

**Exploring the Barriers to the Successful Implementation of Sustainable
Development Goals in the platinum mining sector in South Africa**

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ABSTRACT

Since the launch of Sustainable Development Goals by the United Nations in 2015, as part of the vision 2030 plan, the role of the private sector in furthering the goals has been under scrutiny. The admission by then global Chief Executive Officers surveyed in the 2019 United Nations Global Compact Accenture CEO Study on Sustainability, that business organisations were not performing according to expectations to meet the 2030 targets raised questions on the barriers for the successful implementation of sustainable development goals. This study focused on the platinum mining sector in South Africa as the sector was better positioned to make a meaningful contribution given the reasons provided by the United Nations that large multinational companies control a large percentage of national GDPs globally.

This study was a qualitative study focusing on the implementers of the Sustainable Development Goals in these large platinum companies to establish their perceptions on that the barriers to the successful implementation of sustainable development goals in their companies could be. To establish this, the overarching research question of the study was, what are the perceived barriers to the successful implementation of Sustainable Development Goals in South Africa's platinum mining sector? The principal finding of the study was that the barriers faced by platinum mining companies in successfully implementing the Sustainable Development Goals were lack of capacity to address issues outside of their core objectives.

The study found that while organisations were able to address those Sustainable Development Goals falling within their scope of business, they lacked the capacity to address those that fell outside. The constraints included financial resources, institutional support as well as the requisite skills. The study recommended that partnerships with the government in addressing these goals would assist in ensuring that more effective progress was made.

KEYWORDS

Sustainability, Sustainable development goals, Incentive Theory of Motivation, Barriers and enlightened self-interest.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfillment of the requirement for the degree of Master of Business administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declared that I have obtained the necessary authorization and consent to carry out this research

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19 November 2021

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CHAPTER 1: DEFINITION OF THE PROBLEM AND PURPOSE

1.1 Introduction to the research problem

In 2015 when the United Nations' Sustainable Development Goals were launched, substantial progress had been made towards realising the objectives of the eight Millennium Development Goals (MDGs) (Sachs, 2012) that preceded the Sustainable Development Goals. As Sachs (2012) points out, the objectives of the MDGs was to address issues of "poverty, hunger, disease, unmet schooling, gender inequality, and environmental degradation" (p. 2206).

However, by 2012, it was clear that while substantial progress had been made towards achieving the goals, progress was "highly variable across goals, countries, and regions" indicating that some countries "will achieve all or most of the MDGs, whereas others will achieve very few", (Sachs, 2012, p. 2206). The uneven progress was "particularly in Africa, least developed countries, landlocked developing countries and small island developing States" where some of the goals remained off track (United Nations, 2016, para 16). It was this indication that motivated the development of the 17 Sustainable Development Goals (United Nations, 2016).

Central to the development of the Sustainable Development Goals was the commitment to fully realise all the Millennium Development Goals by providing "focused and scaled-up assistance to least developed countries and other countries in special situations" by 2030 (United Nations, 2016, para 16). In seeking to build on the MDGs by realizing the human rights of all, achieving gender equality and the empowerment of all women and girls, the Sustainable Development Goals also balanced "the three dimensions of sustainable development: the economic, social and environmental" (United Nations, 2016, preamble).

Pirmana, Alisjahbana, Hoekstra, & Tukker (2019) found that all countries were committed to implementing SDGs, and this was "not only because of international demands but also because many of the SDG targets and objectives are in line with their overall development goals" (p. 5). Pirmana et al. (2019) also noted that the overall development goals of countries differed due to local priorities and the nature of their economies. Unlike MDGs, the Sustainable Development Goals made definitive provisions for the participation of the private sector. The Secretary-General

of the United Nations, H. E. António Guterres stated that given that the private sector comprises 75% of the global Gross Domestic Product (GDP) it had to be mobilized to meet the Sustainable Development Goals (United Nations, 2019).

Collaboration with businesses, through identified key CEOs in the world, was perceived to be crucial in areas such as fighting climate change and in eradicating all extreme poverty by 2030. In their research Lacy, Haines, and Hayward (2012) found that CEO's believed that organisations were moving towards an era "in which businesses will no longer focus purely on profit and loss as a primary means of valuation, but rather also take into account the positive and negative impacts on society and the environment" (p. 349). Accordingly, the support of business in furthering the objectives of the Sustainable Development Goals was deemed guaranteed.

However, despite efforts by business leaders to demonstrate not only their commitment to corporate sustainability but to embed sustainability in how they do business, even to the extent of developing sustainable business strategies (Miller, 2020), these efforts did not meet their intended objectives. By 2019, it became clear that the Sustainable Development Goals would not be reached by 2030 (United Nations, 2019). Despite the inclusion of the private sector in the goals, the 2019 United Nations Global Compact Accenture CEO Study on Sustainability, found that the CEOs surveyed believed that business organisations were not performing according to expectations. The survey had been held every three years since 2007. To establish the barriers to the successful implementation of sustainable development goals, this study focused on the platinum mining sector in South Africa.

1.2 Background

According to Sachs (2012), the growing global urgency of sustainable development has led to the idea of the Sustainable Development Goals quickly gaining ground. For developing countries, "the sustainable growth of the extractive industries is particularly important" (Hilson, 2012a, p. 16). Hilson (2012a) further points out that if managed properly, the wealth derived from mining "could provide substantial financial nourishment, raising the living standards of poverty-stricken populations and 'kick-starting' a number of manufacturing and service sector industries in countries struggling to develop" (p. 16).

South Africa is a leading mining country with reserves in several important minerals (Garside, 2021). However, while considerable progress was made to improve the wellbeing of citizens since the country's transition to democracy in 1994, between 2005 and 2010, the percentage of the population below the upper-middle-income-country poverty line declined from 68% to 57% in 2015 and is projected to reach 60% in 2020 (The World Bank, 2021). The World Bank (2021) notes that making progress in household welfare is severely constrained by rising unemployment which reached 32.5% of the population in 2020. Unemployment was also highest, at around 63%, between the ages of 15 and 24 (The World Bank, 2021). Accordingly, interventions are needed if the country is to meet its developmental objectives by 2030.

The World Bank (2021) suggests to propel growth and create jobs, it will be critical to strengthening investment, including foreign direct investment. As a net exporter of minerals, commodity prices remain important for South Africa (The World Bank, 2021). According to the National Planning Commission (2011), South Africa's political challenge in the next decades "will be to develop policies and regulatory initiatives that prompt improved resource management and deliver substantial clean technology industries" (p. 69). Given that South Africa has a dual economy (The World Bank, 2021) such policies and regulatory initiatives need to be partnered with the private sector.

Of the 17 Sustainable Development Goals, Acuti, Bellucci and Manetti (2020) identify goals number 5, 9, 11, and 16 (see table 1) as areas in which the private sector could contribute. It can, however, also be argued that the private sector, particularly mining organisations in South Africa, could also play a significant role in contributing to Sustainable Development Goals 3, 6, 8, 10, 13 and 17 given their apex position in South Africa's economy.

Table 1: Sustainable Development Goals

Goal 1	No poverty
Goal 2	Zero hunger
Goal 3	Good health and well-being
Goal 4	Quality education
Goal 5	Gender equality
Goal 6	Clean water and sanitation

Goal 7	Affordable and clean energy
Goal 8	Decent work and economic growth
Goal 9	Industry, innovation and infrastructure
Goal 10	Reduced inequalities
Goal 11	Sustainable cities and communities
Goal 12	Responsible consumption and production
Goal 13	Climate action
Goal 14	Life below water
Goal 15	Life on land
Goal 16	Peace, justice and strong institutions
Goal 17	Partnership for the goals

Source: United Nations (2021)

While the role played by mining in South Africa's past development is well known, the sector's role in contributing to the Sustainable Development Goals is also without doubt. However, in the development of policies and regulatory initiatives that prompt improved resource management and deliver substantial clean technology industries (National Planning Commission, 2011), cognizance of the impact of mining needs to be taken into account.

Kumar (2017) points out that mining has contributed to many of the challenges that the Sustainable Development Goals are trying to address. Kemp, Bond, Franks and Cote (2010) focus specifically on water and state that mining has been identified as one of the largest contributors to environmental degradation through its use of water. According to Statistics South Africa (2019), given South Africa's status as a water-scarce country, "the expected increased variability in rainfall and an increase in droughts will have a far-reaching impact on South Africa's ability to reach the SDG targets" (p. 32). Accordingly, the policies to be developed would include those that help people to adapt "land and water management to protect livelihoods and threatened natural environments while transforming energy systems" (National Planning Commission, 2011, p. 69).

While the objectives stated here by the National Planning Commission are broad, they also leave leeway for the role that the platinum mining sector can play. The focus on the platinum sector is due to the size of the sector and therefore its potential

contribution in light of the poor performance of the private sector in meeting the Sustainable Development Goals by 2030 (United Nations, 2019).

According to Garside (2021), South Africa is the largest producer of the platinum group metals. According to Neiteler (2021), the platinum group metals sector contributes close to 50% of South Africa's current resource basket. With twice the number of gold mining and coal mining employees, the sector has the highest number of workers in South Africa's mining industry. Despite the negative impacts of mining, platinum group metals are currently the backbone of South Africa resource economy.

1.3 The Research Problem

Mining impacts economic development. The failure of the sector to attain its sustainable goals has the potential to hamstring progress in addressing the country's principal challenges of eliminating poverty and inequality (National Planning Commission, 2011). Therefore, to attain South Africa's ambitious goals through the National Development Programme 2030 (National Planning Commission, 2011) while simultaneously working on the Sustainable Development Goals, the potential growth of the mining sector, as well as its contribution to meeting the Sustainable Development Goals, has to be taken into consideration. It is therefore important to understand what the perceived barriers to the implementation of sustainable development goals are.

While (Hilson, 2012) suggests that "Few industrial activities have as large an environmental footprint" as large-scale mining or oil and gas projects, he further points out that few industries have the capability of "wielding as much influence on the wellbeing of a society" (p. 131). If, as Miller (2020) suggests, the objective of sustainable business strategies is to positively impact the environment and society while also benefiting shareholders, why is there such a lackluster performance by the private sector in the implementation of Sustainable Development Goals?

1.4 Research Purpose and Motivation

To address the problem stated above, the purpose of this research was to explore the barriers to the implementation of Sustainable Development Goals in South Africa's platinum mining sector. To instrumentalise the purpose of the study, the overarching research question was, what are the perceived barriers to the successful

implementation of Sustainable Development Goals in South Africa's platinum mining sector? Given the importance of this sector to the South African economy, exploring the barriers to the successful implementation of Sustainable Development Goals in South Africa's platinum sector is relevant and urgent if South Africa's objectives, as outlined in the National Development Programme 2030 (National Planning Commission, 2011) are to be attained.

1.5 Rationale for the Study

According to Statistics South Africa (2019), South Africa's National Development Plan addresses 74% of the United Nations Development Programme's Sustainable Development Goals while the other 19% are dealt with through sectoral programmes. The interdependency needed to achieve these objectives requires greater policy coherence to reduce duplication and inefficiencies (Statistics South Africa, 2019). While the role of the government is central to ensure the attainment of the goals, "the SDG framework recognizes that government action alone cannot achieve the SDG targets" (Acuti, Bellucci, & Manetti, 2020).

In 2020, South Africa's economy contracted by 7% as a consequence of the Covid 19 pandemic (The World Bank, 2021). The estimated implication of this contraction was to increase poverty by 2 million people (The World Bank, 2021). To get out of poverty, these people will need jobs in a growing economy. It is in this context that The World Bank (2021) points out the criticality of strengthening investment, including foreign direct investment, to propel growth and create jobs.

Therefore, in addition to the government, achieving the goals requires the involvement of private sector organizations, civil society and individual citizens (Acuti et al., 2020). However, it is also important to be cognizant that these stakeholders have other priorities as well. For business, this includes meeting the needs of shareholders. This has the potential for creating a conflict of priorities in choosing "to operate under extreme cost-consciousness versus investing in longer-term strategic objectives which are at the heart of sustainability" (United Nations, 2019, p. 8). Therefore, the need for identifying priorities that may act as barriers to the platinum sector playing a greater role needs to be identified so that solutions could be found.

As Accounting for Sustainability (2021) points out "The financial and accounting systems that underpin our economy focus on short term financial outcomes and do

not adequately reflect the dependency of our economic success on the health and stability of our communities and the natural environment”. However, Accounting for Sustainability (2021) goes on to say that “companies, investors and governments are recognizing that long term sustainable performance relies on an understanding of the interdependency between financial, social and environmental factors”.

As Sachs (2012) points out, sustainable development embraces the combination of economic development, environmental sustainability, and social inclusion. Given the economic value of the platinum mining sector, it is important to understand the barriers it faces in making a greater contribution to the implementation of the Sustainable Development Goals.

1.6 Scope of the Research

This qualitative research was conducted in different platinum mining houses from the perspectives of decision-makers. While mining, in general, has been identified as having a large environmental footprint and a significant influence on the well-being of society (Hilson, 2012), this study focused on the platinum sector because of its sizeable share of mining output (Neiteler, 2021). This was not however intended to suggest that there were any major differences in the barriers to the implementation of Sustainable Development Goals in other mining sectors.

The study was also limited to the geographical borders of South Africa given that the contexts of implementing the SDG differ from country to country (Pirmana et al., 2019).

1.7 Benefits of the study

This study will contribute to the literature on sustainable development implementation by identifying the perceived barriers to the implementation of the SDGs in South Africa’s platinum mining sector from the incentive theory of motivation (Vi & Thuy, 2020) perspective. It will also assist companies to determine what drives the success of implementing and adopting the sustainable developments goals and factors to be considered when putting together the implementation of the sustainability developments goals.

The study will contribute to the literature by determining whether researchers and businesses share a common understanding of sustainable business model

innovation. “Sustainable business model innovation (SBMI) in large multinational corporations is increasingly perceived as a key driver for competitive advantage and corporate sustainability” (Bocken & Geradts, 2020a).

1.8 Structure of the Report

The purpose of Chapter 1 was to introduce the research problem and describe the purpose and motivation of the study. Chapter 2 reviews the literature relevant to this research. The incentive theory of motivation (Vi & Thuy, 2020) was adopted to examine the various drivers of SDG. Chapter 3 represent the proposed research questions developed from the literature. Chapter 4 describe the methodology and design that was adopted in this report. Chapter 5 provides a detailed analysis of data collected while Chapter 6 discusses the findings from the analysis made. In conclusion Chapter 7 presents the conclusions reached in this research and make suggestions for further research.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Chapter 1 of this report presented the topic of the research; the research problem that led to the research question; as well as the motivation for conducting this research. This qualitative research sought to explore the barriers to the implementation of Sustainable Development Goals in the platinum mining sector in South Africa. To do this, it was important to understand what has been learned and accomplished in this area and what still needed to be learned (Boote & Beile, 2005).

To establish what has been learned and what still needs to be learned (Boote & Beile, 2005), relevant literature will be reviewed in this chapter. To conduct a literature review, Creswell (2014) recommends several steps. These are:

- Identify keywords for locating materials;
- Start searching journals and books related to the topic as well as databases;
- Determine availability of material and start the process of obtaining them through interlibrary loan or purchase them.
- Skim through material central to your topic to assess whether the material you have will contribute to your understanding of the literature.
- From the identified literature, design a literature map and begin drafting summations of the most relevant articles:
- Compile, structure and organise the literature review by important concepts and end by summarising major themes and recommend how this particular study augments the literature and addresses a gap while also critiquing past literature and pointing out deficiencies.

While some of Creswell's (2014) suggestions have been used in the process of developing this chapter, some have been omitted as they were deemed not necessary.

Byron and Thatcher (2016) suggest that theory in management research helps to guide the research questions and gives sense to research findings. It is therefore important to state the theoretical perspective of this research. Accordingly, the next section will identify the theoretical perspective being taken. This will be followed by the research context.

