

The Development of Employees' Green Competencies Through Sustainable Business Practices

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Abstract

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Green competencies (GCs) are recognised in the business management literature as those related to all the dimensions of the concept of sustainable development (SD). However, the relationship between GCs and sustainable business practices (SBPs) is not well defined; GCs are often presented in the context of selected organisational activities or the sector of the economy. This paper aims to present the influence of SBPs on employees' GCs in the transport and logistics sector. To achieve this goal, the combination of the methods was employed. First, a classical and semi-bibliometric literature review was undertaken to explore the connection between GCs and SBPs in the literature. Subsequently, the collection of good sustainable practices gathered by the Polish business ethics organisation *Forum Odpowiedzialnego Biznesu* [Responsible Business Forum] (FOB) was re-analysed qualitatively and quantitatively as a source of SBPs in subjective and objective focus. The analysis of the secondary data collected in FOB indicated those SBPs which influence employees' GCs in the transport and logistics sector. As a result of this study, the combined orientation of the SBPs and their influence on GCs is conditional for the creation of green jobs (GJs). In this paper, future research avenues are also proposed for studying employees' competencies in the narrow context of both subjective and objective perspectives and for research into "golden" GJs, the conditions of the sustainable green labour market and green self-employment development.

Key words

green competencies, green economy, green jobs, green labour market, green transition, sustainable development.

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Introduction

Sustainable business practices (SBPs) are the result of the theoretical assumptions of sustainable development (SD) put into practice. SBPs can be also defined as the

economic processes which change under the influence of the SD concept (Alsmadi and Alzoubi, 2022; Pu et al., 2021). Therefore, researchers usually emphasise that SBPs constitute a gradual transition (Papademetriou et al., 2023; Piowar-Sulej, 2022a) from a so-called brown, high-carbon economy and based on non-renewable energy sources, to a green economy (Aceleanu et al., 2015; Sulich, 2018), and ultimately a zero-emission economy based on renewable energy sources (Ferguson, 2015; Sulich and Zema, 2018). Thus, there is a defined process of greening the economy (Kasztelan, 2021; Kozar, 2019) or undertaking a green transition (Čavoški, 2022; Kozar et al., 2022), and activities identified as SBPs (Brown and McGranahan, 2016; Knuth, 2018). In the literature, there is also an increasing number of references focused on the analysis of SBPs (Martínez-Ferrero and Frías-Aceituno, 2015; Sołoducho-Pelc and Sulich, 2022), which are also called green or environmental practices (Afum et al., 2021; Asghar and Hussain, 2009). In scientific publications, research on SBPs is usually focused on at least one of the three dimensions of the SD concept (Khoshnava et al., 2020; Leal Filho et al., 2019). In addition, the studies cited quite often deal with the issue of greening various types of organisations operating on the market, and their activities lead to the development of a sustainable and green labour market (Gull and Idrees, 2022; Kozar and Sulich, 2023a).

The process of greening an organisation through SBPs can occur in various areas of its operation (Gull and Idrees, 2022; Nowak and Kasztelan, 2022). It is impossible to indicate a universal indicator that would allow one to assess when a given entity can be considered sustainable or green (Solešvik et al., 2022). For example, it is possible to state that some researchers consider employees' environmental awareness (Tabuenca et al., 2023) or their green competencies (GCs) to be a determinant of organisational

