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## FOURTH INDUSTRIAL REVOLUTION AND SOCIAL INNOVATION DYNAMICS IN SOUTH AFRICA: A REVIEW

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**Abstract.** Social innovation is one of the key drivers of the sustainable development agenda of the Republic of South Africa in the wake of the new global focus on sustainable development. Furthermore, it is within the agenda of sustainable development that community development, poverty alleviation and eradication and the improvement of the living standards of all South Africans can be realised in the current era of connectivity, advanced analytics, automation, and advanced-manufacturing technology that has been transforming global business for years. Through the extensive review of purposively selected written documents such as journal articles, books, book chapters and newspapers, the paper discusses the role that social innovation plays in pursuing and attaining sustainable development in and by South Africa within the context of the Fourth Industrial Revolution (4IR). Succinctly, the focus of this manuscript is to analyse the role that social innovation in a 4IR context can be the conduit for improving how the government intensifies social and community development. The article indicated that lack of critical skills, scarcity of resources, poor accountability, poor organisational culture, lack of integrity, and low equity and inclusion, among others, were identified as the challenges to social innovation in South Africa. To this effect, the paper showed that the Fourth Industrial Revolution in South Africa can be used to drive social innovation and address urgent socioeconomic issues. It can also promote inclusive growth and build a more sustainable and equitable future for all South Africans.

**Keywords:** Fourth Industrial Revolution; Social Innovation; Sustainable Development; South Africa; Poverty

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### 1. Introduction

Over three decades after the advent of an era of participative democracy and majority rule on 27 April 1994, South Africa has been continually confronted by the continued prevalence of challenges that include among other things, poverty, unemployment as well as socioeconomic disparities (Mlambo, Mubecua & Mlambo, 2023). This reality opens avenues for the governing government to explore emerging stratagems to significantly accelerate the transformation and drive the social development impetus of the government. There is a vast assortment of these strategies, and social innovation is one of them, primarily when it is rooted in the Fourth Industrial Revolution milieu. Lues (2016) suggests that the social innovation phenomenon can be as equally valuable for transforming public service delivery in South Africa to levels where it has been fully utilised in countries such as the People's Republic of China, South Korea, Germany, the United States of America and the Netherlands. Schachtebeck et al. (2020) posit that the South African circumstance of social innovation is such that it does not only have an emphasis on the importance of developing new commodities to serve the most disadvantaged of society. This approach thus also seeks to transform both formal and informal arrangements within organisations and to create new collaborations among partners from different sectors towards realising sustainable community development (Masiyakurima, Chilunjika & Chilunjika, 2020; Schachtebeck et al., 2020). An example of such a focus is the

Common Good Project, under one of its flagship initiatives called the Work Package III, which has managed to ensure cooperation amongst various local academic partners towards developing the social impact factor of social innovations in South Africa (Schachtebeck et al., 2020). Augmented by the recommendations of the Presidential Commission on the Fourth Industrial Revolution (Republic of South Africa, 2020), there are opportunities for projects such as this to champion much-needed social transformation through multi-stakeholder synergies. Principally, the 4IR is anchored on multi-stakeholder cooperation through pooling skills and resources (Nalubega & Uwizeyimana, 2020; Alabi & Mutula, 2022; Aboderin & Havenga, 2024).

Synched with the National Development Plan (NDP), the Sustainable Development Goals (SDGs) and the global focus on sustainable development, the initiative targets three thematic areas which are *viz.*, first, youth and education (particular focus on innovative ways to improve the quality of existing public schools, build more schools and the availability and access to tertiary education) (Schachtebeck et al., 2020). Second, the Work Package III programme targets the critical challenges of healthcare and well-being (transforming access and the quality of primary and reproductive healthcare (Mutua, 2023; Chilunjika, Chilunjika & Uwizeyimana, 2024); essential household food security solutions) and third, it focusses on housing, water and the environment (i.e., water, sanitation and environmental conservation or, water resource conservation; disaster mitigation) (Mutua, 2023; Schachtebeck et al., 2020). This paper infers this initiative as the gist of social innovation for sustainable community development in South Africa, indicating an adoption and implementation of this creative project for local community development.

