather bags), i.e. no business was omitted and hence the list is exhaustive.

The authors have been consistently litigating for the use of the qualitative analysis (Vourvachis & Woodward, 2015) and the holistic Delphi method for CSR studies (MacGregor Pelikánová, 2019a). Consequently, even this case study builds upon a rather qualitative holistic manual Delphi method (Okoli & Pawlowski, 2004) with rankings done by three experts with economics and law backgrounds and CSR knowledge (due to the GDPR and privacy issues, only the initials of these three experts are provided: EDC, LM, ZUP) and in addition all of them have already purchased these types of luxury products and were open to purchase them again, i.e. they were “real”. The ranking was done by each of them independently with the same weight. They did both interviews and mystery shopping observations and classified the yielded information about each of the six CSR categories with (+) or (++) or (+++). Information implying ignorance of, or a disregard for CSR got (0), while information implying a general and weak CSR perception got (+), deeper and more specific CSR information netted (++) and genuine and excellent CSR information got (+++). These interviews and mystery shopping observations were done in three rounds and, pursuant to the holistic manual Delphi method, generated ranking and notes whereby these three experts compared, discussed and readjusted. Hence, each of these top 10 luxury fashion businesses in Pařížská was visited three times in December 2019 (each time by a different expert of these three), i.e. in total - 30 visits. During their visits, the mystery shoppers performed the above described interviews with both a structured (4 questions) and a non-structured part to extract direct indices about the CSR perceptions of front-line employees, and mystery shopping observation to extract indirect indices. Involved front-line employees shared slightly different cultural backgrounds (Czech, Slovak, Russian), which could originally impact their sustainability and CSR perceptions (Burksiene et al., 2018). Since these employees provided the interviewing experts with documents (e.g. marketing leaflets shown and discussed by employees), qualitative content text analysis (Kuckartz,

*Table 1: Case Study – Six luxury fashion business groups and their ten top businesses*

| **Group** | Business | Origin | **Revenue in 2018 (bil EUR)** |
|---|---|---|---|
| **LVMH** | Louis Vuitton | 1854, Paris | 46.8 |
| **LVMH** | Christian Dior | 1945, Paris | 46.8 |
| **LVMH** | Fendi | 1925, Rome | 46.8 |
| **LVMH** | Bulgari | 1884, Rome | 46.8 |
| **Kering** | Gucci | 1921, Florence | 4.65 |
| **Kering** | Bottega Veneta | 1966, Vicenza | 4.65 |
| **Prada** | Prada | 1913, Milan | 3.14 |
| **Dolce Gabanna** | Dolce Gabanna | 1982, Milan | 1.29 |
| **Tod´s** | Tod´s | 1920, St.Elpid. | 0.96 |
| **Furla** | Furla | 1927, Bologna | 0.58 |

Source: Prepared by the authors and based on their field searches performed in December 2019.

2014) was marginally used as well (Krippendorff, 2013).

This framework and employment of both intrinsic and extrinsic evidence and direct and indirect indices facilitates a holistic processing that reveals possible trends. Its benefits are maximized by the parallel use of Meta-Analysis, which is an analysis of analyses (Schmidt & Hunter, 2014), i.e. a quasi-statistical analysis of a large collection of results from individual studies with the goal of integrating their findings (Glass, 1976). The use of three rounds for the Delphi ranking with adjustments, along with the Meta-Analysis of additional information, along with Socratic questioning (Areeda, 1996), reduces the inherent subjectivity and boosts the academic robustness of this case study.

# 4 Research findings and Discussion

Often, the setting of the law and appropriate regimes is one thing, while their application is quite another matter entirely. A proper and committed perception of the CSR is a pre-requirement for the EU's expected approach to CSR by a critical group of stakeholders shaping the CSR of the entire business – the internal stakeholders of luxury fashion businesses. These ambassadors are either de iure representatives of these businesses, CEOs preparing, issuing and signing CSR reports or Codes of Ethics, or de facto representatives of these businesses – front-line employees facing the clientele on "5th Avenue", i.e. Pařížská street. It might be expected that luxury fashion businesses are (should be) aware about the importance of the message conveyed by these front-line employees and that they make sure to motivate these front-line employees to directly and indirectly promote the best information about the illustrious commitment for all six CSR categories of the given business. However, perhaps this is mere speculation. Therefore, it is quite legitimate, via investigations, to discover, critically assess and compare the approach of the front-line employees of the top luxury fashion industry businesses in Prague, both directly by interviews and indirectly by mystery shopping techniques. Hence, in December 2019, a repeated (3x) field search of all 10 luxury fashion businesses was performed, entailing both interviews and mystery shopping.

## 4.1 Front-line employees' direct statements – interviews

Each shop was visited 3x in December 2019 and an interview consisting of two parts, along with mystery shopping was performed. The information from these three sets of interviews was processed and re-adjusted by the Delphi method, is summarized in Table 2 and 3 and commented in a semi-anonymized manner while using codes instead of names of these luxury businesses.

Manifestly, direct statements during the first half of each interview of the front-line employees of these ten top luxury fashion businesses have not differed dramatically, while interesting trends across this special segment of industry could be observed. Basically, all employees covered

*Table 2: Employees´ direct statements during the first half of interviews about CSR categories; businesses' names are replaced by codes*

| | Environm. | Empl.Mat. | Social | HumRight | Anti-Corr. | R&D |
|---|---|---|---|---|---|---|
| **A** | ++ | + | ++ | 0 | 0 | + |
| **B** | ++ | + | ++ | 0 | 0 | ++ |
| **C** | ++ | + | ++ | 0 | 0 | +++ |
| **D** | ++ | ++ | ++ | 0 | 0 | +++ |
| **E** | +++ | ++ | + | 0 | 0 | + |
| **F** | ++ | ++ | + | 0 | 0 | 0 |
| **G** | +++ | ++ | + | 0 | 0 | +++ |
| **H** | ++ | ++ | + | 0 | 0 | + |
| **I** | ++ | ++ | + | 0 | 0 | + |
| **J** | + | + | + | 0 | 0 | + |

Source: Prepared by the authors and based on their own searches and interrogations (interviews).

the environment, employee matters, social and R&D categories, and totally skipped Human rights and Anti-corruption categories. However, the second part of the interviews proved to be very interesting and highly revealing and thusly allowed for the differentiation between the intensity of the CSR commitment regarding the four mentioned categories.

A clear "leader" among CSR categories was the environment category and basically each and every employee addressed it extensively and in a different, original manner. Some employees underlined the tradition and animal welfare policies without going in much detail (A, B). Other employees provided more moderate environment statements oriented not to animal welfare, but they backed them strongly with facts (C, D). Certain employees seemed almost obsessed with animal welfare, energy saving and recycling (E, G). Finally, some employees provided rather weak information without any interest to speak further about it (F, I).

Next in line were employee matters and social categories, for which rather general statements were made with a reluctance to go into details. The biggest difference was within the R&D category, regarding which some employees volunteered a lot of information C, D), a little information (A, B, E, I) or not any information (F). As stated above, no employee mentioned Human rights and anti-corruption categories.

Manifestly, the front-line employees either do not know about the CSR legal framework or their perception of it is incorrect. One half of the front-line employees interviewed totally failed this part, the other half demonstrated only some basic knowledge.

The second half of each interview allowed for a free flow of communication and for letting the employees volunteer information about CSR. The information from these three sets of interviews was processed and re-adjusted by applying the Delphi method, is summarized in Table 4 and commented in a semi-anonymized manner while using codes instead of names of these luxury businesses.

Manifestly, direct statements during the second half of each interview provided a more colourful picture, and the rather small differences became magnified. Some employees were reluctant to carry on the discussion (B), show patronage preferences, patronization and favouritism of certain clients over others (Vveinhardt & Sroka, 2020), or even became confused and contradicted themselves (A) and ultimately even provided information against CSR.

From the six CSR categories, only four were mentioned and clearly the environment category with animal welfare took the lead. Well-informed employees pushed this issue, while underlining their concurrent opinion (E, G), and poorly informed employees became confused (A). Some employees kept repeating the same information (I), while others admitted that they are not on the same page (F). Amazingly, some employees declined to carry on the discussion and left to speak to someone else (B). Employees from less animal-welfare oriented businesses gladly volunteered deep insightful information showing that the entire environment category is manipulated. Doubtless the

*Table 3: Employees´ direct statements during the first half of interviews – awareness about international, regional and national laws on CSR*

| | International law (SDG) | Regional law (EU reporting) | Regional law (EU restrictions) | National law (CZ law on CSR |
|---|---|---|---|---|
| **A** | + | 0 | + | 0 |
| **B** | + | 0 | + | 0 |
| **C** | + | 0 | + | 0 |
| **D** | ++ | 0 | ++ | + |
| **E** | ++ | 0 | ++ | + |
| **F** | ++ | 0 | ++ | + |
| **G** | ++ | 0 | ++ | + |
| **H** | 0 | 0 | 0 | 0 |
| **I** | 0 | 0 | 0 | 0 |
| **J** | 0 | 0 | 0 | 0 |

Source: Prepared by the authors and based on their own searches and interrogations (interviews).

*Table 4: Employees´ direct statements during the second half of interviews (initiated by employees)*

| | Environm. | Empl.Mat. | Social | HumRight | Anti-Corr. | R&D |
|---|---|---|---|---|---|---|
| **A** | 0 | 0 | + | 0 | 0 | + |
| **B** | 0 | + | + | 0 | 0 | ++ |
| **C** | +++ | ++ | ++ | 0 | 0 | +++ |
| **D** | ++ | ++ | ++ | 0 | 0 | +++ |
| **E** | +++ | ++ | + | 0 | 0 | + |
| **F** | + | + | + | 0 | 0 | 0 |
| **G** | +++ | ++ | + | 0 | 0 | +++ |
| **H** | ++ | ++ | + | 0 | 0 | + |
| **I** | + | + | + | 0 | 0 | + |
| **J** | + | + | + | 0 | 0 | + |

Source: Prepared by the authors and based on their own searches and interrogations (interviews).

most interesting revelation was the information that artificial fur done by G and E actually represents an environmental hazard because, unlike animal fur, it does not easily and naturally decompose.

The employees had very little to say about social and R&D categories, but surprisingly mentioned some employment matters and became very clear that there is a big fluctuation among the employees from these businesses. Moreover, often the only way to get a job promotion is to “go next door”, in other words, to take a job with another store in Pařížská. During the second part of the interviews, there often arose the issue of the working place dynamics, and it became obvious that a strict and rigid hierarchical approach prevails, and often junior employees are treated with a total lack of respect (G). Prima facia, it looked like promotion via merit and qualifications is not a core value (B) and employees oscillate between acting strictly, to being almost arrogant (B, I) and even down to a familiar approach more fitting for those working in a supermarket (F).

Finally, during the second half of the interviews, the varying cultural and linguistic levels of the employees, as well as a general failure of effective employee training and education, became apparent. In sum, the first half of the interviews showed small differences that became magnified by the second half interviews and called for testing via mystery shopping techniques.

### 4.2 Front-line employees’ indirect statements – mystery shopping

Since no indices were revealed regarding social matters, human rights, and anticorruption categories, only the remaining three CSR categories were examined by the mystery shopping observation and are presented in Table 5. Namely, the CSR category of the environment was observed while focusing on the mimicry and facial-body language of front-line employees and their manner of touching and dealing with products. The CSR category employment matters was observed while focusing on the mutual interaction between front-line employees and their dress code. The CSR category R&D was observed while focusing on the manner of product demonstrations, along with mimicry and facial-body language.

*Table 5: Employees´ indirect statements – mystery shopping revelations*

| **CSR Category** | **Environm.** | **Empl.Mat.** | **R&D** |
|---|---|---|---|
| **Criteria** | **Mimicry + Material touch** | **Interaction + Dressing** | **Demonstrating + Mimicry** |
| **A** | 0 | 0 | 0 |
| **B** | + | 0 | 0 |
| **C** | ++ | ++ | +++ |
| **D** | ++ | ++ | +++ |
| **E** | +++ | ++ | + |
| **F** | + | + | 0 |
| **G** | +++ | ++ | +++ |
| **I** | + | + | + |
| **J** | + | + | + |
| **K** | + | + | 0 |

Source: Prepared by the authors and based on their own searches and interrogations (interviews).

Of all the tables, clearly the last one, Table 5, is the most revealing and confirms that there is a big difference between these businesses, i.e. the CSR approach of their employees. Those initially disappointing are confirmed, and the mystery shopping techniques underline that these front-line employees made weak attempts to pretend to be committed CSR ambassadors (A, B) and demonstrate favouritism inclinations. These findings match recent studies in comparable settings and ultimately support their very correct conclusions (Vveinhardt & Sroka, 2020).

Other front-line employees do not have such ambitions and ultimately appear much more convincing (F, H, I, J). The "winners" are either those employees who are quite environmentally aware (E, G) or employees deeply aware of traditions and concepts (C, D). With but small exaggeration, it can be stated that the split between the most CSR committed employees is done based on the preference: free fur v. fun fur.

Naturally, it would be remiss to neglect the presentation of these results coupled with short notes about the setting in which the employees operate, while referring to these ten businesses and their six groups.

LVHM comes across as a modern light shopping mall, AKA warehouse, without any privacy and where customers form lines, while with B, the dark shop setting reflects the scandalous and perverse history of the B family and is matched with the arrogance of certain employees. C and D's shop settings, as well as employees, are dramatically different, they are nice, bright, and employ an individual approach; they treat customers with charm and friendliness, even with a nice touch of decent humour and know much more about the history and concept (C, D) than their colleagues about (A, B). Hence the LVMH group does not appear as overly consistent.

In contrast, the Kering group is very consistent and both the setting, as well as the employees stress animal welfare and other environmental issues (energy, recycling). It almost looks like the most critical issue at hand is to provide a wonderful life for the animals if their skin is soon to be used and there is an extreme feeling of guilt about their fate. Sadly, little attention is paid to IP and so the nice and committed, and rather humble, employees show "pro-environment" products, but creativity and sophistication are missing.

G is similar to the Kering group and its fur free status is obvious and demonstrated by its exhibit hall. Its employees are committed and have exceptionally deep knowledge. They are confident and respectful, even while speaking about their competition. Interestingly, they describe the competing B store as a fairy tale world (however, based on the author's experience, a visit to B can easily turn into a dark nightmare and a truly unhappy fairy tale, inappropriate for small children). They are enthusiastic about their substitutes and their pro-environment approach. The rain on this parade is provided by bits of information offered by C´s employees who informed us that G substitutes are extremely environmentally unfriendly in the long term.

H, I and J appear much more modest, their shops do not convey a strong luxury impression and their employees follow this rather minimalist, honest approach.

## 4.3 Comparison and discussion

There is a clear gap between those ready to make grandiose proclamations and possibly lacking integrity and those who are more modest. Further, the obtained results have to be appreciated in the light of available recognized international indexing tools. According to the CSR HUB Sustainability Management Tools CSR/ESG ranking, the leaders are Gucci (96%), Louis Vuitton (92%), Christian Dior (89%), while the CSR underperformers should be Tod´s (28%), Fendi (22%) (CSR Hub, 2019). Manifestly, CSR Hub works more with quantitative than qualitative indicators and so matches up well with the key word's frequency in CSR reports and Codes of Ethics and much less with Delphi indicators and employee statements. Despite all possible objections, the CSRHub basically confirms all the above-mentioned common elements and stresses internal differences between businesses in the same group. Namely, within LVHM, some employees (A,B) have dramatically different approaches to CSR than other employees (C,D). Further, this confirms the importance of the individual background and culture for the sustainability and CSR perceptions (Burksiene et al, 2018).

The performed pioneering case study managed to bring together direct and indirect statements implied by interviews, as well as field observations yielded via mystery shopping techniques. The holistic Meta-Analysis of this rather heterogenous conglomerate of data reveals five highly significant aspects regarding the CSR perception of these front-line employees: (i) their problematic awareness, (ii) their ignorance of the legal setting, (iii) their imbalanced and preferential focus along with ignorance of certain CSR categories, (iv) their direct and indirect contradictions and (v) their almost obsessive preoccupation with the fur issue – fun fur (using fur is fun and indispensable) v. free fur (using fur is evil and wasteful).

Firstly, the awareness of these front-line employees about CSR is dramatically different and it appears that many top luxury fashion businesses totally omit the proper selection and training of their employees and contribute to the massive job fluctuation. It is amazing that these differences are even between employees from the same group (LVMH – A, B v. C, D).

Secondly, front-line employees know very little about CSR regulations and are confused about the mandatory and facultative positive law provisions. They do not appreciate the differences between jurisdictions and confuse moral and legal obligations. For example, only a few front-line employees understood the mandatory setting for the sale and use of fur products. Generally, they are inclined to believe that environmental aspects are compulsory, while social and other CSR categories are beyond the reach of the law, including reporting. Sadly, the SDGs and international law dimension is completely outside their awareness.

Thirdly, the prevailing focus is on the environmental and employee matters of CSR categories, with an undertone of interest for brand history and for IP. This is totally in contrast with the conventional understanding of this industry, which is basically built by selected family fame and excellence. Further, the SDGs of the UN are obviously not major concerns of the front-line employees of these businesses.

Fourthly, even if the front-line employees should be convincing and consistent ambassadors of these luxury leaders, they often prove to be poorly informed, not committed and not professional enough to avoid contradicting themselves, providing poor customer service and denying the CSR.

Fifthly, a top CSR concern of almost of all these employees is the burning issue of what materials are used and how they are obtained. Therefore, after general CSR proclamations, there comes a fast spiel whether is it evil to use animal fur or not. Considering the current global issues (drought, warming, disappearing icebergs and tropical forests, ozone-hole, COVID, etc.), it is rather surprising that front-line employees totally depart from SDGs and even from the top hallmarks of their employers-businesses. With all due respect to animal welfare, perhaps this should not be a top CSR concern, neither should it definitely take priority over SDGs. This luxury slow fashion should return to core values and distinguish itself from the fast fashion (Niinimäki et al, 2020).

These five aspects are both surprising and not matching with the expected and desired CSR image of top brands, including leading luxury fashion businesses (Adamska, 2020). Indeed, the case study points to a myriad of flaws requiring prompt correction, provided that the CSR approach of luxury fashion businesses is to be genuine, effective, and efficient. It confirms the prior finding about the critical importance of external, as well as internal communications regarding the CSR, especially in the multi-national settings (Szanto, 2018) as well as cross-sectorial setting (Van Tulder et al, 2016). Exactly that is typical for the luxury fashion industry. However, it is not only about the cure, it is as well about prevention and so the question 'how' should be paralleled with the question 'why'. Indeed, the proper understanding of the causes of the current deplorable status is indispensable for achieving a correction and for bringing all stakeholders on board in order to make the concept of sustainability and SDGs real and worthy of the efforts of all concerned (van Tulder & Keen, 2018). Science should explore this discrepancy, and practice should promptly take action by engaging in communications with their employees.

## 5 Conclusions

The EU wants to engage businesses with the sustainability issue and attempts to boost their CSR directly by harmonizing the reporting and indirectly pushing businesses to be transparent regarding their CSR. In addition, the importance of sustainability, business ethics and CSR has been growing and this trend continues. Luxury fashion businesses are aware of it and declare their commitment to CSR in a manner definitely exceeding the strict legal minimum demanded by the EU law. All six CSR categories as implied by the EU law, and related practices appear to be relevant for these businesses.

Despite the rather small sample, the performed case study brings forth valuable information about ALL top luxury fashion businesses in the Czech Republic, and, considering their international nature, perhaps even about almost ALL top luxury fashion businesses in the EU. Hence, the main objective was met by investigative discovery, critically assessing and comparing the approach of the front-line employees of these top luxury fashion industry businesses in Prague.

The mentioned set of valuable, truly pioneering and, for the future, research calling aspects, entail especially (i) problematic awareness, (ii) their ignorance of the legal setting, (iii) imbalances and preferential focus, along with ignorance of certain CSR categories, (iv) direct and indirect contradictions and (v) a preoccupation with the fur issue. This has strong implications for both science and practice.

Indeed, the case study reveals interesting information, trends, patterns and even discrepancies and fragmentation. The CSR approach of those individuals voicing CSR policies for top luxury fashion businesses has very little in common, or at least similar, to the objectives set globally by the UN, regionally by EU and nationally by EU member states as vocalized by their statements and materialized by their actions. Lost in translation? Do we have here just individual failures or systemic issues? Science and practice should work together to understand this and to find reasons for it and to identify instruments for improvement.

The CSR approaches of front-line employees of luxury fashion businesses are trailing much behind expectations, at least the expectations of CSR global, regional, and national policy makers. This is very alarming, especially considering the need of the multi-stakeholder approach. Indeed, this alarming inconsistency and ambiguity calls for more studies, deeper understandings of causes and prompt corrections in order to bring the CSR perception of these important inside stakeholder in line with expectations.

There are several managerial contributions of our study. Firstly, it presents the results of a case study analysis related to the manager's attitudes to marketing and innovations in luxury fashion industry in relation to the CSR concept, thus delivering findings to the current debate on the topic. Secondly, such research is rather rare and the CSR concept is analysed mostly in relation to other aspects, such as the impact on a company's performance and its image, relationships between employee, mobbing or nepotism. Given this fact, this aspect is a significant added value of the study. Thirdly, the results achieved may be used for the formulation of the research hypotheses in further surveys.

Of course, our study is not free of limitations, the first of which is the analysis of only one sector existing in one country. The research could and should be expanded while considering different internal and external stakeholders (e.g. different type of employees, agents, consumers, etc.), different EU member states and/or different sectors which are able and expected to go actively for CSR (e.g. financial services sector, pharmaceutical sector, etc.) and different time lines (statements in different years). Such longitudinal, comparative and cross-sector studies could yield extremely relevant and pioneering conclusions and recommendations. Another limitation of our current study is the method used. We employed the case study analysis and a quantitative approach might be used in future research to explore the in-depth nature of the phenomenon. Indeed, the methodology adjustment is necessary if the above suggested and highly ambitious comparison is to be developed. Despite these limitations, we strongly believe that this study presents the real situation with regard to marketing and innovations in the luxury fashion industry and their connections to the CSR concept.

## Acknowledgement

This paper is the result of Metropolitan University Prague's research project no. 74-02 "Territorial Studies, Economics, International Relations" (2020) based on a grant from the Institutional Fund for the Long-term Strategic Development of Research Organisations.

The project was funded within the auspices of the programme of the Minister of Science and Higher Education entitled "Regional Initiative of Excellence" in 2019-2022, project number 018/RID/2018/19; amount of funding: PLN 10,788,423.16.

## Literature

Adamska, M. (2020). Practical Application of Forms and Tools of Marketing Communication in the SME Sector. *E&M Economics and Management,* 23(2), 193–209. http://doi.org/10.15240/tul/001/2020-2-013

Areeda, Ph.E. (1996). The Socratic method. *Harvard Law Review*, 109(5), 911-922

Balcerzak, A.P. (2016). Technological Potential of European Economy. Proposition of Measurement with Application of Multiple Criteria Decision Analysis. *Montenegrin Journal of Economics*, 12(3), 7-17. http://doi.org/10.14254/18005845.2016/12-3/1

Bansal, P. & Song, H.C. (2017). Similar, but not the Same: Differentiating Corporate Sustainability from Corporate Responsibility. *Academy of Management Annals*, 11(1), 105-149. http://doi.org/10.5465/annals.2015.0095

Bunn, I.D. (2004). Global Advocacy for Corporate Accountability: Transatlantic Perspectives from the NGO Community. *American University International Law Review,* 19(6), 1265-1306.

Burksiene, V.; Dvorak, J. & Burbulyte-Tsiskarsishvili, G. (2018). Sustainability and Sustainability Marketing in Competing for the Title of European Capital of Culture. *Organizacija,* 15(1), 66-78, http://doi.org/10.2478/Orga-2018-0005

Cerchia, R.E. & Piccolo, K. (2019). The Ethical Consumer and Codes of Ethics in the Fashion Industry. *Laws*, 8, 23. http://doi.org/10.3390/laws8040023

Chwistecka-Dudek, H. (2016). Corporate Social Responsibility: supporters vs. opponents of the concept. *Forum Scientiae Oeconomia*, 4(4), 171-179.

CSRHub (2019). CSRHub available at https://www.csrhub.com/

Dabija, D.C.; Bejan, B. & Dinu, V. (2019). How Sustainability Oriented is Generation Z in Retail? A Literature Review. *Transformations in Business & Economics*, 18(2), 150-155.

Deloitte (2019). Global Powers of Luxury Goods 2019. Bridging the gap between the old and the new. Retrieved January 5, 2020, from https://www2.deloitte.com/content/dam/Deloitte/es/Documents/bienes-consumo-distribucion-hosteleria/Deloitte-ES-consumer-industry-global-powers-luxury-goods-2019.pdf

Dvouletý, O. (2017). What is the Relationship between Entrepreneurship and Unemployment in Visegrad Countries? *Central European Business Review*, 6(2), 42-53. http://doi.org/10.18267/j.cebr.179

Friedman, M. (2007). The Social Responsibility of business is to Increase its Profits. In: Zimmerli W.C., Holzinger M., Richter K. (eds) *Corporate Ethics and Corporate Governance*. Springer, Berlin, Heidelberg, 173-178. http://doi.org/10.1007

Gallardo-Vázquez, D.; Valdez, L. & Castuera-Diáz, A.M. (2019). Corporate Social Responsibility as an Antecedent of innovation, Reputation, and Competitiveness

Success: A Multiple Mediation Analysis. *Sustainability*, 11(20), 5614. http://doi.org/10.3390/su11205614

Glass, G.V. (1976). Primary, secondary, and meta-analysis of research. *Educational Researcher*, 5 (10), 3-8.

Han, Y.J.; Nunes, J.C. & Dreze, X. (2010). Signalling Status with Luxury Goods: The Role of Brand Prominence. *Journal of Marketing*, 74(4), 15-30.

Haski-Leventhal, D. (2018). *Strategic Corporate Social Responsibility.* Los Angeles: SAGE Publication.

Ikram, A.; Li, Z.F. & Minor, D. (2019). CSR-contingent executive compensation contracts. *Journal of Banking & Finance*. https://doi.org/10.1016/j.jbankfin.2019.105655

Kapferer, J.N. (2012). *The luxury strategy: break the rules of marketing to build luxury brands.* Kogan Page Publishers, London.

Krippendorff, K. (2013). *Content Analysis: An Introduction to its Methodology.* Los Angeles, CA: Sage.

Kuckartz, U. (2014). *Qualitative Text Analysis – A Guide to Methods, Practice and Using Software.* 1st Edition. Sage Publications Ltd.

MacGregor, R.K. & MacGregor Pelikánová, R. (2019). Shareholder Engagement for Corporate Governance in the Light of the Harmonization and Transposition. *International Journal of Economics and Business Administration*, VII(4), 22-34.

MacGregor Pelikánová, R. (2017). European Myriad of Approaches to Parasitic Commercial Practices. *Oeconomia Copernicana*, 8(2), 167-180. http://doi.org/10.24136/oc.v8i2.11

MacGregor Pelikánová, R. (2018). The nebulous effectiveness, efficiency and fairness of the European e-Justice Portal vis-à-vis Corporate Social Responsibility. *Progress in Economic Sciences*, 5, 127-141. http://doi.org/10.14595/PES/05/008

MacGregor Pelikánová, R. (2019a). Corporate Social Responsibility Information in Annual Reports in the EU – Czech Case Study. *Sustainability*, 11, 237. http://doi.org/10.3390/su11010237

MacGregor Pelikánová, R. (2019b). Harmonization of the protection against misleading commercial practices: ongoing divergences in Central European countries. *Oeconomia Copernicana*, 10(2), 239–252. http://doi.org/10.24136/oc.2019.012

MacGregor Pelikánová, R. (2019c). R&D expenditure and innovation in the EU and selected member states. *Journal of Entrepreneurship, Management and Innovation* 15(1), 13-33. http://doi.org/10.7341/20191511

MacGregor Pelikánová, R. & MacGregor, R. (2017). European e-Justice Portal – Reality of Electronic One-Stop-Shop for Publication of Financial Statements in the EU. In: Jindřichovská, I.; Kubíčková, D. Conference: *5th International Scientific Conference on IFRS - Global Rules and Local Use*. Anglo-American University.

MacGregor Pelikánová, R. & MacGregor, R. (2018). Corporate Social Responsibility e-Reporting as a tool for (Un)fair competition in the EU. In Löster, T.; Pavelka, T. (Eds.). *Conference Proceedings. The 12th International Days of Statistics and Economics*. University of Economics, Prague.

MacGregor Pelikánová, R. & MacGregor, R. (2019). The Impact of the New EU Trademark Regime on Entrepreneurial Competitiveness. *Forum Scientiae Oeconomia,* 7(2), 59-70. http://doi.org/10.23762/FSO_VOL7_NO2_4

Marčeta, M. & Bojnec, Š. (2020). Drivers of Global Competitiveness in the European Union Countries in 2014 and 2017. *Organizacija,* 53(1), 37-52. http://doi.org/10.2478/orga-2020-0003

Moon, H.-C. et al. (2014). Extending Porter´s generic strategies: from three to eight. *European Journal of International Management*, 8(2), 205-225. http://doi.org/10.1504/EJIM.2014.059583

Morgan Stanley (2017). Millennials Drive Growth in Sustainable Investing. Morgan Stanley. Retrieved January 5, 2020 from https://www.morganstanley.com/ideas/sustainable-socially-responsible-investing-millennials-drive-growth

Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., Gwilt, A. (2020). The Environmental Price of Fast Fashion. *Nature Reviews Earth & Environment*, 1:189-200. http://doi.org/10.1038/s43017-020-0039-9

Okoli, Ch. & Pawlowski, S.D. (2004). The Delphi method as a research tool: an example, design considerations and applications. *Information & Management*, 42(1), 15-29. http://doi.org/10.1016/j.im.2003.11.002

Olšanová, K.; Gook, G, & Zlatić, M. (2018). Influence of Luxury Companies´ Corporate Social Responsibility Activities on Consumer Purchase Intention: Development of Theoretical Framework. *Central European Business Review*, 7(3), 1-25.

Osei-Tutu, J.J. (2019). Socially Responsible Corporate IP. *FIU Legal Studies Research Paper Series.* Research Paper No. 19-01.

Osterweil, W. (June 4, 2012). *The Secret Shopper. The New Enquiry*. Retrieved January 10, 2020 from https://thenewinquiry.com/the-secret-shopper

Piekarczyk, A. (2016). Contemporary organization and a perspective on integration and development. *Oeconomia Copernicana*, 7(3), 467-483. http://doi.org/10.12775/OeC.2016.027

Polcyn, J.; Stępień, S. & Czyżewski, B. (2019). The Measurement of the Quality of the Environment and its Determinants in Poland and in the Regional Perspective. *Annales Universitatis Apulensis Series Oeconomica*, 21(2): 11-21. http://doi.org/10.29302/oeconomica.2019.21.2.1

Rodriguez-Fernandez, M. (2016). Social responsibility and financial performance. The role of good corporate governance. *BRQ Business Research Quarterly*, 19, 137-151. http://doi.org/10.1016/j.brq.2015.08.001

Rowley, T. & Berman, S. (2000). A brand new brand of corporate social performance. *Business & Society*, 39(4), 397-418. http://doi.org/10.1177/000765030003900404

Schmidt, F.L. & Hunter, J.E. (2014). *Methods of Me-*

*ta-Analysis – Correcting Error and Bias in Research Findings*. 3rd Edition, London, UK: SAGE.

Schüz, M. (2012). Sustainable Corporate Responsibility – The Foundation of Successful Business in the New Millennium. *Central European Business Review*, 1(2), 7-15.