sustainability, the issue of zero emissions (Ahmad, 2015; Baas, 2007), or the climate neutrality of a given entity (Wolf et al., 2021; Wu et al., 2022). Nevertheless, with the development of science and technology along with the change in the level of environmental awareness in society as a whole, the challenges pertaining to sustainability continue to be redefined (Fuso Nerini et al., 2019; Leal Filho et al., 2019; Tsalis et al., 2020). Hence, as the authors of this article acknowledge, there is a space for setting new and more ambitious sustainability-oriented goals (Hofbauer and Limanskis, 2022; Sołoducho-Pelc and Sulich, 2020). This aspect can be seen in various types of organisations in which there is a constant evolution in the approach to the directions and areas of implementation of the SD concept in their daily operations. Such changes can be observed, for example, in the field of organisational solutions related to the subjective and objective areas of work, where it is increasingly common to encounter the creation and shaping of GCs (Kozar and Sulich, 2023a; Sulich and Zema, 2018). The subject- and object-oriented SBPs define GCs in two dimensions (Macke and Genari, 2019). The first, subjective focus relates to whom SBPs are dedicated to and how they develop employees' GCs (Ahmad, 2015; Ludwikowska, 2021; Piowar-Sulej and Podsiadły, 2022); this is the personal dimension of SBPs. The second objective relates to those aspects that SBPs directly focus on (Kozar, 2017; Tymbaliuk et al., 2023); this represents the non-personal dimension of SBPs.

One of the economic sectors in which researchers observe an ongoing process of green transition and an increasing number of SBPs is the transport and logistics sector (Gruchmann et al., 2018; Oberhofer and Dieplinger, 2014). This sector plays an important or even strategic role in socioeconomic development (Bogusz and Sulich, 2019; Shestakova and Shestakov, 2023). At the same time, as indicated by the

assumptions of the European Union SD policy, this sector will undergo a significant transition in the coming years (Faizan et al., 2019; Kijewska et al., 2019). In the opinion of the authors of this article, there will be significant change in the transport and logistics sector, not only in terms of the existing working conditions of individual employees, but also in terms of new environmental GCs or those mentioned above.

This paper aims to present the influence of SBPs on employees' GCs in the transport and logistics sector. The SBPs were divided into two groups, namely those oriented towards the subject and those focused on the object of employee duties in the transport and logistics sector. The subject- and object-oriented SBPs define GCs in two dimensions. The first is a personal and subjective focus pertaining to whom SBPs are dedicated to and how they develop employees' GCs. The second dimension is objective and non-personal, and is related to those aspects on which SBPs are focused. Therefore, objective orientation corresponds to whom the SBPs are aimed at, while the objective orientation addresses how SBPs are targeted. To achieve such complex goals, a collection of complementary methods was used in this paper. First, a classical and semi-automated bibliometric literature review was undertaken based on resources drawn from the Scopus and Web of Science databases. In effect, the 48 publications were used to develop the theoretical construct of the GCs. After this critical analysis of publications, a definition of GCs was proposed. SBPs were researched in terms of their subject and object orientation, and especially to show whether they are already aimed at developing employees' GCs. Additionally, the data collected by the Polish Responsible Business Forum (Polish: *Forum Odpowiedzialnego Biznesu*, FOB) were reused and analysed to achieve the goal of this research (Forum Odpowiedzialnego Biznesu, 2023). In the opinion of the authors of the article, such

a goal is important, because it makes it possible for those responsible for managing employees in organisations to observe the most frequently chosen directions of development of employee competencies.

The article consists of six sections, which are interrelated and focused on achieving the goal of the research. The first section, the introduction, presents the general location of the chosen research problem in the literature and indicates the purpose of the research. In turn, the second section presents what the GCs of employees are and highlights the issues related to their formation and development. The third section contains a description of the research methodology aimed at analysing selected examples of SBPs related to the field of work in the transport and logistics sector. The fourth section describes the results of the analysis. The penultimate section of the article is devoted to a discussion within the scope of which reference is made to the results of other research. The article ends with conclusions. Within the scope of this section, potential directions of future research on the issue of GCs of employees are indicated. As authors, we have also drawn attention in this section to the perceived barriers facing researchers in the field of the issue discussed herein.