Littlewood and Holt (2018) offer another remarkable dimension of South Africa's social innovation fraternity in the context of social entrepreneurship when they argue that local initiatives such as the Broad-Based Black Economic Empowerment are visible signs that socioeconomic development seeks to address past disparities. Furthermore, social entrepreneurship is one social innovation strategy directly linked to addressing poverty and underdevelopment in South Africa (Lombard & Strydom, 2011). This article understands the need to collaboratively fight social challenges such as poverty, underdevelopment, and alarming racial inequality; there is a need to adopt, implement, and utilise the dimension of social entrepreneurship. This is supported by Audretsch, Eichler and Schwarz (2022), Thorgren and Omorede (2018), Thurman (2016), and Gabriel and Drayton (2016), who construe that social entrepreneurship strategies are innovative and successful projects that have the majority in mind when it comes to addressing challenges in the developing countries. It can be noted that social innovation in rural South African communities has yet to be well received. This affects how sustainable development can be promoted and attained in these localities (Hart et al., 2014). The study also explores the notion of the Fourth Industrial Revolution (4IR) and how it impacts social innovation in South Africa. In the process, the paper analyses the policy framework governing social innovation in South Africa, the challenges to social innovation in South Africa, as well as the link between social innovation and the 4IR in South Africa.

## **2. Methodology**

This study is based on a literature study, which is a non-empirical study of existing literature. This qualitative approach under the interpretivism paradigm relied on the extensive desktop study of secondary literature. Data was gathered from the existing records (among other things, journal articles, book chapters, books, government publications, newspapers, and internal records) on the nexus between social innovation and the Fourth Industrial Revolution in South Africa. Data was analysed using content analysis. Table 1 shows the annotated summary of the literature review.

**Table 1.** Summary of Literature Review

Database	Key Words (Inclusion Criteria)	Manuscripts Reviewed
Sage Publications	Social innovation; social entrepreneurship; community development	Littlewood & Holt (2018)
	Social innovation; community transformation; stakeholders in social innovation; renewed strategies	Marques, Morgan & Richardson (2018)
	Innovation; society; ethics, responsible innovation	Purtik & Arenas (2019)
	Entrepreneurship, social innovation; community development	Thorgren & Omorede (2018)
	Social innovation; dimensions, focus, merits	Van Wijk, Zietsma, Dorado, De Bakker & Marti (2019)
Taylor & Francis	Fourth Industrial Revolution in Africa; Challenges; Readiness; potential to transform	Ayentimi & Burgess (2019)
	Social innovation in South Africa; challenges; opportunities	Biljohn and Lues (2020)
	Challenges; Development; Poverty; South Africa	Mlambo, Mubecua & Mlambo, (2023)
	Social Innovation; Government Reforms, Reinvention of governance	Pel & Kemp (2020)
Emerald Insight	Fourth Industrial revolution Packages; tools for digital transformation	Perera, Selvanathan, Bandaralage & Su (2023)
Elsevier	Fourth Industrial Revolution tools	Chilunjika & Chilunjika (2023)
	Pitfalls of technology; benefits of innovation; potential of innovations and technologies for entities	Raguseo (2018)
	Social transformation; innovation, fourth industrial revolution; community development	Wittmayer, Backhaus, Avelino, Pel, Strasser, Kunze & Zuijderwijk, (2019)
Springer	Social Innovation; poverty alleviation	Audretsch, Eichler and Schwarz (2022)
	Social Entrepreneurship, social enterprise	Bhatt (2022)
	Social inequality; digital divide; innovation; South Africa	De Villiers (2021)
	Case studies of social innovation in the Fourth Industrial Revolution	Fossati (2018)
	Digital governance; Fourth Industrial Revolution	Kumar, Zindani and Davim (2019)
	Sustainable Development; Sustainability; Communities	Lopes, Mesquita, del Rio & Alvarez-Garcia 2018
	Impacts of social innovation; advantages of social innovation; innovation and sustainable development	Peris-Ortiz, Gomez & Marquez (2018)
Research gate	Structure of social innovation; impact of social innovation; implementation of special innovation	Wynn & Clarkson (2018)
	Block chain technology, Fourth Industrial Revolution	Chilunjika & Uwizeyimana (2024)
	Fourth Industrial Revolution; Leadership; innovation; Transformation	Jarbandhan (2017)
	Social Entrepreneurship; poverty alleviation; South Africa; community development	Lombard & Strydom (2011)
	Sustainable Community Development; Poverty eradication; community empowerment	Masiyakurima, Chilunjika & Chilunjika (2020)
	Case studies of social innovation; Poverty alleviation and social innovation; community development	Mohan & Potnis (2010)
	E-Health technologies; Fourth Industrial Revolution; Implementation	Chilunjika, Chilunjika & Uwizeyimana, (2024)
	Optimising; Fiscal Decentralisation; Local government; Financing; Poverty alleviation	Chilunjika, Intauno & Poshai, (2024)
	Ethical conduct; Transparency; Accountability; Social development	Haurovi & Chilunjika
	Conceptualising social innovation; facets of social innovation; implications of social innovation to communities	Morrar, Arman & Mousa (2017)
	Fourth Industrial revolution in Africa; Participation; Obstacles	Ndung'u & Signe (2020)
	Meaning of the Fourth Industrial revolution; Tools of the Fourth Industrial revolution; Potential of the Fourth Industrial Revolution	Oosthuizen (2017)
Sabinet	Internet; sustainable development; innovation; social transformation; future of the Fourth Industrial Revolution	Roblek, Mesko, Bach, Thorpe & Sprajc (2020)
	Poverty alleviation; Community Development	Chilunjika (2021)
	Public Private Partnerships; Poverty alleviation; Corporate governance; Development; Leadership	Chilunjika (2024)
	Skills scarcity; Competency; Effective governance	Gumede, Uwizeyimana & Chilunjika (2023)
	Service delivery challenges in South Africa; Poverty alleviation; development	Lues (2016)
	Stakeholder approach to innovation; Fourth Industrial Revolution; South Africa; Community Development	Nalubega & Uwizeyimana (2020)

