INTANGIBLE RESOURCES FOR AN ORGANIZATION’S SUSTAINABILITY POTENTIAL

Helena Bulińska-Stangrecka1, Anna Bagieńska2

1 Faculty of Administration and Social Sciences, Warsaw University of Technology, Plac Politechniki Street 1, 00-661 Warszawa, Poland
2 Faculty of Engineering Management, Białystok University of Technology, Wiejska Street 45, 15-351 Białystok, Poland

E-mails:1 h.bulinska-stangrecka@ans.pw.edu.pl ; 2 a.bagien@pb.edu.pl

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Abstract. The purpose of this paper is to develop and investigate the relationship between intangible resources such as employee relationships and workplace collaboration in building sustainability potential. A research model and hypotheses were constructed on the grounds of Resource-based-view Theory (RBV) and Cooperation theory (CT). The data was obtained from 175 employees’ from the telecommunications sector in Poland. The results were used to carry out a two-step structural equation modelling analysis, including confirmatory analysis and verification of the hypothesized relationship. The findings indicate that there is a linkage between intangible resources such as employee relationships and sustainability potential. Additionally, the results imply that workplace collaboration impacts the development of sustainability potential. Furthermore, collaboration strengthens the explicit knowledge flow within organizations. This research demonstrated the importance of employee relationships as a key component of organizational sustainability. Collaboration is positively related to explicit knowledge transfer. Managers should promote positive employee relationships in order to enhance the organization’s sustainability potential.

Keywords: Intangible resources; resource-based-view theory; employee relationships; cooperation theory; sustainability potential

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JEL Classifications: M54, M14, M21

1. Introduction

Sustainability is a key characteristic that helps organizations to gain a competitive advantage in a volatile, uncertain, complex and ambiguous (VUCA) environment. A potential for sustainability provides an organization with a flexibility and resilience to react and adjust to a changeable economy. To address the ongoing pressure, organizations need to attain sustainability (Wijethilake, Ekanayake 2018). The proper identification of the sources facilitating sustainability potential are essential for companies’ successful adaptation to a changeable environment. According to the resource-based-view theory (RBV), the strength of an organization lies in its internal resources (Wright et al. 2001). The RBV highlights the impact the internal organization’s resources have
on companies’ output (Chen et al. 2017). Thus, this paper emphasizes the role of core resources in enhancing the organization’s sustainability potential. RBV theory indicates that there is a linkage between the organization’s internal resources and the development of sustainable competitive advantage (Barney et al. 2011). Moreover, RBV theory focuses on non-observant factors in the development of organizational potential (Won, Chelladurai 2016). Furthermore, it has been acknowledged that especially intangible resources such as employee relationships (ER) contribute to the organization’s performance (Campbell, Park 2017).

ER can be defined as a positive relationship between individuals in an organization (Asghar et al. 2016), based on values, participation in decision making and the sense of community in the organization, as well as team cohesiveness (Blyton, Turnbull 1998). ER focus on a mutual respect and power balance within organizations (Li 2018). Positive ER result from an egalitarian structure, high involvement and decision making (De Massis et al. 2018). Hence, the sense of community and participation in decision making processes are good indicators of ER. Numerous studies confirm that intangible resources are playing important role in developing an organization’s sustainability potential (Pearson et al. 2015; Khan et al. 2019, Won, Chelladurai 2016). Especially human resources, such as ER, support an organization’s ability to adjust and sustain in the long term (Wright et al. 2001; de Souza Freitas et al. 2011; Černevičiūtė, Strazdas 2018). Thus, to leverage the sustainability potential, managers must improve ER and focus on strategies strengthening the human factor in organizations (Kim, Bae 2004). For instance, Nawaz and Koç (2019) claim that organizational sustainability is linked to ER. Therefore sustainable human resource management (HRM) facilities the development of intangible resources such as ER and collaboration (Clipa et al. 2019; Bulińska-Stangrecka, Bagienska 2019). Moreover, human resources are indicated as an essential component in building organizational sustainability (Stankevičiūtė, Savanevičienė 2018). However, the relationship between ER and sustainability potential has not been empirically explored in literature. There are theoretical papers introducing the convergence of ER and sustainability potential (Stankevičiūtė, Savanevičienė 2018) yet this lacks empirical validation. Additionally, some studies analyse sustainable ER and it’s impact on employees’ satisfaction in the long-term. However, to the best of our knowledge, there is no research verifying how improving ER and collaboration will influence an organization’s sustainability potential. This paper addresses this research gap, by providing empirical evidence of the relationship between ER, workplace collaboration and an organization’s sustainability potential.

Consequently, this research seeks to contribute to the existing literature by investigating the relationship between sustainability potential and ER and workplace collaboration. Additionally it discusses the consequences of this linkage on explicit knowledge sharing practices, which strengthens the capability to transfer and refine knowledge in organizations (Pop et al. 2015). It builds on previous studies which emphasize the importance of sustainable competitive advantage and intangible resources. On the basis of RBV, this study indicates the significance of human resources (such as ER and collaboration) in developing sustainability. Next, it uses Cooperation Theory (CT) as a reference point to explain the connection between ER, workplace collaboration and an organization’s sustainability potential and explicit knowledge transfer. This paper aims to develop a new research model and to analyse the relationship between the discussed variables. Further, the purpose of this paper is to answer the following research question:

*Do the ER and workplace collaboration have an impact on an organization’s sustainability potential?*

This study discloses the issue of the role of intangible resources such as core components facilitating organizational sustainability.