Sroka, W. & Lörinczy, M. (2015). The perception of ethics in business: Analysis of research results. *Procedia Economics and Finance*, 34, 156–163. http://doi.org/10.1016/S2212-5671(15)01614-7

Sroka, W. & Szántó, R. (2018). Corporate Social Responsibility and Business Ethics in Controversial Sectors: Analysis of Research Results. *Journal of Entrepreneurship, Management and Innovation*, 14, 111–126. http://doi.org/10.7341/20181435

Šebestová, J.; Krejčí, P. & Šiška, P. (2018). „Be or Not to Be": A Dilemma of Business Policy Support on a Regional Level. *Central European Business Review*, 7(1), 3-13. http://doi.org/10.18267/j.cebr.192

Szanto, R. (2018). The Online Communication of Corporate Social Responsibility in Subsidiaries of Multinational Companies in Hungary. *Organizacija,* 51(3): 160-168. http://doi.org/10.2478/orga-2018-0017

Ting, I.W.K.; Azizan, N.A.; Bhaskaran, R. et al. (2019). Corporate Social Performance and Firm Performance: Comparative Study among Developed and Emerging Market Firms. *Sustainability*, 2019, 12, 26. http://doi.org/10.3390/su12010026

Van Tulder, R., May Seitanidi, M., Crane, A. & Brammer, S. (2016). Enhancing the Impact of Cross-Sector Partnerships. Four Impact Loops for Channeling Partnership Studies. *Journal of Business Ethics*, 135, 1-17. http://doi.org/10.1007/s10551-015-2756-4

Van Tulder, R. & Keen, N. (2018). Capturing Collaborative Challenges: Designing Complexity-Sensitive Theories of Change for Cross-Sector Partnerships. *Journal of Business Ethics*, 150, 315-332. http://doi.org/10.1007/s10551-018-3857-7

Vourvachis, P. & Woodward, T. (2015). Content analysis in social and environmental reporting research: Trends and challenges. *Journal of Applied Accounting Research*, 16(2): 166-195. http://doi.org/10.1108/JAAR-04-2013-0027

Vveinhardt, J. & Sroka, W. (2020). Nepotism and Favouritism in Polish and Lithuanian Organizations: The Context of Organisational Microclimate. *Sustainability*, 12(4), 1425. http://doi.org/10.3390/su12041425

Vveinhardt, J.; Stonkute, E. & Sroka, W. (2019). Discourse on Corporate Social Responsibility in the external communication of agricultural enterprises. *European Journal of International Management*, 13(6), 846-879. http://doi.org/10.1504/EJIM.2019.102816

Yin, R.K. (2008). *Study Research. Design Methods*. 4th Edition. Thousand Oaks: Sage.

**Robert Kenyon MacGregor**, (*MBA - Orcid ID 0000-0003-2888-3880, WoS Researcher ID E-9858-2019, h-index: 4, Scopus ID: 57213174280*), is an academic lecturer at the International Business Department of the Metropolitan University Prague. He attended the University of Michigan, the University of California-Santa Barbara and Eastern Michigan University, with an MBA from the latter, was a sports writer with nearly 100 magazine articles published and a Realtor and Real Estate law expert. He is a common law expert and writer with a wide experience regarding management, international trade, business ethics, sustainability and USA-EU relationships. His current research interests include corporate social responsibility, financial reporting and industrial property.

**Włodzimierz Sroka** (*Orcid ID 0000-0002-8701-0716, Researcher ID I-1805-2013, h-index: 8, Scopus ID: 54793625000*), is an associate professor at the Management Department of WSB University, Dąbrowa Górnicza (Poland) and specialises in theoretical and practical issues relating to management and strategic management. He is the author of numerous scientific papers on strategic alliances, network organisations, strategy, the restructuring of companies, CSR and business ethics, marketing and customer's behaviour, public management as well as innovations and entrepreneurship published in peer-reviewed international journals. He is also a member of the scientific councils of several journals (e.g. Editor in Chief at Forum Scientiae Oeconomia and Deputy Editor in Chief of the European Journal of International Management) and conferences organised by different European universities. He holds PhD, M.Sc. and B.Sc. degrees in management and marketing from the Karol Adamiecki University of Economics in Katowice, as well as a D.Sc. degree (habilitation) from the University of ***Žilina*** (Slovakia). Currently he combines his scientific activity with the position of CEO of a medium-size engineering company. He was previously employed in different managerial positions in both the steel and machine industries.

**Radka MacGregor Pelikánová**, Ph.D., LL.M., MBA (Orcid 0000-0001-9628-7146, Researcher ID: G-2601-2018, WoS ID V-5469-2019, h-index: 8, Scopus ID: 56021587200), is an academic lecturer and researcher in the International Business Department of the Metropolitan University Prague. She graduated from Charles University Prague, Czech Republic (Ph.D. - Private Law), from the Université Paris XIII – Villetaneuse, France (Licence en Droit – Law), from Wayne State University, USA (LL.M. - Corporate and Financial Law) and National American University, USA (MBA). She is a member of both the Czech and Michigan Bar Associations and has over twenty years of lawyer, business management and academic experience. She has a prolific publishing history including seven monographs and over one hundred articles, almost half of which are classified in the WoS and Scopus database. Her current research interests include intellectual property, competition and corporate social responsibility.

### Dojemanje družbene odgovornosti podjetij s strani zaposlenih v prestižnih modnih podjetjih

**Ozadje in namen:** Trajnost, kot komponenta družbene odgovornosti podjetij, je ključna za prestižna modna podjetja; ta podjetja se nanjo tudi pogosto sklicujejo. Vendar, ali njihovi zaposleni, ki delajo s strankami, sledijo temu trendu? Da bi dosegli učinkovito in učinkovito družbeno odgovornost podjetij, se morajo tudi zaposleni, ki imajo neposreden stik s kupci, sprejeti percepcijo družbene odgovornosti podjetij, kjer delajo. Glavni cilj študije je ugotoviti, kritično oceniti in primerjati dojemanje družbene odgovornosti podjetij pri zaposlenih v podjetjih prestižne luksuzne modne industrije, ki se delujejo v Pragi na Češkem.
**Oblikovanje / metodologija / pristop:** Uporabili smo študijo primera družbene odgovornosti podjetij na vzorcu zaposlenih v vseh desetih prestižnih modnih podjetjih, ki so prisotna v Pragi. Uporabili smo celostno metaanalizo, ročno metodo Delphi in tri kroge intervjujev, skupaj z »mystery shopping« tehnikami.
**Rezultati:** Heterogeni konglomerat zbranih podatkov razkriva: (i) problematično ozaveščenost obravnavanih zaposlenih, (ii) njihovo nepoznavanje pravne ureditve, (iii) neravnovesje in prednostno osredotočenost na nekatere kategorije družbene odgovornosti, ob nepoznavanju drugih kategorij, (iv) neposredna in posredna nasprotja in (v) velika osredotočenost na temo »krzno«.
**Zaključki:** Ugotovitve opisanih nedoslednosti in dvoumnosti so pomembne tako na raziskovanje kot za prakso. Predlagamo, da se nadaljnje raziskave usmerijo na eni strani v globlje razumevanje vzrokov, po drugi pa v takojšnje ukrepanje, predvsem osveščanje zaposlenih v zvezi z družbeno odgovornostjo podjetij kjer delajo.

***Ključne besede**: Družbena odgovornost podjetij (CSR), Zakonodaja EU, Prestižna moda, Trajnost.*

DOI: 10.2478/orga-2020-0014

# Construction and Significance of Corporate Social Responsibility Indices – from Results to the Essence

**Dana BERNARDOVÁ[1], Klára KAŠPAROVÁ[2], Martin FINK[1], Kateřina IVANOVÁ[1] & Tetiana ARKHANGELSKA[1]**

[1]Moravian Business College Olomouc, Department of Social Science and Law, tř. Kosmonautů 1288/1, 779 00 Olomouc, Czech Republic, dana.bernardova@mvso.cz, martin.fink@mvso.cz, katerina.ivanova@mvso.cz, tetiana.arkhangelska@mvso.cz

[2]Masaryk University, Faculty of Economics and Administration - Department of Corporate Economy, Lipová 507/41a, 602 00 Brno, Czech Republic, klara.kasparova@econ.muni.cz

**Background and Purpose:** Regular reporting on Corporate Social Responsibility (hereinafter referred to as CSR) should make it easier for enterprises to identify the sustainability risks and lead to an increased investors and consumers' confidence. The aim of the paper is to find out how the indices which evaluate the socially responsible behaviour of enterprises are constructed.
**Design/Methodology/Approach:** The scoping review is the method used in this study. The scoping question is: What do we know about the construction of indices evaluating the socially responsible behaviour of organisations from the existing expert resources?
**Results:** The analysis of 20 papers shows that there is no consensus about the method of determining the weights and constructing the index. There are 4 approaches to the aggregated index construction. The first one uses the percentage of filling the specific criteria or the average of values of specific dimensions of the index. The second one uses the multi-criteria decision-making methods (most often the Analytical hierarchical process method). The third one uses unconventional linguistic models and fuzzy logic and finally, the fourth one uses the factor analysis or the method of the main components.
**Conclusion:** The main feature of CSR indices lies in their methodological disunity. It complicates the understanding of the CSR outputs and essentially makes it impossible to create a CSR performance ranking, especially for small and medium-sized enterprises (hereinafter referred to as SMEs).

***Keywords:*** *Corporate Social Responsibility, Index, SMEs, Scoping review, Clarity of CSR index outputs*

## 1 Introduction

Corporate social responsibility of enterprises (hereinafter referred to as CSR) is interpreted as a transition of enterprises in the perception of their role from the level "profit only" to the level of three "P" – "profit, people, and planet". CSR is also interpreted as the Triple bottom line (TBL). The term TBL, formulated by Elkington in 1994, means that companies should focus not only on increasing their added value in the economic field, but also in the environmental and social area (Elkington, 2013). CSR is connected to ethics, i.e. the ethical dimension of entrepreneurship. It is also related to economics of enterprises, organisation management, and public interests (Slaper & Hall, 2011; Pokorná, 2012; UN, 2013).

The strategy Europe 2020 was adopted in 2010. Its main issue is the promotion of social and territorial cohesion and sustainable growth (European Commission, 2009). In response, the European Commission issued the Communication on 'A Renewed EU Strategy 2011–14 for

Received: 11th July 2019; revised: 29th March 2020; accepted: 8th July 2020

Corporate Social Responsibility'. It deals with a newly defined responsibility of enterprises for their impact on the society (European Commision, 2011). The Council of Europe called for the same in March 2016. At present, the Directive 2014/95/EU (European Parliament, 2014) the European Parliament and of the Council on non-financial reporting by large enterprises obliges them to regularly provide non-financial information on their activities. It applies to trading companies with over 500 employees, with a balance sheet total of more than EUR 20 million and the net profit of more than EUR 40 million. Approximately 30 organisations will be affected by this measure in the Czech Republic according to the assumptions. Regular reporting should make it easier for enterprises to identify the sustainability risks and lead to an increased investors and consumers' confidence. Obviously, the socially responsible reporting has an impact on the successful corporate operations of large and medium sized organisations conduct (Peršič & Markič, 2013). However, the Directive does not prevent the Member States from requiring the disclosure of non-financial information from enterprises not covered by this Directive, including SMEs.

In order to trustworthily report on CSR, there exist the measurement and implementation methodologies. The resulting reports and methodologies are becoming important in the development and spreading the CSR ideas (Fink et al., 2020). Methodologies by Leipziger (2003) considers these methodologies the CSR standards and, according to him, they can be divided into "... performance and process-oriented standards". Performance oriented standards can be considered normative standards as they "define only minimum standards of what the socially responsible behaviour is" (Leipziger, 2003, p. 39). The performance-oriented standards group can include methodologies measuring the socially responsible performance of enterprises generally called the CSR indices.

In general, the index is intended to quickly navigate large data files (lists of companies, databases of individual organisations, etc.). A specific index expresses belonging to a group of organisations holding the given index. In this case, indices can be considered face values. Within a single group (index as a number), we can consider not only nominal but also ordinal data, i.e. we can create an order of organisations grouped under the given index. Cardinal data have the highest informative value, showing how much a particular organisation is better than the following one in the ranking. This is ideal when evaluating the CSR level of organisations, as organisations that hold a particular CSR index should be able to determine their CSR rate compared to other indexed organisations. For example, the DJSI index (Dow Jones Sustainability Index) publishes the cardinal data (Industry Leader Report, 2018) in publicly accessible materials, compared to the FTSE4Good Index Series, where we were not able to trace such data in publicly accessible sources.

The initial study was conducted by the authors. Being a mega-source of scientific information for social and humanitarian sciences, the EBSCO database was chosen for the search of literary resources. The keywords for the search strategy were determined according to the PCC algorithm. The keywords were: Index or Indices and CSR. The search strategy was also specified: not to search for keywords in full texts, but only in the titles or abstracts; to use the available keyword equivalents; to search only in the reviewed texts. The final result was 50 texts, all of which discussed the issue of CSR, but only 12 of them mentioned the keyword index in the abstract. The same keywords were also searched for in the Google Scholar database, which offered over 100,000 links. The Social Responsibility Journal, which includes most of the keywords according to this database, was selected. According to the best correspondence between the keywords and the paper title, four more research papers from this journal were selected.

On the basis of our initial study, we can conclude that the indices mainly reflect the activities perceived as CSR in combination with the economic parameters and interests of financial institutions (profitability, market potential, stability of the stock market position, etc.) and serve as a guidance for potential investors (Pinilos et al., 2018; Hawn et al., 2018). Their benefit indicating the socially responsible behaviour is small and the impacts of CSR indices on the ethical behaviour and culture of the society are unconvincing (see Adel et al., 2019; Collison et al., 2009).

Not every organisation can reach the point of having the CSR index, and according to the found-out indications, it is a fairly small group of large organisations. With all respect to the 'Strategy 2020', indices must be suitable for all types of organisations at all the regional levels as there are more than 90% of SMEs (United Nations, 2019) in the world. Measuring the organisations' performance in CSR (if it does have a use value for their recipients – stakeholders) must be comprehensible to them and the results of the organisations' indexation must be comparable (as pointed out by Rita et al., 2018 and Yang Wen-Tao et al., 2016).

None of the authors of the initial study mentions the existence of a universal and comprehensible CSR index suitable for all types of organisations and stakeholders covering all the CSR areas and based on the CSR ethical foundations. Adel et al. (2019) (attempting to construct such an index) mention the trend of the need for a new CSR index that outlines the evolving needs and requirements of CSR in a non-financial ethical dimension.

From the point of view of ethical entrepreneurship and thus sustainability, it can be deduced that CSR indices should be constructed to serve not only financial institutions, but also all the external stakeholders, organisations of all types and their internal stakeholders (Government of the Czech Republic, 2017).

The aim of the paper is to find out how the indices that evaluate the socially responsible behaviour of organisations are created.

## 2 Methodology

The method of secondary research (i.e. the analysis of already identified and published results) aimed at a rapid systematic review of the selected topic - scoping review was chosen. Its purpose is to describe the scope of the already published scientific results on the subject (Peters et al., 2015). To conduct the scoping review, the Arksey and O'Malley approach, which consists of five steps: identifying search issues, identifying relevant research, selecting research, collecting and comparing data, and summarising and reporting on results was chosen (Arksey & O'Malley, 2005).

The first step in the procedure proposed by Arksey and O'Malley is formulation of the study (scoping) question (Arksey & O'Malley, 2005). The general study (scoping) question is: »What do we know about the construction of indices evaluating the socially responsible behaviour of organisations from the existing expert resources?" The second step in the scoping review method is to determine the descriptive criteria of the scientific papers, see Table 1. The third step is to determine the specific criteria for the initial study of the content of scientific papers on the basis of the initial research. Table 1 shows the second and third steps of the scoping review. The results are presented according to these criteria.

*Table 1: Descriptive and specific criteria established for the scoping review method*

| Descriptive criteria | Specific criteria |
|---|---|
| Publication year | 1. The method of determining dimensions and (sub)categories (terms dimension and subcategory are chosen for being the most common in terms of the issue) |
| Authors | 2. The method of the index model validation (used for the index construction) |
| | 3. The method of determining the weights[1] |
| Research area | 4. The data collection method (filling the index with data) |
| Journal title | 5. The method of index construction |

Source: authors

The Scopus database was selected to perform the scoping review. The Scopus database contains more papers on the issue of CSR indices than the Web of Science database, its sources are quoted more often (Harzing & Alakangas, 2016). The papers in the Scopus database target at a wider target group than the academic community (Chadegani et al., 2013), which is suitable for the applied scientific issue of the CSR indices. Only papers in English professional journals on Business, Management and Accounting for the last 5 years (i.e. from 2014 to 2018) were searched. The next step was to formulate the keywords for the search. The following procedure was selected to search for synonyms for the expression "CSR index". Two expressions were entered into the search algorithm – "CSR" and "index" (they had to appear together). Subsequently, the entire generated list of papers was reviewed, and the synonyms were generated based on their titles. The occurrence of the keywords was monitored only in the paper titles, keywords, and abstracts. The papers not addressing indices evaluating the general concept of CSR were excluded from the search, only the papers meeting the specific criteria were left. The search order was created using Boolean operators.

The search order using Boolean operators was:

TITLE-ABS-KEY ( "social responsib* index" OR "tool to measure social responsib*" OR "evaluate social responsib*" OR "evaluation of social responsib*" OR "sustainability index" OR "tool to measure sustainability" OR "evaluate sustainability" OR "evaluate of evaluation of evaluation of sustainability" AND NOT REPORTING AND NOT DISCLOSURE ) AND DOCTYPE ( AR OR RE ) AND ( LIMIT-TO ( SRCTYPE , "j " ) AND ( LIMIT-TO ( SUBJAREA , "BUSI " ) OR LIMIT-TO ( SUBJAREA , "English " ) OR LIMIT-TO ( PUBYEAR , 2015 )

A total of 130 papers were obtained through the carried out above procedure. Based on the study of the title and abstract, their relevance to the study question was assessed. Only those papers that met the following conditions were selected:

1. They focused at least partially on the methodology of the CSR index construction.

[1] IAEP, School Children´s Acquisition and Maintenance of Quantitative Thinking in Mathematics, PISA, TIMSS.

2. The papers related to the general concept of CSR (or possibly the parallel and very close concept of permanent sustainability) or at least two of the three dimensions of the concept TBL. The papers focusing on a narrow segment – region, sector, product, or raw material were excluded.
3. The full text of the paper was available.

As a result of the application of these selective criteria, 20 papers were analysed – see Table 2.

## 3 Results

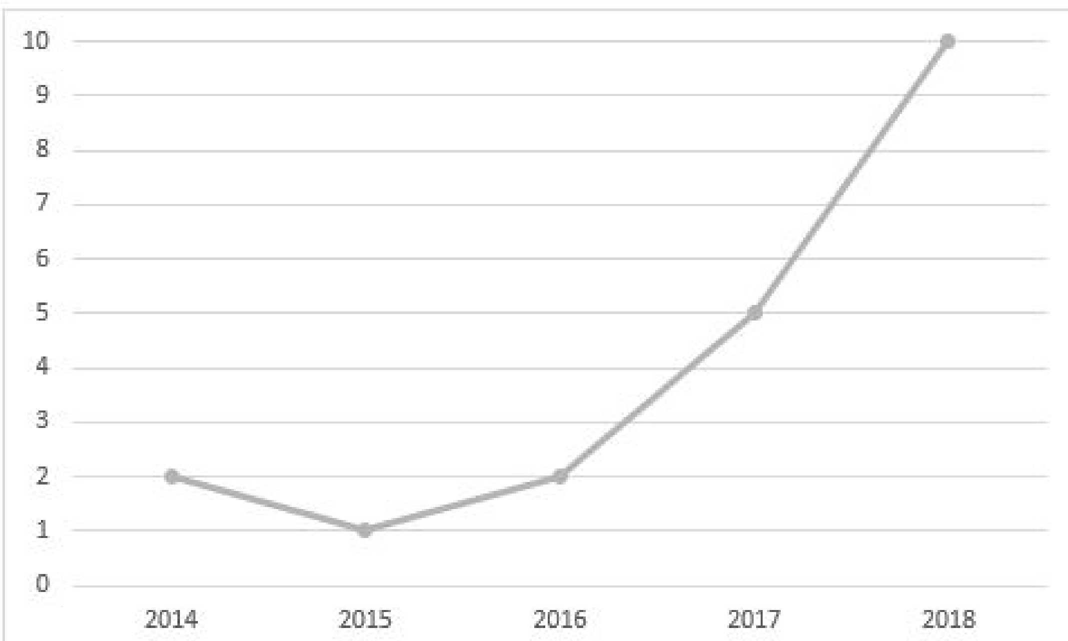
The results are divided into two parts according to the types of the set criteria (see Table 1). The first part presents the descriptive information on the obtained resources. The second part presents the specific information relating to the content of the obtained resources.

Analysis according to the descriptive criteria - descriptive information about the obtained sources.

The scoping review shows that the interest in constructing the index measuring the socially responsible behaviour of an organisation or its sustainability is gradually increasing in the analysed period, especially since 2016 – see Figure 1. However, the interest is still very small in terms of absolute numbers.

Various authors deal with the issue, however, neither of them is listed in more than one paper.[2]

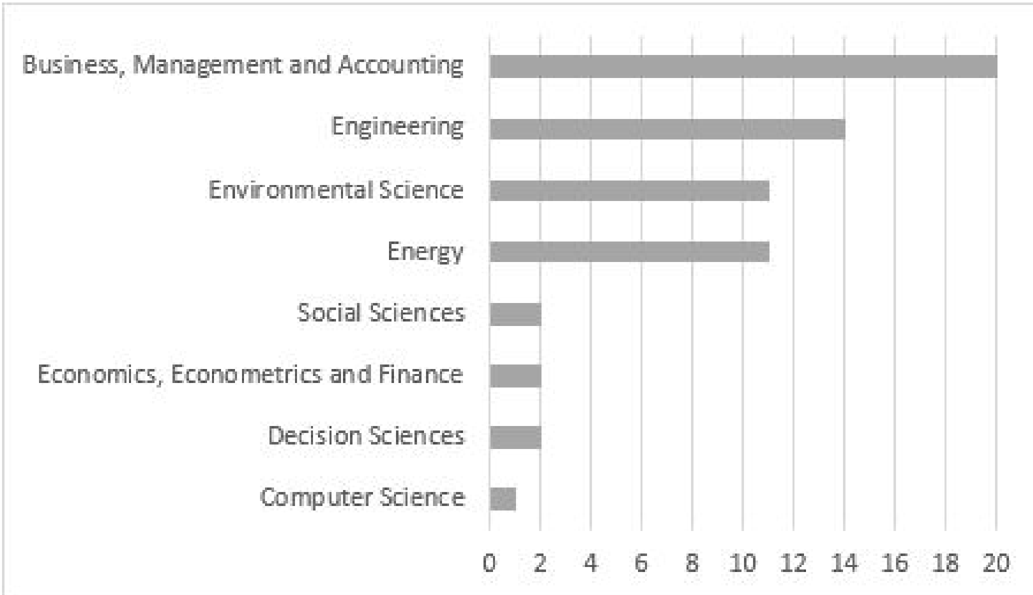
Graph 2 shows that the papers address the issues of Business, Management, and Accounting most frequently. Further, they address Engineering, Environmental Science, and Energy.




Source: authors, based on data from the Scopus database ('Scopus' 2018)

*Figure 1: Number of papers published in the Scopus database for the period 2014-2018*

[2] Two authors have the same surname (Ribeiro), but their names show that they are two different people. The data in the Scopus database show that they do not even come from the same workplace. The authors from the USA, Brazil, and (a little less) from the Czech Republic are most concerned with the issue. Two collectives of authors from the Czech Republic deal with the issue. The first are Staňková and Zapletal from the Faculty of Economics of the Technical University of Ostrava. What is interesting about their approach is that they use unconventional linguistic models and fuzzy logic to construct the index – see below. The second team consists of Rajnoha, Lesníková, and Krajčík – all the three authors work in different universities in the Czech Republic.




Source: authors, based on data from the Scopus database ('Scopus' 2018)

*Figure 2: Connection of the examined papers to the research area*[3]

Data from the Scopus database show that the papers on the index construction are concentrated in the Journal of Cleaner Production by the Elsevier publishing house, the Cite Score of which was 5.79 last year, SCImago Journal Rank (1,467) and Source Normalized Impact per Paper (2,194). The number of such papers in the Journal of Cleaner Production is increasing – in 2014 and 2016 there appeared only 1 paper on the subject, in 2017 there were already 2 papers, and in 2018 there were already 7 papers in its different issues. Beyond them, the rest of the papers can be found in other journals. As for the Czech journals, they are E and M: Economics and Management[4] and Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration.[5]

Analysis according to the specific criteria - specific information related to the content of the obtained sources.

*Table 2: Results of the analysis of the content of papers according to the specific criteria*

| **Author** | **Criterion 1: the method of determining dimensions and (sub) categories** | **Criterion 2: the method of index model validation** | **Criterion 4: the method of data collection for filling the index with data** | **Criterion 5: the method of the index construction** |
|---|---|---|---|---|
| Ribeiro et al., 2018 | review, dimensions established without further explanation | tested in 2 cities | secondary data | simple index |
| Huang & Badurdeen, 2018 | TBL, adopted methodology | tested in 1 company | data available in the enterprise | simple index |

[3] The sum of the papers in research areas is higher than 20, as papers can be related to several research areas.
[4] Paper by Rajnoha, Lesníková and Krajčík.
[5] Paper by Staňková and Zapletal.

*Table 2: Results of the analysis of the content of papers according to the specific criteria (continues)*

| | | | | |
|---|---|---|---|---|
| Marimin et al., 2018 | without explanation, dimensions established without further explanation | tested in 1 company | expert survey - interviews and questionnaires | simple index |
| Schrippe & Ribeiro, 2018 | adopted methodology | tested in 60 organisations | secondary data (available questionnaires) | simple indices |
| Jiang et al., 2018 | review, TBL, authors' own research | tested in 49 companies for the period of 2 years | interviewing company representatives | factor analysis |
| Rodrigues et al., 2018 | TBL, review, authors' own research | tested in 1 city | interviewing company representatives | multi-criteria decision-making |
| Liern & Pérez-Gladish, 2018 | adopted methodology, dimensions established without further explanation | tested in 79 companies | secondary data (other indices, financial data) | fuzzy logic + multi-criteria decision-making |
| Djekic et al., 2018 | review without explanation of the rules | tested in 4 organisations | company data obtained by an unspecified method | fuzzy logic |
| Mansourianfar & Haghshenas, 2018 | reviews without explanation of the rules, TBL | tested in 1 city | secondary data | multi-criteria decision-making |
| Alderete & Bacic, 2018 | adopted methodology, review, dimensions determined without further explanation | tested in 540 municipalities | secondary data | factor analysis |
| Kopacz, Kryzia & Kryzia, 2017 | TBL, review without explanation of the rules | tested in heavy industry | secondary data | multi-criteria decision-making |
| Venturelli et al., 2017 | review, authors' own research | tested in 3 companies | semi-structured interview | fuzzy logic |

*Table 2: Results of the analysis of the content of papers according to the specific criteria (continues)*

| | | | | |
|---|---|---|---|---|
| Kalutara et al., 2017 | review, TBL, authors' own research | not tested | xxx | factor analysis |
| Azevedo & Barros, 2017 | TBL, authors' own research, adopted methodologies, dimensions established without further explanation | tested in 25 companies | secondary data (Sustainibility report) | multi-criteria decision-making |
| Rajnoha, Lesníková, & Krajčík, 2017 | adopted methodology, dimensions established without further explanation | tested in 1 company | secondary data (enterprise data for 5 years) | multi-criteria decision-making |
| Kılkış, 2016 | adopted methodology | tested in 12 cities | secondary data (from authorities and agencies) | simple index |
| Staňková & Zapletal, 2016 | TBL, dimensions established without further explanation | tested in 3 companies | secondary data - Internet presentations, CSR reports, other publications and research | multi-criteria decision-making + fuzzy logic |
| Janamrung & Issaraworn-rawanic, 2015 | adopted methodology, dimensions established without further explanation | tested in 204 companies | secondary data (annual reports, data streams) | simple index |
| Amini & Bienstock, 2014 | adopted methodology, TBL, dimensions established without further explanation | not tested | xxx | simple index |
| Ngai et al., 2014 | adopted methodology, dimensions established without further explanation | not tested | focus groups, interviews | multi-criteria decision-making |

Source: authors, based on data from the Scopus database ('Scopus' 2018)

Most of the analysed papers (11 out of 20) used the CSR TBL concept to identify the dimensions (i.e. the economic, environmental, and social dimensions). For establishing the categories (or subcategories, if the categories were further divided), the authors most often used the existing indices/models (which were further supplemented or modified) or reviews – see Table 2, criterion 1: The method of determining dimensions and (sub)categories. The CSR concept itself is not exactly defined and there is no generally accepted standard to follow (see the outputs of the initial study). The choice of the indices or models is very diverse. The authors of the papers do not usually justify their choice, except stating that this is a known index/model, or that the index/model is suitable for the examined area. The methodologies/indices chosen by the authors (see Table 2, criterion 1) are specifically named in table 3.

Only the authors of two papers are more specific about the process of constructing the index, dimensions, and index categories. For the index construction, Huang and Badurdeen (2018) used the combination of two indices so that the resulting (sub)categories did not overlap and were clear. Schrippe and Ribeiro made an interesting adjustment of the already constructed index. They divided the existing categories into compulsory and compensatory categories based on the assessment of the index categories by a group of experts. The compulsory categories must be fulfilled by organisations at least to some extent in order for them to be considered socially responsible, this does not apply for the compensatory categories (Schrippe & Ribeiro, 2018).

*Table 3: Methodologies chosen for the index construction in the analysed papers*

| The authors constructed their index based on the mentioned methodologies, indices: | The index was constructed in a different, unclassifiable way: |
|---|---|
| Huang & Badurdeen, 2018: Process Sustainability Index and Product Sustainability Index | Mansourianfar & Haghshenas, 2018: predetermined rules |
| Schrippe & Ribeiro, 2018: Corporate Sustainability Index | Azevedo & Barros, 2017: content analysis of sustainability reports |
| Liern & Pérez-Gladish, 2018: model of the Vigeo rating agency | Staňková & Zapletal, 2016: beyond the legal framework |
| Djekic et al., 2018: model by Liu a Lai | |
| Rajnoha, Lesníková, & Krajčík, 2017: model by Krajnce and Glaviče | |
| Kılkış, 2016: SDEWES City Sustainability Index | |
| Janamrung & Issarawornrawanic, 2015: from KLD Rating Data a Corporate Social Responsibility Guideline of the Corporate Social Responsibility Institute of the Stock Exchange of Thailand | |
| Amini & Bienstock, 2014: according to the Hart's natural resource-based view of the firm, TBL and the zero waste perspective | |
| Ngai et al., 2014: adapted Wood's 3P model (principles, processes and products) | |

Source: authors, based on data from the Scopus database ('Scopus' 2018)

In case when the index (sub)categories resulted primarily from the review – see table 2, the review was often supplemented by other methods – most often by individual or group interviewing of experts. The number of the interviewed experts ranged from 3 to 7 (Schrippe & Ribeiro, 2018; Rodrigues et al., 2018; Venturelli et al., 2017). Some authors belonging to this group also state that when determining the (sub)categories, they followed not only the results of the review, but also certain pragmatic motives – their own experience and inventions. For example, Rodrigues et al. (2018) adopted a rule according to which only the category that can be further divided can be considered the category. Kopacz, Kryzia and Kryzia (2017) admit that they chose the content of the categories in such a way that the values were easily identifiable and the total number of included (sub)categories was not too large.

Only three papers from the group of papers using review methods for the identification of (sub)categories also use the factor analyses or their alternatives. The procedure is best described in Kalutara et al. (2017), who identified the individual dimensions and their preliminary categories on the basis of a literature review and enterprise documents. The dimensions were subsequently evaluated by 6 selected experts and adapted in order to be relevant to the examined sectors. This way, 67 preliminary influencing factors were identified (Kalutara et al., 2017). The authors then sent a questionnaire to the selected respondents who met several conditions, which ensured that the respondents understood the problem.[6] The aim was to find out the perceived validity of the individual identified preliminary factors for each dimension. The validity was evaluated on a five-point Likert scale, with the individual points expressed both linguistically and numerically.[7] Before performing the factor analysis, both the internal consistency of respondents' responses (inter-item reliability) using Cronbach's coefficient α and the validity were calculated. In terms of the validity, the authors verified whether the evaluation of the relevance of factors by 6 experts corresponded to the evaluation of a wider sample of addressed respondents. The weighted arithmetic average was used for this purpose. By performing the factor analysis[8] on the material of 67 preliminary influencing factors, 18 superior groups that became the index categories were identified (Kalutara et al., 2017)[9].

As well as Kalutara et al., Jiang et al. wanted the index to accurately measure the social performance of the organisation, and the reliability and validity.[10] The authors used Cronbach's coefficient α to calculate the reliability. Analysing the validity, they distinguish between the content and construct validity. The content validity is calculated using the correlation coefficient between the indicator and the initial performance score. The construct validity is calculated using the main components method (Jiang et al., 2018). As a result, the authors eliminated some of the preliminary factors set by the study since they did not meet the set values and thus gained the final categories.[11,12]

Alderete and Bacic (2018) also used the factor analysis to create the categories and the entire index. First, they used the main components method and subsequently (as well as Kalutara et al. (2017)) the Varimax method for rotation. Marimin et al. (2018) used a more general alternative to the factor analysis in their research. They used the multidimensional scaling to construct a three-point scale, on which they measured the individual categories (Monolingual dictionary).[13]

The last group of authors approached the formulation of (sub)categories in a completely different way than described above. For example, Azevedo and Barros (2017) used the content analysis to examine the sustainability reports of 25 companies over a 16-year period. On the basis of the carried out analysis and taking into account the Global Reporting Initiatives Guidelines and established requirements (categories must be measurable, data must be available and verifiable), the authors formulated the final category (Azevedo, & Barros, 2017). Staňková and Zapletal (2016), in their turn, picked out only the categories that go beyond the legal obligations of the organisation. Contrarily, Mansourianfar and Haghshenas firstly defined a set of nine rules, on the basis of which they then chose the final form of the subcategories (Mansourianfar & Haghshenas, 2018).[14]

On the basis of the carried-out analysis, it can be concluded that most of the indices are conceived as aggregated constructs whose structures contain weights. Indices always allow for the possibility of multiple criteria that are thereafter combined with their structure, in which a value in the form of weights is assigned to each newly created category. It is often very difficult to draw a line between the index contents construction and construction of the weights assigned to each part of the index.