	Community Development; Local Economy; Fourth Industrial Revolution; Innovation	Thani (2020)
AOSIS	Fourth Industrial Revolution, Artificial Intelligence	Chilunjika, Intauno & Chilunjika (2022)
	Skills; Competencies; South Africa	Ndevu & Muller (2017)
Lamintang	Citizen welfare; Poverty alleviation; Leadership	Chilunjika, Mutema & Dube (2020)
SSBFNET	Development; Globalisation	Chilunjika, Uwizeyimana and Chilunjika (2023)
Human Sciences Research Council	Social innovation in South African local government	Hart, Jacobs, Ramoroka, Mangqalaza, Mhula, Ngwenya & Letty (2014)

Source: Authors' compilation

### 3. Literature Review

In this section, the paper focused on clarifying the meanings and implications of the key concepts.

#### 3.1 The Conceptualisation of Social Innovation

Pue, Vandergeest and Breznitz (2016:8) conceptualise social innovation “as a process encompassing the emergence and adoption of socially creative strategies that reconfigure social relations to actualize a given social goal”. Such an objective can be the social transformation of the community through an improvement of the standards of living (Wittmayer et al., 2019). In this definition, the utilisation of the term ‘process’ is to imply that there is a set of interconnected procedures being undertaken within specific parameters or regulations (Zhou & Chilunjika, 2013; Pue et al., 2016; Wynn & Clarkson, 2018). Another angle to the meaning of the practice is the one provided by Hahn and Andor (2013), as cited in Morrar, Arman and Mousa (2017:16), who regard social innovation as “new practices used to tackle social challenges, which lead to a positive influence on *inter alia*, individuals, society, and organisations”. Thus, Marques, Morgan, and Richardson (2018) posit that social innovation moves away from existing stratagems for social challenges and achieves this by venturing into ‘uncharted waters’ as far as addressing social challenges is concerned.

