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ORIGINAL RESEARCH ARTICLE

Towards social responsibility 2.0 for Moroccan public establishments and enterprises: Artificial intelligence and new technologies at the service of sustainable development

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ABSTRACT

This work explores the transition to intelligent corporate social responsibility (CSR) 2.0, an advanced approach to CSR that integrates artificial intelligence and new technologies to promote sustainability and efficiency. In Morocco, this evolution is of great importance, as it is part of the ambitious national vision of sustainable development, with objectives to reduce environmental impact and promote transparency. Moroccan public establishments and enterprises (PEE), as key players in crucial sectors such as energy, water and infrastructure, have already begun to develop CSR strategies. However, it has become clear that the shift towards intelligent Social Responsibility of the Organizations (RSO or OSR) based on artificial intelligence and new technologies is essential to meet current and future challenges. This subject is of paramount importance in the Moroccan context, as it offers a concrete means of achieving the country's sustainability goals while strengthening regional leadership. In addition, it opens the door to future research and studies in this field, encouraging other researchers to explore this promising avenue which has positive potential for humanity as a whole, creating responsible and sustainable development models for the future.

Keywords: RSO 2.0; artificial intelligence (AI); sustainability; public establishments and enterprises (PEE); Morocco; new technologies

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1. Introduction

This substantial evolution in the field of CSR, brought about by technological advances, prompts in-depth reflection on its impact on companies and public establishments in Morocco. New technologies have become the catalysts of a significant transformation, propelling CSR towards new horizons. CSR 2.0 calls for a major reorientation in the way public establishments and enterprises (PEE) approach their responsibility to society and the environment. It calls for rethinking the management of energy consumption, encouraging the adoption of planet-friendly modes of transport, and actively promoting CSR. This represents an exciting challenge, but also a major opportunity for Moroccan PEE[1].

One of the essential components of this new era of CSR is taking energy consumption into account. PEE must now commit to reducing their carbon footprint by implementing innovative energy strategies. This means adopting more sustainable energy sources, optimizing electricity consumption, and constantly searching for eco-friendly

solutions[2].

In this context, the vision of CSR is evolving to encompass a holistic approach. It is no longer limited to philanthropy or one-off initiatives, but becomes a fundamental pillar of corporate strategy[3]. The idea of creating shared value implies that companies integrate CSR into their organization. This requires in-depth reflection on how the company's actions can contribute to solving social and environmental challenges, while fostering sustainable economic growth[4]. A crucial aspect of this evolution of CSR is how it is perceived by stakeholders. Consumers, investors and society as a whole are increasingly attentive to companies' CSR practices. An organization that adopts an authentic CSR approach can not only enhance its reputation, but also build customer loyalty and attract socially responsible investors. This creates a virtuous circle where commitment to CSR becomes a competitive advantage[5].

The world of corporate social responsibility (CSR) has undergone a profound transformation within the field of CSR 2.0[6]. This major evolution has been triggered by the emergence of new technologies and the growing internationalization of communications[5]. This transformation follows on from the pioneering work of Visser[7], who introduced the concept of "shared value". We can argue with conviction that CSR has the potential to become a source of simultaneous economic and social value creation, by aligning the objectives of public and private enterprises (PPE) with the pressing needs of society[8]. This vision considerably broadens the perspective of CSR as a strategic means of sustainable development, combining economic profitability with positive social and environmental impact[9]. It now occupies a central place in contemporary debates, and its evolution, under the growing influence of technological advances, is not going unnoticed. This transformation, which could be described as CSR 2.0, is bringing about profound upheavals in the way all sectors of activity approach the issue, particularly public establishments and enterprises (PEE)[10]. Our analysis will focus on the present and future vision of Moroccan public establishments and enterprises regarding this CSR 2.0, as well as on the opportunities it offers, particularly with regard to managing energy consumption, adopting environmentally-friendly modes of transport with a low carbon footprint[11], promoting corporate social responsibility (CSR) and other aspects that can be exploited through artificial intelligence[5].

