

Working Paper

Organizational Responses to Institutional Complexity in the Artisanal and Small-Scale Mining Field

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Abstract

The study of organizational responses to institutional complexity has received considerable attention over the past two decades. However, studies focus on organizational responses to complexity only in instances where two logics conflict with each other. Restricting attention to two logics, institutional organization scholarship has overlooked the issue of how higher numbers of logics might complicate the adoption of suitable organizational structures. Further, institutional theory has overlooked how responding to higher numbers of conflicting logics might influence attainment or derailment of societal expectations such as sustainable development. In this study, I address this paucity by examining responses to institutional complexity when more than two institutional logics compete. Results of a qualitative analysis of interviews, focus group discussions, field notes, and archival documents reveal four conflicting logics and six response strategies available among actors in the Zimbabwean Artisanal and Small-Scale Mining field. Three organizational responses namely capitulation, elusion and override are a novel contribution to theory on organizational responses to institutional complexity. The study also discusses sustainability implications of these

organizational responses and calls for more research on sustainable development under institutional complexity.

Key words: Conflicting Logics, Organizational Responses, Artisanal and Small-Scale Mining, Sustainable Development.

Introduction

“As the country modernizes the [mining administration] system, it is important to recognize and address the needs and aspirations of the stakeholders. This can be made possible through adequate consultation. These stakeholders include mining companies, artisanal and small-scale miners, farmers, landowners, civil society, communities affected by mining, various Government departments and other key stakeholders with interest or affected in any way by mining. Other analysts have however said failure to manage expectations, especially on access to mining title and dispute resolution, had been the major cause of chaos in the mining sector, which hindered the Government’s ability to translate mineral wealth to development.” (The Herald, 2023).

Organizations have always grappled with the theoretical puzzle of handling conflicting societal demands (institutional complexity) in different institutional fields. For example, the above quote from a Zimbabwean newspaper illustrates how the Artisanal and Small-Scale Mining (ASM) industry comprises “complex organizational arrangements in a sector composed of an entire range of stakeholders” (Verbrugge & Besmanos, 2016: 135). This theoretical puzzle is becoming more complex for organizations in contexts such as climate change, sustainability, and human rights (Almandoz et al., 2017). In turn, increasing complexity calls for additional theory and empirical examination of such contexts to generate

up-to-date understanding that can assist organizations and policy makers (Howard-Grenville et al., 2019).

Several studies investigate organizational responses to institutional complexity, but mostly in a dual logic setting. For example, Reay and Hinings (2009) investigate competition between the logics of ‘medical professionalism’ and ‘business-like health care’ in Canadian hospitals. Battilana and Dorado (2010) describe how leaders of the Los Andes micro-finance organization hired members carrying neither of the required banking nor development logics, and socialized them into adherence with an integrated mission incorporating both logics. Smith et al., (2013) discuss how social enterprises combine logics of social welfare with market logics. These studies show that two logics can either be blended, kept in balance or one logic can dominate the other (Battilana et al., 2017). However, there is still very limited knowledge on how organizations cope with instances where three or more logics compete.

There is a general paucity of studies examining situations with more than two conflicting logics (see McPherson and Sauder (2013) for an exception). This is problematic because Goodrick and Reay (2011) assert that restricting attention to two logics limits our understanding of how higher numbers of logics might complicate the adoption of suitable organizational structures. Further, Greenwood et al., (2011) explicitly point out that there is a need for examining settings in which more than two conflicting logics operate. According to Battilana et al., (2017), there are several possible relations for three or more conflicting logics. For instance, there is a possibility that some logics blend while others cannot be merged. There is also a possibility that one logic may dominate, subordinating the others. Nonetheless, we know very little about how possible relations may affect the tensions inherent in organizations facing institutional complexity. Hence, I investigate ‘How do organizations cope with institutional complexity emanating from more than two institutional logics?’

I attempt to answer this question in three steps using a case study of the ASM industry in the Global South. First, I seek to establish the number of prevalent logics in ASM. Second, I establish how the different logics relate to each other and, lastly, how actors cope with the resulting complexity. The results reveal four institutional logics, including subsistence, sustainability, state, and elitism interacting in ASM. The results also show how ASM miners employ six response strategies, including override, avoidance, elusion, compromise, manipulation, and capitulation to cope with institutional complexity. While two logics and three response strategies appear deductively, the other two logics and three response strategies emerge inductively from the data. The three organizational responses inductively emerging from the data (capitulation, elusion, and override) are a novel contribution to theory on organizational responses to institutional complexity. Finally, the study discusses sustainability implications of these organizational responses and directs future research towards investigating leverage points for sustainable development in the face of institutional complexity.

Theoretical Foundation

Institutional Logics and Institutional Complexity

Thornton and Ocasio (1999: 804) define institutional logics as “socially constructed, historical patterns of material practices, values, assumptions, rules, and beliefs by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to social reality”. Consequently, institutional logics provide societal actors such as organizations with the ‘rules of the game’ (Ocasio, 1997). Societal actors use these rules to categorize and infuse their activities with meaning and value (Greenwood et al., 2019). Hence, institutional logics provide organizations and their members with organizing principles and means to ends designations (Friedland & Alford, 1991; Pache & Santos, 2013). By so

doing, institutional logics offer prescriptions on “how to interpret organizational reality, what constitutes appropriate practice, and how to succeed” (Thornton, 2004: 70).

Logics can multiply and offer incompatible prescriptions, thereby increasing institutional complexity for organizations (Besharov & Smith, 2014; Greenwood et al., 2011). Institutional fields characterized by high fragmentation and moderate decentralization have a higher probability of exposing organizations to conflicting demands (Pache & Santos, 2010). Competing demands often emerge in these fields because of the multiplicity of institutional referents that may include regulators, funders, media, and professional organizations. Pache and Santos (2010) argue that these conflicting demands are imposed on organizations due to the presence of multiple powerful institutional referents without adequate power to dominate and adjudicate conflicts in fields. Instead, these referents possess sufficient power to constrain organizations to incorporate their demands in organizational processes. Hence, institutional complexity results from uncoordinated actions of institutional actors who present their own logics as more unique and legitimate than the others (Besharov & Smith, 2014).

Navigating Institutional Complexity

Organizations facing institutional complexity respond in several ways. Drawing on Oliver (1991), Pache and Santos (2010; 2021) propose a systematic prediction of how organizations respond to institutional complexity through either compromise, avoidance, defiance, or manipulation. In addition, several studies from the strategic management domain highlight other response strategies. For example, surveying organizational responses to intra-institutional complexity (contradictions arising within the same institutional order), Meyer and Höllerer (2016) point to ambiguity and neutralization as response strategies. Bertels and Lawrence (2016), arguing that the repertoire of organizational responses provided by Oliver (1991) and further supported by Pache and Santos (2010) does not apply to emerging institutional logics, outline additional responses, including advocacy, reinterpretation, integration, and isolation.

Different studies also point to hybridization as an escape route from institutional complexity (e.g. Battilana & Dorado, 2010; Dunn & Jones, 2010; Fox-Wolfgramm et al., 1998; Greenwood & Hinings, 1996; Jarzabkowski et al., 2010; Pache & Santos, 2013; Smets et al., 2012). In the sustainability literature, organizations that adopt hybridization of logics for sustainable development subsequently boost their overall performance (Artiach et al., 2010; Choi & Lee, 2018; Weber, 2017). However, these hybrid organizations largely result from the blending of only two logics. Therefore, knowledge on organizational responses still disregards the issue of how higher numbers of logics might complicate the adoption of suitable organizational structures (Goodrick & Reay, 2011). McPherson and Sauder (2013) outline how professionals in a drug court may contend with up to four logics simultaneously. These authors show that actors exercise agency in selecting which logics to adopt and for which purpose. Despite these studies, we still understand very little about how the possible relations may affect the tensions inherent in organizations facing institutional complexity.

In some cases, logics can be contradictory yet complimentary, to the extent that organizations are able to manage all logic expectations without blending the logics at play. For example, Smets et al., (2015) use an ethnographic study of Lloyd's reinsurance to illustrate how conflicting yet complementary logics can be balanced. According to this ethnographic account, individuals can balance logics through segmenting, bridging, and demarcating. In this way, actors dynamically balance coexisting logics and maintain their distinction while benefiting from their independence.

Another possible reaction to tensions resulting from multiple logics is evident from social movement theory. Social movements are collective efforts meant to challenge institutional or cultural domains so as to effect change in various levels of social life (Snow, 2004). These movements can take the form of identity movements whereby movement participants oppose dominant cultural codes being motivated by a feeling of collectiveness sustained through

movement member interactions (Taylor & Whittier, 1992). Activists in identity movements first create institutional gaps which are defects in available logics (Swidler, 2001). These activists then proceed to deploy strategies that suppress differences with the mainstream logic or celebrate differences with the dominant logic (Bernstein, 1997). Similarly, Rao et al., (2003) studied identity movements in French Gastronomy, showing that individual autonomy enables replacement of an old logic and its role identity by a new logic and its role identity.

In the context of rationalities in organizations, there are also several ways of avoiding the complexity emanating from multiple communities of meaning. For instance, Schedler and Rüeegg-Stürm (2014) suggest that when one community of meaning dominates over others, marginalized actors respond through avoidance. Further, through exploitation of consistent power contestations among communities of meaning, a once marginalized logic can improve its position and re seize dominance (Friedland & Alford, 1991). Another possible reaction by non-dominant communities of meaning is circumvention of dominant communities of meaning (Schedler & Rüeegg-Stürm, 2014). The authors describe this response strategy as the smuggling of decisions past the dominant logic through a non-transparent deployment of specialist resources.

We do not know, however, how dynamics change when more than two logics compete within a field. This study sets out to generate an understanding of how organizations cope with more than two conflicting logics. I investigate three main research questions using a qualitative approach to explore the unique features inherent within the ASM field. First, ASM is characterized by complex organizational patterns in a full range of stakeholders. The diversity of stakeholders with different demands simultaneously interacting in one specific field creates the possibility for institutional complexity. Hence, I first ask: ‘which institutional logics interact in the ASM field?’ Second, I explore ‘how the various ASM logics relate to each other?’ And third, I examine ‘how organizations respond to multiple (more than two)

conflicting institutional logics?’ Lastly, I discuss how the various response strategies affect sustainable development outcomes in ASM.

Artisanal and Small-Scale Mining

Artisanal and Small-Scale Mining is an economic industry with millions of people from low-income economies exploiting mineral resources in a substantially informal way (Hilson & Hilson, 2015). About 40 million people are directly involved in ASM in over 80 countries while an additional 120 to 280 million people benefit indirectly from ASM for their livelihoods (de Haan, 2021). ASM also contributes 15% to 20% of global minerals output (Buxton, 2013). Nevertheless, ASM has potentially negative social and environmental impacts that are significant (Rustad et al., 2016; Smith, 2019; Spiegel, 2012). When managed poorly, ASM often results in environmental degradation, worsening economic and social inequality, population displacement, armed conflicts, gender-based violence, corruption, tax evasion, increased health risks, land and water pollution and human rights violations (Hilson & Maconachie, 2020; Spiegel, 2015). ASM also becomes a considerable threat to sustainability when weak regulation arises through political establishments in which elected officials create opportunities for personal gain (Zvarivadza, 2018).

There is no universal definition of ASM. Rupprecht (2017) defines ASM as a manual activity of mineral extraction concentrated in rural areas of resource rich countries. Zvarivadza (2018: 50) defines ASM as ‘the exploitation of marginal ore [mineral-bearing rock] deposits, which are not profitable to mine on a large scale, through both informal and formal channels using rudimentary tools.’ Commodities with an existing market, high value, portability and low transportation cost (such as gold and diamonds) are the most mined in ASM (Zvarivadza, 2018). ASM organizations typically operate in pairs or small groups of up to twenty individuals who could be from the same family. ASM miners have less interest in social or environmental sustainability (Bansah, 2019). ASM miners rarely consider mine planning activities such as

excavation of access ways, rock breakage, material handling, ventilation, water management and general safety considerations (Rupprecht, 2015).