Principally, Noya (2011) notes that the practice of social innovation maps strategies to resolve social problems by identifying and delivering fresh commodities to improve the quality of life of individuals and communities. In furtherance, Noya (2011) regards social innovation as the process that involves identifying and holistically implementing new aspects. These include new innovative labour market integration processes, new human capital competencies, new jobs, and new forms of public participation in the issues of governance, all aimed at improving the welfare of persons and communities (Noya, 2011; Chilunjika, Mutema & Dube, 2020; Masiyakurima et al., 2020). From another angle, social innovation goes hand-in-glove with the entrepreneurial governance philosophy that has been popularised by scholars such as Christopher Hood, when he advocated for a web of New Public Management reforms in government which brought the robust ‘reinvention of governance’ (Pel & Kemp, 2020; Hood & Margetts, 2007). Deductively, social innovation deals with the needs and welfare of the members of a community as individuals and the communities as a whole. Percz (2018) posits that social innovation is a new solution to a targeted social problem significantly more effective, efficient, sustainable, or fairer than existing solutions.

Social innovation generates value primarily for society instead of single individuals or organisations (Percz, 2018; Chilunjika, Uwizeyimana & Chilunjika, 2023). Thus, social innovation has a value addition to solutions to problems. Therefore, social innovation is new creative ways (ideas, plans or methods) of addressing all types of the social needs of any society (Van Wijk et al., 2019). These needs can cover various domains, including education, healthcare, employment or the eradication of poverty or inequality (Noya, 2011; Zhou & Chilunjika, 2013; Peris-Ortiz, Gomez & Marquez, 2018; Chilunjika et al., 2020; Chilunjika, Intauno & Poshai, 2024; Chilunjika et al., 2024). These inventions and innovations require all stakeholders to map new ways to address primarily global, regional and localised poverty and inequality (De Villiers, 2021).

For this paper, social innovation in South African settings invites the three sectors of the government, businesses and non-profit organisations to collectively resolve social problems by fashioning new strategies for sustainable development. This is premised on the urgent need for corporate social responsibility on companies and humanitarian impact by Civil Society Organisations and public service delivery as an obligation of the various tiers of government. For Van Ooijen, Ubaldi and Welby (2019), this whole-of-government approach to addressing social problems has a great potential to create tailor-made solutions to challenges because it is a data-driven approach to service delivery. Furthermore, social innovations signify an empowerment and political mobilisation process to create a bottom-up transformation agenda (Percaz, 2018). Such helps reduce the super-imposition of public commodities on communities or citizens by their government. Such an agenda seeks to regulate the functioning of a social or societal system both in terms of stakeholders and in terms of distribution of resources, therefore, becomes a tool for fighting poverty and inequality in society (Bhatt, 2022; Chilunjika et al., 2024).

In addition, social innovation connotes various strategies that spur social change to solve problems amongst the spectrums of law, policies or regulations, behaviour, service, business model, perception, organisation or technology (Morrar et al., 2017). Some leading examples of areas where social innovations can be found are as follows:

- including self-help health groups;
- self-build housing;
- microcredit or micro-lending;
- consumer cooperatives;
- charity shops;
- zero carbon social housing schemes;
- community wind farms;
- sustainable solutions to environmental problems;
- health insurance;
- new learning models, and
- transportation facilities (McPhee, 2017).

Dionisio et al. (2024) argue that social innovations are another way to achieve the sustainable development agenda in the seventeen SDGs. This is because social entrepreneurship and innovation are creative solutions to the same problems that the SDGs are targeting. The social ills of poverty, unemployment, gender inequality, affordability of social services, sanitation and water, inequality and access to capital can all be addressed through social innovations as discussed in the case studies and examples of social innovation in the preceding section of this manuscript.