Whetten (1989) suggests that observations “are embedded and must be understood within a context” (p. 492) as contexts determine the generalizability of a theory. Once contextual issues have been addressed, literature related to the constructs emanating from the research problem will be reviewed.

2.2 Theoretical Background

Byron and Thatcher (2016) suggest that theory in management research helps to guide the research questions and gives sense to research findings.

By pointing out that “The financial and accounting systems that underpin our economy focus on short term financial outcomes and do not adequately reflect the dependency of our economic success on the health and stability of our communities and the natural environment”, Accounting for Sustainability (2021) points to an inherent conflict of interests in organisations pursuing economic objectives and the issues of broader interest such as the Sustainable Development Goals. The pursuance of economic goals, as pointed out by Accounting for Sustainability (2021), includes direct and tangible rewards for both organisations and their leaders as compared to the Sustainable Development Goals which could be seen as altruistic. This then suggests that leaders in organisations, including those in the platinum mining sector which is the focus of this study, may be dispositionally inclined to pursue objectives which they perceive to be rewarding to them.

This seems to be supported by Pregnoiato, Bussin, and Schlechter (2017) who found that financial rewards were considered the most important component in total reward packages of employees. Given that decision-makers in the platinum mining sector in South Africa are accountable to shareholders, some of whom are based outside the borders of South Africa, the issue of incentives to pursue specific goals is relevant. Accordingly, the theoretical underpinning of this research is the incentive theory of motivation.

Vi and Thuy (2020) indicate that the Incentive Theory of Motivation (1953) argues that external actors “enhance and reinforce positive behaviour, which in turn adds an element of expectation” p. 1022). Such expectation can be perceived as a reward for the behaviour. According to Vi and Thuy (2020), the Incentive Theory of Motivation behaviour is primarily motivated by an outside stimulus such as praise, materialism or money. While noting that the Incentive Theory of Motivation is one of the major

theories of motivation, Gopalan, Bakar, Zulkifli, Alwi, and Mat (2017) support the reward aspect of the Incentive Theory of Motivation by pointing out that “this theory illustrates the desire to motivate behaviours for enrichment or incentives” (p. 3). Given that private sector organisations are, in general, never established to pursue “longer-term strategic objectives” (United Nations, 2019, p. 8), to pursue these objectives, which originate externally, suggests that they may need to be motivated through some form of reward (Vi & Thuy, 2020). Accordingly, the Incentive Theory of Motivation is better suited for this research.

According to Li (2009, p. 23) “motivation is determined by free will, goal-directedness, and sustaining the actions of individuals in relation to their perceived desires”. This suggests that taking a specific course is a matter of choice based on intended objectives. Such objectives could be a result of what is perceived to be positive or negative outcomes by the individual concerned (Moody & Pesut, 2006). Li (2009) identifies three types of incentives for choosing a specific action: (1) remunerative, (2) moral, and (3) coercive.

While financial rewards were considered the most important component in total reward packages of employees (Pregolato et al., 2017), the coercive type of incentive (Li, 2009) has the potential to counter the vagaries of the financial reward-based decision-making which could be contrary to the attainment of Sustainable Development Goals. Therefore the Incentive Theory of Motivation is appropriate for this research to determine the motivations for decisions made on what Sustainable Development Goals to pursue.

2.3 Sustainable Development Goals Background

The concept of sustainable development has a much older history within the United Nations. In 1983, the General Assembly of the United Nations tasked the World Commission on Environment and Development to formulate "A global agenda for change" which translated into proposing long-term environmental strategies for achieving sustainable development by the year 2000 and beyond (World Commission on Environment and Development, 1987). The presenting the proposals the Commission also defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of 'needs',

in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs” (World Commission on Environment and Development, 1987). The World Commission on Environment and Development (1987) also pointed out that in implementing policies, each country will need to work out its own policy implications as different economic and social systems, as well as ecological conditions, made it difficult to devise a uniform blueprint of sustainability.

The Sustainable Development Goals were borne out of the 2012 United Nations Conference on Sustainable Development - or Rio+20 – which was held in Rio de Janeiro, Brazil where the Member States launched a process to develop the Sustainable Development Goals to carry on the work of the Millennium Development Goals (SDGs), (United Nations, n.d.). The agreement to establish the Sustainable Development Goals followed a recommendation by a global sustainability panel appointed by the then Secretary-General of the United Nations, Ban Ki-Moon (Sachs, 2012).

According to Hulme (2009), the Millennium Development Goals (MDGs) were a global agreement to “reduce poverty and human deprivation at historically unprecedented rates through collaborative action” (p. 4). The table below outlines the goals.

Table 2: Millennium Development Goals

Goal 1	Eradicate extreme poverty and hunger
Goal 2	Achieve universal primary education
Goal 3	Promote gender equality and empower women
Goal 4	Reduce child mortality
Goal 5	Improve maternal health
Goal 6	Combat HIV/AIDS, malaria and other diseases
Goal 7	Ensure environmental sustainability
Goal 8	Develop a global partnership for development

Source: (United Nations General Assembly, 2001)

2.4 Sustainable Development Goals as a Partnered Initiative

In looking at the goals, their targets and indicators (United Nations General Assembly, 2001), it is clear that they were intended to be implemented at the level of government. According to Statistics South Africa (2019, p. 8), “in many ways, the Sustainable Development Goals build on the ‘unfinished business’ of the Millennium Development Goals”. However, as Acuti et al (2020) point out, the Sustainable Development Goals requires the involvement of the public, private sector organizations, civil society and individual citizens. Acuti et al. (2020) identifies Sustainable Development Goals 5, 9, 11, and 16 as areas in which private sector organisations could contribute to the attainment of the Sustainable Development Goals. It can also be argued that the private sector, particularly mining organisations, could also play a significant role in contributing to the Sustainable Development Goals 3, 6, 8, 10, 13 and 17 given their apex position in South Africa’s economy and the provisions of the Nedlac Act whose purpose includes the promotion of goals for “economic growth, participation in economic decision-making and social equity” (Nedlac Act, 1994).

In addition to having a greater role for the private sector, the Sustainable Development Goals were also expanded beyond those with a poverty and human deprivation focus (Hulme, 2009). Yakovleva et al., 2017) points out that the Sustainable Development Goals were aimed at reducing “poverty, hunger and inequalities by improving health, well-being, education, gender equality, work conditions, economic growth, peace, justice, institutions and partnerships, and, by increasing the availability of clean water, improving sanitation, and providing affordable and green energy” (p. 426).

The inclusivity of the other stakeholders, besides government, in the Sustainable Development Goals, as well as other areas that could be tackled by these stakeholders, has made it imperative that stakeholders and other powerful institutions, that had hitherto only played the role of interested stakeholders, like mining companies in the case of South Africa, were now expected to play an active role.

Van Tulder (2018) points out that the 17 Sustainable Development Goals are closely connected and that effectively addressing each of these depends on the extent to

which “companies, governments and other societal stakeholders are able to understand, manage and make use of the interrelations between that and the other SDG” (p. 27). Van Tulder (2018) further suggests that success in achieving results in one area depends on the actions, policies and progression in other areas. This suggests that although the South African government, through the National Development Plan, can address 74% of the United Nations Development Programme’s Sustainable Development Goals (Statistics South Africa, 2019), the remaining ones have to be addressed by other stakeholders, including the private sector organisations.

Specific to the mining sector Hilson and Murck (2000) identifies steps a mine could take to improve sustainability in its operations. The steps identified by Hilson and Murck (2000) are based on the fact that mining processes are of interest to a wide range of stakeholder groups and have the potential to have a broad environmental impact. Hilson and Murck (2000) indicate that this provides an opportunity for the mining industry to improve planning and operate more sustainably by implementing sound environmental management tools and cleaner technologies, extending social responsibility to stakeholder groups and forming sustainability partnerships. They suggest that with improved training, a mine can thus contribute enormously to sustainable development in both the environmental and socioeconomic arenas.

2.5 Role of countries

In its report, the World Commission on Environment and Development (1987) indicated that each country would need to work out its own policy implications as different economic and social systems, as well as ecological conditions, made it difficult to devise a uniform blueprint of sustainability. The World Commission on Environment and Development (1987) pointed out that while multinational companies in developing countries could play an important role in sustainable development, this could be hampered by the weak negotiating capacities of developing countries that rely more on foreign equity capital. Accordingly, the World Commission on Environment and Development (1987) suggested that the negotiating capacities of such countries should be strengthened to enable them to negotiate terms that would address their environmental concerns.

While economic, social systems and ecological conditions are still unique to each country, both the Millennium Development Goals and the Sustainable Development Goals have called for “partnerships” in their expanded goals. The need for partnership is also reflected in the 19% shortfall in meeting the Sustainable Development Goals by the South African government (Statistics South Africa, 2019).

Mthembu & Nhamo (2021, p. 1) found that there were several inherent challenges in South Africa’s policies and strategies in addressing the Sustainable Development Goals which focus on climate action (Goal 13). They suggested that these challenges, some of which could be attributed to responding to international pressures and expectations rather than being driven by domestic awareness and activism, resulted in implementation inefficiencies.

Mthembu & Nhamo (2021) also found challenges with institutional capacity to implement the policies at sub-national levels partly due to reliance on a few experts which made the system vulnerable and fragile. The study also found that not enough was being done to support sustainable consumption and production (SDG 12) due to energy-intensive industries which failed to comply with mitigation policies.

It is also important to note that the income of governments emanates from taxing private sector commercial activities that are not in the control of governments. To this extent, governments mostly depend on declarations of income. Mthembu and Nhamo (2021) noted challenges with institutional capacity to implement policies at sub-national levels. This suggests that in addition to the weak negotiating capacities of developing countries highlighted by the World Commission on Environment and Development (1987), the institutions of developing countries need to be capacitated if they are to be effective negotiating policies as well as in monitoring compliance.

Perhaps it is the recognition of these institutional capacity challenges that led to the establishment of the Extractive Industries Transparency Initiative (EITI). Andrews (2016) indicates that “the overall objective of the initiative is to increase transparency over payments by companies to governments and government agencies, as well as transparency over revenues by those host country governments. The EITI, by its nature, forms part of global regimes that are controlled by compliance disclosure measures” (p. 60). The establishment of the Extractive Industries Transparency Initiative is by itself an indication of shortcomings in reporting by either recipient of

payments or the organisations making the payments. According to UNCTAD (2020), Africa loses about US\$88.6 billion in illicit capital flight every year.

2.6 Role of private sector organisations

Multinational corporations have been identified as critical in furthering the Sustainable Development Goals (World Commission on Environment and Development, 1987; Nancy M.P. Bocken & Geradts, 2020; Andersen & Esbjerg, 2020) Andersen and Esbjerg (2020) indicate that “MNCs are posited as being essential for achieving the SDGs before 2030 as they are responsible for about one-third of the total output and the majority of world trade” (p. 3688). Borgen Magazine (2017a) points out the contribution of businesses to the Sustainable Development Goals could be through “financing and flexibility in enacting the goals”. According to the United Nations Secretary-General, António Guterres, the private sector constitutes 75% of the global GDP, “moving forward, collaboration with business and the key CEOs in the world is crucial when it comes to fighting climate change; but also, to meet Sustainable Development Goals, eradicate all extreme poverty by 2030” (United Nations, 2019, P. 3). This sentiment was shared by 49% of the global CEO’s surveyed who said private business organisations would be the most important actor in the delivery of the Global Goals (United Nations, 2019).

Despite the optimism of the United Nations Secretary-General and the 49% of the global CEO’s surveyed, the 2019 United Nations Global Compact Accenture CEO Study on Sustainability, found that the CEOs surveyed believed that business organisations were not performing according to expectations. The survey had been held every three years since 2007.

The conflict inherent in business organisations pursuing their own objectives and their role in contributing to the Sustainable Development Goals was noted by N. M. P. Bocken, Short, Rana and Evans (2014) who point out that organisations have multiple priority areas that they have to deal with. “Over half (55%) of CEOs say that they are facing a key trade-off: pressure to operate under extreme cost-consciousness versus investing in longer-term strategic objectives which are at the heart of sustainability” (United Nations, 2019, p. 8). It is probably the existence of these multiple priorities which contribute to the slow change in the pursuance of Sustainable Development Goals. Slawinski, Pinkse, Busch, and Banerjee (2017, p.

253) point out that “despite increasing pressure to deal with climate change, firms have been slow to respond with effective action”. Slawinski et al. (2017) attribute the slow response to climate change issues to concepts of short-termism and uncertainty avoidance.

Barriers to the sustainable business identified by the surveyed CEOs of the world’s largest companies include lack of market pull, political uncertainty and market closures and limitations on free trade (United Nations, 2019).

Bocken and Geradts (2020) have identified barriers and drivers to sustainable business model innovation on the institutional, strategic, and operational levels. Bocken and Geradts (2020) point out that Sustainable business “incorporate a triple bottom line approach and consider a wide range of stakeholder interests, including environment and society. They are important in driving and implementing corporate innovation for sustainability, can help embed sustainability into business purpose and processes, and serve as a key driver of competitive advantage” (p. 42).

Bocken and Geradts (2020) suggest that sustainable business model innovation in large multinational corporations was increasingly perceived as a key driver for competitive advantage and corporate sustainability. However, they suggest that multinational corporations often lack the dynamic capabilities to innovate for sustainable business model innovation. They indicate that having dynamic capabilities would enable multinational corporations to sense, seize, and transform for Sustainable Business Model Innovation.

Rather than looking at the role that multinational corporations can play in contributing to the sustainable business goals as some form of corporate responsibility act, Borgen Magazine (2017a) point out that the Sustainable Development Goals benefit businesses as adherence to the goals increase corporate security and resilience. However, empirical evidence from the 2019 United Nations Global Compact Accenture Study (United Nations, 2019) indicates that the benefits perceived by Borgen Magazine (2017a) did not provide enough incentive for these organisations to prioritise efforts towards meeting the Sustainable Development Goals

The size of many of the multinationals cited as being essential for the achievement of sustainable goals (Andersen & Esbjerg, 2020) and the enormity of their contribution to the global Gross Domestic Product (United Nations, 2019) makes

them much larger than some of the countries in which they operate. Given the competing objectives, as identified by the CEOs in the United Nations Global Compact Accenture Study (United Nations, 2019), the economic power asymmetries between developing countries and multinational corporations operating in those countries provide them with the ability to negotiate for better terms particularly as those countries would be competing with others for foreign direct investment flows.

This is further supported by Oliver (1997) who notes that “a firm's institutional context includes its internal culture as well as broader influences from the state, society, and interfirm relations that define socially acceptable economic behaviour” (p. 697) Oliver (1997) argues that “a firm's sustainable advantage depends on its ability to manage the institutional context of its resource decisions”.

2.7 Mining Companies and SDGs

Kumar (2017) points out that “historically, however, mining has contributed to many of the challenges that the SDGs are trying to address – environmental degradation, displacement of populations, worsening economic and social inequality, armed conflicts, gender-based violence, corruption, increased risk for many health problems, and the violation of human rights” (no page number). However, Yakovleva et al. (2017) made a differentiation between the lifetime of mines which can vary from two to over 100 years. They indicated that mining projects with short lifetimes “may provide limited economic input, whilst at the same time disrupt local social and environmental conditions with pollution and landscape changes” (p. 431). They suggested that mining projects with longer lifespans may provide “lasting employment opportunities, catalyse business growth and lead to economic spill-overs to other sectors such as infrastructure and transport” (Yakovleva et al., 2017, p. 431).

According to Sonesson (2015), mining companies could become leading partners in the pursuance of the Sustainable Development Goals in low-income countries through their direct operations by generating profits, creating employment, and contributing to economic growth. Sonesson (2015) also adds that the benefits of mining could extend beyond the life of the mine itself if mining organisations partner with government and civil society to ensure that the mining industry has a positive impact on the natural environment, climate change, and social capital. Yakovleva et

al. (2017) also indicate “that mineral production in sub-Saharan Africa can serve the needs for industrial, economic and social development across the continent” (p. 427). However, Columbia Center on Sustainable Investment (2016) sees a much broader role for the mining sector’s contribution to the Sustainable Developmental Goals.



