



# UNRISD

United Nations Research Institute for Social Development



## **The Gender Implications of Transformations in the Copper Value Chain**

*A Case Study of the Zambian Copperbelt*

*Hanna Haile  
McGill University  
Canada*

---

Research Paper 2020-1

**Valueworks: Effects of Financialization Along the Copper Value Chain**

October 2020

The United Nations Research Institute for Social Development (UNRISD) is an autonomous research institute within the UN system that undertakes interdisciplinary research and policy analysis on the social dimensions of contemporary development issues. Through our work we aim to ensure that social equity, inclusion and justice are central to development thinking, policy and practice.

UNRISD, Palais des Nations  
1211 Geneva 10, Switzerland  
Tel: +41 (0)22 9173020  
[info.unrisd@un.org](mailto:info.unrisd@un.org)  
[www.unrisd.org](http://www.unrisd.org)

This paper was drafted as part of the project Valueworks: Effects of Financialization Along the Copper Value Chain, funded by the Swiss Network for International Studies (SNIS).

Copyright © UNRISD. Short extracts from this publication may be reproduced unaltered without authorization on condition that the source is indicated. For rights of reproduction or translation apply to UNRISD, which welcomes such applications.

The designations employed in UNRISD publications and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of UNRISD concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The responsibility for opinions expressed rests solely with the author(s), and publication does not constitute endorsement by UNRISD.

ISBN 978-92-9085-116-5

## Table of Contents

<i>List of Acronyms</i> .....	ii
<i>Abstract</i> .....	ii
<i>Keywords</i> .....	ii
<i>Bio</i> .....	ii
<i>Acknowledgements</i> .....	iii
<i>1. Introduction</i> .....	1
1.1. The <i>Valueworks</i> project .....	2
1.2. The study site: three mining communities in the Zambian Copperbelt .....	3
1.3. The Zambian context .....	6
1.4. Research questions.....	7
1.5. Methodology.....	8
<i>2. Gender and Mining</i> .....	10
2.1. Women’s interaction with the mining industry .....	11
2.2. Environmental and health impacts of mining operations.....	13
<i>3. Mining and Financialization</i> .....	14
<i>4. The Gendered Impact of Mining Operations in the Copperbelt: Empirical Findings</i> .....	16
4.1. The gender context.....	17
4.2. Women in mining .....	23
4.3. The precariousness of mining jobs and gender disparities in retrenchment .....	27
4.4. Environmental and health impacts.....	32
<i>Conclusion</i> .....	37
<i>References</i> .....	39
<i>Appendix: Sample Interview Guide</i> .....	46

## Table of figures

Figure 1: Map of the Copperbelt Province of Zambia .....	9
Figure 2: Location of the Copperbelt in Zambia.....	10
Figure 3: Focus group discussion with women in Chambishi, Copperbelt.....	21
Figure 4: Mopani Copper Mines, Nkana Plant, Kitwe, Copperbelt .....	28
Figure 5: Mopani Plant near Kankoyo Township, Mufulira, Copperbelt .....	33
Figure 6: Houses in Kankoyo Township, Mufulira, Copperbelt .....	35
Figure 7: An old-style miner’s house in a mining township, Mufulira, Copperbelt .....	36

## List of Acronyms

CIA	Central Intelligence Agency
CVC	Copper value chain
ESID	Effective States and Inclusive Development
GCC	Global commodities chain
GPN	Global production networks
ILO	International Labour Organization
MCM	Mopani Copper Mines
NFCA	China Non-Ferrous Metals Company in Africa
SME	Small and medium-sized enterprises
SNIS	Swiss Network for International Studies
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNRISD	United Nations Research Institute for Social Development
ZCCM	Zambia Consolidated Copper Mines

## Abstract

Copper mining occupies a central place in the Copperbelt of Zambia, permeating every aspect of life—the social, economic and political. Any major change in the copper value chain and in the operation of the copper mining companies located in the province can thus affect the Copperbelt community in a significant way, impacting men and women differently. This report provides a synopsis of the results of two months of fieldwork conducted in the Copperbelt in the context of the project *Valueworks: Effects of Financialization Along the Copper Value Chain*. It examines the local-level gender implications of operational and financial transformations in the copper value chain, such as increased financialization at extraction, commodities trading or manufacture. According to informants' stories, spaces in which mining has created specific gendered dynamics include hiring practices, workforce discrimination, the perceived gendered dangers of underground work, and exposure to environmental contaminants. Although it was difficult to establish a clear nexus between financialization and gender dynamics at the local level, the research shows that following privatization of mining companies and increased financialization of the copper value chain, mining companies' business operations, management and decisions made in response to the volatility of copper prices in the commodities markets tend to favour profit over welfare of workers. Casualization of labour, emphasis on profit maximization over other societal and environmental goals, employees' increased reliance on debt as a result of job insecurity, and, to some extent, erosion of gender stereotypes and gendered division of labour are some of the ways that the impacts of transformations such as increased financialization play out in local lifeworlds in the Copperbelt in Zambia.

## Keywords

Copperbelt; copper value chain; financialization; gender; mining; Zambia

## Bio

Hanna Haile is a lawyer, postdoctoral research fellow at the Centre for Human Rights and Legal Pluralism at McGill University, Canada, and a gender specialist with the World Bank Group. Her research interests lie in the fields of international human rights, sustainability, gender and human

migration. She holds a J.S.D. and an LL.M. from Cornell University and an LL.B. from the University of Asmara in Eritrea.

## Acknowledgements

This research would not have been possible without the incredible support of SAIPAR in Lusaka, Marja Hinfelaar, Tinenenji Banda and Lister Madubansi, as well as friends in the Copperbelt who pointed me in the right direction and introduced me to research participants, including Edna Kabala Litana, Charles Mulila, Mr. Muchimba from Mining Union of Zambia, Bishop Steve Safwali and Sharon Safwali. I am also deeply indebted to the many mineworkers, activists and other members of the mining communities in the Copperbelt who welcomed me into their lives, unassumingly gave me their time and were willing to be interviewed for the purpose of this research, although they will remain unnamed. Lastly, I am very grateful to Katja Hujo of UNRISD, the entire Valueworks research team, UNRISD internal reviewers Maggie Carter, Joannah Caborn Wengler and Paul Scharfenberg, and the anonymous external peer reviewers whose feedback and editing support was highly valuable. In addition to presenting a great opportunity for interdisciplinary dialogue, interacting with other team members at various stages made working on this project a real joy.

# 1. Introduction

There is a considerable body of literature acknowledging that the socioeconomic and environmental consequences of mining activities on communities vary across gender and class lines. How and to what extent changes in various aspects of the mining operations, including ownership structure, governance and shifting global economic trends, are experienced differently by men and women at the local level in mining communities is, however, a less studied topic. This research set out to explore the ways in which the consequences of one such change, namely increased financialization occurring at various levels of the copper value chain—including operations of mining companies and commodity trading—manifest at the local level in copper mining communities in the Copperbelt of Zambia.

The Copperbelt has historically attracted the interest of social science and humanities researchers because of the perceived importance of copper mining to the Zambian economy and the portrayal of the region as a site of complex socioeconomic and political intersections and interactions tied to a single commodity: copper. Copper is not only the backbone of the Zambian economy but has also been historically seen as intricately tied to welfare, identity and independence in the Copperbelt. Whether a person is directly involved in mining or not, their life is affected by the mining activities of the companies and the rise and fall of copper prices. In the words of Alistair Fraser, “booms and busts in the global copper market repeatedly raised and dashed hopes of prosperity for communities living on the periphery of the international economic system but on top of mineral deposits of significant value to that system” (Fraser 2010:1).

While the volatility of the price of copper globally is a function of a complex set of political and economic factors, a burgeoning literature acknowledges the influence of increased financialization on global commodity prices (UNCTAD 2012) and on companies’ decision-making processes, ultimately causing a “universal and pervasive impact on economies and societies” (Clarke 2014:13). The present research explores the link between the increasing financialization of the global economy and global commodities markets, and what is happening at the local level within mining communities. It seeks to examine the nature of financialization and the extent to which it has positive or negative impacts on communities. The term financialization here is used to describe the amplified importance that the financial sector has attained not only in financial institutions or financial markets but also in non-financial entities. This is evident in the emergence and growth of new forms of financial capitalism in various types of business, where financial intermediaries have an influence on the way that companies are run, including decisions concerning various aspects of the business, from management, to labour, to operations. Beyond businesses, financialization also denotes the increased reliance of individuals and households on financial products, that is, “financialization of the everyday” (Van der Zwan 2014).

In the Copperbelt, mining permeates many aspects of life and livelihoods. Because of norms, traditions and expectations around gender, the experiences of men, women, boys and girls in connection with mining differ. While it is difficult to conclude whether men or women are disproportionately impacted by changes in mining ownership, management and operations, there is enough evidence to show that the impacts are gendered.

### 1.1. The *Valueworks* project

This research is part of a larger multidisciplinary project, *Valueworks*, which was financed by the Swiss Network for International Studies (SNIS) and led and coordinated by Dr. Rita Kesselring from the University of Basel and Dr. Stefan Leins from the University of Zurich. It ran from January 2017 to December 2018 and brought together twenty-two researchers from Zambia, Switzerland, Germany and the UK, representatives from Swiss and Zambian civil society organizations, as well as non-governmental organizations and international organizations such as the United Nations Research Institute for Social Development (UNRISD). The current study is one of UNRISD's contributions to the project. The project's central objective was to examine the supply and value chain of copper, and to map the actors involved in the "capture of value" along the copper chain across three countries: Zambia, Switzerland and China.

Zambia was chosen as a site for this study because of its role as a major extraction site mainly for copper. The two other countries chosen for the study—China and Switzerland—are two of Zambia's main export partners (CIA 2020). With Switzerland replacing the UK as a major trading hub, the global share of copper being traded in Switzerland stands at approximately 60 percent (Kesselring et al. 2019). About half of the total copper extracted in Zambia is traded in Switzerland (Kesselring et al. 2019). The involvement of Swiss companies in the copper value chain, or "extractivism à la Suisse" as Gregor Dobler and Rita Kesselring put it, extends beyond mining and trade into services such as transport, logistics and certification (2018). The project discovered that the role of the trading firms is not confined to trading alone, but rather many of the large trading firms engage in other businesses covering different aspects of the copper value chain, such as transport, warehousing, ocean shipping, fuel supply, certification and surveillance (Dobler and Kesselring 2018).

The interest in China on the other hand is tied to its position in the global copper trade as "a key site for production, consumption and increasingly, trade" (Kesselring et al. 2019:4). China's place in Zambia as a major buyer of copper and investor also makes it an interesting case study (Kesselring et al. 2019).

The project originated from the observation that we live in an age of financialized commodity markets characterized by, among other things, a global division of labour (Kesselring et al. 2019). The countries from which commodities originate struggle to mobilize resources from activities such as mining, while multinational companies extracting minerals, as well as countries which are specialized in service provision, make significant profits by engaging in trading and transportation of these commodities (Kesselring et al. 2019).

The ways in which new global economic structures produce and perpetuate power imbalances, unequal relations in the global division of labour, and unequal development has been a subject for concern for social scientists since the early 1990s (Kesselring et al. 2019). The *Valueworks* project draws on three theoretical frameworks developed to explain changing global economic structures: the concept of "global commodity chains" (GCC), which focuses on governance processes that affect material and financial flows beyond the nation state (Gereffi and Korzeniewicz 1994); the concept of "global value chains" (GVC), which shifted focus from "trade in goods" to "value added", "tasks" and "capabilities" (Gereffi et al. 2005); and the concept of "global production networks" (GPN), which sees the global economy as made up of dynamic networks of various entities spread over several regions of the world and intricately interconnected (Coe et al. 2008).

The GPN conceptual framework shows how the connections among the different entities and regions create global production and trade, with a focus on inequality of development, not just among countries but also internally within countries (Coe and Yeung 2015). *Valueworks* focuses on one commodity—copper—in accordance with the GCC literature. Per GVC, the research examines “how much value-added is produced where and by whom” (Kesselring et al. 2019:6). In the same vein as the GPN literature, the project looks at “regional institutional dynamics and the embeddedness of local entities in global markets”, as well as the less understood role of financial entities in global production networks (Kesselring et al. 2019:6). *Valueworks* sets out to offer a link between local and global dynamics, and this report in particular goes beyond GPN literature to offer an account of “local lifeworlds as complex social situations in their own right, not just as production networks” (Kesselring et al. 2019:6). This report in particular diverges from the GCC and GVC literature in that it examines the effects of supply and commodity chains at the local level, incorporating the social and cultural dimensions—including gender relations—which facilitate supply chain exploitation (Tsing 2009).

In addition to that, the project makes a connection between GPN literature, the construction of value and the impact of financialization. The *Valueworks* researchers set out to understand the dynamics of value capture in the context of the increasingly financialized copper production networks. This paper explores the local community level of the global production networks of copper, where any changes affecting copper mining operations—for instance fluctuations in the price of copper because of any reason, including the financialization of the commodity—have a direct and indirect impact on the lives of people living and working in the Copperbelt region of Zambia.

## 1.2. The study site: three mining communities in the Zambian Copperbelt

The aptly named Copperbelt province of Zambia has historically been the main copper mining region in the country and held a place of importance in the Zambian national economy. Although mining was traditionally practiced as a means of subsistence before the arrival of the European colonial powers, modern copper mining in the country began in the 1920s in the Copperbelt and has undergone several significant changes concerning ownership, mode of operation, and technological investments over the years (Sikamo et al. 2016).

In the beginning stages, the mines were under private ownership. Between 1928 and 1973, high demand coupled with favourable copper prices drove high production, leading to Zambia accounting for over 12 percent of global production of copper at certain points (Sikamo et al. 2016). Zambia had one of the highest GDPs on the continent and was seen as a middle-income country (Sardanis 2014a). Following independence in 1964, investments in mining decreased because the obligation of mining companies to pay royalties to the state increased their financial costs (Sikamo et al. 2016). In 1969, the government gained 51 percent ownership of the industry and this was followed by measures to increase participation of Zambian nationals in the industry (Sikamo et al. 2016). After complete nationalization of the industry occurred in 1973, the mining industry started taking care of the needs of mine workers and providing several social services to the whole community in the mining townships (Lungu 2008). For example, in contrast to the time when mines were privately owned, the nationalized mines focused on providing quality education to the children in the mining communities (Sardanis 2014b). However, the financial burdens of taking on these social responsibilities caused undercapitalization, in particular the inability to replace old machinery or invest in technological upgrades which resulted in the decrease of



production and downsizing of labour (Sikamo et al. 2016). The process of re-privatization of the mining industry began in 1996 and was completed in 2000 with the sale of the two largest mining companies, Mopani and Konkola to Glencore<sup>1</sup> and Anglo-American Corporation respectively (Sikamo et al. 2016). Heavy investment in new machinery, as well as novel extraction technology and methods, helped the industry to pick up, with mining becoming a key component of the national economy again (Sikamo et al. 2016). Currently, the mining industry is privatized with the government having some minority shares through Zambia Consolidated Copper Mines Investment Holdings (Sinkala et al. 2018).

Under state ownership, public revenue generated from copper mining was low due to poor management and the dips in the global price of copper. In spite of the increasing demand for metals such as copper during the privatization era, rent capture by the Zambian government through royalties and other taxes remained in decline (Simpasa et al. 2013).