### **3.2 Unpacking the Fourth Industrial Revolution**

Ayentimi and Burgess (2019) observed that the African continent has not reaped enough benefits in the first three industrial revolutions to such an extent that it is home to a large proportion of the world's poorest inhabitants. Therefore, this calls for the region to exploit the benefits of the contemporary industrial revolution within the context of social innovation and sustainable development (Ndung'u & Signe, 2020). The paper unpacks the concept of the fourth industrial revolution in the context of social innovation for sustainable development. The Fourth Industrial Revolution (4IR) promotes digital connectivity, which comprises available technology that allows people with internet access to connect with organisations in real time (Jarbandhan 2017; Chilunjika, Intauno & Chilunjika, 2022). The 4IR is a wholesome transformation phase of the industry standards and goods production through various apparatus (Oosthuizen, 2017). This revolution heavily relies on advanced technological inventions like biotechnology, three-dimensional (3D) printing, artificial intelligence, robotics, blockchain, nanotechnology and data mining (Kasza, 2019; Chilunjika & Chilunjika, 2023; Chilunjika & Uwizeyimana, 2024). This has also been referred to as the Internet of Things (IoT) due to its direct link to how

web-based innovations and technologies have transformed the world's business and daily activities. For Roblek et al. (2020), since 2011, when the 4IR was born, the world has seen numerous developments like rapid technological developments. Perera et al. (2023) add that the 4IR additionally incorporates cheaper computer equipment and the increasing availability of broadband in the form of the Fifth Generation (5G) internet broadband, fibre optic cable) transforming how lifestyles and work styles look like today.

In this paper's context, emerging technologies such as artificial intelligence, robotics, blockchain, 3D technologies, and 5G internet bandwidth in South Africa can promote and sustain social innovation and sustainable development. This is an era of seamless governance and more interconnectivity (Signe, 2023; Kumar, Zindani & Davim, 2019). Transformation in this period will be predominantly through the intentional adoption and implementation of innovative solutions to poverty eradication, inequality and community development that are significantly more efficient and economical and preserve the natural habitat, which is the environment (Kanyane, 2021). Schwab (2015), one of the founding fathers of the 4IR, argues that this is a technological era with a huge social impact due to the numerous technological changes in the economic sectors, labour market, production and innovation. Furthermore, the IoT is definitely comprehended now than during previous industrial revolutions when the advancements were obsessed with industrial and not social development or sustainable global development (Morrar et al., 2017; Schwab, 2015; Chilunjika et al., 2022). The current authors argue that the emergence of the 4IR amidst a comprehensive focus on sustainable development that incorporates economic, social, political, and human security as well as environmental spectrums is advantageous for developing countries like South Africa. This is because numerous merits can work to its advantage, resulting from the rapid technological innovations that drive this era (Raguseo, 2018).

Governments around the world need to take advantage of the great opportunities for the global agenda and availability of developmental agendas to ensure that they fight against poverty and under-development in their societies (Thani, 2020; Chilunjika, 2021; Chilunjika, Chilunjika & Uwizeyimana, 2023). South Africa is not an exception because of its huge rates of poverty, inequality and underdevelopment. However, in the context of South Africa, Thani (2020) highlights that the government is serious about the 4IR, but its efforts need to be improved by the existence of low-skilled labour, especially in rural areas where the introduction of related technologies might lead to unemployment. This further testifies that Africa needs to be more robust in assimilating 4IR practices into its governance systems (Thani, 2020; Chilunjika & Uwizeyimana, 2024). The proliferation of the internet has significantly transformed how development is looked at, especially how the 4IR accords great opportunities to augment ancient or traditional development strategies with modern, globally founded methods (Farris et al., 2009). Notably, strategies such as social innovation are crucial to communities in the developing world, where the current global focus on sustainable development also includes them. Arguably, hence, the availability of tools for promoting such a developmental agenda. Principally, the 4IR is an integration of a wide variety of smart devices and influencing social transformation towards modern, efficient and effective systems like e-health, e-learning, e-markets, remote monitoring, and surveillance for the respective industries (Chilunjika & Chilunjika, 2023; Chilunjika et al., 2023). These can be augmented by social innovation to promote the sustainable development agenda in South Africa.

#### **4.1 Understanding Social Innovation in South Africa**

This section discusses the policy frameworks driving social innovation in South Africa and the challenges to social innovation in South Africa.

