

Interdisciplinary Approach to Sustainable Employee Development

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Abstract **Purpose.** *The main cognitive goal of this paper is to examine which benefits and gains achieved by the employees are the best indicators of the sustainability of their development. The concept of research and the structure of the paper is based on the following steps: (A) conceptual analysis of the sustainability of employee development; (B) formulation of a new, interdisciplinary and multidimensional approach to the concept of sustainable development of employees; (C) empirical-research-based analysis indicating factors determining the effects of mentoring processes juxtaposed with identified dimensions of sustainable employee development.*

Design/methodology/approach. *The following research questions have been formulated: RQ1: What is the structure of interdependencies between various mentoring effects describing employee development?; RQ2: Which of the different mentoring effects contribute to the specific dimensions of sustainable employee development? The Social Network Analysis study was carried out using traditional methods, i.e., by modelling the analyzed phenomenon using graphs, processed by the most up-to-date version of the Social Network Visualizer software.*

Findings. *We analyze which aspects of employees' development within the mentoring process are crucial for the sustainability of the process. We obtain these results by conducting a network analysis of a range of parameters commonly used to measure employee development, as well as aspects of mentoring processes. We have formulated a new, interdisciplinary, and multidimensional proposal for defining employee sustainability, which is the main conceptual result of the study. It allows for a holistic approach to employee sustainability within the organization's operations. Empirical analysis confirmed the multidimensionality of the mentoring process. The three groups of factors distinguished in the graph model M1 (I, II, III) correspond to the criteria distinguished in the proposed definition of sustainability of the employee development process.*

Practical implications. *The intention behind this study was to explore the interdisciplinarity and multidimensionality of employee development sustainability, aiming to achieve a holistic theoretical approach that could be translated into specific, practical development goals for the organization. The development of an employee can be perceived in the broader context as sustainable employee development. There are four dimensions of such development that can be taken into consideration by employers: organizational, ethical, sociological, and psychological.*

Originality/value. *We propose an innovative research methodology for the perception of sustainable development among employees using Social Network Analysis (SNA).*

Keywords sustainable employee development, human capital development, SHRM, mentoring.

INTRODUCTION

Sustainable development of employees is a research topic of growing importance and interest, both in its own right and as an aspect of a holistic approach to sustainable development. The concept of Sustainable Human Resource Management (SHRM) seems to be relatively fresh and has gained a lot of scientific attention recently (Vanka et al, 2020), even though it was not only studied over two decades ago (Zaugg et al., 2001) but also practically addressed by labour movements of the 19th century. Moreover, an array of other fashionable concepts, such as work-life balance (Chan, Field, 2018), corporate sustainability (Dyllick, Hockerts, 2002), or even Corporate Social Responsibility (Cohen, 2011), are closely related to it and somehow anticipated the growth of its popularity. On the other hand, sustainability has become a total and overriding conceptual framework due to the implementation of the Sustainable Development Goals agenda, grounded by the United Nations (2015). Nevertheless, the very definition and understanding of sustainability in the context of employees' development remain fiercely debated and thus seem to require further investigation.

In order to achieve a practical definition of employee sustainable development, the more general than typical approach to sustainable development in management – which basically says that it is a method of management in which meeting short-term needs-goals does not reduce the chances of satisfying long-term needs-goals – should be confronted with a multidimensional needs-goals analysis conducted with respect to various interests of a variety of actors, including employees as well as natural

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environment. The idea of balancing primary organizational needs-goals with other stakeholders' needs-goals was addressed in multiple studies and operationalized in the form of analytical models (Vanka et al., 2020). A holistic model – breaking sustainability into four subcategories: sociological, psychological, ecological, and strategic – has recently been successfully adopted by Mazur and Walczyna (2020) to study SHRM in Polish companies.

In our study, we propose a similar approach to SHRM and focus on the psychological, sociological, and material-strategic aspects of employees' sustainable development. In this regard, we propose our own methods of operationalization of these three factors. Moreover, we argue that the sustainable development of any contemporary organization must be based on an accurate recognition of human capital development patterns, and thus the above-mentioned parameters constitute an inseparable dimension of any long-term, effective management model. As discussed in the authors' previous publication on that matter (Baran, Zarzycki, 2021), the motivations and rationale of organizations interested in managerial excellence overlap with the developmental goals of the employees, who typically, on the one hand, intend to improve, but on the other hand, prefer to achieve their goals in a personally sustainable way. Armstrong and Taylor (2020) also confirmed that human capital development encompasses learning, education, personal development, and training, all of which contribute to employees' development. An interested reader might also find it relevant to compare these observations with older, long-term-oriented approaches to employee development, such as knowledge management, talent management, learning organization, and the knowledge-based organization ideas (Zajac, 2014).

More practically speaking, contemporary organizations adopt individualized employee development methods, such as coaching or mentoring, to create conditions encouraging and facilitating constant learning and development of the employees (Baran, 2018; Jyoti & Rani, 2019).

In theoretical terms, mentoring is understood as a developmental relationship that encompasses both professional and psychosocial support (Ragins et al., 2007). Together, the two dimensions contribute to the sustainable development of the employee, promoting long-term professional development and personal well-being (Eby et al., 2008).

Within the framework of sustainable human resource management, mentoring can therefore be seen as a mechanism that involves sustainable psychological and sociological development at the individual level. It develops competencies, strengthens interpersonal relationships and social capital (sociological sustainability), and increases self-efficacy and intrinsic motivation (psychological sustainability) (Bozionelos et al., 2016).