Marja Hinfelaar and Jessica Achberger (2017) illustrate that the sale of the mining companies into private hands was governed by the Mines and Minerals Act of 1995, which allowed for the negotiation of unique Development Agreements (DAs) for the sale of ZCCM's assets with each company in place of a uniform tax regime.<sup>2</sup> The continued decline in government revenue from mining is thus due to the terms of these bilateral agreements which were overly generous to the private mining companies. Some examples of the generous concessions include "no VAT charge for mine products; capital expenditure had a deductible allowance of 100 percent; and 'stability periods' of 15 to 20 years during which no changes could be made to the agreements" (Simpasa et al. 2013:8). In addition, the mining companies would enjoy "excise duty rebates on electricity supplied by the state utility firm and low average rate of mineral royalty". According to Christopher Adam and Anthony Simpasa, the royalty, which averaged at 0.6 percent was a lot lower than the global average range of 2 percent to 6 percent and below the IMF's estimates for developing countries, that is, between 5 percent and 10 percent (2011).

The various financial and operational transformations that have occurred in the mining industry nationally as well as changes in global production networks, such as privatization and fluctuations in the price of copper or increased financialization in the copper value chain, affect the Zambian economy in general and can have an acute impact on the livelihoods of people at the local level—those who are either directly employed by the mining industry or living in the Copperbelt province. To understand what has been happening at the local level based on the stories and the perspectives of the inhabitants of the Copperbelt, I conducted one-on-one interviews and focus group discussions with members of the mining communities in Kitwe, Mufulira and Chambishi—major mining towns in the Copperbelt. For the sake of comparison, the discussions focused on the relationship of the people interviewed with two companies of different modes of ownership and operation: the first, Mopani Copper Mines, which is mostly owned by Glencore,<sup>3</sup> and the

---

<sup>1</sup> According to M. Garside, "Glencore plc is the world's largest company involved in the mining industry and in commodity trading. Based on revenue, as of 2019, Glencore was by far the leading global mining company. However, a large part of this revenue is not earned purely through mining but by trading commodities as well" (Garside 2020a).

<sup>2</sup> In spite of this, on 21 May 2020, the Supreme Court of Zambia handed down a verdict fining Mopani Copper Mines USD 13 million for tax avoidance (Business and Human Rights Resource Center 2020).

<sup>3</sup> At the time the fieldwork was conducted, it was mostly owned by Glencore. There have since been some notable developments with the ownership structure set to undergo significant changes. As of 25 August 2020, negotiations were underway between Zambia's mining investment arm ZCCM-IH and Glencore, with ZCCM seeking a controlling share in the company. Helen Reid and Zandi Shabalala report, "Glencore will likely sell its entire 73.1% stake in Zambia's Mopani Copper Mines to the government's mining investment arm ZCCM-IH rather than becoming a

second, China Non-Ferrous Metals Company in Africa, which is mostly owned by the Chinese state.

One major difficulty in studying this topic was asking research participants to link their experiences to financialization, an abstract and academic concept which could not easily be related and interpreted in local contexts. It therefore made more sense for interviewees to compare their experiences pre- and post-privatization of the mining companies and the impact of worker retrenchment in the wake of a dip in the price of copper. The Glencore-owned Mopani Mines appeared to have a significant influence in the socioeconomic fabric of the Copperbelt and particularly in the more urban settings of Kitwe and Mufulira, while the impact of the Chinese-owned companies, including NFCA, were limited to Chambishi.

Offering job security and good employment benefits, in the past, working in the mines was initially considered prestigious. This, however, changed after privatization. A significant number of the research participants described the private mining companies, and particularly Mopani Copper Mines, as mainly driven by profit rather than the welfare of the miners or the community at large. This observation was invariably made in comparison to the ways in which the former state-owned mining company—Zambia Consolidated Copper Mines—provided the workers as well as the community at large with several social services and benefits.

Most of the miners I interviewed reflected on their working conditions and the socioeconomic impact of the decisions made by mining companies in response to fluctuations in the price of copper globally. Since there are no stabilization funds or other type of safety nets in place to cushion the effects of price volatility, privately-owned mining companies tend to resort to significant downsizing of the labour force in response to sudden drops in copper prices. This approach was resented by the miners interviewed. Conversations with non-mineworkers who live in the community, including spouses of mineworkers, on the other hand, tended to focus on the environmental, health and displacement impacts that mining operations have had on their lives.

Increased casualization of labour and the ensuing generalized economic insecurity emerged as themes in the conversations. Mineworkers who were rehired on a contractual basis post-retrenchment were aware of the precarious nature of their employment, attributing this precariousness to the volatile price of the copper commodity. Other participants on the other hand spoke in comparative terms of the shift in focus from the nationalization era to the privatization era where the welfare and interest of workers became secondary to economic gain.

Mopani Copper Mines in particular has, at various times, resorted to retrenchment in response to the falling prices of copper.<sup>4</sup> This inevitably aggravated already existing inequality, poverty and vulnerability in the region. More importantly, the results of the study show that the impacts of retrenchment decisions and decisions pertaining to other aspects of mining operations are experienced differently by men and by women due to differences in access to resources, level of education, gender-specific division of labour and cultural expectations.

---

minority stakeholder" (Reid and Shabalala 2020). Negotiations regarding its sale were triggered after Glencore presented its plans to put Mopani on care and maintenance; the Zambian government had threatened to revoke the firm's mining licenses in April 2020 (Reid and Shabalala 2020).

<sup>4</sup> In August 2019, after this field research was concluded, Mopani Copper Mines closed operations in two of its mine shafts, Mindola North and Nkana Central, because they were deemed to have reached the end of their economic life. According to Mining Technology News, Mopani issued "notices of non-renewal of all contracts for development support services at the Mindola north and central shafts" (2019). Reuters also reported that as a result of the closure, 1,400 mine contractors lost their contracts (2019).

One interesting way in which the everyday life of the miners appears to be financialized through the practices of the mining companies was a loan that was made available from banks through the mining company. Many who did not have the means to secure a loan from a bank on their own took this option even if the loans were subject to exorbitant interest rates. The payment to the banks would be in installments paid from the borrowers' salary every month. During times of retrenchment however, the payment was taken out of the severance package or retrenchment package, leaving the retrenched miner with little to nothing. This scenario was described by several research participants.

Although establishing a clear-cut nexus between what is happening at the local level in the mining communities and financialization at various parts of the CVC or GPN was tenuous, current and former employees of the Glencore-owned Mopani Copper Mines recounted their stories in relation to the company in the era of privatization and increasing financialization of the company. This report summarizes the stories of these current and former miners and other members of the community who sat down to speak with me about their experiences.

### 1.3. The Zambian context

Revenue generated from mining plays an important role in Zambia's economy, with copper dominating the mining industry. Revenue derived from copper is a significant part of the national economy. The UN Department of Economic and Social Affairs Statistics Division notes that from 2016 to 2018, Zambia's largest export commodity was unrefined copper (2019). In 2016, while all commodity exports were valued at USD 8157.6 million, copper exports made up USD 6070.8 million, that is 74.4 percent, and in 2018, all commodity exports were valued at USD 9052.2 million, with copper being USD 6563.7 million (72.5 percent) out of that amount (UN Department of Economic and Social Affairs Statistics Division 2019). Thus, while other minerals and gems are also extracted in large quantities, copper remains the most prevalent mineral resource in the country. In 2018, Zambia's copper production accounted for around 70 percent of Africa's production (Trading Economics 2020). Globally, Zambia was one of the top ten leading copper producer nations in the world (Garside 2020b).

With large-scale mining of copper having begun under British colonial rule in the 1920s, the Copperbelt has historically been a mining area, attracting foreign investment and triggering an influx of labour migration from various parts of the country as well as from neighbouring countries, such as Malawi and Tanzania. As one interviewee put it, "if we take the big picture, copper mining has sustained the economy of Zambia. It has brought about the development that you see [in the Copperbelt]. All these towns that are here on the Copperbelt would have not been there if there was no copper mining" (interview with a Zambian entrepreneur/geologist based in Kitwe). While these modernist perceptions of the Copperbelt as a site of rapid urbanization and growth may be exaggerated (Ferguson 1999), copper mining is nevertheless deeply entrenched not only in the economic, but also in the social and political fabric of the country, with government development policies often being conditional on what is happening in this key sector. The central role of copper in the economy, and its sociopolitical implications, has at various times in history resulted in the government treating the Copperbelt's mineworkers as economic patriots whose work is instrumental to achieving rapid progress (Bates 1971). However, a recent study conducted by the World Bank indicates that notwithstanding an increase in overall production in the mining

sector in recent years, the country's economic development has not been significant (World Bank Group 2018).

In the Copperbelt, mining had in the past brought about an overall higher standard of living compared to other regions: more roads, schools and health care facilities; increased access to training; and better employment opportunities. During the time that the mining companies were under government ownership, research participants stated that employees' basic necessities were met, including food, diapers and even school fees for children. Training was also offered to the female spouses of mineworkers in household skills, such as sewing, baking and knitting. Informants expressed a collective nostalgia for the time of nationalization when the Zambia Consolidated Copper Mine Company (ZCCM) held ownership and managed operations of the mines, describing the company as a pseudo parent in comparison to Mopani and its parent company Glencore. However, it is important to note that these positive results did not accrue directly to everyone in the community. Benefits from mining operations mostly come through the male miners who are the traditional breadwinners of the family, and trickle down to other household and family members. Differences in education levels, employment opportunities, social status of women and decision-making power are all factors that come into play. Women's role in mining has been traditionally limited and confined to only certain types of jobs which are considered feminine. Most of the female former mine company employees that I interviewed had limited roles, working in secretarial and clerical positions. There were observable discrepancies in men and women's access to employment, types of employment, salary levels and career opportunities in the mining industry.

When the mining companies were privatized about two decades ago, with the state retaining a small percentage share in ownership, management and mining operations underwent significant changes, partly due to changes in global production networks, and the so-called financialization of copper trading.

Although participants acknowledged that mining is a source of individual financial independence in the Copperbelt as one of the major providers of direct and indirect employment, they also mentioned the negative externalities that they have had to suffer as a mining community, including environmental consequences and health hazards as well as overdependence on a single commodity which is subject to market fluctuations. Despite efforts by the government to diversify away from dependence on copper mining and to promote investment in other economic sectors, the Copperbelt's economic and social fabric remain deeply entrenched in copper extraction and sensitive to changes in the industry and to changes occurring globally in copper commodity trading and other parts of the copper value chains.

#### 1.4. Research questions

This paper explores the direct and indirect impacts of copper mining activities on communities in three neighbouring mining towns—Kitwe, Chambishi and Mufulira—and if and to what extent there are gender-based differences in how these impacts are experienced, as the extractive industries and related trading activities have become increasingly financialized. The analysis in this report does not purport to provide a generalized account of gender and mining in a changing global context, but adds to that literature with a specific and qualitative perspective, presenting the experiential knowledge or the personal stories of the participants in the study to shed light on

how they experience recent global changes such as privatization and increased financialization in the copper value chain.

The main research question is whether and to what extent recent changes in the global and national context affecting copper mining in Zambia, in particular the impacts of the privatization of mining companies operating in the Copperbelt and the prevalence of financialization as a mode of accumulation at various levels of the copper value chain, are experienced differently by persons of different genders.

The gender dimensions of mining are examined in two broad categories: socioeconomic aspects and health and environmental impacts. The socioeconomic dimensions studied include equity, the changing roles of women in mining activities, economic independence, cultural stereotypes and women's participation, both in mining activities and also in decision making. The study also looks into the ways in which the response of copper mining companies to the volatility of the price of copper have shaped and continue to shape attitudes about masculinity and femininity, gender relations and division of labour.

The specific questions asked include whether and to what extent women participate in mining activities. Issues examined include the nature of jobs occupied by men and women, remuneration, discrimination, job security, job promotion, advancement, flexibility, and safety and health in the workplace. How meaningful is women's participation in the consultation process leading up to the launch of a mining operation? To what extent do they benefit from the existence and operations of mining companies? Does the recent change in the way that mining companies conduct their business affect women differently than men? What strategies do families and communities employ to maintain a stable financial and social status and do those strategies differ across gender lines? How do they absorb the risk of retrenchment in the home? Do the fluctuations in the operations of the mines affect men and women differently? In the wake of retrenchment, does the resilience, or job flexibility, of men and women differ? The research also looked at the community development programmes that mining companies put in place or promote in the interest of being socially responsible businesses and sheds light on the ways in which they are impacting quality of life, health, access to education and more in the communities.

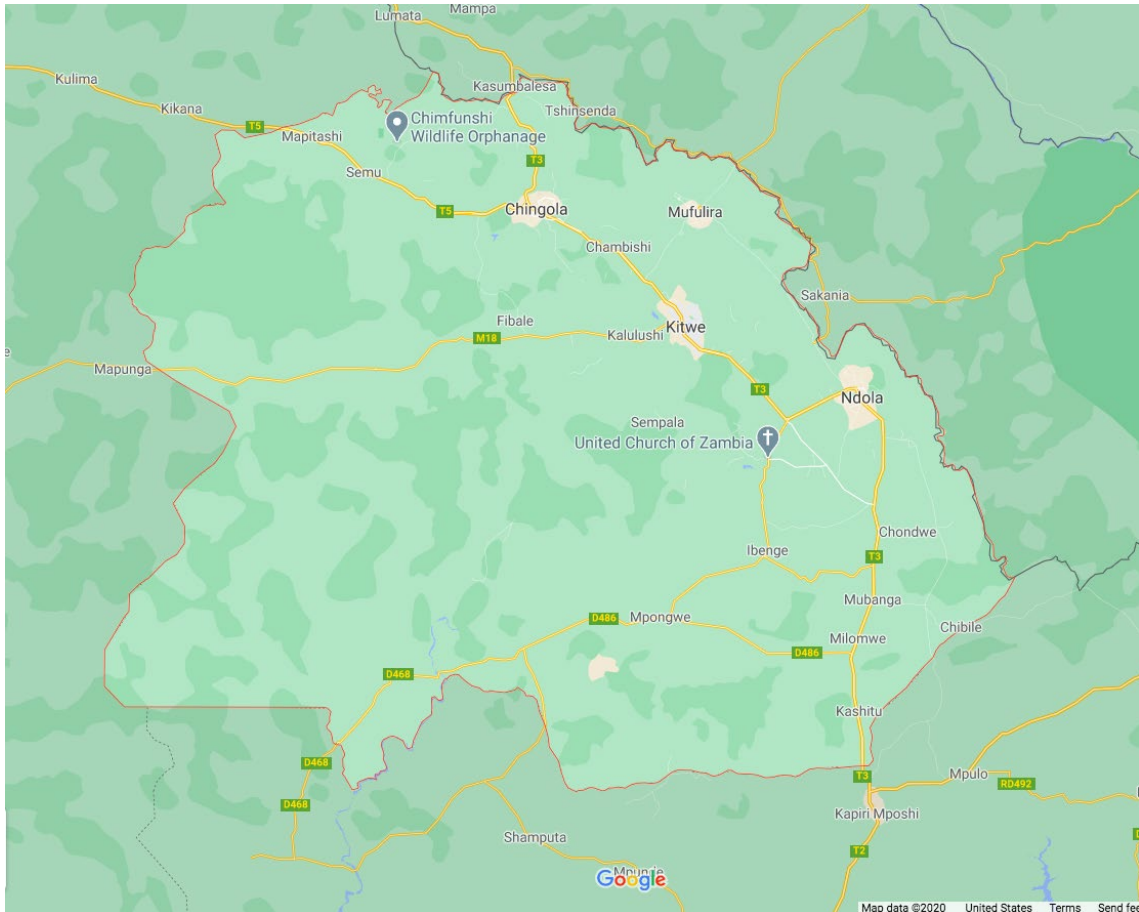
The second prong of the research examines the environmental and health impacts which become aggravated or more rampant in connection with increased financialization of the copper mining industry. In particular, it looks at the way men and women experience environmental and health impacts, specifically the nature and extent of their vulnerability to these impacts, including exposure to polluted air and water, the impact of acid rain on housing, the prevalence of respiratory and other illnesses, and the extent to which the environmental impacts of mining affect their livelihoods.