1.1. CSR 2.0, a theoretical background of our study

At the heart of contemporary concerns, corporate social responsibility (CSR) occupies a prominent place, in constant evolution and under the growing influence of technological innovations. This metamorphosis, known as CSR 2.0, is bringing about profound upheavals in the approach to all sectors of activity[10], with a particular focus on PEE[11]. Our in-depth study examines the current and prospective vision of Moroccan public establishments and enterprises with regard to CSR 2.0. It also explores the opportunities arising from this evolution, such as energy management, environmentally-friendly means of transport with a low carbon footprint[5], the promotion of corporate social responsibility (CSR), as well as other aspects that can be exploited thanks to artificial intelligence[12].

CSR 2.0 offers exciting opportunities for the integration of artificial intelligence. The massive data which can be generated by PEE can be analyzed by advanced AI systems to identify trends, optimize processes and make informed decisions. This convergence between CSR and AI paves the way for more effective and responsible strategies management[13]. It represents a significant evolution in the way PEE approach their responsibilities to society and the environment[14]. New technologies are driving this transformation, offering exciting opportunities for creating a more sustainable and responsible future. However, this requires sincere commitment and concerted action on the part of all stakeholders, in order to realize the full potential of CSR 2.0[15]. At the same time, it strongly encourages the adoption of environmentally-friendly modes of transport. PEE is called upon to play an exemplary role in promoting low-carbon transport alternatives. This could include developing efficient public transport networks, setting up car-sharing systems, and raising awareness among employees and citizens of the benefits of environmentally-friendly mobility choices. In addition, CSR

2.0 highlights the need to promote corporate social responsibility (CSR) in all its dimensions. This goes beyond mere charitable actions and implies PEE commitment to the well-being of society[16]. PEE must be proactive players in solving social and environmental problems, collaborating with various stakeholders to achieve common goals. One of the fundamental pillars of this new era of CSR is taking energy consumption into account. PEE is now required to commit to reducing their carbon footprint by implementing innovative energy strategies. This includes adopting more sustainable energy sources, optimizing electricity consumption, and constantly searching for eco-friendly solutions[17]. At the same time, CSR 2.0 strongly encourages the adoption of environmentally-friendly modes of transport. Public establishments and enterprises are called upon to play an exemplary role in promoting low-carbon transport alternatives. This could include developing efficient public transport networks, setting up car-sharing systems, and raising awareness among employees and citizens of the benefits of environmentally-friendly mobility choices. In addition, CSR 2.0 highlights the need to promote all aspects of corporate social responsibility (CSR). This is a profound commitment to the well-being of society, which goes beyond mere charitable actions PEE must play a proactive role in solving social and environmental problems, working closely with a variety of stakeholders to achieve common goals. It opens up also exciting prospects in terms also of the integration of artificial intelligence[18]. PEE generate huge volumes of data, which advanced AI systems can analyze to identify trends, optimize processes and inform decisions. This convergence between CSR and AI offers the potential for more effective and responsible management[19].

This strategy can represent a substantial advance in the way public establishments and enterprises approach their responsibility to society and the environment. New technologies play a fundamental role in this transformation, offering exciting opportunities to create a more sustainable and responsible future, CSR 2.0, this exciting new extension in corporate social responsibility, is a constantly evolving field that requires in-depth analysis. Under the influence of technological advances and the globalization of communications, CSR has evolved to become a driving force in the contemporary business world. This transformation is not limited to the simple adoption of ethical practices, but is challenging the way PEE integrate social responsibility into their overall strategy[20].

One of the most striking developments in CSR 2.0 is the notion of “shared value”, as introduced by Visser[7]. This revolutionary idea suggests that CSR can be much more than a simple moral obligation or philanthropic action. It can truly be a catalyst for creating economic and social value at the same time. This approach is based on synchronizing the objectives of public and private companies with the needs of society. This means that, instead of seeing CSR as a financial burden, it becomes a strategic opportunity to create a positive impact while improving profitability. CSR 2.0 therefore goes far beyond declarations of intent[8]. It requires a sincere commitment to sustainability, both social and environmental. This includes efforts to reduce carbon footprints, promote diversity and inclusion within the company, and foster ethical relationships with stakeholders. Companies must not only comply with laws and regulations, but also act proactively to identify and resolve social and environmental issues. Integrating this new responsible and technological practice into corporate strategy also requires a thorough rethink of how companies measure and communicate their social and environmental impact. Traditional financial performance indicators are no longer sufficient. Organizations need to develop specific metrics to assess their contribution to society, whether in terms of reducing greenhouse gas emissions, improving working conditions or supporting local communities[21].