This combination of ASM features creates a sustainability challenge that has been the focus of much research and policy debates in recent decades. Maximizing gains while minimizing negative impacts from ASM forms a complex sustainability problem that research has struggled to solve (Siwale & Siwale, 2017). Verbrugge and Besmanos (2016: 135) describe ASM as comprising “complex organizational arrangements in a sector composed of an entire range of stakeholders”. These ASM characteristics render the industry a potential hub of multiple conflicting logics that actors grapple with. Accordingly, I examine the ASM context with the aims of i) uncovering the various logics, ii) how these relate to each other, and iii) how actors cope with the prevailing complexity.

Methodology

The goal of this study was to understand how organizations cope with more than two conflicting institutional logics within a specific field. This study employed a qualitative research approach to develop a detailed understanding of these issues and establish new insights into this underexplored topic (Creswell & Poth, 2007). An instrumental case study approach was appropriate as it allows focusing on an issue and then choosing a bounded case to illustrate that issue (Stake, 1995). Case study results then enabled me to employ grounded theory analysis to incorporate inductive and deductive approaches and develop new theory on organizational responses (Tracy, 2019).

According to Stake (1995), in a case study scenario, researchers may then proceed to select individuals within the bounded case to develop an in-depth understanding of the issue. Yin (2003) recommends collection of multiple sources of information in a case study. Therefore, I collected data through interviews, focus group discussions, field notes, and available archival

records. This combination allowed me to capture a wide range of perspectives on the topic (Nowell et al., 2017). In the following sections, I provide additional detail on case selection, data collection, validity and accuracy checks, data coding and data analysis.

Case Selection

Non-probabilistic sampling techniques appeared most suitable for this study (Vehovar et al., 2016). First, ASM is concentrated in the Global South and the organizational characteristics of the industry also differ amongst countries. I employed purposeful sampling to select a study context that exhibited the specific attributes of high complexity possibly emanating from logic multiplicity. Moreover, I am familiar with the Zimbabwean context and had previous experience with the Zimbabwean ASM sector. Hence, my familiarity with the study context, existing network and contextual knowledge of this field provided a suitable setting to employ convenience sampling and focus on a Zimbabwean case study. I employed snowball sampling to source interview participants. ASM is an extremely sensitive industry, due to the political control and informality surrounding most actors (Mawowa, 2013). As a result, interview participants will only provide reliable information to people they know or people whom they are referred to by their colleagues. The chosen non-probabilistic techniques allowed me to select a relevant context and study participants with the necessary attributes related to institutional complexity and actor responses (Palinkas et al., 2015).

Data Collection

During the data collection process, I paid attention to various ethical considerations that I outline in Appendix 1. I conducted semi-structured interviews, in May 2023, with 14 experts occupying varying roles and with different experiences in the Zimbabwean ASM context (Appendix 2). The average interview length was 56 minutes and participants represented all the 8 mining provinces of Zimbabwe. Interview questions were centered on the various institutional actors that ASM miners interact with, the pressure that different actors bring upon

miners and how miners handle this pressure. This approach allowed me to gather in-depth and wide-spanning insights into the nature of institutional complexity and actor response strategies in ASM (Gibbs, 2018). Since the exploration of instances with more than two conflicting logics is still rare, semi-structured interviews were appropriate for facilitating open and flexible conversations that could capture all useful detail of this sensitive topic (Denzin et al., 2023). In addition, I conducted 2 focus group discussions, 1 with members of a Non-Governmental Organization (NGO) and 1 with a group of miners. Each focus group discussion had 3 participants. Between interviews, I also spent time observing ASM day-to-day operations at mining sites and gathered field notes over 15 days. Fourteen recordings were in English and two were in the local language – Shona. I hired a local freelance data transcriber to do both transcription and translation of the audio files.

I supplemented primary data with archival records obtained in the form of reports, policy briefs, presentations, academic articles, and newspaper articles (Appendix 3). I collected these archival data in two stages. First, I sourced reports, policy briefs, and presentations from two ASM databases, i.e. Delve and artisanalmining.org, as well as the Elsevier database. I used search filters to gather documents with titles bearing any combination of the following Boolean search terms “artisanal mining/small-scale mining/artisanal and small-scale mining” AND “global/international/Africa/Zimbabwe.” The initial search yielded 114 documents covering the period from 2000 to 2023. In 2000, the Zimbabwean ASM industry witnessed an unprecedented influx of miners following the country’s land reform program (Rutherford, 2012).

I filtered these documents by examining the abstracts and summaries to find documents that mentioned contextual information about Zimbabwean ASM more than twice per paragraph. This exercise yielded 28 records which I used to chronicle the history of ASM in Zimbabwe. The historical review of ASM revealed inconsistencies, showing that actors are

confronted varying institutional demands at any point in time. For instance, in the early 2000s, ASM used to be concentrated along rivers and governed by one formal authority, the Rural District Councils (Spiegel, 2015). This changed, however, and by 2012 there were 15 government ministries and 20 local governing bodies involved in mining (Mutsinya, 2012). The evolution evident from this dataset was particularly useful for describing the context and showing how the prevailing ASM logics emerged.

During the above-mentioned historical review, the period from 2020 to 2023 revealed a much stronger consistency and yielded 4 articles. Further, for this focal period, I collected newspaper articles from five main Zimbabwean outlets, including The Herald, Sunday Mail, Newsday, The Zimbabwe Independent, and The Standard. I applied the same search criteria as during the first literature search and obtained 222 articles. To these newspaper articles I added the 4 documents from the first stage (covering the period 2020 to 2023), resulting in a total of 226 document sources which met the criteria to be included in the final analysis. I coded these articles together with interview data, focus group discussion data and field notes. Having reached saturation point, I stopped the coding process after analyzing 124 documents.

Data Coding

I processed the data using a grounded theory approach characterized by iterative sorting, coding, and comparison. I first applied open coding, examining and labelling minute data segments to identify surface topics, actions, and some interpretive details of the data (Strauss & Corbin, 1990). Following open coding, I performed axial coding, in which I assembled the data and identified connections between categories and sub-categories (Strauss & Corbin, 1990). Finally, I applied selective coding, where I selected core categories and systematically related them to other categories while validating emerging relationships and continuously refining the developing model (Strauss & Corbin, 1990). Appendices 4 to 6 show coding trees corresponding to the three research questions I intend to answer. I coded and analyzed the data

using ATLAS.ti, a qualitative data analysis software. At the end of the coding process, I developed summaries using the artificial intelligence memoing function in ATLAS.ti. I used these summaries to draw insights for writing category descriptions in the analysis stage.

Data Analysis

I analyzed the data by first providing a description of the case and context and each categorical aggregation to establish themes or patterns (Creswell & Poth, 2017). I proceeded to develop natural generalizations and presented an in-depth picture of the case using narrations, tables, and figures from the coding process. I adopted an embedded analysis focusing only on prevailing logics as this was the objective of my study (Yin, 2003). I also adopted a hybrid analysis incorporating both inductive and deductive approaches (Tracy, 2019). It was necessary to take an inductive stance because the exploration of empirical cases with more than two conflicting logics has not been tried extensively. Hence, inductive exploration allowed me to obtain new insights into an under-researched domain by drawing conclusions from emerging study findings. There is ample institutional research on logics and organizational response strategies relating to two conflicting logics and established concepts from this existing body of literature were also useful for interpreting emerging findings. This alternative perspective proved useful in applying more conventional, deductive analysis, allowing me to merge study findings with established logics and response strategies.

Validity and Accuracy Checks

I ensured the validity and accuracy of the collected data in two ways. First, I cross-examined participant responses against each other to ensure absence of discrepancies and inconsistencies (Maxwell, 2012). Applying this process, I was able to verify the credibility of the provided information, enhancing the trustworthiness of study findings (Creswell & Poth, 2007). I also applied triangulation of data between primary data and secondary data sources (Lincoln et al., 1985) further enhancing the reliability of the results. Thus, the accuracy and

authenticity of the collected data, as well as the credibility of the insights garnered, were maximized through this iterative process (Tracy, 2019).

Case Description

The ASM industry in Zimbabwe directly employs between 0.5 million and 1.5 million people, with a further 3 million people indirectly benefitting from the industry (Hilson, 2016). These miners mostly focus on the exploitation of gold, gemstones, chrome, diamond, tantalite, and lithium. At least 30% of miners are women and children (AMDC, 2017) and about 0.6 million are directly involved in gold mining. Mining in Zimbabwe is regulated by the Mines and Minerals Act (1961) and its subordinate statutory instruments. These instruments of legislation govern both ASM and large-scale mines. The Environmental Management Act (2002) also regulates mining by controlling environmental impacts. There are several other pieces of legislation that govern mining operations in Zimbabwe. I provide a full list of these laws in Appendix 7.

The marketing of mined gold is formally undertaken through the Fidelity Printers and Refineries, whereas other minerals are marketed through the Minerals Marketing Corporation of Zimbabwe. There are several government bodies responsible for collecting taxes and royalties from miners, including the Zimbabwe Revenue Authority, the Ministry of Mines and Mining Development, the Environmental Management Agency, and Minerals Marketing Corporation of Zimbabwe. The Rural District Councils Act empowers local authorities to collect levies from miners for local development. However, the regulatory environment in the Zimbabwean ASM field has undergone constant change over the past two decades. In the following paragraphs and Table 1, I chronicle relevant developments in the ASM industry and policy evolutions from the year 2000 until 2023. These developments are critical to identify and label key logics.

2000 - 2005: ASM has occurred in Zimbabwe since pre-colonial times, and the State rationalized this activity (*state logic*). However, intensive ASM activity began around the year 2000, following the country's agrarian reform (Rutherford, 2012). This land redistribution exercise opened the country's once occupied farmland areas to increased mineral exploitation. The land reform also created a political crisis that drastically affected the country's economy. Hence, coupled with an associated economic demise, characterized by hyperinflation, industry collapse and rampant unemployment around this time, many unemployed Zimbabweans resorted to ASM for subsistence (Spiegel, 2015). A series of droughts during this time also rendered agriculture less productive, driving many people into ASM. These events characterize the rise of a *subsistence logic* as people engaged in ASM to escape extreme poverty, now estimated to affect 49% of Zimbabweans (World Bank, 2021). However, ASM activities caused rampant environmental degradation and were associated with several social ills e.g., smuggling of 15 tons of gold out of the country between 2002 and 2007 (ZELA, 2016). The Environmental Management Agency was established in 2002 to promote environmental conservation and the organization requested all mining projects to carry out environmental impact assessments before commencement of operations. Together with other developmental organizations, there was a push for sustainable mining, marking the birth of a *sustainability logic*.

In the years leading up to 2006, the government of Zimbabwe strengthened its presence in ASM through various laws, policies, controlling bodies, government ministries to rationalize ASM and to enterprise in this industry. These initiatives highlight the rise of the *state logic* in ASM. The government launched several interventions to promote ASM and increase gold deliveries to the country's sole gold buyer, Fidelity Printers and Refineries. Some of these interventions included stabilization of the gold price, the formation of the Gold Mining and Minerals Development Trust and the establishment of the Mining Investment Loan Fund.

2006 - 2013: State interventions appeared to meet their objectives until 2006, when Zimbabwe's economy entered a deep recession following US and European sanctions imposed to curtail human rights violations by the Zimbabwean government. At this point, mining remained as one of the few major contributors to the National Treasury and Gross Domestic Product (GDP) (Mawowa, 2013). However, the Reserve Bank of Zimbabwe insisted on reducing the gold buying price to one-thirteenth of the international market gold price (Spiegel, 2014). This decision drove ASM miners into informal mining and trading. In response, ASM was criminalized, and the government launched a crackdown operation called *Chikorokoza Chapera* (no more artisanal mining) in which miners were arrested by the police and had their property destroyed or confiscated. The immediate consequences were increasing unemployment, crime rate, illegal mining, and unintentionally incentivized informal trading (PACT, 2015). During this time, the *subsistence, sustainability, and state logics* co-existed with moderate decentralization (Pache & Santos, 2010). This situation persisted until 2013.

2013 - 2016: When the government realized that it could not stop ASM, decisions were taken to decriminalize the industry. At the same time, different NGOs were active in the ASM field, advocating for the formalization of the industry. However, it was difficult for miners to conform to all formal requirements. For instance, miners had to comply with 13 procedures, requiring 158 days and US\$220 capital to begin operating legally (PACT, 2015). Consequently, many ASM miners continued to operate in grey areas, with varying degrees of formal arrangements. Regulation of the industry was poor during this period. Adding to this instability, underpaid government regulators and politicians were involved in illegal activities including the collection of bribes in exchange for disregarding mining standards violation, mine grabs, and also the funding of violent groups (Mkodzongi, 2020). These regulators and politicians were able to escape prosecution and work parallel to formal state structures. This political control of the mining field signifies the emergence of the *logic of elitism*. Many miners

formed associations which served as channels for representation, defending legal rights, policy advocacy and provision of various member benefits (ZEPARU, 2018).