1. Literature review

1.1. Bibliometric literature review

Two databases were selected for a qualitative review of the literature in terms of GC issues, namely Scopus and Web of Science. These databases, due to the procedures associated with the indexing of individual publications therein, are considered by many researchers to be a reliable source of information (Zema and Sulich, 2022), resulting in numerous literature reviews performed precisely on the basis of these databases in the context of the problems of SD and SBPs (Dzhengiz and Niesten, 2020; Murillo-Ramos et al., 2023;

Papademetriou et al., 2023). In addition, the review of research drawn from the Scopus and Web of Science (WoS) databases is explored by means of bibliometric queries constructed by the authors (Konys, 2020; Sulich and Sołoducho-Pelc, 2022). Hence, the authors constructed one query each to the databases indicated (Table 1). These queries were characterised by the same analysis area of the searched keywords (in two forms of English) in scientific studies indexed in the Scopus database (Q1 in Table 1) (Scopus, 2023a) and the Web of Science

database (Q2 in Table 1). The search fields were the titles, abstracts and keywords of the publications (Scopus, 2023b). The databases were explored on 11 February 2023 and the results of each query are presented in Table 1. Considering good practice in this type of analysis (Kozar and Sulich, 2023b; Pu et al., 2021), publications from 2023 were not included, which will enable future researchers exploring the indicated topic to draw comparisons with the quantitative results obtained from the presented queries (Elsevier, 2022).

Table 1. Search Query syntax details

Symbol	Database	Query syntax	No. Results
Q1	Scopus	TITLE-ABS-KEY(„green competencies” OR „green competences”) AND (EXCLUDE(PUBYEAR, 2023))	45
Q2	Web of Science	„green competencies” (Topic) OR „green competences” (Topic) AND 2012-2022 (Year Published)	26

Source: own elaboration

The oldest publications obtained in both queries were published in 2012. Moreover, it was observed that 23 publications from the WoS database were also part of the result of the query obtained from the Scopus database. There was an overlay among the results in Table 1. Hence, only 48 different scientific papers were used for further substantive analysis in exploring the issue of employee GC development through SBPs.

1.2. Development of green competencies

The critical analysis of the scientific literature proved that there is no single, universally valid definition of GCs (Cabral and Dhar, 2021); rather, they are discussed by researchers in different important contexts. They are usually addressed in the context of the green transformation of various types of organisations (Mirčetić et al., 2022), the issue of green human resource management (Bombiak, 2019; Cabral and Lochan Dhar, 2019), the formulation of various types of green strategies by organisations (Ling,

2019; Yahya et al., 2021), or the importance of this type of competence in the process of creating green innovations (Yahya et al., 2022). In addition, there is a noticeable amount of research aimed at identifying GCs from the perspective of selected sectors of the economy (Farooq et al., 2022; Gull and Idrees, 2022).

The context in which the GCs are discussed impinges on the direction of the definitions of this issue created by individual researchers (Garrouste and Courtial, 2016; Misnevs et al., 2021). At this point, it is worth citing selected exemplary definitions of GCs. Thus, GCs are defined by Subramanian et al. as “the requisite ecological knowledge, skills and other socioeconomic behaviour an individual has to help him/her behave and act rightly and responsibly toward the overall well-being of his/her immediate environment” (Subramanian et al., 2016). Kozar, on the other hand, emphasises that the GCs “of employees are the result of their knowledge and skills in

applying pro-environmental solutions in the company” (Kozar, 2017). Even based on the example of these two definitions of GCs, it can be seen that they emphasise a strictly defined environmental objective dimension of SBPs. A qualitative analysis of the articles selected for literature analysis made it possible to identify the following areas of GCs: green knowledge (Maksimov et al., 2022), green skills (Mirčetić et al., 2022), green behaviour (Cabral and Dhar, 2021), green attitudes, also known as environmentally-friendly attitudes (Bombiak, 2019), green abilities (Yafi et al., 2021) and green awareness (Farooq et al., 2022). These six areas are key to the construction of GCs and are also recognised by other researchers (Cabral and Lochan Dhar, 2019). Those key areas can be known by slightly different albeit synonymous terms, e.g. instead of “green” they may be “environmental” (Farooq et al., 2022).