A concrete example of this evolution is the way companies approach supply chain management. CSR 2.0 requires companies to ensure that their suppliers meet high ethical and environmental standards. This goes beyond simply complying with local regulations, as it also involves working closely with suppliers to help them improve their practices. Ultimately, this practice represents a fundamental transformation in the way companies conceive their role in society. It goes beyond philanthropy and regulatory compliance[22]. Take supply chain management, for example. CSR 2.0 is not just about ensuring that suppliers meet high ethical and environmental standards, although this is important. Structures need to work closely with suppliers to help

them improve their practices and reduce their environmental impact. This can include training programs, incentives to adopt sustainable practices, and constant supervision to ensure standards are met. it also encourages organizations to take a long-term view. It's not just about maximizing short-term profits, but committing to creating value for all stakeholders over the long term. This means considering the long-term consequences of every business decision, whether in terms of environmental sustainability, employee well-being or relations with local communities based on AI development[23].

Another key aspect of CSR 2.0 is transparency. Top management actors are increasingly required to report on their CSR actions in an open and transparent way. This means disclosing information on environmental practices, working conditions, community initiatives and other aspects of social responsibility. Transparency enables stakeholders to better assess a company's performance and commitment to CSR[24]. It has also become a key element in investor decision-making. Socially responsible investors actively seek out companies that integrate CSR into their strategy. They see responsible companies as less risky and more attractive in the long term, especially if it's based on AI practices[25].

The exploration of corporate social responsibility (CSR) in its evolved form, known as CSR 2.0, is emerging as an exciting area of study. This innovative thinking has its foundation in the illuminating work of Mudhee[12], who highlights CSR as a crucial element of legitimacy and competitiveness for PEE. In addition, the study by Pollán[5] sheds light on our understanding by demonstrating that organizations that integrate social and environmental considerations into their strategy are better equipped to anticipate changes in societal expectations and maintain their long-term relevance. At the heart of this transformation lies the convergence between CSR 2.0 and new technologies, notably artificial intelligence (AI)[13]. This dynamic fusion of concepts and innovations opens up unexplored horizons for PEEs, placing them at the center of both a societal and economic revolution.

CSR 2.0 transcends the traditional boundaries of social responsibility, evolving into an integrated strategic approach that revolutionizes the way in which PEE understand their role in society. CSR is no longer limited to regulatory compliance or philanthropic initiatives. It is becoming a cornerstone of legitimacy and competitiveness, as emphasized by Mudhee[12]. The importance of this new strategy lies in its ability to anticipate and adapt to society's changing expectations. By integrating social and environmental considerations into their strategy, PEE is better able to understand and respond to the emerging needs of their stakeholders. This PEE evolution is rooted in the "shared value" concept introduced by Baumgartner[9], which suggests that CSR can be a source of simultaneous economic and social value creation. This approach is based on the synchronization of PEE objectives with the needs of society, which goes far beyond traditional notions of economic profitability[9].

New technologies, and in particular artificial intelligence (AI), play a pivotal role in this transformation. They enable PEEs to go beyond one-off philanthropic actions to integrate CSR at the heart of their organizational technologies. AI is becoming a powerful tool for analyzing large datasets and identifying trends, opportunities and risks related to social responsibility Zheng, Luo and Wang[26]. Research by Munro[27] highlights the value of anticipating society's expectations. Organizations that integrate social and environmental considerations are able to differentiate themselves from their competitors. They are perceived as more responsible and trustworthy, which can translate into greater customer loyalty and improved brand reputation. In addition, AI facilitates communication and engagement with stakeholders. AI-based chatbots and automated response systems can provide information on PEEs' CSR initiatives, gather feedback from customers and employees, and facilitate the rapid resolution of social and environmental concerns. AI thus becomes a powerful tool for enhancing transparency and interaction with stakeholders.

