



Leadership styles and sustainable performance: A systematic literature review

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ABSTRACT

The aim of this paper is to synthesize and critically analyze the linkage between leadership styles and sustainable performance (SP) through application of the rigor of systematic literature reviews. Bibliometric characterization of articles indexed in the Scopus database, network analysis and a manual in-depth review were carried out. The final sample consisted of 47 documents. The most discussed leadership styles were sustainable leadership and transformational leadership. The former was mostly linked with general SP, whereas the latter was linked with environmental performance. In 41 out of the 47 papers, the authors provided empirical research. Upper echelon theory and resource-based view theory have been used in most of previous papers. This study synthesizes how leadership influences SP (directly and indirectly) and reveals that the authors of the analyzed papers did not establish a consensus regarding their empirical evidence. The prospects for future research are shown in terms of research topics, methodology, and variables, as well as, i.a., terminological clarity and a holistic approach to SP.

1. Introduction

Both the current functioning and development of each organization depend on the characteristics of its leaders. To manage an organization, not only vision and the efficient communication of that vision are required, but also skills related to motivating people. It seems evident that appropriate leadership is necessary (Chen et al., 2018). However, what is understood by the term “appropriate leadership” has been changing for years (Kjellström et al., 2020).

Changes in the business environment, including new requirements of company stakeholders, are influencing the way organizations should be managed. Another such change is the global shift toward sustainability (Smith and Sharicz, 2011). Traditional theories of development – which remained in place until the 1970s – considered development within the framework of economic growth, and traditional leadership was only profit-oriented (Klarin, 2018). Current leaders have to find a balance between the individual pillars of sustainable development (environmental, social and economic goals), which are interrelated (Correia, 2019).

This study focuses on leadership styles which are defined as a leader’s characteristic behaviors or behavioral patterns when directing, guiding and motivating groups of people, influencing – in turn –

followers’ behaviors, an answer to a question “how do leaders lead?” (Aboramadan and Dahleez, 2020; Armstrong, 2012). Subject literature distinguishes many leadership styles – from traditional such as, e.g., transactional leadership included in the typology by Bass (1990) to modern concepts such as, e.g. agile leadership (Cinnioğlu, 2020). Many previous studies developed sets of a leader’s characteristic behaviors assigned to specific leadership styles and introduced measurement tools which help to identify a certain leadership style (e.g. (Jensen et al., 2019; Zorn and Violanti, 1993)).

Different styles of leadership styles treated as independent variables have been explored in the context of their contribution to sustainable development, or in more detail, to organizational sustainable performance (SP). The latter reflects an organization’s “ability to meet the needs and expectations of customers and other stakeholders in the long term, balanced by an effective organization management, by organization staff awareness, by learning and applying appropriate improvements and innovation” (Stanciu et al., 2014) (p. 341). The notion of sustainability may be broadly defined and associated with processes and outcomes which occur on different levels (e.g., individual, group level) (Mazutis and Zintel, 2015) and measured differently (Bezerra et al., 2021). The same relates to SP which may be even treated as green strategy (Dai et al., 2021). However, in this paper SP is treated as an

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operationalized research construct and is associated with a dependent variable, an organizational outcome (results) of implementation of sustainability-oriented activities, a company's actual and observable output (measured against its intended outputs) (Sapta et al., 2021). Pranugrahaning et al. (2021) listed the set of organizational SP indicators used by companies (e.g., company turnover – for economic performance, water consumption – for environmental performance, and contributions to society – for social performance).

The above-presented definition of SP offers some characteristics of an appropriate leadership style in the current circumstances of business functioning. Although some authors emphasized that transformational leadership contributes to broadly defined SP through shaping responsible practices and behaviors (e.g., (Burawat, 2019; Du et al., 2013; Jiang et al., 2017; Widiastria and Nawangsari, 2021), others explored the positive effects of servant leadership (e.g. (Siddiquei et al., 2021; Ying et al., 2020),) and responsible leadership (e.g. (Liao and Zhang, 2020; Ur Rehman et al., 2021),). There are also authors who focused on sustainable leadership (e.g. (Avery and Bergsteiner, 2011; Iqbal et al., 2020),). A literature review conducted by Santana and Lopez-Cabrales (2019) on the performance of sustainable human resource management found that sustainable leadership is a weakly developed and marginalized topic. In turn, Kjellström et al. (2020) stated that leadership in general is a multifaceted phenomenon which needs closer exploration. Therefore, the aim of this study is to identify and investigate both quantitatively and qualitatively the styles (types) of leadership which positively stimulate SP. This will contribute to the development of the “leadership–SP” research field by providing an analysis, comparison and synthesis of previous findings (Paul and Criado, 2020). For the purpose of this study, the following research questions were formulated:

RQ1: What is the scientific structure of the “leadership–SP” research field? The description of the structure of a given research field – associated with science mapping – is based on analyses of bibliometric characteristics of publications. It includes such information as trends related to the amount of research (the number of publications and the number of citations) as well as networks of keywords and researchers. It uses techniques of visualization, e.g., wordcloud maps (Tibaná-Herrera et al., 2018).

RQ2: Which leadership styles and contexts of SP (general, environmental, or social) are the most examined?

RQ3: Which research approaches have been used most in the studies?

RQ4: Which theories have been used to explain the linkage between a leadership style and SP?

RQ5: Which mechanisms of leadership's impact on SP have been recognized in previous studies?

RQ6: What was the result of examination of conditional factors in previous studies?

RQ7: Which areas need further empirical exploration?

There are many types of literature review, for example, scoping, narrative and systematic reviews. A systematic literature review approach (applied in this study) includes bibliometric analysis (needed for answering RQ1) as well as content analysis (Jiddi and Ibenrissoul, 2020). The authors used bibliometric analysis to provide characteristics of the scientific structure of the research field, because it should rely on data which come from statistical analysis to measure the impact of authors, journals, articles, and citations (Maditati et al., 2018). The main advantage of bibliometric methods is that they provide useful information that refers to the evaluation of the scientific activity (Capobianco-Uriarte et al., 2019) by introducing quantitative rigor into this evaluation (Zhang et al., 2017).

Content analysis needs qualitative and quantitative evaluation (Dورياu et al., 2007). It may provide information about research trends (topics) based on associations of the co-occurrence of keywords (Jiddi and Ibenrissoul, 2020). However, in this paper the authors also applied in-depth analysis, covering the whole content of the articles which

allowed them to understand, describe, and interpret the texts and – as a result – yielded a deeper insight into the findings of previous research.