Figure 1: Major areas for mining and SDGs

Source: Columbia Center on Sustainable Investment (2016)

Companies operating in the South African platinum sector are divided into those which are internationally listed and those listed only on the Johannesburg stock exchange (Sbesta, 2020). The top five platinum producing companies have operations in South Africa (Sbesta, 2020). They are therefore fairly large entities with fairly strong negotiating capabilities and therefore exercise huge leverage in discussions on policy formulation with the government. In addition to their high negotiating leverage capabilities, South Africa’s large mining companies are

members of the Minerals Council of South Africa through which they engage with the government on policy issue matters (Minerals Council of South Africa, 2021). Given the size of the companies as well as their combined negotiating capacities, they potentially have stronger negotiating capabilities compared to the government.

However, the South African government has promulgated statutes to assist in getting mining companies to meet national objectives including those related to the Sustainable Development Goals. These include the National Environmental Management Act 107 of 1998, Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA) and the Broad-Based Black Economic Empowerment Act (BBBEE) of 2010.

The purpose of the National Environment Management Act (NEMA) is to establish “principles for decision- making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; to provide for certain aspects of the administration and enforcement of other environmental management laws; and to provide for matters connected therewith” (Amended National Environmental Management Act 107 of 1998, 1999). Accordingly, the environmental activities of mining companies are regulated under this Act.

The objective of the MPRDA is to provide for the “equitable access to and sustainable development of the nation's mineral and petroleum resources, and to provide for matters connected therewith”. One of the matters connected therewith is the requirement that applicants for mining and production rights develop and implement Social and Labour Plans which incorporate “comprehensive Human Resources Development Programmes, Mine Community Development Plan, Housing and Living Conditions Plan, Employment Equity Plan, and Processes to save jobs and manage downscaling and/or closure” (Department of Mineral Resources, 2010, p. 4).

With regard to the Broad-Based Black Economic Empowerment Act of 2010, all mining companies in South Africa are bound by the provisions of the Mining Charter which is a provision of South Africa's Broad-Based Black Economic Empowerment Act (Broad-Based Black Economic Empowerment Act, 2003, 2004). The Act provides for the establishment of transformation charters whose purpose is to facilitate the promotion of Black economic empowerment within the mining sector

(Draft Broad-Based Socio-Economic Empowerment Charter for the Mining and Mineral Industry, 2018). Some of the provisions of the Charter are aligned with some of the Sustainable Development Goals including the promotion of gender equality (SDG 5) and reduced inequalities (SDG 10).

Unlike the World Commission on Environment and Development (1987) and Mthembu & Nhamo (2021) who look to governments for ensuring compliance for businesses organisations, Borgen Magazine (2017a) looks to civil society's role in providing the social license to operate.

Whether driven by the consideration of doing the right thing or compliance with legal stipulations, there is a clear indication that organisations are moving towards business models which consider sustainability issues. The finding by Lacy, Haines, and Hayward (2012) that CEOs believed that organisations were moving towards an era in which businesses will take into account the impact of their activities on society and the environment.

Of interest is that the World Commission on Environment and Development (1987), Mthembu and Nhamo (2021) as well as Borgen Magazine (2017) suggest that support for the sustainability goals was a consequence of the coercive incentive identified by Li (2009) rather than the moral one. The pursuit of the social license to operate, particularly for mining organisations, can be perceived as some form of coercive incentive. As Demuijnck and FASTERLING (2016) point out, failure to "indicate that their activities are considered as legitimate in the eyes of society" to avoid "a possible disapproval of their activities, when such disapproval may result in resistance that could harm business interests" (p. 675) may be incentive enough to support the Sustainable Development Goals.

One way that mining companies in South Africa can "indicate that their activities are considered as legitimate in the eyes of society" (Demuijnck & FASTERLING, 2016, p. 675) is through compliance with the King Code of Governance principles (Institute of Directors Southern Africa, 2016). The King Code of Governance principles perceives organisations as part of society and as such should be responsive to the needs of society. In this context, organisations should take a stakeholder-inclusive approach, take a sustainable development approach and these should be reflected in integrated reporting (Institute of Directors Southern Africa, 2016).

The other manner in which organisations could legitimize their activities for a positive societal disposition is through acts of enlightened self-interest which, according to Keim (1978) rationalizes corporate social investment by investing in social investment projects which could benefit the investor. Frimer, Walker, Dunlop, Lee and Riches (2011) define enlightened self-interest as promoting one's own interests by advancing the interests of others. This, however, does not mean that all organisations take this route. According to Credit Suisse (2020), investment portfolios focusing on the environmental, social and governance are gathering pace and investors who are sustainability-oriented have adapted their investment portfolios accordingly. This resonates with Li's remuneration incentive (Li, 2009) as the investment preferences of portfolio managers leads to increased share prices which then result in better remuneration for organisational leaders.

This movement towards taking an interest in decisions impacting society and the environment is supported by Bocken, Short, Rana, and Evans (2014) who point out the adoption of sustainable business models and the introduction of reporting practices indicating accounting for sustainability. According to Bocken et al. (2014, P. 42) "Sustainable business models (SBM) incorporate a triple bottom line approach and consider a wide range of stakeholder interests, including environment and society". This is supported by Miller (2020) who notes that the objective of sustainable business strategies is to positively impact the environment and society while also benefiting shareholders.

Bocken et al. (2014) also add that considering "a wide range of stakeholder interests, including environment and society," is "important in driving and implementing corporate innovation for sustainability" which could assist in embedding "sustainability into business purpose and processes, and serve as a key driver of competitive advantage" (p. 42). Li's (2009) typology of incentives is instructive concerning the levels of effort expounded on each of the three reported activities in Sustainable Business Models.

According to Li (2009), remunerative incentives incorporate some form of reward, "especially monetary ones, in exchange for acting in a particular way" (p. 24). The importance of remunerative incentives is further supported by Pregnotato, Bussin, & Schlechter (2017) with respect to what employees considered the most important component in total reward packages.

Moral incentives are based on choosing what is regarded as the right thing to do (Li, 2009). This incentive is more aligned with the reasons why the United Nations established the World Commission on Environment and Development to formulate "A global agenda for change" and why the Millennium Development Goals and the Sustainable Development Goals were formulated.

According to Li (2009), coercive incentives exist "where a person can expect that the failure to act in a particular way will result in physical force being used against them by others in the community" (p. 24). On the organizational level, failure to act in a particular way could result in either the withdrawal of the social license to operate (Borgen Magazine, 2017) or legal sanction.

Motivation for an endeavour based on coercive incentives is likely to be based on very minimum standards. This would be particularly in situations where organisations find themselves under pressure. Baskaran (2021) points out that the financial sustainability of companies operating in the platinum mining sector had been at risk since 2012 due to declining platinum prices, the high cost of labour and prolonged labour strikes. Corporate sustainability is defined as "an approach to business that creates shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments" (Dyllick & Muff, 2016, p. 163).

Baskaran (2021) also points out that "firms use buffers when they seek to protect core business activities from supply-side and demand-side volatilities by shifting their overall business strategy and bridges to conform with external expectations of improving shared-value outcomes" (p. 385). Such buffering could result in minimum compliance with activities that are not deemed critical to the survival of the organization.

Bartels (1967, p. 25) points out that "laws are often a minimal standard, sometimes representing compromise in their enactment and subject to judicial review and interpretation". In the South African business environment in which the platinum mining companies operate, such compromise is encouraged through the National Economic Development and Labour Council Act (Nedlac Act, 1994).

2.8 Competing Objectives of Organisations

While pointing out that “mining companies will be called on to extract with responsibility, produce with less waste, use safer processes, incorporate new sustainable technologies, promote the improved wellbeing of local communities, curb emissions, and improve environmental stewardship”, Sonesson (2015) suggests that “mining companies committed to the SDGs will benefit from improved relationships with governments and communities and better access to financial resources” while “those that fail to engage meaningfully with the SDGs will put their operations at risk in the short and long term” (Sonesson, 2015, p. 2). While the government sets regulatory guidelines for organisations which as such organisations are compelled to abide by, it is unclear what failing to engage meaningfully with the SDGs means and how such organisations would put their operations at risk.

It is also worth noting that although Hilson (2012) points to the importance of mining companies in economic development, the markets in which such companies operate in are “mostly a buyers’ market, in which prices and their volatility are largely dictated by shifting demand patterns and much less by supply constraints” (Renner & Wellmer, 2020, p. 311). This issue was also highlighted by Baskaran (2021) as stated above. This suggests therefore that the potential contribution of mining companies in advancing Sustainable Development Goals is also subject to the vagaries of commodity markets.

2.9 Conclusions

The literature reviewed in this chapter points out to the fact that sustainability has a long history stretching as far back as 1987 with a primary focus on environmental sustainability (World Commission on Environment and Development, 1987). While environmental sustainability has been a constant feature in both the millennium development goals (Hulme, 2009) and the Sustainable Development Goals (United Nations, 2021), their objectives have been markedly expanded. The Sustainable Development Goals, which are the subject of this study, have also clearly opened up a role for other stakeholders including private sector business organisations. More than just opening up a role, the success in achieving them is dependent on the participation of these stakeholders.

Given the apex role played by mining in South Africa, from a legislative perspective, environmental issues related to mining have been paramount in regulations related to the industry. These include the Mine Health and Safety Act (Mine Health and Safety Act, 1996) as well as the National Environmental Management Act (Amended National Environmental Management Act 107 of 1998, 1999). From the social responsibility and labour perspectives, the Minerals and Petroleum Resources Development Act (Mineral and Petroleum Resources Development Act 28 of 2002, 2002) has prescribed that mining companies should develop plans for engagement with communities and their employees. As indicated above, all of these legal interventions are related to the organisations' role in advancing the Sustainable Development Goals. However, as (Bartels, 1967) points out, laws provide for minimum compliance standards. Mthembu and Nhamo (2021) also found challenges with institutional capacity to implement the policies at sub-national levels.

While Bocken and Geradts (2020) have identified barriers and drivers to sustainable business model innovation on the institutional, the strategic, and the operational levels for multinational companies, such companies are not necessarily platinum mining companies operating in South Africa. The South African mining landscape also includes local mining companies. The focus of this research is to explore the barriers to the implementation of Sustainable Development Goals within the mining platinum sector. Chapter 3 presents the research questions for this study.

CHAPTER 3: RESEARCH QUESTIONS

3.1 Introduction

The literature reviewed in Chapter 2 indicated that while the private sector, particularly multinational organisations, were perceived to be essential for the achievement of the Sustainable Development Goals (Andersen & Esbjerg, 2020), their performance towards achieving these objectives has been below expectations. According to the United Nations (2019), at the current pace, it was unlikely that, globally, the goals would be reached by the year 2030. This research was conducted to explore barriers to the implementation of Sustainable Development Goals in the South African platinum mining industry given that, globally, progress in this regard has not met expectations (United Nations, (2019).

To assist in the exploration of this research problem as stated in Chapter 1, the overarching research question for this research was, what are the perceived barriers to the successful implementation of Sustainable Development Goals in South Africa's platinum mining sector? Covering this question for developing a research instrument resulted in the questions listed below.

3.2 Research questions

Question 1: Which Sustainable Development Goals are prioritized in the platinum mining industry?

This question was intended to establish which Sustainable Development Goals were being prioritized by the mining companies.

Question 2: What are the main barriers facing the platinum mining industry in successfully implementing the Sustainable Development Goals?

Question 3: What are the key resources that support the successful implementation of the Sustainable Development Goals?

Question 4: In terms of South African regulations, are social and environmental elements addressed separately as compliance issues?

Question 5: How has the Covid 19 Pandemic impacted the process of implementing Sustainable Development Goals in the platinum mining industry?

Chapter 4 presents the research methodology adopted for this study.

CHAPTER 4. METHODOLOGY

4.1 Introduction

Chapter 3 presented the research questions of this research. In this Chapter, the methodology of this research will be presented. According to Mouton and Marais (1996), “research methodology aims to develop and articulate strategies and methods by means of which the validity and credibility of research results in the social sciences may be maximized” (p. vii). Saunders and Lewis (2018) also assert that a chosen methodology is a primary factor in evaluating the quality of the research. This chapter details the options adopted to systematically respond to the research question and address the research objectives in line with the requirements for quality in academic research. The researcher further illustrates how the credibility of the study will be maintained for quality and validity. The choice of methodology will be addressed next.

4.2 Choice of methodology

4.2.1 Philosophy

An interpretivist approach was taken as the aim of the study was to capture the richness and complexity of the phenomenon through examining the lived experiences of the respondents. According to Edwards and Holland (2013), interpretivism covers a broad range of phenomenological philosophical approaches aimed at understanding the social phenomena of those involved. According to Edwards and Holland (2013), knowledge in an interpretivist approach takes cognisance of the value of the meanings that others attach to their day-to-day lives and social interactions. Saunders, Lewis and Thornhill (2012) also assert that interpretivism research philosophy is appropriate in studying humans as social actors in a particular context. This approach was deemed appropriate for this research as it enabled the researcher to establish the lived experiences of the respondents on how they perceived to be the barriers in the implementation of the Sustainable Development Goals within the platinum mining sector.

4.2.2 Approach

A ground-up inductive approach (Creswell, 2007; Saunders & Lewis, 2012) was adopted to develop a deeper understanding of the current theoretical perspective

(Saunders & Lewis, 2018). Saunders et al. (2012) posit that inductive research is concerned with the context within which events are occurring and also allows for researcher reflexivity that enabled the changing and reframing as new insights are discovered.

Given that this study sought to understand the meanings attached by the respondents given their experiential knowledge in their work environment, the inductive approach was deemed best suited for the research.

4.2.3 Methodological choices

Given that this was an exploratory study in which semi-structured open-ended questions were used to gather data from social actors in their social setting (Creswell, 2014), a mono method qualitative study was chosen.

4.2.4 Purpose of research design

An exploratory study was considered the appropriate method to answer the research question. According to Creswell, Hanson, Clark Plano and Morales (2007), research methods should be based on the research questions. This approach enabled the researcher to gain deeper insights into the complexity of the lived experiences on the barriers to implementing Sustainable Development Goals in the platinum mining sector of South Africa. According to Saunders and Lewis (2018), exploratory research is about discovering new insights into a topic that may present new knowledge. The approach provides an open platform for research participants to share their experiences.

4.2.5 Strategy

A narrative strategy was adopted for this study. Saunders and Lewis (2018) define a narrative as “a story; a personal account which interprets an event or sequence of events” (p.126). This strategy was deemed appropriate to gain an understanding of the views and perceptions of the interviewees, as it allowed them to narrate personal accounts of their experiences and knowledge. Organisations value insights from this approach, which can cut assumptions, prompt action and challenge complacency (Jackson, Vaughan, & Brown, 2018).

4.2.6 Time horizon

The study was cross-sectional as the data was collected at a particular period. Saunders and Lewis (2018) define cross-sectional research as the examination of a phenomenon at a particular point in time unlike the longitudinal study, which observes the same participants but over a period. The investigation thus provides a snapshot of interview data collected over a short period of time. The approach was deemed relevant given the objectives of the study.

4.3 Proposed research design

4.3.1 Population

According to Saunders and Lewis (2018), the population in research is the complete set of group members being researched. They further assert that the set of group members being researched could be anything including people, organisations or even places (Saunders & Lewis, 2018). It is from this complete set that the sample was drawn. This study was concerned with identifying the barriers faced by platinum mining companies operating in South Africa in the implementation of Sustainable Development Goals. According to Saunders and Lewis (2018) definition of population, the population of this study was platinum mining companies operating in South Africa.

According to Asiamah, Mensah, and Oteng-Abayie (2017), there are three types of populations: general, target and accessible. The definition of the general population as the “largest group of potential participants” (p. 1610) is similar to (Saunders and Lewis (2018) definition of population. In the case of this study, the general population was South African platinum mining companies.

