Introduction

Until the 1990s, the economy of the African continent was under marginalization and stagnation. However, after the turn of the 21st century, economic growth was accelerated across the whole of Africa and the rich potential of the African economy started to draw attention. One of the factors behind the accelerated economic growth rate of Africa is the expansion of demand for minerals of the global market especially that of emerging economies. In some countries mining’s share of the economy has been expanding rapidly (Kitagawa and Takahashi, 2016: 91).

The central African copper belt refers to the land area that extends in both Zambia and the DR Congo (Pelletier, 1964: 215-234). On the global scale, the central African copper belt forms one of the largest metallogenic provinces of the world (Dewaele et al., 2006: 455-469). This area contains in excess of 10% of the world’s known copper resources and about 34% of global cobalt deposits that the DR Congo and Zambia exploit.

In 1919, Japan showed interest in Africa by signing with other European imperialists the Congo Basin Treaty that enabled her to make economic advances in the region (Kitagawa, 2016: 459-469). After the World War II, Japan established diplomatic relations with African nations...
expecting to be able to expand trade and investment opportunities. For the African nations, there was the hope that securing markets for agricultural products and raw materials that would generate the income in order to promote industrialization and economic growth. In the 1960s, Japan’s industrial production grew steadily and the market share of Japanese goods in international markets also increased. The Japanese government was seeking the possibility of securing sources of raw materials for industrial use from Africa as well.

The Katanga province is naturally endowed with huge reserves of copper and cobalt. The discovery and use of copper trace their origin from prehistoric times when Stone Age people in the Mediterranean beat the red stones found on the island of Cyprus to make instruments for various purposes (Radetzki, 2009: 176-184). Copper is one of the oldest metals that human has been using for about seven thousand years. Copper and cobalt belong to non-renewable resources for which stock depletes with extraction (Dasguta and Heal, 2001: 113).

In Katanga, the Belgian company known as the Union Minière du Haut-Katanga (UMHK) was the first industrial organization to process the copper metal. During the colonial rule in Congo, the UMHK was administrated by two personal divisions: the skilled employees including European managers and unskilled miners constituted by Africans. Although mining companies homogenized their strategies in dealing with the productivity of miners, their training policies of local employees diverged. Belgian managers at the UMHK refrained from training the locals who they perceived as potential competitors (Doucy, 1954: 792).

Against this background, over the past four decades the study of African business history has made significant progress. Today business history is a recognized subfield of African economic history, which has become a growing field and already had its own journal, African Economic History. In recent years, the African Economic History Network has been expanding its active role all over the world. Also, the Journal of African Business has been published as a refereed journal devoted to African business and its history.

The study of African business history has increased its empirical data and extended understanding of some of the important research questions, including the historical significance of African entrepreneurs, the spatial and temporary evolution of African business, its structure and organization, management and administration.

Despite the growing academic literature on the history of African business, the modern African business past is not yet fully explored. There are rarely book-length biographies of African entrepreneurs and very few comparative histories of African firms exist. More studies are needed to facilitate the better understanding in a variety of African business past (Jalloh, 2002: 149-161). In this regard, firstly this article explains the background of the mining industry in DR Congo, the development of the copper mining in Katanga, and the factors that attract the Japanese firms to Katanga. Secondly, this paper explains the analytical methods and sources. Thirdly this paper presents the changes of the outputs and returns of Sodimico. Fourthly this paper discusses the impact of foreign firms on the management of Sodimico from the comparative perspective.

In this way this article tries to answer the following research questions: How does Japanese management adapt into the Congolese environment? How do the senior Congolese managers perceive the Japanese management? What factors influence the rise and fall of Musoshi mine? There is less information on the economic contribution of Sodimico both in Japan and DR Congo. The article argues that although the government expected that the Japanese investment will be neutral to attract capital and managerial skills in the mining industry; the evidence demonstrates that the Japanese managers refrained from training the senior employees while they exploit the mineral resources in Katanga. The Japanese employees transferred to Congo had to transit by Belgium to get the French language training and guidance before they took their positions at Musoshi mine.

1. Background of copper mining in Katanga

The local people in Katanga extracted copper ore by traditional means to make a variety of instruments for hunting, war and barter (Davis, 2010:6). They had a specific quantity and a particular time of the year to start copper extraction. Since the sixteenth century, the month of May was the crucial period that marked the end of the crop harvest and the starting point of mining activities. Local miners and metallurgists organized a campaign to extract and process copper. Thus, the local people used copper ring as money for the trade since the ninth century (Ndaywel, 1998: 72). They said: “It is time to go to eat copper” (Kyamitala, 1974:4). This expression meant for the local people to nourish, to strengthen and to enrich themselves by the extraction of copper. The old expression
has become a password among the mining community in Katanga province as “les Mangeurs de Cuivre”. In Katanga, local copper was more preferred and refined than the imported item (Rodney, 1973: 66).