## 1.5. Methodology

The report draws on fieldwork carried out in Kitwe, Mufulira and Chambishi in May and June of 2017. Data collection was based primarily on a series of personal and focus group interviews supported by written questionnaires distributed among residents of mining compounds and townships. These included informal conversations with residents of these towns; 60 formal audio-recorded interviews and focus group discussions conducted with miners, former miners, miners'

spouses, civil society activists and other individuals who are in some way connected to the mining industry; and 40 questionnaires distributed in the mining neighbourhood of Mindolo, in Kitwe. Contacts were made via a snowballing method.

**Figure 1: Map of the Copperbelt Province of Zambia**



Source: Google Earth n.d.a

The purpose of the field research was to record stories of informants in order to understand the differences in the experiences of men and women in connection with the operations of two mining companies: the China Non-Ferrous Metals Company in Africa and Glencore's Mopani Copper Mines. Mopani Copper Mines operates in the towns of Kitwe (Nkana, South Ore Body and Mindolo Plants) and Mufulira. The Swiss giant Glencore has a majority ownership in this company. China Non-Ferrous Metals was the second one chosen for this analysis and is owned mostly by the Chinese state. These two companies were selected for this study because of their economic dominance in the Copperbelt—they have a major impact in the economy and the lives and livelihoods of people living in the mining communities of Kitwe, Mufulira, Chambishi and Kalulushi (this small township is located to the West of Kitwe and its inhabitants are miners in Kitwe, Chambishi or Mufulira). In addition, they also represent different ownership structures and therefore different cases of how these companies deal with pressures ensuing from global financialization.

**Figure 2: Location of the Copperbelt in Zambia**



*Image 2: Google Earth n.d.b.*

For the purpose of this research, I am using the term mining communities to include not only the miners but also people who live in mining compounds, people who live or farm in the vicinity of the mines, and those who are engaged in small-scale informal or artisanal mining activities. Although I had approached management in both companies for permission to conduct research therein, the companies were not willing to grant me access. Unsuccessful attempts with the mining companies notwithstanding, I was able to meet and interview members of the mining communities, including miners, former miners, and miners' spouses who were not only willing but also eager to tell their stories.

The lack of formal access to the mining companies' management and the short duration of the fieldwork, however, limit the findings presented in this research. Since the cooperation of the mining companies was unobtainable, there is still great potential for further research on this topic taking into account the perspective of the mining companies.

## 2. Gender and Mining

In many parts of the world, gender parity has yet to be achieved, although gender equality and women's economic empowerment play a central role in global, national and local economies. This is well-reflected in the inclusion of a gender equality goal in the Sustainable Development Goals (SDG 5), an agenda for transformative change to which governments around the world have committed (UN 2015; UNRISD 2016). The following section summarizes the burgeoning literature examining the gender dimensions of the mining sector. This includes literature chronicling women's participation and experiences in connection with the extractive industries.

Current development theory and practice defines gender as a social construct which determines social attributes and opportunities, roles and responsibilities of men and women in a society. Institutions, relationships, expectations and division of labour are all patterned along gendered lines. Gender assumes an economic importance because division of economic tasks and

responsibilities among men and women, as well as access to and control of resources and decision making, are products of gendered sociocultural realities and expectations. How women experience a particular socioeconomic context is thus different from how men experience it. Some economic sectors are more unequal from a gender perspective than others. The extractive industries, for instance, have long been recognized as heavily male-dominated, posing particular challenges, especially for women.

Criticism of the mining sector has typically focused on its environmental and health impacts. For this reason, in most places, mining companies are expected to carry out environmental or social impact assessment of their operations before they commence their activities. While most mining projects carefully weigh the technical and economic impacts at the planning and environmental impact assessment stages, the societal impacts are less strictly examined and even less so through a gender lens (Lahiri-Dutt and Mahy n.d.). Many studies indicate that women experience the impacts in more pronounced ways than men, while also noting that women's voices are often absent from community consultations regarding the operations of mining companies (Scott et al. 2013). Although this observation may generally be true, it fails to take into consideration economic, educational and other differences among women and men. Given that it is hard to thus generalize based on the factor of gender alone, an intersectional approach, taking into account different layers of social disadvantage, could provide a more accurate picture.

## 2.1. Women's interaction with the mining industry

A broad body of literature suggests that in many parts of the world, formal employment of women in mining has traditionally been very limited. Increasing gender diversity in the mining sector not only improves community relations and local economic development, but also enhances productivity and innovation.<sup>5</sup> For this reason, making efforts to meaningfully integrate women in large-scale mining is a sound business decision (IFC 2013). A growing number of mining companies have taken positive measures to ensure gender diversity and inclusivity, such as providing a physical workspace which meets women's needs. Government policies also sometimes require that companies meet a certain quota of women in their workforce.

Although the number of those participating in formal mining activities has increased in recent years, the number of women in mining remains significantly lower than their male counterparts and the terms of employment may be less favourable than those of the men. This disparity is dictated by prescriptive and descriptive gender stereotypes characterizing most mining jobs as ultra-masculine. The prevalent societal attitude across cultures that mining is an inherently male industry implies that one's gender identity can become a barrier to entry into mining jobs. Positions which are easily accessible to women are limited in type and number. Gender-neutral governance and management approaches in the mining sector can often result in women being excluded from mining jobs.

While the focus of this study is large-scale industrial mining, it is worth mentioning that studies have shown that women have a higher participation rate in small-scale and artisanal mining than in large-scale mechanized mining (Abrahamsson et al. 2014). In contrast to large-scale formal mining, artisanal mining has no formal barriers to entry. The lack of formal educational requirement encourages untrained women to engage in these activities. In large-scale mining on

---

<sup>5</sup> IFC 2013; Abrahamsson et al. 2014; Hill et al. 2016.



the other hand, although women are present throughout the value chain, their direct participation in the mining sector remains generally low, estimated at around 10 percent of the workforce (Eftimie et al. 2009). The number of those who are directly working in the mines is estimated to be even lower than 10 percent (Eftimie et al. 2009). Very few, if any, women work underground. Women's involvement in the mineral value chain may sometimes be in low-paying positions such as breaking rocks or transporting and carrying heavy loads of gravel and sand. They are also engaged in businesses providing services to the mining industry, such as renting equipment, cooking for mineworkers, and selling food and other consumer goods in local markets (Hinton et al. 2003). This type of involvement in mining may also be unrecognized as it is considered part of their informal family duties or unpaid care work which they are expected to provide as women.

This low rate of women's involvement can be due to a complex set of reasons associated with women not having access to the same levels of formal or specialized education that is necessary for mining jobs, as well as socio-cultural reasons and stereotypes (Abrahamsson et al. 2014). Moreover, the fact that many mines are not adequately equipped with facilities that could accommodate women's basic needs, such as the absence of sanitary facilities specifically for women, could discourage women from entering the mining workforce.

One of the main benefits of the extractive industries for host communities is that they provide opportunities for direct and indirect employment, thereby being the main source of economic stability in the communities (World Bank Group 2015). However, women often have less access to these opportunities (World Bank Group 2015). Men's predominant occupation of the formal and high-paying jobs in the mining industry perpetuates women's economic dependence in many mining communities and aggravates already existing gender inequalities (World Bank Group 2013). There is also evidence of men being resentful or even actively opposing women coming to occupy positions that they had traditionally held for fear of being replaced (Esteves 2011). This could manifest in discriminatory hiring practices and negative actions and attitudes from male mineworkers towards their female colleagues concerning their employment and certain facilities or accommodations made for women mining employees.

In a study on the gendered impact of mining activities in Indonesia, Kuntala Lahiri-Dutt and Petra Mahy (n.d.) note that the introduction of mining has created more economic opportunities for women in some areas while negatively affecting their involvement in other economic activities. In their study, they noted that although women had more access to certain jobs in the mines and ran businesses providing services to the mines, they suffered because their opportunities from land-based livelihoods had decreased (Lahiri-Dutt and Mahy n.d.). Although land is usually owned by men, women have been increasingly engaged in farming activities due to male absenteeism (Lahiri-Dutt and Mahy n.d.). When farmland was lost to mining, many women who relied on land-based livelihoods had no compensation and with their low education levels, women faced a major challenge in adapting to change. This arguably increased the work burdens of women and lowered their status within the family and society. The limitation of women's voice and agency at home and in the community further decreased family cohesion, and increased crime, gender-based violence and alcoholism (Lahiri-Dutt and Mahy n.d.).

Previous studies have also emphasized the impact that mining has on the social fabric and well-being of communities due to massive male labour migration into mining sites. The introduction of mining in many communities has been associated with increased alcohol consumption, rise in

prostitution, breakdown of families and an increase in the prevalence of sexually transmitted diseases (Eftimie et al. 2009).

## 2.2. Environmental and health impacts of mining operations

Numerous studies have investigated the potential of mining operations to cause severe damage to the environment. In most countries, mining companies are required to undergo environmental impact assessment before they commence their operations. Companies are also required to conduct ongoing environmental and social impact assessment and to make use of the best technology to minimize their negative impacts. These requirements, however, sometimes tend to be cursory. A study on the environmental impacts of gold mining in Prestea, Ghana, shows that mining activities had depleted natural resources, destroyed habitats, threatened biodiversity, polluted the main rivers in the region and eroded agricultural land (Mensah et al. 2015). While this study did not particularly focus on the gendered aspects of the impacts, the authors argue that the impacts could have been minimized by, among other things, creating environmental awareness, allowing for community participation during environmental consultations and a stricter enforcement of regulatory policies (Mensah et al. 2015). These solutions however would be incomplete without taking into consideration the potential differential impacts on men and women.

The health and environmental impacts of mining are experienced differently by men and women. Because of gendered culturally mandated responsibilities and roles, the levels of exposure to harm considered acceptable for men and women are different. Generally, mineworkers face more health hazards than non-mineworkers because their work exposes them to high levels of emissions. However, within the non-mineworker group, in some cases women may be at higher risk than men. For instance, in a community located in the vicinity of mining sites, where women are expected to be homemakers and men are primarily engaged in occupations other than mining, women experience a higher exposure to emissions. Proximity to the mine site as well as the directionality of the winds determines the degree of exposure. This is the case of Kankoyo, a former mining township in Mfulira which is currently inhabited mostly by non-mining families. The health and environmental impacts are thus more closely felt by the women than by men who work outside of the home in non-mining activities. Women living in mining compounds or in communities close to mining sites working at home are for most of the day in close proximity to the mines and therefore have a longer period of exposure to polluted air. Studies also indicate that the environmental impacts could make the gender-specific tasks assigned to women either lengthier or more arduous. Some examples of those tasks normally undertaken by women include unpaid care work, collection of potable water, preparation of food and small-scale farming or gardening (Jenkins 2014).

The environmental risks of mining can threaten long-term agricultural sustainability. In the Indonesian study cited above, for instance, the mining was being conducted in “a critical and biodiverse ecology” where the main livelihoods of the communities, such as forestry, slash and burn agriculture and fishing, relied heavily on the environment (Lahiri-Dutt and Mahy n.d.). In the wake of the destruction of the environment and loss of land and other resources, women lose out more as they are “considered custodians of old customs in most of the local cultures” (Lahiri-Dutt and Mahy n.d.:10). An UNRISD study on the politics of domestic resource mobilization for social development conducted in Rancho Grande, Nicaragua, also shows that conflicts can arise when mining projects are introduced in places where agriculture is the main source of livelihoods

(Gutiérrez Elizondo 2015). This study notes that mining threatens the Rancho Grande community's livelihood by "competing for land and water resources with particularly high environmental costs" (Gutiérrez Elizondo 2015:15). The concern of community members is that if mining prevails over agriculture, "Rancho Grande could become another example of natural exploitation and dependent development" (Gutiérrez Elizondo 2015:15). Granting mining concessions without public participation, increased militarization of the area to protect mining company property, as well as government statements expressing a sense of duty to protect the interest of the mining company all add to the tension (Gutiérrez Elizondo 2015).

The ways in which the environmental and health risks of mining operations are experienced by individuals are not only gendered but are also a function of the socioeconomic context in which the affected persons live, with those with a lower socioeconomic status having fewer options or being impacted more severely. Lahiri-Dutt and Mahy observe in their Indonesian study that the individuals' perception of the mining companies' operations is a function of their geographical distance from the mining operation, with those living closer having a more negative attitude on account of the negative consequences they experience (Lahiri-Dutt and Mahy n.d.). Communities living in the vicinity of mines experience increased dust, pollution of air and water, and loss of agricultural land and resources. For this reason, the environmental and health impacts are also closely intertwined with the socioeconomic impacts of mining.

### 3. Mining and Financialization

The operations and impacts of mining companies are intricately tied to the global economy in general and to global commodity chains and global value chains in particular. One phenomenon which has in recent years been identified as having diverse economic and social development impacts is the increased financialization of the global economy. Financialization has been subject to different conceptualizations and lends itself to many different meanings (Aalbers 2015). While acknowledging that there are many perspectives seeking to understand financialization and recommend policy responses in light of it, this section focuses on the studies which are most relevant for the present research question.

In their background paper on financialization and social development, Katja Hujo and Luisa Lupo (2018) point out that the study of the impact of financialization particularly on the copper value chain across different countries needs to be conducted at different levels: at the macro level looking at the global economy; at the meso level, concerning the approaches and behaviour of the actors involved and their local and regional development implications, and at the micro level, or the impact of the meso level on individual firms, households and communities. In the words of Hujo and Lupo "financialization and the dependence of developing countries on commodity exports and their (often subordinated) role in financialized global production networks...are two drivers of development problems we observe today" (2018:2). While financialization is the central approach that ties together the different components of the *Valueworks* research project, the particular focus of this paper is thus what Hujo and Lupo would call a micro-level analysis or perspective, looking at the local implications of financialization on individuals, local businesses and the community at large through a gendered lens.

Before delving into how financialization may or may not be impacting copper mining communities, it is important to unpack the concept. Because of the multidimensional nature of the concept of financialization (with economic, legal, as well as social and political components),

there is a growing academic interest around it producing a burgeoning literature from different perspectives. Gerald Epstein defines financialization as “the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies” (Epstein 2005:3). Natasha Van Der Zwan goes so far as to describe it as “an increasingly autonomous realm of global finance [which] has altered the underlying logics of the industrial economy and the inner workings of democratic society” (2014:100).

An evident manifestation of this process of financialization is the a growing dominance of the financial sector in the economy as a whole and a growing importance of financial activities in non-financial companies; for instance, external financial actors, such as bankers, investors and shareholders, can influence how managers make their decisions. This conceptual distinction, however, does not imply an actual separation between the real and financial economy (Hujo and Lupo 2018).