The target population is defined as the part of the population with “specific attributes of interest and relevance” (p. 1612). The research focuses on companies that could play an important role in sustainable development. Such companies would have experience in the implementation of sustainability goals. Given that companies listed on the Johannesburg Stock Exchange are required to report the extent to which they comply with the King Code of Governance principles (Institute of Directors Southern Africa, 2016), listed Platinum mining companies formed the target population of this study. Such companies are required to include their sustainability in their reporting. As mining projects with short lifetimes “may provide limited economic input”

(Yakovleva et al., 2017, p. 431) and do not have to comply with the King Code of Governance principles, such companies do not form part of the target population of this research.

Given that the approach taken in this study was an interpretivist one intended to capture the richness and complexity of the phenomenon through examining the lived experiences of respondents, it would be impossible to take such an approach on the target population as described above. Accordingly another population, to serve as representatives of the target population, was identified. This population is defined as the accessible population which, according to Asiamah et al. (2017) is made up of reachable members of the target population willing to participate in the study. These were individuals in positions up to three levels below the Chief Executive Officer. These included Senior Managers, Directors, Executive Managers and Management Consultants. A further requirement for participation was that participants should have been in the company long enough to have been involved in at least one execution of a sustainability initiative in the organisations.

4.3.2 Unit of Analysis

As the study was intended to establish the barriers faced by platinum mining companies operating in South Africa in the implementation of Sustainable Development Goals, the unit of analysis will therefore be organisations. Gorichanaz, Latham and Wood (2018) define a unit of analysis as “the level of abstraction about which the researcher hopes to say something; findings derived from probing a unit of analysis can only apply to that unit of analysis” (p. 884) while DeCarlo (2018) says the unit of analysis “is the entity that you wish to be able to say something about at the end of your study, probably what you’d consider being the main focus of your study” (p. 182). The main focus of this study is platinum mining companies and therefore the unit of analysis will be on the company level.

4.3.3 Unit of observation

The companies which comprised the population of this research were represented by senior officials who made up the accessible population as defined by Asiamah et al. (2017). These representatives comprised the unit of observation for this research. DeCarlo (2018) defines a unit of observation as the item being observed, measured, or as a proxy for learning about the unit of analysis. In this case, the objective was to

learn about the barriers to the implementation of Sustainable Development Goals faced by mining companies. To do so data was collected from the senior officials of those companies who comprise the unit of observation for this research.

4.3.4 Sampling method and size

According to Robinson (2014), sampling is a deliberate process of defining the inclusion and exclusion qualification criteria as well as the size of the sample. Robinson (2014) asserts that the requirement for rigour, as one of the criterion for assessing research validity is not determined by the size of the sample but rather by the adequacy of the subjects to provide information that is rich enough for analysis.

Given the research question and objectives of this study, a non-probability purposive sampling technique coupled with snowball sampling was adopted. This was done after considering the knowledge and experience of the proposed respondents. According to Roulston (2010), knowledge and experience are important in evaluating the quality, credibility and validity of a study. This method is simple and inexpensive to gather data although it cannot be generalised since it is not representative of the population (M. Saunders & Lewis, 2018). Non-probability purposive sampling is useful in qualitative research where the researcher seeks to obtain an in-depth understanding of the phenomenon.

Saunders & Lewis (2018) define purposive sampling as a subjective method primarily driven by the research question and objectives while Palinkas et al. (2015) refer to the method as a deliberate selection of participants that will contribute to the depth of understanding of a phenomenon given their knowledge and experience for optimal use of limited resources.

Purposive sampling can be vulnerable to researcher bias in selecting participants. However, the platinum mining industry is very small and the individuals forming the population of this research are known throughout the industry. It was for this reason that snowball sampling was also used to access other experts in this area. According to Saunders and Lewis (2018), snowball sampling is used when it is difficult to identify members of the population.

Malterud, Siersma and Guassora (2016) suggest that sample size in qualitative studies should be informed by information power and information relevant to the subject under investigation and that such power and relevance will justify the use of

a small size. Palinkas et al. (2015) expand on the perspective of the quality and richness of the data as a primary determinant of sample size in qualitative research. The sample size will, therefore, be primarily informed by the level of domain knowledge and participants' understanding of barriers to the effective implementation of the sustainability goal or objectives in the organisations. A minimum of 12 in-depth interviews has been deemed adequate for this research. The intention is to reach saturation hence a definite sample will be determined by the richness of the data collected.

The sample size as discussed above enabled the researcher to reach saturation (Saunders and Lewis, 2012).

4.3.5 Data gathering process

An email was sent to invite identified qualifying participants to participate in the study. Once participants agreed to take part, they were given a choice between participating through face-to-face interviews or virtual interaction where physical contact was not possible. The interviews were scheduled for a minimum of 60 minutes to allow for an in-depth discussion of the topic.

An interview guide containing in-depth semi-structured questions was used as the data gathering instrument. According to Kothari (2004) an interview guide is necessary to maintain a level of realistic uniformity around the key points of the research. The interview guide enabled the researcher to ground the interview on specific themes that related to the research questions for consistency with different respondents while at the same time allowing for flexibility and openness for the respondent to provide their own views and understanding of the subject matter.

Saunders et al. (2012) suggested that semi-structured interviews in an exploratory study may be useful to understand what is happening as well as the context thereof.

According to Edwards and Holland (2013), in a semi-structured interview, the interviewer is interested in the context and content of the interview. In total, 12 individuals, six men and six women, from twelve big platinum mining companies with operations in South Africa were interviewed. These twelve senior managers were responsible for strategic thinking at the senior management and executive committee levels within their organisations. Participants either had Masters' or PhD degrees and had been employed for periods ranging from 3 to 20 years in their companies working

in various roles that included sustainability, environmental, and governance, risk and social performance impact.

All interviews were recorded using a digital voice recording device to ensure the accuracy, integrity as well as auditability of the data. In line with commitments made when applying for ethical clearance, participants were asked to give their consent recording while also being given an option to opt-out of the interview if they chose to do so. For face to face interviews, all Covid- 19 regulations and protocols were observed. Noble and Smith (2015) and Roulston (2010) suggest that determining how evidence is credible should be based on how the data will be collected and examining the source of the data. Field notes were also taken to capture the tone and quality of the interview, as well as the moods and emotions. These were used as part of the data analysis. In some cases, a second interview was requested for clarification.

4.3.6 Analysis approach

Saunders et al. (2012) suggest that the results should be aligned to the research question and the objectives of the study. Data collected was analysed thematically. An iterative approach whereby analysis commenced in concurrence with the interview process. This enabled the identification of initial insights to be incorporated in refining questions for further interviews.

Saldaña (2013) distinguishes between semantic or explicit theme analysis and latent or interpretive theme analysis. The interpretivist nature of the research dictated that a latent theme analysis would be most appropriate beyond just the semantic analysis for this study.

A six-phase approach to “thematic analysis” (Braun & Clarke, 2019, p. 60; Nowell et al., 2017, p. 4) as detailed in table 3 below was adopted.

Table 3: Six phase thematic analysis

Phase	Actions performed
Familiarising yourself with the data	Data collected from the interviews were transcribed into text while irrelevant information was removed. The transcripts were then read for immersion in order to understand the contextual meaning of the data before the transcripts were formatted for consistency when loading onto ATLAS.ti which was used for analysis.
Generating initial codes	The labelling of data into codes was conducted according to its relevance to the research question and the context of the study. A codebook was also developed in this phase.
Searching for themes	In this phase, codes were rationalised after every three transcripts and grouped into categories to eliminate possible duplicates. This process followed a reflexive approach and continuous assessment of the relevance of the themes to the research question and the context of the study
Reviewing themes	Braun and Clarke (2019) suggest that the reviewing of themes takes the form of answering questions around the adequacy of the theme and supporting data, clarity of the boundaries and potential overlaps. The themes were initially defined and reviewed against the overall research question to ensure coherence and adequacy.
Defining and naming themes	This process built on the previous phase to ensure that themes were unique in meaning as well as in value. This process further reinforced clarity on what was a theme and why it was worthy to be one. The description of the themes was also useful in developing meanings for readers unfamiliar with the data.
Producing the report	Data display tools (Saunders et al., 2012) relevant to visually present data were used.

Source (Braun & Clarke, 2019; Nowell et al., 2017)

4.3.6.1 Transforming data from codes to themes

An iterative approach was used to extract codes from the text as a process of developing meaning by identifying codes or summarising meaning, categorising codes by grouping similar codes and identifying themes and inductively developing theory from the identified themes (Saldaña, 2013; Mark Saunders et al., 2012). Codes that will be summaries of meanings extracted from the interview data will be compiled. The researcher was aware that a few iterations will have to be conducted to address overlaps and likely duplications in the initially established themed codes. The appendix was used to display the outcome of the thematic analysis exercise that was be conducted.

4.3.7 Reliability and validity

To ascertain reliability and validity, the researcher ensured consistency of application in determining the codes According to Elo et al. (2014), the basic measure of credibility evaluation is the best collection method to answer the research questions. According to Creswel & Creswell (2018), good qualitative research is highly dependent on the presence of reliability and validity measures, where reliability refers to the consistency of responses and can be reproduced to multiple coders of a data set whereas validity refers to the accuracy of the findings in what they truly represent. An audit trail was kept and maintained on how data was collected and organized. This included the recordings, transcripts, field notes and any material provided for further clarification and to ascertain the quality and correctness of data collected during the interviews as emphasised by Ravich and Carl (2016).

4.3.7.1 Data saturation

To ascertain reliability and validity, the researcher has ensured consistency of application in terms of the determination of the codes, that these were exhaustive in terms of the data collected and that there was exclusivity between the codes as well as reaching coding saturation, where no new meaning could be identified from the data (Saldaña, 2016; Zikmund, Babin, Carr, & Griffin, 2013).

Saunders et al. (2012) suggest an up-to-date definition of the categories to maintain consistency in application. Equally, categories were refined as meaning was established from the data. In terms of research trustworthiness, consistency was

maintained throughout the analysis process. Once the categories are established, themes were identified using the understanding of existing literature, such that theory saturation was achieved. It was in understanding the underlying meanings of the themes that add value to the inductive development of theory.

The same process was followed with the field notes. It is the researcher's view that such information enriched the understanding of the sustainability context and attributes that may contribute to the meaning of the data collected during interviews.

4.3.7.2 Triangulation

According to Fusch and Ness (2015) to enhance objectivity and validity, data has to be triangulated by presenting it using different lenses to reflect the varied perspectives of the same event. The application of triangulation in this study incorporated data triangulation (Fusch & Ness, 2015; Noble & Smith, 2015) and theory triangulation (Fusch & Ness, 2015; Myres, 2018).

4.3.7.2.1 Data triangulation

To triangulate data, a comparative analysis of the collected data was conducted across the different company sizes for validation and to identify common and conflicting views around barriers to the effective implementation of sustainability goals or objectives. The diversity of the sampled companies within the platinum mining sector was another technique utilised to capture the varied views provided as answers to the interview questions.

4.3.7.2.2 Theory triangulation

Theory triangulation was used to enhance adequacy in terms of the interpretation of the data collected through the testing of the themes against evolving sustainability theories related to sustainability goals or objectives. Theory triangulation was attained using more than one theory to account for the evidence presented in the data, sustainability theories i.e Corporate Sustainability, Stakeholder theory and Institutional theory was utilised to attain theory triangulation.

4.3.7.3 Researcher bias

To alleviate researcher bias and ensure rigour, Squires and Dorsen (2018), suggest that the study be conducted primarily as a contribution to the body of knowledge for academic purposes where the researcher will not stand to benefit in any way. According to Saunders and Lewis (2018), the worldviews and assumptions held by the researcher may influence the reliability of the research as the researcher is part of the study. The lack of experience of the researcher in conducting interviews will be another concern perceived to potentially influence the reliability of the research. Chenail (2011) suggests that the researcher could counter this bias by testing the interview instrument for validity and appropriateness of the instrument. To address this bias, interview questions were tested for ease of understanding as a practice for conducting interviews with two initial interviewees. Feedback was used to identify ambiguities in the questions asked.

Further to this, verification strategies such as methodological coherence, in terms of the ability of the chosen methodology to answer the research question; appropriateness of the participation sample through defined criteria as well as the iterative data collection and analysis grounded by theory (Morse et al., 2002) were employed by the researcher to ensure congruence between the research question and the implementation process. The iterative process of verification enabled the researcher to exercise responsiveness to the data as it unfolded and the discipline to overcome researcher bias in interpreting the data.

4.3.8.4 Research ethics

Data were collected following the ethical standards of the research, wherein participants were informed of their rights in participating in the research. Participants also signed an informed consent form in this regard. The ethical responsibility placed on the researcher in collecting and interpreting data further created a constant awareness and consciousness in maintaining an honest account of the respondents' views throughout the data analysis process.

4.3.8 Study limitations and assumptions

This study was limited to organisations within the South African platinum mining industry registered in the Johannesburg Stock Exchange. The sample size of 12 interviews did not represent a large number of companies and can, therefore, not be

used to generalize the finding or outcomes of the study. As such the findings of the study are contextually derived and cannot be generalised. The study reflects only the perspectives of senior management, sustainability practitioners and management consultants, as experts representing organisations, on the barriers to the effective implementation of Sustainable Development Goals. It is also important to note that the research may be subject to the bias of respondents as companies may, in general, want to share the positive outcomes of their activities rather than the negative ones to protect their reputations.

4.3.8.1 Assumptions

In conducting this study, several assumptions were made. The sampled participants were perceived to be in a position to have insights on the activities of their organisations in contributing to the Sustainable Development Goals and therefore have insights into the barriers experienced in their organisations. Although care was taken to purposively select qualified participants, there is a possibility that this may not have been the case all the time. The respondents were also assumed to have gathered knowledge and experience on the implementation of Sustainable Development Goals through involvement in the ideation and execution of sustainability goals or projects. There is a potential that participants may have chosen to participate based on their positions rather than their experiences.

4.3.8.2 Researcher bias

The researcher as a tool in the collection of qualitative data was not professionally trained to conduct interviews. That lack of experience may have impacted the results of the research. Additionally, the research findings and discussion were based on the interpretation and analysis based on the understanding of the researcher. This opened the possibility that different interpretations and findings could be reached if this was conducted by a different person.

4.3.8.3 Selection bias

The study focused on companies perceived to be sustainable. The findings can be confirmed by deductively testing the exploratory results and extending the approach to include non-sustainable companies.

4.3.8.4 Geographic bias

The study was conducted in South African mining companies; thus, a geographic bias also limits the research findings and can influence the results derived from the study.

4.4 Conclusion

According to Noble and Smith (2015) evaluating the validity of the study, findings require that the researcher should illustrate rigour in the appropriateness of the methods applied as well as the credibility of the outcomes. In line with the requirements of academic rigour in research, this chapter detailed the logic behind the chosen methodology and how validity and reliability would be established and maintained throughout the study.

CHAPTER FIVE: RESULTS

5.1 Introduction

The preceding chapter of this report presented the Methodology for conducting this study. This chapter presents the results of the study following the analysis of data collected as per the methodologies presented in Chapter 4. The collection of data was conducted using the interview guide which contained in-depth semi-structured questions. The presentation of these results will follow the same chronological order outlined in Chapter 3 where the research questions were presented. While the overarching research question was “what are the perceived barriers to the successful implementation of Sustainable Development Goals in South Africa’s platinum mining sector?” for ease of reference, the research questions are restated as follows:

Question 1: Which Sustainable Development Goals are prioritized in the platinum mining industry?

Question 2: What are the main barriers facing the platinum mining industry in successfully implementing the Sustainable Development Goals?

Question 3: What are the key resources that support the successful implementation of the Sustainable Development Goals?

Question 4: In terms of South African regulations, are social and environmental elements addressed separately as compliance issues?

Question 5: How has the Covid 19 Pandemic impacted the process of implementing Sustainable Development Goals in the platinum mining industry?