On the basis of the carried-out analysis, the authors of this paper created groups of indices that showed the same approaches to their construction – see table 2. Basically, the approaches to the index construction can be divided into four groups.

1. Simple indices

The first group does not use weights at all or uses them only at the last stage of the aggregated index construction. This group includes, for example, the index constructed by Ribeiro et al. (2018), which shows the percentage of compliance with the requirements placed on an organisation, or the Schrippe and Ribeiro index (2018) showing how the organisation fulfills the so-called compulsory criteria in percentage[15] (Schrippe & Ribeiro, 2018). The dimension

---

6 They received 107 responses in total (Kalutara et al., 2017).

7 Strongly disagree (1-1.5), disagree (1.5-2.5), neither agree nor disagree (2.5-3.5), agree (3,5-4,5) strongly agree (4,5-5,0) (Kalutara et al., 2017).

8 They chose the Varimax rotation method (Kalutara et al., 2017).

9 The data file containing the overview of all the dimensions, categories, and subcategories is at the authors' disposal. The file was not published for being too extensive.

10 The questionnaire was completed by 49 companies united in 1 association. Its aim was to find out the data in the individual TBL dimensions (Jiang et al., 2018).

11 Cronbach's coefficient α is higher than 0,7, correlation coefficient (content validity) is higher than 0,5, and the loading between the correlated indicators and the first main component (construct validity) is higher than 0,5 (Jiang et al., 2018).

12-14 The data file containing the overview of all the dimensions, categories, and subcategories is at the authors' disposal. The file was not published for being too extensive.

value can also be calculated as the ratio of the points obtained per each dimension category to the maximum number of points in the dimension. The final index value is then determined by the arithmetic average of the dimension values (Janamrung, & Issarawornrawanich, 2015). The index value given by the average of the dimension values is also presented by Huang and Badurdeen (2018), as well as Marimina et al. (2018) and Kılkışe (2016) who use the simple weighting. The idea is to make the index construction as simple as possible and understandable to users, compared to the following indices, which are more sophisticated, more accurate, and therefore, sometimes more difficult to be understood by general public.

2. Indices using the selected multi-criteria decision-making method

The second group uses the multi-criteria decision-making methods, most often the method of analytical hierarchical process, sometimes extended by the unconventional linguistic models and fuzzy logic. To determine the value of each dimension, Azevedo and Barros used the Delf method. The value of each dimension is determined by the sum of the category values that can have a positive or negative impact on the dimension, i.e. a positive or negative value. To aggregate dimensions into the resulting index, the multi-criteria method of decision-making, namely the weighted sum method, the advantage of which is transparency and clarity for the public, was used (Azevedo & Barros, 2017). Mansourianfar and Haghshenas follow the method of analytical hierarchical process, where, within the pair comparison, experts assess which of the two offered (sub)categories is more important and by how much. The index value is determined by the sum of the weights and normalised values of each category (Mansourianfar & Haghshenas, 2018). Kopacz, Kryzia, and Kryzia (2017) or Rajnoha, Lesníková, and Krajčík (2017) also used the analytical hierarchical process method. Staňková and Zapletal as well as Liern a Pérez-Gladish (2018) extended the method by the unconventional linguistic models and fuzzy logic.

3. Indices using the unconventional linguistic models and fuzzy logic

The third group uses the unconventional linguistic models and fuzzy logic in the index construction. It uses linguistic terms to introduce the preferences of the decision-maker (Pokorný et al., 2017). Djekic et al. expressed each category on a three-value linguistic scale, which was subsequently converted into numeric values on a scale from 0-100. When aggregating dimensions, each dimension had the same weight (Djekic et al., 2018). Unconventional linguistic models and fuzzy logic, specifically the fuzzy expert system, were also used by Venturelli et al. (2017).

4. Indices using the factor analysis

The last group uses the factor analysis (or its analogy – the main components method) in the index construction. Both Kalutara et al. and Alderete a Bacic used it not only to identify categories, but also to reveal the weights. They chose the method of the main components to select the factors. Kalutara et al. presented the way of aggregation as well - the index is calculated as the sum of the values of individual dimensions multiplied by the respective weights (Kalutara et al., 2017). Jiang et al. chose the method of the main components instead of the factor analysis. The resulting index is then given by the product of the sustainable performance score and development coordination degree (Jiang et al., 2018).

When constructing the index, the expert panels are often used for deciding on the categories, dimensions, and weights. The expert panels method is aimed at summarising and synthesis of a wide range of data and information and creating a summarising report, which is a set of recommendations for solving the discussed issue or an overall vision regarding the covered subject. The main task of the expert panel is usually the synthesis of different input data. The method is suitable for solving the highly complex issues (e.g. CSR) requiring knowledge from different disciplines.

## 4 Discussion

The scoping review shows that the indices authors use the form of a case study in a particular organisation to test the indices the most often. The number of the investigated organisations did not exceed 12 in the case of the multiple case studies. The data are obtained primarily from the secondary sources. Only in 3 cases the authors did obtain the index calculation data from interviewing in the organisation. The above-mentioned procedure does not change in the case of larger research samples (from 49 to 204 organisations). The authors most often use the data from the databases, or the information provided on the websites or in reports of the investigated organisations.

Schrippe and Ribeiro's approach, where they collected data for creating an adjusted index directly from the ques-

[15] The dimension value in their model is given by the lowest value of the compulsory category and the final index value is given by the lowest dimension value. The index is therefore based on the idea that poor performance in one compulsory dimension/category means that an organisation cannot be considered socially responsible.

tionnaires that the companies had to fill out in order to have a chance to reach the Corporate Sustainability Index of the Brazilian Stock Exchange can serve as an inspiration1. Given that this is a relatively exceptional index, which a maximum of 40 out of the 200 companies with the most liquid shares can reach, the vast majority of the selected companies voluntarily published their answers, which in turn served as a data source for the further research of the authors (Schrippe & Ribeiro, 2018).

There is no consensus about the method of determining the weights and index construction. Most of the CSR indices are created by using the existing data, which are later variously adjusted according to the expert panels formed according to different criteria.

According to Mansourianfar and Haghshenas, the subcategories must meet the following criteria by being (Mansourianfar & Haghshenas, 2018):

- relevant to sustainability in its three main dimensions;
- comprehensible to an ordinary citizen;
- transparent in its content and structure – i.e. the user should be able to find out how the final value is calculated;
- foreseeable;
- comparable;
- appropriate for scaling, i.e. measurable on an appropriate spatial and time scale;
- measurable, i.e. repeatedly measured and able to be quantified;
- feasible, i.e. reliable, reasonably priced and
- independent, i.e. independent of each other.

In the carried out scoping review, it was not possible to well-monitor the way the described indices were used. They are explicitly mentioned only in 2 papers. Most of the time, the authors only state that they created their own index based on a review, but they are not specific in what exactly the review contained. If we accept the options described in the introduction to interpret the output data of the indices as nominal, ordinal, and cardinal data, then at first glance it seems possible to create an order of organisations according to the CSR rate by means of the CSR index evaluation. If we consider the resulting indices as ordinal, then we can trace the use, as different forms of rankings within a single index methodology are used. However, taking into account the cardinal data shows that the resulting CSR indices of different methodologies do not determine the real ranking of organisations. This is due to the inconsistency of the construction of the different CSR indices, the diversity of inputs for the evaluation of the CSR indices, and the diversity of profiles of the target evaluated groups of organisations. The CSR index notice value is also affected by the data source processed in the CSR index, the method of evaluating the data in the CSR index, as well as the clarity of the CSR output for the user.

It can be assumed that there is still a number of other ways of constructing and evaluating the CSR indices that are traceable in other scientific databases.

In the process of summarising the outputs of the carried-out research, we face a number of follow-up questions: Is CSR a suitable content for indexing? Can the CSR activities that should be an expression of free will and a specific visibility of the organisation's relations with the society be expressed by the index? What is more relevant for the CSR index evaluating? Are these data obtained from publicly available sources that respondents publish themselves or the process by which an organisation reaches the value of a particular index? Furthermore, the differences in social, i.e. national, religious, regional, legislative frameworks at national levels that change the concept of CSR according to the environment must be taken into account (Bernardová et al., 2018a).

The positive effects of CSR activities on the society are one of the basic characteristics of the CSR concept, and these can only be perceived by the end-users. Maria Gjølberg illustrates this fact in her paper. To address it, she develops 2 indices: one measuring the CSR activities and one measuring the CSR performance in 20 OECD countries. The comparison of results reveals the significant differences between the 20 countries. (Gjølberg, 2009). The issue of approaching the CSR indices in different countries is also discussed by Halkos and Skouloudis (2018), who highlight the interconnection of the global CSR concept and innovative capacity with regard to the national specifics of individual countries.

CSR is a social construct that develops in parallel with the social evolution. This is documented in a timeline of scientifically and practically recognised definitions. In 1954, Bowen defined the CSR as: "... the entrepreneur's obligations to carry out such procedures, to take such decisions or to follow such direction of conduct as desirable in terms of the objectives and values of the society.' The 2001 Definition of the European Commission defines the CSR as follows: "*... describe it as a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis...."(Commission of the European Communities, 2001). The UN states that: „Corporate sustainability is imperative for business today – essential to long-term corporate success and for ensuring that markets deliver value across society. To be sustainable, companies must do five things: Foremost, they must operate responsibly in alignment with universal principles and take actions that support the society around them. Then, to push sustainability deep into the corporate DNA, companies must commit at the highest level, report annually on their efforts, and engage locally where they have a presence.*" (UN, 2014, p. 7) Rasche's et al., (2017) definition says: "CSR policy acts as a self-regulatory mechanism by which the company monitors and ensures its active compliance with legal spirit, ethical standards and national or international standards." The concept of CSR is being transformed, however, the ethical nature of entrepreneurs' responsibility towards the society remains the same. Responsibility as an individual response to the needs of others is elaborated in the paper by Lévinas. The author emphasises the primacy of ethical (moral) values over any thinking, knowledge and people's actions (Lévinas, 2009, p. 123). In terms of CSR, this means: understanding the needs of the society and taking into consideration the societal needs in entrepreneurship; the ability to communicate with all the stakeholders; the ability to orientate in the structure and functioning of the company; the ability to estimate the consequences of one's own conduct; and the ability to see one's own role in passing on the values to the future generations.

## 5 Conclusion

The aim of the paper was to find out how the indices that evaluate the socially responsible behaviour of organisations are created. The reason is to evaluate their usability for SMEs that account for around 99% of active entrepreneurial entities in the EU (European Parliament, 2020).

The indices are a well-established tool of the CSR measurement. Approaches to their construction are of different level of complexity, which subsequently manifests itself in the level of their comprehensibility. The CSR methodologies using other than simple mathematical procedures are complicated to interpret. Indices using the linguistic models and fuzzy logic are intended to make the value data more effective by using the knowledge and experience of the "experts". In the data processing, they do not use the mathematical, but the linguistic models. But even these indices do not always give us the ability to understand the logic of their construction for SMEs.

In the case of SMEs, the use of the CSR index according to the above-mentioned construction methods seems problematic. SMEs cannot employ the CSR experts or employees understanding the complex descriptions of the CSR indices construction (see indices using the factor analysis, indices using the multi-criteria decision-making methods, indices using the unconventional linguistic models and fuzzy logic) (Bernardová et.al., 2018b). SMEs also do not often produce the data which the indices based on the secondary data processing are drawn from. The indices described in the simple index group are mainly applicable to SMEs.

**Limitations of the research and ethical aspects of the study:**

The carried-out research has several limitations to be taken into account when interpreting the results. The scoping review was conducted within one database and only in the selected period of 2014-2018. Therefore, extending the review for additional databases and time periods could potentially change the results. It should be also noted that the assessment of the relevance of the papers to the study question was carried out by one researcher, which increases the level of subjectivity of the selection.

## Acknowledgements

This article is dedicated to the Project No. TL02000336: Corporate Social Responsibility Index under the Éta 2 TAČR Program financed by the Technology Agency of the Czech Republic.

## Literature

Adel, C., Hussain, M., Mohamed, E., & Basuony, M. (2019). Is corporate governance relevant to the quality of corporate social responsibility disclosure in large European companies? *International Journal of Accounting & Information Management*, 27(2), 301-332. https://doi.org/10.1108/IJAIM-10-2017-0118

Alderete, M.V., & Bacic, M.J. (2018). Local Productive Arrangements and local development in non-metropolitan municipalities of Sao Paulo, Brazil. *Cuadernos de Gestión*, 18 (1), 103-124. http://doi.org/10.5295/cdg.150561ma

Arksey, H., & O'Malley, L. (2005). 'Scoping Studies: Towards a Methodological Framework'. *International Journal of Social Research Methodology.* 8(1), 19–32. https://doi.org/10.1080/1364557032000119616

Azevedo, S., & Barros, M. 2017. The Application of the Triple Bottom Line Approach to Sustainability Assessment: The Case Study of the UK Automotive Supply Chain. *Journal of Industrial Engineering and Management,* 10(2): 286. https://doi.org/10.3926/jiem.1996.

Bernardová D., Ivanová, K., & Fink, M. (2018a). CSR: země vzniku, země rozvoje, země aplikace [CSR – Countries of Origin, Countries of Development, Countries of Application]. In Horáková, N., ed. *Sociologické výzvy ve středoevropském kontextu: 8.* československé *sociologické dny v Ostravě 15. 11. 2017* [*Sociological challenges in the Central European context: 8th Czech-Slovak Sociological Days in Ostrava 15. 11. 2017*]. Ostrava: Ostravská univerzita.

Bernardová D., Ivanová, K., & Kubicová, J. (2018b). Společenská odpovědnost organizacía její význam pro rozvoj region. [Corporate Social Responsibility and its Importance for the Development of the Region]. In Jílková, E. et al. *Hospodářská politika a regionální rozvoj* [*Economic Policy and Regional Development*] (pp. 148-176). Olomouc: Moravská vysoká škola Olomouc

Bowen. H. R. (1953). *Social Responsibilities of the Businessman*. New York: Harper & Row.

Chadegani, Arezoo Aghaei, Hadi Salehi, Melor Md Yunus, Hadi Farhadi, Masood Fooladi, Maryam Farhadi, & Nader Ale Ebrahim (2013.) A Comparison between Two Main Academic Literature Collections: Web of Science and Scopus Databases'. *Asian Social Science.* 9 (5), 18–26. https://doi.org/10.5539/ass.v9n5p18

Collison, D., Cobb, G., Power, D., & Stevenson, L. (2009). FTSE4Good: exploring its implications for corporate conduct. *Accounting, Auditing & Accountability Journal*, 22(1), 35-58. https://doi.org/10.1108/09513570910923006

Commission of the European Communities. (2001). Green Paper. Promoting a European Framework for Corporate Social Responsibility. Retrieved January 22, 2019 from https://ec.europa.eu/commission/presscorner/detail/en/DOC_01_9

Eldomiaty, T., Soliman A., Fikri A., & Anis, M. (2016). The financial aspects of the Corporate Responsibility Index in Egypt: A quantitative approach to institutional economics. *International Journal of Social Economics,* 43(3), 284-307.

Elkington, J. (2013). Enter the Triple Bottom Line. In: *The Triple Bottom Line, Does It All Add Up?: Assessing the Sustainability of Business and CSR*. London: Earthscan

European Commission (2015). *Awareness-raising questionnaire*. Retrieved December 30, 2018, from https://ec.europa.eu/docsroom/documents/10369/attachments/1/translations/en/renditions/pdf

European Commission. (2011). *Communication from The Commission to The European Parliament, The Council, The European Economic and Social Committee and The Committee of The Regions: A renewed EU strategy 2011-14 for Corporate Social Responsibility.* Retrieved December 18, 2018 from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52011DC0681&from=EN

European Commission. (2009). *The governance challenge for knowledge policies in the Lisbon Strategy: Between revolution and illusion*. Luxembourg: Office for Official Publications of the European Communities. Retrieved December 18, 2018, from http://ec.europa.eu/invest-in-research/pdf/download_en/kin123469enc_web.pdf)

European Parliament (2020). Small and medium-sized enterprises. In *Fact Sheets on the European Union.* Retrieved January 20, 2020 from https://www.narodniportal.cz/legislativa/narodni-akcni-plan-pro-byznys-a-lidska-prava-na-obdobi-2017-2022/https://www.europarl.europa.eu/ftu/pdf/en/FTU_2.4.2.pdf

European Parliament (2014). *Directive 2014/95/EU: Non-financial reporting.* Retrieved December 18, 2018 from https://eur-lex.europa.eu/eli/dir/2014/95/oj

Fink, M., Ivanová, K., Bernardová, D., Arkhangelska, T., & Kašparová, K. (2020). Social Responsibility ETA Index 2019. *International Journal of Curriculum and Instruction,* 12 (Special Issue), 50–65. Retrieved February18, 2020, from https://files.eric.ed.gov/fulltext/EJ1245281.pdf

Gjølberg, M. (2009). Measuring the immeasurable?: Constructing an index of CSR practices and CSR performance in 20 countries. *Scandinavian Journal of Management*. 25(1), 10-22. http://doi.org/10.1016/j.scaman.2008.10.003

Government of the Czech Republic (2017). *National Action Plan for Business and Human Rights 2017-2022.* Retrieved January 18, 2020 from https://www.narodniportal.cz/legislativa/narodni-akcni-plan-pro-byznys-a-lidska-prava-na-obdobi-2017-2022/

Halkos G., & Skouloudis A. (2018). Corporate social responsibility and innovative capacity: Intersection in a macro-level perspective. *Journal of Cleaner Production,* 182, 291-300. https://doi.org/10.1016/j.jclepro.2018.02.022

Harzing, A.W., & Alakangas, S. (2016). Google Scholar, Scopus and the Web of Science: A Longitudinal and Cross-Disciplinary Comparison. *Scientometrics.* 106(2), 787–804. https://doi.org/10.1007/s11192-015-1798-9

Hawn, O., Chatterji, A. K., & Mitchell, W. (2018). Do investors actually value sustainability? New evidence from investor reactions to the Dow Jones Sustainability Index (DJSI). *Strategic Management Journal*, 39 (4), 949-976. http://doi.org/10.1002/smj.2752

Huang, A., & Badurdeen, F. (2018). Metrics-Based Approach to Evaluate Sustainable Manufacturing Performance at the Production Line and Plant Levels. *Journal of Cleaner Production*, 192, 462–76. https://doi.org/10.1016/j.jclepro.2018.04.234

Janamrung, B., & Issarawornrawanich, P. (2015). The Association between Corporate Social Responsibility Index and Performance of Firms in Industrial Products and Resources Industries: Empirical Evidence from Thailand. *Social Responsibility Journal,* 11(4), 893–903. https://doi.org/10.1108/SRJ-11-2013-0141

Janik, B., & Bartkowiak, M. (2015). The comparison of socially responsible indices in Central and Eastern Europe. *International Journal of Environmental Technology & Management,* 18(2), 153-169.

Jiang, Qiuhong, Zhichao Liu, Weiwei Liu, Tao Li, Weilong Cong, Hongchao Zhang, & Junli Shi. (2018). A Principal Component Analysis Based Three-Dimensional Sustainability Assessment Model to Evaluate Corporate Sustainable Performance. *Journal of Cleaner Production,* 187, 625–37. https://doi.org/10.1016/j.jclepro.2018.03.255

Kalutara, Pushpitha, Guomin Zhang, Sujeeva Setunge, & Ron Wakefield. 2017. Factors That Influence Australian Community Buildings' Sustainable Management. *Engineering, Construction and Architectural Management,* 24 (1), 94–117. https://doi.org/10.1108/ECAM-10-2015-0158

Kılkış, Ş. (2016). Sustainable Development of Energy, Water and Environment Systems Index for Southeast

European Cities, *Journal of Cleaner Production,* 130, 222–34. https://doi.org/10.1016/j.jclepro.2015.07.121

Kopacz, M., Kryzia, D & Kryzia, K. (2017). Assessment of Sustainable Development of Hard Coal Mining Industry in Poland with Use of Bootstrap Sampling and Copula-Based Monte Carlo Simulation. *Journal of Cleaner Production,* 159, 359–73, https://doi.org/10.1016/j.jclepro.2017.05.038

Leipziger, D. (2003). *The corporate responsibility code book*. Sheffield: Greenleaf Publishing.

Lévinas, E. (2009). *Etika a nekonečno* [*Ethics and Infinity*]. Praha: Oikoymenh

Liern, V., & Pérez-Gladish, B. (2018). Ranking Corporate Sustainability: A Flexible Multidimensional Approach Based on Linguistic Variables. *International Transactions in Operational Research,* 25(3), 1081–1100. https://doi.org/10.1111/itor.12469

Mansourianfar, M. H., & Haghshenas, H. (2018). Micro-Scale Sustainability Assessment of Infrastructure Projects on Urban Transportation Systems: Case Study of Azadi District, Isfahan, Iran. *Cities,* 72,149–59. https://doi.org/10.1016/j.cities.2017.08.012

Marimin, Darmawan, M. A., Widhiarti, M. P., & Teniwut, Y. K. (2018). Green Productivity Improvement and Sustainability Assessment of the Motorcycle Tire Production Process: A Case Study. *Journal of Cleaner Production,* 191, 273–82. https://doi.org/10.1016/j.jclepro.2018.04.228

Peršič, A., & Markič, M. (2013). The Impact of Socially Responsible Reporting on Successful Corporate Operations. *Organizacija*, 46, 47-54. https://doi.org/10.2478/orga-2013-0007

Peters, M. D. J., Godfrey, C.M, Khalil, H., McInerney, P., Parker D., & Baldini Soares, C. (2015). Guidance for Conducting Systematic Scoping Reviews. *International Journal of Evidence-Based Healthcare.* 13 (3), 141–46. https://doi.org/10.1097/XEB.0000000000000050

Pinillos, A., A., Fernández-Fernández, J. L., & Fernández Mateo, J. (2018). A critical review of the Corporate Governance dimension in the Sustainability Indexes questionnaires. *Revista de Comunicación*, 17 (2), 9-40. https://doi.org/10.26441/RC17.2-2018-A1

Pokorná, D. (2012). *Koncept společenské odpovědosti: obsah, podstata, rozsah* [*Concept of Social Responsibility: Content, Basis, Scope*]. Olomouc: Univerzita Palackého

Pokorný, M. et al. (2017). Soft-Computing Technologies in economics expert Systems. In Ryan, D. ed., *Expert systems: Design, Applications and Technology* (pp. 1-58). New York: Nova Science Publishers

Rajnoha, R., Lesníková, P., & Krajčík, V. (2017). Influence of Business Performance Measurement Systems and Corporate Sustainability Concept to Overall Business Performance: “Save the Planet and Keep Your Performance”. *E+M Ekonomie a Management,* 20 (1), 111–128. https://doi.org/10.15240/tul/001/2017-1-008

Rasche, A., Morsing, M., & Moon, J. (eds.). (2017). *Corporate Social Responsibility: Strategy, Communication, Governance*. Cambridge: Cambridge University Press.

Rita, D.I.G., Ferreira, F.A.F., Meidutė-Kavaliauskienė, I., Govindan, J., & Ferreira, J.J.M. (2018). Proposal of a green index for small and medium-sized enterprises: A multiple criteria group decision-making approach. *Journal of Cleaner Production*, 196, 985-996. https://doi.org/10.1016/j.jclepro.2018.05.275

RobecoSAM. (2018). *Industry Leaders 2018*. Retrieved December 20, 2018, from https://www.robecosam.com/csa/csa-resources/industry-leaders.html

Rodrigues, A.P. et al. (2018). Developing Criteria for Performance Assessment in Municipal Solid Waste Management. *Journal of Cleaner Production,* 186, 748–57. https://doi.org/10.1016/j.jclepro.2018.03.067

Schrippe, P., & Ribeiro, J. L. D. (2018). Corporate Sustainability Assessment Heuristics: A Study of Large Brazilian Companies. *Journal of Cleaner Production,* 188, 589–600. https://doi.org/10.1016/j.jclepro.2018.02.232

Slaper, T. F., & Hall, T. J. (2011). The Triple Bottom Line: What Is It and How Does It Work? *The Indiana Business Review*, 86 (1), 4-8. Retrieved January 14, 2019, from http://www.ibrc.indiana.edu/ibr/2011/spring/pdfs/spring2011.pdf

Staňková, Š., & Zapletal, F. (2016). Assessment of Corporate Social Responsibility Using Fuzzy Analytic Hierarchy Process. *Scientific Papers of the University of Pardubice*, Series D: Faculty of Economics and Administration, 2016 (23), 142–54.

United Nations (2019). *Micro-, Small and Medium-sized Enterprises Day 27 June.* Retrieved March 24, 2019, from https://www.un.org/en/events/smallbusinessday/

United Nations (2014). *United Nations Global Compact*. UN. Retrieved March 24, 2019, from https://www.globalcompact.de/wAssets/docs/Nachhaltigkeits-CSR-Management/un_global_compact_guide_to_corporate_sustainability.pdf

United Nations (2013). Economic and Social Council Explores Integration of Three Sustainable Development Pillars - Economic, Social, Environmental - to Achieve ‘Triple Win’ Solutions.*Meetings Coverage & Press Releases*. Retrieved January 24, 2019, from https://www.un.org/press/en/2013/ecosoc6574.doc.htm

Venturelli, A., Caputo, F., Leopizzi, R., Mastroleo, G., & Mio, C (2017). How Can CSR Identity Be Evaluated? A Pilot Study Using a Fuzzy Expert System. *Journal of Cleaner Production,* 141, 1000–1010. https://doi.org/10.1016/j.jclepro.2016.09.172

Yang Wen-Tao, Zhu Xiang-Dong, & Nie Zhong-Ying. (2016). Research on evaluation index system of small and medium size enterpises in engineering machinery industry from social responsibility perspective. *Journal of the Balkan Tribological Association*, 22 (2A-II), 2108-21234.

**Dana Bernardová, Ph.D.** is an expert assistant at the Department of Social Sciences and Law, Moravian Business College Olomouc, Olomouc, Czech Republic. Her research focuses on the CSR, HR management, soft skills. She participates in research projects, teaches, conducts soft skills training, and leads project CSR teaching in direct co-operation with SMEs.

**Klára Kašparová, Ph.D.** is an associate professor at the Department of Corporate Economy, Faculty of Economics and Administration, Masaryk University, Brno, Czech Republic. Her research focuses on the CSR, marketing, marketing communication and marketing research. She participates in the research projects, teaches, and publishes in marketing and CSR.

**Martin Fink Mgr.** is an expert assistant at the Department of Social Sciences and Law, Moravian Business College Olomouc, Olomouc, Czech Republic. He deals with the CSR, the issue of quality of life and QMS (ISO 9001), teaches CSR and communication skills, and participates in project focused on teaching of CSR in collaboration with regional SMEs.

**Kateřina Ivanová, Ph.D.** is an associate professor and a temporarily entrusted Vice-Rector for Science, Research and Development; the Associate Professor at the Department of Social Sciences and Law, Moravian Business College Olomouc, Olomouc, Czech Republic. She focuses on the ethical foundations of social responsibility and methodology of sociological research for business practice, conducts scientific research projects, and teaches business ethics, methodology.

**Tetiana Arkhangelska, Ph.D.** is a Department Manager, senior lecturer at the Department of Social Sciences and Law, Moravian Business College Olomouc, Olomouc, Czech Republic. She focuses on the corporate social responsibility, management of commercial activities abroad, comparative and gender linguistics, teaches and publishes in the field of CSR, Ethics and CSR of small and medium-sized businesses as well as management of commercial activities.

**Sestava in pomen kazalnikov družbene odgovornosti podjetij - od rezultatov do bistva**

**Ozadje in namen:** Redno poročanje o družbeni odgovornosti podjetij naj bi podjetjem olajšalo prepoznavanje trajnostnih tveganj in vodilo do večjega zaupanja vlagateljev in potrošnikov. Namen prispevka je ugotoviti, kako so sestavljeni indeksi, ki se uporabljajo za ocenjevanje družbeno odgovornega ravnanja podjetij.
**Zasnova / metodologija / pristop:** Pregled obsega je metoda, uporabljena v tej študiji. Vprašanje za določanje obsega je: Kaj vemo o oblikovanju indeksov, ki ocenjujejo družbeno odgovorno vedenje organizacij iz obstoječih strokovnih in znanstvenih virov?
**Rezultati:** Analiza 20 člankov je pokazala, da glede metode določitve uteži in konstrukcije indeksa ni soglasja v literaturi. Obstajajo 4 pristopi k oblikovanju indeksa. Prvi uporablja odstotek izpolnjevanja določenih meril ali povprečje vrednosti določenih dimenzij indeksa. V drugem pa so uporabljene večkriterijske metode odločanja (najpogosteje analitična hierarhična metoda). Tretji uporablja nekonvencionalne lingvistične modele in mehko logiko, četrti pa temelji na faktorski analizi ali metodi glavnih komponent.
**Zaključek:** Glavna značilnost indeksov družbene odgovornosti je njihova metodološka raznolikost. To oteži razumevanje rezultatov analiz družbene odgovornosti podjetij in v bistvu onemogoča rangiranje po uspešnosti glede družbene odgovornosti, še zlasti za mala in srednje velika podjetja.

***Ključne besede:*** *Družbena odgovornost podjetij, Indeks, Pregled obsega, Indeks družbene odgovornosti podjetij*

DOI: 10.2478/orga-2020-0015

# The Impact of Industry 4.0 on Export Market Orientation, Market Diversification, and Export Performance

**Alenka NAGLIČ, Polona TOMINC, Klavdij LOGOŽAR**

University of Maribor, Faculty of Economics and Business, Razlagova 14, SI-2000 Maribor, Slovenia, alenkanaglich@gmail.com, polona.tominc@um.si, klavdij.logozar@um.si

**Background and Purpose:** Existing literature on the Industry 4.0 concept does not provide a clear empirical verification if and how the implementation of Industry 4.0 impacts export market orientation, market diversification, and export performance of firms. The purpose of this paper is to provide a framework on how firms can increase their export performance by knowing the impact of Industry 4.0 on firms' export activities.
**Methodology:** The analysis is based on an examination of 81 Slovenian export firms, with the majority active in the processing industry in which the export of products and services represents a more than 20% share in the total revenue of the firm. Factor analysis and multiple regression were used to process the collected data.
**Results:** The analysis results reveal that firms that invest in advanced technologies and realize digital transformation are better prepared to compete internationally and achieve better export performance.
**Conclusion:** Our study showed the positive link between implementation of Industry 4.0 and export activities of firms and confirmed that implementation of Industry 4.0 leads to many changes in the mindset and operation of Slovenian firms and actively reflects in their export results. The research findings may serve as an important guide for managers in the optimal planning and management of export marketing and business activities. The study thus provides a foundation for the growing research on the relationship between Industry 4.0 and export business activities of firms.

***Keywords:*** *Industry 4.0, Export market orientation, Market diversification, Export performance.*

## 1 Introduction

Industry 4.0[1] is bringing many changes that represent numerous advantages or growth possibilities to firms, i.e. the possibility to expand to new, non-traditional markets, streamline products, adapt manufacturing without delays, and efficiently use resources and energy, in addition to causing firms to face new challenges.

Ganzarain & Errasti (2016, 1122) deterimne that Industry 4.0 is a new phenomenon based on technological concepts of cyber-physical systems and Internet of Things and Services that has the potential to give rise to smart factories and influence every economic sector, especially industry. The phrase or abbreviation I 4.0 appeared in 2011 as a result of an association of representatives of German firms, politics, and academicians striving to boost the competitiveness of the German manufacturing industry based on high technology (Kagermann et al., 2011) as well as a

Received: 2nd February 2020; revised: 20th June 2020; accepted: 15th July 2020

[1] According to i-SCOOP (2020) Industry 4.0, which refers to the fourth industrial revolution (TechTarget, 2020), is the digital transformation of manufacturing/production and related industries and value creation processes.

focus on smart – (a) smart products, (b) processes, and (c) procedures and factories (BMBF, 2017).

According to Kagermann et al. (2013), implementing Industry 4.0 will not only strengthen the competitive position of firms but also drive solutions to both global (e.g. resource and energy efficiency) and national challenges (e.g. managing demographic change) (Kagermann et al., 2013). Rodič (2017, 205) claims, that even when firms are not interested in implement¬ing the Industry 4.0 paradigm, the pressure from their competitors or partners will motivate them to do so. As suggested by Jerman et al. (2020, 69 and 75) it is also important to know and understand new competencies of employees such as technical literacy, information and communications technology (ICT) literacy, inovation and creativity, openness to learning, adaptation to change and various soft skills, introduced by the concept of Industry 4.0.