Measuring social and environmental impact is another area where AI makes an invaluable contribution. AI systems can analyze complex data from different sources to more accurately assess a company's

contribution to society. This goes beyond simple figures and traditional indicators, enabling companies to better understand their overall impact and adjust their strategy accordingly. It is also a valuable asset in CSR risk management. AI systems can continuously monitor PEE operations, detecting early warning signals related to potential compliance, reputational or environmental issues. This enables PEE to proactively anticipate and manage risks, reducing their vulnerability to crises. The work of Slimani et al[28] highlights the key role technology is playing in the evolution of CSR 2.0 and it's engineering like in the case of human resources psychology. Technological advances, including the Internet of things (IoT), artificial intelligence (AI)[29] and blockchain, are driving a profound transformation in the way companies interact with their ecosystems and manage their social and environmental impacts[30]. This digitization of CSR offers new opportunities for data collection, transparency, collaboration with stakeholders and sustainable innovation[31].

The profound impact of technology on CSR 2.0 cannot be overstated. It is a transformative force that is reshaping the landscape of corporate social responsibility. Let's take a look at how these technological marvels are reshaping CSR practices and strategies. The Internet of things (IoT) is at the forefront of this transformation. Thanks to IoT, organizations can now monitor and manage their environmental impact with an unprecedented level of precision. Connected sensors and devices can collect data on energy consumption, emissions and resource use in real time, enabling more accurate measurement and communication of environmental performance[32]. This not only enhances transparency, but also enables organizations to identify areas where sustainability efforts can be optimized and improved. Artificial intelligence (AI) represents another pillar of this CSR technology revolution. AI algorithms have the ability to analyze vast data sets and extract meaningful information about social and environmental trends[33]. This analytical capability enables companies to proactively address emerging challenges and adapt their CSR initiatives to make them more effective and relevant. In addition, AI-powered chatbots and virtual assistants enhance stakeholder engagement by providing timely and informative answers to questions, fostering stronger relationships with customers, employees and communities. Blockchain technology, renowned for its transparency and security, is finding applications in CSR through the creation of immutable records to track supply chain sustainability and responsible sourcing. This not only guarantees ethical practices throughout the supply chain, but also enables consumers to verify the authenticity and origin of products, thus reinforcing trust and responsibility. What's more, the digitization of CSR offers a wealth of opportunities for collaboration with stakeholders. Online platforms and social media enable real-time communication and interaction with customers, shareholders, advocacy groups and local communities. These channels facilitate the exchange of ideas, comments and concerns, enabling organizations to further align their CSR efforts with stakeholder expectations[34].

Sustainable innovation is another aspect of technology's influence on CSR. Data collected by IoT, analyzed by AI and secured by blockchain can be used as a basis to drive innovation in sustainable product development and process optimization. This fosters a culture of continuous improvement and positions organizations as leaders in environmentally friendly and socially responsible practices. The integration of these technological advances into CSR 2.0 represents a paradigm shift in the way organizations conceive and implement their social and environmental responsibilities. It transcends the traditional view of CSR as a philanthropic endeavor, elevating it to a strategic imperative for long-term success. By harnessing the power of IoT, AI, blockchain and other emerging technologies, companies can navigate the ever-changing CSR landscape with agility and responsiveness, while committing to creating sustainable social and environmental value[35].

1.2. An overview of the Moroccan context

Within the Moroccan context, the analysis carried out by El Baz et al.[35] has proved essential in highlighting CSR as a key factor influencing the competitiveness of PEE. This in-depth research offers significant insights into the impact of CSR on the Moroccan scene, demonstrating that PEEs that embrace

responsible practices enjoy a favorable position to generate sustainable value and consolidate their legitimacy in front of their stakeholders. An in-depth examination of the role of CSR in the Moroccan context reveals a complex landscape where PEEs face unique challenges and opportunities. This analysis encompasses a variety of dimensions, including economic, social, environmental and even technological impact, which interact to shape the CSR landscape.

One of the strengths of the research conducted by El Baz et al.[35] lies in its ability to highlight the profound link between CSR and competitiveness. In an ever-changing global economic context and with the new public management[36], Moroccan PEEs that choose to integrate responsible practices into their business model are favorably positioned to respond to society's changing needs and adapt to global trends[37].