Although there are some literature reviews devoted to similar problems, they do not provide answers to the above-presented research questions. Their authors also applied different methodologies while reviewing previous papers. For example, Orlitzky et al. (2011) reviewed only nine publications, focused on environmental sustainability and found that inspirational leadership with a long-term focus on stakeholder-based values is needed. Strand (2011) in his review did not present the research methodology and focused on the linkage between leadership theories, organizational culture and broadly defined corporate responsibility (CSR, covering: processes, practices and outcomes, and such issues as, e.g., philanthropy). Gillan et al., 2021 in their review on ESG/CSR reporting identified objective leaders' characteristics such as, e.g. marital status and age, related to ESG/CSR scores. Mazutis and Zintel (2015) based on data from Web of Science (WoS) examined the linkage between different characteristics of leaders and managers (e.g., demographic) and – similarly to Strand (2011) broadly defined CSR. They found only 9 papers which discussed leadership style in the context of sustainability, however those papers demonstrated relationships between a given leadership style with either responsible practices or employees' behaviors. Marques et al. (2018) covered in their review only a general responsible leadership style and provided a bibliometric analysis of papers indexed in WoS and published between 2006 and 2016. Similarly, Waite, 2013 – in her integrative review of papers published in selected journals – addressed only the general linkage between leadership, innovation, and sustainability. In turn, Fernández et al. (2006) and Evans et al. (2015) focused solely on leaders' characteristics (e.g., competencies and demographic traits) which respectively contribute to environmental success and are presented in the scope of the environmental sciences. Moreover, Fernández et al. (2006) did not provide detailed information about the research methodology, only stating that they analyzed 88 papers which they subjectively assessed as being relevant. Binti Zulkiffli and binti Latiffi (2016) focused on the characteristics of sustainable leaders, however they did not provide information about the methodology they used. Karassin and Bar-Haim (2019), through a narrative review, explored different factors which stimulate CSR performance and provided a general finding that leadership is a significant mediator in predicting such performance. Czerniachowicz et al. (2018) identified only 37 papers indexed in WoS which linked leadership with CSR. The content analysis of these papers revealed only 9 papers which discussed leaders' characteristics (including leadership styles) in the context of different CSR issues (e.g., CSR practices, implicit/explicit CSR). Finally, Lis (2020) applied only one type of bibliometric analyses (the keywords co-occurrence analysis) of articles indexed in Scopus on the general intersections between leadership and CSR. He identified only 4 leadership styles divided into different thematic clusters.

This review provides several contributions to the field. First, taking into account previous literature reviews, this article is a pioneering one as far as studies on “leadership–SP” are concerned. It applies methodological rigor and different techniques of analysis. Based on 47 documents from the Scopus database, it identifies the main quantitative and qualitative trends of the scientific output in the research field in question (Camón Luis and Celma, 2020). Moreover, this study contributes to the development of science by not only presenting and discussing the results of analyses, but also formulating future research directions.

The remaining part of this article is organized as follows. The next section presents the methodology of the literature review. It discusses the steps taken to obtain the final sample of articles for further analysis and the bibliometric indexes and network analyses used. The third part of the article presents the research results, which are divided into subsections according to the detailed methods used in the literature review. The research findings are then discussed in the context of their theoretical implications and the research questions are answered. The Discussion section also presents practical implications. In the Conclusions

section the authors present the main contributions and limitations.

2. Methodology

This research project followed procedures that are typical for systematic literature reviews. The selection of documents to be included in the review, the methodology for data extraction and the analysis were geared toward answering the research questions (Xiao and Watson, 2019). It was carried out from October 2021 to November 2021. The first step was to choose the database and to determine the selection criteria for publications (Lewis et al., 2011) (Fig. 1). The authors used not only the general term of sustainable performance, but also environmental performance and social performance because they are treated as core elements of SP (Patiar and Wang, 2016).

The Scopus database was selected because it is considered to be the largest database of peer-reviewed literature (Dias et al., 2019). Moreover, Scopus includes more journals covering the areas of business and management than WoS and thus decreases the risk of missing documents for this study (Baier-Fuentes et al., 2019).

A CSV file was downloaded from Scopus with bibliometric data related to all the documents in the sample. Data related to articles published on or before October 18th, 2021 was extracted. The CSV file was used as the input file for network analysis conducted with the VOSviewer software (van Eck and Waltman, 2014). The data from the CSV file was also imported to an XLS file in order to check whether all articles were relevant and to provide further scientometric analyses. The relevance was assessed based on the manual content analysis, that is, reading the titles and abstracts as recommended by Brereton et al. (2007). The authors independently performed the content analysis and then compared their results, making a final list of documents. They included only those papers which claimed or provided evidence on the impact of specific leadership style (a “named” and measured leadership style) on SP (including the individual dimensions of SP) to establish whether a paper was in line with the aims of the current study. After this step, 47 articles constituted the final sample.

When conducting bibliometric analysis the authors used the most

popular bibliometric indexes (Khan et al., 2020), such as the number of publications and the number of citations. To illustrate the results graphically, figures were designed with MS Excel, WordSift (<https://worsift.org>) and VOSviewer. This paper also presents data in tabular form, which resulted from the authors’ calculations made in MS Excel.

The authors applied two types of network analysis: related to the network of co-authorship and the network of keywords. In the first analysis, the authors of selected papers constituted the unit of analysis. Both analyses were performed based on full counting using VOSviewer (Perianes-Rodriguez et al., 2016). A minimum of two documents by a single author were set as a boundary condition for the creation of a network of the most productive co-authors. A total of 13 authors out of 107 met this condition.

The second network analysis covered keywords. This type of analysis helps to identify the main topics of research within a domain and the relationships between them. The co-occurrence of words can also be used to identify directions for the further development of a given research area (Chen and Xiao, 2016). VOSviewer showed a total of 249 keywords. In the first step, the minimum number of occurrences of keywords was set to five, as recommended by van Eck and Waltman (2014). Only six keywords met the condition, including only one leadership style: transformational leadership. In the second step, the authors decided to set the minimum number of occurrences of keywords to three. In this case, 21 keywords met the threshold. This number is equal to the number of so-called high-frequency keywords in this research sample calculated with the use of the formula presented by Donohue (1973). The authors then excluded keywords which were irrelevant in answering the research questions (e.g., leadership; Pakistan). Eight high-frequency keywords constituted the final network. As mentioned in the Introduction, the graphical representation of how knowledge areas and authors are interrelated is associated with science mapping (Santana and Cobo, 2020).

As Di Vaio et al. (2021) stated, “individual study of the documentation and comparison of the results is an essential step in this type of methodology, because it guarantees greater solidity to the results of the analysis” (p. 223). Therefore, the last step, i.e., qualitative in-depth

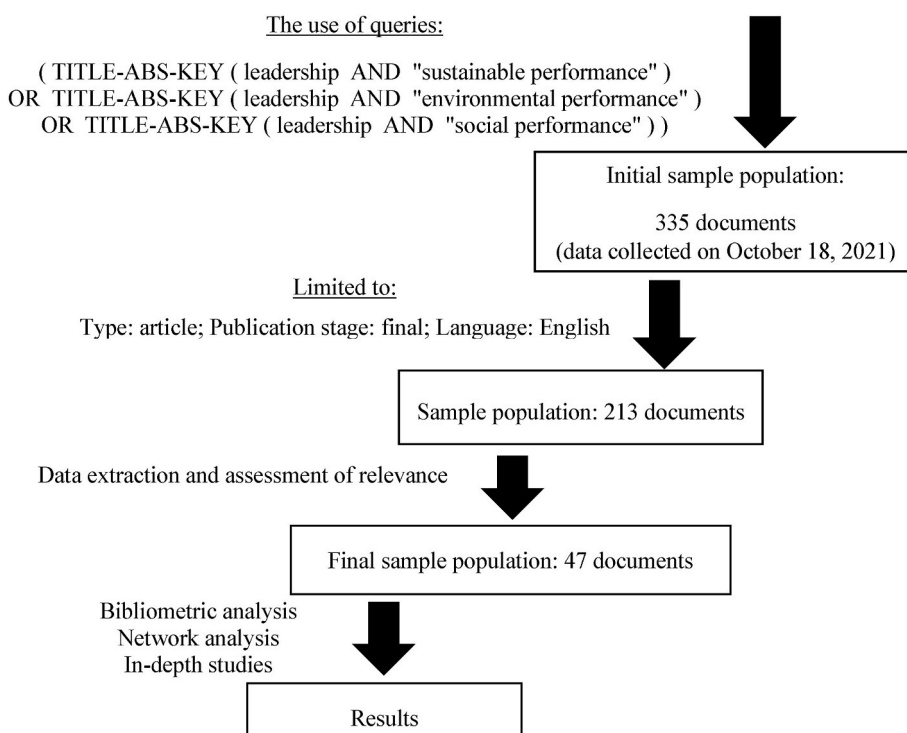


Fig. 1. The process of literature review – based on Xiao and Watson (2019).

study (manual content analysis as in the above-presented case of identification of valid documents) was performed by all co-authors. They worked independently and systematically to analyze each paper. In particular, they focused on the styles of leadership and the scope of SP (environmental, social, or complex) which were explored in a given study, the detailed mechanism and conditional factors and the general methods of empirical research used by previous researchers. The authors systematized the collected results in the form of extended data base. Their conclusions were subsequently compared to develop the sections with qualitative results.