Prior researches revealed that Industry 4.0 encourages (a) the creation of new business models (Frank et. al., 2019; Müller et al., 2020) (b) transformation of internationalization processes (Strange & Zucchella, 2017; Chiarvesio & Romanello, 2018) and (c) impacts on firms' (export) performance (Dalenogare et al., 2018; Büchi et al., 2020).

While Grzybowska & Łupicka (2017, 222) determine that the development of new technologies is the main driving force behind the contemporary global economy, Müller et al. (2018c) claim that strategic as well as operational opportunities are positive drivers of Industry 4.0 implementation, whereas challenges regarding competitiveness as well as organizational and production fit hinder its progress. Veile et al. (2019) expose seven dimensions, which need to be considered when implementing Industry 4.0: (1) corporate culture and communication, (2) personnel, (3) firm organization, (4) safety and security, (5) preparing the implementation of Industry 4.0 solutions, (6) integrating Industry 4.0 solutions and (7) financial feasibility.

Müller et al. (2018c) determine that the perception of Industry 4.0-related opportunities and challenges, which is the first step toward Industry 4.0 implementation, depends to a large extent on different firms' characteristics. According to Horvâth & Szabó (2019, 119) multinational firms have higher driving forces and lower barriers to industry 4.0 than small and medium-sized firms.

The contemporary dynamics in the field of technology development and market globalization require firms to innovate and internationalize while also remaining competitive in the international marketplace (Bettiol et al. 2020). According to Hannibal & Knight (2018), opportunities presented by Industry 4.0 might provoke firms to rethink their degree or geography of internationalization. While Strange & Zucchella (2017) highlight the possibilities of the potential transformation that Industry 4.0 can have on the international dimension of firms, Chiavesio & Romanello (2018) didn't confirm a direct relationship between Industry 4.0 and internationalization, but among other things encouraged scholars to research the relationship between investments in Industry 4.0 and the firm's strategy to remain competitive in the international context.

One of the latest researches (Bettiol et al. 2020) on the relationship between investments in Industry 4.0 and internationalization processes shows that the implementation of Industry 4.0 does not change the international strategy of the firms, but is mainly focused on finding coherence between the opportunities based on those technologies and the present strategy of the firms. Nevertheless, the authors Bettiol et al. (2020) argue that firms that source globally and export present the highest level of sensitiveness to global competition in the investments in Industry 4.0 technologies.

Despite the growing body of economic research on Industry 4.0, little attention has been paid to an examination of opportunities and challenges related to export business and performance of firms. The purpose of our study is to find out whether and how the implementation of Industry 4.0 reflects in firms' export business.

The main objective of this article is to examine if and how the implementation of Industry 4.0 encourages firms' export activities, such as (a) export market orientation and (b) market diversification – not only to traditional but also emerging markets (China, India, Vietnam, Turkey, Pakistan), and improves its export performance. Accordingly, this study attempts to answer the following research questions:

**RQ1:** How does the implementation of Industry 4.0 impact the export market orientation of firms?

**RQ2:** How does the implementation of Industry 4.0 impact the strategy of diversification to the dynamic markets of fast developing countries?

**RQ3:** How does the implementation of Industry 4.0 impact the export performance of firms?

More and more Slovenian firms are aware that digitalization of manufacturing is essential for improving competitiveness on domestic and foreign markets. In 2017, the industrial sector composed 32.2% of Slovenia's total GDP, which is an encouraging fact when compared to the industrial sector's share in the EU's total GDP of 25.1% in 2017 (CIA, 2020), however these data are accompanied by the questions, 'Which transformation phase are Slovenian firms currently in?' or 'Are they capable of introducing future technologies?' (Herakovič, 2016, 12).

In the further course of this paper, Chapter 2 describes the theoretical background, whereas Chapter 3 outlines the designing of the conceptual model and hypotheses. In Chapter 4, the empirical approach is described, encompassing a survey of 81 Slovenian export firms and the survey results. Chapter 5 presents a discussion, while Chapter 6 is closing the paper with a conclusion.

# 2 Literature review

## 2.1 Industry 4.0 and export activity

According to Bettiol et al. (2020, 2) the new emerging paradigm of the fourth industrial revolution promises to redefine the sources of value through the exploitation of new sets of technologies such as co-robots, additive manufacturing, Internet of Things (IoT), big data, and artificial intelligence being directly connected to manufacturing.

Industry 4.0 has been one of the emerging topics in relation to international business in the last decade (Strange & Zucchella, 2017; Chiarvesio & Romanello, 2018).

The implementation of Industry 4.0 is an evolutionary process that requires current basic technologies and experiences to be adapted to the specific requirements of manufacturing engineering and innovative solutions for new locations and new markets to be explored (Kagermannn et al., 2013, 7).

Alcácer et al. (2016, 499) claim that the new techno-economic paradigm of the information age has brought about new structures and processes in international business. In their recent contribution, Bettiol et al. (2020, 1) highlight growing attention on the relationship between implementation of Industry 4.0 and internationalization processes. The authors (Bettiol et al., 2020, 9) argue that different level of internationalization impacts the motivation of implementation of Industry 4.0 technologies. According to the authors, emerging technologies can modify the scale and organization of manufacturing processes, potentially pushing firms toward the redefinition of their activities worldwide.

As reported by Laplume et al. (2016, 595), the implementation of new technology, such as 3D printing, has the potential to partially reverse the trend towards global specialization of production systems into elements that may be geographically dispersed and closer to the end users. Strange & Zucchella (2017, 174) expose the importance of further growth of digital platforms for the distribution of products (e.g. Amazon, Alibaba), which make it easier for small firms to also enter global markets.

According to recommendations (Chiavesio & Romanello, 2018) for future investigation on the relationship between Industry 4.0 and their related effects on the international configuration and performance of firms, the present study is focused on the importance and influence of Industry 4.0 on export activities of firms' and optimizing their export performance. In fact, no empirical evidences have been developed up now to test if and how Industry 4.0 is impacting firms' export activities, especially in terms of how their diversification strategies to untraditional, emerging markets are considered.

## 2.2 Industry 4.0 and export market orientation

A firm's export market orientation is based on the perception of the environment and on better knowledge of the needs, requirements, and wishes of foreign consumers. Export market-oriented firms are more informed about the needs of their target markets and will be positioned more strategically than their less market-oriented competitors to tailor products and services for those markets (Day & Wensley, 1988).

The emergence of the information and digital age is rapidly changing the manner of international business activity (Alcácer et al., 2016). Industry 4.0 relies on the adoption of digital technologies to gather data in real time and to analyze it, providing useful information to the manufacturing system (Wang et al., 2016). Rezk et al. (2016) predict that emerging technologies will reshape the international configuration options available to firms.

As already stated, export market orientation is based on collecting, analyzing, and using information on foreign markets. It is also based on the formation of suitable export strategies in accordance with that information.

For instance, smart, connected products allow companies to form new kinds of relationships with customers, requiring new marketing practices and skill sets (Porter & Heppelmann, 2014). In other words, as companies accumulate and analyze product usage data, they gain new insights into how products create value for customers, enabling better positioning of offerings and more effective communication of product value to customers (Porter & Heppelmann, 2014).

According to the findings from the scientific literature on the impact of Industry 4.0 on firms' export market orientation, it can be assumed that emerging technologies are an important part of consolidating export market orientation.

## 2.3 Industry 4.0 and diversification strategy (on emerging markets)

The fast technological and communication progress in recent decades has operatively brought distant markets much closer and further encouraged firms to expand internationally, even though their operations are getting more complex with stronger internationalization due to the diverse cultural, institutional, and competitive environment.

According to Porter & Heppelmann (2015), implementation of some Industry 4.0 technologies may have strong impacts on the firms themselves and even across their boundaries.

Although the literature highlighted (Strange & Zucchella; 2017; Rehnberg & Ponte, 2017) the importance of

Industry 4.0 technologies in connection with developing international activities, Chiarvesio & Romanello (2018) didn't confirm a direct relationship between Industry 4.0 and internationalization or any underlying impact in terms of internationalization.

On the other hand, different authors have speculated on how some new technologies may impact cross-border business. For example, 3D printing may alter the way production is organized across time and space – with important redistributive effects on geography and size of production activities (Rehnberg & Ponte, 2018), while the digitalization that includes internet and mobile technologies with high-speed connectivity has helped bring about a change to established (export) business models (Roblek et al., 2016). In their recent contribution, Strange & Zucchella (2017) discuss the potential implications of big data for international business. They determine that firms will be able to monitor emerging trends and opportunities in overseas markets without the need to make substantial resource commitments in local marketing affiliates, and that they will be able to more effectively optimize their supply, production, and distribution activities around the world.

The availability of good-quality big data will enable firms to analyze and operationalize them and realize the potential benefits (Strange & Zucchella, 2017), which is particularly important in the case of firms that have the ambition to expand their business activities to international markets, especially fast growing, distant ones, which offer great business opportunities but represent a different business environment and weakly known culture and customer preferences.

It is evident that the young growing population with potential consumer power is an important driver for international business experts that want to pursue opportunities in the rising Asian and other emerging markets. Despite the fact that the world has changed dramatically as a result of the pandemic, the advanced economy group is forecast to grow at 4.5 percent in 2021, while growth for the emerging market and developing economy group is forecast at 6.6 percent in 2021 (IMF, 2020) – a great starting point to take advantage of the fourth industrial revolution, which offers an option of real-time international connectivity, product coordination, and customization of production without a time lag.

### 2.4 Industry 4.0 and export performance

Export performance is one of the most studied topics of international operations and the central construct in export marketing research (Cavusgil & Zou, 1994; Leonidou, Katsikas & Samiee, 2002). However, little is known about how firms see the potential contribution of Industry 4.0 related technologies for export performance.

Prior studies docu¬mented that new technologies, more efficient production techniques, and new products and processes resulting from technological innovation help exporting firms to respond to technological and environmental changes in highly competitive global markets (Kafouros et al., 2008; Zahra & Covin, 1995), whereby the research of Azar & Ciabuschi (2017) indicates that organizational innovation enhances export performance by sustaining technological innovation.

To achieve a competitive advantage, a company must be able to differentiate itself and thus command a price premium, operate at a lower cost than its rivals, or both. This allows for superior profitability and growth relative to the industry average (Porter & Heppelmann, 2014). Azar & Ciabuschi (2017, 333) are convinced that adopting innovations is vital to ensuring adaptive behavior by exporting firms.

Industry 4.0 is considered a new industrial stage in which vertical and horizontal manufacturing process integration and product connectivity can help companies to achieve higher industrial performance (Dalenogare et al., 2018). According to Haseeb et al. (2019) elements of Industry 4.0 such as big data, Internet of Things, and smart factory have a positive role in promoting information technology (IT) implementation, which contributes to sustainable firm performance. Adopting a higher number of smaller technological innovations enables exporting firms to better adjust to the new foreign environment and enhance their performance rather than focusing exclusively on radical innovations (Azar & Ciabuschi, 2017, 333).

## 3 Conceptual Model and Hypotheses

Export market oriented firms operate on the basis of obtaining information that enables better understanding of consumers in foreign markets (Narver & Slater, 1990), therefore we assume that the firms employing the new set of technologies, such as, in particular, Industrial IoT (Porter & Heppelman, 2014; Strange & Zucchella; 2017) and Big Data, which enable management of large amounts of data (Manyika et al., 2015; Strange & Zucchella; 2017), will be more successful in developing export strategies. We can assume that the Industry 4.0 digital business environment promotes planning and making strategic export decisions on the basis of data on (potential) foreign market consumers, therefore we propose the first hypothesis:

**Hypothesis 1:** Industry 4.0 implementation positively impacts the export market orientation of firms.

We believe that in order to develop an appropriate strategy for the firm's market diversification to distant, fast developing markets, the ability of international networking in real time, adjusting production without delay, and coordinating products are of critical importance. These are the advantages brought about by the fourth industrial revolution (Müller et al., 2018a). The adoption of some Industry 4.0 technologies may cause (1) global value chain reconfiguration (Rehnberg & Ponte, 2017), for example reverse the trends towards global specialization of production systems into elements that may be geographically dispersed and closer to the end users (Laplume et al., 2016, 595), or (2) optimization of firms' supply, production, and distribution activities around the world (Strange & Zucchella; 2017), which is also reflected in the ambitions in formulating the firm's international market expansion, especially to distant, fast developing foreign markets that offer numerous business opportunities. This is grounds for our second hypothesis.

**Hypothesis 2:** Industry 4.0 implementation positively impacts the strategy of diversification to the dynamic markets of fast developing countries.

Researches argue that adopting innovations for the development of a foreign market is beneficial to export performance (Azar & Ciabuschi, 2017; Büchi et al., 2020). International competitiveness of firms is increasingly dependent on their competitive potential, therefore based on the results of previous research (Kafouros et al., 2008; Azar & Ciabuschi, 2017), we believe that export firms will only be sufficiently responsive and competitive with regard to the environmental and technological challenges posed by the increasingly fierce competition in terms of market globalisation by adopting new technologies, effective production techniques, and new products and processes. From an IB perspective, we may expect that Industry 4.0 technology implementation influences the firms' ability to compete in national and regional foreign markets as well as cross-border optimisation of business processes and activities in the broader geographical area. In reference to this, we put forward the following hypothesis:

**Hypothesis 3:** Industry 4.0 positively impacts the export performance of firms.

Further on, we are introducing the conceptual framework, based on theoretical perspective and developed hypotheses (see Figure 1).

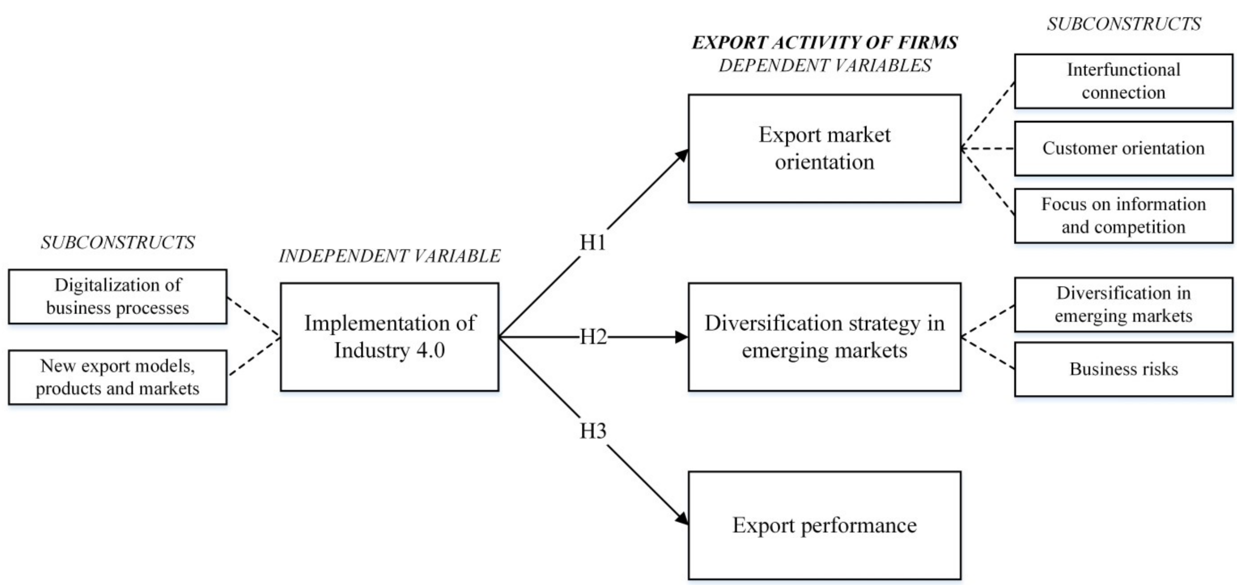



*Figure 1: Conceptual model and hypotheses*

# 4 Study methodology and sample

## 4.1 Questionnaire design

In the first phase of the empirical study, we focused on designing relevant and reliable measurement scales by means of which we tried to study individual constructs as precisely as possible. Based on scientific literature, we searched for suitable measurement scales. If none were available, we designed them in accordance with the fundamental definitions of the constructs and drafted individual question banks. Questionnaire items are shown in the Appendix.

### 4.1.1 Explanatory variable construct

For the Industry 4.0 implementation explanatory variable construct in hypotheses H1, H2, and H3, we designed a new questionnaire comprised of items linked to the digitalization of operations (Herakovič, 2016; Kagerman et al,. 2013; Dais & Bosch 2014), creation of new export strategies and models, a fast information flow, and a facilitated overcoming of temporal as well as geographic obstacles (Kagerman et al., 2013; Ganzarain & Errasti, 2016). The construct was measured on the seven-point Likert scale. The questionnaire design takes into consideration important fields, such as the digitalization of business processes and the competitiveness of the firm, the creation of new business (export) models, a facilitated flow of information, and new – digital marketing channels.

### 4.1.2 Dependent variable constructs

a) Export orientation of firms – hypothesis H1

The Export orientation of Slovenian firms construct has been operationalized based on the shortened range of Narver and Slater statements, focusing on the market orientation dimension descriptions (Narver & Slater, 1990). For the purposes of our study, the scale was additionally adapted in accordance with Cadogan et al. (2009, 86). When designing the scale or subscales, our point of view was just like for the authors of the information on export markets, the availability/dissemination of public information, and the responsiveness of the export firm or its employees. The questionnaire has been significantly shortened and simplified, as we were mostly interested in definitions that were focused on export market orientation, and we avoided posing questions and statements on related topics, because we did not want to deter the representatives of the firms surveyed from participating in a research as a result of too many statements to choose from. The construct was measured on the seven-point Likert scale.

b) Strategy of diversification to the dynamic markets of fast developing countries – Hypothesis H2

To measure the construct Strategy of diversification to the dynamic markets of fast developing countries, we created a new questionnaire based on the long-term marketing potentials of fast developing markets (PwC, 2017; Lins & Servaes, 2002), the uncertainty of the business environment (Jurše, 2017), demographics (OECD, 2019), the capacities of the firm, and the skill set of the personnel (Sakarya et al., 2007; Jurše, 2017), due to the specific nature of the empirical study (non-traditional markets, young population, rising new purchasing power). The respondents evaluated individual statements based on the 7-point Likert scale.

c) Export performance – Hypothesis H3

The studying of export performance was focused on the factors that significantly influence the export performance of firms, i.e. their sales on foreign markets, export market share, entry into foreign markets, and the average annual sales growth in comparison to the average annual growth of their industry. The questionnaire was designed based on the measurement instrument developed by Cadogan et al. (2002). All four items were measured on the 7-point scale, with the first three items focused on measuring satisfaction (1 – very unsatisfied, 7 – very satisfied), and average annual sales growth focused on evaluating the achieved level (1 – very bad, 7 – very good).

## 4.2 Applied methodology

In order to test hypotheses H1, H2, and H3, the multidimensional dependent variables (export market orientation, strategy of market diversification to the dynamic markets of fast developing countries, and export performance) and the explanatory variable (Industry 4.0 implementation) were designed by means of factor analysis, whose applicability was tested beforehand by means of the Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) index (Kaiser, 1974), which has to be above 0.5. The shared variance of an individual variable explained with all the factors together was verified by means of communalities. If an individual variable did not reach the prescribed value of 0.4, it was removed from the analysis. In the further course of the factor analysis, we evaluated the dimensionality, validity, and reliability of the constructs. When determining a smaller number of factors, we used the rule of the own value, which has to be more than 1 for individual factors, as well as the rule of the entire explained variance, with the stipulated value of more than 60%. The convergent validity of a construct was verified with the factor loading applying to the relevant factor. Loading values equal to or higher than 0.6 have confirmed the interconnection between variables measuring the same construct. The construct reliability or the consistency of individual factors was determined with the Cronbach Alfa Coefficient (Cronbach, 1951), with the prescribed value of at least 0.60.

The dependability of a dependent variable on an explanatory variable or the created factors was studied by means of the regression analysis, which was performed separately for each of the hypotheses under the consideration of the value of the (multiple) correlation coefficient used to explain the correlation strength and the direction between dependent and independent variables as well as the value of the (multiple) coefficient of determination based on which the relationship between the explained and total variance for a dependent variable was determined. It was verified with the F-test if it is sensible to use the regression model, which demonstrates the suitability of a model as a whole or the existence of a linear relationship. Additionally, the T-test and statistical significance confirm the existence of codependency among variables. We took the 5% significance rate into consideration.

## 4.3 Characteristic of the sample

The survey questionnaire was distributed via e-mail at the beginning of April 2019 to 300 corporate addresses. We received 144 responses to the questionnaire by the end of April 2019. 63 firms were eliminated, because their responses were incomplete. Therefore, the final sample for the data analysis featured 81 firms that met all the conditions (n=81).

The email was addressed to the employees at one of the following positions in the firm: management board chairman or member, director of the firm, director or manager of the export department, director or manager of the marketing department, others (sales manager, chief digital information officer, financial analyst, head of controlling).

The survey is based on the examination of 81 Slovenian export firms, with the majority active in the processing industry (see Table 1) in which the export of products and services represents a more than 20% share in the total revenue of the company on foreign markets. Table 1 shows that the majority, i.e. 37% of the survey respondents, were small firms. The director function was the most common among survey respondents (43.2%). 14.8% of respondents declared themselves the director/manager of the export department, with the same share also attributed to other positions, such as marketing manager, controlling manager, sales manager, and other similar positions. The majority of firms participating in the study (Table 1) were processing firms (34.6%) as well as information and communication firms (17.3%). A striking 56.8% of the firms included in the study have been present on foreign markets for more than 11 years (Table 1).

It is evident from the data analysis results in Table 2 that as many as 64.2% of the participating companies realize the biggest share of their revenues on foreign markets through the export of products. Table 2 shows that exports account for 21 to 40% of the entire revenue of 42% of organizations participating in our study. The most important market category into which the largest export share (Table 2) of the respondent firms falls is developed markets, with a share of 88.9%. As little as 1.2% of the firms participating in the study stated the independent markets category (e.g. Saudi Arabia – defined as a developing market, Botswana – defined as a frontier market).

*Table 1: Profile of surveyed firms and respondents*

| **Size of the firm** | $\mathbf{f_k}$ | $\mathbf{f\%_k}$ |
|---|---|---|
| Micro enterprises (1-10 employees) | 16 | 19.7 |
| Small firms (11-50 employees) | 30 | 37.0 |
| Mid-sized firms (51-250 employees) | 21 | 25.9 |
| Large firms (251 + employees) | 14 | 17.3 |
| **Total** | **81** | **100.0** |
| **Position** | $\mathbf{f_k}$ | $\mathbf{f\%_k}$ |
| Chairman/member of the management board | 10 | 12.3 |
| Director of the firm | 35 | 43.2 |
| Director/manager of the export department | 12 | 14.8 |
| Director/manager of the marketing department | 10 | 12.3 |
| Does not wish to respond | 2 | 2.5 |
| Other | 12 | 14.8 |
| **Total** | **81** | **100.0** |

*Table 1: Profile of surveyed firms and respondents (continues)*

| **Activity of the firm** | **$f_k$** | **$f\%_k$** |
|---|---|---|
| A – Agriculture and hunting, forestry, fisheries | 3 | 3.7 |
| C – Processing | 28 | 34.6 |
| F – Construction | 4 | 4.9 |
| G – Sale, maintenance in repair of motor vehicles | 7 | 8.6 |
| H – Transport and storage | 4 | 4.9 |
| J – Information technology and communication | 14 | 17.3 |
| F – Finance and insurance | 2 | 2.5 |
| L – Real estate | 3 | 3.7 |
| N – Other various business activities | 16 | 19.8 |
| **Total** | **81** | **100.0** |
| **Presence on foreign markets** | **$f_k$** | **$f\%_k$** |
| Less than 1 year | 2 | 2.5 |
| From 1 to 5 years | 17 | 21.0 |
| From 6 to 10 years | 16 | 19.7 |
| 11 years or more | 46 | 56.8 |
| **Total** | **81** | **100.0** |

*Table 2: Export share in the entire revenue of the firm, strategic form of export internationalization, and the most important market category according to the Global Market Index.*

| **Share of export in the total revenue of the firm** | **$f_k$** | **$f\%_k$** |
|---|---|---|
| Between 21% and 40% | 34 | 42.0 |
| Between 41% and 60% | 18 | 22.2 |
| Between 61% and 80% | 8 | 9.9 |
| More than 81% | 21 | 25.9 |
| **Total** | **81** | **100.0** |
| **Strategic form of export internationalization representing the biggest export share for the company** | **$f_k$** | **$f\%_k$** |
| Product export | 52 | 64.2 |
| Contract-based forms | 20 | 24.7 |
| Direct investments | 9 | 11.1 |
| **Total** | **81** | **100.0** |
| **Most important market category according to the Global Market Index representing the biggest export share for the company** | **$f_k$** | **$f\%_k$** |
| Developed markets | 72 | 88.9 |
| Developing markets | 8 | 9.9 |
| Independent markets | 1 | 1.2 |
| **Total** | **81** | **100.0** |

# 5 Results

## 5.1 Factor analysis results

Based on the factor analysis, we established that the Industry 4.0 implementation construct is two-dimensional (Table 3), i.e. comprised of two subconstructs – digitalization of business processes and new export models, products, and markets. The two factors explain 81.94% of the total variance. Since the communality value was insufficient, we disqualified variable II4_3 in advance (a fast information and data flow makes it easier to overcome temporal and geographic obstacles) and repeated the factor analysis with the disqualified variable. The construct is convergently valid, since the rotated factor loadings for individual factors exceed 0.6. It is also reliable, which is evidenced from the Cronbach Alfa Coefficient that equals 0.781 for the construct.

The factor analysis results for the dependent variable Export orientation of Slovenian firms (Table 4) have shown that the construct is multidimensional. In accordance with the fundamental variables, we named the first factor or subconstruct Inter-functional connectivity, the second Consumer focus, and the third Focus on the information and competition on foreign markets. These three factors explain 96.18% of the variance. The rotated factor matrix showed higher-than-prescribed rotated factor loadings for individual subconstructs also in this studied construct, therefore the entire construct is convergently valid. Suitable Cronbach Alfa Coefficient values confirm the reliability of the scale.

The rotated matrix for the Construct Diversification Strategy into the dynamic markets of emerging countries (Table 5) pointed us towards disqualifying two factors or subconstructs – Diversification to fast developing markets and Operational risks, which explain 89.48% of the entire variance. Due to an insufficient communality value, we disqualified fundamental variable DSDMEM_5 (We have suitably trained marketing experts for our entry on foreign markets) in advance and repeated the factor analysis with the disqualified variable. The Cronbach Alfa Coefficient values confirmed the reliability or consistency of both factors (subconstructs) as well as the entire construct.

Construct Export performance of firms is unidimensional (Table 6). After fundamental variable EP_1 (With our firm's sale to foreign markets in the last 3 years, we are: 1 – very unsatisfied, 7 – very satisfied) was disqualified for not having met the prescribed communality value of 0.4 and the factor analysis was repeated, the factor loadings are above 0.6, which confirms the convergent validity of the construct. One single factor explains 76.82% of the entire variance. The Cronbach Alfa Coefficient value is 0.842, making the scale reliable.

*Table 3: Results of Factor Analysis for the Construct Implementation of Industry 4.0*

| | | | Factor loadings | |
|---|---|---|---|---|
| Statement | | Communalities | 1 | 2 |
| II4.0_1 | Digitalization of business processes is crucial for the competitiveness of the firm. | 0.735 | **0.857** | 0.008 |
| II4.0_2 | Industry 4.0 encourages executives to design new export strategies and models. | 0.869 | 0.180 | **0.915** |
| II4.0_4 | The implementation of digitalization is supervised by competent executives. | 0.852 | **0.886** | 0.258 |
| II4.0_5 | The automation of manufacturing/business processes encourages us to create new products and/or expand to new markets. | 0.881 | 0.102 | **0.933** |
| II4.0_6 | New marketing (digital) channels are used to increase export sales. | 0.761 | **0.855** | 0.172 |
| **Kaiser-Meyer-Olkin measure:** 0.663; **Chi-Square:** 190.200 | | | | |
| **Cumulative percentage of explained variance for the first factor:** 54.73%<br>**Cumulative percentage of explained variance for the second factor:** 27.21% | | | | |
| **Cronbach Alpha – all items (5):** 0.781<br>**Cronbach Alpha – factor 1:** 0.850<br>**Cronbach Alpha – factor 2:** 0.858 | | | | |

*Table 4: Results of Factor Analysis for the Construct Export Orientation of firms*

| | | | Factor loadings | | |
|---|---|---|---|---|---|
| | **Statement** | **Communalities** | **1** | **2** | **3** |
| EO_1 | We closely monitor the information on trends (e.g. provisions, technological development, politics, economy on export markets). | 0.979 | 0.078 | -0.032 | **0.986** |
| EO_2 | We continuously plan and monitor the firm's activities connected to meeting consumers' needs on foreign markets. | 0.980 | -0.027 | **0.989** | -0.029 |
| EO_3 | Executives in all positions in the firm are constantly in contact with current and prospective consumers on foreign markets. | 0.971 | 0.014 | **0.985** | -0.022 |
| EO_4 | Consumer satisfaction on foreign markets is often measured and carefully planned in advance. | 0.942 | -0.019 | **0.968** | -0.068 |
| EO_5 | Employees in the marketing department, along with employees from other departments in the firm, study future requirements and needs of consumers on foreign markets. | 0.966 | **0.982** | 0.018 | 0.038 |
| EO_6 | Information on consumers on foreign markets is available to everyone in the firm. | 0.906 | **0.942** | -0.071 | 0.119 |
| EO_7 | Executives frequently discuss advantages and strategies of competitors on foreign markets. | 0.987 | **0.992** | -0.009 | 0.050 |
| EO_8 | All departments in the firm take part in the export operations. | 0.981 | **0.989** | 0.020 | 0.062 |
| EO_9 | We respond quickly to marketing and other competitive activities of our competitors on foreign markets. | 0.978 | 0.096 | -0.066 | **0.982** |
| EO_10 | The export personnel are continuously in contact with the manufacturing department. | 0.929 | **0.963** | -0.008 | 0.050 |
| **Kaiser-Meyer-Olkin measure:** 0.801; **Chi-Square:** 1463.067 | | | | | |
| **Cumulative percentage of explained variance for factor 1:** 48.43%<br>**Cumulative percentage of explained variance for factor 2:** 29.28<br>**Cumulative percentage of explained variance for factor 3:** 18.47% | | | | | |
| **Cronbach Alpha – all items (10):** 0.814<br>**Cronbach Alpha – factor 1:** 0.987<br>**Cronbach Alpha – factor 2:** 0.981<br>**Cronbach Alpha – factor 3:** 0.978 | | | | | |

## 5.2 Hypotheses testing results

In the further course of the empirical study, the hypotheses were verified by means of regression analysis. The results of individual models are shown in Table 7.

**Testing hypothesis H1**

The results of the first regression model (Table 7) studying the impact of Industry 4.0 implementation on the export orientation of Slovenian firms show that the subconstruct digitalization of business processes (standardized regression coefficient = 0.267; p<0.017) has a statistically significant impact on the export orientation of Slovenian firms, while there is no direct connection between new export models, products, and markets as well as the export orientation of Slovenian firms, since the connection is not statistically significant. The R2 coefficient equals 0.076 and is statistically significant (p<0.050), which means that 7.6% of the variance of the export orientation construct can be explained through the variance of both variables together. The Durbin-Watson coefficient close to the prescribed value of 2 shows that there is no autocorrelation in the residuals. Firms that have digitalized their operations on all operational levels have shown a stronger export ori-

*Table 5: Results of Factor Analysis for the Construct Diversification Strategy into the dynamic markets of emerging countries*

| | | | Factor loadings | |
|---|---|---|---|---|
| | **Statement** | **Communalities** | **1** | **2** |
| DSDMEM_1 | For our industry, fast developing markets represent long-term marketing potentials. | 0.875 | **0.935** | -0.004 |
| DSDMEM_2 | The uncertainty of the business environment is one of the key factors when deciding on entering the markets of fast developing economies. | 0.958 | 0.094 | **0.975** |
| DSDMEM_3 | The dynamic BRIC markets are crucial for the growth of our firm. | 0.845 | **0.908** | 0.144 |
| DSDMEM_4 | We consider China and India to be among economically the most dynamic and attractive developing markets. | 0.921 | **0.957** | 0.073 |
| DSDMEM_6 | The strategy of diversification to developing markets has been assessed as risky. | 0.882 | 0.034 | **0.939** |
| DSDMEM_7 | We are interested in entering Asian developing markets with a young geographic composition and a growing purchasing power. | 0.868 | **0.930** | 0.065 |
| DSDMEM_8 | We only opt for non-ownership forms when entering fast developing high-risk markets. | 0.972 | 0.088 | **0.982** |
| DSDMEM_9 | The marketing activity diversification strategy on developing markets is designed in accordance with the firm's capacities. | 0.956 | 0.089 | **0.974** |
| DSDMEM_10 | The firm's international competitiveness is boosted with outward internationalization to non-traditional, fast developing markets. | 0.776 | **0.877** | 0.085 |
| **Kaiser-Meyer-Olkin measure:** 0.795; **Chi-Square:** 1072.610 | | | | |
| **Cumulative percentage of explained variance for factor 1:** 52.23%<br>**Cumulative percentage of explained variance for factor 2:** 37.25% | | | | |
| **Cronbach Alpha – all items (9):** 0.882<br>**Cronbach Alpha – factor 1:** 0.956<br>**Cronbach Alpha – factor 2:** 0.979 | | | | |

entation. The new export models, products, and markets construct has a negative and statistically insignificant impact on the export orientation. The strength of the linear connection between the dependent and the independent variables is weak, since the R value in our case is only 0.274. Hypothesis H1 that Industry 4.0 implementation positively affects the export market orientation of Slovenian firms can only be partially confirmed.