Conceptualizations of financialization can be broadly classified into three approaches: (i) those that see it as a regime of accumulation; (ii) critical social accountancy; and (iii) financialization of everyday life (Hujo and Lupo 2018; Van der Zwan 2014). The regime of accumulation approach describes financialization as a new model for doing business characterized by the rise of financial capitalism and a shift from managerial capitalism. The idea is that companies used to make profits by producing and trading goods and services, but increasingly their profits depend on financial activities. In other words, it represents a distinction between real and fictitious capital.<sup>6</sup> Financialization is “a pattern of accumulation in which profits accrue primarily through financial channels rather than through trade and commodity production” (Krippner 2005:174). This determines how wealth is distributed and arguably perpetuates already existing inequality (Hujo and Lupo 2018).

The second approach, critical social accountancy, looks at how financialization influences management decisions at the company level towards maximization of shareholder value.<sup>7</sup> In the words of Gerald F. Davis and Suntae Kim, “at the firm level, financialization manifests itself in the form of a stronger emphasis on maximizing shareholder value and an increased engagement in financial activities by non-financial corporations” (Davis and Kim 2015:205). For instance, if a company’s stock is undervalued relative to its assets, it may be easily bought and reorganized and the underperforming parts resold. If the capital is seen as relatively liquid, then employees also become disposable; that is, the idea of labour as a quasi-fixed asset is becoming obsolete as the success of the company is not tied to the welfare of the workers, as we will see in the later parts of this study. A plethora of legal regimes, soft law instruments and guiding principles governing the relationship between companies and various actors and structures interact and operate in a way that favours the maximization of shareholder value. One argument from agency theory is that the fiduciary duty of executives requires them to make decisions primarily in the interest of shareholders, that is, profit maximization or shareholder value maximization.<sup>8</sup> Thus, the idea is that corporate and investment law encourage corporate managers, who act as agents of the company, to prioritize shareholder value maximization in their decision making, sometimes relegating other societal and environmental interests to a less important position (Stout 2012). The company’s wider and long-term purpose thus has a less important role. Corporate law scholars such as Lynn Stout and Margaret Blair offer a counterargument that managers and

---

<sup>6</sup> Hujo and Lupo 2018; Lapavistas 2009; Bresser-Pereira 2010; Hermele 2015.

<sup>7</sup> Hujo and Lupo 2018; Jürgens et al. 2000; Lazonick and O’Sullivan 2000.

<sup>8</sup> Lazonick and O’Sullivan 2000; Ansari 2018; Davis and Kim 2015; Stout 2012.

executives have no legal obligation to promote shareholder value. Instead, they are at liberty to take into account the interests of other stakeholders even if this adversely affects the value of shareholder interests (1999).

The third approach, financialization of everyday life, focuses on the ways in which financialization and financial decisions impact individual life (Martin 2002) as well as social and cultural life (Chiapello 2015; Bourdieu 1998). Scholarship on financialization of everyday life narrows in on the ways in which households and individuals have incorporated financial products into their daily practice and the increased reliance of households on financial products and debt as sources of funding for everyday spending (Thomson and Dutta 2018). Use of credit cards, pension plans, home mortgages, and “other mass-marketed financial products” are all examples of this phenomenon (Van der Zwan 2014). In Van der Zwan’s words, this allows finance to become a “decentralized form of power, exercised through individuals’ own interactions with new financial technologies and systems of financial knowledge” and “new norms of risk-taking” (Van der Zwan 2014:102). The proponents of this approach seek to understand the impacts of financialization on particular social groupings and social contexts (Pellandini-Simányi et al. 2015). For those who are struggling financially, these modes of funding look attractive. However, taking into account that increased reliance on debt can perpetuate already existing inequalities, proponents of this approach of looking at financialization of the everyday seek to find ways of bringing about equality and social justice (Dixon 2008).

As will be described in the next sections, the approach taken in the current research is most closely aligned with the second and the third ones described above. In light of the increasing role of financialization in the copper value chain, the impact of some management decisions of mining companies at the firm level in the Copperbelt pertaining to employees and the gendered social impact of these decisions, that is the differences in how men and women are experiencing this increased financialization of copper trading and production at the local level, are discussed in the following sections.

#### 4. The Gendered Impact of Mining Operations in the Copperbelt: Empirical Findings

Traditional views on gender relations and division of labour laid down the context for how mining would evolve in the Copperbelt. Over time, as the economy has been impacted by locally and globally produced transformations such as financialization, we observe that mining is not only a context through which women are disenfranchised but also a context which creates conditions for women’s empowerment and economic independence. As discussed in section 1.1, mining of copper plays an important role in the lives and livelihoods of people in the Copperbelt. The local-level implications of this reliance on mining projects for communities are many, and both positive and negative. While on the one hand, mining has been praised for bringing about increased employment and leading to the Copperbelt being seen as a symbol of modernity and development (Ferguson 1999), the mining sector has also been known to have negative externalities that affect human health and well-being as well as the environment, all of which are gendered.

Through the interviews that were conducted, the researcher attempted to address the question of whether and to what extent financialization exacerbates these gendered impacts and sought to understand how it is experienced by men and women either engaged in the extractive industries or living in the communities where the operations take place. The research started out with the

hypothesis that as the economy and the various parts of the copper value chain become increasingly financialized, these gendered impacts of the mining operations would be further heightened. The assumption was that already existing gender-based inequalities are exacerbated during times of crisis. Given that changes and fluctuations in the global production networks can have a negative impact on the economy at the local level in mining communities, whatever gender inequities existed before would be worse during the crisis.

Diane Elson examines these social dimensions of global economic crisis through the concept of “social reproduction” which considers the “invisible, unpaid parts of economies, as well as the much more visible paid parts” (Elson 2012:63). In addition to falling investment, output and employment, she notes that economic crisis results in a breakdown in social reproduction and livelihood crisis (Elson 2012). Studies show that in times of global economic crises, the economic and social empowerment of women is negatively impacted because of job loss, decline in public spending and reduced wages. Women’s burden of care increases while they still have to engage in income-generating activities outside of the home, and this results in women having less free time in the day (UNAIDS 2012). Economic hardship can also perpetuate gender inequities by “increasing women’s financial dependence on men” which in turn could reduce women’s agency in the home, increase gender-based violence or lead to an increase in unsafe sexual practices (UNAIDS 2012).

It was very difficult to establish a direct link between what is happening at the local level and financialization, and to isolate the gendered impacts of mining operations from the gendered impacts of the increased financialization of the copper mining sector. In addition, generalizing about gendered impacts without taking into consideration socioeconomic status and context could lead to simplistic conclusions. The individualized stories of the research participants thus help to provide a more nuanced understanding. The impacts are gendered but they are also products of many other factors.

While listening to the stories of the interviewees, one could see that the risks, economic insecurities and possible challenges faced by women working in the mining sector and living in the surrounding communities seem to be aggravated in some ways because of decisions made by mining companies in response to changing prices of copper, while on the other hand, the economic insecurities have also contributed to changing gender roles and gender relations for the better in some cases. For instance, when the traditional breadwinner in the family has been retrenched and can no longer earn an income, the woman whose work was mostly confined to the home may venture outside the home in search of an income. One cannot thus speak of gendered impacts as either being positive or negative, as the impacts are not linear but complex and multi-layered. The first sub-section below introduces the gender context in which the research was conducted. By providing an overview of how gender relations and gender roles have been changing in recent years, it lays the groundwork for the following sub-sections on the gendered reading of the socioeconomic and environmental aspects of mining and increased financialization of mining operations, as seen through the eyes of the research participants who live in the Copperbelt of Zambia.

#### 4.1. The gender context

Gender is a dynamic factor which evolves in response to social, political, cultural and economic changes and in turn influences these changes. This section recounts research participants’

reflections on traditional gender roles and how these have evolved over time particularly in relation to mining communities, the education of women and girls, division of labour and financial burdens in the household and the recent precariousness of mining jobs as potential causes for changing attitudes to gender. Gender is relevant at all levels of social life and is deeply embedded in how work is organized, rewarded and experienced. While some gender norms and roles are deeply engrained in the way of life, changes in the economy, such as the periods of boom and bust in the Copperbelt fuelled by fluctuations of copper prices in the global arena, may over time have contributed to a change in gender relations.

While many study participants, both male and female, agreed that men and women have the capacity to do the same type of work, some jobs were nevertheless still considered as either feminine or masculine. For example, Edna, a homemaker from the mining compound Wusakile in Kitwe and married to a mineworker, said she is open to her daughter doing many jobs but there are some jobs which are, “only for men”.

In the Copperbelt, historically, women’s work had been mostly in the informal sector of care work and housework. With the increasing number of women working in the formal sector, they are expected to fulfil this role of the caregiver in addition to their formal employment.<sup>9</sup> Unpaid or informal work, including a wide range of activities in the home, care work, and small-scale farming or trading was more often characterized as “feminine” work by participants.

This is the same at the global level where a large part of unpaid care work is performed by women across all economies and cultures. While it is not formally recognized, social economists estimate that had unpaid care work been assigned monetary value, it would make up between 10 and 39 percent of global GDP (UN Commission on the Status of Women 2017). Unpaid and domestic work supports “the formal economy and often makes up for lack of public expenditure on social services and infrastructure and thus it represents a transfer of resources from women to others in the economy” (UN Commission on the Status of Women 2017:9). While paid and unpaid care work is an integral component of well-being, social development and economic growth, the burden of provision of care is unequally distributed across gender and social class lines (Razavi and Staab 2012; UNRISD 2010). The 2018 ILO report on care work and care jobs shows that although there is a growing recognition of how vital care work is to the economy, gender inequalities in households and the labour market are persistent and inextricably linked with care work and reproductive work (Addati et al. 2018). In addition, women may often engage in informal income-generating activities, considering this to be an extension of their care work or domestic work. Informal income-generating activities are an essential component of the global labour market and an important source of production and income in the developing world, often used to complement low wages earned from formal wage labour and ultimately contributing positively to poverty reduction. However, the downside to informal work is that it is precarious and continues to go unrecognized and unquantified. There is a growing movement to recognize reproductive work and unpaid care work as productive work in contrast to the dichotomy that classical capitalist thought creates between the two. While financialization and other transformations in the economy do not erase this dichotomy, they appear to create conditions for amplifying the importance of informal work.

---

<sup>9</sup> Global trends reveal a similar pattern elsewhere, see for example Razavi and Staab (2012).

Among the study participants, there was also an attitude that women's work which neither generates income or is informal was not "work" but an extension of a woman's role. B, a retrenched miner in his sixties who no longer had a source of income, lamented that wives do not work, while also paradoxically acknowledging that all they do is cook, insinuating that housework was not work in his eyes. In his words, "many of our wives in Zambia don't work, they are just housewives. They just cook *nshima* [Zambian staple] and wash plates". This is an example of how women's care work or housework is devalued. This attitude that housework is not "work" was also shared by women. M, a homemaker and wife of a mineworker at Mopani Copper Mines also stated "I don't do any work. My husband is the only one who works. I am a housewife" (Interview excerpt translated from Bemba).

Research participants noted that the downside to a woman working at home without a formal source of income is a lack of independence from the husband, which could often result in feelings of frustration and resentment. Some even reported abuse by the husband. The following is an excerpt from a focus group discussion with female homemakers living in the same mining neighbourhood of Wusakile and attending the same church. All speakers are female.

L: We pass through challenges trying to find food and trying to make our lives bearable. Sometimes your husband would come home angry or sometimes he would bring very little money. So sometimes we end up having disagreements.

M: We have challenges when maybe the husband has had a difficult day and he would just come and be violent. It affects us as women. Sometimes he would get paid and then a relative like his sister would call and say they need money. He might take the money he is paid and instead of bringing it home, send it to his relatives.

My husband is a brick layer so when he comes from work, he might say he is coming with money, but he might go drinking first and not bother about the needs of the home.

J: Men are the same. Sometimes they act like they all had the same mother. Sometimes they come home and try to find something to argue about; it doesn't matter what. As women we have to just go with it in order to keep the peace until he decides to come to his senses on his own.

E: There are some men that just insist on starting fights; even if you don't want to respond, they force you to.

H: The men in our homes hurt us in many ways. Some of us are married to drunkards. You could be waiting for him to bring money home, but he will come home drunk having already spent the money. In order to cover himself he will start an argument.

In her work examining the causes and consequences of the growing flexibility in gender divisions of labour in Kitwe (the biggest city in the Copperbelt), Zambia, Alice Evans notes that the gendered divisions of labour are not as strictly defined as they used to be, which she attributes to growing economic insecurity (Evans 2014). The economic insecurity and the resulting restructuring of gender relations in labour are due to decades of fluctuations in employment levels in the mining industry. She attributes the low levels of employment at times of economic decline to decreases in copper prices and increased mechanization in the mining industry (Evans 2014). Even in periods of plenty, secure and permanent positions have given way to precarious employment (Fraser and Lungu 2007). Low levels of employment, followed by periods of precarious employment, made it necessary for women to engage in income-generating activities, whereas in the past, this was discouraged.



According to Evans, it was not women's increased access to resources but rather the community's "*collective reflection* about a large number of women engaging in more activities, which were typically associated with masculinity, that weakened gender beliefs and undermined gender-status inequalities" (Evans 2014:981).

When discussing perceptions of gendered divisions of labour and changing attitudes to gender roles, most women participants expressed the view that men and women are equally capable of working in the home as well as outside the home. The following is a conversation among women from the mining neighbourhood of Wusakile in Kitwe.

S: In terms of work, do you think some jobs can only be done by men and some can only be done by women?

M: Men and women can do the same jobs as long as the person has the desire.

E: There is no difference. Anyone can work. A man can even cook *nshima* or do anything in the house.

In a focus group with women who are married to miners, each of the participants expressed the view that the shift in attitudes and behaviours with regard to women working is due to the changing economic context. The following is an excerpt from that focus group.

J: The way things are now, there is no job that can be specified for just one gender. A man can work and a woman can do the same things. It's all the same.

S: So, would you say the rules have changed?

J: Yes.

S: What do you think has caused the change. What has changed?

J: In my opinion, I believe because money is scarce, you'll find a lot of unemployed men; women are taking over, and in most cases, acting as the main income earner. Things have changed.

M, a female research participant from Nkana East who is the spouse of a former mineworker of Mopani Copper Mines, remembered the opposition she received from her husband when she expressed her desire to do business outside the house at the beginning of their marriage. The husband resisted because of the possible perception that he was not providing enough as the breadwinner and the head of the household. This led to her sneaking out and engaging in small-scale trade in clothes and shoes whenever her husband was at work. She would walk long distances just to be able to do her work. Initially, her husband was offended at the idea of her working to earn money, as he was already providing for the family and he thought there was no need for her to engage in these economic activities. Later, however, his resistance was replaced by appreciation for the extra income that was bringing about changes around the household. In the words of M:

He [the husband] got angry but he got over it. I think he started trusting me bit by bit and he noticed the changes in the home. He could see the changes. The money that I got for business, you know, us Zambians, we help our parents, and by that time, my parents were not working. They had gone back home. My father was a miner and a housing officer in the mines. So, at that time they used to retire them by fifty years. I would help them [with the money that I made]. I [also] wanted my children to go to very nice schools. And those

days I told my God. I kept going to convent pleading with the sister; I wanted my first born to go there. I was staying in Chachacha. I kept on pleading with the sister in 1995 until one day my child was accepted. Vehicles were rare. One or two people had vehicles. Every day I would take my child back to school, go back and work, at twelve hours every day I would go back and forth and I would put her on my back.