##### ***4.1.1 Policy Frameworks Driving Social Innovation in South Africa***

There are several policy frameworks supporting innovation in South Africa. Foremost, the Centre for Public Service Innovation is a part of the government and tasked with creating a culture and practice of innovation to help solve challenges, whether in identifying the root causes of problems or convening partnerships with the

public and private sector to explore possible solutions and develop funding models (Chilunjika, 2024; Hart et al., 2014). This emphasis on social innovation targeting societal problems is a sign of how some of the community's pressing needs can be addressed through innovation. In addition, the White Paper on Science and Technology (1996) vividly recognised the importance of both formal (government, higher education and research institutions, private sector and civil society) and informal (households and individuals) actors in the National System of Innovation (Hart et al., 2014).

Since 1996, there has yet to be enough impetus locally to drive social innovation despite this policy stance. Another policy framework supporting social innovation locally is the Ten-year Plan for South Africa (2008-2018) policy was targeted at creating a knowledge-based economy where the vital processes of production and dissemination of knowledge directly result in economic growth and advancement and attainment of marked sustainable community development (Sithole et al., 2015). Furthermore, concerning this policy framework supporting social innovation, the National Research and Development Strategy (2002) is another police framework that supports innovation because it declares that there is a great need in South Africa to institutionally reinforce research and development as the impregnable backbone of innovation in the economy (Sithole et al., 2015).

There are also institutional structures within the system of government that support social innovation, including the Technology Innovation Agency, the National Advisory Council on Innovation, and the National System of Innovation, which all feed into the state-wide thrust on innovation for social and community development. Other statutes supporting skills development and social innovation encompass the 3<sup>rd</sup> Education White Paper, A Programme for the Transformation of Higher Education (July 1997) and the Higher Education Act (No. 101 of 1997). These offer the regulatory direction for transforming the higher education system and its institutions to be more responsive to societal interests and needs, and to adopt and sustain social innovation.

Additionally, the National Research Foundation Act (No. 23 of 1998) significantly supports research and development (Sithole et al., 2015). The current authors note that financing research related to innovative ways to drive social transformation is a noble idea since the role of research in social development has always been positively impactful. Moreover, the National Development Plan (2012) seeks to advance social innovation as part of the socioeconomic development issues that must be attained by 2030. The NDP contains, "strategies and incentives to encourage business and other stakeholders to form industry clusters for increased competitiveness and wealth, as well as contribute to science and technology capacity development" (Sithole et al., 2015:20). Lastly, the Skills Development Act of (No. 97 of 1998) promotes the development of skills sets that address the socioeconomic needs of South Africa through *inter alia*, social entrepreneurship. The discussed policy framework is a testament to the strong position that South Africa has taken to significantly stimulate social innovation that assists a plethora of existing strategies to address societal problems. As argued earlier in this manuscript, these problems include poverty, inequality, poor living standards and unemployment.

#### **4.1.2 Challenges to Social Innovation in South Africa**

Lues (2016) notes that some factors affecting the assimilation and use of social innovations for sustainable local community development in South African municipalities are multi-faceted. These include, among other things, a lack of critical skills, scarcity of resources, poor accountability, poor organisational culture, trust deficits in local government, low equity and inclusion, lack of willingness to smoothen the practice of citizen participation, lack of probity, and demerits of multi-tier government system (Gumede, Uwizeyimana and Chilunjika, 2023; Lues, 2016; Zhou and Chilunjika, 2013). Observably, there is a huge disparity between the skills and proficiency demands of social innovation and the 4IR and the contemporary levels of capacity that the Republic has at its disposal. Due to this disparity, it is recommended that interventions be implemented to ensure that social innovation is improved. Among other things, a pro-poor innovation policy development must be adopted where the rural inhabitants have direct participation (Hart et al., 2014). In addition, Hart et al. (2014) advise that the rural service providers and

potential innovators are conscientious on the meaning and implication of social innovation and ensure funding is increased towards research that depends on the understanding and workings of rural innovation value chains for and with poor communities.