The remainder of this paper is organized as follows: first the literature review is presented, followed by the hypothesis development. Then the research methodology is presented. Further, the research results are exhibited and discussed. Finally the contributions and limitations are described.
2. Literature review and Hypothesis development

2.1. Employees’ relationships as a factor affecting collaboration in organizations

Under RBV theory, intangible resources strengthen organization performance (Monteiro et al. 2017; Franca, Dua 2018; Kamasak 2017). Intangible resources are defined as rare and valuable assets that lead to competitive advantage, which, if able to withstand in the long term, became a sustainable competitive advantage (Kristandl, Bontis 2007). They are usually described as a core component contributing to an organization’s success, yet are not recognized by traditional financial statements (Castilla-Polo, Gallardo-Vázquez 2016). The critical importance of intangible resources refers to it’s scarcity and difficulty to imitate by competitors. Furthermore, they are not available to large numbers of firms (Kristandl, Bontis 2007). For instance, Okpara, (2015) confirms on the basis of empirical analysis that indeed intangible resources such as culture, knowledge and management support a firm’s sustainable competitive advantage and performance. Further, Ying, Hassan and Ahmad (2019) proved that intangible assets boost the organizational ability to acquire external, valuable resources. Indeed, Fazlagić and Skikiewicz (2019) point out that the main danger to the sustainability of an organization is a scarcity of intangible resources. Hence, the RBV theory considers intangible assets as an essential component of a firm’s sustainable competitive advantage.

RBV theory assumes that competitive advantage is inconstant, therefore the main goal of organizations is oriented toward acquisition and the creation of unique strategic resources, which are hard to imitate (Barney et al. 2011). In particular, various resources will lead to competitive advantages and, consequently, improved organization performance. An effective and creative usage, development and merging of organizational resources, in alignment with an enterprise’s objectives, helps firms to achieve a competitive advantage (Volberda, Karali 2015; Burvil et. al. 2018). Intangible resources (such as relationships, collaboration and knowledge) differ from tangible resources because they cannot be purchased. It is necessary for a manager to implement practices to develop intangible resources, so their strategic potential will increase. Hence, the competitive value of an organization is inevitably associated with the management of its intangible resources (Nason, Wiklund 2018).

The human, relational and informational resources are listed as a core example of intangible resources (Monteiro et al. 2017; Liu et al. 2019). Especially, human and relational resources play a pivotal role in developing the organization’s sustainable competitive advantage (Wright et al. 2001).

Generally, ER are considered to be the main responsibility of HRM functions within organizations (Blyton, Turnbull 1998). ER are recognized as a factor in shaping employee satisfaction and intention to stay (Abugre 2017). The notion of ER refers to the positive relationship between two or more individuals involved in a mutual relationship within the social and authority dimensions within an organizational context (Asghar et al. 2016). Moreover, ER in the wider sense concerns the way in which employers relate to employees (Armstrong 2006). ER concerns the quality of interaction between employees and between employees and managers (Blyton, Turnbull, 1998). ER manifests itself in employee participation in decision making processes, a high quality of interactions and a sense of community within organizations (De Massis et al. 2018). These three factors can indicate high quality ER.

Research confirms that ER impacts organizational performance (Worlu et al. 2016; Samwell 2018) and innovation (Brander, Zhang 2016). Additionally good ER strengthens employees’ learning capability (Kooij et al. 2011). ER aims to build a harmonious relationship in the workplace (Anggraeni 2018). Further, it helps to develop work engagement (Conway et al. 2015; Kwon et al. 2016; Sahoo, Sahoo 2018). High quality ER are associated with higher employee productivity (Tansel, Gazioğlu 2014). The role of ER in enhancing work task completion has been acknowledged (Chen et al. 2016). Well developed ER provides a nurturing environment for creating
organizational effectiveness. Next, the empirical findings from Denmark support the link between ER and external collaboration between firms and universities (Østergaard, Drejer 2017). However, there is no empirical evidence regarding the internal dependency between ER and collaboration in organizations. Referring to the RBV theory, this study anticipates that the improvement of ER as an element of core intangible resources will lead to the enhancement of the effectiveness of the workplace collaboration. Therefore, this study assumes that there is a linkage between ER and collaboration. Hence the hypothesis:

**H1. Employee relationships are positively related to workplace collaboration.**

2.2. Workplace collaboration and organizations’ sustainability potential

The main challenge for current managers refers to the straightening of an organization’s capability to adjust to constant changes and adapt to new market condition and requirements. Scholars highlight that organizations which are able to work out and implement corporate strategies embedded in sustainable development became strategic leaders in the contemporary economy (Benn et al. 2014, Baumgartner, Rauter 2017). Furthermore, sustainability potential may increase an organization’s competitive advantage (da Silva Batista, de Francisco 2018; Cantele, Zardini 2018; Lin et al. 2018).