1.1. Katanga arouses the international interest
From the nineteenth century, the colonial powers considered African continent as the supply source of raw materials for Western industries (Showers, 2009:31-58). Therefore the imperialist camp can be sub-divided into exploiting and exploited countries. From late nineteenth century, the Katanga region fell under Belgian colonial power until the independence of the Congo on 30 June 1960. On 11 July 1960, the Katanga region went into secession from the central government with the Belgian military and financial independence that does not translate to economic autonomy.

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Katanga province as<br/>
Congolese government wished to diversify the investment<br/>
of minerals in Katanga<br/>
Support because the latter wished to continue the exploitation<br/>
exploiting and exploited countries. From late nineteenth<br/>
century until the independence of the Congo on<br/>
century, the Katanga region felt under Belgian colonial power<br/>
neocolonialism denounces the control that developed<br/>
nations exert over independent developing countries through<br/>
economic penetration, political subversion and military<br/>
pressure (Uche, 2015:354). The result of neo-colonialism, like<br/>
colonialism, is that foreign capital is utilized for exploitation<br/>
rather than for the development of developing countries. The<br/>
Congolese government wished to diversify the investment<br/>
and managerial expertise in order to escape from the Belgian<br/>
Control. For that reason, the Japanese investment was the<br/>
golden opportunity to realize the project.

1.2. Reasons to advance Japanese firms to Katanga
The reserves of copper metals in Katanga have attracted<br/>investors from different parts of the world including the Japanese investment and managerial expertise.

The prelude to the discovery of America by Columbus was directly linked to his wish to get precious metals from Zipangu or Japan (Wada, 1893: 4-10). From the middle of the seventeenth century, Japan was the leading supplier of copper metal in Asia and the world market (Shimada, 2006: 3). The Meiji government expanded the mining industry, shipyards, and engineering workshops (Clark, 1987: 19-20). Japan shifted from the supplier position at the beginning of the twentieth century to that of demander for its reconstruction during the 1960s. Therefore, Japan launched many overseas projects to search for mineral resources.

The level of metal consumption correlates with the stage of economic development of a country (Ignacio Guzman et al., 2005: 21-27). Since 1965, Japan was experiencing high economic growth known as “Izanagi Boom”. Japan undertook huge construction projects to rebuild infrastructures damaged during the Second World War. The demand for red metal increased in the context of rapid economic growth. Since the beginning of 1965, Japan’s annual copper consumption was growing at a steady rate (Nishiyama, 2003: 131-139). In 1965 Japan’s copper demand was 430,000 tons, five years later in 1970, the demand exceeded one million tons, and reached in 1971 the peak of 1.2 million tons (Inoue, 2007:252-268). Therefore, in September 1965, Nihon Kogyo11 made an agreement with the Congolese government for exploration project in Katanga province. The project intended to evaluate the ore reserves on the concession (Shinnikko Holdings, 2006: 96).

In April 1966, the Japanese firms opened a representative office in Lubumbashi to supervise the exploration activities. The Congolese government granted in January 1967 a second exploration license to Nihon Kogyo which started immediately the exploration. On 18 December 1967, the government and Japanese investors signed a final mining license for twenty years.

In 1989, the Nihon Kogyo explained the motivation of the Japanese consortium to develop the Musoshi mine in Katanga (Nihon Kogyo, 1989: 442-445). Also, Mulumba described the legal aspects of agreement between the Congolese government and Japanese firms led by Nihon Kogyo (Mulumba et al., 1973:81). In addition, Inoue explained the
challenges that Japanese managers encountered in managing the Musoshi mine (Inoue, 2007: 252-268). Although Inoue gave the Japanese point of view about Sodimico, this article emphasizes the Congolese perception of the Japanese managerial style at Sodimico. Two firms including the Gecamines and Sodimico dominated the Congolese copper industry (Mikesell, 1979: 11-12).

2. Analytical methods and sources

This article analyzed the archives and in-depth interviews conducted with both managers and workers during fieldwork trips at Musoshi and Lubumbashi. The qualitative method was used to explain the perception of Congolese managers on Japanese managerial style during the in-depth interviews. In addition, the quantitative method was used to analyze the trends and economic value of copper production based on the data from the company’s annual reports and the London Metal Exchange’s price.