While acknowledging the need to discuss and to make decisions together as a couple, most participants emphasized that the man's position as the head of the household is central to decision making on important matters concerning the family. This does not mean that the woman has no say but rather that the man has at least a symbolic if not always literal ultimate say in decision making. In the words of L, a homemaker and a mineworker's wife from Wusakile, a mining neighbourhood in Kitwe, "According to our traditional culture I follow my husband's rules. If they are not good, we change them". Other wives of mineworkers also living in Wusakile expressed similar sentiments. The husband's position as a head of the household/breadwinner is important, but the woman also has a say in the decision making in the chance that she does not agree with him. Comparing the responses of participants, the attitude of the older generation seems to be different from the younger generation. L, a young mineworker's wife, stated that she and her husband talk and make decisions together. E, an older mineworker's wife, on the other hand said that while she would normally follow what her husband decides on his own, she would "always advise him on the right thing if he is wrong" (focus group discussion with mineworkers' wives in Wusakile, a mining compound). The prevalent response however was that husbands and wives make decisions together with a particular deference given to the man's point of view. In the words of J, another mineworker's wife from Wusakile, "We make the decisions together. The man is the head of the home and what he says goes, but I'm there to steer him right when he goes the wrong way".

**Figure 3: Focus group discussion with women in Chambishi, Copperbelt**



Source: Author

This position of the husband/father as the head of the household is also an extension of his traditional status as the breadwinner for the family. Although attitudes to women working outside the home are changing, there is still an expectation that the man be the provider for the family. The sentiment expressed by most male participants whose wives were also working was that the wife's responsibilities are primarily to make sure that the family home is taken care of rather than to bring in money.

If the wife brings in money, she is not, in a sense, required to use it to provide for her family. Informants expressed the view that if the wife makes money, there is an understanding that it is her own and for her to use as she wishes. H, a mineworker's wife from Wusakile, stated that the couple does not share the financial responsibility of maintaining the household: "As the father, he does everything". J, a mineworker's wife from Wusakile who is generating an income on her own in addition to her housework, also stated that her income is supplementary, rather than the primary income. Since there was no expectation for her to bring in an income, whatever money she makes is thus her own money, and not the family's money. In her words, "I farm and do some business here and there. [Although I voluntarily use the money I make to] help with our basic needs...my money is mine. My husband's money is the money we use for our livelihood. He has a number of businesses like bars, grocery stores, that bring us money for our livelihood. My money is used for other things". J's statement shows that she has no obligation to use the money she makes in a particular way. She can thus use it as she sees fit. The following conversation with two young male miners in their early thirties (B and P) illustrates the cultural expectation of women and men's financial burdens.

B: As a man, basically you would take the whole burden on you unless your wife is responsible enough just to take note of one or two expenses. So, when my wife was working, she would take care of some small [expenses]. But in African culture, the bigger burden is for the father! Yeah. That's the cultural [expectation] and challenge for men. ...But with good...negotiation [*chuckles*], the women could take care of the food. I think they are comfortable with the food part.

P: The management, the bills, lighting, heating or whatever, those are the big things that we [men] take care of.

This idea that the woman does not have the same financial burden as the husband was echoed by wives of mineworkers who expressed the view that their financial role was to help out when they could and, if possible, the husband would pay back what the wife had used to pay for what is considered to be the husband's responsibility to begin with. In the same vein, J, a wife of a mineworker says, "whichever one of us gets money first will take care of what bills need to be paid. If I end up paying using my money, he will pay me back when he gets money".

This, however, is not the same across the whole population of Kitwe. A very interesting outlying group of women is challenging the prevalent attitude that the man is the provider, or breadwinner. These women are part of the copper value chain since they collect, crush and sell rocks to construction companies by the roadside in Nkana West, near the Mopani mines. They buy the rocks, which are by-products of mining companies' operations, from companies such as Mopani. Many of the women we interviewed stated that their husbands stay at home and take care of the work which is traditionally considered feminine, such as taking care of children or cooking and cleaning. A few of the rock crushers were accompanied to the site by their young children and

one had a nursing baby. When asked what her husband does, T, a stone-crusher from Kitwe stated, “Nothing, he doesn't work. He just remains at home”, and M said her husband is “the one who cooks and takes care of children at home”. The reason given by the women was economic—their husbands had not been able to find jobs and so the women took on the role of breadwinner. There was an insinuation from the women that they were better at doing this work, better suited for negotiating with the companies selling the rocks. It may also be temporary employment which they engage in while their husbands are unemployed or are searching for work.

A significant majority of participants emphasized the importance of educating their daughters as well as their sons. They noted that the determining factor in whether children can attend school or not is financial ability to pay for the children rather than the perception that sending sons to school is more useful than sending daughters. Some research participants were asked if they prioritized their sons or daughters in deciding who to continue sending to school in a period of economic decline. While some replied that they would prioritize boys, most said they would treat all children in the same way. This, however, represents a shift in attitude from fifteen to twenty years ago. D, a female mineworker from Mufulira, explains that in times of financial hardship, parents used to give preferential treatment to their male children over their female children. In the words of D, “Boys were given preference. We would be told, let your brothers go to school and they will come and take care of you. Another reason we were given is that ladies can get married and a man will take care of you while a man has to go to school because he will have to take care of the family”.

The financial burdens for educating children were also expressed in gendered terms. There was a slight preference in this regard for sending girl children to school since boy's items were deemed to be more expensive than those for girls. When it comes to questions of intelligence or level of interest in education, on the other hand, most participants expressed the view that there was no significant difference between boys and girls. Thus, the consensus was that sending girls to school is just as useful and as important as sending boys to school.

#### 4.2. Women in mining

Mining has often been described as a “masculine” occupation, and as one that traditionally and structurally prevents women from entering it (Lahiri-Dutt 2011). According to Evans, in the past, while male mineworkers occupied all sort of jobs, ranging from managerial and administrative positions in the mines to wage labourers, trade union officials, civil servants and politicians (whose work is intricately linked to or influences mining activities), women's role was mostly relegated to one of support and dependency (Evans 2014). According to Keck and Powell (2006), the rationale behind the historical restriction of women's participation in the mining sector is the desire to promote their reproductive role. In recent years, women's participation in the mining industry has increased, albeit in small increments. According to Bloomberg, globally, around 15.7 percent of those employed by mining companies are women, up by 1 percent between 2014 and 2019 and at management level, only one in 20 global firms is headed by a woman (Doku 2019).

Studies have shown that women's participation in mining activities allows for increased wealth and economic security in the household, as well as increased women's empowerment and authority in household decision making (Heemskerk 2000). This is not unique to the Zambian context, however. In much of the world, re-structuring of gender relations in the mining industry has only recently begun to occur. The adoption of laws around non-discrimination, the publicity

value of having women in the workforce, and women being regarded as instrumental to “civilizing the workforce” have been suggested as the driving forces behind companies increasing women’s participation in the mining industry (Murray et al. 2017:123).

As discussed in previous sections, women’s participation in large-scale formal mining is still generally low, this being due to prescriptive and descriptive stereotyping, the hyper-masculine mining environment, and lack of education, training and experience, in addition to the absence of female role models in the sector as a source of inspiration for other women. The low percentage of women in mining is thus a product of the “culture, the labour market, and educational traditions at the national level, at the regional/local level, as well as within the mining companies themselves” (Abrahamsson et al. 2014). Rossana Romano and Leda Papastefanaki argue that throughout history, women’s roles as mineworkers and as household workers have been undermined and minimized by “masculinizing work and sites of labour” as a result of state and employers’ policies (2020). This, they assert, is in congruence with “de-labourization” of women, that is, “the exclusion of women from more or less formal wage labour employment by state and employer regulations, based on a male breadwinner ideology and the masculinization of workplaces and work processes”. They cite mining in the global South as being part of this process as women’s informal work extended throughout the mines (Romano and Papastefanaki 2020:3). It was this deliberate exclusion, they argue, which precluded women from mining and, more specifically, engaging in underground tasks and restricted them to household work, while at the same time their “pivotal role in reproduction and care work in mining communities was also insufficiently recognized” (Romano and Papastefanaki 2020:3).

The participants who were interviewed for this study indicated that in the Copperbelt, mining has traditionally been a gendered activity, with very limited involvement by women. Although the numbers of women who participate in mining activities has increased in recent years, it remains significantly lower than that of their male counterparts. The conversations on the place of women in the mining sector revolved around ease of access to mining jobs for women, remuneration, and women’s competence. Safety and health were brought up in the context of the suitability of women in underground jobs.

While discussing their take on the role of women in mining, participants overwhelmingly characterized mining as a “masculine” occupation. When asked why he decided to become a miner, a participant explained that in addition to the fact that it was a good source of income, he grew up hearing stories about the harshness of the working conditions for miners. He went into mining because it was the “manly thing to do”. This sentiment was echoed by a number of other male miners as well.

Although traditionally it has been regarded as a masculine occupation, there is an increasing number of women who are employed in the mining sector nowadays. The number however remains low and most of the female employees of mining companies who participated in the study work in offices in clerical and administrative positions. One woman who is employed in a technical position at Mopani Copper Mines attributes the low participation of women in mining jobs to the lack of opportunity to pursue the same type of education as their male peers.

D: So, most females are not educated, and they have the inferiority complex when it comes to working in the mines.

H: Do you think this kind of inferiority complex still persists?

D: Yes, we have just about a 100 [female employees] in the whole of the mining plant. The numbers are not that high, but with time, it seems to be changing.

Structural gender inequality is persistent in the extractive industries and this threatens to undermine women's rights (Hill et al. 2016). Some on-the-job challenges that women miners talked about included encountering bias and discrimination and in some cases harassment from their male colleagues.

E: Is there any form of stigma against women working in the mines?

D: Yes. Because even when I just entered the mines there was a bit of discrimination and men were surprised and complained at my preference to work in the mines and they said we would be lazing about and getting free money. And there was a book that was against women working underground in the mines. But to their surprise, we did a very good job and we proved to be very good workers. They used to say we would be more favoured and become girlfriends of managers. Men used to complain that we also go on maternity leave and still get the same salary.

The reported bias and discrimination usually happened at the beginning when the female mine company employee is just starting work. Once the woman has proven to the men that she is competent, that she has adequate or even more knowledge of the technical or financial aspects of mining, participants observed that the negative attitudes would subside. For instance, Mopani's women dump truck drivers were highly praised and admired by the men that were interviewed.

However, there was some degree of resentment that women get preferential treatment because they are entitled to "mothers' day", which is a break once a month for when they have their menstruation. Some attributed the negative attitudes towards their female colleagues to the level of education that the men had received. On the whole, however, when asked for their opinion on the involvement of women in mining operations, informants were generally in favour of increasing women's employment.

According to C, a middle-aged female nurse working at a mine, some jobs are becoming more gender-neutral: "I haven't been underground but what I hear is that the jobs that involve manual work are mostly done by men, but other jobs like being an electrician or a loader driver (someone who drives trucks) are done by both. For jobs like electricians or loader driver, I just noticed recently that women are also involved, but I don't know about the past". E, a male mineworker, also stated that men and women are now involved in all kinds of work: "A long time ago some jobs couldn't be done by women but now everyone can work the same jobs".

While some male participants expressed the view that women had the capacity to do any type of job in mining, others tied their response to conditions. One reason given for not allowing women to work underground, for instance, was that it would be inappropriate for women to be exposed to conditions so harsh that men are forced to "strip down to their underwear". This is in reference to the fact that the high temperature and pressure, added to the shortage of oxygen underground, forces many male miners to take off their clothes while working underground.

Apart from the moral inappropriateness, others cast the mines as a harsh working environment that could potentially be harmful to the health and safety of women. Women mine workers on the

other hand expressed ambivalence. While on the one hand some expressed the view that they would want to have equal access to all types of jobs, including working underground, they would want decent working conditions, such as limiting the workload to eight hours per day. The following is a conversation between two female mineworkers who were working as clerks at Mopani Copper Mines on the reasons why women do not work underground.

E: Ok, it's correct when it comes to the underground work. But mining is not all about underground. Only some are surface plants where they don't even mine, but they just treat the plant. Definitely there are areas underground which [can get] very hot [or] very cold [sic]. [and these conditions may be too harsh] for a lady. But again, [there are some underground] positions like a safety officer [which a lady can do and even if she has to go underground, because she will not have to be down there for long periods]. She is just there to identify what can harm the workers and leave the place. Yeah, in that area, a lady can at least work but not like the hot area: it's very...

O: She's not supposed to be underground for more than eight hours. She should be there for fewer hours.

E: Because of the temperature.

O: It's not advised for her to be there for so long. And if she is there for let's say after eight hours, she is supposed to maybe talk to the manager or what. She is supposed to be brought up. She is given the powers to do that.

Some women mine employees mentioned that they would be happy to have access to more technical positions without having to work underground. In recruitment, some expressed frustration that there was a slight bias in favour of recruiting a male candidate over a female candidate when both candidates have the same qualifications. A woman who is a metallurgic engineer by training expressed her frustration in the following way:

E: Ok. Maybe just on the side of like recruiting people, at least mines should even consider women as well. Yeah, because there are many out there who would, who have the papers but maybe they just don't have that chance to work in the mines.

H: If for example, they are presented with two candidates, there's a woman and a man-

E: They'll go for the man. But because this is what I've experienced myself. ... Sometimes I am [more qualified than the men] but they would definitely go for a guy at the end of the day. They look at [the physical strength of the man]. So, they usually don't consider the papers (educational qualifications). We, [the women have] the papers and can work and do the job properly, but...we are being undermined. We are not given that chance. So they should look into that. The other thing, the problem with the mines is that they don't consider ladies to be equal to the men because a lot of work underground is done by men mostly. There are very few ladies who go underground as compared to men, [which is] why they would come for a man [rather] than for a lady.

Sometimes a woman could be hired because of a descriptive stereotype about a woman—that she possesses a certain quality that a man may not presumably have. For example, there is an assumption that a woman would be more careful in operating certain machinery. A female dump truck operator states that she was chosen for this position not only because of her knowledge and training as an electrical technician but also because of her gender. The rationale behind this decision to hire women was because women are considered more careful and more attentive to detail. In the words of the female dump truck operator, “the reason they opted to train ladies is

because of the belief that ladies easily understand technicalities of the machines, detect faults and meet targets easily. We [women] use the best basic safety practices [to make sure] that [we] don't cause accidents”.

As discussed in this section, many aspects of life and interactions in the Copperbelt are interlinked with mining. Culturally mandated gender roles have always played a very important role in the ways that men and women interact and also determine women's participation in the economy, including in mining. Even though women's involvement in mining has increased somewhat in recent years, their recruitment is also laced with gender bias and stereotyping. For instance, the women who were recruited as dump truck drivers by Mopani Copper Mines were given these positions because they were deemed to be “more careful” and “more attentive to detail” than their male counterparts. At least one female engineer also complained that recruiters show a positive gender bias in favour of male candidates versus female candidates.

#### 4.3. The precariousness of mining jobs and gender disparities in retrenchment

Casualization of labour and hiring practices favouring contract-based temporary employment result from privatization and increased financialization. This in turn creates instability and job precariousness. Conversations that I had with mineworkers revealed that they do not feel secure in their jobs at the mines. Many of them expressed the view that they are afraid they could lose their jobs at any time due to the volatile nature of the price of copper and often the inability of unions to negotiate well. There is thus a trend among the younger generation of miners to take up a second form of income-generating activity. In addition, many have used their employment to secure loans. Mineworkers gain access to and interact with lending institutions through their employer. In this way, they have very little if any leverage or agency, since the negotiation happens at the corporate level and the mineworkers engage in this risk-taking behaviour when they take out loans with the conditions which have been agreed upon by their employer. This is a prime example of financialization of the everyday by mining companies.