Sustainable organizations are characterized by balanced development, fair and transparent rules and norms guiding both managers and employee behaviour oriented towards long-term sustainable resource management (Medne, Lapina 2019). Additionally, Benn, Edwards and Williams (2014) define a sustainable organization as a corporation which incorporates sustainable principles into its strategy and operation, while implementing sustainable values in society.

In an organizational context, competitive advantage evolves through the continued management of key resources (Kristandl, Bontis 2007), and an agile adjustment to changeable and volatile market requirements (Nijssen, Paauwe 2012; Cummins 2017). Sustainability and agility are considered as complementary concepts that support current managers in pursuing business goals (Obramović et. al. 2019). Strategic resources are usually embedded in unique practices which have evolved in time (Barney, 1991; Chen et al. 2010).

Business strategy and its implementation may lead to opposite outcomes. Therefore, sustainability potential helps managers to maintain valuable results. The sustainability potential in an organization comes from both the resources used (Moloy et al. 2011), and dynamic business models embedded in sustainable development (Consenz et al. 2019). The latest research confirms that versatile resources enhance flexibility in adjusting to a volatile business environment (Tehseen et. al. 2019; Nason, Wiklund 2018; Klier et. al. 2017). Effective management of an organization’s sustainable development is based on a comprehension of organizational resources and their contribution (Ferreira, Fernandes 2017).

Human resource management is extensively recognized as central to sustainable development (Macke, Genari 2019; Bombiak, Marciniuk-Kluska 2018; Pellegrini et al. 2018). Sustainable human resource development is oriented toward the on-going support of human capital in organizations (van Dam et al. 2017). Hence, human resources contribute to the intangible development of the organization and the creation of a long-term competitive advantage.

Organizations’ sustainability potential can be defined as the organizational capability for an agile adjustment to the changeable economic environment through the sustainable use of both tangible and intangible resources in order to develop constant competitive advantage.

Workplace collaboration plays a pivotal role in sustainable human resource management (Stankevičiūtė, Savanevičienė 2018). The critical importance of collaboration in developing sustainability potential has been
established (Caniglia et al. 2018). Collaboration facilities productivity, especially in relation to complex work tasks which require coordination (Tjosvold, Yu 2004; Jasińska 2019). Positive relationships and workplace collaboration are regarded as intangible and long-lasting assets which increase the likelihood of achieving a competitive advantage in a given organization (Ahmad 2015).

In an organizational context, CT was first established by Deutsch (1949), and later developed simultaneously by Tjosvold (1984,1998) and by Johnson &Johnson (1989, 1999). The implications of CT reinforce managerial understanding of the essence of the relationships in a work group, problem solving methods (West et al. 2003), and the ways of mutual support between organization members oriented towards the improved effectiveness of workplace collaboration (Tjosvold, Johnson 2000). CT highlights the relationship between goals and behaviours in the workplace. The theory indicates that positively related goals strengthens employees’ involvement and encourages mutual support and in consequence leads to better results and improved effectiveness (Tjosvold, Yu 2004). CT provides a framework to understand how goals affect interactions and results (Tjosvold, Johnson 2000; Chen et al. 2010). Collaboration is an enabler of task performance and can help employees’ mutual and reciprocal support, interactive-based engagement, correction of errors and the synergy of ideas (Tjosvold, Yu 2004). Positive collaborative experiences may influence work engagement (Gerards et al. 2018). Collaboration increases the sense of community and integrates collective goals with individual objectives (Chen et al. 2010).

Even though organizations provide the necessary conditions for cooperation, individual and organizational goal alignment doesn’t occur automatically (Zanda 2018). The managers play an essential role in developing interdependent goals both in a traditional and a virtual work environment (Afferbach 2020), shaping the positive image of an organization (Chen et al. 2010), whilst maintaining a positive relationship with stakeholders (Bosse, Coughlan 2016; Bundy et al. 2018) and developing the organization’s sustainability potential.

Current human resource management is oriented toward initiating a collaboration and building team spirit in the workplace. Lorincová et al. (2019) and Macke & Genari (2019) suggest that human resource management is linked to environmental sustainability and organizational performance. Workplace collaboration is a process, which drives employees to achieve collective, organizational goals (Heavey, Murphy 2012; Bond-Barnard et al. 2018). Development of a high performing team depends on a high level of collaboration between team members (Shagholi et.al. 2010).

Hence, CT supports the notion that effective collaboration increases the employees’ ability of collective effort and achieving common, organizational goals and developing intangible potential. The theory reasons that collective interactions result in sustainable development.

**H2: Workplace collaboration positively influences an organization’s sustainability potential**

### 2.3. Workplace collaboration and explicit knowledge transfer

Knowledge is considered to be a core resource in the success of an organization (Grant 1996), which influences its performance (Bierl et al. 2009; Cegarra-Navarro et al. 2016). Knowledge is essential to making decisions, furthermore it supports effective processes and improvement (Cegarra-Navarro et al. 2016). Moreover, it has been shown to be a critical basis for creativity and innovation (Fereira, Fernandes 2019; Munoz-Pascual, Galende 2017). Additionally, knowledge has been recognized as essential to gaining competitive advantage (Lee et al. 2016).