This article relies essentially on personal memories of managers and miners interviewed in Lubumbashi and Musoshi during the fieldworks. In Japan, in March 2015, we conducted a fieldwork to the Museum Center of JX Group in Hitachi City to search for Japanese archives related to activities at Musoshi mine. However, we found out that primary sources were not available and accessible in Japan.

The precedent researches are substantially based on interviews to assess the impact of colonialism and neocolonialism on African businesses, economies, and politics. Dibwe interviewed employees and their families to analyze the perceptions of working conditions at the Union Minière du Haut-Katanga (Dibwe, 2001: 1-19). Uwe suggests that the interview constitutes an important technique for verbal data of qualitative research in social sciences (Uwe, 2009: 149-185).

The sixteen in-depth interviews were all conducted by the authors during the field works in Lubumbashi and Musoshi. Managers and miners of Sodimico are identified by their positions omitting their names to be anonymous. The interviews were tape-recorded in French and then transcribed by the authors in English.

3. Changes in outputs and returns of Sodimico

On 17 April 1969, President Mobutu Sese Seko created Sodimico as a joint venture company (Muyej et al., 1997: 7). Table 1 depicts the investors of Sodimico in Zaire currency. In 1969, “Sodimico built the houses for Japanese executive managers in Koyo”, the miner said. The Musoshi mine produced the ore grade with 3.2% of copper while the second mine of Kinsenda showed the highest ore grade with 5.82% of copper,” the general director said. The tracks transported the extracted ores of Kinsenda to Musoshi. The install production capacity was 30,000 tons of metal copper contained in the concentrates (Sodimico, 2003b: 2). Technological and managerial factors affected the trend of production.

3.1. Output of Sodimico 1972-1983

Sodimico processed the extracted ores into the concentrator to produce the concentrates as the semi-finished products. The director of the production pointed out that “during the 1970s period most of the Japanese shareholders in Sodimico manufactured the mining equipment,” he said. Figure 1 depicts the production of Sodimico from 1972-1983.

Figure 1 shows that the production of Sodimico increased.
From 1972 to 1976, the production of concentrates and copper metal showed a steady increase. The battle of Kolwezi in 1978 reduced the level of output progressively up to 1980. At Sodimico, “the quality of management had a direct impact on the output,” the director said. In 1974, the increase in output resulted from the improvement of the transportation system in mines, the training of team leaders in mines, and the increase in workers (Sodimico, 1974b: 7). The total production of Sodimico during the period of Japanese management accounted for 14,800,000 tons of dry ores representing 418,564 tons of copper metal (Nihon Kogyo, 1989: 442-445).

3.2. Export of concentrates to Japan and its trade routes

Musoshi plant is connected to a railway network that links to Beira port in Mozambique, the Lobito port in Angola, and the Durban port in South Africa (Katzenellenbogen, 1973: 61-62).

The Sodimico sold and exported the concentrates exclusively to Japan for all the period of Japanese management. The export of concentrates from DR Congo to Japan went through the port of Lobito in Angola until 1975. Then, “Sodimico changed the road for exportation from Lobito to East London port in South Africa because of the war in Angola,” the general director said. The concentration department of Sodimico reduced the quantity of water in the concentrates initially of 21% up to 10.29% before the export (Sodimico, 1988: 17).

As soon as these concentrates arrived in Japan, the metallurgical plants conducted further refinery processes in order to produce copper metal for industrial use. In fact, the metallurgical plants of Hitachi Works located in the Hitachi City of Ibaraki Prefecture and the Saganoseki Smelter and Refinery in Oita City of Oita Prefecture of Japan refined the concentrates from Katanga into copper metal.

3.3. Production after the retreat of the Japanese firm, 1984-2004

From 1984 to 1987 the production remained stable although Sodimico experienced a small decline (Sodimico, 1984b: 6). Also, in 1984, Sodimico processed 67,537 tons of ores to produce the concentrates containing 51.15% of copper metal (Sodimico, 1984c: 6). Figure 2 shows the output of Sodimico from 1983-2004.

Figure 2 shows that the merger of Gecamines and Sodimico in 1987 marked the turning point in the management of Sodimico. It was the determinant cause of output collapse.

Figure 2 shows the dilapidation of funds caused many difficulties at Sodimico. The firm could not purchase basic supplies such as explosives, fuels, and oil. In 1985 the lack of supplies decreased the output of concentrates (Sodimico, 1985: 442-445).
Furthermore, the change of management committee decreased the production in 1987. The Congolese government transferred the managerial responsibility to Gecamines which is the largest state-owned company in the copper industry (Prasad, 1989: 521-541). The disaster began after the managers of Sodimico decided to renegotiate the repayment of the Japanese debt evaluated at US 30 million dollars due in 30 years. These managers spent the 1.2 million dollars from the Belgolaise Bank account to pay the government tax and gave loans to other firms (Sodimico, 1987: 13).