### Testing hypothesis H2

Model 2 (Table 7) was used to establish the effect of Industry 4.0 implementation on the strategy of diversification to the dynamic markets of fast developing countries. It can be concluded that the subconstruct of the digitalization of operations (standardized regression coefficient = 0.267; $p<0.016$) positively affects the expansion of firms to developing markets. It has been established that the link between new export models, products, and markets and the expansion strategy to fast developing markets is not statistically significant. The adjusted coefficient of determination R2 equals 0.066 and is statistically significant ($p<0.026$), which means that 6.6% of the variance of the diversification to the dynamic markets of fast developing countries strategy construct can be explained through the variance of both predictor variables. The Durbin-Watson coefficient is 1.787, which excludes potential autocorrelation problems. Hypothesis H2 stating that Industry 4.0 implementation positively impacts the strategy of diversification to the dynamic markets of fast developing countries can thus only be partially confirmed.

**Testing hypothesis H3**

The results of the third regression model (Table 7) confirm that the subconstructs of business process digitalization (standardized regression coefficient = 0.855; p<0.001) and new export models, products, and markets (standardized regression coefficient = 0.172; p<0.003) have a statistically significant positive impact on the export performance of Slovenian firms. The effect of the digitalization of operations subconstruct on export performance is very strong, whereas the subconstruct of new export models, products, and markets only has a weak impact on the export performance of Slovenian firms. The adjusted coefficient of determination R2 equals 0.754 and is statistically significant (p<0.026), which means that 75.4% of the variance of the export performance of Slovenian firms construct can be explained through the variance of both predictor variables. The Durbin-Watson coefficient equals 1.580, so there is no danger of residual autocorrelation. It has been established that firms with digitalized operations as well as systematically designed new export models, products, and selected markets achieve better export performance compared to firms that have not (completely) digitalized their operations or are still insisting on traditional business models and product ranges as well as selected markets. Slovenian export-oriented firms will have to urgently follow the trends of digital transformation in the future, also when it comes to faster collection of important data and information from remote foreign markets. With timely recognition and fast reactions to customer requirements as well as thorough monitoring of the competition on foreign markets, firms boost their own competitiveness and increase their possibilities for maintaining/improving export performance. Hypothesis H3 stating that Industry 4.0 implementation positively impacts the export performance of Slovenian firms has therefore been confirmed in full.

## 6 Discussion

The aims of this study are to fill the voids in the extant literature by providing empirical confirmation of the impacts of Industry 4.0 implementation on export market orientation, market diversification to emerging markets, and export performance. This paper responds to calls for empirical research on Industry 4.0 technologies' impact on the international configuration and performance of firms (Chiarvesio & Romanello, 2018).

At a general level, the results of this study show that implementation of Industry 4.0 is beneficial to export activities of firms. First, this study found that firms that digitize business processes (standardized regression coefficient = 0.267; p<0.017) manage large volumes of data, including extensive information on customers and competitors in foreign markets, providing them with a better basis for achieving greater export market orientation, which is consistent with Strange & Zucchella's (2017, 179) claims that firms, supported by BDA, will be able to monitor emerging trends and opportunities in overseas markets which exert big influence on the implementation of market orientation in the export context.

Second, our study seems to lead us to consider that subconstruct Digitalization of business processes (standardized regression coefficient = 0.267; p<0.016) has a strong impact on firms' international market expansion into emerging markets. Our finding is consistent with expectations and with lessons drawn from the literature (Azar & Ciabuschi, 2017, Büchi et al., 2020), since we find that firms with certain ownership-specific advantages, such as innovative products, technological know-how, and market price leadership in competitive products, which are the result of digital transformation, often give firms a competitive edge in foreign markets. We also establish that due to

*Table 6: Results of Factor Analysis for the Construct Export performance of firms*

| | | | Factor loadings |
|---|---|---|---|
| | Statement | Communalities | 1 |
| EP_2 | Satisfaction (1 – very unsatisfied, 7 – very satisfied) with the export market share of the firm in the last 3 years. | 0.902 | **0.950** |
| EP_3 | Satisfaction (1 – very unsatisfied, 7 – very satisfied) with the firm's entry onto foreign markets in the last 3 years. | 0.698 | **0.835** |
| EP_4 | Achieved (1 – very low, 7 – very high) average annual growth of the firm compared to the firm's industry average growth. | 0.704 | **0.839** |
| **Kaiser-Meyer-Olkin measure:** 0.588; **Chi-Square:** 128.089 | | | |
| **Cumulative percentage of explained variance for factor 1:** 76.82% | | | |
| **Cronbach Alpha – all items (3):** 0.842 | | | |

*Table 7: Regression Analysis Results*

| | | Unstandardized coefficients | | Standardized coefficients | | | |
|---|---|---|---|---|---|---|---|
| **Dependent variable** | **Independent variable** | **B** | **Std. error** | **Beta** | **t** | **Sig.** | **VIF** |
| **MODEL 1** | Implementation of Industry 4.0 – **Factor 1:** Digitalization of business processes | 1.871 | 0.764 | 0.267 | 2.449 | 0.017 | 1 |
| **Export orientation of Slovenian firms** | Implementation of Industry 4.0 – **Factor 2:** New export models, products and markets | 0.428 | 0.764 | 0,061 | 0.560 | 0.577 | 1 |
| | **Model 1:** R = 0.274; R- square = 0.076; Adjusted R-square = 0.051; p<0.048; Durbin-Watson = 2.104 | | | | | | |
| **MODEL 2** **Diversification strategy into dynamic markets of emerging countries** | Implementation of Industry 4.0 – **Factor 1:** Digitalization of business processes | 2.181 | 0.884 | 0.267 | 2.467 | 0.016 | 1 |
| | Implementation of Industry 4.0 – **Factor 2:** New export models, products and markets | 1.113 | 0.884 | 0.136 | 1.259 | 0.212 | 1 |
| | **Model 2:** R = 0.299; R- square = 0.090; Adjusted R-square = 0.066; p<0.026; Durbin-Watson = 1.787 | | | | | | |
| **MODEL 3** | Implementation of Industry 4.0 – **Factor 1:** Digitalization of business processes | 0.781 | 0.051 | 0.855 | 15.432 | 0.001 | 1 |
| **Export performance of Slovenian firms** | Implementation of Industry 4.0 – **Factor 2:** New export models, products and markets | 0.157 | 0.051 | 0.172 | 3.111 | 0.003 | 1 |
| | **Model 3:** R = 0.72; R- square = 0.761; Adjusted R-square = 0.754; p<0.000; Durbin-Watson = 1.580 | | | | | | |

the possibility of international networking in real time provided by digitalisation of business processes, the firms are able to compete more easily also in distant, commercially attractive, fast developing markets. This finding is in line with (a) McKinsey's (2015) claims that firms need to drive the digital transformation of their business to succeed in the new environment and (b) the assertion that adoption of digital technologies can have significant implications for firms' international operations (Strange & Zucchella, 2017). Müller and Voigt (2018b, 659) claim that Industrial Internet of Things (IIoT) confronts industrial manufactures with economic, ecological, as well as social benefits and challenges. In order to make sustainability potentials in firms accessible, concerns towards increasing competition, future viability as well as losing customer orientation should be addressed. Firms hereby need to find new or modified business models that address these concerns (Müller and Voigt, 2018b, 666).

While prior research argued that firms can benefit from Industry 4.0 in the attempt to innovate their business models through their digital transformation (Roblek et al., 2016; Frank et al., 2019), we didn't confirm an effect of subconstruct New export models, products, and markets in connection to Industry 4.0 technologies on developing cross-border activities, in other words on expansion into emerging markets, therefore this aspect is worth investigating in more detail in further research. The reason, among other things, might be that Slovenian firms in general are less digitally mature than other firms worldwide (Erjavec et al., 2018, 109).

Third, our research, in line with expectations, reveals that firms that introduce the emerging technologies of Industry 4.0 into their production or business processes achieve, according to the results of our analysis (standardized regression coefficient = 0.855; p<0.001) better export performance. As emerges from the extant literature, the different technologies that are included in the umbrella term Industry 4.0 (IoT, Big data and Analytics, Robotics, Additive Manufacturing) can have very diverse impacts on firms' export performance (Azar & Ciabuschi, 2017; Bettiol et al., 2020). Dalenogare et al. (2018) determine that some of these technologies are positively associated to the expected benefits, while others are still at a very early stage of implementation and thus are without clear expected benefits. From this perspective, Industry 4.0 defines a new path for the competitiveness of the firms, especially in advanced countries, such as in Europe (WEF, 2018), that are nowadays particularly challenged by global competition and which might find in these technologies a new source of competitive advantage (Bettiol et al., 2020, 2).

## 7 Conclusions

The present study highlights the importance and influence of Industry 4.0 technologies on the creation of export activities of firms. Contrary to Chiarvesio & Romanello's (2018) claims, we confirmed a direct relationship between implemented emerging technologies and cross-border processes, which is in line with Gerbert et al.'s (2015) findings that Industry 4.0 includes a range of new digital industrial technologies based on Internet of Things, BDA, and 3D printing that will strongly influence firms' international business activities.

According to Bettiol et al. (2020), the necessity to face global competition is one of the most compelling reasons for investing in Industry 4.0 technologies. This study confirmed this claim, as some of the emerging technologies (IoT, BDA) ensure much information on customers and competitors in foreign markets, which is of key importance for developing relevant export strategies.

In this study, based on the analysis of 81 Slovenian export firms with the majority active in the processing industry, we argued that firms can benefit from digital transformation in terms of expansion to foreign, more distant markets, which is in line with Porter & Heppelman's (2015) work that attributes strong impact on cross-border business operations to some Industry 4.0 technologies.

The outcomes of this paper indicate that export business results are significantly related to effective performance of activities and actions that firms launch, direct, execute, and manage in their selected markets through their strategies, programmes, and operations (Jurše, 2017, 10) and are based on increased competitiveness through smart equipment, making use of information about high-wage locations, demographic changes, resources, energetic efficiency, and urban production (Heck & Rogers, 2014).

In summary, the current study documents the positive link between implementation of Industry 4.0 and (a) export market orientation, (b) exit internationalization into emerging markets, and (c) export performance.

### 7.1 Implications for managers

Industry 4.0 is bringing many changes that represent numerous advantages or growth possibilities for firms, i.e. the possibility to expand to new, non-traditional markets, streamline products, adapt manufacturing without delays, and efficiently use resources and energy, in addition to causing firms to face new challenges.

The findings of this study reveal that the business success of firms in international markets is significantly related to the managers' commitment to exploiting the opportunities and advantages provided to the firms by the emerging technologies, which is consistent with the finding of (a) Jurše (2017, 114) that in their efforts for cross-border market expansion, managers often come up against a series of restrictions resulting from various gaps in their own competitive potential and are reflected, inter alia, in insufficiently perfected technological competencies of the firm, or (b) with the claim of Chiarvesio & Romanello (2018) that managers wishing to preserve competitiveness of their firms in the international arena invest in technological advances.

In the future, managers will ensure company performance mainly on the basis of good anticipation and formulation of customer demands as well as more efficient product distribution, which is inextricably linked to the implementation of digital technologies, such as BDA and IoT (Strange & Zucchella, 2017, 181). This study confirmed this claim, as its results show that firms with digitalized operations as well as systematically designed new export models, products, and selected markets achieve better export performance.

The current study investigates whether and how the implementation of Industry 4.0 is related to the export activity of firms and whether it influences decisions regarding export market orientation and diversifications to emerging markets. The findings of this study reveal that firms that invest in advanced technologies and realize digital transformation are better prepared to compete internationally and achieve better export performance. The research findings may serve as an important guide for managers in the optimal planning and management of export marketing and business activities.

### 7.2 Limitations and future avenues of research

However, the study features several limitations. Every firm in the survey was represented by only one respondent, therefore the firm's opinion could only be presented unilaterally. Another limitation is the focus on Slovenian firms. This limitation should be kept in mind when generalizing the results and transferring them to different (more advanced level of digitization) countries or even cultural contexts (different export business practices).

The sample size (n=81), which is largely determined by the size of the country or, more precisely, the number of export firms, willing to correctly participate in the survey, prevented a more thorough comparison between industries. The study sample featured few firms that are active in non-manufacturing industries. The interpretation of findings reflects the general state of firms in all size brackets – from micro to large organizations.

We suggest that in the future the authors include a higher number of respondents in an individual firm, focus on the industry of an individual company, and also collect data for samples of countries that represent foreign markets in order to be able to make an international comparison. Moreover, future studies could investigate for instance, what kind of export (direct exporting, indirect exporting) and what kind of products (high-tech products, pharmaceutical products, vehicles) are supported by Industry 4.0. Therefore, we claim studies in the international management fields that carry on an in-depth analysis of export products, types of export business, potential export markets and activities in relation to the Industry 4.0 emerging technologies. This approach could clarify which products and types of exports, supported by Industry 4.0, could be implemented in order to increase international competitiveness and export performance.

## Literature


Alcácer, J., Cantwell, J. & Piscitello, L. (2016). Internationalization in the information age: A new era for places, firms, and international business networks? *Journal of International Business Studies,* 47**,** 499–512, https://doi.org/10.1057/jibs.2016.22

Azar, G. & Ciabuschi, F. (2017). Organizational innovation, technological innovation, and export performance: The effects of innovation radicalness and extensiveness. *International Business Review*, 26 (2), 324-336, https://doi.org/10.1016/j.ibusrev.2016.09.002

Bettiol, M., Capestro, M., de Marchi, V., & Di Maria, E. (2020). Industry 4.0 investments in manufacturing firms and internationalization. *Marco Fanno Working Papers*, 245.

BMBF – Bundesministerium für Bildung und Forschung. (2017). *Industrie 4.0. Inovationen für die Produktion von morgen*. https://www.bmbf.de/pub/Industrie_4.0.pdf Accessed 13 January 2019.

Büchi, M., Cugno, M., Castagnoli, R. (2020). Smart factory performance and Industry 4.0. *Technological Forecasting and Social Change*, 150, https://doi.org/10.1016/j.techfore.2019.119790

Cadogan, J. W., Diamantopoulos, A., & Siguaw, J. A. (2002). Export Market-Oriented Activities: Their Antecedents and Performance Consequences. *Journal of International Business Studies*, 33 (3), 615-626, https://doi.org/10.1057/palgrave.jibs.8491036

Cadogan, J. W., Kuivalainen, O., & Sundqvist, S. (2009). Export Market-Oriented Behaviour and Export Performance: Quadratic and Moderating Effects Under Differing Degrees of Market Dynamism and Internationalization. *Journal of International Marketing*, 17 (4), 71-89, https://doi.org/10.1509/jimk.17.4.71

Cavusgil, S. T., & Zou, S. (1994). Marketing strategy-performance relationship: An investigation of the empirical link in export market ventures. *Journal of Marketing*, 58, 1–21, https://doi.org/10.2307/1252247

Chiarvesio, M., & Romanello, R. (2018). Industry 4.0 Technologies and Internationalization: Insights from Italian Companies, van Tulder, R., Verbeke, A. and Piscitello, L. (Ed.) *International Business in the Information and Digital Age. Progress in International Business Research, 13,* 357-378, https://doi.org/10.1108/S1745-886220180000013015

CIA – Central Intelligence Agency. (2020). *The World Factbook*. *Economy – overview.* https://www.cia.gov/library/publications/the-world-factbook/geos/ee.html. Accessed 20 April 2020.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16 (3), 297-334, https://doi.org/10.1007/BF02310555

Dais, S., & Bosch, R. (2014). Industrie 4.0 – Anstoß, Vision, Vorgehen. In Bauernhansl, T., ten Hompel, M., & Vogel-Heuser, B. (Eds.), *Industrie 4.0 in Produktion. Automatisierung und Logistik*, 625–634. Wiesbaden: Springer Vieweg.

Dalenogare, L. S., Benitez, G.B., Ayala, N. F., & Frank, A. G. (2018). The expected contribution of Industry 4.0 technologies for industrial performance. *International Journal of Production Economics*, 204, 383–394, https://doi.org/10.1016/j.ijpe.2018.08.019

Day, G. S., & Wensley, R. (1988). Assessing Advantage: A Framework for Diagnosing Competitive Superiority. *Journal of Marketing*, 52 (2), 1-20, https://doi.org/10.2307/1251261

Erjavec, J., Manfreda, A., Jaklič, J., & Indihar Štemberger, M. (2018). Stanje in trendi digitalne preobrazbe v Sloveniji. [State and trends of digital transformation in Slovenia]. *Economic and Business Review*, 20, 109-128, https://doi.org/10.15458/85451.56

Frank, A. G., Mendes, G. H. S., Ayala, N. F., & Ghezzi, A. (2019). Servitization and Industry 4.0 convergence in the digital transformation of product firms: A business model innovation perspective. *Technological Forecasting & Social Change*, 141, 341-351, https://doi.org/10.1016/j.techfore.2019.01.014

Ganzarain, J., & Errasti, N. (2016). Three Stage Maturity Model in SME's towards Industry 4.0. *Journal of Industrial Engineering and Management*, 9 (5), 1119-1128, http://dx.doi.org/10.3926/jiem.2073

Gerbert, P., Lorenz, M., Rüßmann, M., Waldner, M., Justus, J., Engel, P., & Harnisch, M. (2015). Industry 4.0: The Future of productivity and growth in manufacturing industries. *Boston Consulting Group*, 1-9. https://image-src.bcg.com/Images/Industry_40_Future_of_Productivity_April_2015_tcm9-61694.pdf. Accessed 10 May 2020.

Grzybowska, K., & Łupicka, A. (2017). Key competencies for Industry 4.0. *Economics & Management*

*Innovations*, 1 (1), 250-253, https://doi.org/10.26480/icemi.01.2017.250.253

Hannibal, M., & Knight, G. (2018). Additive manufacturing and the global factory: Disruptive technologies and the location of international business. *International Business Review*, 27 (6): 1116–1127, https://doi.org/10.1016/j.ibusrev.2018.04.003

Haseeb, M., Hussain, H. I., Slusarczyk, B., & Jermsittiparsert, K. (2019). Industry 4.0: A Solution towards Technology Challenges of Sustainable Business Performance. *Social Sciences*, 8(5), 154, https://doi.org/10.3390/socsci8050154

Heck, S., & Rogers, M. (2014). Are you ready for the resource revolution? *McKinsey Quarterly*, 2, 32-45.

Herakovič, N. (2016). Nekateri tehnološki izzivi Industrije 4.0. [*Some technological challenges of Industry 4.0*]. *Ventil*, 22 (1), 10-16.

Horváth, D., & Szabó, R. Z. (2019). Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities? *Technological Forecasting & Social Change*, 146, 119-132, https://doi.org/10.1016/j.techfore.2019.05.021

IMF – International Monetary Fund. (2020). *World Economic Outlook. Chapter 1 – The great lockdown*. https://www.imf.org/en/Publications/WEO/Issues/2020/04/14/weo-april-2020. Accessed 3 May 2020.

I-SCOOP. (2020). *Industry 4.0: the fourth industrial revolution – guide to Industrie 4.0.* https://www.i-scoop.eu/industry-4-0/. Accessed 12 July 2020.

Jerman, A., Bertoncelj, A., Dominici, G., Pejić Bach, M., & Trnavčević, A. (2020). Conceptual Key Competency Model for Smart Factories in Production Processes. *Organizacija*, 53 (1), 68-79, https://doi:10.2478/orga-2020-0005

Jurše, M. (2017). *Mednarodne strateške in kapitalske povezave [International strategic and capital alliances]*. Maribor: University of msribor, Faculty of Economics and Business.

Kafouros, M. I., Buckley, P. J., Sharp, J. A., & Wang, C. Q. (2008). The role of internationalization in explaining innovation performance. *Technovation*, 28, 63–74, https://doi.org/10.1016/j.technovation.2007.07.009

Kagermann, H., Lukas, W. D., & Wahlster, W. (2011). Industrie 4.0: Mit dem Internet der Dinge auf dem Weg zur 4. industriellen Revolution. *VDI Nachrichten,* 13.

Kagermann, H., Wahlster, W., & Helbig, J. (2013). *Securing the future of German manufacturing industry. Recommendations for implementing the strategic initiative INDUSTRIE 4.0. Final report of the Industrie 4.0 Working Group*. https://www.acatech.de/wp-content/uploads/2018/03/Final_report__Industrie_4.0_accessible.pdf. Accessed 14 January 2019.

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39 (1), 31-36, https://doi.org/10.1007/BF02291575

Laplume, A. O., Petersen, B., & Pearce, J. M. (2016). Global value chains from a 3D printing. *Journal of International Business Studies*, 47, 595-609, https://doi.org/10.1016/j.techfore.2019.01.014

Leonidou, L. C., Katsikeas, C. S., & Samiee, S. (2002). Marketing strategy determinants of export performance: A meta-analysis. *Journal of Business Research*, 55, 51–67, https://doi.org/10.1016/S0148-2963(00)00133-8

Lins, V. K., & Servaes, H. (2002). Is Corporate Diversification Beneficial in Emerging Markets? *Financial Management*, 31 (2), 5-31, http://dx.doi.org/10.2307/3666220

Manyika, J., Chui, M., Bisson, P., Woetzel, J., Dobbs, R., Bughin, J., et al. (2015). The Internet of Things: Mapping the value beyond the hype. *McKinsey Global Institute*, (June) 144.

McKinsey & Company. (2015). *Industry 4.0: How to navigate digitalization of the manufacturing sector.* https://www.mckinsey.com/business-functions/operations/our-insights/industry-four-point-o-how-to-navigae-the-digitization-of-the-manufacturing-sector. Accessed 2 May 2020.

Müller, J. M., & Voigt, K.-I. (2018b). Sustainable Industrial Value Creation in SMEs: A Comparison between Industry 4.0 and Made in China 2025. *International Journal of Precision Engineering and Manufacturing-green Technology*, 5, 659-670, https://doi.org/10.1007/s40684-018-0056-z

Müller, J. M., Buliga, O., & Voigt, K.-I. (2018a), Fortune favors the prepared: How SMEs approach business model innovations in Industry 4.0? *Technological Forecasting and Social Change*, 132, 2-17, https://doi.org/10.1016/j.techfore.2017.12.019

Müller, J. M., Kiel, D., & Voigt, K.-I. (2018c). What Drives the Implementation of Industry 4.0? The Role of Opportunities and Challenges in the Context of Sustainability. *Sustainability*, 10, 247, https://doi.org/10.3390/su10010247

Müller, J. M., Buliga, O., & Voigt, K-I. (2020). The role of absorptive capacity and innovation strategy in the design of industry 4.0 business Models-A comparison between SMEs and large enterprises. *European Management Journal,* https://doi.org/10.1016/j.emj.2020.01.002

Narver, J. C., & Slater, S. F. (1990). The Effect of a Market Orientation on Business Profitability. *Journal of Marketing*, 54 (4), 20-35, http://dx.doi.org/10.2307/1251757

OECD – Organization for Economic Co-operation and Development. (2019). *Young population*. https://data.oecd.org/pop/young-population.htm. Accessed 7 May 2019.

Porter, M. E., & Heppelmann, J. E. (2014). How Smart, Connected Products Are Transforming Competition. *Harvard Business Review*, 92 (11), 64-88.

Porter, M. E., & Heppelmann, J. E. (2015). How Smart,

Connected Products Are Transforming Companies. *Harvard Business Review*, 93, 1-37.
*PwC – PricewaterhouseCoopers. (2017). The Long View. How will the global economic order change by 2050?* https://www.pwc.com/gx/en/world-2050/assets/pwc-world-in-2050-summary-report-feb-2017.pdf. Accessed 30 April 2020.
Rehnberg, M., & Ponte, S. (2016). *3D printing and global value chains: How a new technology my restructure global production*. GPN Working Paper Series. Singapore: Global Production Networks Centre.
Rehnberg, M., & Ponte, S. (2017). From Smiling to Smirking? 3D Printing, Upgrading and the Restructuring of Global Value Chains. *Global Networks*, 18 (1), 57–80, https://doi.org/10.1111/glob.12166
Rezk, R., Srai, J. S., Williamson, P. J. (2016).The impact of product attributes and emerging technologies on firms' international configuration. *Journal of International Business Studies,* 47, 610-618, https://doi.org/10.1057/jibs.2016.9
Roblek, V. Meško, M., & Krapež, A. (2016). A Complex View of Industry 4.0. *SAGE Open*, Aprile-June, 1-11, https://doi.org/10.1177/2158244016653987
Rodič, B. (2017). Industry 4.0 and the New Simulation Modelling Paradigm. *Organizacija*, 50 (3), 193-207, https://doi:10.1515/orga-2017-0017
Sakarya, S., Eckman, M., & Hyllegard, K. H. (2007). Market selection for international expansion. *International Marketing Review*, 24 (2), 208-238, https://doi.org/10.1108/02651330710741820
Strange, R., & Zucchella, A. (2017). Industry 4.0, global value chains and international business. *Multinational Business Review*, *25*(3), 174-184, https://doi.org/10.1108/MBR-05-2017-0028
TechTarget. (2020a). *Industry 4.0.* https://whatis.techtarget.com/search/query?q=Industry+4.0. Accessed 12 July 2020.
Veile, J. W., Kiel, D., Müller, J. M., & Voigt, K. I. (2019). Lessons learned from Industry 4.0 implementation in the German manufacturing industry. *Journal of Manufacturing Technology Management*, https://doi.org/10.1108/JMTM-08-2018-0270
Wang, S., Wan, J., Zhang, D., Li, D., & Zhang, C. (2016). Towards smart factory for industry 4.0: a self-organized multi-agent system with big data based feedback and coordination. *Computer Networks*, 101, 158–168, https://doi.org/10.1016/j.comnet.2015.12.017
WEF – World Economic Forum. (2018). *Readiness for the Future of Production Report 2018*. http://www3.weforum.org/docs/FOP_Readiness_Report_2018.pdf. Accessed 2 May 2020.
Zahra, S. A., & Covin, G. C. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. *Journal of Business Venturing*, 10 (1), 43-58, https://doi.org/10.1016/0883-9026(94)00004-E

**Alenka Naglič** is a doctoral student at the Faculty of Economics and Business, University of Maribor. Her research interests are primarily focused on emerging markets and market diversification. She works as Marketing Specialist in the field of digitalization in the media industry.

**Polona Tominc** is a full -time Professor in the Department of Quantitative Economic Analysis at the Faculty of Economics and Business, University of Maribor. Her research is focused on statistical methods in economics and business sciences, especially in the field of entrepreneurship, gender differences and behavioural differences between social groups in different fields of management. She has published over sixty original scientific papers, with several of them in the Scopus or WoS databases and has participated at several scientific conferences.

**Klavdij Logožar** is an associate professor of international economy and business at University of Maribor, Faculty of Economics and Business. His research work is focused on logistics and supply chain management, international business and international strategic alliances.

**Vpliv industrije 4.0 na izvozno tržno naravnanost, tržno diverzifikacijo in izvozno uspešnost**

**Ozadje in namen:** Obstoječa literatura s področja koncepta industrije 4.0 ne vključuje bistvenih empiričnih preverjanj, če in kako implementacija industrije 4.0 vpliva na izvozno tržno naravnanost, tržno diverzifikacijo in izvozno uspešnost podjetij. Namen prispevka je oblikovati okvir, ki podjetjem, na osnovi poznavanja vpliva industrije 4.0 na izvozne aktivnosti podjetij, pomaga pri spodbujanju njihove izvozne uspešnosti.
**Metodologija:** Analiza temelji na raziskavi 81 slovenskih izvoznih podjetij, ki so v večini dejavna v predelovalni industriji, z več kot 20-odstotnim deležem izvoza izdelkov oziroma storitev v celotnih prihodkih podjetja. Za obdelavo zbranih podatkov smo uporabili faktorsko analizo in večkratno regresijo.
**Rezultati:** Dobljeni rezultati analize razkrivajo, da se podjetja, ki vlagajo v napredne tehnologije in uresničujejo digitalno preobrazbo, lažje soočajo z mednarodno konkurenco ter dosegajo boljše izvozne rezultate.
**Zaključek:** Naša raziskava je pokazala pozitivno povezavo med implementacijo Industrije 4.0 in izvoznimi aktivnostmi podjetij ter potrdila, da izvajanje Industrije 4.0 vodi k številnim spremembam v miselnosti in delovanju slovenskih podjetij ter se dejavno odraža tudi na njihovih izvoznih rezultatih. Ugotovitve raziskave lahko vodstvenim zaposlenim pomagajo pri optimalnem načrtovanju in upravljanju izvoznega trženja in poslovnih dejavnosti. Pričujoča raziskava je dobra osnova za nadaljnje poglobljeno preučevanje odnosa med industrijo 4.0 in izvoznim poslovnim aktivnostim podjetij.

***Ključne besede:*** *Industrija 4.0, Izvozna tržna naravnanost, Tržna diverzifikacija, Izvozna uspešnost*

## Appendix

**Implementation of Industry 4.0.**
II4.0_1: Digitalization of business processes is crucial for the competitiveness of the firm.
II4.0_2: Industry 4.0 encourages executives to design new export strategies and models.
II4.0_3: The rapid flow of information and data facilitates overcoming time and geographical barriers.
II4.0_4: The implementation of digitalization is supervised by competent executives.
II4.0_5: The automation of manufacturing/business processes encourages us to create new products and/or expand to new markets.
II4.0_6: New marketing (digital) channels are used to increase export sales.

**Export Market Orientation**
EO_1: We closely monitor the information on trends (e.g. provisions, technological development, politics, economy on export markets).
EO_2: We continuously plan and monitor the firm's activities connected to meeting consumers' needs on foreign markets.
EO_3: Executives in all positions in the firm are constantly in contact with current and prospective consumers on foreign markets.
EO_4: Consumer satisfaction on foreign markets is often measured and carefully planned in advance.
EO_5: Employees in the marketing department, along with employees from other departments in the firm, study future requirements and needs of consumers on foreign markets.
EO_6: Information on consumers on foreign markets is available to everyone in the firm.
EO_7: Executives frequently discuss advantages and strategies of competitors on foreign markets.
EO_8: All departments in the firm take part in the export operations.
EO_9: We respond quickly to marketing and other competitive activities of our competitors on foreign markets.
EO_10: The export personnel are continuously in contact with the manufacturing department.

**Diversification Strategy into the dynamic markets of emerging countries**
DSDMEM_1: For our industry, fast developing markets represent long-term marketing potentials.
DSDMEM_2: The uncertainty of the business environment is one of the key factors when deciding on entering the markets of fast developing economies.
DSDMEM_3: The dynamic BRIC markets are crucial for the growth of our firm.
DSDMEM_4: We consider China and India to be among economically the most dynamic and attractive developing markets.
DSDMEM_5: We have properly trained marketing professionals to enter the emerging markets.
DSDMEM _6: The strategy of diversification to developing markets has been assessed as risky.
DSDMEM_7: We are interested in entering Asian developing markets with a young geographic composition and a growing purchasing power.
DSDMEM_8: We only opt for non-ownership forms when entering fast developing high-risk markets.
DSDMEM_9: The marketing activity diversification strategy on developing markets is designed in accordance with the firm's capacities.
DSDMEM_10: The firm's international competitiveness is boosted with outward internationalization to non-traditional, fast developing markets.

**Export Performance**
EP_1: Satisfaction (1 – very unsatisfied, 7 – very satisfied) with the sales volume of our firm to foreign markets in the last 3 years.
EP_2: Satisfaction (1 – very unsatisfied, 7 – very satisfied) with the export market share of the firm in the last 3 years.
EP_3: Satisfaction (1 – very unsatisfied, 7 – very satisfied) with the firm's entry onto foreign markets in the last 3 years.
EP_4: Achieved (1 – very low, 7 – very high) average annual growth of the firm compared to the firm's industry average growth.