Both obtaining and retaining knowledge, plays a critical role in gaining a sustainable competitive advantage (Bolisani, Bratianu, 2017; Mahdi et al. 2019). The capability to effectively use knowledge helps to maintain long-term innovative potential in organizations (Ponce et al. 2018). The critical importance of knowledge management
in an organization’s adjustment to the environment and further development has also been established (García-Cabrera et al. 2017). An effective use of knowledge helps to improve and implement new technology (Zheng et al. 2019). Such long-term sustainably developing organizations are able to cope with ongoing challenges and transformations (Mahdi et al. 2011). Organizational knowledge helps to establish grounds for sustainable competitive advantage (Teece 1998). Overall, knowledge management contributes to the organization’s development both as a primary source of competitive advantage and as long-lasting intangible resource (Mahdi et al. 2011; Nonaka, Takeuchi 1995).

In an organizational context, there are two different types of knowledge (Nonaka, Takeuchi 1995; Polanyi 1962). Explicit knowledge can be relatively easily codified, transmitted and disseminated in the form of writing instructions or documentation (Smith 2001; Benisic 2016). Tacit knowledge is embedded in employees’ experiences and know-how, and is often non-verbalised and difficult to codify (Jasimuddin et al. 2005). Both types of knowledge are rooted in employees and involve their contribution to the organization’s development (Donelly 2019).

Explicit knowledge is practical knowledge, which can be articulated, documented, stored and conveyed within organizations (Smith 2001; Benisic 2016). Nowadays, technology plays a pivotal role in keeping and disseminating explicit knowledge (Oye et al. 2011). The explicit knowledge resources help to solve various organizational issues, reuse significant information and connect employees in valuable knowledge-sharing networks (Smith 2001).

Knowledge transfer can be described as a process, in which one person receives and reuses obtained information (Kumar, Ganesh 2009), to solve problems and implement new procedures and processes (Wang, Noe 2010). Knowledge transfer occurs in the workplace, in the form of shared documents, reports, ideas and expertise. Knowledge can be conveyed both through formal and informal channels (Holste, Fields 2010; Chen et al. 2011). Knowledge transfer is a dynamic process which occurs within organizations (between employees) as well as outside organizations (between customers, companies, stakeholders) (Loon 2019; Muñoz – Pascual et al. 2020). Knowledge transfer refers to both kinds of knowledge: tacit and explicit (Balle et al. 2019). Employee involvement in collective tasks, interests and goals increases the likelihood of successful knowledge transfer (Singh Sandhawalia, Dalcher 2011). Furthermore, knowledge transfer is an important part of employee development by improving their creativity, effectiveness and status (Chae et al. 2019), as well as job satisfaction (Cugueró-Escofet et al. 2019).

Explicit knowledge transfer is a key challenge employees are facing in current organizations (Szulanski 2000; Gou et al. 2019). Some studies suggest that sixty per cent of employees found it difficult to obtain information from colleagues (Inefficient Knowledge Sharing Costs Large Businesses $47 Million Per Year https://www.prnewswire.com/news-releases/inefficient-knowledge-sharing-costs-large-businesses-47-million-per-year-300681971.html). Nevertheless, it has been confirmed that the effectiveness of an explicit knowledge application depends on its fluent transfer between employees (Sung, Choi 2018; Chae et al. 2019). Hence, it is important that managers facilitate explicit knowledge transfer in organizations. Managers should apply practices that motivate and encourage employees to share knowledge. (Mahdi et al. 2019; Donelly 2019). This might not only improve the organization’s effectiveness but also contribute to a new knowledge creation (Nonaka, Takeuchi 1995), and consequently it may enhance the company’s sustainability potential (Muñoz – Pascual et al. 2020).

According to CT, collaborative work results in more effective outcomes than working individually (Chen et al. 2010). The collaboration process decreases the pressure and dissonance between individual and collective goals (Axelord 2000). CT assumes that collective goals in an organization affect employee behaviours, including knowledge sharing attitudes (Lu et al. 2010).
Managers should also consider the impact of behavioural norms on explicit knowledge sharing in organizations (Malik 2019; Cugueró-Escofet et al. 2019). Additionally, assistance in creating, storing and using explicit knowledge by establishing a knowledge system in an organization can encourage knowledge sharing between employees (Reychav, Weisberg 2010; Friedrich et al. 2020). However, research indicates that such systems (e.g. ERP, data base, document management system) are not necessarily motivating employees to engage in knowledge sharing (Reychav, Weisberg 2010). Hence, the need for identifying different factors facilitating knowledge transfer in organizations.