3. Results

3.1. Findings from quantitative analysis

Although the articles were extracted on October 18th, 2021 (Fig. 2), the final sample included articles dated between 1993 and 2022 (because some of the articles were assigned to volumes published in 2022). The first article was published in 1993. It was written by Craigmgeee and Bhushan and has been cited 12 times.

The continuing growth of publications can be observed starting in 2019. Although 2020 seems to be a record-breaking year with 16 articles, 11 papers had been published by October 18th, 2021; thus, 2021 may prove to be the most productive period in the research sample.

To find the most productive countries/regions, the Wordsift tool was used. The word cloud consisting of the names of countries/regions is presented in Fig. 3. Both the size and the intensity of color matter. One may notice that authors from China (16) and Australia (12) prevail in the sample, followed by researchers from the United States (10) and Malaysia (9).

The 47 articles were published in a total of 37 journals and were cited 1461 times. The analysis of the journals' titles indicates that the issue of leadership is discussed in journals that specialize in the field of general management (e.g., "Management Research"), journals devoted strictly to the problem of leadership (e.g., "Leadership and Organization Development Journal") and journals that specialize in specific business domains (e.g., "Journal of Hospitality and Tourism Management"). Although the most productive journal was "Leadership and Organization Development Journal" (Table 1), it received only 0.82% of all citations. The most influential journal was "Leadership Quarterly," publishing only one article but receiving 886 citations (60.64% of all citations in the sample).

The total number of authors was 107. The articles were written by between one and five scholars. As Table 2 shows, the most productive authors – Ahmad and Iqbal – stood out from the other researchers. Although they published the most articles and received many citations, they were not the most influential authors. As mentioned above, the most influential article received 886 citations (60.64% of all citations in the sample) and was written by Gardner, Avolio, Luthans, May and Walumbwa.

The total link strength shown in Table 2 indicates the scope of the

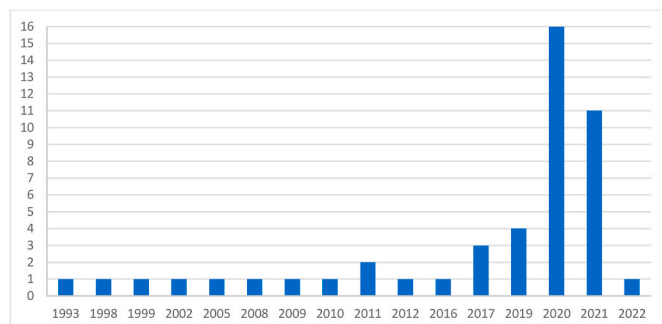


Fig. 2. Number of articles published by year.



Fig. 3. Countries/regions represented in the studies on leadership in SP.

authors' cooperation. The data was calculated with the use of Vos-Viewer. It shows that the most productive authors – while preparing their papers – cooperated in practice with many other authors. Fig. 4 presents the connections between authors. The largest set of connected items consists of four authors: Manz, Manz, Shipper, and Adams. This team of authors wrote two articles.

At this point it is worth emphasizing that Iqbal was mentioned six times as the first author in the list of authors. It is generally assumed that the name of the principal investigator is almost always mentioned first. However, the order in which the remaining co-authors are listed in the paper does not necessarily reflect the extent of their contribution (Subramanyam, 1983).

The results of the keyword network analysis are presented in Fig. 5. The network consists of eight items which form three clusters. In the map, the size of nodes manifests the frequency of keyword's occurrence, while a line shows the relationships between keywords.

Cluster 1 consists of such keywords as sustainability performance, sustainable performance, and transformational leadership. It shows that the most explored research topic was the role of transformational leadership in SP. Cluster 2 includes such keywords as environmental management, environmental performance, and responsible leadership. This research area focuses on the links between responsible leadership and environmental performance. Finally, Cluster 3 is constituted by the following two keywords: environment and sustainable leadership. It covers research on sustainable leadership and its impact on environmental performance.

3.2. Findings from qualitative analysis

3.2.1. The types of leadership and performance examined in previous studies

The in-depth content analysis of articles resulted in the identification of 21 different leadership styles. The most popular (i.e., closely examined in more than one paper) are presented in Table 3. As shown in below Table 3, sustainable leadership and transformational leadership both have been studied in highest number of studies i.e., nine. Environmental leadership and ethical leadership have been consecutively examined in five (10.64%) and four (8.51%) studies. Only three studies are available which have taken each responsible leadership and servant leadership as independent variable. In our sample, only two studies each take authentic leadership and value-based shared leadership into account. In four papers, more than one leadership style was explored.

As far as the type of performance is concerned, the most examined was the general sustainable performance (Table 4). The analysis of current sample reveals that sustainable performance has been highly examined i.e., n = 20, 42.55%. Least number of studies are available about social performance i.e., n = 8, 17.02%. Nineteen studies in current sample talk about environmental performance.

The links between the most often discussed leadership styles and the types of company performance are shown in Table 5.

Although the articles link the leadership styles with SP – as presented in Table 5 – out of the 47 studies, only 10 papers provided empirical

Table 1

The most productive journals in the sample.

Journal	Number of papers (n ≥ 2)	Percentage of papers in the sample	Number of citations	Percentage of citations in the sample	Number of citations per paper
Leadership and Organization Development Journal	4	8.51%	12	0.82%	3.00
Journal of Cleaner Production	3	6.38%	19	1.30%	6.33
Sustainability (Switzerland)	3	6.38%	57	3.90%	19.00
International Journal of Contemporary Hospitality Management	2	4.26%	13	0.89%	6.50
International Journal of Manpower	2	4.26%	13	0.89%	6.50

Table 2

The most productive authors in the sample.

Author	Number of articles (n ≥ 2)	Number of citations received	Number of citations per article	Total link strength
Ahmad, N.H.	7	50	7.14	9
Iqbal, Q.	6	43	7.17	9
Zhang, Y.	3	14	4.67	2
Adams, S.B.	2	18	9.00	6
Manz, C.C.	2	18	9.00	6
Manz, K.P.	2	18	9.00	6
Shipper, F.	2	18	9.00	6
Halim, H.A.	2	7	3.50	4
Gupta, V.	2	4	2.00	2
Khan, S.A.R.	2	18	9.00	2
Patlar, A.	2	53	26.50	2
Wang, Y.	2	53	26.50	2
Javed, M.	2	3	1.50	0

evidence about the direct effect of different styles of leadership, such as sustainable, transformational, responsible, ethical, populist, and entrepreneurial leadership (independent variable), on sustainable performance (dependent variable) and its three dimensions. Their authors did

not establish a consensus regarding their empirical evidence.

Sustainable leadership (Burawat, 2019) and transformational leadership (Burawat, 2019; Jiang et al., 2017) both significantly influence SP. On the other hand, Pantouvakis and Vlachos (2020) claimed that talent, which is viewed as a high-value human capital (Yu et al., 2014) and operant resources (Pantouvakis and Vlachos, 2020; Smith et al., 2014), has a stronger influence on SP than leadership (stakeholder, formal, authoritarian, and growth).