The separation of the GC areas presented above is important, in the opinion of the authors of this article, not only from a theoretical point of view but also from a practical one. It allows one, first of all, to indicate the issues which managers of employees in an organisation should pay attention to, so as to shape GCs among employees which are desired in the organisation, including their appropriate quality (Hameed et al., 2020). Previous research carried out in Polish companies by Kozar indicates that the formation of GCs can take place through training, the assessment of employees' attitudes and behaviour, as well as engaging employees in pro-environmental enterprise initiatives (Kozar, 2017, 2019). In this research, attention is paid to SBPs in the transport and logistics sector which develop employees' GCs.

2. Methodology

2.1. Description of the methodology

This paper aims to present the influence of SBPs on employees' GCs in the transport and logistics sector. Therefore, the first

step of the research procedure was to analyse selected practices from the transport and logistics sector related to sustainability in the area of employees' duties in terms of their subject and object orientation, and especially to show whether they are already aimed at shaping the GCs of employees. A qualitative analysis of the practices selected for the study was used to prepare a set of SBPs based on the FOB (Polish: *Forum Odpowiedzialnego Biznesu*) database (Forum Odpowiedzialnego Biznesu, 2023). The qualitative analysis was additionally supported by quantitative analysis in terms of demonstrating the frequency of occurrence of the elements in the research sample.

Due to the purposeful selection of the sample for this study, the analysed data are not presented in terms of quantitative changes year-on-year and there is no substantive or static justification for this type of analysis. The programme ATLAS.ti was used for qualitative analyses, while quantitative analyses were carried out in the programme PS IMAGO PRO. The research was conducted from January to March 2023.

2.2. Selection of sustainable business practices for research

The selection of SBPs in the workplace for the study was preceded by a definition selected by the authors and literature defining what such practices should be characterised by. This definition was accompanied by the adoption of a baseline period for the planned quantitative and qualitative analyses.

Thus, for the purposes of this study, SBPs in the workplace were understood as all solutions implemented by employers that do not result directly from the current legislation, and at the same time are aimed at creating:

1. an employee-friendly workplace (implementing additional measures aimed at integrating new employees into the operation of the entity, supporting the development of employees' interests based on

- their hobbies, striving for gender equality, and emphasising the appropriate environment in which an employee spends his or her time during breaks at work),
2. a healthy workplace (supporting activities aimed at work-life balance, health, and developing and introducing additional non-legislative solutions aimed at increasing the level of employee safety in the workplace),
 3. opportunities to develop existing and acquire new competencies (including GCs in their various dimensions),
 4. career opportunities (inside and outside a particular business entity).

It was assumed that the SBPs chosen for analysis should be characterised by the same source or database. This was to ensure a similar qualitative description of individual SBPs. In turn, the authors of this article chose 2016 as the starting point. The choice of that year was not accidental, as it was the first full year after the adoption of Agenda 2030 and the related Sustainable Development Goals. As a result of a review of research on the issue of SD in Poland, the authors assumed that the most comprehensive database for the purposes of the research would be the database of SBPs created by FOB, an organisation which is a forum for responsible business in Poland (Forum Odpowiedzialnego Biznesu, 2023).

The aforementioned database collects practices in the field of SD from organisations operating in various sectors of the economy in Poland. It is important for the fulfilment of the research objective that this database contains descriptions of SBPs from the transport and logistics sector. A review of the FOB database in January 2023 allowed the researchers to identify 243 SBPs in the transport and logistics sector. As a result of further analysis undertaken based on the SBPs from the workplace area defined above, 94 descriptions of various practices that were implemented in 2016-2021 were

selected for further qualitative and quantitative analysis (the criterion of data availability at the time of the survey).

2.3. Criteria for analysing sustainable business practices

In order to achieve the stated goals of the study, the authors formulated criteria for the analysis of SBPs from the workplace. The criteria for subject analysis and the formation of GCs were distinguished.

In terms of subjectivity, attention was paid to whether a given solution implemented in the studied entity was targeted to all employees or to a portion of them. In cases where the SBPs from the workplace area applied only to some of the employees in a given entity, the identification of the factor or factors that influenced the availability of the implemented solution was carried out.