The concept of long-term value creation is of particular importance in the Moroccan context. PEEs that take a long-term view of CSR are more inclined to invest in initiatives that, while requiring up-front resources, generate considerable benefits over the long term. In an ever-changing world, organizations are faced with new challenges and opportunities. Corporate social responsibility (CSR) has become an essential part of the strategy of many PEE[11]. CSR encompasses a wide range of practices aimed at integrating social and environmental considerations into business operations. CSR is not limited to one-off philanthropic initiatives, but extends to the way a company manages its day-to-day activities. This includes reducing environmental impact, promoting equity and diversity in the workplace, and engaging with local communities[38].

In the Moroccan context, the government has also undertaken major administrative reforms inspired by the concept of new public management (NPM). NPM is a public management approach focused on efficiency, accountability and performance, aimed at modernizing public administrations by aligning them more closely with private sector principles[39]. In Morocco, these reforms have had a considerable impact on the way PEE operates. The introduction of the NPM in Morocco was accompanied by a series of measures aimed at strengthening governance, streamlining operations and improving the accountability of PEEs. These reforms have encouraged greater transparency and prompted PEAs to adopt more modern management practices, thus contributing to improved public service delivery[40].

Another element not to be overlooked in the analysis of CSR in Morocco is the growing adoption of technology. Technological advances, such as the Internet of things (IoT) and artificial intelligence (AI), can be a developer of the way Moroccan PEEs approach. For example, IoT enables real-time data collection to monitor energy consumption and emissions, while AI can analyze this data to identify opportunities for improvement. Ultimately, CSR is about more than just complying with regulations. It's a commitment to long-term value creation, both for the company and for society as a whole[41]. Organizations that integrate CSR into their culture and operations are better positioned to succeed in a world increasingly focused on sustainability, social responsibility, technological advances and the principles of new public management.

The importance of our study lies in its potential impact on the Moroccan context. Morocco is actively pursuing its sustainable development objectives, and PEEs play an essential role in this dynamic. Understanding their vision of CSR 2.0 and the challenges that lie ahead is crucial to steering public policies and business practices in a more responsible direction. From a scientific point of view, this study will enrich the existing literature on CSR 2.0 by exploring a specific context and providing valuable insights into how PEEs are approaching this evolution. It will also serve as a basis for future research into the impact of CSR 2.0 in Morocco. Finally, on a human level, this study will help promote more responsible business practices, generating tangible benefits for Moroccan society as a whole. It is part of a sustainable development perspective, promoting harmony between economic, social and environmental activities for the well-being of present and future generations.

2. Methodology

Qualitative methodology is a research approach characterized by its ability to explore in depth the perceptions, attitudes and experiences of individuals or groups. It is widely used in the social sciences to gather rich, nuanced data. According to Drury et al.[39], qualitative research focuses on understanding social phenomena through a holistic perspective, allowing participants to express themselves freely and in context. This approach is particularly suited to the study of complex issues, such as the views of Moroccan PEE on CSR 2.0.

This type of methodology is based on several fundamental principles that distinguish it from quantitative approaches. Firstly, it places great importance on contextual understanding. This means that researchers seek to understand social phenomena in their natural context, taking into account environmental, cultural and historical influences[42]. In the case of the study of Moroccan PEE and CSR 2.0, this means seeking to understand how these entities integrate CSR 2.0 in a specific Moroccan context, with its own social norms and expectations[43]. Secondly, qualitative methodology is characterized by its flexibility. Unlike quantitative approaches, which use standardized measuring instruments, qualitative methodology enables researchers to adapt to changing situations in the field. Interviews, observations and document analysis are commonly used methods in qualitative research, and can be adjusted to suit the needs of the study. In the case of the CSR 2.0 study, this flexibility makes it possible to gather data tailored to the specificities of each Moroccan public company. Thirdly, qualitative methodology emphasizes subjectivity[44]. It recognizes that individuals have personal perspectives, opinions and experiences that influence their understanding of the world. Consequently, researchers seek to give a voice to participants, encouraging them to express themselves freely and valuing their individual points of view. In the context of the CSR 2.0 study, this means seeking to understand how managers and employees of Moroccan PEE perceive and experience CSR 2.0, recognizing that their opinions may vary. Finally, qualitative methodology places great importance on the construction of meaning. It recognizes that social reality is complex and multifaceted, and that researchers need to build an understanding of the phenomenon under study by gathering and interpreting data in a systematic way. This often involves the use of qualitative analysis techniques, such as content analysis, thematic analysis or discourse analysis, to tease out meaningful patterns and themes from the data collected. It should be noted that qualitative methodology encompasses a variety of approaches, each with its own specific techniques and methods. Among the most commonly used qualitative approaches are semi-structured interviews, participant observation, content analysis and discourse analysis[45].