Responsible leadership significantly influences each dimension of SP, namely, economic, social, and environmental performance (Javed et al., 2020). Though past studies have validated the positive impact of socially responsible leaders and entrepreneurial leadership on environmental and social performance (Nor-Aishah et al., 2020; Phillips et al., 2019), this is not the case with economic performance (Nor-Aishah et al., 2020). Contrary to this, ethical leadership and responsible leadership were found to significantly influence social performance (Fatoki, 2019; Javed et al., 2021), but not environmental performance (Fatoki, 2019). Pirayesh and Pourrezay (2019) and Gupta and Zhang (2020) both concluded that there is a significant impact of transformational leadership on environmental performance. Furthermore, controlling for left- and right-wing populism, populist leadership significantly lowers environmental performance (Böhmelt, 2021). Moreover, two dimensions of ethical leadership – leader humane orientation and leader responsibility and sustainability orientation – significantly influence social performance. The impact of one dimension of ethical leadership, i.e., leader moderation orientation, on social performance is not significant (Wang et al., 2017).

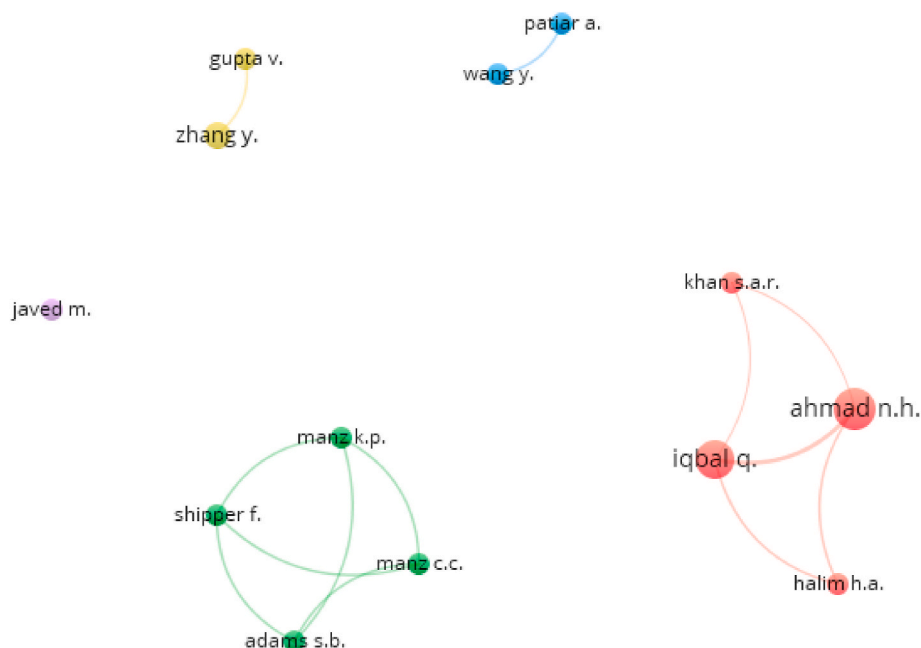


Fig. 4. Visualization of networks of authors.

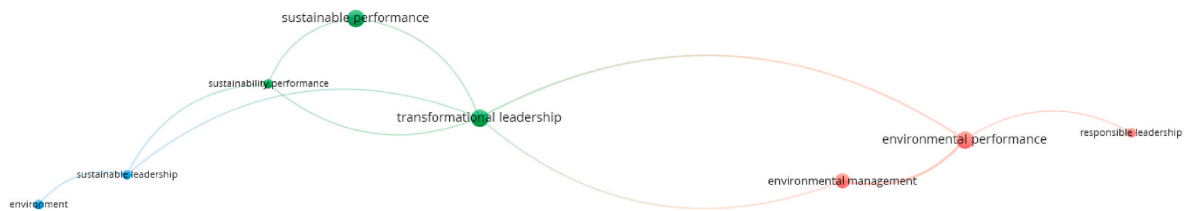


Fig. 5. Visualization of the network of keywords.

3.2.2. Research approaches used in the analyzed articles

In 36 out of the 47 papers, the authors provided quantitative empirical research. The remaining papers were either qualitative or theoretical. A case study approach was applied in six papers and five papers were conceptual based. In 24 articles out of 36 quantitative studies, a cross-sectional approach to collecting data from a single source, the employees, was adopted. Only three studies used multi-source data. Moreover, there were only three multilevel studies in the final sample. In two studies, the authors used secondary data. One study adopted a mixed-mode research approach. Partial least square – structural equation modelling (PLS-SEM) was used in 22 articles and regression analysis in seven articles. SPSS Macro Process and valuation ratios were used in one research paper each.

3.2.3. Theories used in previous studies

Out of 47, 16 papers have not used any theoretical background to examine the relationship of a given leadership style and SP (including its sub-dimensions). Two theories such as the upper echelon theory (Iqbal et al., 2021b; Iqbal and Ahmad, 2021; Liao and Zhang, 2020) and resource-based view theory (Iqbal et al., 2020; Pantouvakis and Vlachos, 2020; Ren et al., 2020; Rizvi and Garg, 2020; Singh et al., 2020) has been used in most of the studies ($n = 5$ for each) followed by the social exchange theory (Darvishmotevali and Altinay, 2022; Gardner et al., 2005; Iqbal et al., 2020a; Wang et al., 2017) in four studies and the ability-motivation-opportunity theory (Al-Swidi et al., 2021; Rizvi and Garg, 2020; Singh et al., 2020), and social learning theory (Darvishmotevali and Altinay, 2022; Iqbal et al., 2020a; Su et al., 2020) each in three papers. Moreover, the previous authors have also employed the path-goal theory (Patiar and Wang, 2020), contingency theory (Javed et al., 2020), complexity theory (de Sousa and van Dierendonck, 2010), knowledge-based theory (Sapta et al., 2021), conservation of resources theory (Chang et al., 2020), service-dominant logic theory (Pantouvakis and Vlachos, 2020), neo-institutional theory (Gupta and Zhang, 2020), job-demand resource model (Iqbal et al., 2020a), leader-member exchange theory (Jiang et al., 2017), structural theory of organizational behavior, self-discrepancy theory and self-determination theory (Gardner et al., 2005) in their empirical studies.

In the analyzed sample, there are only three multilevel studies. In these studies, three theories such as stakeholder theory (Javed et al., 2021), social identity theory (Zhao and Zhou, 2019) and resource-based theory (Ren et al., 2020) have been used separately. Among unilevel research, eleven studies have been conducted on the integration of two theories such as natural resource-based view with dynamic capability theory (Iqbal and Ahmad, 2021), service dominant logic with resource-based view (Pantouvakis and Vlachos, 2020), upper-echelon theory with effectuation theory (Q. Iqbal et al., 2020), stakeholder theory with contingency theory (Javed et al., 2020), the upper echelon perspective with effectuation theory (Iqbal et al., 2020), stakeholder theory with upper-echelon perspective (Liao and Zhang, 2020), upper echelons theory with effectuation theory (Nor-Aishah et al., 2020), the resource-based view with the ability-motivation-opportunity theory (Singh et al., 2020), the resource-based view with the group engagement model (Wang et al., 2017), the ability-motivation-opportunity model with social information theory (Al-Swidi et al., 2021) and Herzberg's two-factor theory of motivation with conservation of resources theory

(Chang et al., 2020). Moreover, in this review, empirical evidence of four studies are based on the application of three theories such as resource-based view with dynamic capability and job-demand resource theory (Iqbal et al., 2020), social learning theory with social exchange theory and the job demands-resources model (Iqbal et al., 2020a), social legitimacy theory with institutional theory and organizational fitness theory (Gupta and Zhang, 2020), and social exchange with social cognitive and social learning theory (Darvishmotevali and Altinay, 2022).