5.3 Data Collection Procedure and Analysis

The participants were interviewed separately using the video conferencing applications in compliance with social distancing requirements as a consequence of COVID 19 regulations. The duration of the interviews ranged between 45 and 75 minutes. These were conducted using the interview guide attached as Appendix 1 of this report. Save for one interview, the interviews were recorded using Microsoft teams, an application that records and transcribes voice conversations. The audio recordings were transcribed within a period of three to five days and thematic

analysis was conducted manually to identify the categories, themes and sub-themes which are presented below.

5.4 Presentation of the Results

The results of the research are presented below in accordance with the research questions presented in Chapter 3. Given the nature of the qualitative research, each question was followed by probing questions. The results are presented accordingly under each main research question which itself is intended to support the primary research question of this research.

5.3.1 Research Question 1

Which sustainable development goals are organisations prioritizing?

This question was intended to establish which Sustainable Development Goals were being prioritized by the mining companies.

There was a general consensus that the mining companies looked at all 17 Sustainable Development Goals and prioritised them according to those goals considered material to each mine's unique strategy. Two respondents said their platinum mines promoted community development, zero waste landfill, climate change, clean water, biodiversity, air quality, carbon, health, decent work and economic growth, safe designing and energy emissions. Accordingly, the Sustainable Development Goals which were pursued were related to these prioritized issues. These related to 10 Sustainable Development Goals. These were:

1. SDG3 on Good health and well-being,
2. SDG4 on quality education,
3. SDG5 on gender equality,
4. SDG6 on clean water and sanitation,
5. SDG7 on affordable and clean energy,
6. SDG8 on decent work and economic growth,
7. SDG12 on responsible consumption and production,
8. SDG13 on climatic action,
9. SDG1 on no poverty, and
10. SDG2 on zero hunger.

According to respondent DD1:

“We look at all sustainable development goals. Except I would say. In a little bit, not the marine, although we deal with the species, as you might know, that we have biodiversity plan and then we do manage the offset areas, but specifically I would say the marine and sea we have got little to do with it.”

Respondent SM1 alluded to the prioritization of those which his organisation pursued:

“I wouldn't say they are prioritized the same way because you do have those already that I've been running and those that are just kickstarting, and as such we are at different levels as far as this is concerned in the different elements”.

Only one respondent said the company had a holistic strategy for implementing the Sustainable Development Goals. Other organisations selected specific goals to which they intensely pursued and committed resources. It was, however, unclear whether this was related to concepts of short-termism to enable reporting on tangible outcomes without having abandoned projects or those that took too long to finish.

Respondent HP1 also suggested that strategy also provided cost-saving benefits: *“I think from a cost-saving point of view there was a huge component or benefit”.*

Some of the prioritized goals seemed to be related to compliance, the pursuance of the social license to operate or the pursuance of enlightened self-interest.

5.3.1.1 Compliance

All respondents indicated that each mine had specific plans on how to manage the environmental impacts of mining activities. These included taking care of waste (sanitation), air quality, water and biodiversity.

While mining has traditionally been a male occupational enclave, gender equality, related to SDG 5 was one of the salient issues raised. Respondent AM1 pointed out that platinum mining companies were also actively promoting gender equality in the industry. According to Respondent AM1, *“in line with the Mining Charter targets which also support the same goal of diversity and inclusion”* were being pursued. Gender equality is one of the commitments made in the

Respondent AN1 commented on his company's contribution towards SDG 8 on work and economic growth.

“If you look at our company, we believe that by recognising and rewarding our employees for their effort we create a positive working environment and culture, and also employees experience a boost of morale, and this tends to foster employee satisfaction. That is what we believe. I will give you an example: we have reward performances in terms of a few strategies that are employed, like at our other operation there is ESOP (Employee Share Option Plan), share incentive plan for all managerial staff from middle management level and above, we have performance bonuses schemes for teams or groups or production bonuses, and we have cash incentives awards for individuals or groups.”

It is however not clear whether this was over and above normal practice for staff retainment particularly as the dispersion of the benefits was differentiated by rank.

5.3.1.2 Social License to Operate

All respondents indicated that their companies were involved in community development activities. These activities were said to be focused on integrated human settlement SDG 10 (reduced inequality), good health, wellbeing (SDG 3), decent work SDG 8, reduced inequality (SDG 10) and education (SDG 4) to restore livelihoods within the mine’s surrounding communities to eradicate poverty. While these areas fell were related to Sustainable Development Goals 3, 4, 8 and 10, respondents said effort towards achieving these goals was haphazard. These areas were also under no legal enforcement except for the sanction of the social license to operate. Respondent TT1 pointed the importance of the social license to operate for the organization:

“So for us, we are a community-based mine, our social license to operate is critical so how our stakeholders view us and what they think about us is critical to us. We have a department that just deals with stakeholders, we do have a community engagement department that deals with the community, we have got corporate affairs department that just deals with all other stakeholders including your investors. There are regular meetings with those people to try and understand what is critical for them, and everything we do, we are doing to create value for our stakeholders”
Respondent TT1

5.3.1.3 Enlightened Self Interest

While this research question was related to the identification of goals prioritized by the mining companies, the underlying assumption was that first and foremost, these companies would prioritize objectives that are primary to their financial objectives. It emerged from some of the respondents that some of the organisations pursued Sustainable Development Goals that also advanced their own self-interests. Given the size of the organisations, the companies could also invest its own projects that contributed to reducing costs while contributing to the Sustainable Development Goals.

Some of the initiatives that could be considered to fall under enlightened self-interest include initiatives related to SDG 13 which is climate action, Skills Development SDG 4 and SDG 8 and improved quality of life SDG 3.

Respondent HP1 put this more succinctly: *“because let me give you an example: we set up what we call a hydrocarbon bioremediation plant, so instead of taking hydrocarbon pollution off the soil, it happens on an ongoing basis at our opencast mines, where when a big truck, then we set up our own bioremediation site where we could treat the polluted soil by means of different enzymes and that stopped that cost and the nice thing is we could re-use that soil after treatment, for rehabilitation and all sorts of purposes”*.

Respondent HP1 pointed out that mines contributed to SDG 13 related to climate action by reducing CO₂ emissions to the environment through the implementation of renewable energy projects as well as by avoiding sending waste to landfills. According to Respondent HP1, *“We don’t send waste to landfill, we don’t travel, so there you have a positive impact from a CO₂ contribution point of view, and then obviously because you don’t introduce a huge amount of waste to the landfill there is a positive impact on the landfills itself, that you don’t contribute to gas emissions – which is a huge positive”*

According to Respondent AK1, *“So zero waste means you start linking back to a circular economy context, and that is basically where your company starts turning any waste materials into a resource, okay – and that is a fundamental change. And this is probably another link back to your sustainable development goal. So that is the next phase and we intend really to say, before we bring anything in from a supply*

chain point of view, we need to understand whether there is going to be any waste, but we don't want to allow any waste to come in.' If we talk about things like a waste rock in our company, how do we turn waste rock which currently sits in a huge pile, into a useable resource? How do we turn our flat dumps into a usable resource? how do we turn our trailing dams into a useable resource?"

5.3.1.3.1 Skills development

Skills development directly feeds into the mine's skills catchment. Respondent DD1 hailed the benefit derived from schools' projects initiated by the mine as part of its Social Labour Plans. The school acted as a source of labour for the mine.

5.3.1.3.2 Improved quality of life

Some respondents indicated that by offering jobs at the mine to members of the community, the mines contributed to improving the quality of life to community members by taking them out of poverty.

5.3.1.4 Conclusion to Research Question 1

While it was clear that the activities of the mining companies prioritized different areas, such areas fell into the categories of compliance, maintaining stakeholder relations, pursuing the social license to operate as well as pursuing enlightened self-interest. The lack of uniformity can be attributed to the fact that some companies made the implementation of the Sustainable Development Goals part of the employees' Key Performance Indicators (KPI) to monitor performance and ensure that the areas chosen were prioritised. Respondent TT1 also pointed out that the KPIs *"are part of the sustainability performance dashboard that has high-level key performance indicators that are critical for the organization from a sustainability point of view."*

5.3.2 Research Question 2

What are the main barriers facing the organisation in achieving the successful implementation of sustainable development goals?

Following from Research Question 1, this question sought to establish what respondents perceived as the main barriers faced by their organisations in successfully implementing the Sustainable Development Goals.

The respondents identified constraints in meeting their own objectives, Adapting to changing circumstances, costs, government red tape and dealing with stakeholders.

5.3.3.1 Constraints in meeting organisational objectives

The issue of constraints in meeting organizational objectives was deemed the main barrier in pursuing the Sustainable Development Goals as organisations had to meet their own sustainability needs first in order to survive. One of the main issues in this regard was related to meeting the power needs of mining companies and the perceived intransigence of the government in enabling the alternative sources of energy while the country was facing regular power-outs due to the incapacity of the state-owned energy supplier to meet demands. In light of recent legislative changes on energy supply, Respondent DD1 commented:

“The energy was highly regulated. Companies couldn't do much on it, so that was the barrier in terms of that. It was the issue of being regulated and only changed recently when the government allowed private companies or energy producers to produce up to 100 MW of their own energy.”

However, the opportunities provided by the government in allowing organisations to produce own energy also revealed different challenges in meeting own energy needs while pursuing Sustainable Development Goals. This was raised by Respondent DD1 explained problems faced by one mining operation:

“our biggest operation doesn't have wind, you then have to create your own plant in the Eastern Cape (thousand of kilometres away) then that is how you will get energy. So, it depends on where you want it. So those become barriers in terms of implementing SDG.”

The shortage of skills was another issue highlighted by respondents in meeting organizational objectives. Respondents indicated that the mines spent large amounts of money in skills development to meet their own needs. While this was a contribution to the Sustainable Development Goal of SDG 4 and 8, it resulted in the diversion of resources from the areas of the companies competencies to address the incapacity of the South African education system. In addition to spending large sums of money on graduate skills development, mines also found themselves building schools in the surrounding communities.

5.3.3.2 Adapting to Changing Circumstances

As the study was conducted a few months before the 26th meeting of the United Nations Framework Convention on Climate Change's (UNFCCC) Conference of Parties in Glasgow in November, the issues of climate change were salient, particularly given South Africa's heavy reliance on fossil fuel energy. Respondent NR1 commented on the matter:

“there is a lot of pressure on companies to respond to climate change type issues, with COP26 at the end of the year there is a reporting standard which is more than just asking for disclosure, it is asking for companies to actually start embedding climate change processes into their strategy”.

Such changes require not only system changes but also changes in attitudes as well. Respondent HP1 emphasised the role played by resistance to culture as a barrier to achieving the successful implementation of sustainable development goals.

“It took us literally about 7 or 8 or 9 years to get the operations to get to the point of zero waste to landfill, to change their systems, to understand we don't send things to landfill, we recycle or reuse it' and to find alternatives and introduce different new ways of managing and dealing with waste to influence our supply chain, etc. We set the goal of zero waste to a landfill already in 2013 for us as a company, and that demonstrates the point of culture change.” Respondent HP1

Respondent HP1 suggested that for culture change to take place, there was a need to take employees and the communities on a journey that includes awareness campaigns that involve everyone and make them conscious of the sustainability goals being implemented.

5.3.3.3 Costs

Given the dependency on the location of minerals for establishing mining operations, mining companies are compelled to make large capital investments to enable operations. Some respondents pointed to the high costs of accessing fresh water and having to install plants to recycle water while also facing the costs of alternative energy costs to mitigate against power cuts. These costs were highlighted as huge barriers leading to the non-implementation of some Sustainable Development Goals platinum mines irrespective of the wishes of the leaders of these mines.

5.3.3.4 Government red tape

One respondent pointed out that government red tape was also a barrier to the successful implementation of the Sustainable Development Goals. Respondent DD1 said, *“if you want an approval say, to build houses or you want an approval to build a school, you must be sure at the minimum it will take you a year before you get that approval from the government”*.

Such delays were likely to lead to organisations focusing more on areas that had more value to them rather than those whose ultimate benefit has little value for them.

Another issue raised by respondents was the lack of governmental flexibility in requirements for implementing goals related to the Sustainable Development Goals. Respondent TT1 pointed out that regulators.

“need to be able to change and say ‘Not you company A, we want you to do A, B and C’ – but they need to be able to say ‘From the region point of view, Rustenburg area, organisation in this, we need this.’ Then we will be able to work together, but up until they change that, we are unable to because we need to tick our tick box first: as an organisation have we done a, b, c per the law before we can go and collaborate with others” Respondent TT1.

5.3.3.5 Dealing with Stakeholders

Others respondents pointed to engagement and consultation strategies to ensure that the interests of all stakeholders, internal and external, were aligned. One mine had a specific department called the Stakeholders Engagement Department with full responsibility to engage stakeholders. Projects were implemented only after the SED had carried out intense consultation with communities to ensure alignment with specific community needs.

This strategy was a direct response to what mining stakeholders wanted from the mine. In a sense, therefore, the stakeholder engagement process also served the purpose of enhancing their social license to operate.

In some of these engagements, employees, through the unions took an active part. According to Respondent AM1.

“You can see it is not just rhetoric. Currently, our general manager is a chairperson of that tripartite in the Mpumalanga region and we always participate with our full-time employee representative and our union including the managers.”

With regard to community engagement, Respondent AK1 said they engaged community leaders to deal with issues of mutual interests and formed task-specific forums where necessary.

Respondent DD1 pointed out that where there was cooperation between the community and the company, the results spoke for themselves:

“It's a quality school. Look at what we have delivered a quality clinic. It's functioning. You have got all these systems which are needed. All the equipment which is needed and that's how sort of you build these. You go to communities and say look what I've delivered its quality product”

Respondent AK1 said in addition to having discussions with communities on the mine level, *“We also participate in industry forums where the Department of Water and Sanitation is also a party. We also make sure that they understand what is it that we can do from a company perspective to manage all those risks.”*

Respondent HT1 pointed out his company's response to the COVID 19 pandemic and said the company had built a field hospital and was at the forefront of driving vaccination both for their employees and the local communities. This was in line with SDG3 relating to good health and well-being.

Respondent HT1 pointed out that almost 30% of the equity of his company was “owned by the local tribe” and therefore seems to suggest some form of obligation in contributing to SDG 1 related to the elimination of poverty. According to Respondent HT1,

“in terms of no poverty, we do a lot of things from there, from our strategy in terms of SVPM where we look at the preferential procurement, discretionary spend, local HDS spend. So we focus on that a lot because we are a company that is almost 30% owned by the local tribe. We then have to make sure that in terms of poverty alleviation we can sustain that.”

The importance of maintaining positive stakeholder relations was highlighted by Respondent SM1 who pointed out that mines tend to ensure that the Sustainable

Development Projects that they do where the community is involved, have to be agreed with the communities as failure to reach a compromise might lead to unsustainability should the mine choose to go ahead with the project. “as I said, my role entails managing risk to the Community, and this means stakeholders will complain, or they will lay grievances and in terms of the kind of development that they want to see in their community”, said Respondent SM1.

Respondent AK1 also suggested that communities could sometimes have too many expectations from the mines and at times such expectations are unreasonable. According to Respondent AK1

“At the end of the day there is a lot of expectation raised, and at the end of the day, they then look towards the one direction to say that every time there is an issue they come to the company. Although we know we have the legal practice to play that bigger role of making sure that the SDG goals are implemented within our community. So I think the main challenge is their way and you know you get that you try help one thing and the problem becomes bigger and because there are a lot of expectations coming from the community side.”

5.3.3.8 Conclusion to Research Question 2

In identifying the main barriers faced by organisations in achieving the successful implementation of Sustainable Development Goals, five themes emerged from respondents. These were constraints in meeting organizational objectives, adapting to changing circumstances, costs, government red tape and dealing with stakeholders.

In terms of performance, some respondents could not rate the performance of their companies in advancing Sustainable Development Goals. In terms of activities to mitigate against climate change, most respondents said their organisations had regressed. Respondent DD1 explained.