2.1. Sample: The final sample comprises the following PEEs

Our research sample is shown in the **Table 1** below:

Table 1. Research's simple.

PEE	Approximate function
National Office for Electricity and Drinking Water	CSR and Sustainable Development Manager
National Office for Railways Office	Head of Sustainable Development and CSR
Maroc Telecom	Responsible for CSR-related tasks
National Sanitation Office	Head of Sustainable Development and CSR
Marsa Maroc	ESG function manager
National Ports Agency	Head of Sustainable Development and CSR
Digital Development Agency	Head of Governance

2.2. Data collected

The non-directive interviews were conducted with high-level representatives within each PEE.

Interviewees were invited to share their views, experiences and practices in CSR 2.0. Interviews were structured around key CSR 2.0 themes, but participants were encouraged to express themselves freely. Interviews were conducted in person or via videoconferencing platforms, according to interviewees' preference. Yet, before the start of each interview, an informed consent document was provided to each participant. This document clearly stated the purpose of the study, the confidentiality of the information provided, and the fact that the data collected would be used for research purposes only. Interviewees were also informed that they could withdraw from the study at any time without consequences. Then, for data collection, interviews were recorded and transcribed in full to ensure data accuracy. The transcripts were then subjected to content analysis to identify recurring themes, trends and patterns.

Interpreting qualitative data can be particularly complex. It requires in-depth analytical skills on the part of researchers to extract valuable information from the data collected. Insufficient analysis can lead to erroneous conclusions, underlining the importance of rigor in this approach. What's more, in qualitative research, the generalization of results can prove difficult. Since this methodology focuses on specific contexts, the direct application of results to other situations can pose challenges. However, it is essential to note that qualitative research is often aimed at gaining in-depth understanding rather than establishing generalizations[45].

Using qualitative methodology to study CSR 2.0 in Morocco offers several specific advantages. Firstly, it enables us to explore in detail the perceptions, attitudes and experiences of key players, such as managers and employees of Moroccan PEE. This in-depth approach is essential for understanding the subtleties of integrating CSR 2.0 into their daily practices. The qualitative approach favors the gathering of diverse perspectives. Those organizations represent a diversity of opinions and viewpoints on CSR 2.0. By using semi-structured interviews and other qualitative methods, researchers can gather a variety of perspectives, contributing to a more comprehensive understanding of the topic. Moreover, this qualitative methodology is adaptable to the specific Moroccan context. Given the study's focus on the Moroccan context, it is imperative to allow participants to freely define their views without imposing undue restrictions. The non-directive qualitative methodology takes account of this specificity, which is of particular importance in the field of CSR, where social expectations and standards can vary from one country to another. It also favors the collection of rich data. Non-directive interviews, in particular, enable detailed testimonials to be collected, which can then be analyzed in depth to extract valuable insights into how Moroccan PEE are approaching CSR 2.0. Finally, the qualitative methodology encourages confidentiality. Participants can express themselves in complete confidence, knowing that their answers will be treated confidentially. This guarantee of confidentiality encourages openness and honesty in participants' responses.

2.3. Data analyses

Thus, the data processing consisted on analyzing the qualitative data collected using content analysis methods. This approach extracted significant information and generated themes and categories to organize the data. Relevant verbatims were extracted to illustrate the results.

Hence, this methodology was designed to guarantee the rigor and reliability of our research, while respecting the confidentiality of the participants. It enabled us to obtain in-depth information on how Moroccan PEEs approach CSR 2.0 and the initiatives they implement in this context. significant information and generated themes and categories to organize the data. Relevant verbatims were extracted to illustrate the results.

3. Results

For a structured presentation of our results, we can approach them from different key angles:

3.1. Current situation

The majority of public establishments and companies interviewed are still at the initial stage of their CSR

strategies, favoring traditional approaches. One interviewee clarified, “We’re still in the early stages of integrating CSR into our practices.”