*2017 - 2023: During this period, the ASM field stabilized with most mining areas being legally registered. In 2017, the Environmental Management Agency simplified environmental regulations for ASM from full requirements to a reduced checklist called the Environmental Management Plan. It is estimated that by 2018, 16% of ASM miners were legally registered and 84% were not (ZEPARU, 2018). Despite these developments, all unregistered miners soon engaged in informal contracts, whereby they worked under registered miners through various forms of agreements and social organizations (Chipangura, 2019). At this point, the gold price was at par with the international market price and miners received 100% of their income in foreign currency. The Ministry of Mines and Mining Development also established gold centers that were supposed to offer technical support to miners. Conforming with all formal demands, however, remained difficult. For instance, the 2018 World Bank report on business activity noted that, still, 9 procedures and an investment cost of 110% of per capita income were required to start a registered mining business (World Bank, 2018). Sustainable development of the industry was still hampered by poor law enforcement, prohibitive costs, corruption, elite accumulation, safety issues, farmer-miner conflicts, gender and community issues, and control by politically backed mafia-like groups (Mkodzongi, 2020). Increasingly, political elites controlled most mining areas and miners had to align themselves with these actors in order to maintain their mining rights and avoid existential threats to their business (Hilson, 2016; Hinton, 2005; Makotore, 2021; Mawowa, 2013; ZEPARU, 2018). During this time, all four logics co-existed with mild dominance of *elitism*.*

Table 1: History of ASM and emergence of prevailing logics in Zimbabwe

Phase	Description	Characteristics
2000 – 2005	Appearance of the <i>state logic</i> Birth of <i>subsistence</i> and <i>sustainability logics</i>	Land reform program which opened farming areas to mineral exploitation. Miner influx in ASM as a refuge from poverty. Rural District Councils lose control of alluvial mining regulation. Government interventions to promote ASM. Environmental degradation.
2006 – 2013	Coexistence of the <i>state</i> , <i>subsistence</i> and <i>sustainability logics</i>	Political instability and economic deterioration. Hyperinflation of 2005-2008 which rendered many Zimbabweans jobless. Environmental degradation. Informal marketing. Criminalization of ASM under the <i>Chikorokoza Chapera</i> campaign. Increased informal trading following criminalization of ASM. Social ills through gender-based violence, child labor, illegal mining, corruption by law enforcement agents etc. Formalization efforts by civil society.
2013 – 2016	Emergence of the <i>logic of elitism</i> . Co-existence of all four logics	Decriminalization of ASM. Political control of mining activities. ASM formalization efforts by Civil Society organizations and government. Formation of several miners' associations. Government efforts to establish mining service centers for providing miners with technical support and services. Campaigns for ASM recognition and ASM focused legislation.
2017 – 2023	Co-existence of all four logics	Politically backed turf wars. Elite accumulation. Mine grabs. Informal contracts between registered and unregistered miners. Favorable gold pricing system.

Results

The first round of coding yielded 375 codes, 864 quotations and 47 memos. The second round of coding yielded 155 codes with 40 categories and 5 networks. The 40 categories produced 5 key themes, including prevailing logics, conflicting logics, organizational responses, sustainability implications and sustainability leverage points. However, for the purposes of this study, I limited the analysis to prevailing logics, conflicting logics, and organizational responses. These three core themes corresponded with my primary research questions.

Prevailing ASM Logics (Research Question 1)

The first research question sought to identify the different logics present in the Zimbabwean ASM industry. Using the inductive-deductive approach, I detected four logics, including subsistence, sustainability, state, and elitism. Of the four logics, two (state and sustainability) were deduced from existing literature (Friedland & Alford, 1991; Kok et al., 2019; Lee & Lounsbury, 2015) while two (i.e., subsistence, and elitism) emerged inductively from the data. Table 2 (also see coding tree in Appendix 4) provides a description of each logic in terms of its sources of organizational legitimacy, targets of legitimacy pursuits, basis of organizational mission, basis of organizational attention, basis of strategy, and primary associated actors. I adapted the identifying characteristics from McPherson and Sauder (2013).

Table 2: Institutional logics in ASM and their identifying characteristics. List of identifying characteristics adapted from McPherson and Sauder (2013)

Characteristic	Subsistence	Sustainability	State	Elitism
Sources of organizational legitimacy	ASM miners as generators of their own income.	ASM miners as responsible for societal welfare and environmental protection.	ASM miners as law abiding organizations and contributors to national economy.	ASM miners as supporters of and subordinate to elected officials.
Targets of legitimacy pursuits	Self/families/dependents of ASM miners.	NGOs, local community, wider society.	Government.	Elected officials.
Basis of organizational mission	Poverty alleviation, individual employment opportunity, individual income generation.	Giving back to the society, environmental protection.	Compliance with laws and regulations. National building.	Political protection, contributions to political causes, elite accumulation.
Basis of organizational attention	Profit maximization.	Community benefit, environmental protection.	Legal compliance. Production and disposal of mineral wealth to the government.	Compliance with unlawful demands of politicians.
Basis of strategy	Pay more attention to profits. Pay minimum attention to the environment, society, or nation.	Contribute to community welfare and employ environmentally friendly production practices.	Implement and observe all legal and regulatory requirements. Market through formal channels.	Get politically connected, support political causes, yield to political pressure.
Primary associated actors	ASM Organizations.	NGOs, local community.	Government regulatory and enterprising departments.	Elected officials.

Subsistence

As indicated in the historical review above, a land reform program, followed by hyperinflation, industry collapse, and rampant unemployment around the year 2000, drove many Zimbabweans into ASM for subsistence (Spiegel, 2015). A series of droughts rendered agriculture less profitable and further drove many people into ASM. These events characterize the rise of a subsistence logic as people engaged in ASM solely to escape extreme poverty, estimated to affect 49% of Zimbabweans (World Bank, 2021). Thus, poverty is the main driving factor for participation in ASM, as the industry provides a means to alleviate financial hardship and support families. Regardless, there were also a few ASM miners that approached mining as an advanced formal business opportunity, even though these represented only a small portion of the ASM industry. By 2018, only 16% of actors in the Zimbabwean ASM industry were formally registered with the Ministry of Mines and Mining Development (ZEPARU, 2018). Indeed, most mine owners and workers lived hand-to-mouth and were forced to employ illegal means to navigate formal and informal pressures that potentially threatened their income. Quotes from one interview respondent and one newspaper article highlight how the logic of subsistence shaped within Zimbabwean ASM:

“And you know in rural areas because agriculture is no longer functioning properly ASM is now what they are looking up to in terms of food and everything. And most of them, they just want to dig so that they can provide food for their children and school fees. So, I think that poverty makes us, where someone is just going there with their pick and shovel to just provide for their family. They don't think of anyone, anything else. And they know what they are doing is illegal, but they have no choice because it's the available livelihood mechanism.” [Participant 11 – Mine Manager].

“With over 400 000 artisanal and small-scale miners, mining has become a key economic sector in Zimbabwe, owing largely to the collapse and slow recovery of the manufacturing and agricultural

sectors, which previously contributed significantly to the national fiscus,” [Zimbabwe Independent: August 28, 2023].

The subsistence logic, thus, highlights the primary goal of survival held by ASM miners. These actors are forced to engage in mining activities, either formally or informally, to earn a living. However, informal engagements can have negative implications for society and the environment. These negative impacts push other institutional constituents to conceive and drive a sustainability logic, as I continue to elaborate.

Sustainability

The sustainability logic is characterized by activities meant to ensure the pursuit of profit also contributes to the welfare of affected communities and does not harm the environment (Etzion, 2007; Laurence, 2011). First, communities in which mining occurs believe that miners must give back to the community and engage in sustainable development. Opportunities to give back include the building of schools and medical facilities, providing clean water, and providing employment opportunities. Miners are expected to work with the community to gain community respect and support. Within Zimbabwean communities, cases of farmers accusing miners of degrading their farmland and polluting their farms with dangerous chemicals occur. Traditional leaders may also request financial contributions from miners. In these instances, community members reflect their desire to benefit from mining activities. One respondent summarized the idea of contributing back to the community in the following quote:

“I’m sure it’s like, one: to have projects of that nature in the area will provide jobs to the community. So, it’s like it will lessen burdens to them [traditional/community leaders]. Two: they also survive with these projects, right? It’s like in Shona “unobvisa bikiro” [“you must pay a royalty”]. So, it’s like here and there you have to remember your elders in the area [by giving them gifts or money].” [Participant 8 – Mine Owner].

Second, various constituents within ASM believe that the environment must be protected when mining is conducted. Through the Environmental Management Agency and the Forestry Commission, the Zimbabwean government in conjunction with different NGOs such as ZELA and CNRG propagate this mandate. The Environmental Management Agency, for instance, plays a key role in enforcing environmental regulations and advocating for environmental protection. The agency issues environmental impact assessments and environmental management plans and conducts regular inspections and monitor miners' environmental management efforts to ensure compliance. Simultaneously, farmers and communities in mining areas raise concerns about issues such as cyanide usage, deforestation, and unsecured pits left behind by miners. To promote environmentalism, the Zimbabwean constitution provides environmental rights to every citizen. According to these rights, citizens can sue any miner who deprives citizens of their right to a clean and healthy environment. One participant pointed to an incident in which an ASM actor was taken to court over environmental damage issues:

“There was a litigation case with [Organization] where the community refused that company to start operations without an environmental impact assessment. It's not The Environmental Management Agency, it's the community, which went for that litigation, and [Organization] is a government company. But the community refused, no matter you are a government company, but where is your environmental impact assessment?” [Participant 1 – Government].

As a result, communities, NGOs, and select government departments create an expectation for sustainable business conduct by ASM miners. Additionally, constituents contending for sustainability emerge due to inadequacies exhibited by the state in rationalizing organizational behavior. I proceed to highlight how the state logic is structured in this context.

State

The state logic is concerned with the rationalization and regulation of human activity through legal and bureaucratic hierarchies (Friedland & Alford, 1991). In an ASM setting, the state is responsible for the administration of mining rights, regulation of mining activities, revenue collection and formulation of mining legislation. Key government departments that frequently interact with ASM miners include the Ministry of Mines and Mining Development, the Rural District Council, Fidelity Printers and Refiners, Environmental Management Agency, Forestry Commission, the Zimbabwe Republic Police through the Criminal Investigation Department, Zimbabwe Revenue Authority, the Zimbabwe National Water Authority, the National Social Security Authority, and the Ministry of Health. ASM miners must conform to all state demands observed by these government agents.

The state also enterprises within ASM through the Ministry of Mines and Mining Development's marketing departments, Fidelity Printers and Refiners and Minerals Marketing Corporation of Zimbabwe. The Ministry of Mines and Mining Development, therefore, is interested in both increasing gold production and overall mineral output. The department, thus, goes to significant efforts to ensure maximum mineral output and contribution into the National Treasury. Fidelity Printers and Refiners is responsible for gold marketing, whereas the Minerals Marketing Corporation of Zimbabwe focuses on all other minerals. Fidelity Printers and Refiners also provides loans to ASM miners, although actors complain that such loans are often inaccessible. Alongside these marketing departments, local councils are also interested in economic development. Hence, working under local councils, such as the Rural District Councils, miners are expected to pay taxes and levies for infrastructure development in rural communities. A state enterprising initiative tightly linked to ASM is the establishment of service centers through which ASM miners obtain mineral processing and marketing services.