As many studies show, mentoring has been adopted as an effective tool for developing human capital (Allen et al., 2017). In many cases, mentees' participation in mentoring processes led to numerous benefits associated with career development, including increased job satisfaction, promotion, increased remuneration, as well as personal development gains and related psychosocial benefits (Ghosh, Reio Jr., 2013).

The main cognitive goal of this paper is to examine which benefits and gains achieved by the employees are the best indicators of the sustainability of their development. Similarly, we analyze which aspects of their development during the mentoring process are crucial for the psychological and sociological sustainability of the process. We obtain these results by conducting a network analysis of a variety of parameters often adopted to measure employee development, as well as aspects of mentoring processes. In this way, the paper aims to propose an innovative research methodology for the perception of sustainable development among employees using Social Network Analysis (SNA).

The concept of research and the structure of the paper are based on the following steps:

- (A) Conceptual analysis of the sustainability of employee development;
- (B) Formulation of a new, interdisciplinary, and multidimensional approach to the concept of sustainable development of employees;
- (C) empirical-research-based analysis indicating factors determining the success of mentoring processes juxtaposed with factors determining the sustainability of employee development.

Moreover, in the empirical context, we formulate the following research questions:

RQ1: What is the structure of interdependencies between various mentoring effects describing employee development?

RQ2: Which of the various mentoring effects contribute to the specific dimensions of sustainable employee development?

The structure of the paper is the following: in Section 2 the overview of the literature is presented; Section 3 describes the theoretical framework underlying the study, including the definition of sustainable development of employees; the details of the adopted research methodology are contained in Section 4; Section 5 presents key findings and results of the study; Section 6 wraps up the discussion in four separate subsections devoted respectively to conclusions, implications, limitations, and future research subsections.

LITERATURE REVIEW

Sustainable human resource management

The concept of organizational sustainability has received growing research interest since sustainable organizations have been shown to positively affect many aspects of society, including business, environment, and people (Kim, Khan, & Wood, 2016). Sustainable human resource management is defined as the use of human resource management tools to embed a sustainability strategy within the organization and to create a human resource management system that contributes to sustainable organizational performance (Kim, Han, & Park, 2019). In the research field of organizational sustainability, the role of sustainable human resource management in engaging employees to sustainable behavior is often studied (Park, Jung, & Lee, 2019).

In recent years, scholars in the fields of human resources and organizational behavior have devoted much attention to management practices that have a profound impact on the physical and psychological well-being of employees in a sustainable manner (Sypniewska, Baran, Kłos, 2022; Zhai et al., 2020).

Of particular importance is the use of sustainable human resource management practices, used to ensure the proper development of employees. Many authors point to the link between specific employee development practices and high levels of employee well-being, with training and development, mentoring, career support, creating challenging and autonomous work, providing information and receiving feedback, a positive social and physical environment, and employee voice as key (Jaskeviciute et al., 2021). The development of employees in a competitive work environment, which can increase efficiency and employee well-being, can only be ensured by meeting their needs and providing a sustainable work environment (Ali et al., 2021).

Human capital development is understood as a set of activities that enrich knowledge, develop abilities, shape motivation, and improve the physical and psychological condition of employees, thereby increasing their human capital and the value of the organization's human capital. Undertakings aimed at the development of human capital can be considered at the level of the entire organization, separate employee teams, and individual employees (Armstrong & Taylor, 2020). The company's role first comes to building initial human capital, and then developing it through continuing education, training, reallocation of employees, labor restructuring, an appropriate organizational culture and incentive system, and by providing appropriate working conditions and medical care. The role of employees includes active participation in continuing education, internal and external training, self-education, striving for work-life balance, taking care of physical and psychological well-being, and engaging in active leisure activities (Jaskeviciute et al., 2021).

Employee development is the expansion of an individual's ability to function effectively in the current or future workplace and work organization. Development activities include formal education, work experiences, professional relationships, and personality, skills, and abilities assessments that help employees grow professionally. There is a widespread belief in the literature that such support will produce a workforce capable of meeting human capital needs. However, the traditional perspective, in which development is carried out at the employer's discretion and the supervisor implements carefully designed development plans to achieve the employer's goals, limits our understanding of how employee development is conducted today (Dachner et al., 2019), especially when we consider sustainable development.

Organizations have increasingly recognized the importance of investing in their employees' development. Some research has focused on identifying the key factors that contribute to sustainable employee development, including organizational culture, leadership support, and employee motivation and engagement (Park, Jung, Lee, 2019). Well-being and sustainable performance of employees are becoming crucial for organizational sustainability (Sypniewska, Baran, Kłos, 2022). This is because many studies indicate that subjective well-being is related to various potential employee development outcomes, such as knowledge sharing, innovative behavior, job performance, and efficiency (Wang & Tseng, 2019).

Other studies have examined the impact of sustainable employee development on employee outcomes such as job satisfaction or retention. One area of particular interest has been the use of technology and digital tools to support sustainable employee development, such as e-learning platforms, social learning networks, and gamification techniques. These technologies can provide employees with flexible and personalized learning experiences, as well as opportunities for social interaction and collaboration (Mosley E., Irvine D., 2020).

Important aspects of human sustainability include thriving at work as a vital force for creating a healthy, highly engaged workforce, when individuals experience both vitality and learning (Abid et al., 2019). Employees showed positive behavior towards their sustainable organization: they are highly engaged, perform effectively, and pay more attention to organizational goals (Lou, Ye, 2019). Work engagement and exerting influence at work are important factors that can explain employee development in sustainable organizations (Li, Sun, Li, 2019).