Traditional OSR currently dominates, with a commitment to the community and the environment, but limited use of digital technologies. One participant noted, “Our RSO programs are rather classic; we haven’t yet fully exploited the potential of new technologies.” Social impact initiatives: companies in Morocco are leveraging technology and data analytics to identify and support social impact initiatives. These include programs for education, healthcare and community development. One social project manager says: “We use technology to target our efforts where they are most needed, improving the lives of many people.”

3.2. Aspirations for intelligent OSR 2.0

Our interviews revealed a consensus among those responsible for CSR and sustainable development in Morocco about the need to adopt an intelligent CSR 2.0. This vision is based on the idea that the use of artificial intelligence and new technologies can revolutionize the way public institutions approach social responsibility.

Interviewees stressed the crucial importance of AI and new technologies in environmental protection and sustainable resource management. One CSR manager explained, “AI can help us optimize our processes to minimize environmental impact, whether in water, energy or waste management.”

Intelligent OSR 2.0 can also enhance decision-making based on accurate, real-time data. This enables PEE to react quickly to environmental and social issues, contributing to better risk management.

we can also give more importance to intelligent RSO actions desired by interviewees such as:

3.2.1. Green and smart transportation

Our results suggest that PEE in Morocco are actively considering adopting electric vehicles (EVs) and setting up charging infrastructures in the near future to reduce their transport-related carbon emissions. One fleet manager interviewed stressed: “Switching to EVs will be an integral part of our future commitment to sustainable development. It will contribute significantly to reducing our carbon footprint while stimulating innovation in the transport sector.”

This vision of transitioning to more environmentally-friendly means of transport demonstrates the firm intention of Moroccan public PEE to integrate CSR 2.0 into their future strategy. It demonstrates how the use of technologies such as electric vehicles are seen as a major lever for achieving their sustainability objectives in the future.

3.2.2. Transparency and reporting

Our results also highlight the willingness of Moroccan organizations to actively use technology to improve the transparency and reporting of their CSR 2.0 initiatives in the near future. They plan to use advanced reporting tools and platforms to more effectively communicate their future CSR 2.0 efforts to their stakeholders. One CSR manager explained, “Technology will play a crucial role in making our future actions more transparent and understandable to our stakeholders.”

The intention to use technology to enhance the transparency and communication of future CSR 2.0 initiatives demonstrates the strong commitment of Moroccan PEE to proactively account for their actions in the future. It highlights how technology will facilitate the sharing of key information with stakeholders, strengthening trust and mutual understanding over the coming years.

3.2.3. Relationship between OSR and artificial intelligence/new technologies

Our interviews highlighted how AI and new technologies can be integrated with OSR to improve the collection, analysis and dissemination of crucial information. CSR managers expressed the importance of automating tasks related to the collection of environmental and social data.

AI can also play a key role in identifying emerging trends and issues, enabling public companies to respond proactively to sustainability challenges. It can also contribute to stakeholder engagement through interactive digital tools.

New technologies, such as IoT (Internet of things) sensors and blockchain, were mentioned as ways of guaranteeing traceability and transparency in CSR initiatives, thereby strengthening stakeholder trust.

3.3. Importance in the Moroccan context and public establishments and enterprises

In the Moroccan context, characterized by an ambitious national vision for sustainable development, intelligent CSR 2.0 is seen as an essential lever for achieving these goals. PEE see themselves as key players in implementing this vision.

PEE in Morocco play a central role in various sectors, from energy and water to infrastructure. By adopting smart CSR 2.0, they cannot only improve their own sustainability performance, but also serve as models and incentives for other players, both public and private.

The combination of OSR and AI can also better address Morocco's specific needs, such as water management in a context of increasing scarcity. Intelligent OSR 2.0 can contribute to a more efficient use of natural resources.

These results clearly demonstrate that PEE in Morocco are resolutely forward-looking and recognize the importance of AI and new technology-based OSR 2.0 in achieving their sustainability objectives and contributing to the country's development within a sustainable framework.

4. Results discussion

The results of our study correspond closely to trends observed in the academic literature on organizational social responsibility 2.0 (OSR 2.0) and its integration with new technologies. OSR 2.0 is defined as an evolution of traditional OSR, characterized by the use of artificial intelligence (AI), big data, and other technologies to improve the environmental and social performance of organizations. Interviewees clearly expressed a vision aligned with these principles, particularly within PEE in Morocco.