3.2.4. Mechanism: leadership and sustainable performance

Only 25 research papers out of our sample elaborated on the mechanism of the “leadership–SP” relationship. Only four papers were theoretically driven and proposed factors such as total quality management, authentic followership, organizational learning and complex adaptive behavior to strengthen the “leader–performance” relationship. Empirically, the studies focused on transformational, sustainable, responsible, transactional, ethical and charismatic leadership.

In the context of the knowledge-driven organization, de Sousa and van Dierendonck (2010) proposed that servant leaders fully comply with the global meaning framework and can therefore influence social performance through their complex adaptive behavior, which concerns emergent adaptation, continuous learning and innovative and entrepreneurial culture. Following the leader's and followers' personal experiences and triggered phenomena, Gardner et al. (2005) proposed a mediating role of authentic followership on the “authentic leader–follower SP”. Further, Craigmcgee and Bhushan (1993) posited that environmental leaders could employ total quality management practices to promote environmental sustainability in their firms, considering the criteria for the Malcolm Baldrige quality award as a benchmark.

Sapta et al. (2021) conducted an empirical study among farmers in Indonesia and found that transformational leadership indirectly influenced SP through knowledge management. Based on the upper echelon theory, Iqbal et al. (2020a) proposed that frugal innovation significantly mediates the relationship between sustainable leadership and SP. Moreover, past studies from countries such as China, Pakistan, Malaysia, Indonesia, India and Brunei provided empirical evidence about the indirect effect of sustainable leadership on SP through psychological safety (Qaisar Iqbal et al., 2020c), organizational learning (Iqbal et al., 2020a), structural empowerment (Sulasmis et al., 2020) and frugal innovation (Iqbal et al., 2021b). In a study among manufacturing firms in Thailand, Burawat (2019) confirmed a partial mediating role of lean manufacturing in the relationship between sustainable leadership and transformational leadership with SP. Patiar and Wang (2020) conducted a quantitative study among employees in four- or five-star hotels in Australia. They established the mechanism of a transformational and transactional “leadership–SP” relationship on the basis of managers' perceived compensation and benefits practices. Moreover, Javed et al. (2021) found that innovation significantly mediated the relationship of responsible leadership with each dimension of SP. However, their study did not suggest a mediating impact of corporate reputation on the “responsible leadership–environmental performance” relationship.

The extant literature from SMEs and large manufacturers has confirmed the indirect impact of sustainable leaders on environmental performance through environmental innovation and frugal innovation

Table 3
The most often^a examined leadership styles in empirical papers.

Type of leadership	Attributes of the style (with references)	Number of articles examining the given type	Percentage of articles in the sample
Sustainable leadership	promotes novelty and sharing creation ideas, focuses on learning and continuous improvement, and embraces errors in a non-punitive manner (Burawat, 2019; Iqbal et al., 2020a; Iqbal et al., 2021a; 2021b; Iqbal et al., 2020a; Iqbal et al., 2020; Sulasmi et al., 2020)	9	19.15%
Transformational leadership	evolves around inspirational motivation, individualized consideration, idealized influence, and intellectual stimulation (Burawat, 2019; Jiang et al., 2017; Patiar and Wang, 2016; Saptia et al., 2021); their behavior motivates followers to achieve environmental goals and inspires followers to perform beyond expected levels (Rizvi and Garg, 2020; S. K. Singh et al., 2020), based on political skills and charismatic leadership (Gupta and Zhang, 2020).	9	19.15%
Environmental leadership	possesses strong environmental values, promotes environmental practices, and influences both internal and external stakeholders (Su et al., 2020)	5	10.64%
Ethical leadership	fosters the normatively appropriate conduct through personal actions and interpersonal relationships and promotes such conduct to followers through two-way communication, reinforcement, and decision-making (Ren et al., 2020; Siddiquei et al., 2021; Wang et al., 2017)	4	8.51%
Responsible leadership	focuses on relationship-building, relational governance, and sharing orientation (Liao and Zhang, 2020), a process where a leader finds consensual solutions through discursive decision-making (Javed et al., 2020, 2021)	3	6.38%
Servant leadership	portrays an altruistic personality in favor of followers and assists them in growing and learning by providing opportunities to experience and improve	3	6.38%

Table 3 (continued)

Type of leadership	Attributes of the style (with references)	Number of articles examining the given type	Percentage of articles in the sample
Authentic leadership	their material and spiritual condition (Darvishmotevali and Altinay, 2022; Siddiquei et al., 2021) concerns about relational transparency, balanced processing, internalized moral perspective, and self-awareness (Chang et al., 2020; Gardner et al., 2005)	2	4.26%
Value-based shared leadership	develops an interactive dynamic influence process in which organization members lead one another to help reach team and organizational goals (Manz et al., 2010, 2011)	2	4.26%

^a Examined in more than one paper.

(Iqbal et al., 2021a, 2021b). Patiar and Wang (2020) empirically validated the mediating role of organizational commitment in the relationship between transformational leadership with social and environmental performance. Furthermore, Rizvi and Garg (2020) conducted a study among Indian oil and gas companies and found a partial mediating effect of green culture between green transformational leadership and environmental performance. In agriculture firms, it has been proven empirically that responsible leaders can also adopt green innovation practices, which concerns green innovation strategy and actions meant to foster environmental performance (Su et al., 2020). In their study among top managers of Chinese medical firms and pesticide producers, Ren et al. (2020) established that there is a mediating role of the top management team's green commitment on green HRM–environmental performance, where green leadership is deemed a vital part. Additionally, Singh et al. (2020) emphasized the indirect impact of transformational leadership on green innovation, which is crucial to environmental performance, through green HRM practices involving employees' green ability, green motivation, and green opportunity. On the other hand, Zhang and Wei (2021) released the only study to examine and confirm a mediating role of environmental performance in the interactive term (charismatic leadership and the progression of product life cycle) and financial performance of Chinese SMEs. Moreover, in a study among employees in the hospitality sector, authentic leaders were proven to enhance career satisfaction (as an element of social performance) via culture of learning and vitality (Chang et al., 2020).

3.2.5. Contextual factors: leadership and sustainable performance

Out of the 47 studies in our sample for this review, only 11 papers provided empirical evidence about the conditional factors on the relationship of different types of leadership: sustainable, charismatic, transformational, responsible, authentic, entrepreneurial, ethical, and shared leadership with SP and its three dimensions: social, economic, and environmental performance. Only three papers talked about moderating the impact of servant, ethical, and sustainable leadership itself on the relationship of green HRM and buyer–supplier relationships with environmental performance and social performance.

Based on a case study in Herman Miller Corporation, Manz et al. (2011) concluded that commitment to ongoing creativity and recognition of stakeholders as a resource might act as conditional forces on the “shared leadership–SP” relationship. Moreover, in the maritime industry, organizational culture (formal and learning) significantly

Table 4
Types of performance discussed in the context of sustainability.