The interference of the Congolese government to merge Sodimico with Gecamines was the external cause for the collapse. This merging marked the starting point of sharp decline of the output of Sodimico. “Managers could not combine meaningfully the available resources in their hands in order to maintain the level of production,” the director said. The concentrator could not work, the mine could no longer produce, and managers observed the collapse of the company helplessly.

The ore reserves remained important to extract. “From 2005 to 2012 Sodimico did not extract any ores from mines,” the director said. Like most of the industries during the post-colonial period in Africa, Sodimico produced copper concentrates as semi-finished products for exportation. The company does not have plants for further processing of concentrates to add value to the product before the exportation.

3.4. Production of copper and fluctuation of total returns

Sodimico did not declare the economic value of other metals contained in the concentrates of copper for exportation.
For instance, the concentrate of copper may contain 51% of copper, 7% of manganese, 6% of cobalt, and 2% of iron. The estimated value of output is obtained by multiplying the quantity of output by the historical price of copper metal retrieved from the London Metal Exchange (LME). Table 2 depicts the total proceeds US dollars at market price from 1972 to 2004.

Table 2 shows that the trend of proceed has been increasing during the Japanese period until 1978. But, the rebels launched their attack at dawn on 13 May 1978 and captured the strategic mining town of Kolwezi the same day (Collier and Sambanis, 2005: 75). The battle in Kolwezi caused the decrease of the output. Sodimico produced an estimated total of 669,889 tons of copper metal from 1972 to 2004 that generated the proceeds estimated at 1.1 billion US dollars. The company processed about four hundred thousand tons during the period of Japanese ownership. The fifth section discusses the impact of foreign firms on company’s management.

4. Foreign company’s impact and managerial change of Sodimico

The managerial responsibility of teaching exists at all levels of management - from the shop floor to the executive suite. The concepts such as the lifetime employment\(^{(5)}\), seniority system, on-the-job training, just in time production, and enterprise unions characterize the Japanese management (Firkola, 2006: 115-130).

4.1. Japanese management at Sodimico

In Japanese companies, workers usually start daily activities with a meeting in the morning to receive instructions from the top management. Then, they sing the company’s song, and finally, they go to work. “Japanese managers implemented these practices at Musoshi mine,” the miner said.\(^{(6)}\) Instead of the company’s song, every morning workers of Sodimico gathered to sing the national anthem called “La Zairoise”. “This practice became a custom for all schools and public companies during the Mobutu regime,” the mechanic said.\(^{(7)}\)

In Japanese firms the managerial responsibility to offer in house-training is more emphasized because each firm has its own way of conducting business. One’s ability and contribution to the organization increase by several years in service that lead to a promotion. The seniority system applies only to regular employees in large companies (Sugimoto, 2003: 87-88). Since the 1960s, Japanese companies have sent their managers and employees to overseas affiliate branches (Takeuchi and Chen, 2001: 109-130). Figure 3 shows the
number of Japanese employees and Congolese workers from 1972 to 1983.

Figure 3 shows that about one thousand Japanese employees worked at Musoshi during the entire period of fifteen years. Japanese companies involved in the Musoshi mine in Africa sent their male employees including managers, engineers, and supervisors to work in DR Congo for two years then they returned to their earlier positions in Japan. Their families including spouses and children remained in Japan. Indeed, job transfer helps workers to acquire new experiences and skills in different locations where the company runs its activities (Eguchi, 2005: 187-197). The personnel change or rotation in Japanese companies allows workers to develop new skills to deal appropriately with unusual operations. Japanese administration and companies usually practice the job rotation.

Japanese managers at Sodimico faced challenges while leading the company. In 1983, Japanese shareholders divested from Sodimico because of the low price of metal copper, the high cost of transportation, the increase of exchange rate of the yen against the US dollar, and the economic crisis in DR Congo.

In 1983 the Japanese shareholders possessed 240,000 shares in the capital of Sodimico. “They obtained a bond of 30 million US dollars from the Congolese government without interest with a five-year grace period, to repay in 30 annual installments,” the employee said. In addition to the bond, the Japanese lend a working capital of 20 million US dollars in cash and money into the bank account. This amount was an interest-bearing loan to pay back in 10 annual installments starting from June 1984.