Many trends shaping the current workplace have changed the nature of human capital development practice, making it more employee-oriented in sustainable organizations (Dachner et al., 2019). However, existing research on employee development does not fully account for this shift and the expected benefits of sustainable employee development.

Sustainable Employee Development

Sustainable employee development emphasizes the ongoing nature of employee learning and growth, as well as the importance of aligning development initiatives with the organization's overall goals and values. Employees are a valuable resource for any organization; investing in their professional and personal development can benefit both the individual and the organization (Jarlstrom, Saru, & Vanhala, 2018).

Sustainable Employee Development – The Organization Perspective

It can lead to the development of professional competencies and professional promotion. By investing in employee development, organizations provide employees with the knowledge, skills, and abilities they need to perform their jobs effectively and advance their careers (Jarlstrom, Saru, & Vanhala, 2018).

Sustainable employee development involves ensuring employees have opportunities to learn, grow, and develop their competencies, which may involve formal training programs, mentoring and coaching relationships, on-the-job learning opportunities, and access to resources and information that can help employees improve their performance. By supporting the workforce, organizations can also increase the retention of talented employees, as employees who feel supported and challenged in their roles are more likely to remain with their organization over the long term. This can help organizations to build a strong talent pipeline and reduce the costs associated with turnover and recruitment (Strenitzerova & Achimsky, 2019).

Sustainable Employee Development – The Ethical Perspective

Another key aspect of sustainable employee development is their commitment to working in alignment with ethical principles and organizational values. This includes providing employees with opportunities to develop not only their skills but also their moral reasoning, ethical decision-making, and social responsibility.

In the context of morally sustainable management and leadership, emphasis is placed on the importance of creating a culture of trust, respect, and transparency to foster an environment in which employees feel valued and in which ethical behavior is modelled and rewarded. This kind of approach is consistent with the concept of ethical leadership, highlighting the moral dimension of managerial or leader behavior (Brown & Trevino, 2006; Kalshoven et al., 2011). Organizations may also offer specific training and development programs focused on ethics, diversity, and social responsibility, as well as opportunities to volunteer and engage in community service. Integrating human resource management with corporate social responsibility is the main aspect of sustainable human resource management (SHRM), according to I. Ehnert (2009), sustainable human resource management involves implementing practices that enable an organization to achieve its long-term goals while taking into account the interests and needs of its employees. By focusing on sustainable development, organizations can create a workforce that is not only highly skilled but also committed to making a positive impact on society and contributing to the common good. This can help organizations to build a reputation for ethical leadership, attract and retain top talent, and ultimately achieve long-term success. (Muñoz-Pascual, & Galende, 2020).

Sustainable Employee Development – The Sociological Perspective

Concentrating on sustainable employee development, organizations can help individuals to maintain and enhance their social capital, that is, the relationships, networks, and social norms that facilitate collaboration and cooperation among individuals and groups (Coleman, 1990). In the workplace, social capital can be an important source of information, resources, and support for employees. Fostering a culture of collaboration and knowledge sharing is another important aspect of human capital sustainability. In the sustainable workplace, employees recognize and nurture their social, emotional, and psychological well-being. They can be productive and creative in advancing human well-being and prosperity (Raissa et al., 2021). Recent research links the social perspective of sustainable employee development at work, showing that social ties and trust at the workplace contribute to sustainable performance (Kramar, 2014).

The idea can be understood as human beings actively participating in community activities for their development. This can help to build a sense of community and belonging within the organization, as well as facilitate the sharing of information, and develop their emotional intelligence and resilience. In this sense, the development of an employee can be perceived in this broader context as socially sustainable.

Sustainable Employee Development – The Psychological Perspective

Considering the dualistic model of passions developed by Robert Vallerand, sustainable employee development can foster harmonious passion while preventing the development of obsessive passion. Passion is a strong inclination or desire for an activity or object that is central to a person's identity and that brings them pleasure and satisfaction. Harmonious passion

is characterized by an autonomous internalization of the activity into one's identity, leading to a harmonious integration of the activity into one's life. This type of passion is associated with positive outcomes, such as higher levels of well-being and better performance in the activity (Vallerand, 2016). On the other hand, obsessive passion is characterized by a controlled internalization of the activity, leading to an obsessive preoccupation with the activity that interferes with other areas of one's life. This type of passion is associated with negative outcomes, such as burnout and decreased well-being (Vallerand et al., 2019). Activities that allow employees to experience harmonious passion may provide opportunities to pursue activities that align with their values and interests and to use their strengths and skills (Vallerand, 2016).

This understanding is consistent with Self-Determination Theory, which emphasizes that autonomy, competence, and relatedness are key to sustained motivation and well-being of employees at work (Deci & Ryan, 2000). By providing employees with opportunities to make decisions and express their opinions, and by supporting and providing resources to help them achieve their goals, a culture of employee autonomy is created. On the other hand, organizational activities should prevent the development of obsessive passion, which can lead to adverse outcomes for employees and the organization. This may involve monitoring employees' levels of engagement and providing support to prevent burnout and other negative consequences of obsessive passion.