The state offers these services at a fee and re-sells ASM products at higher prices on the international market. The quote below illustrates how these services centers operate:

“The finance minister said in order to realize maximum value from the country’s minerals, the Government will target beneficiation of mineral value chains such as the gold ore to bullion processing – through setting up of gold processing/milling service centers. On diamond cutting and polishing, Government will facilitate establishment of more cutting and polishing factories while on base metals (nickel, copper, iron, cobalt) recovery from Platinum Group Metals, Government is supporting the private sector towards establishment of a Base Metal Refinery.” [The Sunday Mail: November 28, 2021]

In addition, a division of the Ministry of Mines and Mining Development called Mining Promotion Corporation also enterprises within the mining sector through exploration and joint ventures with local and international investors. For example, the Minister of Information, Publicity and Broadcasting Services once announced the granting of mining rights to the Mining Promotion Corporation department as follows:

“The nation is reminded that Cabinet in December 2020 banned all applications for Special Grants in areas reserved in favor of Ministry of Mines and Mining Development through the Mining Promotion Corporation. Mining Promotion Corporation is a wholly owned Government company that holds a number of reservations for strategic investment and exploration.” [The Sunday Mail: August 3, 2022].

Therefore, the State is mostly concerned with the administration of mining rights, regulation of mining activities and enterprising within the mining sector. These State-specific roles in the ASM sphere conflict with subsistence and sustainability referents. I will explore

these conflicts in a separate section. It is relevant to note, however, that, within government, elite groups or individuals exist who leverage political power to propagate a logic of elitism.

Elitism

The elitism logic denotes the domination of society by a group of elites who are elected officials. These institutional referents thrive on deviant behavior but remain undeterred and also influence how rules are made (Desai, 2016; Gilad, 2014; Susskind & McMahon, 1985). These elites exercise considerable political influence in the ASM field, such that individuals aligned with these elites ‘grab’ mines, terrorize other miners, acquire mining rights in formally protected areas, and operate undeterred by the law. This influence also results in corruption and sector manipulation. State security agents and the military also operate in mining operations. Interview participants highlighted the influence of politicians and the demands they make, including contributions to political activities and rallies. Since these politicians wield considerable power, a fear of retribution and violence associated with elitism exists among mining actors. The significant power and influence exercised by politicians and high-ranking officials create remarkable challenges for small-scale miners to operate independently and without disruptions. Consequently, ASM miners must either align with the demands posed by elites as otherwise they risk losing tenure or may suffer deprivation from public provisions.

Small-scale miners often seek protection and security from political and economic gatekeepers to secure their tenure. This protection can be beneficial for both the political elite and the miners themselves. Political affiliation provides benefits such as protection from conflicts and manipulation of documents that may result in seizure of mining rights. There were also machete wars in 2020, which were fueled by these political affiliations, with those affiliated being protected and others being victimized (Mkodzongi, 2020). Surviving and thriving in the mining industry is difficult, particularly for mines with high-grade ores and consistent production as political elites can easily seize legally occupied mining properties.

Consequently, miners believe that political power is necessary to protect one's properties and interests. One participant provided a particularly detailed explanation of the elitism logic:

“But, in reality, when you go into the sector and you ask people, ‘who are you actually interacting with?’ You find it’s the police, it’s the army, it’s the intelligence, also the President’s office or the CIO [Criminal Investigation Office] [...] because of the amount of money that can be generated out of gold mining, particularly [...] And I would not go into the details, there’s the gold mafia, the documentary that goes into many details around this. But it means, it is [...] seen as a cash cow by a lot of people [...] People want to control it [...] You’re trying to create a small business that is operating in a formalized manner, in a responsible manner, but you are trying to do so in a sector where the people in power are trying to control it for the purposes of politics, getting votes and getting money. ”
[Participant 6 – Consultant].

In the following newspaper quote, a miner narrates how he lost his mining investment to invaders who were backed by local leaders and politicians.

“This is money flushed down the drain. As a company, we did everything that we were supposed to do. These thugs won’t allow us even to remove our equipment... The former owners of the mine forfeited it in 2011 and we came in, prospected and were given a licence. After mining for three months, locals, led by Chief Gwesela, invaded the mine and chased away our workers. The invaders went on to loot gold ore from the mine and processed it at a mill belonging to a local businessman. Chamu Zvishamira, the local ward councillor, is also allegedly involved in the illegal mining activities at the BVM mine claim.” [The Sunday Mail: February 23, 2020]

These results imply that political elites expect submission by other institutional constituents whilst accumulating wealth and consolidating power. In a nutshell, even though the four prevailing logics may have contradictory relationships, the diversity of interactions results in a

high degree of institutional complexity. In the following section, I proceed to explain and provide evidence for these contradictions.

Logic Relationships (Research Question 2)

Relationships among logics can either be contradictory or in support of each other (Besharov & Smith, 2014; Thornton et al., 2012). As shown in Figure 1 (also see coding tree in Appendix 5), the four prevailing logics in ASM appear to contradict each other, resulting in six contradictory sets of interactions (represented by solid lines), including subsistence vs sustainability, subsistence vs elitism, subsistence vs state, sustainability vs state, sustainability vs elitism and state vs elitism.

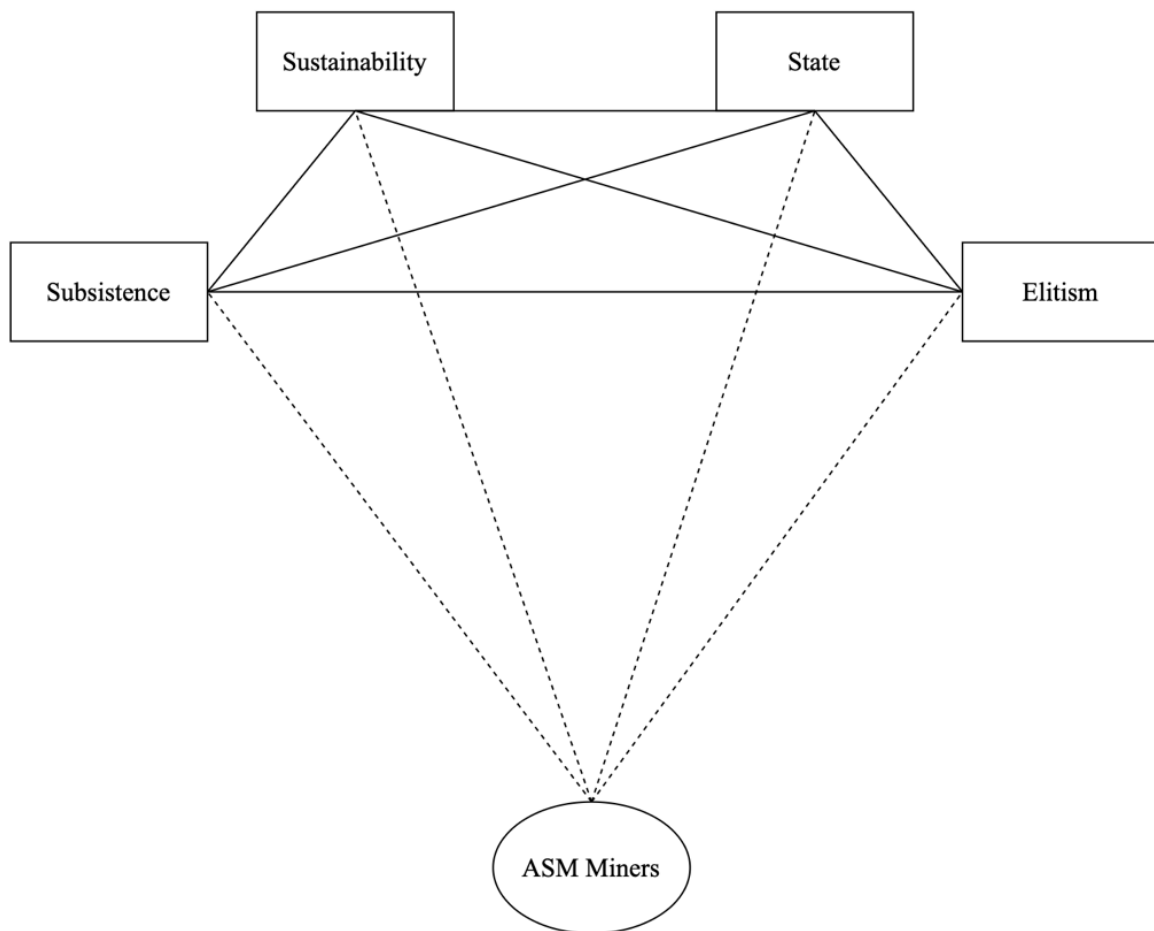


Figure 1: Institutional logics interacting in the ASM field and the relationships among them.

Subsistence vs Sustainability

The results reveal an apparent conflict between subsistence and social sustainability logics. From the community's perspective, traditional leaders play a significant role in either supporting or obstructing mining projects. Maximum support is accorded only to those mining projects that either benefit the community directly, or those whose owners agree to paying royalties to traditional leaders. Although traditional leaders often expect remuneration or tributes from miners, the latter believe this demand is unjustified since communal land is not a property of leaders. ASM miners feel constrained by these community demands, which materialize as an extra cost to ASM miners who are (typically) already financially stressed and pursue ASM as a subsistence measure. Additional conflicts may arise between miners and farmers, as well as with other stakeholders intending to benefit from mining operations. The following newspaper article exemplifies the farmer-miner conflict:

“There exists a complex relationship between farming and mining, wherein most minerals are found within the heart of arable land. It would appear that there is no legislation that governs the farmer-miner relationship in relation to the competing land uses, save for the Mines and Minerals Act. One is tempted to believe that the odds favor the miner.” [The Sunday Mail: September 4, 2023].

Another type of conflict occurs between subsistence and environmental sustainability logics. From an eco-centric viewpoint, environmentalism occurs at an economic cost, which contradicts poverty alleviation, efficiency, and wealth accumulation and, therefore, undermines the subsistence logic. For example, the setup cost for small-scale mining operations is cheaper with diesel engines when compared to investment into electric machines. Hence, with limited capital, ASM miners will opt not to invest in expensive electric equipment when similar production capacity can be achieved with cheaper diesel alternatives, at a greater associated environmental cost. In addition, inexpensive ways to process gold in ASM commonly include

dry milling and mercury amalgamation. Dry milling, however, involves extensive deforestation as miners cut down trees to light fires needed to conduct this process while mercury amalgamation releases toxic mercury into the environment. More sustainable refining methods are typically regarded as expensive and may lie beyond the capital reach of poor miners struggling with poverty. In support of this notion, one respondent highlighted:

“Here, in the small scale, we don't have much to invest in [sustainable] development. So, it's cheaper for you just to buy a diesel engine and start operating with a diesel engine. Plus, the third thing, the cost of electric machines is extremely high compared to diesel machines. I was in Beijing, you can buy a diesel ball mill for \$2,000, but a ball mill of the same capacity with an electric drive system is \$22,000. The difference is noticeably big.” [Participant 9 – Mine Manager]

There is also a sense among small-scale miners that it is impossible for the mining industry to ever be truly sustainable. These miners assert that sustainability is mostly a Western idea applicable only to developed economies. One participant mentioned:

“To us in the developing countries, their definitions [of sustainability] are not suitable, they are suitable for service industries not us in the primary industries because we will have to compromise the environment, we will clear the land and chase away all the animals that want to stay there and upgrade and start from the beginning.” [Participant 2 – Focus Group Discussion 1]

While ASM miners admit that environmental and social sustainability are important considerations for their organizations, miners offered two main arguments why they find this logic contradictory to their own goals. First, sustainability requires resources that are inaccessible to most ASM miners. Secondly, mining activities impact the natural environment directly, thus making it difficult to avoid environmental damage.

Subsistence vs Elitism

Political demands often contradict profitability and work efficiency under the subsistence logic. Profitability is negatively impacted by diminishing mining returns as miners are expected to pay for political support or risk losing their mining investments to political actors. For instance, one participant referred to a political rally that all local miners were coerced to attend, even though this disrupted mining operations and negatively impacted production targets.

“They can just come and tell you that we have a rally, and everyone here should come and attend the rally, and we are told to wait for an important person who will be here at 12 midday, but sometimes, they come at 4 pm and talk for a few minutes, and since mining works with targets, that slows down our production. You are then also told to run and do other things. If you go against, then you are said you are of the opposition [political party] and they threaten to evict you from your mining operation.”

[Participant 7 – Mine Manager]

Another participant highlights how the logic of elitism, although favored by the involved parties, conflicts with general market interests. ASM miners (who may have no interest in politics or who lack resources to acquire and maintain political support) risk losing their mining rights, as evidenced by a participant summarizing the effect of political control:

“So, it’s more like in the house where the mother is supposed to feed all the children, the mother feeds only those that want to play with her and neglect all those that want to play with the father.”