Type of performance	Characteristics of latent variables	Number of articles examining the given type	Percentage of articles in the sample
Sustainable	comprised of economic, operational, and environmental performance (Sapta et al., 2021); economic, social, and environmental performance (Q. Iqbal et al., 2020; Javed et al., 2020; Nor-Aishah et al., 2020); economic, social, environmental, and economic stakeholder sustainability performance (Pantouvakis and Vlachos, 2020); social and environmental performance (Patiar and Wang, 2020); operational, financial, environmental, and social performance (Burawat, 2019); or task and relational performance (Jiang et al., 2017)	20	42.55%
Environmental	takes into account task-related and proactive environmental performance (Darvishmotevali and Altinay, 2022), effectively meets and exceeds society's expectations with respect to concerns for the natural environment (Gupta et al., 2019; Ren et al., 2020), focuses on the efficiency of material and energy consumption (Iqbal et al., 2021a; Liao and Zhang, 2020; S. K. Singh et al., 2020), and is concerned about energy-saving, pollution prevention, waste recycling, no toxicity, or green product designs (Siddiquei et al., 2021)	19	40.43%
Social	evaluates trust in and satisfaction with supply chain partners (Akhtar et al., 2017), takes care of people and the planet along with making profit (Javed et al., 2020), and promotes commitment towards social expectations (Rao and Holt, 2005)	8	17.02%

moderated the “leadership–SP” relationship (Pantouvakis and Vlachos, 2020). In a study among SMEs from Malaysia, Indonesia, and Brunei, Iqbal, Ahmad, Nasim, et al. (2020) and Iqbal et al. (2020) found that psychological empowerment amplified the indirect impact of sustainable leadership on SP through psychological safety and organizational learning, respectively. Psychological empowerment enables organizations to reinforce their employees self-efficacy by sharing quality information with them through formal and informal organizational practices which eradicates their feelings of powerlessness (Conger and Kanungo, 1988). In spite of this evidence, in a study among SMEs in Malaysia, Nor-Aishah et al. (2020) reported that entrepreneurial

Table 5
Connections between the most often discussed^a leadership styles and the types of organizational performance.

Type of performance			
Type of leadership	Environmental	Social	Sustainable
Authentic		1	1
Environmental	4		
Ethical	2	1	1
Responsible	1	1	1
Servant	2	1	
Sustainable	1	1	7
Transformational	6		3
Value-based shared			2

^a Examined in more than one paper.

bricolage did not amplify the relationships of entrepreneurial leadership with environmental, social, or economic performance. Bricolage is defined as an ability to seize opportunities and deliver value by recombining the resources at hand (Davidsson et al., 2017).

Zhang and Wei (2021) conducted a study among SME employees in China and confirmed the moderating impact of the product life cycle, which is comprised of four stages, namely introduction stage, growth stage, mature stage, and declining stage and covers product manufacturing and sales timeline (Levitt, 1965), on the “charismatic leadership– environmental performance” relationship. Another study conducted among Chinese SMEs confirmed that the knowledge-sector identification, which facilitates the awareness of organizations about their interconnectivity with other stakeholders, enables them use resources efficiently by creating and applying knowledge on an individual and collective level (Chichilnisky and Gorbachev, 2004), does not moderate the positive effect of transformational leadership on environmental performance (Gupta and Zhang, 2020). Moreover, in their study among hotel employees in Almaty, Kazakhstan, Darvishmotevali and Altinay (2022) it was confirmed that servant leadership moderates the relationship between green HRM and proactive employees' pro-environmental performance and environmental awareness, but does not moderate the pro-environmental performance related to green HRM tasks. In another study from China, Ren et al. (2020) provided empirical evidence in support of a positive moderating impact of CEO ethical leadership on the indirect relationship of green HRM and environmental performance through the top management team's green commitment.

Wang et al. (2017) conducted a study to examine the integrated relationship of ethical leadership and social performance among Chinese manufacturing firms. Accordingly, they found that leader justice orientation did not moderate the relationship of ethical leader's humane orientation (awareness about employees' human rights), leader responsibility or sustainability orientation with social performance. Leader justice orientation enables managers to treat others fairly irrespective of their gender, color, religion, nationality, and socio-economic status (Treviño et al., 2003). Moreover, the “ethical leader's moderation orientation (self-control, humility, ethically neutral behavior)–social performance” relationship is amplified in the presence of a leader justice orientation (Wang et al., 2017). By employing multi-wave and multi-source research design, Javed et al. (2021) provided empirical support in favor of authenticity as a conditional factor on the relationship between responsible leadership and firm's social performance. Chang et al. (2020) also concluded there was a conditional effect of psychological contract fulfillment on the indirect effect of authentic leadership on career satisfaction (being the element of social performance) through learning and vitality. Psychological contract fulfillment are individual beliefs which are based on the exchange agreement between themselves and their organizations (Chang et al., 2020; Rousseau, 1998). Moreover, Awan and Khan (2021) found that sustainable leadership significantly moderated the relationship between buyer–supplier relationships and social performance in manufacturing firms in Pakistan.

After thoroughly reviewing all the quantitative papers in the analyzed sample, the authors have exhibited the mechanism and conditional factors which refer to the “leadership style-SP” relationship in the shape of the below framework (Fig. 6).

3.2.6. Directions for future research identified in the sample

Authors who published theoretical/conceptual papers, such as Iqbal et al. (2020b) as well as Correia de Sousa and van Dierendonck (2010), generally recommended empirical research be conducted which would examine their propositions. More detailed future research avenues are presented in Table 6.

4. Discussion

4.1. Theoretical contributions

The quantitative analysis conducted in this paper provided information to describe the scientific structure of the “leadership-SP” research field (RQ1). Firstly, the research field consists of 47 articles, authored by a total of 107 authors and published in a total of 37 journals. The most productive journal was “Leadership and Organization Development Journal,” but the most influential in terms of citations received was “Leadership Quarterly.” The most productive author was Ahmad, and the most influential were Gardner, Avolio, Luthans, May and Walumbwa. All these authors cooperated with other researchers – which can be treated as “a recipe for success” in this case. The majority of the authors came from China – like in the case of leadership in the context of broadly defined CSR (Czerniachowicz et al., 2018) – and Australia. A majority (41 out of 47) of the studies were empirical.

In an answer to RQ2, one can state that the cluster analysis of keywords indicated that transformational leadership was the most often examined leadership style. The in-depth content analysis revealed that the transformational and sustainable leadership were the most popular topics. This finding enriches previous studies which found that in the general CSR domain the most examined was ethical and transformational leadership (Czerniachowicz et al., 2018; Lis, 2020). Although the issue of sustainable performance prevailed in the sample, the second most discussed type of performance was environmental. The most often explored leadership styles (in general) were mostly linked with environmental performance. Studies devoted to transformational

and green leadership styles in particular focused on environmental performance (which is obvious).

Examining different leadership styles in the context of their impact on environmental performance is in line with the general evolution of how sustainable development has been defined. This concept gained popularity after the Brundtland Commission (1987) emphasized that the Earth’s resources are at risk. The environmental context was historically first (Klarin, 2018) and even nowadays the environmental bottom line has been recognized as a basis for the other pillars of sustainability (Scharlemann et al., 2020).

One interesting finding is that an integration of different leadership styles in the form of sustainable leadership has been happening. Moreover, sustainable leadership is mostly linked with sustainable performance, which also indicates that sustainable development means the integration of economic, social, and environmental goals.

As Waite, 2013 stated, leadership has indefinite targets related to sustainability. The current study shows that authors used different approaches to defining and measuring SP. They also applied different methodologies of empirical research; however, the most common research approach was a cross-sectional design. The authors mainly employed the PLS-SEM approach to analyze their data collected at the individual level, that is, from employees (RQ3). To the best of the authors’ knowledge, there is no prior review paper about the linkage of leadership style with organizational/firm/business performance which could potentially work as a benchmark to differentiate research design and methodological approach from the present study.

The most popular theory used to explain the “leadership style-SP” relationship is the upper echelon theory and the resource-based view theory which constitutes the answer to RQ4. This result provides evidence that there is a difference between studies which generally link various leaders’ characteristics with CSR processes and outcomes and research which focuses on the linkage between leadership style and SP. In the first case, the agency theory and stakeholder theory is broadly used (Mazutis and Zintel, 2015). As compared to multilevel studies, unilevel research in our sample offers more complex integrated framework based on the multiple theories.