Biljohn and Lues (2020) established that the utility of social innovation in South Africa will always face hurdles and obstacles. This is similar to any public service delivery or social development programme that is inevitably affected by the lack of diligence and skills, especially in the local sphere of government. The inclusion of communities in social innovation projects faces a daunting task and fate due to the failure of existing community participation initiatives in South Africa (Biljohn & Lues, 2020). In the same vein, the gatekeepers to these poverty-bursting programmes sometimes need improvement in their capacity to champion these initiatives and interventions due to their failure to grasp what the social innovation initiatives will seek to achieve. Therefore, this paper argues that the plethora of challenges that ordinary public service delivery programmes face will adversely affect local government social innovation initiatives. Over and above, there is an urgent need to ensure that the existing public service delivery challenges are effectively resolved before the efficacy of social innovation strategies can be ascertained with pinpoint accuracy. Therefore, the same governance, democracy and other related inhibitors will always adversely act on any emerging approaches until there are concerted efforts to effectively resolve them. Principally, 4IR comes in handy to address the social innovation challenges in South Africa and highlight best practices.

#### **4.2 Social Innovation in the Context of the 4IR and Best Practices in South Africa**

In the context of the 4IR, social innovation discusses the need for solutions to problems affecting the effective resolutions of existing development challenges. These solutions are driven by technological advancement and investment to ensure that poverty and community development are addressed more efficiently. Foremost, a noble social innovation process is a systems-changing intervention which fashions novel solutions to enable communities to create social value and promote community development (Chilunjika et al., 2023; Peris-Ortiz et al., 2018). Such an effect is made more efficient by employing modern Information and Communication Technologies to solve societal problems, such as using drones to deliver Covid 19 vaccines. Such an effect can be realised while concurrently challenging existing social institutions on their focus on social development (within a 4IR context) through collaborative action developing wider networks built on contemporary inventions and innovations (Peris-Ortiz et al., 2018).

Invariably, therefore, “the promotion of sustainable community development in the 4IR is related to social innovation since the former significantly requires socially adjusted and ethically situated ideas and interventions so that it can be fully achieved” (Haurovi & Chilunjika, 2023; Lopes et al., 2018:136). Sustainable development within the realm of social innovation in the 21<sup>st</sup> century and 4IR is inevitable because humans faced with difficulties in their own localities naturally respond creatively to the pressing challenges they are experiencing. For Peris-Ortiz et al. (2018), such innovations can emerge as effective initiatives of communities by establishing *inter alia* consumer cooperatives, exchange and social currency networks, transfers of advantages to the ordinary person, free universities and microcredit lines to forge the way forward.

From the preceding discussions and arguments, the impetus of fighting poverty and other community ills effectively is dependent on how states and governments strike a balance in promoting social innovations and creativity together with investments in modern technologies. The merit of this is that within a globalised world, the sharing and transferring knowledge, technologies, data and strategies has become easier each day (Purtik & Arenas, 2019). Therefore, for communities in South Africa, it is becoming easier each day to benefit from the same community development social innovation strategies that are being used in developed countries like Canada and the United States of America.

According to Pue et al. (2016), social innovations must ensure that the reconfiguration of society's practices on a particular issue (which happens through the process of social innovation) additionally alters and transforms the broader social environment. For instance, the adoption phase of social innovation may bring together and mobilise groups, creating a new social role or changing existing role relations, thereby creating a cooperative group effort to a social challenge (Wittmayer et al., 2019). A good example is Wheeliz, one of the winners of the 2015 European Social Innovation Competition, which invented the French car or ride-sharing application. Specifically, the Wheeliz social innovation initiative was designed for those vehicles that are disability adapted or friendly to improve access to mobility for differently-abled persons (Fossati, 2018). In governments, social innovation usually originates in sub-national units of governments, with most of these social innovation initiatives being implemented at the national or federal scale of federal government implementation. For instance, the Canadian federal government adopted homelessness strategies launched and initiated by municipal governments (Pue et al., 2016). These are social innovation initiatives and interventions to address the problem of lack and poverty linked to the citizens' right to housing and decent livelihoods.