CONCEPTUAL FRAMEWORK

We propose a new working definition of the sustainability of employee development, interweaving classical psychological and sociological concepts on the one hand, and contemporary advances in mentoring theory on the other. We call the professional development process of a given employee sustainable if it fulfils the following criteria:

- leads to the development of professional competences and professional promotion of the employee in the traditional sense (C1: development criterion)
However, at the same time, we expect it to:
- be integrated with the development of the entire organization, understood both as a business entity and as a community of people, in particular, the process does not take place at the expense of other employees' development (C2: integrity criterion),
- be consistent with the moral values declared by the organization (C3: morality criterion),
- prevent loss of the individual's social capital (C4: socio-sustainability criterion),
- prevent the development of compulsive motivations (C5: psycho-sustainability criterion).

Criterion C1 is naturally founded in contemporary theories of employee development and, in this sense, does not require any additional explanation at this point. Criterion C2 corresponds to the holistic approach to management and, similarly, corresponds to a vast array of approaches. The intention behind the very inclusion of C2 is to integrate organizational development with employee development, which often goes contrary to the business practice of organizations focused on competition in demanding markets in the spirit of neoliberal rivalry. Naturally, C1 and C2 criteria correspond to the organization perspective described in the literature review section.

Criterion C3 refers directly to the works on morally sustainable management and leadership, on the one hand, and to the general ethical framework described in the literature review section (Brown & Trevino, 2006; Ehnert, 2009).

The C4 and C5 criteria are of a different nature. The former refers directly to the sociological understanding of social capital, related to the dualistic model of passions developed by Vallerand (2016), which characterises the individual's involvement in activities as harmonious or obsessive. At the same time, Criteria C4 and C5 refer to social and psychological sustainability, respectively, which have been discussed in recent research on human resource management and sustainable human resource management (Kramar, 2014; Ryan & Deci, 2000). It seems that the combination of parameters C4 and C5 should be close to the idea of work-life balance, currently fashionable in the SHRM discourse; however, establishing more detailed semantic relations would require an in-depth analysis of the subject. In this context, the methodological challenge is not so much to consolidate any of the individual components of the proposed definition of employee development sustainability, but rather to (a) define their mutual relationships within this particular definitional constellation; (b) specify the methods of their practical measurement and benchmark values, as well as, in the case of criteria C4 and C5, confront them with the subjectivity of employees' perception. Again, it corresponds with the last two perspectives described in the literature review section.

It is worth noting that the ecological dimension of sustainability and/or any aspects related to SDGs are not directly included in the definition proposed above. On the one hand, it seems that, at least at the present stage, our semantic perception of personal development in the professional environment does not encompass these elements. On the other hand, in those

contexts where it seems to be significant, it should also appear at the level of “green-moral” declarations formulated by the employer, and thus, this dimension is indirectly included in C3.

Similarly, excessive exploitation of the employee’s body, which could be conceptualized as a bio-sustainability criterion, seems to exceed the expertise of the field of management sciences, even though the medical sciences quite thoroughly encompass it. It is regarding this definition that we will now conduct an empirical analysis of factors determining the success of mentoring processes, juxtaposed with those determining the sustainability of employee development.

METHODOLOGY OF THE EMPIRICAL RESEARCH

The Data

We use the research material collected in an extensive process meant to collect information on various aspects of mentoring processes, leading to a series of publications, one of which has already been published (Baran & Zarzycki, 2021). In particular, the data employed in this paper comes from the results of an online in-depth survey questionnaire provided by one of the companies involved in the research process, a large (employing over 1000 workers) energy technology company based in Warsaw, satisfying the mentoring maturity conditions (i.e., offering structured and managed mentoring programs to its employees). The analyzed sample was selected homogeneously regarding the position and professional seniority. Age, education level, gender, and other socio-demographic parameters were not included and were chosen randomly. As the language of investigation was Polish, both the questionnaire and the employees’ answers presented were translated by the authors of this publication. The online computer-assisted web interview was available for three months to employees who were directly involved in at least one of the company’s formal mentoring development processes. Employees were informed and encouraged to fill in the questionnaires three times during this period. The form was broader than the scope of this study; however, it included questions of key importance to the current research, as employees were asked about their expected and actual assessments of the mentoring process they participated in. All interviews were conducted in a manner compatible with research objectives and model assumptions of the current research. Specific questions provided in the questionnaire were anchored in the self-designed measures, previously employed by one of the authors in several investigations. The reliability of the measurement of the selected groups of effects was confirmed by the typical Cronbach’s alpha measurement (with a score of 0.95 for personal effects and 0.91 for career outcomes). Eventually, answers were submitted by 28 employees, which was sufficient, taking into account expected applications within the current study, which are limited to: (a) calibration of the sustainability of employee development; (b) experimental modelling of the categorization of components of the subjective sense of sustainability of the professional self-development using SNA.

SNA Modelling of the Interdependencies Between Perceived Success Factors

The idea of SNA comes from mathematical graph theory and specifically boils down to the implementation of this branch of mathematics to the analysis of social phenomena. In other words, whenever a set of actors and a specific binary relation among them are distinguishable, one can easily encode this system in the form of a mathematical graph, where actors correspond with the nodes, and edges represent existing relations. This setting allows one to conduct a complex technical analysis of a given graph obtained in this manner (i.e., in terms of centrality, connectivity, distances) and eventually interpret the results in the initial terms of actors and relations. This fundamental idea is being successfully applied by numerous researchers representing a manifold of disciplines.

As there is no point in conducting yet another review of the literature, given the many that have already been prepared, we base our review of the literature on social network analysis (SNA) on an overview paper by Castellano, Fortunato, and Loreto (2009). As noted in the aforementioned paper, SNA was significantly developed by multiple researchers active in the social sciences (Freeman, 2004). Currently, according to Castellano, Fortunato, and Loreto (2009), the scope of application of network theory is interestingly broad and covers an area reaching the network of scientific collaborations, sexual contacts, ongoing social relationships, email exchange networks, dating community networks, and mobile communication networks (Onnela et al., 2000).