“A lot of points were located to that and climate change and say what systems do you have in place. So because we didn't have anything, we performed very badly. I'm expecting that this year will improve a little bit and next year we are supposed to compare with our peers.”

5.3.3 Research Question 3

What are the key resources that support the successful implementation of strategy in delivering prioritized Sustainable Development Goals?

This question sought to establish what respondents perceived as the key resources needed to support the successful implementation of strategies in delivering prioritized Sustainable Development Goals.

5.3.4.1 Expertise in human capital

Expertise was identified as a key resource needed to support the successful implementation of strategies to deliver prioritized Sustainable Development Goals in the platinum mining industry. Some respondents indicated that such expertise existed within their organisations while others said this was outsourced. Respondent DD1 explained the importance of expertise:

“you need good expertise in terms of delivering these. You don't just do it because you have to do it. Or you want to tick the box. It should be done by people whom you will be proud of the end product and also as the years go you can say it is still there” Respondent DD1.

5.3.4.2 Stakeholders' support

Stakeholder support was another identified resource needed to support the successful implementation of strategies in successfully delivering prioritized Sustainable Development Goals. Three categories of stakeholders were identified. These were external stakeholders, shareholders, top management and communities.

5.3.4.2.1 External Stakeholders

Respondent DD1 pointed out pressure from external institutions for compliance to comply:

“I have to say that also, what's helping the companies is the investors now and the analysts who are forcing that the companies have to show how are they contributing to the ESG which is the environment, social and governance. So that helps a lot to an extent that we have just completed what we call task force on climate-related financial disclosures, which is commonly called a TCFT.”

5.3.4.2.2 Shareholder and top management support

Shareholder and top management support were identified as critical in unlocking the financial resources needed to successfully implement the Sustainable Development Goals. The shareholders were seen to have the power to put pressure on top management to give priority to SDG projects and show cause and report how the company was contributing. One respondent pointed out that when the board, CEO or EXCO gave full support, the targets became easier to achieve.

“you know we have 100% support from our EXCO and our CEOs in this regard. And I think that is a critical point, you need to have top management support in order to make these things happen because if you don’t have that it is very difficult to get budgets approved, to get support from your general managers at your operations”

Respondent HP1

5.3.4.2.3 Local Government support

Respondents pointed out that municipalities as the local government were required to support Sustainable Development Goals and were responsible for directing how projects such as schools or hospitals should be built in the area. Lack of support from local government was perceived to have the potential of delaying the implementation of projects to meet the Sustainable Development Goals.

5.3.4.3 Financial resources

Respondents identified finance as one of the critical resources needed to support the successful implementation of Sustainable Development Goals as these competed with activities core to the organization. Accordingly, projects related to the Sustainable Development Goals had to be directly linked to the mine’s strategy to be prioritized and get the board’s attention. Respondent TT1 explains the importance of funding in implementing critical SDG projects in the mines:

“ your health one, we identify what are the critical key performance indicators there? Obviously the health of our employees, the wellness of our employees, I mean we look at occupational diseases related to that – so those things we are able to provide the fund on because now they are critical. So everybody knows they are critical to the business and need that kind of attention.”

Respondent TT1 pointed the importance of collaboration to address the issue of resource constraints:

“what would do better as well is collaboration, as mining industry we tend to work alone; if we had to work together with other mining companies our impact when it comes to contribution to SDGs would be very big. So we are doing things in silo’s, so I think that is one thing if I would have to change the system” Respondent TT1

5.3.4.4 Conclusion to Research Question 3

The key resources needed to support the successful implementation of strategies in successfully delivering prioritized Sustainable Development Goals were identified as internal and external. Internal resources needed were expertise in human capital as well leadership support. The external resources identified included legislative enablement and stakeholder support.

5.3.4 Research Question 4

In terms of South African regulations are social, environmental elements addressed separately as compliance issues?

The purpose of this question was to establish whether Sustainable Development Goals related to compliance received more attention than other goals unrelated to the concept of enlightened self-interest.

Some mines had dedicated sustainability departments that report monthly and quarterly on sustainability projects. Most respondents indicated that issues related to the Sustainable Development Goals were addressed through an integrated approach that included fulfilling regulatory requirements which are part of the Social Labour Plans and the obligations related to the Mining Charter. Respondent DD1 explained further:

“The Social Labour Plan and the Mining Charter is very specific on social, environmental and economic issues and the mines. Hence, some projects are done not only out of preference but to ensure compliance with mining sector legislative requirements. A mining licence cannot be obtained without meeting certain environmental, social and economic conditions.”

According to Respondent TT1:

“When we look at sustainability, we look at social, environmental and economic, we look at the governance point of view. Within all these elements we know what is critical within the pillars, like for example for us in our organisation if we talk social we are talking about a social license to operate, we are talking about stakeholder engagement, we are talking about mining charter requirements, our Social labour Plan (SLP) delivery, providing infrastructure for our people – so those are the critical things, we have listed them. We are talking about your health, your human rights issues, they fall under that particular pillar. You go to the environment, we know what is critical for us – climate change, water, energy, rehabilitation – those are some of the elements. You go under governance – your ethics, your culture, your transformation. So each and every element has a pillar inside and within that pillar we are coming back to the KPIs, that is where my KPIs are coming in again. So there is no way we will miss them, they are part of our strategy, so that is how we implement it.”

5.3.6 Research Question 5

How has the Pandemic (Covid 19) impacted the efforts or progress of implementing sustainable development goals?

This question sought to understand whether the implementation of Sustainable Development Goals were vulnerable to external interruptions such as COVID 19.

5.3.6.1 SDG implementation delays

Most respondents believed that the COVID19 pandemic delayed the implementation of sustainability programs. According to Respondent HP1:

“I think many ideas and initiatives that were on the table Pre-COVID was delayed and this is maybe the key point – was delayed because during every lockdown things came to a standstill. You know you can’t visit operations, you can’t drive around as you want to, projects can’t continue necessarily as they planned to be.”

5.3.6.2 Shift in focus on SDG 3, 1, 2, 8 and 17

Respondents indicated that the emergence of COVID19 shifted the focus on priorities where in some instances the mines used their experiences to assist. Concerning persuading people to vaccinate, Respondent AK1 mentioned the use of influencers to encourage employees and the communities to vaccinate and also to

observe the COVID19 health safety rules. Respondents mentioned that their companies conducted their own vaccination programs for staff and members of the surrounding communities. Other issues prioritized included contributions to building infrastructure and interventions to minimize the impact of COVID 19. Respondent HT1 noted:

“we had to spend about over R84 million in erecting a hospital for the COVID isolation centres, we had to employ extra nurses, extra screening people who manage to screen. All these things, I mean we had to put together social distance conducive environment and processes, including all the PPE. Our employees reacted wonderfully and fortunately for us as a platinum industry the basket price went up. So although production was short of a month or so, we recovered well. We made more profit than we did in the previous year. For example, we did 7 billion the last financial year and this financial year we did 10 billion while we had COVID. But I mean we lost 14 people in the process, which if you check our strength which is 9700 people, it gives you about 0.4% of your death rate.”

In addition to infrastructural issues, respondents also mentioned issues of community support. Respondent TT1 focused on SDG 1 and 2:

“the one around no hunger, no poverty, because many of the people around us were impacted by COVID so we had to increase more of our attention to try and assist our stakeholders in terms of managing the impact. So 1 and 2 became one of our focus areas as we were implementing our things. And then SDG 17 which was our indirect contribution, it’s talking about partnership, it was one of the last ones, it was not a focus area. During the pandemic it came to be a focus area, we had to hold hands with our peers, with our neighbours, where we operate, we had to hold hands with our government departments. For us we had to even construct a hospital you know, with the Dept of Health, to try and assist our people.”

5.7 Conclusion

This chapter has presented the findings of this study as they emerged from the five sub-question of the main research question. The study sought to establish the perceived barriers to the successful implementation of Sustainable Development Goals in South Africa’s platinum mining sector. The study was conducted during the second year of the COVID 19 pandemic. Whether directly or indirectly, the pandemic

had an impact on the execution of strategies to meet the Sustainable Development Goals. While one of the questions focused directly on the impact of the pandemic. The others were on the general issues perceived to be barriers to implementing the Sustainable Development Goals. Other than the fact that the pandemic led to the refocusing of priorities, the pandemic did not seem to have added any disturbances in the process of meeting the Sustainable Development Goals. Chapter 6 will discuss these findings within the context of the literature reviewed in Chapter 2.

CHAPTER 6: DISCUSSION OF RESULTS

6.1 Introduction

In reviewing literature Boote and Beile (2005) suggest that the review of literature enable the reviewer to establish what has been learned and what still needs to be learned in the area of study. In the review of literature in Chapter 2, what still had to be learned with regard to the reasons why there has been a lacklustre performance in the successful implementation of the Sustainable Development Goals to the extent that the goals would not be reached by 2030 (United Nations, 2019). The study focused on the platinum industry in South Africa. The findings of this study were presented in Chapter 5 and were presented according to the five supporting research questions as outlined in Chapter 3. In this chapter, these findings are discussed in preparation for the conclusions which will be presented in Chapter 7.

6.2 Discussion of Results

The main purpose of this study was to explore the perceived barriers to the successful implementation of Sustainable Development Goals in South Africa's platinum mining sector were. For the purposes of the research, this question was instrumentalised into five research sub-questions. In discussing the findings, the same format adopted in Chapter 5 will be used to maintain continuity.

6.2.1 Sustainable Development Goals prioritized by South Africa's Platinum Mines

As stated in Chapter 5, the purpose of this question was to establish which Sustainable Development Goals were being prioritized by the platinum mining companies.

Commenting on the 2010 Accenture and the United Nations Global Compact study, Lacy et al. (2012) note that the surveyed CEO's acknowledged the growing importance of sustainability on the future of their businesses and pointed out the need to integrate environmental, social and governance issues into their core businesses. A similar study conducted in 2019 found that the CEOs surveyed believed that business organisations were not performing according to expectations and that it was unlikely that the Sustainable Development Goals would be reached by 2030 (United Nations, 2019). The 2019 survey indicated that 55% of the CEOs

surveyed said they were under pressure to “operate under extreme cost-consciousness versus investing in longer-term strategic objectives which are at the heart of sustainability” (United Nations, 2019, p. 8). This indicates that they had to shift their priorities.

The shifting of priorities to address salient concerns was confirmed in this study. Respondents indicated that priorities shifted to focus on the most urgent issues like the building of hospitals, being involved in vaccination campaigns as well as providing support to members of the community on issues of hunger and poverty during the height of the COVID 19 pandemic in the country. The enormity of the support confirmed suggestions by Sonesson (2015), Yakovleva et al. (2017) and others that mining companies could become leading partners in the pursuance of the Sustainable Development Goals in low-income countries.

While the prioritization of focus areas during the response to the COVID 19 pandemic was a shift from normal focus areas, the study also found that in general, platinum mining companies prioritized Sustainable Development Goals which had a material benefit to them. Most candidates admitted that mining companies did not prioritize the Sustainable Development Goals in the same way. Respondent SM1 was more direct on this issue: *“I wouldn't say they are prioritized the same way because you do have those already that I've been running and those that are just kickstarting”* While this was not categorically stated, it is likely that those “just kickstarting” had to do with new areas of saliency.

Commenting on the COP26 conference that was to take place a few months after this study was conducted, Respondent NR1 said there was a lot of pressure on companies to respond to climate change issues expected to emanate from the conference, *“with COP26 at the end of the year, there is a reporting standard which is more than just asking for disclosure, it is asking for companies to actually start embedding climate change processes into their strategy”*. It is likely that companies would put more effort into this area given the pressure for cost-consciousness (United Nations, 2019).

The prioritized areas were categorized under those related to compliance, social license to operate and enlightened self-interest.

6.2.1.1 Compliance

In general, there are specific statutes that regulate the mining industry in South Africa. Some of the most prominent ones are the National Environmental Management Act of 1998 (Amended National Environmental Management Act 107 of 1998, 1999), The Mineral and Petroleum Resources Development Act 28 of 2002 and the Broad-Based Black Economic Empowerment Act of 2010.

All respondents indicated that each mine had specific plans on how to manage the environmental impacts of mining activities. These included taking care of waste (sanitation), air quality, water and biodiversity. Other areas of compliance, Under the stipulations of the Mineral and Petroleum Resources Development Act, all mining companies must have Social Labour Plans through which they work with communities on social development issues (Mineral and Petroleum Resources Development Act 28 of 2002, 2002). This is related to SDG 3 and 4. Respondent DD1 spoke about a school and a clinic build by the mine as part of these requirements:

“It's a quality school. Look at what we have delivered to a quality clinic. It's functioning. You have got all these systems which are needed. You go to communities and say look what I've delivered its quality product.”

Given that there are penalties for non-compliance with statutes, it was evident that part of the programmes were directly linked to compliance.

It is clear that failure to comply with any of these was perceived to have a potential for some legal action against the organization and therefore they were incentivized to do these. According to Li (2009), this type of incentive is coercive as failure to act in a particular is likely to result in some form of punitive action. According to Respondent TT1:

“when we look at sustainability, we look at social, environmental and economic, we look at the governance point of view. Within all these elements we know what is critical within the pillars, like for example for us in our organisation if we talk social we are talking about a social license to operate, we are talking about stakeholder engagement, we are talking about mining charter requirements, our Social labour Plan (SLP) delivery, providing infrastructure for our people – so those are the critical things, we have listed them.”

What emerged from the results was that issues related to compliance were prioritized. In this case were issues related to compliance with the National Environmental Management Act (Amended National Environmental Management Act 107 of 1998, 1999), Mineral and Petroleum Resources Development Act (Amended National Environmental Management Act 107 of 1998, 1999) and the Broad-Based Black Economic Empowerment Act (Broad-Based Black Economic Empowerment Act, 2003, 2004). While Slawinski et al. (2017) indicate that organisations have been slow to respond to climate change issues with effective action due to concepts of short-termism and uncertainty avoidance, it seems that where the slow response to these issues could lead to some form of punitive measures, organisations are incentivized to prioritise them.

Perhaps prioritizing compliance matters is related to the point made by Sonesson (2015) that “mining companies committed to the SDGs will benefit from improved relationships with governments and communities and better access to financial resources” while “those that fail to engage meaningfully with the SDGs will put their operations at risk in the short and long term” (p. 2).

6.2.1.2 Social License to operate

Demuijnck and Fasterling (2016) define the social license to operate is defined as the granting or support of engaging in activities by the community as such activities are considered legitimate and where the disapproval of the activities “may result in resistance that could harm business interests” (p. 675). Many respondents pointed out that stakeholder engagement was high on their agenda. This was one of the issues highlighted by Respondent TT1 as stated above in this chapter.

According to some respondents, some of the expectations were outside their organisations’ obligations for the Social Labour Plans in accordance with the Minerals and Petroleum Resources Development Act. One mine had distributed bicycles to communities for free to be used to collect waste. Respondent AK1 noted that sometimes leaders of communities “*tend to be difficult, there is a lot of expectations raised, and at the end of the day, they then look towards the one direction to say that every time there is an issue they come to the company. You try to help one thing and the problem becomes bigger.*”

While organisations are not legally obliged to accede to such requests, they tend to do so in order to avoid any disruptive actions from the communities. This is some form of coercive incentive according to Li (2009).

6.2.1.3 Enlightened Self-interest

While the act of pursuing the social license to operate through some community projects such as building schools can be perceived as part of fulfilling legislative requirements through Social Labour Plans, respondents pointed out that the mining companies also engaged in activities that could be perceived as enlightened self-interest by promoting their interests while advancing the interests of others (Frimer et al., 2011). The response to COVID 19 was one major example of this. The building of hospitals that Respondent HT1 and TT1 mentioned and the initiatives to persuade people to vaccinate, as mentioned by Respondent AK1, was clearly an act of enlightened self-interest.