[Participant 15 – Mine Owner]

As a result of the oppressive effects of elitism, miners continue to lose their only source of survival given the economic situation in Zimbabwe. Hence, subsistence-motivated ASM miners may become radicalized and may form gangs or mafia groups to fight elitism

(Mkodzongi, 2020). A popular network of such groups called the *Mashurugwi* terrorized several mining communities in 2020, resulting not only in miners' economic losses by losing their assets to gangs, but also the loss of several lives.

Subsistence vs State

There are several challenges that ASM miners face with the state logic. First, Fidelity Printers and Refiners, as the formal market outlet, offers lower prices for gold compared to those accrued by sales on the informal market. Fidelity Printers and Refiners deducts a 10% transaction fee when purchasing gold, which, in 2023, increased to 12%. This fee burdens miners who aspire to sell their gold at global market price. In addition, marketing gold formally requires miners to travel to registered buying agents, whilst also resulting in delayed payments. These attributes of the state logic conflict with the miners' desire to maximize profits and achieve poverty alleviation. Whilst the state logic pressurizes ASM miners to sell gold on the formal market, the subsistence logic simultaneously exerts pressure to opt for sales using the informal market where higher value and efficiency are materialized. In addition, marketing through state channels and obtaining all mandatory mining licenses is also time consuming and delays profits for subsistence logic proponents. Adhering to formal procedures is costly to miners who entered ASM business due to poverty. Hence, operating in a legal manner, whilst observing all regulatory requirements, incurs costs that ASM miners often cannot afford. As one respondent remarked:

"What I can say is Ministry of Mines, they come in and they want proper papers to be in place, which [...] is a good thing. The issue to do with safety, the issue to do with legal requirements, but the thing is, capital is a scarce resource. So sometimes when you want to focus on, [...] putting the paperwork in place or whatever requirements, then it means you won't achieve your goals as soon as you would want." [Participant 12 – Mine Manager]

As regards mining safety regulations enforced by the State, following all regulations conflicts with ASM work efficiency and cost savings. For example, timbering (i.e. wooden reinforcements of mine shaft walls to prevent collapses that may injure or kill people underground) is a time- and labor-intensive process, and, thus, expensive for subsistence miners. Akin to other safety regulations, timbering also requires investment capital and, therefore, miners often disregard safety regulations and expose themselves as well as others to considerable dangers. Another example of unsafe (yet affordable) practices common in ASM is the illegal handling of explosives. To be a legal handler of explosives, miners are required to acquire work experience at established large-scale mines, be certified, and obtain explosives handling licenses. Opportunities to obtain the required work experience, however, are limited and subsistence miners typically do not have sufficient time to go through the associated training and license processes. Consequently, miners put themselves and other members of the public in considerable danger by illegally handling explosives, as mentioned in this interview account:

“And, if you come across them [regulators] while carrying explosive cartridges, they confiscate them because for you to possess them you need to have a blasting license. So, what we do is we buy them from Bindura [local town] and have them transported via public transport, but it is against the law. Recently, they caught someone who was carrying 15 boxes of explosive cartridges.” [Participant 7 – Mine Manager]

While miners acknowledge the legitimacy of state demands, fulfilling state obligations places a financial burden on miners. As a result, miners find it hard to comply with the legal requirements and resort to different ways of avoiding state regulations.

Sustainability vs State

The State, except for regulating the mining sector, is further interested in revenue collection through taxes and the marketing of minerals. Considering Zimbabwe's general economic hardships, the government is desperate to attract investment in mining that yields mining taxes and state profits through state-run mining enterprises. This desperation results in weak oversight of sustainability standards, allowing higher mineral production output. Low environmental standards and 'a blind eye' on local community needs characterize the current government approach to promoting mining investment. ASM miners benefit from relaxed enforcement of regulations, damaging the environment whilst simultaneously contributing to state income. To encourage higher ASM production, the government offers annual mining awards, which are offered to the biggest producers. This incentivization of production output encourages negative environmental impacts. The following quotes from two newspaper articles feature the concerns of an environmental activist about how the current administration of mining contradicts the environmental and social dimensions of sustainability:

"Zimbabwe government is too desperate for attracting and retaining mining investors, hence environmental issues are not a priority [...]. Because the government places mining above everything else, including the environment, polluters enjoy state protection and impunity." [The Standard: May 8, 2022].

"Mining in Zimbabwe remains an enclave economy detached from people's aspirations. There is a wave of dissatisfaction and rejection of the current mining system, with environmental degradation being the sole visible impact on communities. As a result, resource extraction should contribute to considerable changes in the communities where mining occurs." [Zimbabwe Independent: August 28, 2023]

Further confounding the sustainability logic, several state laws favor production interests over the land rights of community members, especially farmers. When a mineral deposit of interest is discovered, the government may allow exploitation without the consent of land or title-deed holders. The Mines and Minerals Act empowers the Minister of Mines and Mining Development to issue such directives. Usually, displaced farmers or communities are neither compensated, nor do they receive benefit from the mining activities taking place in their areas. One newspaper article notes this conflict as explained by a Zimbabwean attorney:

“The minister is empowered by the Act under the same section to issue title over ground that is less than 100 hectares should he deem it necessary in the event that consent is denied by the land occupier. This leaves farmers vulnerable, however this might become necessary in the event that a very valuable mineral is found and it would be in the best interests of the nation for such mineral(s) to be extracted. Thus, indeed when it becomes necessary mining rights take precedence over farming rights. [Hence, the] issue of compensation should come into play if the minister insists on issuing title over land that is less than 100 hectares or this discretion should be removed all together in order to protect the interests of farmers with smaller pieces of land considering that the smaller the farm, the more restricted the arable land.” [The Sunday Mail: March 14, 2021]

When such conflicts arise, local communities or farmers often have the right to appeal in a court of law. Due to their low levels of education and lack of financial resources to hire lawyers, most rural community members fail to approach courts and rather resort to protesting or attempting to sabotage mining projects. A Zimbabwean attorney describes these soured relationships (government vs. community members) in this newspaper quote:

“The Act provides that if a dispute arises between a miner and farmer on whether or not the land is open to pegging and prospecting, the matter should be referred to the Administrative Court. It goes

without saying that court processes are intimidating for most of the less sophisticated people and tend to be more expensive and take longer. While litigation is pending, the relationship on the ground continues to deteriorate.” [The Sunday Mail: September 4, 2023]

Due to the prevailing economic hardships in Zimbabwe, it appears that the government prioritizes revenue generation from mining over sustainability matters. Since economic and sustainability goals are concentrated in different government department, economic departments are afforded with greater power than sustainability-oriented departments. Similarly, concerns from non-governmental sustainability referents are ignored. As a result, antagonism between the state (economic departments) and sustainability constituents is commonplace.

Sustainability vs Elitism

Elitism enables political actors to prioritize their interests at the expense of the environments and communities in which minerals occur. Political elites may abuse the state apparatus and grant mining rights to specific companies or individuals, even in protected areas. For instance, the Zimbabwean government issued mining permits in state game parks and areas previously cordoned as national monuments or wildlife sanctuaries. The President has been implicated in cases in which political elites leveraged their official power to achieve personal gains, while disregarding sustainability standards. Political elites may do so by holding shares in those mining groups that are granted resource exploitation rights in protected areas or specific communities. This form of elitism contradicts societal expectations for wildlife conservation and national cultural heritage protection. For instance, two newspaper articles revealed:

“Near the entrance of Umfurudzi National Park, around 100km outside Harare, headgear left at a disused mine is among the signs that park authorities say are part of a by-gone era. They battle to keep

a balancing act even as the northern part of the park sees companies mining for black granite and gold with permission of a special exemption granted by the government. While mining is prohibited in national parks under the Zimbabwe Parks and Wildlife Act, the government allows flexibility in areas it deems safari areas. It's a grey area given the complexities of regulating mining operations and balancing the detrimental effects to wildlife.” [The Independent: May 17, 2023]

“It recently emerged that President Emmerson Mnangagwa granted the company a special grant to resume mining activities inside Zimbabwe’s largest game reserve. Mnangagwa’s government has granted several Chinese companies coal mining rights in the Hwange area, amid concerns by environmentalists that the activities would destroy the fragile ecosystem and worsen the human-wildlife conflicts.” [The Standard: Jun. 27, 2021].

Hence, political elites may operate undeterred, even if there are apparent, significant environmental or social consequences. Although often with limited success, NGOs, journalists, and affected community members increasingly raise their voices against such forms of abusive elitism.

State vs Elitism

Political elites may place themselves, or their interests, above regulatory law, sometimes without any apparent fear of prosecution. Such kind of behavior of political elites may even obstruct state functions and stall administrative and judicial processes. There are several reported instances in which government regulators imposed lawful instructions that were intended to align mining activities with legal provisions, yet political elites ignored these instructions. In one such case in Gwanda, a mining operation violated state-sanctioned mining safety regulations and was ordered to close operations. However, according to one interview participant, political elites defied this lawful order and re-opened the mine:

“In Gwanda there is another mine which was also taken and is being run by the youths as well. These youths belong to a certain political party and that mine is well known for having so much gold on it. But the problem that happens with small scale mining is that they don’t have equipment. They can’t really do deep extraction of gold. Once they reach a certain depth and they can’t pull out ores to the surface, they can’t go further. They [...] start blasting pillars that support the mine and eventually that mine collapses. The Gwanda mine that I am referring to was banned because a number of people died in that mine. But extraction is still being done because those [youths] are linked to this [political] party.” [Participant 15]

In other instances, political elites interfered with law formulation procedures, thereby obstructing the government in its legislative function. For example, efforts to amend the Mines and Minerals Act were delayed, slowing the process to take almost a decade. As one interview participant pointed out, this delay has been the result of political elites blocking the law-making process:

“Yeah, I can give an example of the Mines Bill. I think political interference or vested interests within the mining sector have been responsible for the delay in terms of finalization of the mines bill. I mean, we’ve been talking about this bill for quite a long period of time if it’s not a decade now. And we think [that] it is a result of some vested interests. You know, the ASM sector is mainly used by political actors. So, whenever they feel that we want to get more votes, they start to come up with some very good proposals on how they want to advance the interest of the ASM sector. But sometimes they also disadvantage, so that at least they feel that they need to depend on governments interventions. So, it’s like, that kind of a discourse is within the mindset in general, and we feel that this has been one of the reasons why the legal reforms have been delayed.” [Participant 1 in Focus Group Discussion 2]

Consequently, conflicts may arise between formal state objectives and elite ambitions. While the government aims to formally rationalize mining activities and benefit the nation economically, some political elites may fight specific state objectives to achieve personal gain and consolidate their power over personal interests.

Actor response strategies to conflicting logics (Research Question 3)

As shown in Table 2, ASM miners are the primary referents of the subsistence logic. This study aimed at understanding ASM miners' response strategies to conflicting logics. Hence, further analysis of response strategies focuses specifically on conflicts that involve the subsistence logic. Thus, my findings relating to research question 3 demonstrate that ASM miners might adopt up to six different response strategies as they try to cope with institutional complexity in their field. Three of these strategic response types, i.e. compromise, avoidance and manipulation, follow deductively from Oliver (1991) and Pache and Santos (2010; 2021). The remaining three, including override, elusion, and capitulation emerge inductively from the analyzed data. Figure 2 (also see coding tree in Appendix 6) shows how ASM miners cope with the four conflicting logics presented in Figure 1. Miners first develop a perception of the power distribution between themselves, as primary referents of a subsistence logic, and the primary referents of the contradicting logic. Following this perception, actors move on to respond through different tactics.