Mopani Copper Mines is a major employer in both Kitwe and Mufulira. As discussed above, prior to becoming a subsidiary of Glencore, it was owned by the state, under Zambia Consolidated Copper Mines. The research participants noted that since its privatization in the 1990s, the company's decision-making process in response to the changing prices of copper has prioritized profit making over their welfare. This inevitably impacts the rights of members of the mining community and aggravates already existing poverty and inequality.

Similarly, James Musonda finds that for a lot of mine workers, mining work is no longer a secure lifelong career but rather a way for them to have access to loans (Musonda 2018). According to Musonda, over 75 percent of all directly employed miners have obtained loans from financial institutions, often at interest rates as high as 40 percent per annum (Musonda 2018). According to one interviewed miner, the average market interest rate at that time was around 27 percent. The loans are then used to buy houses, cars, send children to school, among other things (Musonda 2018). The exorbitant interest rates were confirmed by persons that I interviewed who said that they took the option because it was the only means of financing family and personal life projects. The mining work is thus facilitating the entry of financialization into household economics—financialization of the everyday as described by Van der Zwan (2014).



**Figure 4: Mopani Copper Mines, Nkana Plant, Kitwe, Copperbelt**



*Source: Author*

In 2015, 4,300 employees of Mopani Copper Mines were laid off as a result of the price of copper dropping in the global commodities market. The fact that a trade union leader lost his employment along with the 4,300 dismayed many and caused them to lose some measure of confidence in the influence of the unions. A story that kept coming up was that many of the miners had taken out loans from banks through the mining company. At the time that they were laid off, their severance package was reduced in order to reflect the loans that they had taken, and many left the company without any money at all. This situation has created a significant disruption in the socioeconomic fabric, leading to the breakdown of families and increased poverty.

Stories of retrenchment and rehiring are all too common. A year or so after this massive retrenchment, some workers were recalled and offered contract-based and temporary work. This practice of hiring without actually offering permanent employment not only creates job insecurity but also prevents workers from organizing in unions and fighting for their rights. Musonda argues that the greatest impact of privatization of the mines has been on the nature of employment in the mines (Musonda 2018). Prior to privatization, employment in the mines “was understood as long term, permanent, direct and pensionable” but “is now subcontracted, temporal and precarious, while retrenchments are frequent” (Musonda 2018). It is thus this job insecurity which drives many to take out loans.

As the ILO has stated, these various types of precarious work—including outsourcing, casualization, contractualization and fixed term contracts—are all creating a large pool of permanently temporary employees and bogus independent contractors. There is thus a general

insecurity—the ways in which the mining company deals with the volatile prices of the copper commodity are the primary determinants of people’s livelihoods. The rights to life, livelihoods, shelter, dignity and equality, as well as collective rights, such as the right to a clean environment, are all affected.

Research participants observed that the privately owned mining companies such as Mopani are profit driven monoliths, in sharp contrast to the state-owned mining companies during the nationalization period, which took a more socially mindful approach.

M: I think at that time [of ZCCM] I didn't mind about [the price of] copper going up or down. [We had all that we needed. So, we didn't care about what was happening regarding the price of copper] until they started to say that they were closing the mines because [the price of] copper had gone down. That is when we started to get worried [maybe in the 1990s or 2000s]. [Before that we didn't think about the price of copper because in] those days, the mines were so good. You'd find the road well tarred, the lights in the streets, everything was done, and they would come and spray for mosquitoes. They would do everything. The hospitals were well equipped for us as miners, so we didn't mind.

Research participants acknowledged that they lacked economic security. Participants attributed the precariousness of their employment in mining to the changing price of copper and sometimes the weakening unions, specifically their inability to negotiate effectively. This in turn affects the whole community’s economy, and not just those directly employed by the mining companies or engaged in providing services to the mining companies. As one 31-year-old female mineworker of MCM from Mufulira notes, “when the price of copper goes down, and when miners have been retrenched, the whole town goes down. And when miners have been paid, you’ll find them in the shops immediately after. This is in part due to the reputation of miners as big spenders and in part attributable to the fact that everyone’s life is in some way connected to mining”.

The price was up and down, up and down, and like anywhere else in the world we all get affected. So, in the time of boom, we're all celebrating. In the time of low, we all cry, but the reality is that we have survived it [and we have benefited much from the mining companies]. Most of the skills we see here, industrial skills, hands-on skills, engineering and all that was...developed by the mining industry.

A mining entrepreneur from Kitwe

Participants told stories of how retrenchment negatively impacted the societal structure by causing economic decline and catalysing breakdown of some families. S, a miner from Mufulira, recounted the stories of two of his friends whose wives left them as soon as they lost their jobs and they were unable to provide for the family any longer. The breakdown in the family structure could also result from psychological factors—frustration over the inability to fulfil the role of breadwinner.

For some, the wives leave them because they are no longer working. There are some cases where women are used to getting a lot of money from their husbands, and when the money is not there because there is no job, they just leave.

A male miner from Kitwe

Some reported a higher occurrence of adultery, stories of families breaking down because the retrenched miner would take his severance money and spend it all on prostitutes or on alcohol before going home.

H: ...there was a huge influx of prostitutes coming here to prey on the workers' severance package.

N: You have some stay-home mothers or housewives that were married to ex-miners. Just after [the men] got the last paycheck [immediately after retrenchment], [the husbands would be absent from the home for a week or so]. They...would be somewhere with a prostitute and at the end of the week, [would] go back home with [no money]. Very sad. I wish there was a programme [that the company] could have put in place before the laying off process. Our men [have a problem with alcohol too]. They may go for a beer or two and end up spending all their money.

S: Isn't it like it was already a culture?

N: Yes, especially on like pay days.

In addition to that, participants recounted cases of suicides that happened in the wake of Mopani's large-scale retrenchments of 2015. E, a miner working for Mopani, explains, "In Chingola, a certain man hung himself because after retrenchments, he didn't have anything to do next".

All over the world, women are disproportionately more involved in informal work than men (UN Women 2015). In sub-Saharan Africa, 74 percent of women in non-agricultural work are in the informal sector (UN Women 2015). Women's participation in the informal sector is usually in work that is culturally considered to be feminine work. This might be one of the reasons why after the retrenchments at the mines in 2015 women were quick to take up informal work to help their families. Also, most former mine workers are unable to transfer their skills into another job easily. The interviews reveal that women mine workers did better in terms of adjusting to life after losing employment in the mines, often moving into informal income-generating activities.

The issue of status might also hinder men—particularly of the older generation—from going into less lucrative forms of employment. Some men said the reason they were drawn into the mining industry was not only because of the financial benefits it provided but also because this male-dominated industry had always been associated with bravery and masculinity. Leaving that behind and going into another job was thus difficult for the older mineworkers. While some men who were former miners struggled to find another job or were reluctant to start another income-generating activity, others embarked on a completely different path, such as farming or small-scale trading. L is a former miner who was employed by ZCCM and subsequently by Mopani. Although he had been retrenched a couple of times before, his final exit happened in December 2015 when he was forced into early retirement. He welcomed us very warmly and emphasized that he wanted to make the experiences of former miners, including himself known; he wanted to tell the story of how he has struggled to take care of his very big family. He started a farm where he grows maize, sweet potatoes and ground nuts for household consumption. The reason he has been unable to sell, he says, is because his mining skills did not really prepare him for anything other than mining. A group of older men who were former miners from Mindolo, on the other hand, noted that they are not involved in any income-generating activities. They expressed their grievances against their former employers at Mopani Copper Mines—after decades of

employment in copper mining, they felt that they had not benefited from it as much as they deserved to.

The model of the nuclear family is being used as a unit of analysis only to show that there is a socio-cultural notion of heads of households (typically the husband of the nuclear unit, having the primary financial responsibility). The heads of households are primarily responsible for their children and spouse (the nuclear unit). In the Zambian context, they are also expected to provide for an extended network of relatives and kin. Economic pressures such as loss of employment of the head of household thus impacts the well-being of relatives in this network. The household thus refers not only to the nuclear unit but also the extended family. Most of the time, women shoulder a bigger burden to care for extended family members.

In addition to the breakdown of family and societal structures, retrenchment impacts women differently than men. For one thing, women who earn money report having more people to take care of. For this reason, they innovate and create other means of earning an income. While most of the former male miners that I interviewed (and especially the older former miners) have not managed to find other income-generating employment, their wives, who had always been homemakers, have begun engaging in small-scale commercial activities, such as having a small shop stand or selling vegetables. When asked to compare how men and women are affected when there is a dip in the price of copper, D, a female miner, replied as follows:

D: I would say ladies are really affected because women take care of a large number of people in the community. But for men as well, a lot of marriages fell apart like in the last retrenchment. And the last retrenchment was really bad because people were going home with nothing because banks would get money from them through the company.

A group of women from Wusakile, one of the mining neighbourhoods, who are married to men working in the mining industry were thankful for the opportunity to talk to each other because they said that their conversation woke them up to the reality of the precariousness of the copper mining industry and that they would be more proactive in the future instead of continuing to wait for their husbands to bring home a salary. In the words of L, a mineworker's wife from Wusakile, "we really need to have something that we are doing on our own. We thank you for giving us this interview. It has helped us to think of things we can do to improve our lives".

We often hear radio programmes telling us as women not to just sit at home and wait for our husbands to bring in some money. We should instead try and do things here and there to help supplement our lives. Sometimes when there is pruning (if the husband has been retrenched), for example if you (the woman) are not doing anything else, it becomes like a punishment for your children. We must find things to do to help out with money.

H, a miner's wife from Wusakile, Kitwe

This section analysed some of the responses adopted to combat economic insecurity ensuing from retrenchment and changing prices of copper. Unlike financialization, a concept that seems too far removed from what is happening on the ground, it was easier for participants to reflect on their experiences in relation to changes in the price of copper and how they financed the construction of a house or managed to send their children to school. The fact that mine workers resort to loans to pay for some short-term expenses and even long-term goals shows increased financialization

of the everyday in the lives of miners. Because of limited options, miners are very often driven to take loans with unfavourable terms and high interest rates. In this way, financialization of the everyday tends to negatively impact those who are in a weaker bargaining position because of socioeconomic status or unequal power dynamics. Further, it was hard to conclude that financialization has had more positive or negative impacts on men as opposed to women or vice versa. If we look at the number of women in mining, however, we see that the number is quite low. In this regard, women's ability to access loans would be low. On the other hand, economic insecurity that is related to increased financialization or greater volatility of copper prices in the sector has helped to catalyse changing attitudes and behaviours about women working outside the home, slowly changing the traditional view that only the man is the breadwinner and head of household. Looking at it from the perspective of the man, however, the inability to provide for one's family in accordance with the traditionally assigned role of breadwinner can have serious impacts on the social fabric of the community and social institutions.

#### 4.4. Environmental and health impacts

The environmental and health issues that arise from mining operations as discussed in section 2.2 above are both gendered and a product of the socioeconomic and geographical context. The level of exposure to environmental and health risks is often associated with socioeconomic conditions and one's ability to move. For instance, residence near the mines may be the only affordable residence option available to low-income families. With limited financial resources, they may not be able to move to places which pose less risk. The health and environmental impacts are also very closely intertwined with social impacts.

Toxic air, water pollution and acid rain, which are typically produced by mining operations, create "deadzones" where plants cannot grow (Earth Rights International 2004). The introduction of mining threatens traditional livelihoods which are based on the environment. In communities where women have the responsibility to obtain and prepare food, their task is made harder as a result of the destruction of the environment. This often leads to other social impacts. According to Earth Rights International, "mining operations force a rapid shift from a largely subsistence-based economy to one based on cash" and these changes often force women into the sex industry since they have no other way to provide for themselves and their families (Earth Rights International 2004:5).

The chemicals used in extraction can be very toxic and harmful to the health and well-being of human beings. Sulphur, hydrochloric acid and other toxic chemicals are used in the extraction of copper. Continued exposure to these chemicals can heighten the risk of short- and long-term injury and illness as well as the "likelihood that subsequent children will have physical and/or mental abnormalities" (Earth Rights International 2004:5). A case study on the gendered impacts of gold mining in Kachin State in Burma reports that in order to bring in more money to their families, women frequently engage in an unsafe artisanal mining practices—they "commonly transport ore, wash and then treat it with chemicals, and collect water needed for drinking, washing, and cooking" (Earth Rights International 2004:5). This exposure jeopardizes their own health and puts the health of their unborn children at risk because of the potential harm to their reproductive health (Earth Rights International 2004). The findings of the study confirm these observations from the literature. Whether these environmental and health impacts are exacerbated by increased financialization, however, has no straightforward answer. However, where profit

maximization is the driving force, very little is dedicated to mitigation of environmental and health impacts, as mitigation efforts would entail a notable cost to the mining companies.

This analysis could have benefited from conversations with mining companies' management to understand how they strategize and make their decisions on how to minimize environmental and health impacts. However, based on conversations with mining employees, those working in the company's environmental compliance<sup>10</sup> department, members of the nearby communities, and civil society, it appears that when it comes to environmental or health impact minimization, both Mopani Copper Mines and NFCA would like to be seen to be meeting targets without actually doing enough to make significant or meaningful changes. Mopani also demonstrated reluctance to accept responsibility with regard to another health challenge faced by residents of three neighbourhoods in Mufulira—Butondo, Kankoyo and Kantanshi: poor water quality (Garcia 2018).<sup>11</sup>

A good example is the case of Kankoyo, a residential neighbourhood located very close to Mopani in Mufulira. We conducted a focus group discussion attended by 12 residents of Kankoyo, most of whom were members of Green and Justice, a grassroots organization formed in order to expose people's experiences. The majority of the participants in the focus group were women. Many of them reported having respiratory problems, frequent headaches, coughs, asthma and other health issues because of the emissions coming from the mines. The sulphur dioxide emissions cause acid rain which in turn causes cracks in the walls and roofs of the houses. There is rampant poverty in the neighbourhood, and although the residents would like to grow vegetables to feed their families, it is impossible to grow anything because the quality of the soil has deteriorated as a result of the emissions and acid rain.

**Figure 5: Mopani Plant near Kankoyo Township, Mufulira, Copperbelt**



*Source: Author*

<sup>10</sup> This refers to compliance with national environmental regulatory standards.

<sup>11</sup> Mopani is involved in the treatment and transfer of the water to the water provider, Mulonga Water and Sewerage Company. As part of *Valueworks*, partner organization Swiss ADR Campaign met with the Mufulira Civil Society Organizations' Forum which began a campaign for clean water at the end of 2017 with support from SOLIFONDS. Tests revealed that the water contained high levels of lead and cadmium (a carcinogen). Mopani and Mulonga had originally denied the allegations that the water was of poor quality, but later, with the presentation of the results and public pressure from the news being publicized, both Mopani and Mulonga expressed interest in responding as of the end of December 2017. For more information about this part of the project, see García (2018).

Kankoyo is a low-income residential neighbourhood. The location of the houses in relation to the mines has exposed the residents to large amounts of pollutants blowing from the mines. This pollution was seriously affecting the health and well-being of residents of the housing projects. Because the area was deemed unfit for human habitation, the mining employees who lived there were asked to relocate, and the houses were ordered to be destroyed. After the mining employees moved out, destruction did not occur immediately. Before the destruction could be carried out, low-income families moved into the now vacant houses. The new residents were not forced out of the houses. The residents of Kankoyo, who are now living in the direct path of the emissions, are thus not employees of Mopani Copper Mines. The women who are mostly engaged in home-based domestic work or care work experience prolonged exposure to the pollution and to the loud noises and shaking emanating from blasting in the mines. As the men's work takes them away from the vicinity of the mines, they are not exposed to pollution for as long a period as the women are.