Moreover, although in many papers the “leadership-SP” relationship was identified, only a few studies provided evidence of the direct impact of leadership on SP. The current review study also concludes that past studies confirmed the mediating role of total quality management

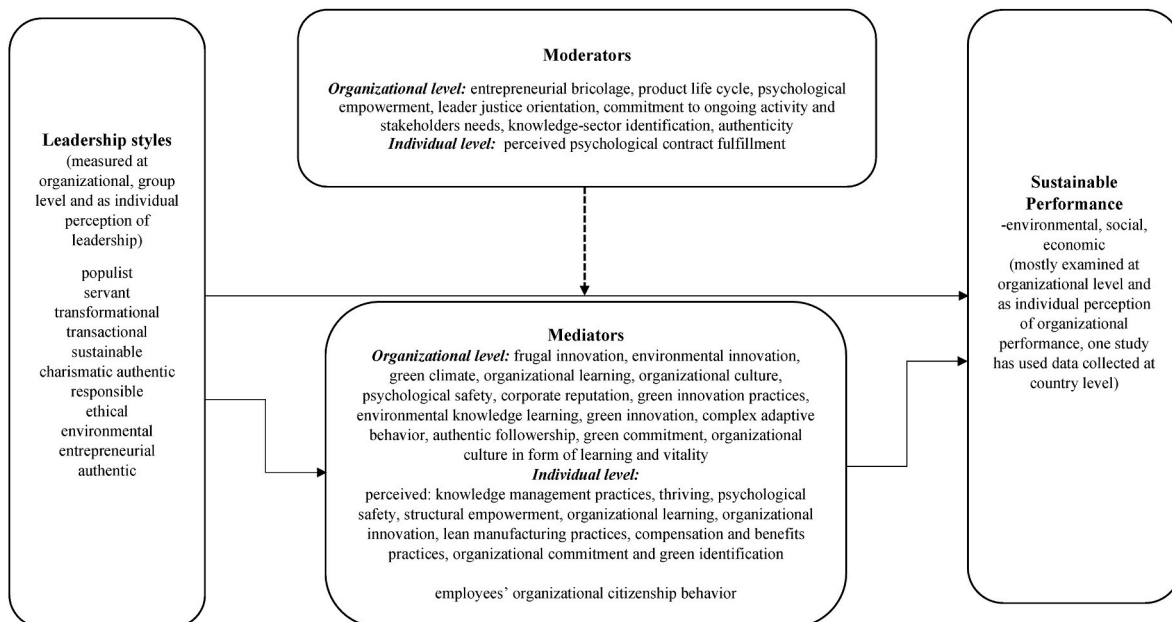


Fig. 6. The integration of variables used in quantitative papers.

Table 6
Directions for future research identified in the selected papers.

Research area	New perspectives	Authors
Related to types of leadership and performance	<ul style="list-style-type: none"> to examine the role of organic leadership in organizational social performance to further explore transformational leadership to examine such types of sustainable performance as green creativity and green consumer behavior to investigate whether knowledge-based organizations with a servant leadership model demonstrate complex adaptive behavior and the impact of complex adaptive behavior on both organizational and social performance 	Rok (2009); Darvishmotevali and Altinay (2022); Ren et al. (2020); Correia de Sousa and van Dierendonck (2010)
Methodological recommendations	<ul style="list-style-type: none"> scope of research: to cover other regions (developed countries), sectors, or teams research approach: multilevel research sampling: large sample size, large firms data collection: multi-source data, multiple respondents (e.g., responses from both managers and employees) research methods and tools: longitudinal study, case study, or interview-based psychological analysis measures: applying objective measures and determining the difference between subjective and objective measurement 	Sapta et al. (2021); Iqbal and Ahmad (2020); Iqbal, Ahmad, and Li (2021a); Iqbal et al. (2020a); Siddiquei et al. (2021); Ahmad et al. (2021); Liao and Zhang (2020); Iqbal et al. (2020); Iqbal, Ahmad, and Li (2021a) Rizvi and Garg (2020); Iqbal et al. (2020); Nor-Aishah et al. (2020); Patiar and Wang (2020); Iqbal, Ahmad, and Li (2021b); Sulasmi et al. (2020); Akhtar et al. (2017); Patiar and Wang (2016)
Moderators	<ul style="list-style-type: none"> intrinsic rewards supervisors' personality traits green organizational identity management support national culture green behavior environmental beliefs and values 	Darvishmotevali and Altinay (2022); Siddiquei et al. (2021); Iqbal, Ahmad, and Li (2021a); Rizvi and Garg (2020); Ahmad et al. (2021); Iqbal and Ahmad (2020); Singh et al. (2020); Patiar and Wang (2016)
Mediators	<ul style="list-style-type: none"> employee attitude stakeholders' satisfaction competitive advantage shared vision and values self-leadership organizational team orientation consensual decision-making organizational culture employee behavior 	Siddiquei et al. (2021); Ahmad et al. (2021); Javed et al. (2020); Burawat (2019); Wang et al. (2017)
Control variables	<ul style="list-style-type: none"> organizational sector country of origin employee age and gender scale of assets ownership R&D personal and organizational characteristics cultural values 	Iqbal, Ahmad, and Li (2021a); Chang et al. (2020); Su et al. (2020); Jiang et al. (2017); Patiar and Wang (2016)

practices (Craigmcgee and Bhushan, 1993), authentic followers (Gardner et al., 2005), lean manufacturing (Burawat, 2019), frugal innovation (Qaisar Iqbal et al., 2020b), psychological safety (Qaisar Iqbal et al., 2020c), organizational learning (Iqbal et al., 2020a), structural empowerment (Sulasmi et al., 2020), managers' perceived compensation and benefits (Patiar and Wang, 2020) and knowledge management (Sapta et al., 2021) on the "leadership-SP" relationship. Although the focus of this study is on SP, the current review findings are in line with other studies which has confirmed the mediating impact of empowerment (Aufegger et al., 2019), knowledge management (Inkinen, 2016; Kılıç and Uludağ, 2021), organizational learning (Nguyen and Luu, 2019) and innovation (Gong et al., 2021) on the "leadership-firm (financial/marketing/operational) performance relationship". This constitutes the answer to RQ5. Previous authors who provided empirical evidence about the mechanism of "leadership-SP" came from Australia, Thailand, Pakistan, China, India, Malaysia, Indonesia, Australia and Brunei.

In response to RQ6, this review has also confirmed that only a few studies evaluated and claimed a positive impact of conditional factors – namely, commitment – on the ongoing creativity and recognition of stakeholders (Manz et al., 2011), organizational culture (Pantouvakis and Vlachos, 2020) and psychological empowerment (Iqbal et al., 2020a, 2020b) on the relationship between leadership and sustainable performance. Contrary to these findings, Nor-Aishah et al. (2020) concluded that there was a positive impact of entrepreneurial bricolage as moderator on the "leader-SP" relationship. These review findings are similar to past studies where authors have confirmed the indirect impact of leadership on performance through collective culture (Balwant, 2016; Liu et al., 2021) and organizational commitment (Saleem et al., 2021). However, Iqbal et al. (2021b) have provided empirical evidence in favor of negative moderating effect of entrepreneurial bricolage on the "leadership – firm (financial/marketing/operational) performance" relationship. Studies have mostly been conducted on SMEs. There is a dearth of studies among large manufacturing firms and from developed countries and Europe.

This study – to answer RQ7 – suggests new directions for future research, which is in line with the requirements of a valuable literature review (Paul and Criado, 2020). These research directions were divided into a) those related to types of leadership and performance, b) methodological, and c) additional variables which are recommended to be used in future research (moderators, mediators, or control variables).