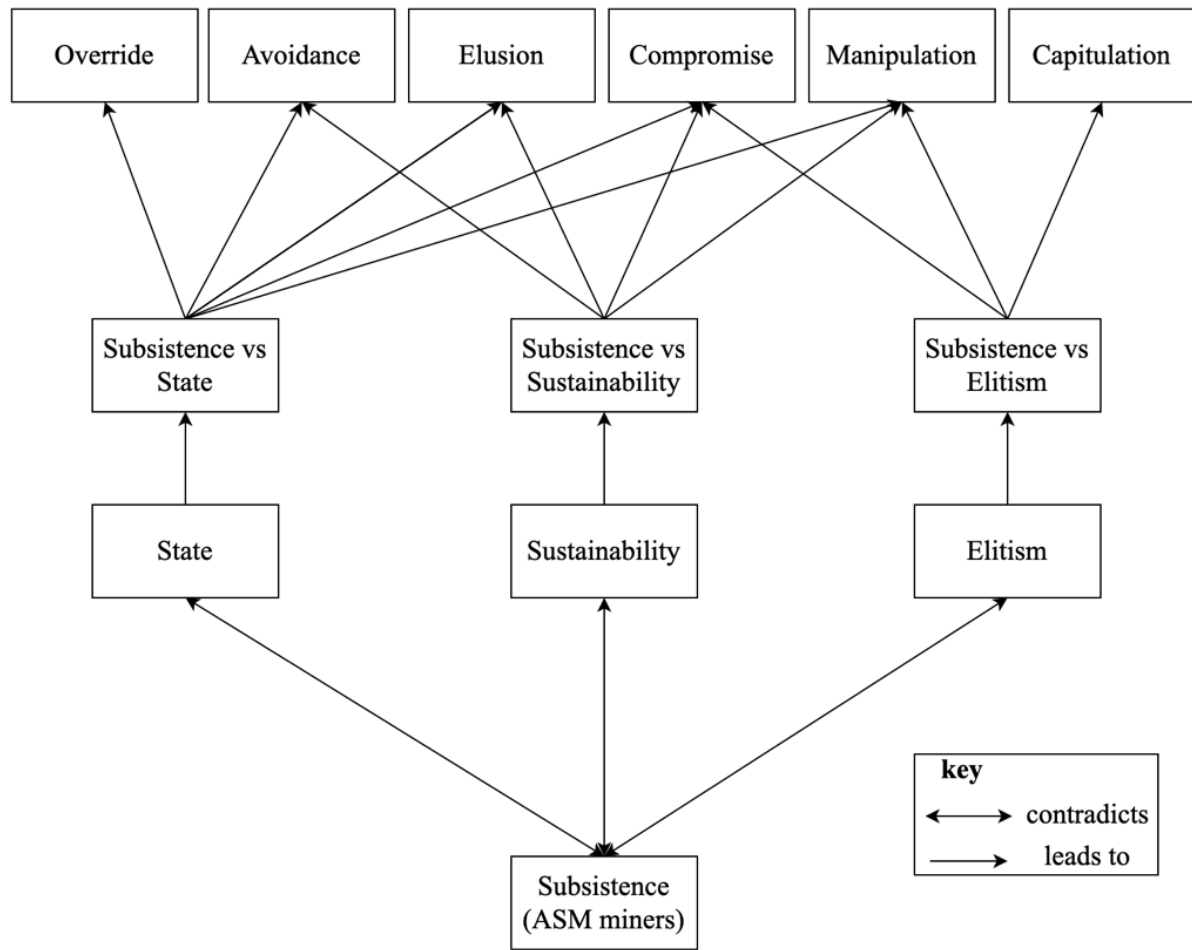


Figure 2: ASM logics and actor response strategies. The contradictory relationships between the subsistence and the other three logics contribute to the three conflicting sets of logics to which organizations respond in six major ways.

Override

While conformity to institutional norms, rules and values has been emphasized in organizational theory (DiMaggio & Powell, 1983), some actors may thrive by flouting institutional expectations and proceeding to *de facto* adoption of deviant strategies (Webb et al., 2009). This form of organizational response is characterized by overriding behavior of specific ASM miners. By overriding, ASM miners may dismiss formal authority and proceed to act in a way that still fulfills the objective of the defied authority. For instance, the Ministry of Mines requires specific paperwork and legal requirements to be observed, which can delay gold production considerably. In response, some miners start excavation before obtaining legal permits and utilize this period to raise funds that enables them to formalize their activities.

Hence, they first bypass legal requirements solely to fulfil the same requirements once they have developed sufficient capacity. In other cases, individuals take it upon themselves to assess the quality of roads in their operation areas, thus clearly performing government duties that benefit the wider community. Once miners realize no development of roads is occurring despite them paying taxes, they may choose to halt tax payments and rather manage road maintenance themselves. This kind of practice occurs because many local councils do not have a sufficient police force, nor can they revoke their mining licenses or leverage any other action against them. As stated by one participant:

“Others, just stop paying the tax because the Rural District Council is not the police, they don't have a police force. They can't do anything to you, they can't take away your license. There's nothing they can do to stop a business. So, oftentimes the coping mechanism is, you stop paying the tax and you provide the services for yourself.” [Participant 7 – Mine Manager]

Avoidance

While avoidance practices such as decoupling expose organizations to high reputational risk (Crilly et al., 2012; Marquis & Qian, 2014), thereby also risking sanctions that may negatively affect organizational profitability and survival (King & Soule, 2007), ASM organizations seem to regularly employ this tactic despite the potential consequences. As defined by Oliver (1991), avoidance involves decoupling internal organizational practices from external communication. By utilizing avoidance as a strategy, ASM miners decouple their true practices from the image that they portray to the primary referents representing state and sustainability logics. For instance, miners may comply with certain obligations in the presence of regulatory officials but continue with non-compliant activities once officials leave the mining sites. A government regulatory agent noted that miners are often not effectively adhering to Environmental Management Plans. Many miners only insufficiently implement

Environmental Management Plan stipulations, regarding plans more as a legal compliance document rather than actually putting their provisions into practice. A government regulatory agent expressed the following:

“They know that those are obligations that they have to do, but they also try to hide, to say, if they know you are coming from Harare [capital city], how frequently will you be at each and every mine? So, sometimes they can comply, at that particular moment, but the moment you leave then they continue doing the [usual].” [Participant 1 – Government]

Like large corporate companies that separate action from communication through various impression management tactics, ASM miners may also separate operational practices from the image they present to state and sustainability constituents.

Elusion

Elusion involves several illegal practices that ASM miners employ to escape conformity to those institutional demands that contradict the subsistence logic. When caught violating the law by state logic proponents, miners often offer money to pro-actively prevent fines or escape any other legal implications of their activities. Miners also specifically set aside small amounts of money to bribe officials, e.g. during mining operation inspections. Miners remarked that it is often beneficial to foster informal relationships with regulatory agents, instead of paying normal operations fees or observing all legal requirements. These relationships are built through corrupt activities. Maintaining such relationships with officials can yield benefits by being notified in advance of site visits or inspections, allowing miners to be prepared. Involved agents typically work in the security sector, also including the police force and who have knowledge of the local area and individuals. By maintaining informal relations with officials, miners may not have to wait for official visits and can provide incentives, such as fuel for

officials' vehicles. These activities help soften the officials' approach as law enforcers. One participant summarized relations by stating:

“So, you find that there is a lot of, I would say, cutting of corners. There is a lot of [...] illegal activities around so many expectations from the Ministry of Mines and Inspectorate.” [Participant 12 – Mine Manager]

Hence, through elusion, organizations adopt illegal means to escape institutional pressures that threaten organizational performance goals. In the context of ASM, the paying of bribes to regulatory agents and law enforcers is a common approach to escaping conformity to institutional demands while also evading prosecution when rules are violated.

Compromise

Organizational theory emphasizes that it is imperative for organizations to conform with prevailing norms, rules and expectations (DiMaggio & Powell, 1983). To show conformity, some ASM miners choose to compromise. According to Oliver (1991), compromise involves practices such as balancing, placating and pacifying to satisfy all institutional demands. To achieve compromise, Zimbabwean ASM miners often negotiate with regulators or form collaborations to overcome uncertainty resulting from regulatory enforcements and other institutional demands (Desai, 2016). These negotiations can include discussing expectations and operational improvements to avoid disruption of production activities or payment of high fines. Miners may also negotiate rates and request for exemptions based on their financial status. Indeed, most miners attempt to comply with regulations, but they may request additional time for certain tasks or activities. Negotiations may even involve paying certain amounts at the enforcement office to show compliance. However, actors try to ensure that compromises

reached during negotiations do not inadvertently compromise environmental regulations or other legal requirements. One mine manager mentioned:

“So there is a big problem there for you to convince the mine owner and for you to satisfy the agencies, you have to balance. You have to try to do as much as you can also saving the company’s money.”

[Participant 11 – Mine Manager]

To maintain balance between subsistence and sustainability logic imperatives, ASM miners attempt to satisfy the interests of traditional leaders, farmers, or community members over mining activities in their area. For instance, miners offer assistance to farmers in terms of water supply or specific farming activities to strengthen relations. Striking a balance between subsistence and elitism logics may involve making contributions for political causes while maintaining appropriate productivity at the local mines. These tactics and actions endeavor to foster agreeable co-existence between the various referents of subsistence, sustainability, and elitism logics.

Manipulation

According to Oliver (1991), manipulation involves efforts aimed at influencing the laws or policies that work against a particular institutional logic. In the Zimbabwean ASM industry, policy lobbying is common and occurs in three ways. First, the Zimbabwe Miners Federation, a lobbying group, accumulates and conveys miners’ concerns to the government. The Zimbabwe Miners Federation also promotes sustainable mining practices and provides support in cases of legal disputes between miners and stakeholders. Second, miners often form associations that articulate their concerns to parliament or other government platforms of policy negotiation. Most interviewed miners believe that joining mining associations is beneficial as these can advocate for higher mineral market prices and address the concerns and challenges

faced by small-scale operators. For instance, an association of women miners lobbied government as outlined in the following newspaper article excerpt:

“We also hear that there are EPOs (Exclusive Prospecting Orders) that the Government plans to release, our appeal to the Government is to let there be a certain quota of the EPOs reserved for allocation to women and youths in mining” [The Sunday Mail: September 6, 2023].

Third, manipulation also involves co-opting of traditional leaders to manage community interests in mining projects. Miners find it important to nurture good relationships with traditional leaders as they hold influence over the community. Traditional leaders and other influential community members, such as specific farmers, may be granted shares in mining projects so that they feel compelled to protect miners against sustainability pressures, or other deleterious influences. Manipulation may also occur between ASM miners and political elites. Many ASM miners believe that it is impossible to succeed in ASM without political connections. Hence, miners attempt to co-opt politicians for tenure protection purposes.

Capitulation

To escape negative externalities of non-conformity to demands imposed by powerful institutional referents (Ruef & Patterson, 2009; Zuckerman, 1999), organizations may capitulate. By capitulation, organizations or individuals surrender to the demands of a conflicting logic while completely losing conformity with their own primary logic. Capitulation occurs when people in authority assert their power or identity such that ASM miners feel compelled to stop operating, even if this is not their intention. This response strategy can occur even if the usurping of authority by powerful constituents is unlawful. ASM miners feel that they have no alternative choices but to comply with political demands, regardless the consequences for their business investments. In most areas, there are influential figures who have authority, and people often must obey and give in to their influence with no

ability to resist. For instance, when confronted with pressure to cede mining rights, compliance and relocation may be the best course of action, as taking legal action may not be feasible for ASM miners since they have limited power and resources. One ASM actor described their responses to political pressure as follows:

“Their powers are beyond any law. You can say you are registered but you have to conform with them [...] For example, I told you of providing food for the rallies. If you refuse, then you don't have certainty of maintaining the position of your mine.” [Participant 9 – Mine Manager]

Hence, political elites may possess too much power to be restrained through legal or civil processes. Once established elites approach miners, a common option for miners is to give up their investments or attempt to comply with all demands even if compliance means failure to satisfy their own subsistence goals.

Discussion

The goal of this study was to understand the extent of institutional complexity emanating from the interactions of more than two logics. This entailed to examine the range of logics, understand the different relationships among these logics and identifying the coping strategies available to actors in such a complex environment. My analysis has revealed four main logics interacting in the ASM field and that all these logics contradict each other. The study also shows six specific response strategies - override, avoidance, elusion, compromise, manipulation, and capitulation - by which actors navigate the complexity in their operating environment. The contradictory logic relationships and the triggered coping strategies have implications for both institutional organization scholarship and sustainability.