Enlightened self-interest on the individual level can also result in the Sustainable Development Goals being prioritized. Organizational executives are agents of shareholders. Respondents indicated that when shareholders put pressure on top management to prioritise Sustainable Development Goals. Respondent HP1 pointed out that *“you need to have top management support in order to make these things happen because if you don’t have that it is very difficult to get budgets approved, to get support from your general managers at your operations”*. Support from shareholders, the CEO and Executive Committee members can, directly or indirectly, result in some form of reward. Li (2009) points out that, remuneration, especially monetary, incentivize individuals to act in a particular way. According to (Pregnolato et al., 2017) monetary rewards are considered the most important component in total reward packages.

6.2.1.4 Conclusions to Research Question 1 Discussion

The acknowledgement of the CEO surveyed in the 2010 Accenture and the United Nations Global Compact study (Lacy et al., 2012) and a similar study in 2019 (United Nations, 2019) on the growing importance of sustainability on the future of their businesses and the need to integrate environmental, social and governance issues into their core businesses does not seem to have accelerated the implementation of the Sustainable Development Goals as the CEOs surveyed acknowledged in 2019

(United Nations, 2019). However, the inability to make enough progress to reach the Sustainable Development Goals does not mean that not enough progress has been made with regard to all goals.

The findings of this study indicate that there was a clear prioritization on which goals to focus on. Clearly, progress on prioritized goals would make progress on such goals to exceed progress on the goals which are not prioritized. This was the case in the progress made in the Millennium Development Goals. When the Sustainable Development Goals were adopted to build on the 'unfinished business' of the Millennium Development Goals (Statistics South Africa, 2019), progress had been made in a number of areas although it was "uneven, particularly in Africa, least developed countries, landlocked developing countries and small island developing States" where some of the goals remained off track (United Nations, 2016, para 16).

The fact that progress was uneven suggests that some of the Millennium Development Goals were prioritized over others. The fact that this unevenness occurred in the least developed countries suggests that prioritization occurred in countries that depended on mining companies to become leading partners in the pursuance of the Sustainable Development Goals (Sonesson, 2015a)

6.2.2 Main barriers SA platinum mines face in implementing Sustainable Development Goals

This question sought to establish what respondents perceived as the main barriers faced by their organisations in successfully implementing the Sustainable Development Goals. Five issues were identified as the main barriers faced by platinum mining companies in implementing the Sustainable Development Goals. These were constraints in meeting organizational objectives, difficulties in adapting to changing circumstances, costs, government red tape and complexities in dealing with stakeholders.

6.2.2.1 Constraints in meeting Organisational Objectives

Organisations have multiple priority areas that they have to deal with (Bocken et al., 2014b). In addition to meeting their financial obligations to shareholders, listed companies are now expected to "operate in the triple context of the economy, society and the environment" as "How they make their money does have an impact on these three elements and, in turn, the impact on organisations" (Institute of Directors

Southern Africa, 2016). However, to meet their societal and environmental obligations, organisations have to be sustainable. This is where the issue of prioritizations comes in. Baskaran (2021) points out that the financial sustainability of companies operating in the platinum mining sector had been at risk since 2012 due to declining platinum prices, the high cost of labour and prolonged labour strikes. This did however change in 2020. According to Respondent HT1

“Our employees reacted wonderfully and fortunately for us as a platinum industry the basket price went up. So although production was short of a month or so, we recovered well. We made more profit than we did in the previous year. For example, we did 7 billion the last financial year and this financial year we did 10 billion while we had COVID. But I mean we lost 14 people in the process, which if you check our strength which is 9700 people, it gives you about 0.14% of your death rate.”

It is possibly this performance that enabled some of the companies to focus attention on other areas which were outside their obligations such as building hospitals and clinics to assist with fighting COVID 19.

Baskaran (2021) points out that “firms can use buffers when they seek to protect core business activities from supply-side and demand-side volatilities by shifting their overall business strategy and bridges to conform with external expectations of improving shared-value outcomes” (p. 385). It stands to reason that if companies have constraints in meeting their own obligations, they are unlikely to pursue objectives that they are not obligated to. Private sector organisations are, in general, not established to pursue “longer-term strategic objectives” (United Nations, 2019, p. 8).

Respondents pointed out to the unreliable supply of power and the shortage of skills as major constraints in meeting their organizational obligation. Diverting resources to address these organizational issues acted as a barrier faced by the mining companies in pursuing Sustainable Development Goals.

6.2.2.2 Difficulties in Adapting to Changing Circumstances

While the Secretary-General of the United Nations noted the need to mobilize private sector organisations to meet the Sustainable Development Goals (United Nations, 2019) what is often overlooked is that such mobilization occurs on the CEO level from where policies have to be cascaded down to the operational levels.

It is on the operational level that policies have to be turned into practical steps to pursue the Sustainable Development Goals. This implies not only changes in systems but also attitudinal changes. Respondent HP1 said it took them about 7 or 8 or 9 years to get the operations to get to the point of zero waste to landfill after a decision had been taken to do so.

Accordingly, the process of adapting to changing circumstances was perceived as one of the barriers faced by the platinum mining companies in meeting Sustainable Development Goals.

6.2.2.3 Costs

Costs as a barrier were related to the issue of prioritization and were in agreement with Baskaran (2021) with regard to strategies adopted by organisations in changing market conditions. In addition to alternative costs as a consequence of the intermittent power outages, platinum mining companies also faced high costs of accessing freshwater and some had to install plants to recycle water.

These costs were perceived by respondents as a barrier to their organisation's efforts in pursuing the Sustainable Development Goals as money was diverted to these essential operational expenditures.

6.2.2.4 Government Red Tape

Mthembu and Nhamo (2021) identified several inherent challenges in South Africa's policies and strategies in addressing the Sustainable Development Goals focusing on climate action (Goal 13). They suggested that some of the country's responses were due to international pressures and expectations rather than being driven by domestic issues. Mthembu and Nhamo's focus was specific to issues of climate change rather than the Sustainable Development Goals in totality.

The most salient contributory factor to climate issues is emissions which are more relevant to coal mining companies than to platinum mining companies. On the other hand, environmental issues are dealt with under the auspices of the National Environmental Management Act (Amended National Environmental Management Act 107 of 1998, 1999) which is a national statute. However, the impracticality of some of the government's requirements, which they ascribe to being motivated by international pressures (Mthembu & Nhamo, 2021) seems to be valid. Some of the

respondents cited government inflexibility as a barrier to attaining some of the Sustainable Development Goals. Respondent TT1 was particularly concerned about wastage due to duplication of effort on initiatives related to the Social Labour Plans as required under the Minerals and Petroleum Resources Development Act (Mineral and Petroleum Resources Development Act 28 of 2002, 2002). Respondent TT1 suggested that government “*need to be able to change and say ‘Not you company A, we want you to do A, B and C’ – but they need to be able to say ‘From the region point of view, Rustenburg area, organisation in this, we need this.’ Then we will be able to work together, but up until they change that, we are unable to because we need to tick our tick box first: as an organisation have we done a, b, c per the law, before we can go and collaborate with others*”.

6.2.2.5 Complexities in Dealing with Stakeholders

There has been a general consensus on the critical role that multinational corporations could play in advancing the Sustainable Development Goals have been identified as being critical in furthering the Sustainable Development Goals (World Commission on Environment and Development, 1987; United Nations, 2019; Nancy M.P. Bocken & Geradts, 2020b; Andersen & Esbjerg, 2020). However, in contributing to the attainment of these goals, multinational corporations have to operate within the confines of the statutes regulating their activities. In South Africa, as stated above, these statutes include the National Environmental Management Act (Amended National Environmental Management Act 107 of 1998, 1999), Mineral and Petroleum Resources Development Act (Amended National Environmental Management Act 107 of 1998, 1999) and the Broad-Based Black Economic Empowerment Act (Broad-Based Black Economic Empowerment Act, 2003, 2004).

Some of these statutes, like the Mineral and Petroleum Resources Development Act, have some of their components, like the Social Labour Plans which are locally administered and therefore need to respond to local needs rather than strictly on strategic ones. Given that their company is partly owned by the local community they focus on poverty alleviation a lot. Such focus translates into the prioritization of where money has to be spent most. In addition to addressing the Sustainable Development Goals, some respondents pointed out that pressures to maintain their social license to operate also acted as an incentive to prioritise projects agreed to with local communities.

In addition to refocusing of resources, delays in reaching agreements on projects as well as priorities often led to delays in execution. Respondent SM1 pointed out that mines tend to ensure agreement with communities before embarking on any projects which have an impact on local communities as failure to reach a compromise might lead to the unsustainability of the project.

Respondent AK1 also suggested that communities could sometimes have too many expectations from the mines and at times such expectations are unreasonable. According to Respondent AK1

6.2.2.6 Conclusion to Research Question 2 Discussion

The main barriers to contribute effectively to the implementation of the Sustainable Development Goals identified by respondents could largely be divided into two categories, internal barriers and external ones. Internal barriers include constraints in meeting organizational objectives; difficulties in adapting to changing circumstances as well as costs.

One of the main reasons why the Secretary-General of the United Nations suggested that the private be mobilized to meet the Sustainable Development Goals (United Nations, 2019) was because of their ability to do so. As Yakovleva et al. (2017) point out, projects with short lifetimes “may provide limited economic input”, (p. 431). It follows therefore that to be able to make a contribution to the Sustainable Development Goals, large mining companies have to ensure their own sustainability first. To do so, funds and effort should first be diverted to ensure organizational sustainability before anything else. This can act as a barrier to contributing to the Sustainable Development Goals.

Red tape issues related to the stakeholder management of local communities was the second category of identified barriers faced by platinum mining companies in meeting the Sustainable Development Goals. While red tape and dealing with stakeholders have different legal enforcement potentials, they can have an equally disruptive effect on the mining companies. Therefore, the mining companies have to be equally responsive to them. However, responding to coercive incentives (Li, 2009) such as laws results in the application of low minimum standards (Bartels, 1967). Mthembu and Nhamo (2021) also point out that when mines are only acting out of

pressure instead of pursuing goals in line with their unique organizational strategies often results in implementation inefficiencies (Mthembu and Mhamo, 2021).

6.2.3 Key resources supporting the successful implementation of SDGs in SA platinum mines

This question sought to establish what respondents perceived as the key resources needed to support the successful implementation of strategies in delivering prioritized Sustainable Development Goals.

6.2.3.1 Expertise in Human Capital

The need to focus on addressing constraints in meeting organisational objectives identified in section 6.2.2.1 highlights the need for organisations to focus on their sustainability in pursuing their organizational interests. Nancy M.P. Bocken and Geradts (2020b) point out the importance of sustainable business model innovation on the institutional, strategic, and operational levels. However, Nancy M.P. Bocken & Geradts (2020b) suggest that multinational corporations often lack the dynamic capabilities which would enable multinational corporations to sense, seize, and transform for Sustainable Business Model Innovation.

Expertise was identified as a key resource needed to support the successful implementation of strategies to deliver prioritized Sustainable Development Goals in the platinum mining industry. Respondent DD1 explained the importance of expertise:

“you need good expertise in terms of delivering these. You don't just do it because you have to do it. Or you want to tick the box. It should be done by people whom you will be proud of the end product and also as the years go you can say it is still there” Respondent DD1.

6.2.3.2 Stakeholders Support

Stakeholder support was also seen as a critical resource in the successful development and strategies to implement the Sustainable Development Goals. Stakeholders identified by respondents were both external and internal stakeholders.

6.2.3.2.1 External Stakeholders

Mthembu & Nhamo (2021) noted the existence of factors forcing “a growing number of industries to use energy more efficiently” (p. 2). These include “pressure from the markets, growing public awareness of environmental sustainability and increasing energy costs and volatility” (Mthembu & Nhamo, 2021, p. 3). These external factors do not only focus on issues related to energy efficiency but also on issues of the sustainable business models which include a triple bottom line approach (Bocken & Geradts, 2020b; Institute of Directors Southern Africa, 2016).

The importance of external stakeholders as a key resource in supporting the pursuance of the Sustainable Development Goals was highlighted by Respondent DD1 who pointed out that:

“what’s helping the companies is the investors now and the analysts who are forcing that the companies have to show how are they contributing to the ESG which is the environment, social and governance. So that helps a lot to an extent that we have just completed what we call task force on climate-related financial disclosures.”

6.2.3.2.2 Shareholder and top management support

Shareholders, through the Board of Directors and in using other avenues can play a critical role in persuading organizational leaders to take a particular direction. Once the CEO and other relevant leaders have taken a decision to take a certain path, they can unlock the funds needed. The focus of the Secretary-General of the United Nations on the CEOs specifically is in recognition of this critical role (United Nations, 2019).

The role of the Chief Executive Officers was also pointed out by respondents. Respondent HP1 expressed the appreciation of organizational leaders and said:

“you know we have 100% support from our EXCO and our CEOs in this regard. And I think that is a critical point, you need to have top management support in order to make these things happen because if you don’t have that it is very difficult to get budgets approved, to get support from your general managers at your operations”

6.2.3.2.3 Government Support

While the role of private sector organisations in the pursuance of the Sustainable Development Goals has been lauded, organisations operate within the confines of the legal frameworks in the countries where they operate. His role was indicated by Sonesson (2015) who pointed out that “mining companies committed to the SDGs will benefit from improved relationships with governments and communities and better access to financial resources” while “those that fail to engage meaningfully with the SDGs will put their operations at risk in the short and long term” (Sonesson, 2015, p. 2).

Respondent TT1 pointed that better government support would enable better collaboration in pursuing Sustainable Development Goals in the mining industry. According to Respondent TT1:

“as the mining industry, we tend to work alone; if we had to work together with other mining companies our impact when it comes to contribution to SDGs would be very big. So we are doing things in silo’s, so I think that is one thing if I would have to change the system”.

Respondent TT1 added that the prevailing approach to compliance has resulted in the need to “*tick our tick box first: as an organization. Have we done a, b, c per the law before we can go and collaborate with others*”.

While lack of governmental support was perceived by respondents as a needed resource, there is a possibility that support was present but was lacking was capacity and necessary skills. Mthembu and Nhamo (2021) also found challenges with institutional capacity to implement the policies at sub-national levels. As a result, there was a tendency to rely on a few experts which made the system vulnerable and fragile. Respondent DD1 noted the impact of this lack of capacity:

“if you want an approval say, to build houses or you want an approval to build a school, you must be sure at the minimum it will take you a year before you get that approval from the government”.

Such delays were likely to lead to organisations focusing more on areas that had more value to them, such as those which would serve the purpose of enlightened self-interest rather than those whose ultimate benefit had little value for them.

6.2.3.3 Financial Resources

Financial resources as a key resource are self-explanatory. The issue was highlighted by the CEO's surveyed in the Accenture and the United Nations Global Compact study when they mentioned the pressure for cost-consciousness as a constraint in meeting their targets with the implementation of the Sustainable Development Goals (United Nations, 2019).

The issue of focusing on issues of compliance in pursuing the Sustainable Development Goals also highlights the importance of finance as a key resource.

6.2.3.4 Conclusions to Research Question 3 Discussion

While the issue of key resources to support the successful implementation of the Sustainable Development Goals were categorized as Expertise in Human Capital, Stakeholder Support and Financial resources what was clear was that more creativity was needed in making what was available count more.

6.2.4 Are social, environmental elements separately addressed from compliance issues?

The purpose of this question was to establish whether Sustainable Development Goals related to compliance received more attention than other goals unrelated to the concept of enlightened self-interest.

Most respondents indicated that there were no roles specifically dedicated to the pursuance of sustainable development goals. However, these were allocated according to the strategic functions of the organisations. Respondent TT1 put it more succinctly:

“each and every element has a pillar inside and within that pillar, we are coming back to the KPIs, that is where my KPIs are coming in again. So there is no way we will miss them, they are part of our strategy, so that is how we implement it.”