DOI: 10.2478/orga-2020-0016

# Moderating-mediating Effects of Leader Member Exchange, Self-efficacy and Psychological Empowerment on Work Outcomes among Nurses

**Farzad SATTARI ARDABILI**

Islamic Azad University, Department of Management, Ardabil Branch, Ardabil, Iran, sattari.farzad@gmail.com; f.sattari@iauardabil.ac.ir

**Background:** The main effects of leader-member relationship and the quality of supervisor-subordinate relationship are emphasized as main variables that help improve nurses' job satisfaction and reduce exhaustion. The aim of this study is to examine the effects of the emotional intelligence, self-efficacy, and psychological empowerment on psychological exhaustion and job satisfaction of nurses using moderation-mediation effects of leader-member exchange (LMX).
**Methods:** A cross-sectional design was carried out in three public-sector hospitals in north west of Iran during 2016. A total of 138 self-administered questionnaires were used for analysis. The main hypotheses of this study were analyzed through applying mediation-moderation analysis using PROCESS model.
**Results:** The results revealed that LMX acted as a mediator between emotional intelligence and job satisfaction through converting its negative effect into positive one. The indirect effect of emotional intelligence on emotional exhaustion through leader-member exchange was strongly negative especially at higher levels of leader-member exchange.
**Conclusions:** High quality relationships between nurses and their superiors could improve their job outcomes. The negative relationship between emotional intelligence and emotional exhausting was more significant when leader-member exchange was taken into account. High emotional intelligence in nurses has negative effect on job satisfaction but by mediating role of LMX the effect changed to positive. LMX partially mediated the effect of emotional intelligence on job satisfaction, except when self-efficacy values were quite large. Psychological empowerment did not significantly moderate the relationship between emotional intelligence, leader-member exchange, and job outcome.
**Implications for nursing managers:** It is recommended to analyze the quality of leader-member exchange in the hospitals before using them for measurement of nurses' satisfaction and their jobs' outcomes. Managers should also concentrate more on leader-member exchange and try to improve its quality. Future studies are needed to investigate the effects of leader-member exchange quality in longer follow-up periods.

***Key words:*** *Emotional intelligence, Moderating mediating effect, Leader member Exchange (LMX), Psychological empowerment*

## 1 Introduction

It is shown that emotional intelligence has various effects on job outcomes such as job satisfaction (Wen, Huang, & Hou, 2019). However, based on the idea behind the leader-member exchange (LMX), it seems that the impact of emotional intelligence on the consequences of jobs in different occupational groups can change under the influence of some other variables such as the supervisors-subordinates relationship and their obtaining

Received: 5th May 2020; revised: 29th June 2020; accepted: 9th July 2020

empowerment. Therefore, increasing the managerial and psychological empowerments can improve the quality of the relationship between the nurses or subordinates and their supervisors and hence improve their job satisfaction (Laschinger, Purdy, & Almost, 2007). The effectiveness of these factors with respect to the culture and perceptions of empowerment in different areas is different in various studies (Al-Maaitah, 2019; Yip, 2004) reveal us its lack of theoretical base. Despite this attention, relatively few previous studies have examined the relationship and mechanism of leader-member exchange among these variables Thus, the main aim of the present study is to assess the mediating role of leader member exchange on the relationship between emotional intelligence and job outcomes including job satisfaction and job exhaustion through evaluating mediation and moderation effects of self-efficacy and psychological empowerment of nurses.

## 2 Theory and Hypotheses

### 2.1 Leader–member exchange mediates emotional intelligence, job satisfaction, and emotional exhaustion

In nursing literature review, Evans and Allen (2002) confirmed the nurses' ability to manage and understand their own emotions and those of their patients is an asset in providing the best possible care, but the potential value of emotional intelligence is an issue that still needs to be searched especially in relationships and work performances. Voitenko (2020) explored the relationship between burnout and emotional intelligence (EI). Emotional exhaustion as the first phase of burnout carries great importance, because it may increase the turnover rates among the employees and may lead to reduced quality of care. Also, the high levels of emotional exhaustion have direct effect on the work outcomes such as job satisfaction (White & Grayson, 2019); therefore, it seems reasonable to assume that there exists a negative correlation between emotional intelligence and emotional exhaustion. In addition to emotional intelligence and work outcomes, there is another concept which deserves attention such as leader member exchange. Such leadership practices effect on employees' work behavior, burnout and empowerment (Manojlovich, 2005) and relationship between high quality of leader-member exchange and higher performance (Rezapour & Sattari Ardabili, 2017). Consistently, we argue that some extent emotional intelligence protective against nurses' work outcomes can be in relation with quality of relationship between leaders, nurses, and mediating role of the nurses' psychological empowerment; therefore, the first hypothesis is formed.

**$H_{01}$:** Leader–member exchange mediates the relationship between emotional intelligence, job satisfaction, and emotional exhaustion.

### 2.2 Moderating Effects of Self-Efficacy on Job Outcomes

Self-efficacy is an individual's belief in his or her capacities or abilities to muster the cognitive, motivational, and behavioral resources required to perform in a given situation (Bandura, 1997). It means that self-efficacy refers to the situation-specific nature of competence belief. It's closely related to the relevant variables affecting on the performance of nurses and healthcare centers such as job satisfaction and emotional exhaustion. A sense of self-efficacy had a significant impact on the level of stress and the ways of dealing with difficult situations among nurses (Chegini, Janati, Asghari-Jafarabadi, & Khosravizadeh, 2019; Liu & Aungsuroch, 2019) and can help to decrease job stress and less exhaustion (Voitenko, 2020). Furthermore, low self- efficacy and high self-efficacy were strongly correlated to the job stress and job satisfaction, respectively (Manojlovich, 2005; Skaalvik & Skaalvik, 2010). Researchers found that people with a high level self-efficacy have more confidence in their abilities and therefore like to set up challenging and specific goals which committed to them (Sue-Chan & Ong, 2002) and more likely to be succeed more in challenging tasks (Luthans, Youssef, & Avolio, 2007). The leaders' enthusiasm may arouse emotions in their staff through encouraging them to increase their levels of self-efficacy (Ashkanasy & Dasborough, 2003). This process depends on employees' emotions and leaders relationships with individual employees. On the other hand, there is a relationship among communication competence, self-efficacy, and job satisfaction (Arfara, Tsivos, Samanta, & Kyriazopoulos, 2017; Park, Jeoung, Lee, & Sok, 2015). Therefore, it is expected that people who possess high levels of self-efficacy have effective communication skills. Self-efficacy not only can build a better relationship between leader-subordinate, but also it can improve through better relationships with superiors or managers. Self-employment not only has a direct relationship with the job consequences, but also has a significant effect of on the interaction between leader and subordinates and career implications. Therefore, the second hypothesis is formulated.

**$H_{02}$:** Degree of self-efficacy moderates the positive interactive effect of emotional intelligence and leader-member exchange on job satisfaction and emotional exhaustion.

### 2.3 Indirect Effects of Emotional Intelligence on Psychological Empowerment and Employee Work Outcomes

The recent body of theoretical and empirical research develops linking psychological empowerment to the positive employees' work outcomes such as job satisfaction, organizational commitment, and job performance (Permarupan, Al Mamun, Samy, Saufi, & Hayat, 2020). As the employees perceive that their work is meaningful and has a significant impact on their skills or competencies which gives them autonomy to make decisions on how to do their work or determine for themselves, they become more able to express their values and true interests through their work experiences (Seibert, Wang, & Courtright, 2011). This may lead to the higher levels of job satisfaction and greater organizational commitment which provide them such job opportunities. Herzberg, Mausner, and Snyderman (2011) proposed that employees who are more intrinsically motivated than other employees will derive a greater sense of satisfaction from the value of their work and apt to demonstrate a greater effort for successful execution of job duties. Seibert et al. (2011) stated that meta-analysis found that psychological empowerment was related positively to job satisfaction, organizational commitment, and job performance. By considering this combination, the second hypothesis which predicts that psychological empowerment mediates the interactive effect of LMX (Aggarwal, Chand, Jhamb, & Mittal, 2020) and degree of emotional intelligence on job satisfaction, organizational commitment, and job performance, will positively significant and we have referred to it as a first stage of moderation model in which the path from the independent variable like leader-member exchange to the mediator variable such as psychological empowerment is moderated while this path from the mediator to the dependent variable is not moderated. In terms of the relationship between leader-member exchange and employees' work outcomes or attitudes, it should lead to a conditional indirect effect where the indirect effect of leader-member exchange on employees' work outcomes through psychological empowerment is dependent upon the communication degree which they have. Furthermore, communication degree strengthens the positive relationship between leader-member exchange and psychological empowerment. The higher degree of communication can predict a strong positive inverse relationship between leader-member exchange and employees' work outcomes through psychological empowerment. Therefore, the third hypothesis was formed as follow:

**$H_{03}$:** Psychological empowerment mediates the interactive effect of emotional intelligence and leader-member exchange on job satisfaction and emotional exhaustion.

Figure 1 reflects the development of theoretical framework of study in which the degree of self-efficacy moderates the relationship that leader-member exchange mediates between emotional intelligence and nurses' job satisfaction and emotional exhaustion. On the other side, psychological empowerment also mediates the relationship between leader-member exchange and job outcomes.

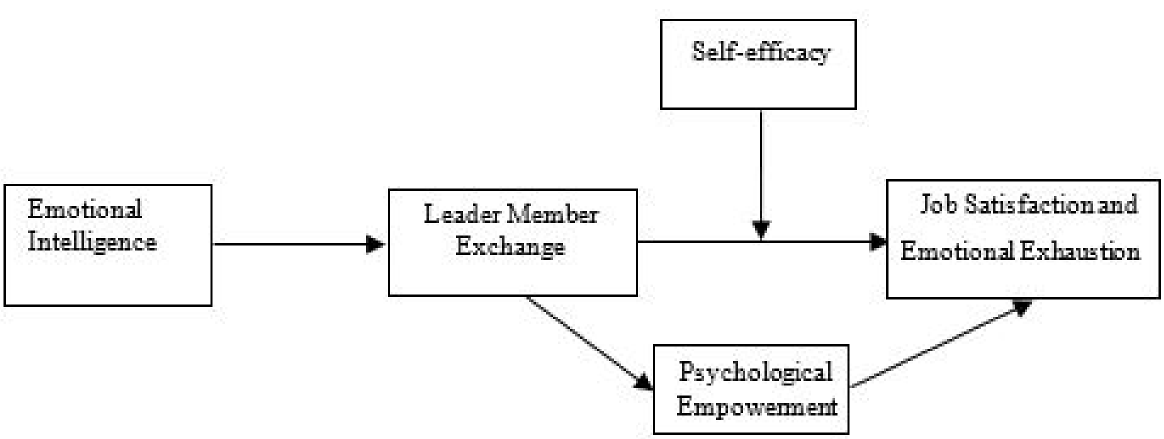



*Figure 1: The theoretical framework of study*

# 3 Method

## 3.1 Sample and Procedure

The participants of the study were selected from nurses in three public-sector hospitals in North West of Iran via applying convenience sampling method and random sampling used in each cluster. Only one hundred thirty-eight questionnaires were replied out of 260 ones (response rate = 53.1%) and 23 of them were excluded due to incomplete data. All participants were asked to indicate their age, gender (1 = male, 2 = female); and the level of education (ranging from 1 = high school degree to 5 = postgraduate university degree). The average age of nurses was 33.5 years old (SD = 4.6). Seventy-nine percent of the respondents were female.

## 3.2 Measures

### 3.2.1 Emotional Intelligence

Wong and Law Emotional Intelligence Scale (Wong & Law, 2002) as a self-report scale was used to measure the respondents' emotional intelligence. It consists of four dimensions which are consistent with Mayer and Salovey's definition of emotional intelligence. These dimensions are self-emotional appraisal (SEA), others' emotional appraisal (OEA), regulation of emotion (ROE), and use of emotion (UOE). This questionnaire consists of 16 items with a 5 point Likert- scale.

### 3.2.2 Leader–Member Exchange

To measure the quality of leader-member exchange, Liden, Wayne, and Stilwell (1993) adaptation of (Scandura & Graen, 1984) were used. Items were scored on a seven-point rating scale ranging from 1 (strongly disagree) to 7 (strongly agree). It rates the quality of nurses' relationships with their supervisors. Employee-rated leader-member exchange was used because our theorizing specifically has focused more on employees' perceptions of the quality of supervisor-subordinate relationship or high quality of leader-member exchange. A sample items was "My supervisor understands my problems and needs" and "My supervisor would use his or her influence to help me solve problems in my work". The estimated Coefficient alpha was 0.87.

### 3.2.3 Psychological Empowerment

Psychological empowerment was assessed using Spreitzer's (1995) 12-item scale. It used three items for each of the four dimensions of psychological empowerment, namely meaning, competence, autonomy, and impact. The items such as my job activities are personally meaningful to me, and my impact on what happens in my work team is large refer to these dimensions, respectively. Reliability of questionnaire was reported by using Cronbach's alpha as 0.91. Consistent with those found in previous studies and theories such as Chen and Klimoski (2003) and Zhang and Bartol (2010) which conceptualized and measured psychological empowerment as an overall motivational construct through conducting Confirmatory Factor Analysis (CFA). The results comprised of four sub-dimensions, the fit indices for 4 first-order factors and 1 second-order factor demonstrated goodness of fit ($\chi 2= 163.02$, $p < 0.00$, Non-normed Fit Index (NFI) = 0.80, Comparative Fit Index (CFI) = 0.84, The Root Mean Square Error of Approximation (RMSEA) = 0.14). In this study, the four dimensions were averaged into a single psychological empowerment scale.

### 3.2.4 Self-Efficacy

Perceived self-efficacy was measured by means of general self-efficacy scale (Schwarzer & Jerusalem, 1995). The measure taps beliefs in one's capability to handle difficult tasks in a variety of other domains. It consists of 10 items that are rated on a 4-point scale with the anchors not at all true and exactly true. An example item is "I can handle whatever comes my way." Higher scores on this measure indicate higher levels of general self-efficacy. Longitudinal studies have reflected variable stability coefficients which ranging from 0.47 to 0.75 (Scholz, Doña, Sud, & Schwarzer, 2002).

### 3.2.5 Emotional Exhaustion

Professional burnout is a gradual psychological process which is produced due to occupational stress and it is composed of high levels of employees' emotional exhaustion, high depersonalization, and low personal accomplishment levels (Halbesleben & Buckley, 2004). The most widely used research instrument is Maslach Burnout Inventory – General Survey (MBI-GS) which was used to measure burnout among non-human service workers (Schaufeli & Taris, 2005). The emotional exhaustion subscale of the MBI-GS was used to measure emotional exhaustion. Its 5 items were rated on a 7-point Likert scale ranging from 0 (never) to 6 (every day).

### 3.2.6 Job Satisfaction

Job satisfaction was measured through five-point Likert scale based on the Quality of Employment Survey. This instrument contains five general measures applicable to any profession including criminal justice jobs (Holt & Blevins, 2011). High scores represented higher levels of job satisfaction and low scores represented low job satisfaction.

## 3.3 Analyses

### 3.3.1 Analytic Approach

For data assessment, AMOS 20 and SPSS 20 statistical programs were used. Before hypothesis testing, PROCESS was used as computational tool for path analysis (Hayes, 2013). Furthermore, the evaluation of measurement model was done through confirmatory factor analysis (CFA) to consider the analytical distinctiveness of each construct through anticipating the item load on their respective constructs. In order to assess the research model fit, several goodness-of-fit indices as suggested in Structural Equation Modeling (SEM) were applied (Kline, 2015) such as Chi-square statistics divided by degrees of freedom ($\chi2/df$) that recommended to be less than 3, Relative Fit Index (RFI), Normed Fit Index (NFI), Comparative Fit Index (CFI), Tucker-Lewis Coefficient (TLI); RFI, NFI, CFI and TLI greater than 0.90 is also recommended. Root Mean Square Error of Approximation (RMSEA) as another index is better to be up to 0.05 and acceptable up to 0.08. Harman's single factor test (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) was used to identify the common method variance of factors because the dependent and independent variables were reported by the same source or individual.

Entering the values of dependent and independent variables in one factor analysis with principal factor axis factoring and varimax rotation, six factors emerged with Eigen values greater than 1. The outcomes exposed to the highest variance of 29.07 per cent. The results indicated that Common Method Variance (CMV) did not impact on the findings of the study.

In order to avoid errors in data entry, the data was entered twice and comparison was made between two separate data entries (Barchard & Christensen, 2007). SPSS was used to do missing data imputation and analysis over some of the study variables using the recommended expectation-maximization (EM) algorithm (Schafer & Graham, 2002). On average, there were 1.52 percent missing values in the study variables (SD = 1.75; Range = 0-6.4 percent). Little (1988) proposed a chi-square test which indicated that these values were missing completely at random ($\chi2/df = 6.03$, $p = 0.00$). His research showed that the imputation of missing data using the EM algorithm was appropriate. Table 1 presents the summary of descriptive statistics for the variables and their correlations.

*Table 1: The Summary of Descriptive Statistics & Correlations*

| | M | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| Gender | 1.79 | 0.40 | -- | | | | | |
| Leader Member | 3.20 | 0.69 | 0.06 | -- | | | | |
| Emotional Exhausting | 2.62 | 0.88 | -0.21* | -0.31** | -- | | | |
| Job satisfaction | 2.32 | 0.66 | -0.05 | 0.45** | -0.54** | -- | | |
| Self-efficacy | 2.87 | 0.55 | -0.05 | 0.37** | -0.17 | 0.17 | -- | |
| Psychological Empowerment | 3.61 | 0.80 | 0.04 | 0.43** | -0.20* | 0.17 | 0.68* | -- |
| Emotional Intelligence | 2.62 | 0.88 | 0.03 | 0.27 | -0.21 | 0.03 | 0.63 | 0.72* |
| * Correlation is significant at the 0.05 level | | | | | | | | |
| **Correlation is significant at the 0.01 level | | | | | | | | |

### 3.3.2 Discriminant Validity of Constructs

At first, confirmatory factor analysis (CFA) was conducted on variables such as leader-member exchange, psychological empowerment, job satisfaction, job exhaustion, self-efficacy, and emotional intelligence for establishing their Discriminant Validity. This was important because all of these variables were from the same source. For the purpose of the study, two models were selected and then compared. First, a one-factor model was used where the load of all items on one factor for four above mentioned scales was assumed ($\chi2= 1911.71$, $p < 0.00$, NNFI = 0.46, CFI = 0.56, RMSEA= 0.12). Second, a six-factor model with leader-member exchange, job exhaustion, job satisfaction, self-efficacy, emotional intelligence, and psychological empowerment loaded on separate factors ($\chi2 = 1884.00$, $p < 0.00$, NNFI = 0.67, CFI = 0.67, RMSEA = 0.09).

The first model demonstrated poor fit of the model to the data while the second model showed better fit indices to the data in which psychological empowerment and self-efficacy were modeled as second order factors. After the purification processes, all the standardized factor loadings exceeded 0.05 ($p < 0.01$) suggest the evidence of convergent validity. Discriminant validity was checked by comparing the proportion of average variance extracted (AVE) for each construct to the square of the correlation coefficients. Table 2 demonstrates the overall reliability of the constructs and factor loadings of the indicators. The proportion of variance extracted in each construct exceeded the respective squared correlation coefficients as an evidence of discriminant validity. Table 3 demonstrates the result of test for discriminant validity.

*Table 2: Overall Reliability of the Constructs & Factor Loadings of Indicators*

| Constructs | Items | Factor Loadings |
|---|---|---|
| Self-Efficacy<br><br>NFI = 0.70<br>IFI = 0.77<br>TLI = 0.62<br>CFI = 0.75<br>RMSEA = 0 .13<br>Chi- Square = 112.48<br>Cronbach = 0.84 | I can always manage to solve difficult problems if I try hard enough. | 0.53 |
| | If someone opposes me, I can find the means and ways to get what I want. | n.a |
| | It is easy for me to stick to my aims and accomplish my goals. | 0.58 |
| | I am confident that I could deal efficiently with unexpected events. | 0.58 |
| | Thanks to my resourcefulness, I know how to handle unforeseen situations. | 0.64 |
| | I can solve most problems if I invest the necessary effort. | 0.61 |
| | I can remain calm when facing difficulties because I can rely on my coping abilities. | 0.58 |
| | When I am confronted with a problem, I can usually find several solutions. | 0.53 |
| | If I am in trouble, I can usually think of a solution. | 0.62 |
| | I can usually handle whatever comes my way. | 0.59 |
| Psychological Empowerment<br><br>NFI= 0.80IFI = 0.85<br>TLI = 0.76<br>CFI = 0.84<br>RMSEA = 0.14<br>Chi- Square = 163.02<br>Cronbach = 0.91 | Competence | 0.96 |
| | Self determination | 0.97 |
| | Meaning | 0.85 |
| | Impact | 0.89 |
| Job Satisfaction<br><br>NFI= 0.96<br>FI= 0.98<br>TLI= 0.96<br>CFI=0.98<br>RMSEA= 0 .09<br>Chi-Square=9.61<br>p=0.08<br><br>Cronbach=0.86 | All in all, how you how satisfied are you with your job? | 0.69 |
| | Knowing what you know now, if you had to decide all over again whether to take the job you now have, what would you decide | 0.84 |
| | In general, how well would you say your job measures up to the sort of job you wanted when you took it? | 0.85 |
| | If a good friend of yours told you he (or she) was interested in working in a job like yours for your employer, what would you tell him (or her)? | 0.75 |
| | If you were free to go into any of job you wanted, what would your choice be? | n.a |
| Leader-Member Exchange<br><br>NFI = 0.88<br>IFI= 0.92<br>TLI = 0.84<br>CFI = 0.92<br>RMSEA = 0.13<br>Chi -Square= 41.37<br>Cronbach = 0.87 | Do you know where you stand with your leader … | n.a |
| | How well does your leader understand your job problems and needs | n.a |
| | How well does your leader recognize your potential | 0.74 |
| | What are the chances your leader would use his/her power to help you solve problems in your work | 0.78 |
| | Regardless of the amount of formal authority your employee has, what are the chances that he/she would 'bail you out' at his/her expense | 0.80 |
| | I Have enough confidence in my leader that I would defend and justify his or her decision if he or she were not present to do so. | 0.74 |
| | How would you characterize your working relationship with your leader | 0.71 |

*Table 2: Overall Reliability of the Constructs & Factor Loadings of Indicators (continues)*

| | | |
|---|---|---|
| Job Exhaustion<br><br>NFI= 0.93<br>IFI=0.95<br>TLI= 0.85<br>CFI=0.95<br>RMSEA= 0.13<br>Chi -Square= 15.14<br>Cronbach= 0.83 | I feel burned out from my work | 0.74 |
| | I feel emotionally drained from my work. | 0.87 |
| | I feel fatigued when I get up in the morning and have to face another day on the job. | 0.87 |
| | Working with people all day is really a strain for me | 0.69 |
| | I feel frustrated by my job | 0.93 |
| Emotional Intelligence<br><br>NFI = 0.83<br>IFI = 0.91<br>TLI= 0.87<br>CFI= 0.90<br>RMSEA= 0.09<br>Chi- Square= 196.97<br>Cronbach= 0.91 | Self-emotion appraisal (SEA) | 0.81 |
| | Others' emotion appraisal (OEA) | 0.84 |
| | Use of emotion (UOE) | 0.56 |
| | Regulation of emotion (ROE) | 0.86 |

*Table 3: Discriminant Validity*

| | CR | AVE | MSV | ASV | Empowerment | Job Satisfaction | Exhaustion | Leader_ Member | Self_Efficacy | Emotional |
|---|---|---|---|---|---|---|---|---|---|---|
| Empowerment | 0.94 | 0.59 | 0.47 | 0.40 | 0.77 | | | | | |
| Job Satisfaction | 0.99 | 0.97 | 0.85 | 0.40 | 0.59 | 0.98 | | | | |
| Exhaustion | 0.96 | 0.86 | 0.85 | 0.38 | -0.58 | -0.92 | 0.93 | | | |
| Leader-Member | 0.95 | 0.82 | 0.79 | 0.41 | 0.69 | 0.89 | -0.83 | 0.90 | | |
| Self -Efficacy | 0.81 | 0.52 | 0.38 | 0.16 | 0.61 | 0.12 | -0.14 | 0.23 | 0.72 | |
| Emotional | 0.90 | 0.52 | 0.46 | 0.17 | 0.67 | 0.03 | -0.09 | 0.18 | 0.59 | 0.72 |

# 4 Results

## 4.1 Hypotheses Testing

Table 4 demonstrates the results for the first and second hypotheses. These hypotheses predicted the conditional indirect effects of emotional intelligence through leader-member exchange on emotional exhaustion and job satisfaction. The mediating effects were examined by procedures discussed in Hayes (2013) and using the PROCESS Macro (Model 4). The relationship between emotional intelligence and job outcomes including exhaustion and job satisfaction were tested at different leader-member exchange levels in this study. Outputs along with 95 percent bias-corrected bootstrap confidence intervals based on 5000 bootstrap samples are shown in Table 2. The direct effect of emotional intelligence on emotional exhaustion was significantly negative (B = -0.206, t = -2.00, 95% CI [-0.41,-0.00], p = 0.04). The standardized indirect effect of emotional intelligence on emotional exhaustion through leader-member exchange was significant (B = -0.10, SE = 0.05, 95% CI = [-0.23, -0.02], t = -2.07, p = 0.00). After including leader-member exchange as a mediator of the relationship, emotional intelligence still had a significant direct effect on emotional exhaustion (B = -0.20, t = -2.00) and this path reduces the magnitude of this effect. Table 4 shows that the indirect effect of emotional intelligence on job exhaustion through leader-member exchange is consistently negative. It decreased as the values of leader-member exchange relationship increased. Approximate 95 percent biased-corrected bootstrap confidence intervals for the conditional indirect effect is less than zero for values of leader-member exchange. Hence, leader-member exchange completely mediates emotional intelligence influence on job exhaustion (B = -0.08, 95% CI = [-0.17,-0.02], SE =0.03). Moreover, there were significant positive relationship between leader-member exchange with both occupational outcomes including job exhaustion and job satisfaction were significant (B = 0.47, SE = 0.07, t = 6.29, p = 0.00) while there was an inverse relationship between leader-member exchange and burnout (B = -0.360, SE = 0.14, t = -2.56, p = 0.05).

In second phase of the first hypothesis, the impact of emotional intelligence on job satisfaction was investigated as a first step to demonstrate the existence of an indirect effect of emotional intelligence on job satisfaction via leader-member exchange as a mediator (B = -0.05, p = 0.45, 95% CI(-0.18, 0.08)). The results revealed that there was not a significant relationship between emotional intelligence and job satisfaction. Therefore, leader-member exchange could not consider as a mediator between emotional intelligence and job satisfaction, but it can be entered as a single block into the model. There was a significant interaction between job satisfaction and single block and this interaction was shown in the form of EI*LMX that was the result of indirect effect (B = 0.08, SE = 0.03, 95% CI [0.02, 0.17], Z = 2.29). Therefore, leader-member exchange mediated the relationship between emotional intelligence and burnout. Table 4 presents the leader-member mediating effects of emotional intelligence on job satisfaction and emotional exhaustion.

*Table 4: LMX Mediating Effects of EI on Job Satisfaction & Emotional Exhaustion*

| | Emotional Exhaustion | | | Job Satisfaction | | | |
|---|---|---|---|---|---|---|---|
| | B | SE | t | | B | SE | t |
| Constant | 3.63 | 0.72 | $5.02^{****}$ | | 1.72 | 0.35 | $4.80^{****}$ |
| Gender (Control Variable) | 0.48 | 0.20 | $2.31^{**}$ | | -0.11 | 0.10 | -1.09 |
| Emotional Intelligence | -0.20 | 0.10 | $-2.00^{**}$ | | -0.05 | 0.06 | $-0.75^{*}$ |
| Leader-Member Exchange | -0.05 | 0.02 | $-2.59^{***}$ | | 0.04 | 0.00 | $5.10^{****}$ |
| Emotional Intelligence *Leader-Member Exchange | -0.10 | 0.05 | $-1.77^{**}$ | | 0.08 | 0.03 | $2.29^{**}$ |
| | $R^2$ = 0.17*** | | f(3,10) = 6.82 | $R^2$ = 0.16*** f(3,10)=9.15 | | | |

*P < 0.10, **P < 0.05, ***P < 0.01, ****P < 0.001

To determine whether if leader-member exchange and psychological empowerment could mediate the relationship between emotional intelligence and job outcomes including job satisfaction and exhaustion respectively, Hayes PROCESS\\process macro was conducted to analyze the mediation effect and then add psychological aspect to the model (Model 6) (Hayes, 2013). The results revealed that psychological empowerment as a dependent variable could significantly be predicted by emotional intelligence (B = 0.73, SE = 0.08, t = 9.19, 95% CI= [0.57, 0.89], p = 0.00) and leader-member exchange (B = 0.04, SE = 0.08, t = 4.09, 95% CI=[0.02, 0.07], p = 0.00, R2 = 0.60, F(3,103)=78.80). The results indicated that only the mediating role of leader-member exchange can be considered significant in the relationship between emotional intelligence (EI- > LMX- > EX) and psychological empowerment, and psychological empowerment did not act significantly as moderator in this relationship (EI-> LMX-> PS- > EX) (B = -0.10, SE = 0.06, 95% CI = [-0.26,-0.01]). Table 5 demonstrated the mediating effects of member-leader exchange and psychological empowerment on the relationship between emotional intelligence and job outcomes.

Table 6 demonstrates the results of third hypothesis in which job outcomes were significantly affected by emotional intelligence through mediating role of leader-member exchange, while in the second hypothesis self-efficacy acted as moderator. According to the Model 14 (Hayes, 2013), the relationship between emotional intelligence and job satisfaction was significant only when leader-member exchange had mediating role (B = -0.27, 95% CI = [-0.47, -0.07], p = 0.00).

Table 7 states that emotional intelligence had indirect positive effect on job satisfaction through applying the mediating effect of leader-member exchange. As its values decreased, the values of self-efficacy increased.

*Table 5: The Mediating Effects of Member-Leader Exchange & Psychological Empowerment on the Relationship between Emotional Intelligence & Job Outcomes*

| | Emotional Exhaustion | | | Job Satisfaction | | |
|---|---|---|---|---|---|---|
| | B | SE | t | B | SE | t |
| Constant | 3.63 | 0.72 | 5.12*** | 1.72 | 0.36 | 4.77*** |
| Gender | 0.48 | 0.20 | 2.30* | -0.11 | 0.10 | -1.06 |
| Emotional Intelligence | -0.22 | 0.15 | -1.46 | -0.07 | 0.08 | -0.90 |
| Leader-Member Exchange | -0.05 | 0.02 | -2.44* | 0.04 | 0.01 | 3.79*** |
| Psychological Empowerment | 0.01 | 0.16 | 0.11 | 0.03 | 0.09 | 0.39 |
| Emotional Intelligence *Leader-Member Exchange | -0.10 | 0.05 | (-0.24,-0.02) | 0.08 | 0.03 | (0.02, 0.17) |
| Emotional Intelligence *Leader-Member Exchange *Psychological Empowerment | 0.00 | 0.01 | (-0.02,0.04) | 0.00 | 0.01 | (-0.01, 0.02) |
| Emotional Intelligence *Psychology Empowerment | 0.01 | 0.11 | (-0.20,0.24) | 0.02 | 0.06 | (-0.11, 0.15) |
| | $R^2$ =0. 17*** f(4,10)=5.09 | | | $R^2$ = 0.17*** f(4,10)=7.94 | | |

*P < 0.10, **P < 0.05, ***P < 0.01, ****P < 0.001

*Table 6: Mediating-Moderating Effect of Leader-Member Exchange & Self-Efficacy*

| | Emotional Exhaustion | | | Job Satisfaction | | |
|---|---|---|---|---|---|---|
| | B | SE | t | B | SE | t |
| Constant | 2.78 | 0.73 | 3.80*** | 3.02 | 0.36 | 8.31*** |
| Gender | 0.47 | 0.20 | 2.30* | -0.11 | 0.10 | -1.14 |
| Leader-Member Exchange | -0.05 | 0.01 | -3.27** | 0.03 | 0.00 | 4.18*** |
| Emotional Intelligence | -0.28 | 0.14 | -1.91* | -0.13 | 0.07 | -1.87* |
| SE | 0.16 | 0.21 | 0.75 | 0.18 | 0.11 | 1.72 |
| Emotional Intelligence*Leader-member Exchange*Self-Efficacy | -0.27 | 0.29 | -0.91 | -0.27 | 0.10 | -2.71** |
| $R^2$ = 0.19*** f(5,10) = 5.07 | | | | $R^2$ = 0.22*** f(5,101) = 9.95 | | |

*Table 7: Conditional Indirect Effects of Emotional Intelligence on Job Satisfaction through Leader-Member Exchange at Values of Self Efficacy as Moderator*

| | | | | Bias Corrected Bootstrap 95% Confidence Interval | |
|---|---|---|---|---|---|
| Mediators | Self-Efficacy | Indirect Effect | Boot SE | Lower | Upper |
| Leader-Member Exchange | -0.53 | 0.11 | 0.04 | 0.03 | 0.21 |
| Leader-Member Exchange | 0.00 | 0.06 | 0.03 | 0.02 | 0.14 |
| Leader-Member Exchange | 0.53 | 0.02 | 0.02 | -.011 | 0.10 |

Notes: Values for self-efficacy (moderator) are the mean and plus/minus one standard deviation (SD) from the mean.