The SNA study was carried out using traditional methods, i.e., by modelling the analyzed phenomenon using graphs, processed by the most up-to-date version of the free Social Network Visualizer software at the time of the study. The SNA study was based on the expected and current assessment by the mentees of a range of factors describing the development process within the mentoring program (Baran & Zarzycki, 2021).

Analytics

Mentees were first asked to declare their expectations before entering the mentoring process and then to assess to what extent a given gain was addressed by the mentoring process in practice. These opinions were expressed on a four-point scale from "I strongly disagree" to "I strongly agree". In this way, we obtained three vectors of assessments: (V1) expectation vector, (V2) assessment vector, and (V3) discrepancy vector. We calculated three different types of correlations of the answers collected for each pair of aspects-profits from the list above: (c_1) as the correlation between expectations related to the two given aspects-profits; (c_2) as the correlation between assessment to what extent a given gain was addressed in practice related to the two given aspects-profits; (c_3) as the correlation between the corresponding discrepancies related to the two given aspects-profits. Subsequently, we created 3 SNA models corresponding to these vectors, each time taking the 34 aspects-profits as the sets of vertices, and establishing the relationship between two given vertices whenever the absolute value of the correlation c_i between these two given vertices was greater than 0.5, where c_1 was calculated for the graph-model M1, c_2 was calculated for the graph-model M2 and c_3 was calculated for the graph-model M3. Importantly, in practice, these correlations have never been lower than -0.5, which excluded this situation from the analysis altogether. Eventually, we received three models: (M1) illustrating interdependencies between individual aspects-profits in the perspective of mentees' expectations; (M2) illustrating interdependencies between individual aspects-profits in the perspective of achieved aspects-profits; (M3) illustrating the interdependencies between individual aspects-profits in the perspective of discrepancies between expectations and profits. The SNA analysis allowed us to specify certain groups of features that correspond to the components of the definition of the sustainability of employee development described in Section 3. On this basis, we were able to confront the theoretical results described in psychological, sociological, and management theory discourses with the results of the empirical study, as well as address the research questions RQ1 and RQ2. Finally, the use of SNA analysis enabled us to propose a new perspective on the factor analysis of perceptions of success in the mentoring process. Some observations made possible using graph models will be formulated in the next section.

RESULTS AND DISCUSSION

Conceptual Dimension

The expanding literature on sustainable development in general and employee development in particular is an important argument for discussing new, interdisciplinary, and multidimensional approaches to conceptualize this phenomenon. The definition of sustainable development for employees proposed in Section 3 addresses this need and aligns with the gaps revealed in the literature analysis, providing a starting point for further discussion. Moreover, the formulated approach, including the C1-C5 criteria, provides a practical guide to the areas that organizations supporting sustainable development should take into account from the perspectives of employees and the organization. The operationalization of these areas in line with the organization's profile and the implementation context provides, in turn, the opportunity to increase the effectiveness in achieving specific goals important to the organization.

At this point, the conceptual dimension of our research is combined with the results of empirical research that was carried out in a real working environment. Mentoring programs are one of the key processes aimed at the development (including sustainable development) of employees, implemented by several organizations. The effectiveness of these programs is measured in various ways, using internal and external parameters (Baran & Zarzycki, 2021). Increasing this efficiency is possible by recognizing the aspects of success and individual gains that participating employees perceive as significant for their (sustainable) development. The first application of the presented definition of sustainable development of employees concerns the analysis of these very aspects of success and individual gains identified by the employees themselves in the empirical study we conducted. The structure of the gains was modelled by means of SNA and described in the previous publication of the authors (Baran & Zarzycki, 2021), and now, in the subsequent section, they are being juxtaposed with the theoretical dimensions of the sustainable employee development recognized in this paper.

Empirical Dimension

As described in Section 4, graph models M1, M2, and M3 were created. They correspond respectively to the network of interdependencies between individual aspects-profits in the perspective of participants' expectations; the network of interdependencies between individual aspects-profits in the perspective of actually achieved development effects; and the network of interdependencies between individual aspects-profits in the perspective of discrepancies between expectations and actual effects. The outcome of these proceedings is presented in the three figures attached below.