Wilma Nchito<sup>12</sup> shows that the location of Kankoyo is the result of colonial era planning policies and practices of racial segregation which mandated that mine townships be built very close to the mines (2018). These practices continued to impact the community during nationalization and re-privatization of the mines in Zambia, as the particular location of the townships continues to expose the inhabitants to the impacts of mining activities regardless of whether they are involved in mining or not (Nchito 2018). Nchito thus argues that local community members who are not employed by the mines are suffering as a result of the negative consequences of mining but are not benefiting from the extractive activities (Nchito 2018).<sup>13</sup>

In response to complaints regarding Kankoyo, Mopani's office of environmental compliance claims that the company has made significant technological changes to avoid environmental pollution. By modernizing their method of capturing the sulphur dioxide, they state that they have managed to capture as much as 98 percent of these emissions and convert it into sulphuric acid. Residents of Kankoyo who were interviewed, however, still suffer from the health and environmental impacts in spite of these changes made. The measures that Mopani has taken to reduce pollution also appear to be discretionary. For example, in 2015-2016, the government's restriction of the use of electric power made meeting the environmental targets that the company had set for itself more expensive. To avoid these expenses, the company decided to do away with these targets without putting a stop to its regular mining activities.

---

<sup>12</sup> This research was undertaken as part of the Valueworks project and the results were presented at the Valueworks symposium held in Geneva, Switzerland by the author.

<sup>13</sup> She argues that the companies cannot "justify their profits to the local communities who are not even employed by the mine" and calls for the removal of barriers to the equitable distribution of the gains obtained from mining (see also Kabala and Lungu 2018).

**Figure 6: Houses in Kankoyo Township, Mufulira, Copperbelt**



*Source: Author*

A couple of miles away from Kankoyo, in the neighbouring Kantanshi, I heard a different story regarding MCM. Kantanshi is a mining compound inhabited mainly by miners and former miners. Interestingly, women from Kantanshi explained to me that Mopani was a benevolent company that was doing a lot to give back to the community. As part of their corporate social responsibility strategy, they offer some of the land on which they are not mining to communities in the area for the purpose of farming. They provide lessons on how to farm, seeds, farming equipment, fertilizers and so on. These are however either loaned or have to be paid for in some form. The beneficiaries of these programmes were mostly women. The women who were interviewed said that the plot offered to them is generally “good land” with “fertile soil” and producing “good crops”. Mopani would let them farm it until deciding to explore or to extract from that plot.



**Figure 7: An old-style miner's house in a mining township, Mufulira, Copperbelt**



*Source: Author*

The land that Mopani is currently offering for use was formerly communal land under the traditional land tenure system. There is evidence that this land was previously used for agricultural purposes by the community and there was an assumption that it was communally owned (Business and Human Rights Resource Center 2016). Tinenenji Banda and Marja Hinfelaar describe how privatization of land ownership came about to facilitate commercial exploration for the purpose of mining in the period prior to nationalization of the mining industry, and in the 1990s and early 2000s when it was re-privatized (Banda and Hinfelaar 2018). In this vein, once the mines were privatized, Glencore acquired the land from ZCCM in the early 2000s, and it became the private property of Mopani. Between 2001 and 2002, the mining company, with support from government security, destroyed the farming crops on the land and forcefully displaced over 2000 seasonal farm workers (Business and Human Rights Resource Center 2016).

At first glance, outside of the mines, it appears that the environmental and health impacts of the mining operations affect women more than men (excluding men who work in the mines) because women's gender roles require them to stay at home longer, and home is close to the emissions. However, not all women are affected in this way, but rather women of a particular socioeconomic status who live in certain locations. Linking these impacts to financialization is tenuous in the absence of an honest explanation of the rationale behind decisions on environmental impact mitigation. However, there is evidence suggesting that these decisions are made with the objective of prioritizing profit and minimizing cost. Although community consultation is part of the environmental impact assessment, the consultation is not gender-informed and hence does not take women's experiences into consideration.

## Conclusion

Increased financialization of global production networks in general and the copper value chain in particular has direct and indirect impacts on lives and livelihoods at sites of extraction in the Copperbelt. This study indicates that the socioeconomic, environmental and health implications are multifaceted, intertwined and, in some ways, gendered. Research participants' stories paint a nuanced, dynamic and multi-layered picture of the change in gender relations that have taken place, particularly in the past two to three decades. We discover that gender stereotypes and gender relations remain traditional in some ways, but in other ways gender disparities appear to be eroding. Given the important role that copper mining plays in the socioeconomic fabric of the Copperbelt community, some of the changes in gender dynamics can be attributed to the shifts occurring in the copper mining industry in response to the global financial economy, and particularly to what is happening in commodity markets.

Although traditionally mining has been seen as an ultra-masculine domain, it seems to have become more open to women in recent years. Although there are more opportunities for women now than in the past, there is no tangible evidence that women are being offered more sustainable access to all types of jobs. Anecdotal evidence shows that women are favoured over men for positions requiring attributes which are stereotypically considered feminine—specifically their supposed secretarial, accounting, organizational and communication skills. Choice of women as dump truck drivers for example was attributed to their perceived ability to be more cautious or more attentive to detail in operating complicated machinery. Yet compared to men, women's involvement in mining as geologists or engineers still remains very low.

Life in the mining communities seems far removed from financialization and shifts in global financial markets. However, this report has shown that as finance continues to become more important in the economy, various other social and environmental issues are accorded less importance. Increased reliance on financial capital and increased financialization has caused casualization of labour and employment insecurity. In comparison to pre-privatization, employment in the mines is no longer considered attractive since employees believe that their welfare is not accorded much importance in the mining company's decision-making processes. When there is a dip in the price of copper globally, companies resort to widescale retrenchment. The once strong miners' trade unions have been weakened. In addition, companies prefer to do a lot of their work through contractors rather than employing the miners directly, which puts them in a precarious position.

In the wake of retrenchment, stories from interviewees indicate that retrenched women tended to transition more easily into other types of income-generating activity. Perhaps because of their traditional role as breadwinner, men were seen to have a harder time accepting employment loss. In addition, anecdotal evidence shows that retrenchment and economic instability tends to erode gender stereotypes and roles, as women are increasingly assuming roles and taking up positions traditionally held by men. In the wake of their husbands losing employment in the mines, women who formerly performed mainly care work or household work began taking up income-generating activities in the informal or formal economy. While this is generally the case, gender cannot be seen in isolation—education level, socioeconomic status, ownership of land and decision-making power are all interlocking factors which can determine the ability to survive and thrive in the wake of retrenchment.

An unexpected way in which financialization plays out in the everyday lives of the miners is through the personal loans that miners had secured as a result of their employment in the mines. Even if the terms were unfavourable and the interest rate exorbitant, because of job insecurity, for many, this was the sole option of obtaining the financial means to undertake life projects, such as building a house. Banks would have direct access to the employees' salaries through the company and when retrenched, severance packages would be withheld to pay off the debts. This example of financialization of the everyday life of miners facilitated by the mining companies exacerbates already existing inequalities. There was, however, no evidence that this particular impact was differently felt by men and women.

It is true that the high volatility of the price of copper forces producers to adapt to quickly changing market conditions and shifts in the global financial economy. While these choices have to be taken by companies according to commercial criteria, they have consequences beyond individual firms. Changes in the global financial economy thus have very real impacts on social relations and economic and political realities at the national as well as at the local level. Some of the problems discussed are attributable to the state's granting of generous concessions to private mining companies and its lax enforcement of health and environmental standards. For this reason, business ethics as well as state and international regulation should lead companies to take into account their societal, ecological and economic impact and aim at making copper production sustainable throughout its value chain. Regulation of financial institutions and commodity markets is of paramount importance in this regard, precisely for the ways in which their activities create precariousness and perpetuate inequality in communities that are extracting the commodity in question. Nationally, there are discussions on diversification of the economy to reduce over-reliance on mining and to invest more in other sectors such as agriculture.

Since this study was undertaken, several other changes have occurred both locally and globally, including the COVID-19 global pandemic which threatens to further perpetuate and exacerbate inequalities. Unrelated to this health crisis, Mopani Copper Mines is also undergoing changes in its operations and ownership structure. In addition to closing some mine sites and retrenching mineworkers, the company is negotiating the sale of the majority shares of the company to ZCCM. The outcome of the negotiations remains to be seen, but in times of turmoil, it is the most economically and socially marginalized that are hit the hardest. In the current insecure economic environment, inclusive growth, provision of welfare and other public services, and social security, to name a few, attain a heightened importance. As the mining industry continues to play a major role in the Copperbelt, more empirical research should be undertaken in order to understand what drives company activities and to find ways of holding them accountable to their stated goals and policies of gender parity, to their employees, and to the communities from which they are deriving much profit.

## References

- Aalbers, Manuel B. 2015. "The Potential for Financialization." *Dialogues in Human Geography*, 5(2):214–219.
- Abrahamsson, Lena, Eugenia Segerstedt, Magnus Nygren, Jan Johansson, Bo Johansson, Ida Edman and Amanda Åkerlund. 2014. *Gender, Diversity and Work Conditions in Mining*. Luleå: Luleå University of Technology Press.
- Adam, Christopher and Anthony Simpasa. 2011. "Copper Mining in Zambia: from Collapse to Recovery." In *Plundered Nations? Successes and Failures in Natural Resource Extraction*, edited by P. Collier, & A. J. Venables, 304-351. London: Palgrave Macmillan.
- Addati, Laura, Umberto Cattaneo, Valeria Esquivel and Isabel Valarino. 2018. *Care work and care jobs for the future of decent work*. Geneva: International Labour Organization Press.
- Ansari, Valeed Ahmad. 2018. "Financialization and Inequalities in Income and Wealth." *Journal of King Abdulaziz University: Islamic Economics*, 31(1):129-135.
- Banda, Tinenenji and Marja Hinfelaar. 2018. *Complexities of Colonial Planning and Land Use in Mining Towns: The Case of Mufulira, Zambia*. Prepared for the Valueworks Project. Mimeo.
- Bates, Robert H. 1971. *Unions, Parties, and Political Development: A Study of Mineworkers in Zambia*. New Haven: Yale University Press.
- Blair, Margaret M. and Lynn A. Stout. 1999. "A Team Production Theory of Corporate Law." *Virginia Law Review*, 85(2):247-328.
- Bourdieu, Pierre. 1998. "L'essence du néolibéralisme." *Le Monde Diplomatique*, March 1998. Accessed 28 August 2019. <http://www.monde-diplomatique.fr/1998/03/BOURDIEU/3609>.
- Bresser-Pereira, Luiz Carlos. 2010. "The Global Financial Crisis and a New Capitalism?" *The Levy Economics Institute Working Paper*, No. 592. Annandale-on-Hudson: Levy Economics Institute.
- Business and Human Rights Resource Centre. 2020. "Zambia: Court fines Glencore's Mopani Copper \$13 Million for tax avoidance." London: Business and Human Rights Resource Centre. <https://www.business-humanrights.org/en/latest-news/zambia-court-fines-glencores-mopani-copper-13-million-for-tax-avoidance/>.
- Chiapello, Eve. 2015. "Financialisation of Valuation." *Human Studies*, 38(1):13–35.
- CIA. 2020. "The World Factbook: Zambia." Last modified 10 September. <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/za.html>.
- Clarke, Thomas. 2014. "The Impact of Financialisation on International Corporate Governance: The Role of Agency Theory and Maximising Shareholder Value." *Law and Financial Markets Review*, 8(1):39-51.

- Coe, Neil M., Peter Dicken, and Martin Hess. 2008. "Global Production Networks: Realizing the Potential." *Journal of Economic Geography* 8, no. 3: 271–95. DOI: 10.1093/jeg/lbn002.
- Coe, Neil, and Henry Wai-chung Yeung. 2015. *Global Production Networks: Theorizing Economic Development in an Interconnected World*. Oxford: Oxford University Press.
- Davis, Gerald F. and Suntae Kim. 2015. "Financialization of the Economy." *Annual Review of Sociology*, 41:203-221.
- Dixon, Adam D. 2008. "The Rise of Pension Fund Capitalism in Europe: An Unseen Revolution?" *New Political Economy*, 13(3):249-270.
- Dobler, Gregor and Rita Kesselring. 2018. "Extractivism à la Suisse: The Role of Swiss Companies in the Copper Value Chain." *Afrika Bulletin* (English Version), 172:4-5.
- Doku, Linda. 2019. "Why the Mining Industry Needs More Women." *Forbes Magazine*, 24 May. <https://www.forbes.com/sites/woodmackenzie/2019/05/24/why-the-mining-industry-needs-more-women/#747a5296585c>.
- Earth Rights International. 2004. *Mining, Gender, and the Environment in Burma*. Washington D.C.: Earth Rights International. <https://earthrights.org/wp-content/uploads/publications/Mining-Gender-and-Environment.pdf>.
- Eftimie, Adriana, Katherine Heller and John Strongman. 2009. "Gender Dimensions of the Extractive Industries" (World Bank Report). *Mining for Equity, Extractive Industries and Development Series*, No. 8. Washington, D.C.: World Bank Group. <http://documents1.worldbank.org/curated/en/407711468176974163/pdf/511140NWP0eXtr10Box342018B01PUBLIC1.pdf>.
- Elson, Diane. 2012. "Social Reproduction in the Global Crisis: Rapid Recovery or Long-Lasting Depletion?" In *The Global Crisis and Transformative Social Change*, edited by Rebecca Varghese Buchholz, Shahra Razavi and Peter Utting, International Political Economy Series, 63-80. London: Palgrave Macmillan and UNRISD.
- Epstein, Gerald. 2005. "Introduction: Financialization and the World Economy." In *Financialization and the World Economy*, edited by Gerald Epstein. Cheltenham: Edgar Elgar Publishing.
- Esteves, A.M. 2011. "Women-owned SMEs in Supply Chains of the Corporate Resources Sector." In *Gendering the Field: Towards Sustainable Livelihoods for Mining Communities*, edited by Kuntala Lahiri- Dutt, 133–144. Canberra: Australian National University Press.
- Evans, Alice. 2014. "Women Can Do What Men Can Do: The Causes and Consequences of Growing Flexibility in Gender Divisions of Labour in Kitwe, Zambia." *Journal of Southern African Studies*, 40:5, 981-998.
- Ferguson, James. 1999. *Expectations of Modernity: Myths and Meanings of Urban Life on the Zambian Copperbelt*. Berkeley: University of California Press.
- Fraser, Alistair and John Lungu. 2007. *For whom the windfalls: Winners & losers in the privatisation of Zambia's copper mines*. Lusaka: Civil Society Trade Network and Catholic Centre for Justice, Development and Peace of Zambia.