A 95% of bias-corrected bootstrap confidence of interval for the conditional indirect effect was entirely above zero for low-to-medium levels of self-efficacy. Hence, leader-member exchange partially mediated the effect of emotional intelligence on job satisfaction, except when self-efficacy values were large. Finally, index of moderated mediation described by (Hayes, 2013) was estimated (−0.07) which was significant (95% CI = [-.187, -.016]) as zero fell outside the conditional indirect effects.

## 5 Discussion

This study investigated the roles that leaders play in mediating emotional intelligence effects on job satisfaction and emotional exhaustion with regard to psychological empowerment and self- efficacy of nurses. Given the demonstrated challenges associated with nurses' work outcomes (Permarupan et al., 2020), the key role of exchange between leader and member is surprising. The effects of self-efficacy (MacPhee, Skelton-Green, Bouthillette, & Suryaprakash, 2012), emotional intelligence (Mohebbi, Coombe, & Kirkpatrick, 2017) and psychological empowerment (Laschinger et al., 2007; MacPhee et al., 2012) on work outcomes are approved except for how these different factors effect on work outcomes with regard to each other. Consistent with previous researches that has examined the interaction between leader-member exchange and work outcomes (Loi, Chan, & Lam, 2014; Rezapour & Sattari Ardabili, 2017), this study also referred to the importance of leadership in promoting positive work outcomes in hospital. The findings showed that participants' leader-member exchange mediates the effect of emotional intelligence on job outcomes. Leader-member exchange is considered as an important boundary condition for understanding the relationship between emotional intelligence and psychological empowerment as well as self-efficacy and job outcomes. This resulted in a mediated effect in which the indirect effect of emotional intelligence on emotional exhaustion through leader-member exchanges was more strongly negative especially at higher levels of leader-member exchange. In spite of existing a weak negative relationship between emotional intelligence and job satisfaction, the direct effect of leader-member exchange on job satisfaction was high enough in a way that through the mediating role of leader-member exchange the relationship of emotional intelligence could become significantly positive. Previous studies (Gorgens-Ekermans & Brand, 2012; Voitenko, 2020) investigated the impact of emotional intelligence on emotional exhaustion and burnout which can increase through mediating role of leader-member exchange. Actually, the quality of subordinate-superordinate relationship can reduce or prevent the employees' emotional exhaustion. Those employees, who have a higher degree of emotional intelligence, experience less emotional exhaustion. Furthermore, the strength of this relationship can enhance as the superior-subordinate relationship improve. Unlike most of previous studies which showed that high levels of emotional intelligence lead to higher job satisfaction (Benson, Ploeg, & Brown, 2010) , the results of this study revealed that there was an inverse relationship between the level of nurses' emotional intelligence and decreasing their job satisfaction (through mediating leader-member exchange). In previous studies, the superior-subordinate relationship was not investigated that is why this relationship was not much significant (Kafetsios, 2007). It can be argued that the nurses who had high levels of emotional intelligence had less willingness to stay in their current jobs due to their high communicating skills with other private clinics and hospitals and therefore were less satisfied with their jobs (Wu & Norman, 2006). In the same conditions, therefore, different results or job outcomes could be expected based on emotional intelligence. A qualified relationship with superior could positively change the results. It means that it was not only reduces the level of burnout, but also it also was the main cause of job satisfaction among employees. So, the employees with high levels of emotional intelligence could have a good relationship with their supervisors and therefore their satisfaction level of their job could be improved. These results of study indicated that only using the nurses who had higher levels of emotional intelligence could not guarantee the enhancement hospital services' quality and efficiency and the quality of their relationship with their superiors was an influential factor. Laschinger et al. (2007) investigated that building a good relationship between nurses and their supervisors could cause job satisfaction without considering the nurses' emotional intelligence. The effect of this relationship should properly be determined through psychological empowerment of nurses. Unlike the study of Lyu, Ji, Zheng, Yu, and Fan (2019), the psychological empowerment of the nurses did not have a direct effect on job satisfaction and burnout and it was in line with the study of Yip (2004) who stated that the perception of empowerment differed in western and eastern societies because western culture supported espoused values in democratic culture and society. These conflicting research results may be due to the lack of consideration to the leader-member relationship in these studies. Thus, it can be concluded that psychological empowerment did not effect on the job outputs independently. The results also revealed that self- efficacy and leader-member exchange did not act as an independent mediator in the relationship of emotional intelligence and burnout. It can be deduced that self-efficacy of physical dimension of an occupation as an influential factor can effect on burnout. Physical and emotional dimensions of an occupation and job environment cannot regulate with self-efficacy and work-related variables (Maslach & Jackson, 1981). Emotional intelligence also cannot regulate them alone, but just can influence on the quality of relationship with superiors. Herzberg (1966) stated that emotional intelligence was considered as one of the motivational factors and should be considered different from other health factors. The condition is different regarding the job satisfaction because it is related to the human physical processes and working conditions (Cropanzano & Mitchell, 2005). Therefore, the mediating role of self-efficacy has a significant effect on the relationship between leader-member exchange and job satisfaction. It also acts as a compliment for the physical dimension of job satisfaction which investigates the effect of leader-member exchange and emotional intelligence on job satisfaction.

## 6 Conclusion

The results of this study showed that the research on different occupations can bring different results especially for occupations that are stressful and have excessive workload (McVicar, 2003). It is not necessary to seek an overhasty generalization of the results of previous studies in nursing job, but categorizing the different dimensions of theories seems to be necessary. Due to the novelty of this study which investigated the mediating and moderating effects of leader-member exchange, self-efficacy, and psychological empowerment on relationship between emotional intelligence and work attitudes, the findings failed to support any potential positive role of psychological empowerment as a mediator between emotional intelligence and leader-member exchange as well as job satisfaction and emotional exhaustion. In other words, contrary to expectations, neither emotional psychology nor self-efficacy can predict emotional exhaustion. Based on the obtained results, although self-efficacy affected on the relationship between emotional intelligence, leader-member exchange, and job satisfaction, it was surprisingly inefficient about the same relationship with the influence of emotional exhaustion. The importance of leadership training can never be underestimated. Effective leadership skills, especially communication skills for the nurses, seem to be necessary for the board of supervisors to develop supervisors' leadership skills and qualities, improve employees' job satisfaction, and decrease employees' emotional exhaustion. Investigating the relationships among nurses' self-efficacy beliefs and their perceptions may be helpful to improve the nurses' performance. Future research needs to examine the ways in which emotional intelligence effects may be moderated by more non-personal factors such as social support, job identity, and especially organizational climate which cover the emotions in organizations. Like previous studies, this study also suffers from some limitations. First, the statistical population of the study was restricted to nurses' perceptions of the quality of their leader-member exchange relationship, self-efficacy, and emotional empowerment; therefore, the data generally obtained from just a single source. Therefore, the findings of this study cannot necessarily be generalized to all occupations. Second, supervisors and nurses ratings of leader-member exchange might not appear on the same line (Hill, Kang, & Seo, 2014). Third, though efforts should be made to reduce the effects of biases especially at interpreting the results. To validate the conclusions, it is better to seek out the samples from multiple sources and occupations which need less communication skills such as virtual jobs and employees on production lines.

## Literature


Aggarwal, A., Chand, P. K., Jhamb, D., & Mittal, A. (2020). Leader–member exchange, work engagement, and psychological withdrawal behavior: the mediating role of psychological empowerment. *Frontiers in Psychology*, *11*:423. https://doi.org/10.3389/fpsyg.2020.00423

Al-Maaitah, N. A. (2019). The Spatial Variation in Women Empowerment in Jordan: A Cross Country Comparative Overview *Management and Business Research Quarterly, 11*, 20-34. https://doi.org/10.32038/mbrq.2019.11.03

Arfara, C., Tsivos, G., Samanta, I., & Kyriazopoulos, P. (2017). The Integration of Information Technology to Facilitate HRM Functions: The Case of the Health Care Sector (Biomedicine Group). *Management and Business Research Quarterly, 3*, 38. https://doi.org/10.32038/mbrq.2017.03.03

Ashkanasy, N. M., & Dasborough, M. T. (2003). Emotional Awareness and Emotional Intelligence in Leadership Teaching. *Journal of Education for Business, 79*(1), 18-22. http://doi.org/10.1080/08832320309599082

Bandura, A. (1997). *Self-efficacy : the exercise of control*. New York: Freeman.

Barchard, K. A., & Christensen, M. M. (2007). Dimensionality and higher-order factor structure of self-reported emotional intelligence. *Personality and Individual Differences, 42*(6), 971-985. http://dx.doi.org/10.1016/j.paid.2006.09.007

Benson, G., Ploeg, J., & Brown, B. (2010). A cross-sectional study of emotional intelligence in baccalaureate nursing students. *Nurse Educ Today, 30*(1), 49-53. http://doi.org/10.1016/j.nedt.2009.06.006

Chegini, Z., Janati, A., Asghari-Jafarabadi, M., & Khosravizadeh, O. (2019). Organizational commitment, job satisfaction, organizational justice and self-efficacy among nurses. *Nursing Practice Today*. http://dx.doi.org/10.18502/npt.v6i2.913

Chen, G., & Klimoski, R. J. (2003). The Impact of Expectations on Newcomer Performance in Teams as Mediated by Work Characteristics, Social Exchanges, and Empowerment. *The Academy of Management Journal, 46*(5), 591-607. https://doi.org/10.2307/30040651

Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of management, 31*(6), 874-900. https://doi.org/10.1177%2F0149206305279602

Evans, D., & Allen, H. (2002). Emotional intelligence: its role in training. *Nurs Times, 98*(27), 41-42. https://doi:10.1007/978-0-387-88370-0_8

Gorgens-Ekermans, G., & Brand, T. (2012). Emotional intelligence as a moderator in the stress-burnout relationship: a questionnaire study on nurses. *J Clin Nurs, 21*(15-16), 2275-2285. http://doi.org/10.1111/j.1365-2702.2012.04171.x

Halbesleben, J. R., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of management, 30*(6), 859-879.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*: Guilford Press. https://doi.org/10.1111/jedm.12050.

Herzberg, F., Mausner, B., & Snyderman, B. B. (2011). *The motivation to work* (Vol. 1): Transaction publishers. ISBN:1412815541, 9781412815543

Hill, N. S., Kang, J. H., & Seo, M.-G. (2014). The interactive effect of leader–member exchange and electronic communication on employee psychological empowerment and work outcomes. *The Leadership Quarterly, 25*(4), 772-783. https://doi.org/10.1016/j.leaqua.2014.04.006

Holt, T. J., & Blevins, K. R. (2011). Examining job stress and satisfaction among digital forensic examiners. *Journal of Contemporary Criminal Justice, 27*(2), 230-250. https://doi.org/10.1177%2F1043986211405899

Kafetsios, K. (2007). Work-family conflict and its relationship with job satisfaction and psychological distress: The role of affect at work and gender. *Hellenic Journal of Psychology, 4*(1), 15-35. Retrived from: https://pseve.org/wp-content/uploads/2018/05/Volume04_Issue1_Kafetsios.pdf

Kline, R. B. (2015). *Principles and practice of structural equation modeling*: Guilford publications. ISBN: 9781462523344.

Laschinger, H. K. S., Purdy, N., & Almost, J. (2007). The impact of leader-member exchange quality, empowerment, and core self-evaluation on nurse manager's job satisfaction. *Journal of Nursing Administration, 37*(5), 221-229. https://doi.org/10.1097/01.NNA.0000269746.63007.08

Liden, R. C., Wayne, S. J., & Stilwell, D. (1993). A longitudinal study on the early development of leader-member exchanges. *Journal of Applied Psychology, 78*(4), 662. https://psycnet.apa.org/doi/10.1037/0021-9010.78.4.662

Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association, 83*(404), 1198-1202. http://doi.org/10.1080/01621459.1988.10478722

Liu, Y., & Aungsuroch, Y. (2019). Work stress, perceived social support, self-efficacy and burnout among Chinese registered nurses. *J Nurs Manag, 27*(7), 1445-1453. https://doi.org/10.1111/jonm.12828

Loi, R., Chan, K. W., & Lam, L. W. (2014). Leader–member exchange, organizational identification, and job satisfaction: A social identity perspective. *Journal of Occupational and Organizational Psychology, 87*(1), 42-61. https://doi.org/10.1111/joop.12028

Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital: Developing the human competitive edge*: Oxford University Press Oxford. http://doi.org/10.1093/acprof:oso/9780195187526.001.0001

Lyu, D., Ji, L., Zheng, Q., Yu, B., & Fan, Y. (2019). Abusive supervision and turnover intention: Mediating effects of psychological empowerment of nurses. *International Journal of Nursing Sciences, 6*(2), 198-203. https://doi.org/10.1016/j.ijnss.2018.12.005

MacPhee, M., Skelton-Green, J., Bouthillette, F., & Suryaprakash, N. (2012). An empowerment framework for nursing leadership development: supporting evidence. *J Adv Nurs, 68*(1), 159-169. https://doi.org/10.1111/j.1365-2648.2011.05746.x

Manojlovich, M. (2005). Promoting Nurses' Self-efficacy: A Leadership Strategy to Improve Practice. *Journal of Nursing Administration, 35*(5), 271-278. https://doi.org/10.1097/00005110-200505000-00011

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of organizational behavior, 2*(2), 99-113.

McVicar, A. (2003). Workplace stress in nursing: a literature review. *J Adv Nurs, 44*(6), 633-642. http://doi.org/10.1046/j.0309-2402.2003.02853.x

Mohebbi, H., Coombe, C., & Kirkpatrick, R. (2017). Emotional Intelligence: Continuing Controversies and Unresolved Issues *Language Teaching Research Quarterly, 4*, 12-24. http://doi.org/10.32038/ltrq.2017.04.02

Park, M. S., Jeoung, Y., Lee, H. K., & Sok, S. R. (2015). Relationships among communication competence, self-efficacy, and job satisfaction in Korean nurses working in the emergency medical center setting. *J Nurs Res, 23*(2), 101-108. http://doi.org/10.1097/jnr.0000000000000059

Permarupan, P. Y., Al Mamun, A., Samy, N. K., Saufi, R. A., & Hayat, N. (2020). Predicting Nurses Burnout through Quality of Work Life and Psychological Empowerment: A Study Towards Sustainable Healthcare Services in Malaysia. *Sustainability, 12*(1), 388. https://doi.org/10.3390/su12010388

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *J Appl Psychol, 88*(5), 879-903. http://doi.org/10.1037/0021-9010.88.5.879

Rezapour, F., & Sattari Ardabili, F. (2017). Leader-member exchange and its relationship with career adaptability and job satisfaction among employees in public sector. *International Journal of Organizational Leadership, 6*, 425-433. http://dx.doi.org/10.33844/ijol.2017.60405

Scandura, T. A., & Graen, G. B. (1984). Moderating effects of initial leader–member exchange status on the effects of a leadership intervention. *Journal of Applied Psychology, 69*(3), 428. https://psycnet.apa.org/doi/10.1037/0021-9010.69.3.428

Schafer, J., & Graham, J. (2002). Missing data: Our view of the state of the art. *Psychological Methods, 7*(2), 147-177. https://doi.org/10.1037/1082-989X.7.2.147

Schaufeli, W. B., & Taris, T. W. (2005). The conceptualization and measurement of burnout: Common ground and worlds apart The views expressed in Work & Stress Commentaries are those of the author (s), and do not necessarily represent those of any other person or organization, or of the journal. *Work & Stress, 19*(3), 256-262. https://doi.org/10.1080/02678370500385913

Scholz, U., Doña, B. G., Sud, S., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment, 18*(3), 242. https://psycnet.apa.org/doi/10.1027//1015-5759.18.3.242

Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale Weinman, J., Wright, S., Johnston, M. *Measures in health psychology: A user's portfolio. Causal and control beliefs*, 35-37. Retrived from http://userpage.fu-berlin.de/health/engscal.htm

Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: a meta-analytic review. *J Appl Psychol, 96*(5), 981-1003. http://doi.org/10.1037/a0022676

Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education, 26*(4), 1059-1069. https://doi.org/10.1016/j.tate.2009.11.001

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal, 38*(5), 1442-1465. https://doi.org/10.2307/256865

Sue-Chan, C., & Ong, M. (2002). Goal assignment and performance: Assessing the mediating roles of goal commitment and self-efficacy and the moderating role of power distance. *Organizational Behavior and Human Decision Processes, 89*(2), 1140-1161. https://doi.org/10.1016/S0749-5978(02)00017-1

Voitenko, E. (2020). Emotional burnout as a result of professional stress in the work of managers. *Journal of Behavior Studies in Organizations, 3*, 5-12. http://dx.doi.org/10.32038/JBSO.2020.03.02

Wen, J., Huang, S., & Hou, P. (2019). Emotional intelligence, emotional labor, perceived organizational support, and job satisfaction: A moderated mediation model. *International Journal of Hospitality Management, 81*, 120-130. https://doi.org/10.1016/j.ijhm.2019.01.009

White, D., & Grayson, S. (2019). The importance of emotional intelligence in nursing care. *J Comp Nurs Res Care, 4*, 152. https://doi.org/10.33790/jcnrc1100152.

Wong, C.-S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study. *The Leadership Quarterly, 13*(3), 243-274. https://doi.org/10.1016/S1048-9843(02)00099-1

Wu, L., & Norman, I. (2006). An investigation of job satisfaction, organizational commitment and role conflict and ambiguity in a sample of Chinese undergraduate nursing students. *Nurse Educ Today, 26*(4), 304-314. https://doi.org/10.1016/j.nedt.2005.10.011

Yip, K.-s. (2004). The empowerment model: A critical reflection of empowerment in Chinese culture. *Social Work, 49*(3), 479-487. Retrieved July 10, 2020, from www.jstor.org/stable/23721085

Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal, 53*(1), 107-128. Retrieved July 10, 2020, from www.jstor.org/stable/25684309

---

**Farzad Sattari Ardabili** is Assistant Professor in the Department of Management, Islamic Azad University, Ardabil Branch, Iran. He has worked as executive manager in a consultant company and as a research head at University. His practical experience in research and in educational organizations had persuaded him to study on organizational behaviour. He focused in conducting research in leadership and organizational behaviour. Currently he is working on wisdom and its relationships with career adaptability, ambidextrous behaviour and self-efficacy. Because of his educational background in operational research, he is particularly interested in mixed method research in different multicultural organizations. He also served as conference organizer in more than 10 international conferences over period of 2015-2019.

**Vpliv posrednega učinka izmenjave med vodjo in timom, samo-učinkovitosti in psihološko opolnomočenje na delovnih rezultate medicinskih sester**

**Ozadje**: Glavni učinki odnosa med vodjo in članom ter kakovost odnosa med podrejenim in nadrejenim so glavne spremenljivke, ki pomagajo izboljšati zadovoljstvo in zmanjšati izčrpanost medicinskih sester. Cilj te je študije preučiti učinke čustvene inteligence, samoučinkovitosti in psihološkega opolnomočenja na psihično izčrpanost in zadovoljstvo z medicinskimi sestrami s poudarkom na vplivu izmenjave med vodjo in timom
**Metode**: Podatke smo zbrali v treh javnih bolnišnicah na severozahodu Irana v letu 2016. Zbrali smo 138 za analizo uporabnih anketnih vprašalnikov. Glavne hipoteze te študije smo analizirali z uporabo analize mediacije- moderacije po modelu PROCESS
**Rezultati**: Rezultati so pokazali, da je izmenjava med vodji in timom (Leader Member Exchange - LMX) delovala kot posrednik med čustveno inteligenco in zadovoljstvom z delom in spremenila negativen učinek v pozitivnega. Posredni učinek čustvene inteligence na čustveno izčrpanost z izmenjavo voditeljem in člani je bil močno negativen, zlasti pri višjih ravneh izmenjave med člani in vodjo..
**Zaključki**: Študija je pokazala, da lahko kakovostni odnosi med medicinskimi sestrami in nadrejenimi izboljšajo rezultate dela. Negativni odnos med čustveno inteligenco in čustvenim izčrpavanjem je bil izrazitejši, če smo upoštevali izmenjavo med člani tima in vodjo. Visoka čustvena inteligenca pri medicinskih sestrah negativno vpliva na zadovoljstvo z delovnim mestom, vendar se s posredovanjem vloge izmenjave med člani in vodjo vpliv spremenil v pozitivnega. Izmenjava med vodjo in timom je delno posredovala učinek čustvene inteligence na zadovoljstvo z delovnim mestom, razen kadar so bile vrednosti samo-učinkovitosti precej velike. Psihološko opolnomočenje ni bistveno vplivala na povezave med čustveno inteligenco, izmenjavo med vodjo in člani in rezultati dela.
**Implikacije za vodje zdravstvene nege**: Priporočamo, da vodje je preučijo kakovost izmenjave med vodji in člani timov v bolnišnicah, preden jih uporabijo za merjenje zadovoljstva medicinskih sester in rezultatov njihovega dela. Menedžerji naj se tudi bolj osredotočijo na izmenjavo med vodji in člani tima in poskušajo izboljšati kakovost v le-tega. Nadaljnje študije so potrebne za raziskovanje učinkov različnih učinkov kakovosti izmenjave med člani in vodji v daljših obdobjih spremljanja.

***Ključne besede:*** *Čustvena inteligenca, Izmenjava med vodji in člani (LMX), Psihološko opolnomočenje*

DOI: 10.2478/orga-2020-0017

# The Influence by the Elderly on Modernising the Organisation of Tourist Farms

**Jože ZALAR[1], Goran VUKOVIČ[2], Rok OVSENIK[3]**

[1]Višja strokovna šola za gostinstvo, velnes in turizem Bled, Slovenia, joze.zalar@vgs-bled.si

[2]University of Maribor, Faculty of Organizational Science, Kranj, goran.vokovic@um.si

[3]Alma Mater Europaea, Evropski center, Maribor, Slovenia, rok.ovsenik@gmail.com

**Background and purpose**: The demographic structure of the countryside shows that the number of people aged 65 or more is increasing; however, they are still active and motivated for work and help the younger generation. The research aims at studying the influence of the elderly on the organisation of tourist farms; particularly the factors which affect the organisation of operation and modernisation thereof, such as the factors of inheritance, intergenerational organisational relationships and cooperation, the frequency of further training, inclusion of the elderly in tourist farms and the effect of the perceived changes in the organisation of subsidiary tourist activities on farms on the perception of modernisation.
**Methodology:** A critical review of secondary literature sources has been made and the findings were summarised by applying the synthesis method. Further on, a survey was conducted on tourist farms in all Slovenian cohesion regions in order to collect the data which was then analysed by multiple regression method, applying IBM SPSS software.
**Results:** Inheritance factors do not affect the perception of the modernisation of tourist farms in a statistically significant way; the same applies for intergenerational relationships for people, aged 51 or more while the influence was established for people under 51. Furthermore, the inclusion of the elderly does not have any influence neither does the frequency of further training while education and trainings themselves are important. It has been found out that the expansion of the offer, followed by the division of work, is the most significant for the perception of modernisation.
**Conclusion:** Survey results show good relationships among the social actors and possible solutions which can be implemented in order to help the population of the Slovenian countryside concerned.

**Key words:** The elderly, Modernising the organisation, Tourism, Tourist farms, Organisation.

## 1 Introduction

In these times of rapid changes and progress social systems are changing, followed by changing tourist systems (Holloway and Humphreys, 2019). Tourism is undergoing significant changes and facing new challenges, which result in new aspects regarding the operation of tourist systems. On the other hand, the demographic structure of the countryside is getting older, which means that the number of people aged 65 or more is increasing; however, most of them are still active and motivated for work and help the younger generation, in our case on tourist farms (Kerbler, 2007; Program razvoja podeželja, 2015; Reid, Pezzi and Faggian, 2020).

People in the countryside are constantly striving for maintaining good conditions for the development of economy on the farms; and it is those conditions that are extremely important for the future generations who will continue to work on the farm (Kerbler 2011, Kneževič

Received: 24th April 2020; revised: 9th July 2020; accepted: 25th July 2020

Hočevar 2013). Numerous families in the countryside consist of several generations, where also the elderly have a significant role and consequently also the influence (Augé, 2011); according to the same author: »Longer life expectancy, transition from the usual living with three generations to four generations gradually lead to practical changes in the regulation of social life.«

The problems in the countryside are connected with the decreasing number of families with several members. On the other hand, there are even as many as four generations on the same farm, we are facing the migration of young people to towns and migration of the elderly back to the countryside. All of the above causes deterioration of intergenerational relationships, disputes concerning inheritance (Kerbler 2011), lack of quality knowledge and further education and training (Burholt and Dobbs 2012; Glasgow and Brown 2012; Knežević Hočevar 2013).

Consequently, knowing the influence of the elderly on the modernisation and development of the organisation of tourist farms is of key importance (Dwyer and Bressey 2007; Cigale, Lampič, Potočnik and Repe, 2014; Phillipson et al., 2018), which is emphasised also in the rural development programmes (Rural Development Programme, 2015; NIC 2018). The whole world, particularly big countries such as the United States of America, Canada and Australia, is aware of the significance and relevance of those problems (Davis, Chrothers, Grant, Young and Smith, 2012; Beaulieu 2014).

Tourist system is operating more and more individually as mass tourism does not prevail anymore. The new way of organisation, affected by the individualisation of tourist services, requires the application of new technologies, new ways of management and, above all, a new way of training for tourism. This research aims at studying the influence of the elderly on modernising the organisation of tourist farms in Slovenia; particularly how the factors of inheritance, quality of intergenerational organisational relationships, further training, social inclusion of the elderly and the perceived changes in the organisation of subsidiary tourist activities on farms affect the perception of the modernisation of tourist farms.

## 2 Theoretical background

The number of people aged 65 or more who are still active and motivated for work and help the younger generation on tourist farms is increasing (Kerbler, 2007; Program razvoja podeželja, 2015; Reid, Pezzi and Faggian, 2020). Consequently, it is very important to know the influence of the elderly on modernising the organisation of tourist farms and therefore four pillars have been established as the factors which affect the organisation of operation and modernisation thereof. These are as follows: transfer of ownership and inheritance, intergenerational organisational relationships and cooperation, further training and social inclusion of the elderly in tourist farms.

Transfer of ownership and inheritance – In the past (before land reform in 1848) various rules applied to inheriting farms, all sharing the same interest of the government or the landlord that farms would not be fragmented. Therefore rules on the inheritance of farms did not favour the division of property or they even prevented it by granting the right to succeed only to one child of the deceased (Kambič, 2007). It is also interesting that the "wife of the deceased person was entitled only to the movable property in the house, which was a very common custom in the old Austro-Hungarian lands« (Kambič, 2007). While in Europe the change of generations or transfer of ownership in case of non-agricultural SMEs often means closing down or sale of the enterprise (e.g. Croatia 35%, Finland 70%) (Alpeza, Tall, & Mezulić Juric 2018), this is not usually the case in the transfer of the ownership of farms.

Nowadays, Inheritance of Agricultural Holdings Act regulates the inheritance of agricultural land in the Republic of Slovenia. It is laid down in Article 7 of the said Act: The agricultural holding shall be inherited by the statutory heir under the general inheritance regulations who plans to cultivate the agricultural land, and who is selected by agreement by all the heirs; in case the agreement referred to in the preceding indent cannot be reached, the inheritance priority shall be held by the spouse of the deceased and the children who are training or have trained in the field of agricultural or forest activity. In case there are several such persons, the priority shall be held by those who are or have been growing up on the farm and have contributed by their work or earning to maintaining or development of the farm. In case of equal conditions, the precedence in inheriting the protected farm shall be held by the spouse of the deceased. In case the whole or a part of the protected farm comes from the surviving spouse of the deceased, that spouse and the children the spouse has with the deceased, shall have precedence from other children of the deceased; (...).« (Inheritance of Agricultural Holdings Act, 1995).

In order to maintain the integrity of agricultural land the Inheritance of Agricultural Holdings Act Article 5 lays down also that "as a rule, a protected farm shall be inherited by one heir only. The farm may be inherited by several heirs only in case the conditions referred to in that Act are met.« (Inheritance of Agricultural Holdings Act, 1995).

Intergenerational organisational relationships and cooperation – According to (Dimovski and Žnidaršič, 2007) »It is not rare today that four generations live together. Due to low natality children are surrounded by more adults and elderly people". Results of an analysis, conducted by Knežević-Hočevar (2013) on farms in Prekmurje (northeast Slovenia), show that most interviewees are of the opinion that it is an advantage when young and older people live together, provided they get on well. Older generation stated that among the advantages there is safety and care when they get older, mutual intergenerational learning and the feeling that you always get help when you need it.

Social relationships and intergenerational communication are of key importance for several generations to live together. Ramovš and Slana (2010) point out the lack in mutual contacts and quality communication, particularly between the young and older generation. The above are essential in order to strengthen intergenerational solidarity and quality aging in the future. Human solidarity is developing and strengthening in parallel with enhancing the quality of intergenerational communication. All those relationships are required for good cooperation and modernising the organisation of tourist farms (de Bel, Kalmijn and van Dujin, 2019).

Education – The strategy of lifelong learning is significant for quality development of knowledge and qualification in the countryside. People in the countryside, who are engaged in subsidiary tourist activities on the farm, are constantly dealing with tasks and problems they did not have prior to starting up the activity. Nowadays, lifelong learning is required as a development concept, upgrading education, developed and created in the past, and provides a new, paradigmatic shift also for schooling of the youth or formal initial education (Bahçelerli, 2018).

In the countryside, particularly on tourist farms, lifelong learning is essential and therefore we want to emphasise the important learning objectives. It is of extreme importance for marketing of products and communication with the environment and provides a competitive advantage in ever increasing competition. Specific knowledge, required for successful production and processing of foods, and accommodation and food service activities, demands the contents of education in all fields of work on a tourist farm for all age groups to be adapted. They also have to include the programmes of intergenerational cooperation (Kump and Jelenc-Krašovec, 2005; Pažek, Majkovič and Borec, 2005)

Social inclusion of the elderly on tourist farms – Educational and career centres as social networks deal with social inclusion of the tourist farm members. Social environment monitoring is important as members of all generations on the farm are aware of the responsibility for active participation at all levels of educational and social and cultural activities. The knowledge and skills create the organisational structure and adapting to the specifics of work by individual family members. In the countryside, there are good conditions for the involvement of the elderly in various societies. This strengthens the feeling of responsibility and importance also in later periods of life. There is some dissatisfaction felt among young people regarding the status in the family; due to fear older members are too late to transfer the ownership of the property to younger generation. This often leads to family disputes concerning inheritance and continuation of the family holding (Albanese and Bocci, 2019).

An important topic which should contribute to further training and development of public policy, associated with the social inclusion of the elderly, deals with how different generations can participate and contribute to social inclusion and benefit from them. The elderly themselves are a heterogeneous group. This is shown also in the vitality and productive engagement of the generation in the third age group (e.g. 65–84 years of age), contrary to the proportionally higher limitations of dependence and health in the fourth age group (e.g. 85 and more years of age). Creative approaches to social inclusion should be focused on how voluntary work by the younger elderly can best support social inclusion and autonomy of the oldest (Windsor, Curtis and Luszcz, 2016).

The biggest problems are the basic needs and wishes of the elderly in rural areas where the access or departure from home is more difficult, particularly in winter. This affects the mobility at home and outside or travelling and driving. In rural areas it is essential to drive in order to go to the doctor, cultural institutions or shops as public transport is rare. If the elderly are not able to drive, they become dependent on their families, neighbours or service providers. This is particularly true in winter time when there is a lot of snow in certain areas. The second problem are supporting services such as deliveries, health care support, and similar (Biniok, Menke and Selke, 2018).

## 3 Research questions and hypothesis

For the research purposes four research questions have been posed, explained and justified below:

RQ1: »How do inheritance factors affect the perception of the tourist farm modernisation?«

According to numerous authors the farms where the ownership was transferred earlier, are more modernised than those subject to later transfer of ownership or those where the ownership has not been transferred yet; parents often transfer their property to their successors late and the future heirs do not dare or are not interested in investing their capital or knowledge if they are not completely sure they will inherit the farm (Fennell, Phillipson and Evers, 1988; Gosar, 1998; Pečjak, 1998).