In the subject dimension, in turn, each sustainable business practice from the workplace area was analysed through the perspective of the following research questions:

1. Is there a reference to the issue of integration and/or the creation of a friendly workplace in the given sustainable business practice from the workplace area?
2. In the given sustainable business practice from the workplace area, were activities aimed at the development of existing competencies and/or the acquisition of new competencies by employees indicated? If so, what types of activities were undertaken?
3. In the SBPs in the workplace area, is there reference to the implementation of additional solutions aimed at improving the health and safety of employees at work? Do such solutions apply only to the work environment?

In the case of the last aspect, attention was focused on the identification and classification of activities that contribute to the formation of GCs. Hence, it was verified each time whether the scope of the analysed SBPs from the field of workplace refers

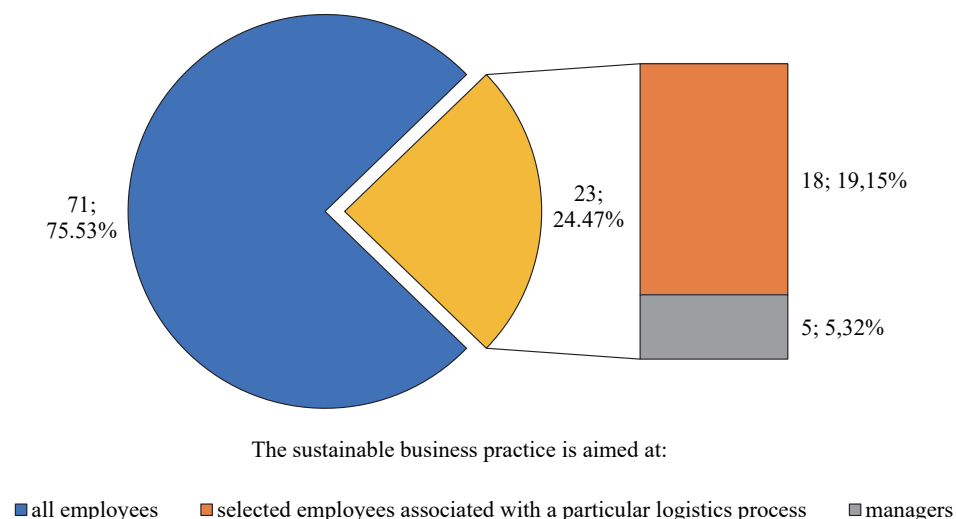
to activities aimed at developing existing and acquiring new GCs in at least one of the six dimensions selected during the review of the literature on the subject, namely green knowledge, green skills, green behaviour, green attitudes, green abilities and green awareness.

3. Research results

Based on an analysis of the literature and the FOB database, it was found that the vast majority of the sustainability-oriented solutions implemented were targeted at employees in general (Figure 1). However,

approximately 24.7% of the analysed SBPs from the workplace area were found to be targeted only at those employed in a strictly defined job position or responsible for a strictly defined logistical process. Such action was aimed primarily at offering specialised solutions aimed at developing existing competencies and acquiring new ones, as well as improving working conditions for selected groups of employees. It should be noted at the same time that in around one-fifth of such cases these solutions were available only to managers in organisations where this type of SBPs in the workplace had been implemented.

Figure 1. Analysis of SBPs among groups of employees



Source: Own elaboration based on Forum Odpowiedzialnego Biznesu (2023)

In light of the analysed SBPs from the workplace area (Forum Odpowiedzialnego Biznesu, 2023), it should be noted that creating a welcoming and inclusive workplace was the primary goal of a significant number of the implemented solutions. References to integration could be seen in approximately 42.6% of the analysed SBPs (Table 2). Integration activities took various forms and had different goals (e.g. social, environmental, or educational). Nevertheless, based

on the direction of the integration process taking place, they can be divided into:

1. internal (the initiatives taken with regard to a particular practice were aimed at integrating employees exclusively around workplace issues, e.g. improving working conditions),
2. external (the initiatives undertaken for a given practice were aimed at integrating employees exclusively around issues external to the organisation, e.g. supporting

the group involvement of employees in various social actions),

- 3. mixed (both internal and external initiatives were undertaken within the scope of a given practice).