The setting of collaborative work has been recognized as a significant knowledge sharing enabler (Farhan et al. 2016). Indeed, the relational factor has been identified as a core facet in enhancing knowledge transfer (Barbolla, Corredera 2009; Ferraris et al. 2018). Hence, relationships between employees are an important element which may help to bridge the gap between technology and knowledge transfer in an organization. Therefore, relationships built on collaboration in a workplace should strengthen knowledge sharing. Workplace collaboration enhances knowledge transfer because it provides mutual understanding of the operational context (McInerney, Day 2007). Further, the collaboration process can contribute to the strengthening of employee relationships, engagement and increased inter-organizational trust (Bulińska-Stangrecka, Bagieńska 2018). Moreover, CT (Lu et al. 2010) highlights that collaboration builds commitment to collective goals, which promotes knowledge transfer between employees. Consequently, this study assumes that workplace collaboration influences explicit knowledge transfer.

**H3: Workplace collaboration positively influences explicit knowledge transfer**

### 3. Research design

The design of this study draws on RBV and CT. The research model in this study assumes that ER has an effect on the organization’s sustainability potential. The workplace collaboration is positioned between these two variables to reflect the influence of ER on workplace collaboration, and this is illustrated in the hypothesised relationships. Additionally, the study assumes that collaboration strengthens explicit knowledge transfer as shown in Figure 1.

![Fig. 1. Research model](image)

#### 3.1. Research context

The telecommunications sector is a dynamic industry, leading in digital transformation (www.The top 3 telecom trends for 2020). It has been characterized as an innovative sector (www.Innovation in the Telecoms world). State-of-the-art technologies and solutions have been developed on the basis of new knowledge creation and refinement. Digital revolution enables fast information flow and exchange of ideas (Buda et al. 2020). Therefore,
intangible resources are crucial for telecommunications companies to achieve a competitive advantage. Hence, this study focuses on this innovative sector, where the intangible resources play a crucial role in an organization’s sustainable development.

4. Research methodology

The quantitative approach was used in this study. A survey has been conducted to gather information from employees from the Telecommunication Sector in Poland. The data was collected using self-reported measures. This method can be effectively applied when a large sample is involved (Cameron, Price 2009).

All items were measured using a five-point Likert scale in which 1 means “strongly disagree” and 5 means “strongly agree”. Employee relationships were measured using three statements: “I have a good relationship with my co-workers”; “I have a sense of mutual support in my organization”; “I perceive my organization as a community”. The variable of workplace collaboration was measured using four statements based on Bond-Barnard et al. (2018) where a four-item team collaboration instrument was used. It involved four items: “Employees in my organization are committed to achieving team goals”, “Employees in my organization work together as a team to achieve a common goal,” “Employees in my organization coordinate team efforts to achieve a common goal,” and “The collaboration in my team is effective.” The organization’s sustainability potential was measured by three statements, based on Ramos and Caeiro (2010) and includes the following items: “My organization is capable of achieving its goals”; “My organization is capable of coping with difficulties”; “My organization is able to deal with unforeseen circumstances”. The variable of explicit knowledge was measured using three statements: “In my organization, employees share work instructions”, “In my organization employees share work-related documentation”, “In my organization employees prepare guides and instruction for others in regard to their work tasks”.

4.1. Procedure

The questionnaire was distributed to respondents and included the information that their answers and identities will remain anonymous. In total, 175 answers were deemed suitable for further analysis. All data was transferred into an Excel spreadsheet.

4.2. Participants

The demographic profile of participants are as follows: gender distribution showed an acceptable balance: 65.14 per cent of the sample were men and 34.86 women. 60 per cent of the survey population had professional experience of over 10 years, whereas 22.86 per cent had between 1-5 years, and 13.71 per cent had 6-10 years of professional experience, and only 3.43 per cent had less than a year’s experience. Directors made up 5.14 per cent of the sample in regard to position in an organization, while the most substantial group were specialists (67.43 per cent), 18.29 were classified as managers, 3.43 per cent as experts, 1.71 per cent as analysts, 0.57 per cent as assistants and 3.43 as others. Employees with a master’s degree consisted of 67.43 per cent of the population, 17.71 had a bachelor degree, 11.43 an engineer’s degree, 1.14 had high school diplomas and 2.29 didn’t specify.

4.3. Data analysis

Structural equation modelling (SEM) was applied to analyse the hypothesised relationships. The analysis was conducted using a two stage approach according to Hair et al. (2010). The measurement model was developed with Statistica 13 software and R. Then confirmatory factor analysis (CFA) was used to decide whether the variables are reliable. Later, the proposed SEM model fit was evaluated based on a range of incremental fit indices (Hair 2010; Byrne 2010).
5. Results

5.1. Correlation among variables

Correlation among employee relationships, workplace collaboration, the organization’s sustainability potential and explicit knowledge transfer were scrutinized (Table 1). The analysis revealed that there were positive and significant correlations between most variables, which implies that further analysis can be conducted (Brown, Moore 2012). Furthermore, demographic variables (gender, education, position) were not statistically related to the variables within the model (employee relationships, workplace collaboration, sustainability potential and tacit knowledge transfer), therefore they were excluded from further analysis to avoid biased interpretation (Spector, Brannick 2011).