RQ2: »How does the quality of intergenerational relationships with the elderly in the family affect the perception of the tourist farm modernisation?«

There are as many as four generations living in the same household (Kerbler, 2011; Burholt and Dobbs, 2012; Glasgow and Brown, 2012). In such cases the relationships concern young, middle and old generations and in those family businesses cooperation is of key importance for the modernisation of the organisation itself (Brandth and Haugen, 2012; Kneževič-Hočevar, 2013; Li, Mi and Zhang, 2020). It is assumed that the better the intergenerational relationships the better the modernisation of the organisation of tourist farms.

RQ3: »How does the frequency of further training for the needs of subsidiary activity affect the perception of the tourist farm modernisation?«

Further training and lifelong learning are important as in the modern world the progress of various technologies is the fastest ever seen; it strengthens reasonable dialogues of two or even three age generations in the family (Amoah and Baum, 1997; Kump and Jelenc-Krašovec, 2010; Simándi, 2018).

RQ4: »How does the inclusion of the elderly in the affect the perception of the tourist farm modernisation?

Social inclusion of the older generation in the social and cultural life is of key importance for maintaining their physical, psychological and mental fitness (Biniok, Menke and Selke, 2018; Windsor, Curtis and Luszcz, 2016).

RQ4: »Which changes have the highest effect on the perception of the tourist farm modernisation?«

# 4 Methodology

## 4.1 Research approach

A combined research approach was applied for the needs of the research. A critical review of secondary literature sources has been made and the findings were summarised by applying the synthesis method. Further on, a quantitative research, namely a survey was conducted on tourist farms in all Slovenian cohesion. The survey was conducted on web portal https://www.1ka.si and in printed forms, sent to respondents with the help of the agricultural counsellors and employees at the Association of Tourist Farms of Slovenia. The survey questionnaire was emailed to 738 units. These were farms with registered subsidiary tourist activity on the farm, and activities, associated with the traditional knowledge on the farm, services or products. The email was received by 585 respondents, opened by 546 people, and 131 respondents answered the questions – values are missing in some questions as not all the respondents answered all the questions.

Where possible, the results are presented comparatively, according to the young or the older generation of the tourist farm members. Holders of the tourist farms as well as their spouses and their descendants were surveyed. Statistical analysis under IBM SPSS software, multiple regression analysis and calculation of the Spearman correlation coefficient were applied in order to verify the hypothesis below.

## 4.2 Presentation of the sample

Representatives of family farms from all 12 Slovenian regions participated in the research. Age structure of the respondents is as follows: 58.0% of the respondents were between 31 and 50 years old, and the lowest sample (3.8 %) were people, aged 65 or more. 5.3% of respondents were between 16 and 30 while the sample of people aged between 51 and 65 accounts for 32.1%, one person did not answer. 50.4% of respondents were female and 36.6% male; 17 people did not answer.

Education structure of the sample was as follows: 17.6% of respondents completed primary or vocational school, while the most (35.1%) finished secondary school. 11.5% respondents completed short-cycle college, 4.61 % professional college, 6.1 % higher education, 10.7% university education, and 2.3% have a master's degree.

Most respondents live in partnership, either married (77.1%) or in cohabitation (14.5%). Only 3.1% are single, 2.3% widowed, 1.5% are in a relationship but they do not live with their partners, two respondents did not answer.

Most respondents have a decisive role on the farm as they are either holders of subsidiary activity (74.89%) or owners and heads of the holding (41.2 %). Nearly a tenth of the respondents are future heirs of the farm (8.4%) while 6.1% are already the heirs. Others indicated other roles such as the co-owner of the farm (8.4%), housewife or mother of the holder of the subsidiary activity.

# 5 Results

Dependent variable "perception of the tourist farm modernisation" and the following independent variables: "inheritance factors", "quality of intergenerational relationships with the elderly", "frequency of further training for the needs of subsidiary activity", "inclusion of the elderly", and "modernisation changes" were established.

Multiple regression analysis was applied to verify whether there are positive and statistically significant links between the inheritance factors and perception of the tourist farm modernisation. As shown in Table 1, they were not recognised.

Multiple regression analysis was applied to verify whether there are positive and statistically significant links between the quality of intergenerational relationships with the elderly in the family and perception of the tourist farm modernisation, where the respondents were divided into two groups according to their age – up to 50 years of age and 51 or more. As shown in Tables 2a and 2b, they were not recognised in the case of the elderly while it was recognised in the group up to 50 years of age, which shows that the better the intergenerational relationships with the elderly in the family, the higher the perception of the tourist farm modernisation is (beta is 0.217 and it is statistically significant at the rate of 0.052).

Spearman correlation coefficient was applied to verify whether there are positive and statistically significant links between the frequency of further training for the needs of subsidiary activity and perception of the tourist farm modernisation. As shown in Table 3, the link is not statistically significant.

Multiple regression analysis was applied to verify whether there are positive and statistically significant links between the inclusion of the elderly and perception of the tourist farm modernisation. As shown in Table 4, they were not recognised.

Spearman correlation coefficient was applied to verify which changes have the highest and statistically significant influence on the perception of the tourist farm modernisation. As shown in Table 5, there are positive and statistically significant links between the perception of the tourist farm modernisation and: changes in the organisation of farm work, education and training, expansion of the offer at the farm, enhanced cooperation by all family members, and sharing of work in the family.

*Table 1: Multiple regression for RQ1*

| | **Unstandardized Coefficients** | | **Standardized Coefficients** | | |
|---|---|---|---|---|---|
| **Model** | **B** | **Std. Error** | **Beta** | **t** | **Sig.** |
| (Constant) | 3,176 | ,448 | | 7,087 | ,000 |
| Early transfer of property to the heir is extremely important | -,018 | ,092 | -,021 | -,193 | ,847 |
| Planned way of inheritance is extremely important | ,145 | ,101 | ,162 | 1,442 | ,152 |
| We follow the tradition that the heir is the first-born son or daughter if there is no son | -,048 | ,064 | -,072 | -,750 | ,455 |
| Inheritance causes stress and disputes in the family | ,020 | ,070 | ,033 | ,282 | ,779 |
| Brothers and sisters are on bad terms due to inheritance | ,009 | ,067 | ,015 | ,128 | ,898 |
| Appropriate inheritance can regulate the relationships in the family | ,010 | ,063 | ,016 | ,161 | ,872 |
| a. Dependent Variable: Perception of the tourist farm modernisation | | | | | |

*Table 2a: Multiple regression for RQ2*

| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | | |
|---|---|---|---|---|---|---|
| **B** | | **Std. Error** | **Beta** | | **t** | **Sig.** |
| 1 | (Constant) | 3,681 | ,429 | | 8,582 | ,000 |
| | Intergenerational relationships with the elderly in the family – 51 years and more | -,005 | ,099 | -,009 | -,054 | ,957 |
| a. Dependent Variable: Perception of the tourist farm modernisation | | | | | | |

*Table 2b: Multiple regression for RQ2*

| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | | |
|---|---|---|---|---|---|---|
| **B** | | **Std. Error** | **Beta** | | **t** | **Sig.** |
| 1 | (Constant) | 3,237 | ,274 | | 11,815 | ,000 |
| | Intergenerational relationships with the elderly in the family – up to 50 years of age | ,130 | ,066 | ,217 | 1,973 | ,052 |
| a. Dependent Variable: Perception of the tourist farm modernisation | | | | | | |

*Table 3: Spearman correlation coefficient for RQ3*

| | | | **Frequency of further training for the needs of subsidiary activity** |
|---|---|---|---|
| **Spearman's rho** | Perception of the tourist farm modernisation | Correlation Coefficient | -,025 |
| | | Sig. (2-t/iled) | ,788 |
| | | n | 118 |

*Table 4: Multiple regression for RQ4*

| **Model** | | **Unstandardized Coefficients** | | **Standardized Coefficients** | | |
|---|---|---|---|---|---|---|
| **B** | | **Std. Error** | **Beta** | | **t** | **Sig.** |
| 1 | (Constant) | 3,840 | ,519 | | 7,402 | ,000 |
| | The elderly are good mentors at work | ,154 | ,118 | ,192 | 1,307 | ,195 |
| | They strongly influence our decisions | -,154 | ,117 | -,173 | -1,321 | ,191 |
| | Quality work would not be possible without parents' advice and cooperation | ,041 | ,108 | ,061 | ,382 | ,703 |
| | We would not have decided for the subsidiary activity at our farm without the material and financial basis, created by our parents | -,091 | ,086 | -,144 | -1,066 | ,290 |
| | Our parents' opinions do not help in the organisation of work | ,096 | ,104 | ,138 | ,920 | ,361 |
| | Parents are completely excluded from the subsidiary activity | -,104 | ,093 | -,175 | -1,113 | ,269 |
| a. Dependent Variable: Perception of the tourist farm modernisation | | | | | | |

## 6 Discussion and conclusion

The problems of the change of generations, inheritance and intergenerational relationships on the farm are shown as good examples of developing social and economic power of the topic concerned. As it has been mentioned, tourist farms are facing numerous challenges or problems such as rapid changes and progress where social systems are changing, followed by changing tourist systems (Holloway and Humphreys, 2019; Poslad et al., 2001).

On the other hand, the number of people aged 65 or more who are still active and motivated for work and help the younger generation on tourist farms is increasing (Kerbler, 2007; Program razvoja podeželja, 2015; Reid, Pezzi and Faggian, 2020). Consequently, it is important to find out the influence of the elderly on the organisation of tourist farms according to four pillars which are as follows: transfer of ownership and inheritance, intergenerational organisational relationships and cooperation, further training and social inclusion of the elderly in tourist farms.

It follows from the research that the inheritance factors themselves do not affect the perception of the tourist farm modernisation. It was established in the previous qualitative research, conducted by Zalar (2014), that in eastern regions parents decide to transfer the ownership to the heirs earlier than in western regions. It is common in western regions that the heirs divide the property only after their parents have died and they agree with that. This often leads to disputes and destruction of the family. Our research does not confirm the link between earlier transfer of property to the heir and the perception of tourist farm modernisation.

It was found out that in case of people aged 51 and more intergenerational relationships on tourist farms do not affect organisation modernisation or the introduction of a new paradigm of relationships on the tourist farms, while such effect is present in case of people under the age of 50; the better the relationships, the more modernised the organisation. It follows from the above that the younger and the older generation get on well in all aspects. Consequently, at the time of the research tourist farms were modernised well. There are occasional disputes and arguments in families but that does not affect the modernisation of organisation or renovation of farm and accommodation facilities. It is a positive influence of intergenerational relationships on the self-assessment of the organisation modernisation. The better the relationships, the higher the perception of the younger that the organisation of their farm or subsidiary activity is modernised.

In spite of the fact that the frequency of further training does not affect the perception of tourist farm modernisation in a statistically significant way, education and training are important and they have a statistically significant positive contribution to the perception of tourist farm modernisation. Social inclusion of the elderly in various social activities does not affect the modernisation of the tourist farm organisation. It regards mainly general knowledge of the elderly about the current topical social issues. In this way, the elderly have more insight in the problems and understanding of the younger generation when faced with organisational and business decisions and plans. That contributes to intergenerational coexistence and life in families where even up to four generations live in one or two households on the same farm.

Social inclusion of the elderly affects only their mental and health condition and quality spending of free time they have more of than the active younger generation. The latter, particularly the female part of the family, have to go to work and be engaged in the subsidiary activity at home. The elderly are often only moral and financial supporters of the family organisation of the farm operation. This means mutual influence between the elderly and younger generation. In this case, the elderly do not have a direct influence on the modernisation of the organisation.

We would like to point out the factors which positively and statistically significantly affect the perception of the tourist farm modernisation, which are as follows: expansion of the offer at the farm, sharing of work in the family, changes in the organisation of farm work, enhanced cooperation by all family members, and education and training.

It has been found out that the influence of the modernisation of the organisation is mainly moral, which is reflected particularly in good intergenerational relationships and financial support to young generation who is starting their career path. Survey results show good relationships among the social actors and possible solutions which can be implemented in order to help the population of the Slovenian countryside concerned.

In the field concerned, attention should be paid to maintaining and development of social actors who strive for the best possible overall image of the organisational structure of the subsidiary activity on the farm. Comparison of the theoretical background and the research topic gave insight in the excellence in improving organisational capabilities of tourist farms in Slovenian countryside. The tasks and objectives are to strive for maintaining the organisational capabilities of tourist farms and keeping rural population in the countryside by encouraging good economic and social position of the inhabitants.

## Literature

Albanese, A. & Bocci, E. (2019). Intergenerational Sustainable Tourism and Quality of Life. In *Italian Studies on Quality of Life* (pp. 273-285). Springer, Cham. Available from: http://doi.org/10.1007/978-3-030-06022-0_18

Alpeza, M., Tall, J. & Mezulić Juric P. (2018). The Challenges of SME Business Transfers: The Evidence from

Croatia and Finland. *Organizacija*, 52(2), 135-145. https://doi.org/10.2478/orga-2018-0012

Amoah, V. A. & Baum, T. (1997). Tourism education: policy versus practice. *International Journal of Contemporary Hospitality Management*, 9, 5—12. https://doi.org/10.1108/09596119710157531

Augé, M. (2011). *Nekraji - Uvod v antropologijo nadmodernosti [Non-lieux. Introduction à une anthropologie de la surmodernité],* Ljubljana: Maska.

Bahçelerli, N. M. (2018). Strategy for lifelong learning in vocational schools of tourism education. *Quality & Quantity*, 52(1), 43-58. http://doi.org/10.1007/s11135-017-0586-4

Beaulieu, M. S. (2014). Statistics Canada. Demographic Changes in Canadian Agriculture. Available from: http://www.statcan.gc.ca/pub/96-325-x/2014001/article/11905-eng.htm#a2

Biniok, P., Menke, I., & Selke, S. (2016). Social Inclusion of Elderly People in Rural Areas by Social and Technological Mechanisms. In Domínguez-Rué E. & Nierling L. (Eds.), *Ageing and Technology: Perspectives from the Social Sciences* (pp. 93-118). Bielefeld: Transcript Verlag. Available from https://www.jstor.org/stable/j.ctv1xxrwd.7?seq=1#metadata_info_tab_contents

Brandth, B. in Haugen, M. S. (2012). Farm tourism and dilemmas of commercial activity in the home. *Hospitality & Society*, 2(2), 179—196. http://dx.doi.org/10.1386/hosp.2.2.179_1

Burholt, V. & Dobbs, C. (2012). Research on rural ageing: Where have we got to and where are we going in Europe? *Journal of Rural Studies*, 28, 432—446. http://doi.org/10.1016/j.jrurstud.2012.01.009

Cigale, D., Lampič, B., Potočnik Slavič, I. & Repe, B. (2014). Geografsko raziskovanje turizma in rekreacije v Sloveniji [Geographical research of tourism and recreation in Slovenia]. GeografFF 15, Ljubljana: University of Ljubljana, Faculty of Humanities.

Davis, S., Chrothers, N., Grant, J., Young, S. & Smith, K. (2012). Being involved in the country: Productive ageing in different types of rural communities. *Journal of Rural Studies*, 28, 338—346. https://doi.org/10.1016/j.jrurstud.2012.01.008

de Bel, V., Kalmijn, M. & van Duijn, M. A. (2019). Balance in family triads: How intergenerational relationships affect the adult sibling relationship. *Journal of Family Issues*, 40(18), 2707-2727. https://doi.org/10.1177%2F0192513X19860181

Dimovski, V. in Žnidaršič, J. (2007). Ekonomski vidiki staranja prebivalstva v Sloveniji: Kako ublažiti posledice s pristopom aktivnega staranja [Economic aspects of population aging in Slovenia: How to mitigate the consequences with an active aging approach]. *Kakovostna starost*, 1, 2—15.

Dwyer, C. & Bressey, C. (2007). *New geographies of race and racism*. London and New York: Routledge, Taylor and Francis Group.

Fennell, G., Phillipson, C. & Evers, H. (1988). *The Sociology of Old Age*. Philadelphia: Open University Press.

Glasgow, N. & Brown, D. L. (2012). Rural ageing in the United States: Trends and Contexts. *Journal of Rural Studies,* 28, 422—431. http://doi.org/10.1016/j.jrurstud.2012.01.002

Gosar A. (1999). Zrno do zrna pogača, kamen na kamen (turistična) palača [Grain to grain cake, stone to stone (tourist) palace]. *Dela*, (13), 27-46. https://doi.org/10.4312/dela.13.27-46

Holloway, J. C. & Humphreys, C. (2019). *The Business of Tourism*. SAGE Publications Limited.

Kambič, M. (2007). *Recepcija rimskega dednega prava na Slovenskem s posebnim ozirom na dedni red Karla VI [Reception of Roman inheritance law in Slovenia with special regard to the hereditary order of Charles VI]*. Ljubljana: Založba ZRC, ZRC SAZU.

Kerbler, B. (2007). Nasledstvo na kmetijah kot posledica učinkovanja dejavnikov socialnogeografske strukture kmetij [Succession on farms as a consequence of the effects the factors of the socio-geographical structure of farms]. *Urbani izziv*, 18(1/2), 106—109. http://www.dlib.si/?URN=URN:NBN:SI:DOC-Q3HEL63Y

Kerbler, B. (2011). Ohranjanje medgeneracijske kontinuitete kot pogoj za zagotavljanje socialne varnosti starejše generacije kmečkega prebivalstva [Maintaining intergenerational continuitiy as condition for ensuring the social security of older generation of farm population]. *Acta Agriculturae Slovenica*, 97(1), 53—61.

Knežević Hočevar, D. (2013). Skrb za starejšo generacijo na družinskih kmetijah [Caring for the older generation on family farms]. *Socialno delo*, 52(6), 383—392. Available from http://www.dlib.si/?URN=URN:NBN:SI:doc-PF2N4YUC

Kump, S. in Jelenc-Krašovec, S. (2005). Izobraževanje - možni dejavniki krepitve moči in vpliva starejših odraslih [Education - possible factors for strengthening the power and influence of older adults]. *Družboslovne razprave,* 49/50 (21), 243—261. Available from http://dk.fdv.uni-lj.si/dr/dr49-50KumpJelenc-Krasovec.PDF

Li, B., Mi, Z., & Zhang, Z. (2020). Willingness of the new generation of farmers to participate in rural tourism: The role of perceived impacts and sense of place. *Sustainability*, 12(3), 766. https://doi.org/10.3390/su12030766

NIC (2018). Mapping the Global Future, Report of the National Intelligence Council`s 2020 Project. Available from: https://www.dni.gov/files/documents/Global%20Trends_Mapping%20the%20Global%20Future%202020%20Project.pdf

Pažek, K., Majkovič, D. & Borec, A. (2005). Turizem na ekoloških kmetijah slovenskega podeželja [Tourism on organic farms in the Slovenian countryside]. *Geografski vestnik*, 77(2), 107—114. Available from http://www.dlib.si/?URN=URN:NBN:SI:DOC-5DVYMD2B

Pečjak, V. (1998). Psihologija tretjega življenjskega obdobja [Psychology of the third period of life]. Ljubljana: University of Ljubljana, Faculty of Humanities.

Phillipson, J., Tiwasing, P., Gorton, M., Maioli, S., Newbery, R. & Turner, R. (2018). Shining a spotlight on small rural businesses: How does their performance compere with urban? *Journal of Rural Studies,* 68, 230-239. https://doi.org/10.1016/j.jrurstud.2018.09.017

Program razvoja podeželja Republike Slovenije [Rural Development Program of the Republic of Slovenia] (2015). Dostopno na: http://www.program-podezelja.si/sl/infoteka/sporocila-za-javnost/462-18-8-2015-sprejeta-nova-uredba-o-dopolnilnih-dejavnostih-na-kmetiji

Ramovš, J. & Slana, M. (2010). Komuniciranje med generacijami [Communiction between Generations]. *Kakovostna starost*, 13(3), 16—25.

Reid, N., Pezzi, M. G. & Faggian, A. (Eds.) (2020). Tourism in peripheral regions: some challenges. *Agritourism, Wine Tourism, and Craft Beer Tourism: Local Responses to Peripherality Through Tourism Niches*. Routledge.

Simándi, S. (2018). The role of permanent learning and human capital in the sector of tourism. *Turizam*, 22(2), 63-70. http://doi.org/10.5937/22-17528

Windsor, T. D., Curtis, R. G., & Luszcz, M. A. (2016). Social Angagement in Late Life v Hel Kendig, Peter McDonald in John Piggott: Population Ageing and Australias Future. Available from: https://www.jstor.org/stable/j.ctt1rqc955.14?Search=yes&resultItemClick=true&searchText=Social&searchText=inclusion&searchText=of&searchText=older&searchText=adults&searchText=in&searchText=rural&searchUri=%2Faction%2FdoBasicSearch%3FQuery%3DSocial%2Bincl

Zakon o dedovanju kmetijskih gospodarstev/ZDKG/ [Inheritance of Agricultural Holdings Act] (1995). Uradni list RS, št. 70/1995 (29.11. 1995). Available from http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO383

Zalar, J. (2014). Lifelong learning of elderly citizens in rural areas. In: Plenković, M., Galičić, V. & Toplak, L. (Eds). *Društvo i tehnologija 2014*. [Society and technology 2014: book of manuscripts, pp. 40-45. Zagreb: Hrvatsko komunikološko društvo.

**Jože Zalar**, Master of Tourism, is a lecturer at Vocational College of Hospitality, Wellness and Tourism in Bled, Slovenia. His professional focus is gastronomy and tourism development in Slovenia, especially rural tourism. He is author of several scientific and professional works and author of two monographs on catering, wellness and tourism. He is participates in several projects of Local Action Groups in Slovenia and the European Innovation Partnership. His current research interests are development of tourist farms, education for complementary activities on farms, social inclusion of the elderly, and intergenerational relations.

**Goran Vukovič**, PhD, is full professor at the Faculty of Organisational Sciences, University of Maribor. He is a qualified university teacher in the area of human resources and a qualified university teacher in the area of »Marketing«. He also has more than fifteen years of work experience in the area of functional education and consultancy. Dr Vukovič is a consultant in the areas of human resources, marketing and procurement in the profit and non-profit sectors of the economy. Furthermore, he is the author of many authentic scientific papers, author and co-author of many books, editor, critic, member of the editorial council for the journal »Iskanja«.

**Rok Ovsenik,** PhD, full professor of Tourist Destination Management at Faculty of Organizational studies in Novo mesto, is engaged in education, research, management and consulting activities in area of tourism management on the national and international level. He is author and co-author of several documents focusing tourism strategies, which represented a basis for the growth of Slovenian receptive tourism in 2007-2011. He is author or co-author of 6 monographies and many scientific articles published in recognized research journals. His current research interests are destination management, measurement of the quality of tourist services, and leisure time and sport activities management.

**Vpliv starejših odraslih na posodabljanje organizacije turističnih kmetij Slovenije**

**Ozadje in namen**: Demografska struktura podeželja stara; vedno več je ljudi, ki so stari 65 ali več let, in so še vedno aktivni in motivirani za delo ter pomagajo mlajši generaciji. Cilj raziskave je proučiti vplive starejših odraslih na organizacijo turističnih kmetij, predvsem dejavnike vpliva na samo organizacijo poslovanja in njeno posodabljanje, kot so dejavniki dedovanja, medgeneracijski organizacijski odnosi in sodelovanje, pogostost dodatnega izobraževanja, vključenost starejših na turističnih kmetijah ter vpliv percipiranih sprememb organizacije dopolnilne turistične dejavnosti na kmetiji na dojemanje posodobljenosti.
**Metodologija**: Izdelali smo kritičen pregled sekundarnih virov literature in na osnovi metode sintez strnili ugotovitve. V nadaljevanju smo z anketo na turističnih kmetijah v vseh kohezijskih regijah Slovenije zbrali podatke in jih analizirali z metodami multiple regresije, ker smo uporabili program IBM SPSS.
**Rezultati**: Dejavniki dedovanja ne vplivajo statistično značilno na dojemanje posodobljenosti turističnih kmetij, podobno velja tudi za medgeneracijske odnose pri starejših od 51 let, vendar pa smo ugotovili vpliv pri mlajših od 51 let. Vključenost starejših prav tako ne vpliva, enako je s pogostostjo dodatnih izobraževanj, so pa pomembna sama izobraževanja in usposabljanja. Ugotovili smo, da ima največji vpliv na dojemanje posodobljenosti širitev ponudbe, kateri sledi delitev dela.
**Zaključek**: Rezultati raziskave nakazujejo dobre odnose med socialnimi akterji in možne rešitve, ki jih bo mogoče implementirati v obravnavano področje, da bi z njimi pomagali obravnavani populaciji slovenskega podeželja.

***Ključne besede:*** *Starejši odrasli, Posodabljanje organizacije, Turizem, Turistična kmetija, Organizacija*.

# AUTHOR GUIDELINES / NAVODILA AVTORJEM

Manuscripts considered for publication in Organizacija (organizacija@fov.uni-mb.si) are those which:

- *Contain original work* – which is not published elsewhere in any medium by the authors or anyone else and is not under consideration for publication in any other medium. The author(s) is/are also responsible for any violations of the copyright regulations.
- *Are focused on the core aims and scope of the journal*: Organizacija is an interdisciplinary peer reviewed journal that seeks both theoretically and practically oriented research papers from the area of organizational science, business information systems and human resources management.
- *Are clearly and correctly written* – should contain all essential features of a complete scientific paper, should be written in a clear, easy to understand manner and be readable for a wide audience.
- *Are written in English* – should be clearly and grammatically written, in an easily readable style. Attention to detail of the language will avoid severe misunderstandings which might lead to rejection of the paper. Correct language is the responsibility of the authors. Unless the author is an English native speaker, the paper must be proofread by a language editor, English native speaker

All parts of the manuscript should be type-written (font size 12), with margins of 2.5 cm. Pages should be numbered consecutively throughout the manuscript. The text should be subdivided into numbered chapters. Figures and tables, consecutively numbered (Figure 1, Figure 2, ...; Table 1, Table 2, …) can be included in electronic form in the text. All lettering and figure elements must be large enough to be readable when figure or table has been reduced to fit journal page or column. All figures and tables must be specifically referred in the text. Colour pictures cannot be published in the printed version of the journal; colours appear only in the internet version. The paper should start with a cover page with names and mailing and electronic addresses of the authors. To assure the anonymity of the refereeing procedure the names of the authors should not appear in the text.

Detailed Guidelines for Authors are available from https://content.sciendo.com/supplemental/journals/orga/orga-overview.xml/Guidelines_for_Authors.pdf.

All the papers will be reviewed by at least two referees. Based on the opinions and suggestions of the reviewers, the editors accept the paper, demand minor or major enhancements, or reject the paper. If major enhancements are required the upgraded paper is reviewed again.

Manuscripts can be submitted via journal web site (http://organizacija.fov.uni-mb.si). For further information and clarifications contact Organizacija's editorial office (organizacija@um.si or joze.zupancic@um.si).

**Address of the Editorial office:**
University of Maribor,
Faculty of Organizational Science
Kidričeva cesta 55a
4000 Kranj, Slovenia
Fax: +386-4-2374-299
Phone: +386-4-2374-245

---

V reviji Organizacija objavljamo znanstvene članke, rezultate raziskovalnega dela avtorjev. Predloženi prispevki naj bodo napisani v angleškem jeziku. Imeti morajo strukturo IMRAD, ki je običajna za znanstvena in strokovna besedila. Objavljamo dela s predmetnega področja revije, ki še niso bila objavljena in niso bila poslana v objavo v kakšni drugi reviji ali zborniku. Avtorji so odgovorni za vse morebitne kršitve avtorskih pravic.

Besedilo naj bo oblikovano za tiskanje na papirju in levo poravnano. Na začetku prispevka, takoj za naslovom, naj bo povzetek (izvleček) dolžine največ 250 besed, ključne besede, v končni – sprejeti verziji članka pa na koncu prispevka tudi kratek strokovni življenjepis vsakega od avtorjev (do 10 vrstic) in letnica rojstva (zaradi vnosa podatkov v knjižnični informacijski sistem COBISS, v reviji letnica ne bo objavljena). Na prvi strani besedila naj bodo napisani le naslov prispevka, imena in (poštni in elektronski) naslovi avtorjev članka, po možnosti tudi telefonska številka enega od avtorjev. Da bi zagotovili anonimnost recenziranja, naj se imena avtorjev ne pojavljajo v besedilu prispevka. Na koncu članka, za življenjepisi, naj bo slovenski prevod naslova, povzetka in ključnih besed.

Članek naj bo razčlenjen v oštevilčena poglavja. Naslovi članka, poglavij in podpoglavij naj bodo napisani z malimi črkami, da so razvidne kratice. Slike in tabele v elektronski obliki vključite kar v besedilo. Besedilu so lahko priložene slike in/ali tabele na papirju v obliki pripravljeni za preslikavo. V tem primeru naj bo vsaka slika na posebnem listu, oštevilčene naj bodo z arabskimi številkami, v besedilu naj bo označeno, kam približno je treba uvrstiti sliko: na tem mestu naj bo številka slike/tabele in njen podnapis. Slike bomo praviloma pomanjšali in jih vstavili v članek. Upoštevajte, da morajo biti oznake in besedila na vseh slikah dovolj velika, da bodo čitljiva tudi pri velikosti slike, kot bo objavljena v reviji. Vse slike naj bodo črno-bele z belim ozadjem; barvnih slik v tiskani verziji revije ne moremo objaviti, barve so vidne le v spletni verziji.

Članki morajo biti pred objavo v Organizaciji lektorirani. Končno verzijo mora lektorirati naravni govorec oz. lektor s primerljivim znanjem angleščine.

Podrobna navodila avtorjem za pisanje in oblikovanje člankov so na https://content.sciendo.com/supplemental/journals/orga/orga-overview.xml/Guidelines_for_Authors.pdf.

Predložene prispevke pregledata in ocenita najmanj dva recenzenta. Na osnovi mnenj in predlogov recenzentov uredniški odbor ali urednik sprejmejo prispevek, zahtevajo manjše ali večje popravke in dopolnitve ali ga zavrnejo. Če urednik oziroma recenzenti predlagajo večje popravke, se dopolnjeni prispevek praviloma pošlje v ponovno recenzijo.

Članke za objavo lahko predložite preko spletnega mesta http://organizacija.fov.uni-mb.si. Za nadaljnje informacije in pojasnila se lahko obrnete na uredništvo Organizacije (organizacija@um.si ali joze.zupancic@um.si).

**Naslov uredništva:**
Univerza v Mariboru,
Fakulteta za organizacijske vede
Kidričeva cesta 55a
4000 Kranj
Faks: 04-2374-299
Tel.: 04-2374-245

Prva slovenska revija za organizacijska in kadrovska raziskovanja in prakso. Revijo sofinancira Javna agencija za raziskovalno dejavnost Republike Slovenije.
Ponatis in razmnoževanje deloma ali v celoti brez pisnega dovoljenja nista dovoljena. Izdajatelj: Univerza v Mariboru, Fakulteta za organizacijske vede Kranj,
Založba MODERNA ORGANIZACIJA, Kidričeva cesta 55a, KRANJ, telefon: 04 23 74 200,
telefax: 04 23 74 299, E-pošta: organizacija@fov.uni-mb.si. Uredništvo revije: Kidričeva cesta 55a, 4000 Kranj, naročniški oddelek: 04 23 74 295.
Letna naročnina: za pravne osebe za prvi naročeni izvod 51,47 EUR, drugi naročeni izvod 41,38 EUR, vsak nadaljnji 36,33 EUR,
za posameznike 25,23 EUR. Cena posamezne številke je 9,08 EUR.
Na leto izidejo 4 številke. Tisk: Tiskarna Koštomaj d.o.o.
Naklada 200 izvodov.

Organizacija is covered by the following services: Cabell's Directory, CEJSH (The Central European Journal of Social Sciences and Humanities), Celdes, Clarivate Analytics - Emerging Sources Citation Index (ESCI), CNPIEC, Die Elektronische Zeitschriftenbibliothek, DOAJ, EBSCO - TOC Premier, EBSCO Discovery Service, ECONIS, Ergonomics Abstracts, ERIH PLUS, Google Scholar, Inspec, International Abstracts in Operations Research, J-Gate, Microsoft Academic Search, Naviga (Softweco), Primo Central (ExLibris), ProQuest - Advanced Polymers Abstracts, ProQuest - Aluminium Industry Abstracts, ProQuest - Ceramic Abstracts/World Ceramics Abstracts, ProQuest - Composites Industry Abstracts, ProQuest - Computer and Information Systems Abstracts, ProQuest - Corrosion Abstracts, ProQuest - Electronics and Communications Abstracts, ProQuest - Engineered Materials Abstracts, ProQuest - Mechanical & Transportation Engineering Abstracts, ProQuest - METADEX (Metals Abstracts), ProQuest - Sociological Abstracts, ProQuest - Solid State and Superconductivity Abstracts, Research Papers in Economics (RePEc), SCOPUS, Summon (Serials Solutions/ProQuest), TDOne (TDNet), TEMA Technik und Management, WorldCat (OCLC)

# CONTENTS - 3/2020




Založba Moderna organizacija