Favorable Moroccan context: The Moroccan context, with its ambitious national vision for sustainable development, is conducive to the adoption of intelligent CSR 2.0 within PEE. They occupy crucial positions in key sectors for the country, making them key players in achieving these national goals.

AI for sustainability: The use of AI within PEEs to minimize environmental impact, water, energy and waste management, illustrates how these technologies can contribute to achieving sustainability goals. AI enables better analysis of environmental and social data, facilitating informed decision-making and the implementation of proactive measures.

Transparency and trust: The commitment to enhancing transparency through technology underlines the importance of stakeholder trust. By making PEEs' future actions more transparent and understandable, they can strengthen their credibility and legitimacy in the eyes of the public, investors and partners.

Recommendations for the Moroccan context:

Promote artificial intelligence (AI) within PEAs: Moroccan authorities can actively encourage PEAs to invest in AI by offering tax incentives and facilitating access to training resources. Training staff in AI skills is essential to the successful implementation of smart RSO 2.0.

Facilitating collaboration: Creating platforms for sharing knowledge and best practices between PEAs can foster the adoption of Smart OSV 2.0 and stimulate innovation. Collaborations between the public sector, the private sector and academic institutions can also be encouraged.

Develop standards and regulatory frameworks: The Moroccan government can work on developing specific standards and a regulatory framework to guide the integration of AI into OSR within PEAs. This will ensure consistent and ethical implementation of these technologies while meeting the country's specific needs.

Supporting research and development (R&D): Investment in research and development of technological solutions adapted to Morocco's environmental challenges can stimulate innovation and strengthen the country's competitiveness in the field of sustainability.

Strengthen stakeholder engagement: PEE should consider mechanisms to actively involve stakeholders in the Smart CSR 2.0 process. This can be done through public consultations, transparent sustainability reporting and interactive communication tools.

PEEs in Morocco are showing a clear willingness to adopt intelligent CSR 2.0, using AI and new technologies to achieve sustainability goals. To fully realize this vision, concrete measures such as AI promotion, collaboration, tailored regulation, R&D support, and stakeholder engagement are required. These efforts will help strengthen Morocco's position as a regional leader in sustainability and promote responsible long-term development within PEEs.

5. Conclusion

The transition to intelligent CSR 2.0 is essential for public establishments and enterprises in Morocco, enabling them to maximize their positive impact on the environment and society while improving their overall performance. This study highlights the crucial importance of this development, not only for Morocco, where it aligns with an ambitious national vision for sustainable development, but also for scientific research, opening up new perspectives for innovation and knowledge creation. What's more, this integrated approach to intelligent.

CSR 2.0 has profound implications for humanity as a whole, for it offers a model for responsible and sustainable development, addressing global environmental challenges while promoting transparency and trust between organizations and their stakeholders. As such, this study reveals a promising future where technology and social responsibility converge to create a lasting positive impact.

6. Future work

We wish to demonstrate our commitment to continuing our research into corporate social responsibility (CSR). As researchers in this field, we plan to conduct a confirmatory study in the near future. This study aims to provide solid answers that will enable us to propose recommendations to corporate stakeholders (CSR) to adopt CSR 2.0 practices. We also plan to study best practices and tools for implementing these new practices, with the aim of remaining a source of scientific information for future researchers and contributing to the development of humanity and organizations.

Author contributions

Conceptualization, REM and SL; methodology, REM; software, REM; validation, REM, SL and RM; formal analysis, REM; investigation, REM; resources, REM; data curation, REM; writing—original draft preparation, REM; writing—review and editing, SL; visualization, SL; supervision, RM; project administration, REM, SL and RM; funding acquisition, REM, SL and RM. All authors have read and agreed to the published version of the manuscript.

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Conflict of interest

The authors declare no conflict of interest.

Abbreviations

AI, Artificial Intelligence; CSR, Corporate Social Responsibility; EV, Electric Vehicles; IoT Internet of Things; PEE, OSR, Organizational Social Responsibility; Public Establishments and Enterprises; R&D, Research and Development.

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