Some of the analysed SBPs assumed that the activities undertaken as part thereof were reported by employees themselves. Subsequently, by the decision of superiors or on the basis of a transparent competition, they were evaluated and, if the requirements were met (focusing good practices on aspects related to SD), implemented in organisational practice. The

special value of this type of integrative activities should be emphasised here (employees involved in the indicated practice identified with it very strongly, which later translated into the results obtained). Unfortunately, as Table 2 shows, activities aimed at integrating employees based on their own ideas were used sporadically. For the purpose of integration activities, managers also provided opportunities for employees to engage in various types of volunteer activities (these were initiatives taken in the form of one-time actions or on an ongoing basis).

Table 2. Friendly and inclusive workplaces in the analysed practices

Targeted action identified in practice:	Total practices [n=94] from the workplace area that were focused on sustainability	
	number	%
integration (in general)	40	42.6
integration (internal)	16	17.0
integration (external)	11	11.7
integration (mixed)	13	13.8
the opportunity to independently propose an integration activity	7	7.4
proposals for integration activities are subject to a competition procedure	3	3.2
volunteerism	7	7.4
onboarding	3	3.2
hobbies	5	5.3
improving the conditions for spending breaks during work time	2	2.1
equality at work	4	4.3

Source: Own elaboration based on Forum Odpowiedzialnego Biznesu (2023)

In addition to integration measures, some of the practices aimed at creating friendly working conditions referred to the issue of supporting employees' interests (hobbies) or improving conditions for taking breaks during work time. Initiatives aimed at labour equality were found in only four SBPs. They were mainly focused on gender equality, and related activities most

often addressed the issue of improving the skills of female employees. Activities to support new employees in the scope of their functioning in the organisation (onboarding) were also observed in the results of the analysis (Table 2).
An important element of SBPs in the workplace area was the issue of employee health and safety in the workplace. One can

see numerous initiatives addressed in this aspect, which is also, in the opinion of the authors, mainly due to the specifics of the transport and logistics sector. In approximately 40.4% of the analysed practices there was a reference to the issue of safety in the workplace (Table 3). Through the prism of the analysed practices, it can be seen that in addition to restrictive organisational policies on safety, individual entities implement various additional initiatives. These are aimed not only at the acquisition of new knowledge of workplace safety by employees, but are primarily aimed at consolidating the good practices already taking place in these

organisations. As part of the organisational solutions implemented, it was observed that some entities offer employees additional non-wage benefits in the form of psychological support, free medical services, or opportunities for various types of stress management therapy (Forum Odpowiedzialnego Biznesu, 2023). Fully anonymous access was offered to some of the aforementioned benefits. It should be pointed out here that during part of the period from which the analysed practices are drawn (2020-2021), the COVID-19 pandemic had a significant impact on the type of sustainable workplace practices initiated in organisations of this type.

Table 3. The aspect of health and safety in the analysed practices

Targeted action identified in practice:	Total practices [n=94] from the workplace area that were focused on sustainability	
	number	%
safety in the workplace	38	40.4
implementation of additional technical solutions to reduce the risk of accidents at work	6	6.4
offering free medical services	5	5.3
psychological support	8	8.5
stress management	7	7.4
promotion of healthy lifestyles	19	20.2
activation through sport	18	19.1
promotion of healthy eating	8	8.5

Source: Own elaboration based on Forum Odpowiedzialnego Biznesu (2023)