The authors of analyzed articles advocated for further research on transformational and servant leadership, but also recommended that additional styles of leadership, such as organic leadership, be explored. Although this leadership style is similar to servant and value-based shared leadership, it is also based on teamwork and self-organization and it relinquishes the formal distinction between leaders and employees (Rok, 2009). Numerous methodological aspects have also been raised by the authors of the selected articles. Future lines of research should apply multilevel studies and different research methods, it should also strive for objectivity of measurement, among other things. The researchers also recommended the use of additional variables in future research (e.g., national culture as a moderator, competitive advantage as a mediator, and organizational sector as a control variable).

Moreover, the above-presented considerations lead to the formulation of future research avenues other than that mentioned by previous authors which is an additional theoretical implication of this study. The first includes activation of regions which are underrepresented in the research sample (e.g., Eastern European countries), as depicted in the word cloud in Fig. 3. Moreover, the mechanisms and conditional factors have been verified in specific countries; therefore, it is worth conducting replicative research to check whether these variables influence the relationship between leadership and SP in the same way. Collaboration between authors from different regions would contribute to the science and increase the impact of co-authors. This study provides evidence that collaboration matters in terms of authors' productivity.

This review also shows that different leadership styles are linked with SP, but not all authors empirically analyzed the relationships between leadership styles in their papers. Even if they focused on a given leadership style, they did not clearly distinguish this style in the context of other styles. For example, visionary leadership is sometimes called charismatic or transformational (Rok, 2009). Terminological clarity is needed in future research, which is in line with the postulate of Marques et al. (2018), in their review on responsible leadership, to use more mature definitions. Moreover, none of the articles analyzed herein were devoted to the problem of spiritual leadership, which remains at the stage of theoretical conceptualization in the context of sustainability (Samul, 2019). This leadership style may be an interesting research topic in the context of SP.

Moreover, a research trend was observed where sustainable leadership is gaining attention – emphasizing the need to integrate all three of the triple bottom line – whereas SP is often approached fragmentarily. Since leadership theory “must transition to new perspectives that account for the complex (...) needs of organizations (Lichtenstein, Benyamin B.; Uhl-Bien et al., 2006, p. 2), the authors of this study would like to enhance other researchers to conduct further research on the most complex and most sustainability-oriented leadership style in the form of sustainable leadership. This concept may be further developed taking into account the need for implementation of agility in modern organizations.

Both leadership studies and business management have incorporated different theories of economics and psychology and the integration of theories is needed (White, 2011), which is also visible in the above-presented findings. These findings also show that some of the theories have been integrated and the integration took place only in unilevel studies. Therefore, the authors raise postulate to integrate in future research different theories as well as to use theories other than identified in this study.

The next promising research avenue is the application of multilevel studies. As current research shows there is scarcity of multilevel research on the “leadership style – SP” relationship. It is difficult in practice to find single-level relations that are unaffected by other levels due to the nature of organizations as hierarchically nested systems (Kozłowski and Klein, 2000). Peccei and Van De Voorde (2019) claimed that the adoption of a multilevel approach has the potential to make a significant contribution to the further development of HRM research. The authors of the current study believe that examining the “leadership – SP” relationships with the use of multilevel approach will contribute to the theoretical development in this area. To develop a multilevel study, researchers may use the information presented in Fig. 6. They are also encouraged to go beyond examination of many variables at individual level which means examination of perception of employees. More effort should be introduced to collect data of more objective nature than employees’ subjective opinions.

Most of the selected studies addressed the problem of effective leadership style in the business context. They focused on the positive outcomes of this leadership. It would be valuable to conduct similar research in non-profit and public organizations, such as schools, which are viewed as lacking adequate leadership (Franken and Plimmer, 2019). This would meet the requirements presented by Daniëls et al. (2019) and Gümüş et al. (2021), for example. Another research avenue is to empirically explore the negative leadership outcomes (Evans et al., 2015).

Finally, this review revealed the discrepancies between the results obtained through bibliometric methods and through in-depth manual analysis in the identification of the most popular leadership style. It is therefore worth encouraging researchers to use a mixed-method approach, as adopted herein, in further literature reviews. A mixed-method study increases the study’s strength (Younas and Ali, 2021).

4.2. Practical implications

Lis (2020) stated that the added value of a literature review is mostly theoretical. In turn, Templier and Paré (2015) and Cummings and Daellenbach (2009) emphasized that stand-alone literature reviews – such as the present study – can serve as valuable overviews of a topic for practitioners and thus have real-world implications. They help managers to understand how the intellectual structure of the “leadership–SP” field looks and to find evidence which may guide their decisions. Practitioners (e.g., managers or business trainers) may use the bibliometric data presented in this study to choose journals as sources of broader knowledge on the relationships between leadership and sustainable performance. This study also presents researchers who specialize in the area of knowledge in question and who may act as business consultants.

In their decision-making process, managers can use the relationships between different leadership styles and types of organizational performance and the mechanisms and conditional factors identified in this study. The results can also make them aware of the discrepancies between the various findings of researchers using different methods of analysis in literature reviews. Moreover, they may be not only “knowledge users” but also contribute to the development of this research field by conducting research in their practice related to the promising research areas, collaborating with researchers, and using experimental methods which were not used in the studies analyzed herein.

Finally, reviews play an instrumental role in shaping policies (Younas and Ali, 2021). Based on the results of the current study, there is also room for educating future leaders and young researchers who are interested in this topic.

5. Conclusions

The aim of this article was to map the “leadership–SP” research field and to collect findings from previous studies. As a result, this study contributes to the field of knowledge about leadership and sustainable development, filling a gap in such studies by focusing on the linkage between leadership and sustainable performance and implementing a methodological approach. As discussed above, this study has many implications for both researchers and practitioners. It provides evidence that there is growing interest in this research field. It also presents numerous findings related to the impact of a given leadership style on sustainable performance and the impact of the underlying mechanism and conditional factors. This article also offers prospects for future research in terms of research topics, methodology, and variables as well as terminological clarity, a holistic approach to sustainable performance, activating researchers from other countries and increasing collaboration between researchers. Practitioners may use the information presented herein in decision-making processes and training for leaders.

This study – being systematic in its nature – provides transparency and replicability of research process. However, systematic literature reviews have some drawbacks related to assessment bias and heterogeneity in the chosen articles (Ferrari, 2015). This study has three main limitations, which also suggest directions for future research. First, bibliometric analyses are valid for a given moment. The number of publications increases and some of the bibliometric characteristics are being criticized. In particular, citations could not always reflect individual scientific contribution (Aksnes et al., 2019). Second, the search methodology may exclude some interesting articles from the sample if their authors did not include the search terms in the abstract, title, or keywords. Future research projects may overcome these limitations. Future authors are encouraged to identify links not only between strictly defined and measured leadership styles and sustainable performance but also leader’s individual attributes (values, beliefs, attitudes etc.) and CSR/sustainability policies, processes and broadly defined outcomes. Third, although the presented analyses based on the Scopus database which has higher coverage of social sciences’ literature than Web of

Science (Aksnes and Sivertsen, 2019), the authors would like to encourage researchers to complete the present study's analysis with results from different databases, such as Web of Science, Dimension or Google scholar. Articles written in other languages than English are also worth being covered by future literature reviews.

CRedit authorship contribution statement

Katarzyna Piwowar-Sulej: Conceptualization, Formal analysis, Investigation, Writing – original draft, Writing – review & editing, Supervision. **Qaisar Iqbal:** Conceptualization, Investigation, Writing – original draft, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

This text is based on data from Scopus. All main data is presented in the text.

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