Theoretical Implications

This study extends institutional organization theory in two ways. First, it shows that organizations confronting more than two conflicting logics employ a range of strategies to manage this complexity while keeping the different logics separate. Similar to McPherson and Sauder (2013), this study shows that there is no universal approach to dealing with the complexity arising from more than two logics. Indeed, actors adopt different strategies as dictated by the perceived power relationships between actors and proponents of each competing logic. This study yields empirical evidence that a particular logic (elitism) may dominate other subordinate ones (Battilana, et al., 2017). Distinct power differentiation among primary referents of the four logics forces ASM miners to give salience to elitism while subsistence, state, and sustainability take subordinate roles. Second, three response strategies to conflicting demands emerge inductively from this study – override, elusion, and capitulation. I elaborated these responses further in the following paragraphs.

Override occurs when primary referents of a logic defy an imposed conflicting logic and take over the control of functions pertaining to the defied logic. While override starts in an analogous way to defiance (Oliver, 1991), after defying institutional demands, overriding organizations proceed to device their own strategy to satisfy the dismissed demand. This practice leads to institutional change through interstitial emergence (Morrill, 2017). Morrill (2017) points out dramatic changes that led to the growth of alternative dispute resolution in the US between 1970 and 2000. Various institutional actors perceived institutional failure in US courts, initiated innovation around these failures, mobilized support, and structured an informal alternative to formal adjudication. However, power balance and mutual benefit from the filling of perceived voids will necessitate and enable override responses. The overriding actors must be able to do so without facing sanctions and regain their legitimacy after

dismissing societal demands. These conditions render override a ‘strategically sound’ deviant behavior (Piazza et al., 2022).

Elusion, on the other hand, manifests itself through several forms of illegal activities including bribery and other forms of corruption. This strategy emerges as the most common way for coping with pressure from several conflicting logics in ASM. Fraudulent tactics for escaping institutional pressures have been ignored in formal institutional theory conversations until recently. Increasing focus may be due to the exposure of many cases of organizational misconduct enabled by modern communication technology and media. Accordingly, the ASM case study reveals several illegal mechanisms of managing conflicting demands being employed by organizations. Although the prevalence of illegal activities may be enabled by weak (public) institutions (Webb et al., 2009) in countries where ASM is practiced, I argue that such activities could be equally present in jurisdictions characterized by strong institutions. For example, the VW diesel emissions scandal of 2015, which was followed by the exposure of misconduct by several other vehicle manufacturers, shows how illegal activities are subtly prevalent across many contexts, regardless of institutional quality and organizational size. Hence, in dealing with conflicting logics, elusion through illegal activities can become a sedimented practice and may eventually be adopted as a societal ‘reality’ (Laclau, 1990).

Conversely, capitulation occurs when primary referents of one demand completely give in to referents of another logic, thereby temporarily or permanently ceasing to exist. This response strategy emerges under two conditions, as evidenced in the Results section under *capitulation* in this paper. Firstly, there must exist an unbalanced power distribution between the institutional referent leveraging a contradictory demand and the organization receiving the demand. In this case, the responding organization must be too weak to resist exerted pressure because any deviant behavior would represent an inappropriate proposition (Roulet, 2020). Secondly, a weak institutional environment must enable the stronger institutional referent to

over-exert its dominance on organizations without fear of sanctions (Webb et al., 2009). This assertion is evident from complaints voiced by several study participants that even if they were legitimately entitled to certain mining areas, they cannot withhold rights from elitism logic referents who abuse official power to achieve personal goals. In such instances, ASM miners cease operations and give up their investments. I acknowledge that capitulation starts in a manner similar to acquiescence, considering that both responses embody an element of compliance (Oliver, 1991). However, acquiescing organizations comply while maintaining conformity with their primary logic, whereas capitulation forces organization to go further and get absorbed by the contradicting logic.

The emergence of these response strategies attests to the rise and exploitation of institutional gaps (Swidler, 2001). While development of institutional gaps has been associated with instantiation and institutionalization of new logics (Rao et al., 2003), this study demonstrates how power differentiation constrains the institutionalization process. First, conflicting logics reveal institutional gaps, but insufficiency of power among organizations effectively inhibits institutional work that may lead to new logic instantiation and institutionalization. Instead, and particularly so in the ASM context, a cyclic situation of toxic coexistence develops, one that is characterized largely by override, elusion, and capitulation. Previous ASM studies described this dynamic as the ‘vicious cycle of poverty’ (Rupprecht, 2017). The cycle traps ASM miners and the environment in which they operate in a state of equilibrium where no progress is realized in any sustainability dimension as efforts to move in any direction are countered with an opposing response.

Implications for practice

The choice of organizational response to conflicting logics is determined by the perceived power differentiation between responding actors and primary referents of opposing logics. For example, institutional constituents representing the logic of elitism possess prominent levels of

power, thus dominating other field actors. As a result, other actors can only adopt the least resistive responses to pressure from such powerful constituents, e.g., capitulation. Manipulation may also be adopted in such instances by co-opting members of the most powerful logic to the actors' side (Oliver, 1991; Rivera, 2010). Conversely, when the power distribution among referents is equal, organizations adopt less aggressive responses like compromise, avoidance, elusion, and override. Nonetheless, these responses can result in the inadvertent suppression of another logic. The sustainability logic, for example, may be submerged as actors engage in avoidance, elusion, and manipulation responses. Hence, the choice of response also provides impetus for referents from contradictory logics to loosen connections with their primary logic, resulting in submersion.

The dominance of other logics over sustainability has implications for sustainable development. An understanding of these implications is important for ASM miners, policy makers, NGOs, and local communities alike. First, there are economic implications for both ASM miners and the wider national economy. As ASM miners continue to operate confronting four conflicting demands, their economic growth is hampered, thereby trapping them in a cycle of poverty. On the other hand, national economic growth is obstructed, as ASM miners employ several strategies to avoid conforming to the state logic. Second, there are environmental implications including continued, and unabated, environmental degradation, deforestation, and pollution. As ASM miners manage to escape environmental conservation pressures through elusion, the consequences imposed on the environment continue. Third, there are social implications in the form of population displacement, turf wars, increased social inequality etc. A weak rule of law makes it possible for political elites to displace communities and allow crime to continue through corruption. Fourth, there are significant safety implications, such as miner deaths or injury as unsafe mining practices continue due to inefficient regulation of operations. These sustainability implications reveal where capacitated ASM miners, policy

makers, and policy advocates could leverage more sustainable development of the ASM sector in the future.

Limitations and Future Directions

In a social sense, the ASM context is both diverse and complex, as it encompasses a wide range of different stakeholders. This complexity also presents an opportunity, as sustainability management scholarship is moving towards a deeper conceptualization of such complexities (Howard-Grenville et al., 2019). As part of this study, several critical institutional constituents may have been omitted from the data gathering exercise. Such stakeholders may include politicians, other government departments, community members and international players who buy ASM minerals. Nevertheless, the inclusion of participants working independently as researchers (2) or civil society groups (6) in my sample ensured that views of a broad range of stakeholders were captured. Additionally, and considering the sensitive nature of ASM, it remains almost impossible to obtain information from constituents such as politicians. Future studies may, however, endeavor to expand the range of respondents when examining the organizational, field, and societal implications of ASM actor responses to institutional complexity.

The current study reveals both intra-institutional and inter-institutional contradictions. The difference between these forms of conflicts was documented by Meyer and Höllerer (2016). Intra-institutional contradictions are demands arising from the same institutional order, whereas inter-institutional contradictions arise from different institutional orders. The state logic encompasses both enterprising and regulatory goals that might conflict (by default of their nature), thereby giving rise to intra-institutional contradictions. Further, the state logic and the logic of elitism arise from intra-governmental structures, thereby creating another source of intra-institutional contradictions. Inter-institutional contradictions also occur across institutional orders including the state, market, community and family (Friedland & Alford,

1991; Thornton et al., 2012). The differences in response strategies across this diverse arena of contestations merits additional future studies.

In closing, while Boxenbaum and Jonsson (2017) call for acknowledging heterogeneity among institutional contexts, the findings of this study are based on a single context located in a unique institutional environment. Hence, it is difficult to generalize these findings to other institutional contexts, such as weak versus strong institutions and Global South versus Global North contexts. The sector that I examined is a highly contested industry with a unique set of features that may differ significantly from the characteristics of other industries. Nevertheless, I argue that contexts shrouded in informality and weak institutionalism (such as that found in the ASM industry in Zimbabwe) deserve greater interest in institutional research because, cumulatively, these contexts contribute 17% to GDP in developed countries and 40% GDP in developing countries (Schneider, 2002). Therefore, the insights obtained here are relevant not only for the immediate study context, but rather extend to insight into broader contexts.

Conclusion

Studies on institutional complexity have predominantly focused on instances involving only two logics. This study broadens our scope by examining an institutional context with four conflicting logics. The results revealed evidence of six response strategies of ASM miners in the Zimbabwean context. While three responses – compromise, avoidance, and manipulation, emerged deductively, three of these responses – override, elusion, and capitulation - emerged inductively. These strategies contribute to a growing understanding of organizational responses to institutional complexity. Moreover, this study yielded evidence of different sustainability implications of the response strategies employed by organizations as they try to cope with complex institutional environments. These insights are useful to inspire further research on

organizational coping strategies when facing contradictory demands and, also, their associated societal implications.

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Appendices

Appendix 1: Ethical considerations

I adhered to all fundamental research ethics standards such as obtaining informed consent, ensuring confidentiality and maintaining the anonymity of study participants (Wiles, 2013). All participants signed a consent form after I had explained the purpose of the study and how the provided information was going to be used. I recorded all interviews and hired a freelancer to transcribe the interviews and translate those in the Shona (local) language to English. I also

anonymized any identifying information, corrected grammar, and cleaned transcripts of unnecessary words (e.g., repeated words) while preserving the original meanings of responses.

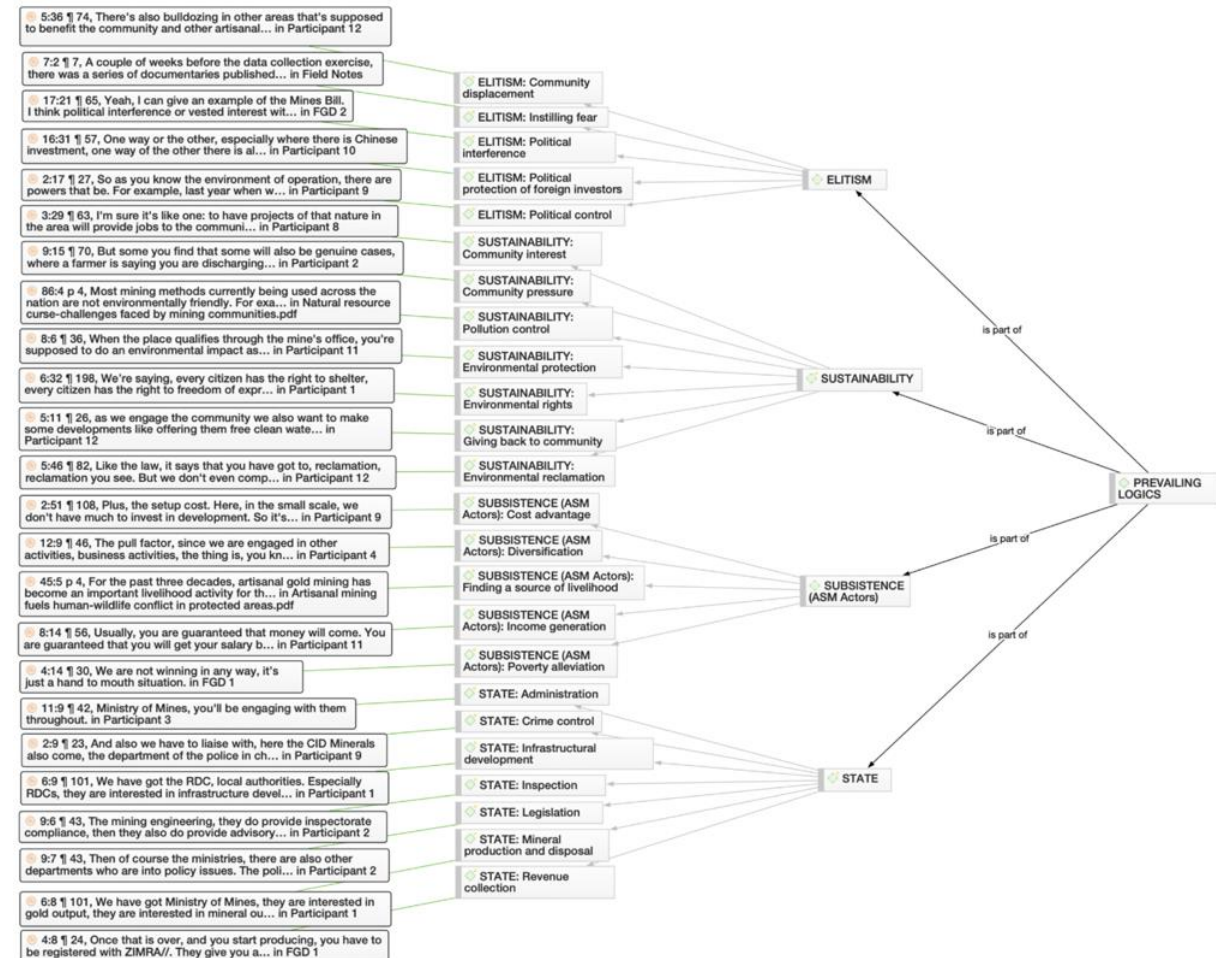
Appendix 2: Interview participant roles in ASM, Provinces of operation and experience in industry [P = Participant, FGD = Focus Group Discussion]