Table 1. Means, Standard Deviations, and Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
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<tbody>
<tr>
<td>1 employee relationship</td>
<td>4.04</td>
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<td>2 employee relationship</td>
<td>3.55</td>
<td>1.12</td>
<td>0.628**</td>
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<td>3 employee relationships</td>
<td>3.90</td>
<td>0.957</td>
<td>0.600**</td>
<td>0.711***</td>
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<td>4 workplace collaboration</td>
<td>3.88</td>
<td>0.984</td>
<td>0.683**</td>
<td>0.687***</td>
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<td>5 workplace collaboration</td>
<td>3.82</td>
<td>1.02</td>
<td>0.703**</td>
<td>0.734***</td>
<td>0.698***</td>
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<td>6 workplace collaboration</td>
<td>3.99</td>
<td>0.907</td>
<td>0.648**</td>
<td>0.590***</td>
<td>0.556***</td>
<td>0.689***</td>
<td>0.704***</td>
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<td>0.605**</td>
<td>0.545***</td>
<td>0.536***</td>
<td>0.708***</td>
<td>0.724***</td>
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<td>8 sustainability potential</td>
<td>4.19</td>
<td>0.793</td>
<td>0.386**</td>
<td>0.258***</td>
<td>0.320***</td>
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<td>0.386***</td>
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<td>0.766</td>
<td>0.370*</td>
<td>0.261*</td>
<td>0.252*</td>
<td>0.365*</td>
<td>0.330*</td>
<td>0.324*</td>
<td>0.407*</td>
<td>0.726*</td>
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<td>10 sustainability potential</td>
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<td>0.781</td>
<td>0.401**</td>
<td>0.245***</td>
<td>0.250***</td>
<td>0.367***</td>
<td>0.359***</td>
<td>0.326***</td>
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<td>11 explicit knowledge transfer</td>
<td>3.71</td>
<td>0.993</td>
<td>0.419**</td>
<td>0.414***</td>
<td>0.436***</td>
<td>0.359***</td>
<td>0.394***</td>
<td>0.381***</td>
<td>0.310***</td>
<td>0.122</td>
<td>0.122</td>
<td>0.107</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>12 explicit knowledge transfer</td>
<td>4.05</td>
<td>0.850</td>
<td>0.347**</td>
<td>0.285***</td>
<td>0.331***</td>
<td>0.316***</td>
<td>0.336***</td>
<td>0.344***</td>
<td>0.333***</td>
<td>0.115</td>
<td>0.111</td>
<td>0.128</td>
<td>0.608***</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>13 explicit knowledge transfer</td>
<td>3.75</td>
<td>0.974</td>
<td>0.239**</td>
<td>0.175*</td>
<td>0.245**</td>
<td>0.160*</td>
<td>0.170*</td>
<td>0.213**</td>
<td>0.139</td>
<td>0.064</td>
<td>0.054</td>
<td>0.102</td>
<td>0.496***</td>
<td>0.646***</td>
<td>—</td>
</tr>
</tbody>
</table>

Notes: N=175, * p < .05, ** p < .01, *** p < .001
Source: own elaboration.

5.2. Confirmatory factor analysis

The CFA was performed to ensure a proper fit of the research model. The results of the CFA are exhibited in table 2. All factor loadings were above 0.5, which indicated that all latent variables are adequately represented by indicators. The recommended fit indices are: overall model chi-square ($\chi^2$), degrees of freedom (DF), Root mean square error of approximation (RMSEA), goodness-of-fit index (GFI) and Adjusted goodness-of-fit index (AGFI) (Hair et al. 2010). Final measurement model indices were as follows: CMIN/DF = 1.663, GFI = 0.913, AGFI = 0.866, RMSEA = 0.062, $p = 0.001$. All these represent a good fit.
Table 3 illustrates the results of CFA and model estimation. The model validity has been assessed according to Hair et al. (2010). The average variance extracted (AVE) was used to estimate the items’ convergent validity. Reliability was evaluated using composite reliability (CR) and Cronbach’s alpha measurement. The estimation confirms that the measurement scales are variable and reliable.

### Table 2. Results of confirmatory factor analysis

<table>
<thead>
<tr>
<th>Measures</th>
<th>Items</th>
<th>Factor loadings</th>
<th>t-value</th>
<th>Standard error</th>
<th>Composite reliability</th>
<th>Average variance extracted</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee relationships</td>
<td>3</td>
<td>0.797</td>
<td>22.377</td>
<td>0.036</td>
<td>0.848298</td>
<td>0.651</td>
<td>0.844</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.826</td>
<td>25.606</td>
<td>0.032</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.797</td>
<td>22.735</td>
<td>0.035</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workplace collaboration</td>
<td>4</td>
<td>0.933</td>
<td>64.723</td>
<td>0.014</td>
<td>0.94372449</td>
<td>0.8078665</td>
<td>0.923</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.957</td>
<td>80.412</td>
<td>0.012</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.842</td>
<td>28.507</td>
<td>0.030</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.858</td>
<td>30.985</td>
<td>0.028</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainable potential</td>
<td>3</td>
<td>0.808</td>
<td>22.740</td>
<td>0.036</td>
<td>0.88175917</td>
<td>0.71343467</td>
<td>0.887</td>
</tr>
<tr>
<td>Explicit knowledge transfer</td>
<td>3</td>
<td>0.888</td>
<td>30.389</td>
<td>0.029</td>
<td>0.82867691</td>
<td>0.61877267</td>
<td>0.802</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.836</td>
<td>25.389</td>
<td>0.033</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Notes: Chi-square = 98.141, df = 59, chi-square/df = 1.663, p =0.001, GFI= 0.913, AGFI = 0.866 , RMSEA = 0.062.*