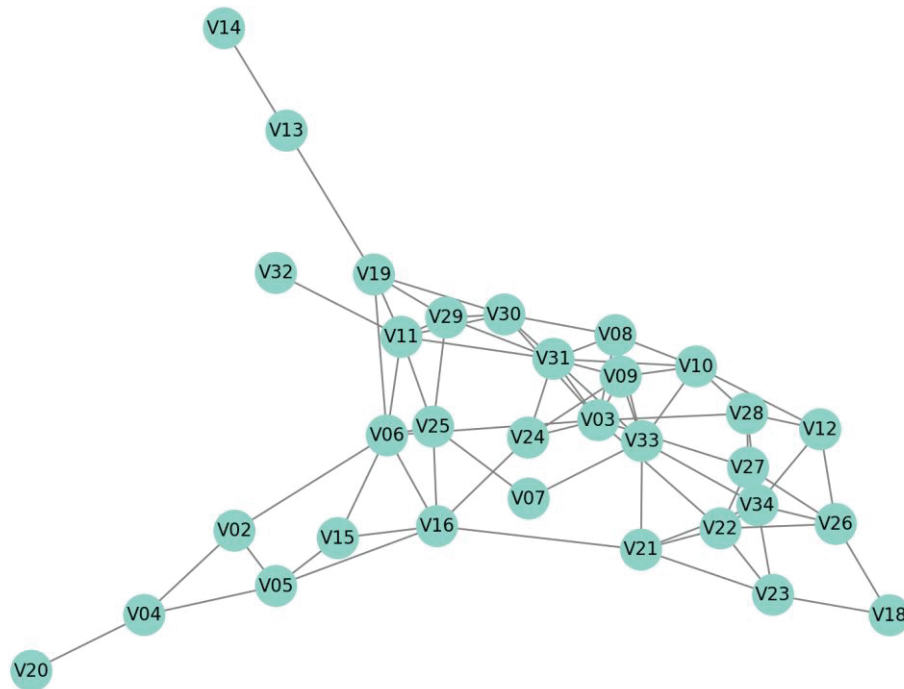


Figure 1. Graph-model: M1

Source: Own work.

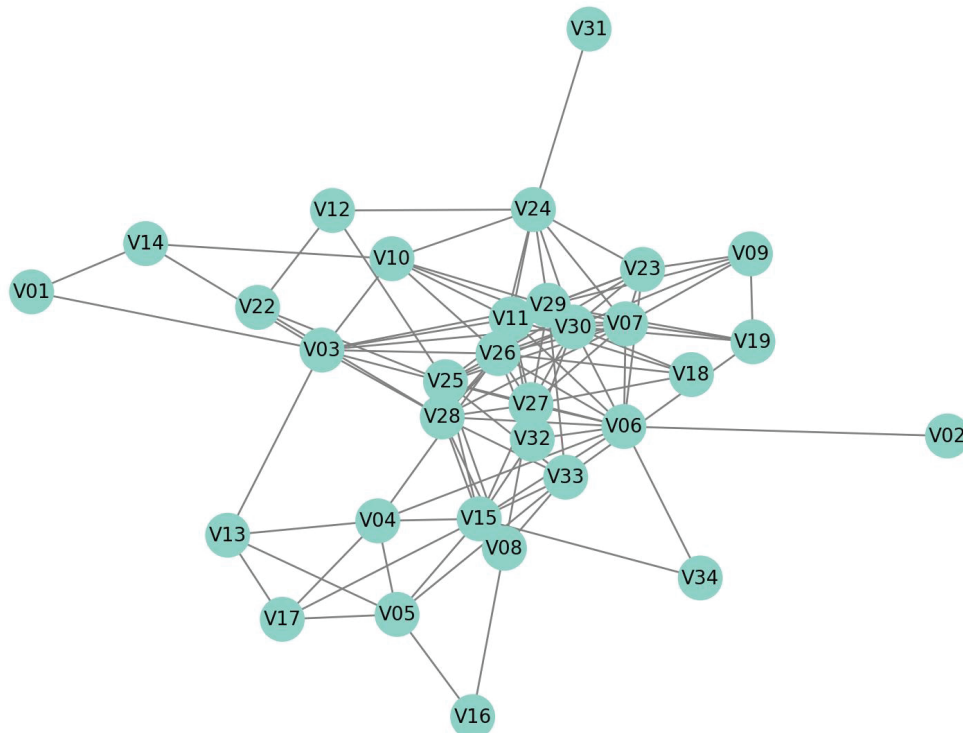


Figure 2. Graph-model: M2

Source: Own work.