By incorporating the aspects of the Sustainable Development Goals into the KPIs of employees, as Respondent TT1 points out, “there is no way” that they could be missed particularly as they are embedded within the reward system of the organization. As Pregnolato et al. (2017) point out, monetary rewards are considered the most important component in total reward packages. The answer to what would

be the barrier to the implementation of Sustainable Development Goals would then lie not in incentivized activities but in the choice of what is being incentivized.

6.2.5 Impact of COVID 19 in the implementation of Sustainable Development Goals?

This question sought to understand whether the implementation of Sustainable Development Goals were vulnerable to external interruptions such as COVID 19.

COVID 19 had an unprecedented disruptive impact in many areas. Simply from a practical level, delays occurred in many of the projects being undertaken. Respondents also pointed to the working from the home effect which made it difficult to carry out some of the projects in place.

In addition, given the shutdowns of economies, very few industries came out of the pandemic unscathed. According to Respondent HT1, the platinum mining industry as one of those which performed better. However, it is beyond the scope of this study to establish whether the improved financial performance of the platinum mining sector was due to COVID 19 or to changing commodity prices.

According to respondents, the COVID 19 pandemic also led to the shifting of focus with regard to which Sustainable Development Goals were being prioritized. Fortunately for the platinum mining sector, the improved financial performance enabled investments into hospitals, clinics and services which assisted in alleviating the adverse effects of COVID 19.

Therefore COVID 19 did have an impact on the focus areas being prioritized in implementing the Sustainable Development Goals. This on its own suggests that progress on the areas being focused on would be greater than in the areas which received less attention.

6.3 Conclusion to Chapter 6

In discussing the results of this research, it emerged that five main barriers were perceived as hindering the attainment of Sustainable Development Goals. These were related to constraints in meeting organizational goals, difficulties in adapting to changing circumstances, costs of implementation, government red tape and complexities in dealing with stakeholders.

These constraints led to the prioritization of the goals being pursued and the inadequacy of the resources needed to support the strategies being taken to pursue these goals. The findings of this research confirm sentiments expressed in literature that while multinational organisations are critical in assisting with meeting the Sustainable Development Goals, these organisations should be in a state of health to attend to issues beyond their core activities. Given that sustainability is central to the future of business, the development of competencies in sustainable business model innovation was critical both for the sustainability of these organisations as well as their contribution to the Sustainable Development Goals.

As Acuti et al. (2020) point out, the framework of the Sustainable Development Goals acknowledges that government action alone cannot achieve the targets. Therefore, the interdependency to achieve these objectives requires greater policy coherence to reduce duplication and inefficiencies (Statistics South Africa, 2019). Li, (2009) notes that moral incentives are based on choosing what is regarded as the right thing to do. What is the right thing to do for organisations, given their many priorities, depends on what is salient at the moment.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION

7.1 Introduction

In Chapter 5 of this report, the results of the research into the barriers hindering the successful implementation of the Sustainable Development Goals in South Africa's platinum mining companies were presented. These results were discussed in Chapter 6 in line with the literature reviewed in Chapter 2 to situate the findings of this study within "existing literature in a broader scholarly and historical context" (Boote & Beile, 2005, p. 4). The purpose of this chapter is to present the principal findings of this research; explain what the implications of these conclusions are for policymakers and leaders of Platinum Mining Companies; identify the limitations of this study, and make suggestions for further research.

7.2. Principal Findings

7.2.1 Findings

The purpose of this study was to explore the barriers to the implementation of Sustainable Development Goals in South Africa's platinum mining sector. The overarching research question of the study was, therefore, what are the perceived barriers to the successful implementation of Sustainable Development Goals in South Africa's platinum mining sector? The principal finding of the study is that the barriers faced by platinum mining companies in successfully implementing the Sustainable Development Goals are due to a lack of capacity to address issues outside of their core objectives.

7.2.2 Underlying Expectations

The Sustainable Development Goals were developed by member states in 2015 (United Nations, 2019) with the purpose of continuing the work of the Millennium Development Goals (Statistics South Africa, 2019). Given their economic power, the involvement of private sector organisations was seen to be critical for the attainment of the Sustainable Development Goals (United Nations, 2019). This expectation was based on what the organisations could contribute to the development of the goals, in the context of different legal boundaries in which these organisations operated (Pirmana et al., 2019).

This expectation overlooked the need to take into account the needs of organisations in the furtherance of their own objectives. As a result, the expectation of the platinum mining companies in advancing what was essentially a state function could be perceived as an add-on to the role already played by private sector organisations through various channels including their social responsibility programmes, activities geared towards gaining the social licence to operate as well as compliance with statutory requirements. In the case of platinum mining companies in South Africa, this would be the fulfilment of obligations as part of their Social and Labour Plans (Department of Mineral Resources, 2010).

As Pirmana et al. (2019) point out, the commitment of United Nations member states to the implementation of the Sustainable Development Goals was also motivated by the fact that many of the SDG targets and objectives were in line with the overall developmental goals of those countries. In South Africa, this was confirmed by Statistics South Africa (2019) with respect to the National Development Plan. It is this alignment that has made it possible for the National Development Plan to address 74% of the Sustainable Development Goals. However, the alignment of private sector needs with the Sustainable Development Goals was overlooked while the focus was on the perception that “it is 75% of the global GDP” (United Nations, 2019, p. 2). While the CEO’s surveyed in the Accenture and the United Nations Global Compact study expressed enthusiasm for making a contribution, the pressure for cost-consciousness acted as a constraint in meeting their targets with the implementation of the Sustainable Development Goals (United Nations, 2019). In essence, the need to address their own core objectives took precedence. The same was found in this study.

7.2.3 Meeting own Primary core

The first two of the five supporting research questions focused on the primary purpose of this study, which was to explore the barriers to the implementation of Sustainable Development Goals in South Africa’s platinum mining sector. Support research questions 4 and 5 were intended to establish structural priorities in organisations on how they implemented the Sustainable Development Goals while support research question 3 had to do with what was perceived as the key resources needed for the platinum mining companies to do better in pursuing the Sustainable Development Goals.

In response to support research question 1 which had to do with which Sustainable Development Goals were being prioritized by the platinum mining companies, it was found that the prioritized areas fell under those related to compliance, social license to operate and enlightened self-interest. The pursuance of the Sustainable Development Goals in these categories had some form of incentive for the companies. For goals having to do with compliance and the social license to operate, it was a coercive incentive (Li, 2009). For pursuing Sustainable Development Goals that fell under the enlightened self-interest category, the incentive was remunerative (Li, 2009).

In response to support research question 2 which had to do with what respondents perceived as the main barriers faced by their organisations in successfully implementing the Sustainable Development Goals, it was found that capacity in meeting own objectives either financially or abilities, as well as red tape, were perceived as the main barriers faced by these organisations in successfully implementing the Sustainable Development Goals. The issue of lack of capacity has to do with focusing resources on what was core to the organisations while the issue of red tape led to delays.

It is of interest that the incentives identified by the respondents in this study had more to do with the coercive and remunerative types of incentives (Li, 2009). While it can be argued that the response to the COVID 19 was an indication of a moral type of incentive (Li, 2009), this could also be seen in the context that the platinum mining companies actually performed better that year as pointed out by Respondent HT1. Similar to the CEOs surveyed in the Accenture and the United Nations Global Compact study who demonstrated commitment to pursuing the Sustainable Development Goals (United Nations, 2019), the fruits of such commitment are limited by the availability of resources after organisations have met their core objectives.

Although the context differs, the findings of this study are similar to the reasons advanced by the CEOs surveyed in the Accenture and the United Nations Global Compact study who attributed their delayed pace in meeting the sustainable development goals to organizational constraints (United Nations, 2019). What is clear is that the constraints in resources, as a result of the vagaries of the markets in which they operated, forced these organisations to prioritise their core objectives resulting in reduced capacity for addressing the Sustainable Development Goals.

A similar situation occurred with the Millennium Development Goals where progress had been uneven (United Nations, 2016). Interestingly, progress in meeting the Millennium Development Goals was uneven “particularly in Africa, least developed countries, landlocked developing countries and small island developing States” (United Nations, 2016, para 16). What these areas had in common was, unlike developed countries, a lack of capacity, on their own, to advance the Millennium Development leading to a dependency on multinational corporations. These corporations were perceived to be critical in advancing the Sustainable Development Goals particularly in developing countries (World Commission on Environment and Development, 1987; United Nations, 2019; Nancy, Bocken & Geradts, 2020; Andersen & Esbjerg, 2020).

7.3.1 Implications for policymakers

The 3rd support research question sought to establish what respondents perceived as the key resources needed to support the successful implementation of strategies in delivering prioritized Sustainable Development Goals. The issues raised fell under the categories of Expertise in Human Capital, Stakeholder Support and Financial resources. Both expertise in human capital and financial sources pointed to the issue of organizational capacity to do both things within the core organizational goals as well as outside.

Stakeholder support was related to both internal stakeholders to support the pursuance of the goals. Such support implied that those in a position to make a decision had to prioritize the allocation of funds meaning that issues not perceived by them to be core to the organization received less attention. This suggests that organisations tend to prioritise those activities which were core to their organizational objectives or were perceived to be rewarding to the organisations

Accordingly, for policymakers to get private sector organisations to increase the prioritization of Sustainable Development Goals, they need to partner with such organisations in identifying priorities. In so doing, organisations would need to ensure that organisations were incentivised to pursue such goals.

One other aspect identified as a necessary resource was supported by governmental stakeholders. In partnering with platinum mining companies, policymakers would be

able to see areas of duplication and ensure that less “tick box” compliance was undertaken. This would release resources for other goals.

In essence, therefore, it means flexibility in the administration of compliance and possibly authority could be devolved to the local areas where effort had been expended in building relationships and areas of priority could easily be identified while local administrators are capacitated to ensure their effectiveness.

7.3.2 Implications for organisational leaders

While respondents noted the futility of tick-box compliance, they equally noted inefficiencies of such an approach in the form of duplication of effort. What was unclear was the extent to which this was communicated with the authorities. The population of this study was implementers of the Sustainable Development Goals rather than top leaders in the organisations who had contact with senior government officials.

Improving two-way communication between those implementing the policies and those in senior positions would enable a better understanding of what was happening on the implementation level. This would improve clarification on the goals that are important to be dealt with.

7.4 Limitations of the research

The research sought to establish the barriers to the effective implementation of the Sustainable Development Goals in the platinum mining sector of South Africa. The study focused on the large mining companies as these were perceived to be better able to contribute to meeting the Sustainable Development Goals. The platinum mining sector includes smaller companies. The views of these companies would have enhanced this study, particularly as they are also bound by the provisions of the National Environmental Management Act 107 of 1998, Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA) and the Broad-Based Black Economic Empowerment Act (BBBEE) of 2010.

A further limitation of the study is its focus on the platinum mining sector to the exclusion of other commodities mined in South Africa. While the platinum mining sector is currently the largest economic mining sector, mining plays a large economic

role in the country. Perceptions of the other sectors could have made a meaningful contribution to this study.

7.5 Suggestions for research

Unlike the Accenture and the United Nations Global Compact study (United Nations, 2019) which sought the views of CEOs, this study focused on those charged with implementing the Sustainable Development Goals in their organisations. For the comparative purpose and a holistic view of CEOs in the platinum mining sector, further research is recommended for CEOs in the platinum mining sector in South Africa.

Given that this study focused on large platinum mining companies, further studies are recommended in other mining sectors as well as in the smaller platinum mining companies. This is in view of the fact that addressing the Sustainable Development Goals is of national interest and therefore the advancement of these goals is not bound by a particular sector.

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APPENDICES

Appendix 1: Interview Guide

Question to obtain additional participant information:

- a. Could you describe your role and the company that you currently work for?
- b. How many years have you been working in this environment?
- c. What inspired you to be a sustainability ambassador?

Question 1: What element of sustainability goal are you prioritizing in your organisation?

Prompts:

Question 1.1 In your own understanding what are the elements of sustainability goals?

Question 1.2 Do organisations equally prioritize all elements of sustainability initiatives?

Question 1.3 What are the reporting channels for those elements?

Question 2: During the time of implementation what are the main barriers facing efforts to achieve a successful implementation of sustainability goals?

Prompts:

Question 2.1

To achieve the sustainability goals practitioners employ different strategies to implement the sustainability objectives. Which strategies did you employ to achieve the sustainability goals?

Question 2.2

How did these strategies contribute to the implementation of sustainability objectives?

Question 2.3

Looking at the post-implementation position of your organisation, what challenges do leaders face resulting from the implementation strategies employed?

(including pressure from institution, or peers)

Question 3: What are the tools that support and enables efforts to implement successful sustainability objectives?

Prompts:

Question 3.1

How do the enablers create value from the perspective of social, economic and environmental objectives?

Question 3.2

How can organisations ensure that these values are part of its sustainability culture?

Question 3.3

What cultural changes have you implemented in the process of achieving sustainability goals?

Question 3.3

Are the tools and support adequate to achieve sustainable goals? If not what can be done?

Question 4: In light of the support that enables the sustainability efforts (social, economic and environmental) are they addressed as separate compliance issues?

Prompts:

Question 4.1

Are the sustainability goals linked to the overall strategy of the organisation?

Question 4.2

If does the case, does the integrated approach contribute optimally to the sustainable development goals adopted by the United Nations by 2030?

Question 4.3

If not what can be done differently?

Question 5: Lastly but not least how has Covid 19 impacted the efforts of implementing sustainability initiatives?

Appendix 2: Informed Consent Letter

INTERVIEW CONSENT FORM:

Exploring the barriers to the successful implementation of sustainability goals in the platinum mining industry

Researcher: Rebecca Nkgudi, MBA Student at the Gordon Institute of Business Science, University of Pretoria

Dear Participant,

I am currently a student at the University of Pretoria's Gordon Institute of Business Science and completing my research in partial fulfilment of an MBA. I am conducting research on the barriers to the successful implementation of sustainability goals or objectives in the South African platinum mining industry. Our interview is expected to last 45 minutes to an hour.

Your participation is voluntary, and you can withdraw at any time without penalty. The audio recording of this interview is also voluntary, and you may choose not to be recorded. All data will be kept confidential.

If you have any concerns, please contact my supervisor or myself. Our details are provided below.

Researcher name: Rebecca Nkgudi **Research Supervisor Name:** Keith Fairhurst

Email: 20802872@mygibs.co.za **Email:** keith@unleashconsult.com

Phone: +27 82 8248932

Researcher's Name: Rebecca Nkgudi

Signature: _____

Date: _____

Participant Signature: _____

Date: _____

Appendix 3: Invitation to Participate in Research

Date:

Start Time:

End Time:

Introduction

Thank you for your willingness to meet me today and for agreeing to participate in this research interview. My name is Rebecca Nkgudi, and I am a final MBA student at The Gordon Institution of Business Science (GIBS). The topic I am researching is on exploring the barriers to the successful implementation of sustainable development goals in the South African platinum mining industry.

Purpose

This interview aims to gain a deeper understanding of what are the barriers to the successful implementation of sustainable development goals and how best to mitigate the challenges. Of particular interest are the sustainability elements like economic, environmental elements, and social contractual obligation which contributes to the performance applicable to sustainability goals will be covered.

Motivation

The research intends to contribute to the body of knowledge both in academic and in business. The research will be beneficial to sustainability practitioners to have a source of reference on what are the critical success factors during the implementation of sustainable development goals.

Assurance

The information shared in this interview will remain to be confidential. Therefore, I would be grateful if you could speak freely. Before we start, may I request you to sign the consent form and confirm that you approve that I take written notes and record the interview with an audio recording device?

The duration of the interview will take approximately 60 minutes.

Appendix 4: Ethical Clearance Approval

Masters Research <MastersResearch@gibs.co.za>

to me, Masters ▾



**Gordon Institute
of Business Science**
University of Pretoria

**Ethical Clearance
Approved**

Dear Rebecca Nkgudi,

Please be advised that your application for **Ethical** Clearance has been **approved**.

You are therefore allowed to continue collecting your data.

We wish you everything of the best for the rest of the project.

[Ethical Clearance Form](#)

Kind Regards

This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team.