Saterberg and Wessberg (2016) give another example of a social innovation initiative in the NESTA venture in the United Kingdom. In the context of the NESTA social innovation initiative, the public and social innovation centres on developing and supporting social enterprises and new models of public service and commodities delivery (Murray et al., 2010). The NESTA program further focuses on developing metrics and methods for social innovation and researching how the government can more effectively encourage and enable innovation (Bunt, 2011). The initiative achieves this through its social innovation hub, the Public Service Innovation Lab which has a dedicated team of innovation experts working with stakeholders and developmental partners to test and evaluate new strategies for social development (Murray et al., 2010) and advises the government and other decisions makers on these new approaches to community development in the United Kingdom (Bunt, 2011). Observably, this programme is meritorious since it is an innovation hub that stays ahead of time and explores the feasibility of a myriad of social innovation options as well as emerging practices for shaping the future of social development in the community (Ramos et al., 2019). The authors of this manuscript regard this initiative as a noble social innovation initiative, especially when it comes to its research and experimentation with new approaches to the delivery of public goods and services by the government. In the context of South Africa, such an innovation strategy can be instrumental, especially regarding the scarcity of skills in governments' ranks where social development is designed and implemented. For Ndevu and Muller (2017), the South African public sector lacks the skills needed for effective service delivery. A merit is that the National Research Foundation, the skeletal frame for a related initiative, is already on the ground but focused on research aspects of government policy.

Percas (2018) gives another example of a social innovation case study aimed at fighting poverty in India. Foremost, the Swayam Krishi Sangam (SKS) is the largest microfinance institution in India. The focal business of the SKS is to provide small-value, collateral-free loans for purposes of income generation to poor, predominantly rural women in groups across India (Mohan & Potnis, 2010). This model has proven extremely successful, with over ninety-nine per cent repayment rates, and the company employs over 21 000 individuals across various states and municipalities in India (Percas, 2018). In addition to being a not-for-profit company, the SKS also has a social mission that aims to eradicate poverty (Huda, 2010). The SKS initiative does so by offering financial services to people with low incomes (women) and by using its business to offer goods and services that are urgently needed by people with low incomes (Mohan & Potnis, 2010). This brings social inclusion and fights social exclusion for those left out by the mainstream banking architecture in India.

This paper deduces that this social innovation is noble because there is a need for financial inclusion for those without collateral security and not services by the mainstream financial sector in any economy. Huda (2010) notes that the loans that the SKS provides are granted based on mutual trust that is created between the organisation and its clients and not based on collateral guarantees. Invariably, this microcredit venture is an effective way to resolve the social ill of poverty, financial exclusion and the patriarchal foundation of the Indian society that

excludes women in mainstream socioeconomic economies. South Africa can derive lessons from this social innovation project, especially on the issue of free loans that are less stringent and need no collateral borrowing security from the customer.

## 5. Conclusions

Social innovation and sustainable development are interlinked and inseparable. Within the context of the 21<sup>st</sup> century, in an era of the 4IR, social innovation becomes part and parcel of the global agenda to expedite the resolution of social challenges. This paper underscores the fact that the worldwide agenda of development, which is cognisant of the need to spare resources and ensure equality, is bold. Furthermore, the need to ensure that people in South Africa and across the globe reach their capabilities through interventions by all relevant stakeholders, including the government, civil society organisations and private-sector businesses, is a step in the right direction. The manuscript also observes that social innovations are here to stay, and the local practices of the phenomena need to be improved, especially given that South Africa still has huge socioeconomic inequalities and alarming levels of poverty. In the end, the authors emphasise that social innovation is a critical driver of sustainable development and new strategies and creative models of solving social problems must be designed and implemented. This ensures that living standards for South African communities are improved, poverty is eradicated, and all people and communities live peacefully with all their capabilities and essential goods and services needed for decent livelihoods. Primarily, there is great potential to address urgent socioeconomic issues, promote inclusive growth, and build a more just and sustainable future for all South Africans by utilizing the Fourth Industrial Revolution for social innovation. This can help intensify the ongoing war against the three ills of society stated in the National Development Plan, which include poverty.

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