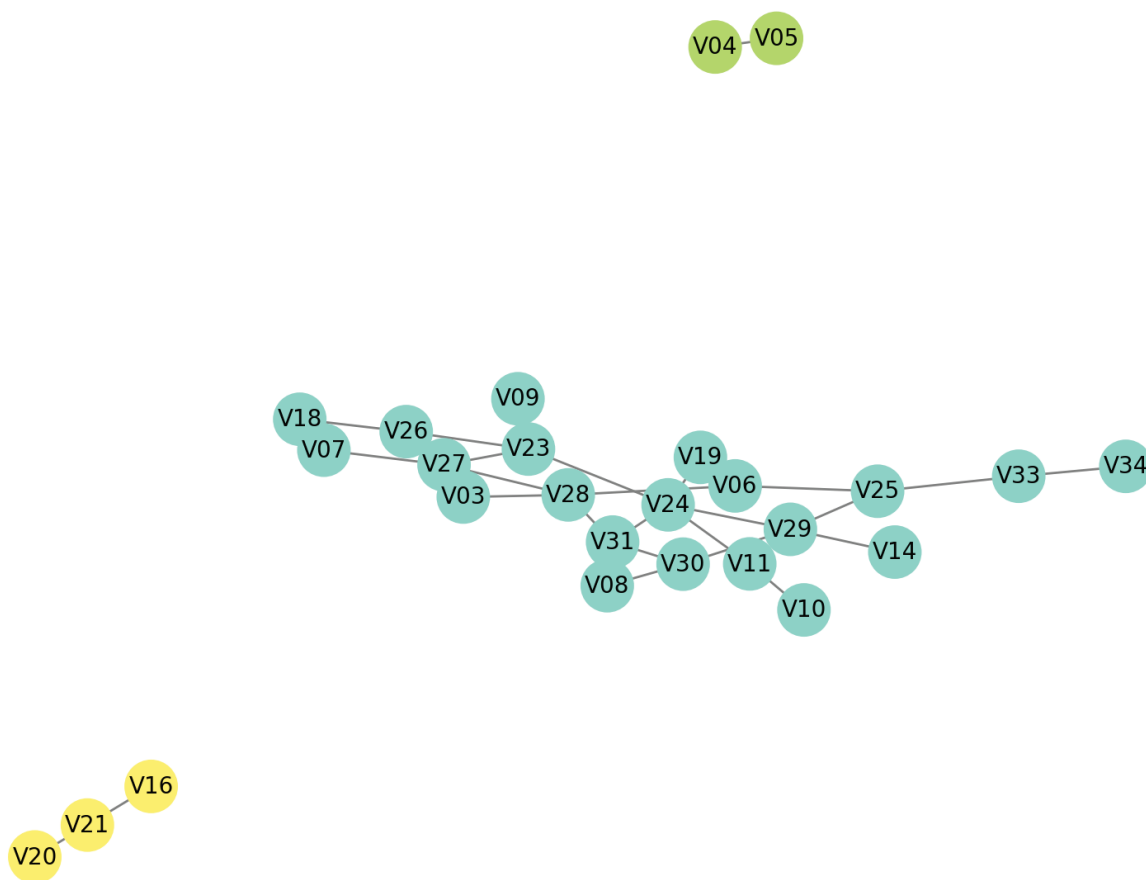


Figure 3. Graph-model: M3

Source: Own work.

Table 1. Legend

● V01	on-the-job training - mentoring as part of the job placement process	● V18	adaptation to a new role in the organisation after promotion
● V02	support in professional development	● V19	deepening knowledge about the organisation
● V03	development of substantive/technical/expert competences	● V20	opportunity to talk to an experienced manager who is not a supervisor - support in personal development
● V04	development of managerial competences	● V21	increased self-esteem
● V05	development of leadership competences	● V22	support in determining the best career path and support in its implementation
● V06	increasing initiative, entrepreneurship, creativity	● V23	increasing the chances of being promoted or getting a promotion
● V07	increasing motivation and commitment to work	● V24	increasing the chances of getting a raise or getting a raise
● V08	improving the atmosphere of cooperation between employees	● V25	increasing job satisfaction
● V09	improvement of communication within the organisation - better information flow	● V26	increasing openness to new ideas and ways of working
● V10	development of community networks in the organisation	● V27	a better diagnosis of the competences (knowledge and skills) that you need to develop / in order to develop your career
● V11	improving relations with the managerial staff	● V28	getting to know your strengths and weaknesses at work at a given position
● V12	counteracting frustration and burnout syndrome	● V29	a better opportunity to establish relationships with other people, from other departments, at higher positions
● V13	equipping with managerial knowledge - needed to carry out their tasks	● V30	meeting new people in the organisation
● V14	gaining specific substantive/technical/expert knowledge and practical experience	● V31	additional remuneration (if offered for additional tasks, also in the form of bonuses/prizes)
● V15	increasing efficiency / achieving better results	● V32	a sense of real influence on the functioning of the organisation
● V16	work better and with more confidence on the job	● V33	streamlining internal communication
● V17	better preparation for the challenges at work	● V34	obtaining inspiration for further professional development

Source: Own work.

The list of nodes in each of the graph models represents the development aspects and profits assessed by employees participating in the mentoring programs, which were adopted in the previous research of the authors (Baran & Zarzycki, 2021). Structural analysis of the interdependencies illustrated by the above networks is itself a complex and non-obvious process. At this point, we present the five main remarks describing the empirical results obtained in view of the previously formulated theoretical approach:

- [A] The basic observation is the interpretation of the distance between the vertices in each of the graph models. In the case of the first two graph-models (M1 and M2), the proximity of the vertices should be understood in a standard statistical way as a significant level of positive correlation of the corresponding profit-aspects from the perspective of the participants, which in turn can be interpreted as their convergence-dependence. Similarly, their distance will reflect their mutual independence from the participants' perspective. In the case of graph-model M3, the proximity of vertices has a more sophisticated interpretation and may indicate a convergence of disappointed expectations regarding two aspects: profits, due to a lower assessment of the actual development effect of the mentoring process compared to the expected effect, or a convergence of positive surprise with the effect in case the actual gains exceeded expectations. Similarly, the distance between the vertices will indicate the lack of these convergences, i.e., the independence of the assessment of the actual implementation of a given couple of aspects-profits in relation to the initial expectations.
- [B] In this context, the cluster analysis of the indicated networks becomes crucial, which, depending on the approach, allows for the identification of specific groups of aspects-profits whose achievement in the development process is convergent or independent in the eyes of the participants. In practice, this means that the fact that a given aspect-profit belongs to a given cluster makes it a representative marker of the entire cluster. Identification of such sets of representative markers may help to simplify the modelling of mentoring effectiveness. At the same time, however, the very emergence of clusters indicates the multidimensionality of the process itself and can also be the basis for identifying specific dimensions by referring to the common characteristics of clusters.
- [C] The analyzed graph models isolated vertices were removed to increase the clarity of the illustration. However, this should not encourage neglecting the impact of these removed nodes. Quite the contrary, it underlines the importance of taking these elements into account when examining the effectiveness of development processes within mentoring programs, given their uniqueness and likely irreplaceability by other sets of features, at least within the wide pool of 34 aspects-profits analyzed.
- [D] Eventually, the mutual comparative analysis of the three constructed models (M1, M2, M3) is also noteworthy. The M3 model has the lowest clustering coefficient, which is also visible in the form of a high degree of inconsistency. The M2 model is more centralized than the M1 model, which may indicate a more holistic assessment of the effects from the perspective of time and assessment of its practical course and actual profits. Between the M2 and M3 models, we can locate the M1 model, which illustrates the profit expectations of the participants. This perspective makes it possible to distinguish the dimensions of the development process, which should be taken into account when grasping its sustainability in an interdisciplinary and multidimensional way.
- [E] In the above sense, under certain assumptions, the graph-model M1 allows for the working identification of four clusters using greedy modularity: [I - vertices: V12, V18, V21, V22, V23, V26, V27, V28, V34], [II - vertices: V02, V04, V05, V06, V15, V16, V20], [III - vertices: V03, V08, V09, V10, V24, V30, V31, V33] and [IV - vertices: V07, V11, V13, V14, V19, V25, V29, V32], which correspond to the four groupings of vertices. Due to the insufficient sample size, significant statistical dependencies cannot be drawn here, but they were not the aim of this analysis. It is important that the distribution of vertices within graph model 1 provides heuristic clues for determining the dimensions of sustainable development for the participants in the mentoring processes under investigation. Interestingly, all four clusters are subject to a fairly clear retrospective conceptualization: the first of them (I) may correspond to the substantive development of competences, career planning, role adaptation, and self-awareness; the second of them (II) strengthening of professional identity as well as leadership potential; the third of them (III) concerns group phenomena, formal structures, resource access, and workplace cohesion; while finally, the fourth (IV) seems to be related to blend of motivation, job satisfaction, and social recognition.