In the SBPs surveyed, initiatives aimed at promoting healthy lifestyles are discernible; as Table 3 shows, this type of initiative is part of approximately one-fifth of sustainability-oriented initiatives surveyed. It can be seen that managers of organisations that implement this type of activity notice a direct link between the quality of work and employee health. Thus, an active lifestyle around numerous sports is promoted. Ensuring physical fitness plays an important

role in the field of work in the transport and logistics sector, despite the numerous technical solutions that are still being implemented to relieve the physical strain on employees. In 8.5% of practices, attention was also paid to the issue of healthy eating, which directly affects the psychophysical predispositions of employees. Another measure observed in the analysed practices, in line with the goals of Agenda 2030, was additional initiatives

aimed at improving employee competencies. 36.2% of the analysed practices referred to this issue. It should be noted that the pandemic contributed in many cases to a change in the form in which employees received additional voluntary training/courses from on-site to remote learning. As a result, a much larger number of people were able to participate in them. Participation in courses in remote form also contributed to the fact that the managers of the entities in question paid attention to the issue of digital exclusion.

Hence, the training topics varied in nature. On the one hand, more generalised training was available in various fields (including those aimed at digital inclusion of employees). On the other hand, very narrow and highly specialised training related to strictly defined logistical processes (additional professional training) was organised.

Issues related to GCs were the object of analysis of the last criterion. In the indicated research area (Table 4) an intensification of activities aimed at GCs was diagnosed.

Table 4. Intensification of activities aimed at the development of GCs in the analysed practices

In a given practice, one can find the following number of activities aimed at the development of GCs:	Total practices [n=94] from the workplace area that were focused on sustainability	
	number	%
one	9	9.6
two	6	6.4
three	2	2.1

Source: Own elaboration based on Forum Odpowiedzialnego Biznesu (2023)

Activities aimed at the development of employees' GCs were identified in as many as 18.1% of the analysed SBPs (Table 4). According to the analysed practices, managers made rather narrow use of training to develop GCs (this was observed in only 35.3% of practices targeting GCs). They were primarily used to impart rather narrow and specialised pro-environmental knowledge. More common was an attempt to green the existing competencies of employees using voluntary integration activities around the indicated issues (in approximately 58.8% of cases) and the promotion of healthy lifestyles (in approximately 52.9% of cases). Activities aimed at the development of GCs of employees were primarily undertaken in the area of:

1. commuting (shared transportation, use of environmentally friendly means of transportation, the creation of conditions in the organisation to encourage bicycle

- usage, e.g. a healthy/ecological meal provided by the employer),
2. to promote the idea of the sharing economy (the creation of various types of exchange points in the workplace),
3. meals consumed at the workplace (the possibility for employees to propose vegan and vegetarian meals, which were then offered for a trial period in the employees' cafeteria),
4. eco-driving (additional courses in sustainable driving combined with awareness-raising activities about the emissions performance of various types of vehicles),
5. waste management (the correct segregation of waste at different workplaces).

In the context of the analysed SBPs, it should be noted that attempts were made to universalise GCs in a certain way, which consisted in indicating to employees that they are not only important in the context

of the workplace, but should be part of everyday life. Hence, in creating GCs which are desirable from the point of view of the goals of a given organisation, reference was often made to attitudes and behaviours that affect the health of a given employee and his or her loved ones, as well as the economic effects they may bring. In order to create appropriate pro-environmental patterns, so-called "open days" were also organised, during which employees could come to work with their children and participate in various types of integrative activities related to environmental issues, which were aimed at creating GCs in all six dimensions of this type of competence diagnosed during the literature review.

4. Discussion

The low number of publications (48 publications both in Scopus and WoS) identified in the semi-automated survey of the literature indexed in the database, with coverage since 2012, indicates that the topic of GCs is relatively new to management science. On the other hand, the general picture presented in this study covers all six of the most important dimensions of GCs constructs also proposed by other authors (Tabuenca et al., 2023).