- Fraser, Alistair. 2010. "Introduction: Boom and Bust on the Zambian Copperbelt". In *Zambia, Mining, and Neoliberalism: Boom and Bust on the Globalized Copperbelt*, edited by Alistair Fraser and Miles Larmer. New York: Palgrave Macmillan US.
- García, Aurora. 2018. "Solifonds Campaign: Mufulira Wants to Finally Have Clean Water." *Afrika Bulletin* (English Version), 172:12.
- Garside, M. 2020a. "Glencore - Statistics & Facts." Hamburg: Statista. Last modified 28 April. <https://www.statista.com/topics/2081/glencorexstrata/>.
- Garside, M. 2020b. "Copper production in leading countries 2010-2019." Last modified 10 February. <https://www.statista.com/statistics/264626/copper-production-by-country/>.
- Gereffi, Gary, and Miguel Korzeniewicz. 1994. *Commodity Chains and Global Capitalism*. Westport, CT: Praeger.
- Gereffi, Gary, John Humphrey, and Timothy Sturgeon. 2005. "The Governance of Global Value Chains." *Review of International Political Economy* 12, no. 1: 78–104.
- Google Earth. n.d.a. [Map of the Copperbelt Province of Zambia]. Accessed 18 October 2020. <https://www.google.com/maps/place/Copperbelt+Province,+Zambia/@-13.1267701,28.0868745,9z/data=!4m5!3m4!1s0x196b80ff6337785f:0xd770a20ca96fbf95!8m2!3d-13.0570073!4d27.5495846>.
- Google Earth. n.d.b. [Map Showing Location of the Copperbelt Province in Zambia]. Accessed 30 September 2020. <https://www.google.com/maps/place/Copperbelt+Province,+Zambia/@-13.0593017,23.3408629,5.98z/data=!4m5!3m4!1s0x196b80ff6337785f:0xd770a20ca96fbf95!8m2!3d-13.0570073!4d27.5495846>.
- Gutiérrez Elizondo, Hilda María. 2015. *Mining and Resource Mobilization for Social Development: The Case of Nicaragua*. Working Paper 2015-9. Geneva: UNRISD.
- Heemskerk, Marieke. 2000. "Gender and Gold Mining: The Case of the Maroons of Suriname." *Working Papers on Women in International Development*, 269, edited by A. Ferguson. Ann Arbor: Michigan State University.
- Hermele, Kenneth. 2015. "How Economists Understand (or not) the Relationship between the Real and the Financial Economy." *FESSUD Working Paper Series*, 7(82). Brussels: European Union. [http://fessud.eu/wp-content/uploads/2015/01/How-economists-understand-or-not-the-relationship-between-the-real-and-the-financial-economy\\_Hermele\\_Working-paper-82.pdf](http://fessud.eu/wp-content/uploads/2015/01/How-economists-understand-or-not-the-relationship-between-the-real-and-the-financial-economy_Hermele_Working-paper-82.pdf).
- Hill, Christina, Chris Madden and Maria Ezpeleta. 2016. "Gender and the Extractive Industries: Putting Gender on the Corporate Agenda." Carlton: Oxfam Australia. [https://www.oxfam.org.au/wp-content/uploads/2016/05/2016-PA-004-Mining-and-Gender-report\\_FA\\_web.pdf](https://www.oxfam.org.au/wp-content/uploads/2016/05/2016-PA-004-Mining-and-Gender-report_FA_web.pdf).
- Hinfelaar, Marja and Jessica Achberger. 2017. "The politics of natural resource extraction in Zambia." *ESID Working Paper* 80. Manchester: University of Manchester.
- Hinton, Jennifer, Marcello Veiga and Christian Beinhoff. 2003. "Women and Artisanal Mining: Gender Roles and the Road Ahead." In *The Socio-Economic Impacts of Artisanal and Small-Scale Mining in Developing Countries*, edited by G. Hilson, 149-189. Lisse: A.A. Balkema Publishers.

- Hujo, Katja and Luisa Lupo. 2018. *Financialization and Social Development*. Background paper prepared for the *Valueworks* project. Geneva: UNRISD. Mimeo.
- IFC. 2013. *Investing in Women's Employment: Good for Business, Good for Development*. Washington D.C.: International Finance Corporation.
- Jenkins, K. 2014. "Women, Mining and development: An emerging research agenda." *The Extractive Industries and Society*, 1:329-339.
- Jürgens, Ulrich, Katrin Naumann and Joachim Rupp. 2000. "Shareholder Value in an Adverse Environment: The German Case." *Economy and Society*, 29(1):54–79.
- Kabala, Edna and John Lungu. 2018. *Value Chain Analysis of the Copper Sector, Financialization and Influence on the Regulatory Framework on the Copperbelt* (Unpublished paper). Prepared for the *Valueworks* project. Mimeo.
- Krippner, Greta R. 2005. "The Financialization of the American Economy." *Socio-Economic Review*, 2005(3):173-208.
- Keck, Jennifer and Mary Powell. 2006. "Women into Mining Jobs at Inco: Challenging the Gender Division of Labour." In *Mining Women: Gender in the Development of a Global Industry, 1960 to the Present*, edited by J. J. Gier and L. Mercier, 280-295. New York: Palgrave Macmillan.
- Kesselring, Rita, Stefan Leins and Yvan Schulz. 2019. *Valueworks: Effects of Financialization along the Copper Value Chain (Working Paper)*. Geneva: Swiss Network for International Studies.
- Lahiri-Dutt, Kuntala, ed. 2011. *Gendering the Field: Towards Sustainable Livelihoods for Mining Communities*. Asia-Pacific Environment Monographs. Canberra: Australian National University E Press.
- Lahiri-Dutt, Kuntala and Petra Mahy. n.d. *Impacts of Mining on Women and Youth in Indonesia: Two Mining Locations*. Canberra: Australian National University.
- Lapavistas, Costas. 2009. "Financialised Capitalism: Crisis and Financial Expropriation." *Historical Materialism*, 17:114–148.
- Lazonick, William and Mary O'Sullivan. 2000. "Maximizing Shareholder Value: A New Ideology for Corporate Governance." *Economy and Society*, 29(1):13–35.
- Lungu, John. 2008. "Copper Mining Agreements in Zambia: Renegotiation or Law Reform?" *Review of African Political Economy Journal*, 35(117):403-415.
- Martin, Randy. 2002. *Financialization of Daily Life*. Philadelphia: Temple University Press.
- Mensah, Albert K., Ishmail O. Mahiri, Obed Owusu, Okoree D. Mireku, Ishmael Wireko and Evans A. Kissi. 2015. "Environmental Impacts of Mining: A Study of Mining Communities in Ghana." *Applied Ecology and Environmental Sciences*, 3(3):81-94.
- Mining Technology News. 2019. "Glencore's Mopani Shuts Down Two Shafts at Nkana Mine in Zambia." 9 August. <https://www.mining-technology.com/news/glencores-mopani-shafts-nkana-mine-zambia/>.

- Müller, Barbara, ed. 2018. "Swiss Transit Trade and Zambia." *Afrika Bulletin* (English Version), 172.
- Murray, Georgina, David Peetz and Olav Muurlink. 2017. "Structuring Gender Relations Among Coal Mine Workers." In *Women, Labour Segmentation and Regulation*, edited by D. Peetz and G. Murray. New York: Palgrave Macmillan.
- Musonda, James. 2018. "Working in Zambia's Mines after Privatization: Changing Meaning for Miners." *Afrika Bulletin* (English Version), 172:8-9.
- Nchito, Wilma. 2018. *Complexities of Colonial Planning and Land Use in Mining Towns: The Case of Mufulira, Zambia*. Prepared for the *Valueworks* project. Mimeo.
- Pellandini- Simányi, Léna, Ferenc Hammer and Zsuzsanna Vargha. 2015. "The Financialization of Everyday Life or the Domestication of Finance?" *Cultural Studies*, 29:5–6.
- Razavi, Shahra and Silke Staab, eds. 2012. *Global Variations in the Political and Social Economy of Care: Worlds Apart*. Geneva: UNRISD and Routledge.
- Reid, Helen and Zandi Shabalala. 2020. "Exclusive: Glencore puts entire stake in Mopani on the table in talks with Zambia." *Reuters*, 27 August. <https://uk.reuters.com/article/uk-zambia-mining-glencore-exclusive-idUKKBN25N2S4>.
- Reuters. 2019. "Glencore Zambian unit closes two mine shafts; opposition sees 1,400 job cuts." 8 August. <https://www.reuters.com/article/us-zambia-mining-glencore/glencore-zambian-unit-closes-two-mine-shafts-opposition-sees-1400-job-cuts-idUSKCN1UY1T3>.
- Romano, Rossana Barragán and Leda Papastefanaki. 2020. "Women and Gender in the Mines: Challenging Masculinity Through History: An Introduction." *International Review of Social History*, 65(2):1-40.
- Sardanis, Andrew. 2014a. *Zambia: The First 50 Years*. London: I.B. Tauris.
- Sardanis, Andrew. 2014b. *Africa: Another Side of the Coin. Northern Rhodesia's Final Years and Zambia's Nationhood*. London: I.B. Tauris.
- Scott, J., R. Dakin, K. Heller and A. Eftimie. 2013. "Extracting Lessons on Gender in the Oil and Gas Sector." *Extractive Industries for Development Series*, no. 28. Washington, DC: World Bank Group.
- Sikamo, J., A. Mwanza and C. Mweemba. 2016. "Copper mining in Zambia: history and future." *Journal of the Southern African Institute of Mining and Metallurgy*, 116(6):491-496.
- Simpasa, Anthony, Degol Hailu, Sebastian Levine and Roberto Julio Tibana. 2013. *Capturing Mineral Revenues in Zambia: Past Trends and Future Prospects. United Nations Development Programme Discussion Paper*. New York: UNDP. <https://www.un.org/en/land-natural-resources-conflict/pdfs/capturing-mineral-revenues-zambia.pdf>.
- Sinkala, Pardon, Yoshiaki Fujii, Junichi Kodama and Daisuke Fukuda. 2018. "An overview of copper mining in Zambia's Copperbelt province." *Proceedings of Spring Meeting of MMIJ Hokkaido Branch*, 35-36. Sapporo, Japan: Hokkaido University.



- Stout, Lynn A. 2012. "New Thinking on Shareholder Primacy." *Accounting, Economics and Law*, 2(2):1- 22.
- Thomson, Frances and Sahil Dutta. 2018. *Financialisation: A Primer*. Amsterdam: The Transnational Institute. <https://www.tni.org/files/publication-downloads/financialisation-primer-sept2018-web.pdf>.
- Trading Economics. 2020. "Zambia Exports 2003-2020 Data". Accessed 30 September 2020. <https://tradingeconomics.com/zambia/exports>.
- Tsing, Anna. 2009. "Supply Chains and the Human Condition." *Rethinking Marxism: A Journal of Economics, Culture and Society*, 21(2):148-176.
- UN. 2015. *Transforming Our World: The 2030 Agenda for Sustainable Development*. New York: United Nations. <https://sustainabledevelopment.un.org/post2015/transformingourworld>.
- UN Commission on the Status of Women. 2017. "Women's economic empowerment in the changing world of work: Report of the Secretary-General." Presented at the Commission on the Status of Women Sixty-first session, New York, 13-24 March. [https://www.un.org/ga/search/view\\_doc.asp?symbol=E/CN.6/2017/3](https://www.un.org/ga/search/view_doc.asp?symbol=E/CN.6/2017/3).
- UN Department of Economic and Social Affairs Statistics Division. 2019. *International Trade Statistics Yearbook*. New York: United Nations. <https://comtrade.un.org/pb/downloads/2018/VolII2018.pdf>.
- UN Women. 2015. *Progress of the World's Women 2015-2016: Transforming Economies, Realizing Rights*. New York: UN Women. <https://www.unwomen.org/en/digital-library/publications/2015/4/progress-of-the-worlds-women-2015>.
- UNAIDS. 2012. *Impact of the Global Economic Crisis on Women, Girls and Gender Equality*. Joint United Nations Programme on HIV/AIDS. Geneva: UNAIDS.
- UNCTAD. 2012. *Don't blame the physical markets: Financialization is the root cause of oil and commodity price volatility*. UNCTAD Policy Brief No. 25. Geneva: United Nations Commission on Trade and Development.
- UNRISD. 2010. *Why Care Matters for Social Development*. Research and Policy Brief, No. 9. Geneva: United Nations Research Institute for Social Development.
- UNRISD. 2016. *Policy Innovations for Transformative Change. Implementing the 2030 Agenda for Sustainable Development*. Geneva: United Nations Research Institute for Social Development.
- Van der Zwan, Natascha. 2014. "Making Sense of Financialization." *Socio-Economic Review*, 12(1):99–129.
- World Bank Group. 2013. *Gender in the Extractive Industries. Understanding Poverty Extractive Industries*. Washington, D.C.: World Bank Group. <https://www.worldbank.org/en/topic/extractiveindustries/brief/gender-in-extractive-industries>.
- World Bank Group. 2015. "Women in the Supply Chain." *World Bank Group, Energy and Extractives*, No. 3. Washington, D.C.: World Bank Group. [https://olc.worldbank.org/system/files/WB\\_Nairobi\\_Notes\\_3\\_RD3.pdf](https://olc.worldbank.org/system/files/WB_Nairobi_Notes_3_RD3.pdf).

World Bank Group. 2018. *Republic of Zambia- Systematic Country Diagnostic*. Report No. 124032-ZM. Washington, D.C.: World Bank Group.

## Appendix: Sample Interview Guide

- Introductions
  - Describe the research objectives and outcomes and discuss confidentiality issues
  - Ask for permission to record the interview
- 
1. Tell me about your life (name, age, marital status, where you grew up, residence, how long you've lived on the Copperbelt, your job/area of expertise, age at which you started working at the mining company).
  2. Do you have other sources of income besides mining?
  3. Gender relations and roles
    - a. Do girls and boys have the same access to education? What is expected of girls and what is expected of boys in education, household chores, social settings, job prospects, etc.?
    - b. What are your roles and what are your spouse's roles in the household?
    - c. How do men and women spend their money in the family? Who pays school fees?
    - d. Who makes decisions for the family?
    - e. What jobs do men do and what jobs do women do? Should women be allowed to do the same jobs as men?
    - f. Have these strict gender roles changed over time? Why? Why not?
  4. Are the challenges faced by women mineworkers and men mineworkers the same? Compare experiences of men and women in terms of types of jobs that they handle, remuneration, job security, promotion/advancement, safety/health, discrimination.
  5. What does Mopani/CNFC do to promote gender equality?
  6. Are you aware of the changing prices of the copper commodity?
  7. How has the changing price of copper affected your life (both positive and negative impacts)?
  8. What strategies do you use to avoid the risks and instabilities associated with the changing price of copper?
  9. Do you think that Mopani contributes to the community where it is situated? If yes, how? If no, explain the negative impacts of its mining practices on lives and livelihoods.
  10. What changes have you seen in the community in the past few years? (e.g. This can include social, economic, infrastructure, health and environmental issues).
    - a. What has changed since Mopani took over from ZCCM?
    - b. What happened to the community when Mopani undertook extensive retrenchment two years ago? Were you affected by the retrenchment? If so, how? In your opinion, did men and women (women mineworkers or wives of mineworkers) cope differently?
  11. Does Mopani support other economic activities (besides mining) in the community (e.g. small businesses, agriculture, etc.)?
  12. Can you talk about your union and your participation in union activities?
  13. Are women's interests (rights, safety, wellbeing) adequately represented in unions? Is there active promotion of women's participation in leadership positions in labour unions?
  14. Anything else you'd like to add?

### **United Nations Research Institute for Social Development**

The United Nations Research Institute for Social Development (UNRISD) is an autonomous research institute within the UN system that undertakes multidisciplinary research and policy analysis on the social dimensions of contemporary development issues. Through our work we aim to ensure that social equity, inclusion and justice are central to development thinking, policy and practice.

A list of UNRISD's free and priced publications may be obtained by contacting the Reference Centre:

UNRISD • Palais des Nations • 1211 Geneva 10 • Switzerland  
Phone 41 (0)22 9173020 • Fax 41 (0)22 9170650  
info.unrisd@un.org • www.unrisd.org