### Table 3. Final structural model fit indices

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Abbreviation</th>
<th>Recommended value</th>
<th>Authors</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum of Discrepancy (χ2)</td>
<td>CIMIN</td>
<td>&lt;30</td>
<td>Hair et al. 2010</td>
<td>22.53</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>df</td>
<td>-</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>CMIN/df</td>
<td>≤3</td>
<td>Kline 2011</td>
<td>1.126</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td></td>
<td></td>
<td>0.312</td>
</tr>
<tr>
<td>Goodness of Fit Index</td>
<td>GFI</td>
<td>&gt;0.90</td>
<td>Hair et al. 2010</td>
<td>0.980</td>
</tr>
<tr>
<td>AGFI &gt;0.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index</td>
<td>AGFI</td>
<td>&gt;0.90</td>
<td>Bentler 1990</td>
<td>0.909</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Marsh, Balla &amp;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>McDonald 1988</td>
<td></td>
</tr>
<tr>
<td>Root Mean Square Error of</td>
<td>RMSEA</td>
<td>&lt;0.05 or 0.08</td>
<td>Hair et al. 2010</td>
<td>0.027</td>
</tr>
<tr>
<td>Approximation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: own elaboration.*

### 5.3. Structural model estimation

Fit indices for the structural model were CMIN/DF = 1.126, RMSEA = 0.027, GFI= 0.980 and AGFI = 0.909, which indicates that the model satisfactory fits the data (Hair at al. 2010). Model fit results are exhibited (table 3).
The hypothesized relationships within the model are summarized in Table 4. It consists of the results of hypothesis testing. Taken together, the results suggest that the research model is an adequate one.

Table 4. Results of hypotheses testing

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Standardized coefficients</th>
<th>t-statistic</th>
<th>p</th>
<th>result</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER-&gt;WC</td>
<td>0.837</td>
<td>28.603</td>
<td>0.000</td>
<td>supported</td>
</tr>
<tr>
<td>WC-&gt;SP</td>
<td>0.489</td>
<td>5.895</td>
<td>0.000</td>
<td>supported</td>
</tr>
<tr>
<td>WC-&gt;EKT</td>
<td>0.621</td>
<td>8.362</td>
<td>0.000</td>
<td>supported</td>
</tr>
</tbody>
</table>

Notes: ER- employee relationships; WC- workplace collaboration; SP- sustainability potential; EKT- explicit knowledge transfer

Source: own elaboration.

The final structural model illustrating standardized coefficients is exhibited in Figure 2. All relationships were found to be statistically significant.

The H1 hypothesis was supported, and employee relationships were found to affect workplace collaboration ($\beta = 0.837, p= 0.000$). This highlights the importance of strong and positive employee relationships for effective collaboration.

The relationship between workplace collaboration and the organization’s sustainability potential was confirmed ($\beta = 0.489, p = 0.000$). Thus it indicates the role of workplace collaboration in developing sustainability.

The H3 hypotheses, concerning the relationship between workplace collaboration and explicit knowledge transfer was supported.

The SEM model illustrates the mechanism describing how employees’ relationships and workplace collaboration can support the organization’s sustainability potential.

In the structural model, employee relationships has an effect on the workplace collaboration. The workplace collaboration in turn affected the organization’s sustainability potential. Additionally, workplace collaboration also affected explicit knowledge transfer.
6. Discussion

To better understand the role intangible resources play in developing an organization’s sustainability potential, this study explored a research model linking employees’ relationships and workplace collaboration with the organization’s sustainability potential and explicit knowledge transfer. The findings demonstrate that positive employees relations are associated with workplace collaboration. Furthermore, this research shows the positive relationship between workplace collaboration and an organization’s sustainability potential. This highlighted the importance of intangible resources in developing an organization’s sustainability potential (Monteiro et al. 2017; Franca, Dua 2018; Kamasak 2017). Additionally, this study confirmed the positive impact of workplace collaboration on explicit knowledge transfer. As such, it provides empirical confirmation of the suggested relationship between cooperation and knowledge flow in organizations (Racko et al. 2019; Neiva, Borges 2017).

In this research, the link between employees’ relationships and workplace collaboration was found to be statistically significant and a positive relationship was demonstrated. Thus, the importance of human factors in supporting effective workplace collaboration has been confirmed. This is in accordance with the RBT, which assumes intangible resources are key to building competitive advantage (Nason, Wiklund 2018).