Tabuenca et al. pointed that there is development of GCs along with the development of the technical infrastructure in business organisations, especially if they teach and promote employees' environmental awareness by means of learning processes which can be extended (Tabuenca et al., 2023). Increased environmental awareness and green principles were also the subject of research by Büyüközkan and Ifi (2012), which also indicated environmental competencies or GCs of the suppliers of green supply chains. These researchers surprisingly turned their attention to transport and logistics sector organisations ('Feature 2: Imtech launches Green Competence

Centre', 2012) which also develop GCs, and listed the SBPs nurturing the same competencies as the Polish FOB organisation (Forum Odpowiedzialnego Biznesu, 2023). Nurturing employees' GCs through sustainable business processes was also confirmed in research on training at universities (Murga-Menoyo, 2014). "These competencies must embrace their formative role not only with regard to future graduates who will be employed in GJs per se, but also with regard to those alumni who will work in all the other productive sectors, in addition to all citizens directly and indirectly involved in the wider economy as consumers, producers and (direct or indirect) recipients of its effects" (Murga-Menoyo, 2014). Training in the general competencies of sustainability is necessary within the ambit of the subjects taught at universities, but equally to those are part of SBPs in companies (Subramanian et al., 2016). Therefore, environmentally protective actions with adequate ecological knowledge and socio-economic behaviour and skills are referred to in this paper as GCs. Contrary to the research of Subramanian et al. (2016), in this research the authors proposed a bespoke model based on the organisational set of GCs. Therefore, this paper empirically examines the influence of individual GCs on organisations' green practices or SBPs and performance objectives and list the areas where GJs are created.

In the opinion of the authors of this article, the greening of modern economies cannot be achieved without measures aimed at workers acquiring GCs. On the other hand, shaping or nurturing the competences related to SD is essential to the creation of high-quality GJs, the so-called "golden" GJs, which are necessary workplaces for each SD-oriented organisation. SBPs make workplaces and employees' positions more integrative. It can be assumed that this theme will also be visible in the practices carried out in the future.

Conclusions

This paper aimed to present the influence of SBPs on employees' GCs in the transport and logistics sector. The results indicate that acquired GCs are more positively associated with individuals' GCs and green behaviour. The study empirically demonstrates that verifying acquired GC attributes such as environmental knowledge, green purchase attitude and intention during employee selection would certainly be helpful for firms in order to identify individual green performance potential and GJ creation.

The transition to a green economy is based on technical change and the development of selected sectors of the economy, one of which is the transport and logistics sector. Apart from technological changes, there are also changes in employees' competences, which also become green. This research aimed to present the best SBPs from the transport and logistics sector which develop employees' GCs.

In light of the research carried out, it seems that the level of involvement of economic actors in the process of creating GCs is still quite low. It is good practice to attempt to integrate employees around these issues through their voluntary involvement (Piwowar-Sulej, 2022b). The use of integration and health-oriented instruments is a much better solution than hours of theoretical training. Nevertheless, some of the necessary knowledge should still be imparted in courses (especially specialised in the field). In the authors' opinion, organisational managers should, however, aim to link these courses to practice and other incentives (i.e. non-salary motivators). Such activities would not only contribute to a better assimilation of new green knowledge, but would result in the consolidation of green attitudes and green behaviour. The attempt to universalise green competences is a good move in this respect.

The authors recognise that the formation of GCs in organisations should be

permanent. Such an observation is due to the fact that such specific competences are devalued relatively quickly due to the dynamic development of technology or knowledge itself in terms of pro-environmental solutions. Hence, practices undertaken on a one-off basis, or from time to time, will not have the desired effect (Afum *et al.*, 2021).

Future research directions may focus on: the evolution of GCs in organisations, green onboarding for organisations that ascribe to sustainability; a benchmark in the context of the quality of GJs, and research aimed at determining whether the different dimensions of GCs influence each other (e.g., whether people with a high level of green knowledge are also characterised by a high level of green attitudes). This suggests that researchers in the fields of economics and management should collaborate with psychologists, an interdisciplinary and challenging endeavour. The next area of possible research may be green self-employment developed in the context of GCs. However, the authors recognise the difficulty of reaching green sole traderships.

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