Participant	Role	Province	Experience	ASM Minerals	Interview Length/minutes
P1	Government agent	All	20	All	65
P2	Government agent	All	18	All	54
P3	Mine owner	Mashonaland central	5	Gold	47
P4	Mine owner	Mashonaland central	6	Gold	38
P5	Consultant, Educator	All	15	Gold	72
P6	Consultant, NGO	All	8	Gold	68
P7	Mine manager	Mashonaland central	4	Gold	48
P8	Mine owner	Mashonaland East	4	Gold	47
P9	Mine manager	Mashonaland West/East	3	Gold, Quarry	64
P10	Researcher	Midlands, Masvingo, Matebeleland North	5	Gold, Lithium Gemstones	63
P11	Mine manager	Midlands	14	Gold	54
P12	Mine owner, manager	Mashonaland central	9	Gold	51
P13	Mine manager	Mashonaland Central	5	Gold	48
P14	Miller	Midlands	3	Gold	50
P15	Mine Owner	Mashonaland Central/Matebeleland South	10	Gold	42
FGD1	Mine owner, Miller, Equipment manufacturer	Midlands, Manicaland, Masvingo	29	Gold, Antimony	71
FGD2	NGO employees	All	23	All	63

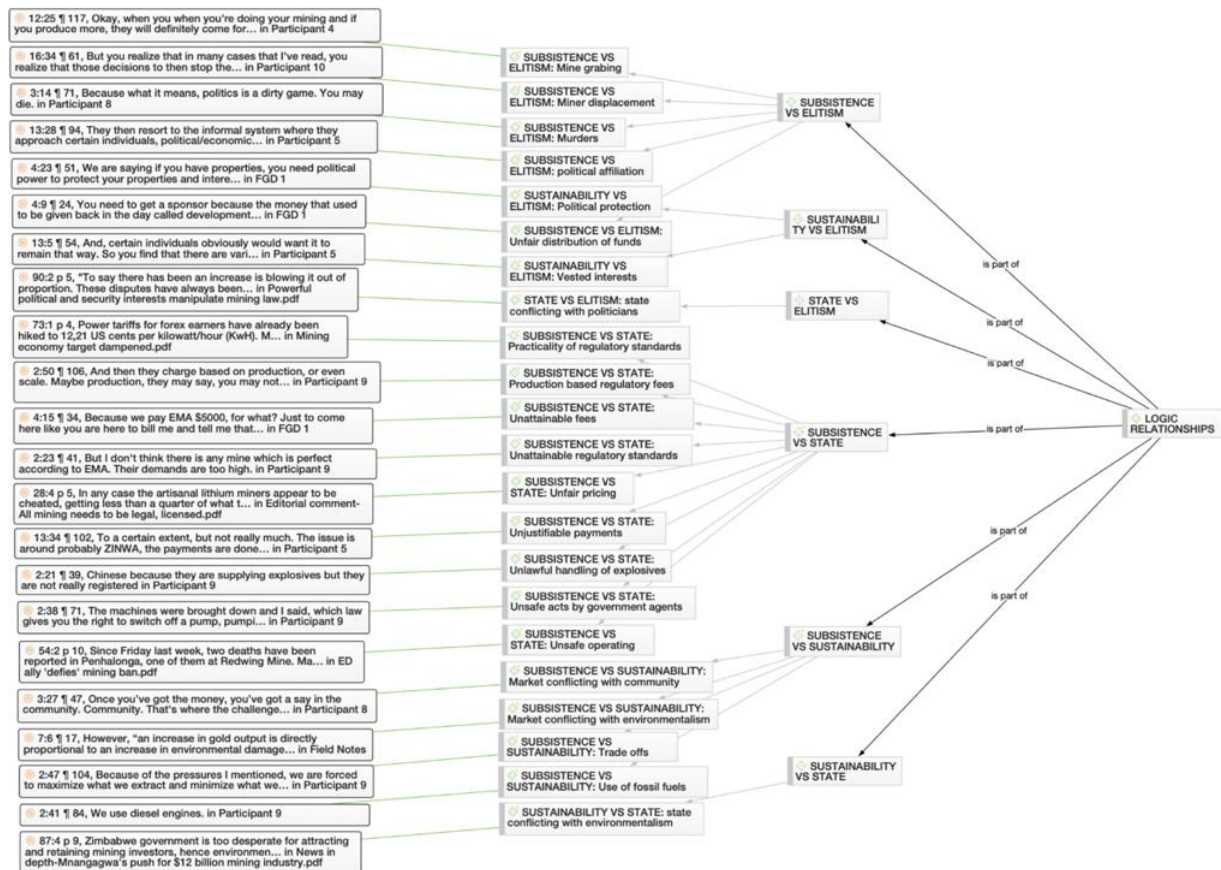
Appendix 3: Distribution of archival documents from 2020 to 2023

Document type	Source	Quantity
Reports	Delve	3
Presentation	Artisanalmining.org	1
Newspaper articles	Herald	33
	Sunday Mail	78
	Newsday (including Standard & Independent)	117

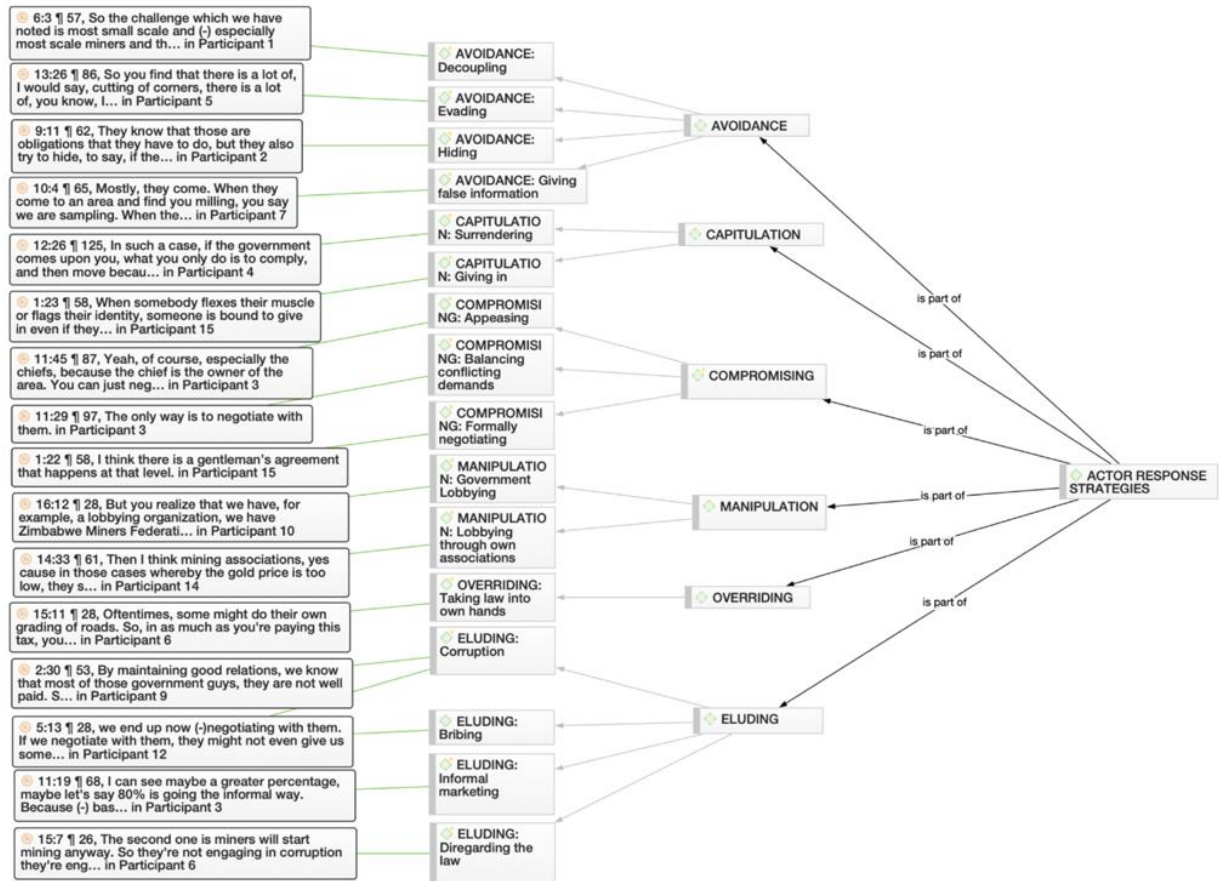
Appendix 4: Coding tree for the prevailing logics in ASM



Appendix 5: Coding tree for the relationships among logics



Appendix 6: Coding tree for the actors' response strategies



Appendix 7: Relevant pieces of legislation governing mining in Zimbabwe (Source: (Madya & Muzaza, 2023))

Act of Parliament	Functions
The Mines and Minerals Act [Chapter 21:05]	(Together with the regulations made in terms of the Act), is the principal legislation governing mining law in Zimbabwe.
Minerals Corporation of Zimbabwe Act [Chapter 21:04]	Establishes the Minerals Marketing Corporation of Zimbabwe responsible for marketing of minerals in Zimbabwe.
Environmental Management Act [Chapter 20:27]	Ensures that mining takes place in an environmentally friendly manner. Also establishes the Environmental Management Agency.
Labor Act [Chapter 28:01]	Regulates the relationship between employers and their employees and their respective rights.
Explosives Act [Chapter 10:08]	Regulates the importation, transportation and use of explosives used in the mining industry.
Gold Trade Act [Chapter 21:03]	Regulates the trade and dealings in gold and prohibits the possession of gold by unlicensed persons.
Water Act [Chapter 20:24]	Deals with the use and control of water bodies and the requirements for a water permit needed in mining projects.
Precious Stones Trade Act [Chapter 21:06]	Regulates the possession and marketing of precious stones such as diamonds, emerald etc.
Urban Councils Act [Chapter 29:15]	Provides for the administration of municipalities and towns by local boards which may have control over land in certain mining areas.
Forest Act [Chapter 19:05]	Provides for the protection of forests and establishes a Mining Timber Permit Board to control the cutting and taking of timber for mining purposes.
Roads Act [Chapter 13:18]	Provides for the development and management of the road networks in Zimbabwe.
Communal Lands Act [Chapter 20:04]	Regulates the occupation and use of Communal Land and the acquisition of mining rights.
Exchange Control Act [Chapter 22:05]	Regulates gold, currency, securities, exchange transactions, payments and debts, and the import, export, transfer, and settlement of property.
Land Acquisition Act [Chapter 20:10]	Accords the President and relevant authorities power to acquire land and other immovable property compulsorily in special circumstances;
The Rural District Councils Act [Chapter 29:13]	Accords the President and relevant authorities power to acquire land and other immovable property compulsorily in special circumstances;
Base Minerals Export Control Act [Chapter 21:01]	Regulates and controls the export of base minerals from Zimbabwe.
Indigenization and Economic Empowerment Act [Chapter 14:33]	Provides for support measures for the economic empowerment of indigenous Zimbabweans; and
Zimbabwe Investment Development Agency Act [Chapter 14:38]	Deals with investment promotion in the Zimbabwe.