The strong, positive relationship between workplace collaboration and an organization’s sustainability potential has been confirmed in this study. This emphasises the significance of cooperation for developing sustainability (Wright et al. 2001). These findings imply that managerial practices promoting collaboration may have a considerable influence on an organization’s sustainability. This validates previous research indicating that human resources boosts sustainability (Macke, Genari 2019; Langwell, Heaton, 2016). Moreover, this suggests that sustainability can be embedded in human factors such as collaboration and employee relationships. Therefore it can be concluded, that organizations with stronger, positive employee relationships and effective workplace collaboration practices are more likely to successfully develop their sustainability potential.

Finally, the results showed that explicit knowledge transfer is affected by workplace cooperation. Therefore, well maintained employee relationships and cooperation improved knowledge flow in organizations. In other words, when members willingly collaborate and can rely on each other, they will be inclined to share explicit knowledge with others in an organization.

Overall, statistical support for all hypotheses indicates that intangible resources such employee relationships and workplace collaboration can give an organisation an advantage in developing their sustainability potential.

Conclusions

The main objective of this research was to verify the new model of explaining the role of intangible resources in developing an organization’s sustainability in the context of RBV theory (Barney et al. 2011). The intangible resources that affect sustainability potential were identified through literature, a research model was constructed and the impact of these factors was measured through SEM. As in previous studies, employee relationships were found to have a significant influence on workplace collaboration, but in this study, further positive consequences for organizations’ sustainability potential were indicated.

Empirical evidence indicating that sustainable development of a given organization becomes more likely as the employees’ relationships improves, which in turn improves workplace collaboration. Further, an effective workplace collaboration facilitates explicit knowledge transfer in organizations. These findings address the literature gap regarding the resources which can assist an organization’s sustainability potential.
It is clear from this research that there are managerial practices oriented toward the effective management of intangible resources which can support sustainability. Promotion of positive, strong employee relationships in an organization enhances its sustainability potential. Moreover, good collaborative practices can encourage better knowledge sharing and sustainable competitive advantage. Greater sustainability potential helps organizations to better deal with unknown problems and face future challenges (Broman, Robèrt 2017). Hence, improved comprehension of human resource practices can support sustainability strengthening organizations’ potential to avoid prospective difficulties and prevent damages. This research also suggests that maintaining positive relationships between organization’s members would enhance its sustainable development.

Overall, this research has important implications for both theory and practice. The theoretical implications refer to the empirical confirmation of the RBV theory approach toward the essential role of human resource management in developing a sustainable competitive advantage (Wright et al. 2001; Colbert 2004). This study highlights the importance of intangible resources such as employee relationships and workplace collaboration in having a better adjustment to a changeable economic environment. Further, this study applies the RBV theory and CT to illustrate the conceptual and practical implications of intangible resources for developing sustainability. Additionally, this study proposes a research model linking employees’ relationships, workplace collaboration with an organization’s sustainability potential and explicit knowledge transfer. This model proposes a framework from which managers and researchers can better understand the importance of human resources in developing sustainability.

The practical contributions of this study are that by promoting positive relationships among co-workers, the likelihood of the company’s success would improve. Managers could also consider the impact of workplace collaboration on the organization’s sustainability potential and its relationship with explicit knowledge transfer. Furthermore, there is a particularly strong relationship between workplace collaboration and sustainability potential. This indicates how effective management of the cooperation processes strengthens the company’s sustainable competitive advantage. The results of this study also provides an insight into the implication of human resource management for an organization’s sustainability. This includes implementation of managerial practices strengthening the positive relationship between employees, as well as improving the organization of cooperation in teams. From a managerial perspective, the empirical verification of human resource practices concerning employee relationships and workplace collaboration, as the sources of the organization’s sustainability potential provides a valuable clue for managers. This study emphasizes the role of employees’ relationships and collaboration in developing sustainability.

It would be advantageous for future research to include different sectors. Also, qualitative research would provide a more in-depth comprehension of the role of intangible resources in developing sustainability. Further research should focus on using qualitative methods to explore the significance of employees’ relationships and workplace collaboration. Additionally, the analysis of organizations’ sustainable potential needs further consideration from multiple perspectives and across various contexts. For instance, what are other intangible antecedents of organization sustainability? Do other human resources practices drive organizational sustainability? Future research can explore additional antecedents of organizational sustainability. This complex assessment of HR practices would allow managers to implement relevant, sustainability-oriented HR strategies in organizations. Furthermore, another path for research can examine how the use of technology can impact the link between employee relationships, workplace collaboration and sustainable potential. Additionally, further, longitudinal analysis of this mechanism can provide broader data regarding this link in various contexts.
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Helena BULIŃSKA-STANGRECKA is an assistant professor at Faculty of Administration and Social Sciences at Warsaw University of Technology. Her research focuses on the human resource management; knowledge management; trust and organizational culture.

ORCID ID: orcid.org/0000-0003-2971-9708

Anna BAGIENSKA is an Assistant Professor at Faculty of Engineering Management at Bialystok University of Technology in Poland. Her research interests include human resource management, corporate social responsibility and integrated reporting

ORCID ID: orcid.org/0000-0002-3053-8085

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