CONCLUSIONS

Conclusions and Implications

A thorough review of the literature, as well as critical reflection on the key dimensions of employee sustainability, led to the formulation of a new, interdisciplinary, and multidimensional proposal for the definition of employee sustainability, which is the main conceptual result of the presented study (which corresponds to steps (A) and (B) formulated in the introduction). At the same time, it was shown how different perspectives appearing in a number of studies from various areas of the broadly understood field of social sciences (in particular: Ali et al., 2021; Dyllick & Hockerts, 2002; Strenitzerová & Achimský, 2019;

Vallerand et al., 2019) can be represented at the level of a definition in the form of specific aspects of the sustainability of the employee development process. This, in turn, facilitates operationalizing these approaches. As a result, it allows for a holistic approach to employee sustainability in the practice of the organization's functioning. This also demonstrates that approaches focused solely on selected aspects and shaping the understanding of employee sustainability in a selective manner are unlikely to capture either the complexity of employees' expectations toward this process or to align with the perceived outcomes of advanced mentoring processes. In this sense, a comprehensive consideration of all these dimensions appears to be a necessary condition for the adequate planning of employees' professional development programs.

The obtained conceptual result was juxtaposed with the empirical results of the study of mentoring processes in a real and professional work environment (step (C) (c.f Baran & Zarzycki, 2021). For this purpose, Social Network Analysis was experimentally used to study the interdependence between various aspects of the profits of the mentoring process from the perspective of the process participants to answer RQ1. It is exhibited in the diagrams representing models M1, M2, and M3. As a result of this technical analysis, the multidimensionality of the mentoring process was confirmed. In particular, the four groups of factors—clusters—distinguished in the graph-model M1 (I, II, III, IV) correspond to the criteria distinguished in the proposed definition of sustainability of the employee development process, namely: the aspects-profits grouping I corresponds to a mix of the C1 criterion (development criterion) and C3 (morality criterion), the aspects-profits grouping II corresponds to C5 (psycho-sustainability criterion), the aspects-profits grouping III corresponds to C2 (integrity criterion), and the aspects-profits grouping IV corresponds to C4 (socio-sustainability criterion). This provides us with an experimental-empirical reply to RQ2. The analytical technique applied also enables a detailed examination of the interdependencies among the individual benefits employees perceive and attain within professional development processes. Depending on specific analytical needs, these relationships may be interpreted through the use of the presented diagrams. In particular, this may have practical applications in identifying key factors for optimizing mentoring processes (i.e., vertices with the highest centrality) and in planning their overall complexity (the eccentricity parameter of individual vertices).

Limitations

Clearly, one of the most important limitations of this study is the subjectiveness of the authors' perspective, which is revealed in the very selection of the literature, aspects and threads. An ambitious scope of the extensive review of the literature was, however, intended to minimize this factor. Nevertheless, the spectrum of views and research taken into account should be successively expanded, translating into better conceptualization and calibration of the adopted definitions and models.

In the empirical dimension, a significant limitation was the small statistical sample on which the study was conducted, as well as the selection of other parameters, such as the list of distinguished aspects-profits associated with mentoring processes. In this regard, however, the authors intended to present a new, fruitful perspective on the effectiveness of the employee development process, particularly within mentoring programs, and on the sustainability of employee development in general.

Future Research Directions

The intention behind this study was to explore the interdisciplinarity and multidimensionality of employee development sustainability, in order to achieve a holistic theoretical approach that could be operationalized into specific, practical development goals for the organization. In this sense, this reflection should be continued. At the same time, an attempt to understand the structure of employees' expectations for sustainable development, including discrepancies between expectations and organizational reality, raises important questions. It is exciting to see which dimensions of sustainability are noticed, appreciated, and recognized as significant by the employees themselves, and which are perceived, appreciated, and recognized as significant by the organization. Finally, it is important to track and explain the differences that appear in the juxtaposition of theoretical approaches and practical insights. All this is an important field of further applications of SNA, not only in the context of mentoring processes, but also in other tools supporting the sustainable development of employees in organizations.

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