Japanese managers held the positions of the president and vice president. “The positions of administrators and commissaries included both Japanese and Congolese,” the...
director said. In fact, the Japanese employees transferred to Musoshi mine had to transit by Belgium and France to learn French language before they took their effective responsibilities in Katanga. This pattern implies that the Japanese managers were briefed with the Belgian policy in the post-colonial period of Katanga. When they worked in Katanga, they refrained from training and giving higher responsibilities to the Congolese senior managers. A well-trained and qualified team of Congolese would constitute a potential competitor for the Japanese managers.

4.2. Canadian management at Sodimico

After the retreat of Japanese managers, the Congolese government observed that the existent number of local managers was sufficient to take the leadership of Sodimico. It offered a bid tender for which French, Belgian, American and Canadian companies responded to. Indeed, the Congolese government recruited the Canadian Phillip Barrett and Kaiser Engineering Co. Ltd (PBK) as a trustee company management. It is worth to note that at this period, Canadians were not owners nor investors of Sodimico.

On 12 November 1983, the Congolese government signed a managerial contract with PBK for three years. The Canadians appreciated the creativity of Japanese who constructed the production plant of Sodimico. They observed that Japanese managers did neither train the Congolese middle and senior managers to take over the managerial positions (Sodimico, 1984a: 8-9).

4.3. The perception of Congolese employees to Japanese and Canadian managements

After the advent of Canadian management in 1984, the number of Congolese in top management positions increased significantly compared to the period of Japanese management. The Congolese senior and middle managers showed satisfaction toward the Canadian managers because for the first time they were associated with leadership meeting and planning activities of the company in contrast to the Japanese period. The attitude of Canadians inspired trust to them so that they became more opened to collaborate with new management committee.

The Japanese practice to avoid the training of local managers depicts the similar policy adopted by Belgian at the UMHK during the colonial rule. The positive attitude of Canadian managers was normal because their mission was exactly to train and to promote the Congolese. Also, the Canadian managers did not imitate neither the Belgian nor the Japanese policy in managing the Sodimico. These Congolese were willing to take effective responsibilities in some departments where they believed to possess the required qualifications and experiences. They thought that the lack of trust during the Japanese period would disturb again the new opportunity given to them (Sodimico, 1987: 13). In contrast, the Japanese managers concentrated their efforts on exploiting the maximum of minerals during their limited time. “At their arrival, Canadian managers found that the Japanese had highly trained Congolese workers in the techniques,” the mining engineer said.

The blue-collar workers only were well-trained. Japanese managers used on-the-job training method to improve the skills of workers recruited without any earlier qualifications and job experiences. “Japanese managers trained multi-functional workers on the workplace,” the miner said. This approach is widely adopted in Japanese companies that recruit recent graduates from universities without any prior working experience. These companies offer internships to deepen the knowledge about the company.

From 1984, “Canadian managers trained the middle and senior Congolese to improve their leadership skills,” the representative said. In 1985, 28 managers got the promotion among the Congolese for the first time. The number of senior managers reached 58 while middle managers increased up to 166 persons who supervised the total number of Congolese labor force of 3,170 persons. At the end of Canadian management, the leadership of the Sodimico went to Gecamines.

4.4. The merger of Gecamines and Sodimico and various effects to workers

Gecamines is the largest government-owned company in the copper industry (Kalenga, 2013: 32-34). In 1987, the Congolese government merged the Sodimico with Gecamines. In 1966, the government dealt with the lack of Congolese managers when it nationalized the Union Minière du Haut Katanga to create Gecamines (Kalenga, 2014: 1-7). Although the number of top managers increased during the Canadian management, the government decided to merge these two companies for better performance.

The working style was very different between Sodimico and Gecamines because it was too demanding for workers at Sodimico than Gecamines (Kalenga, 2016: 366-380). “During the Japanese management miners received the training to
do more than one task in the mine. A miner of Sodimico did worth three miners of Gecamines,” the general secretary said. This was a simple deduction from the fact that a miner of Sodimico was able to do three different tasks in contrast to the miner of Gecamines. For instance, a miner of Sodimico could drill, load the holes, put fire, and check for blocks that were about to fall into the mine. In contrast, a miner at Gecamines was expected to do substantially one task.

4.5. Management of Sodimico after achieving its autonomy

In 1999, the Congolese government appointed through the Minister of Mines the top manager as the general director (Zaire, 1982: 1). The government influenced the administration of Sodimico. In fact, the above changes show the high degree of government interference by appointing and dismissing managers. This situation refrained to improve the company’s performance with direct impact on the growth of human resource and output.

“The management of Sodimico became relatively stable from 2004 because the same manager has led the company for more than seven years,” the Vice-general Administrator said. Sodimico gave in rent some mining equipment, sites, and workers to partners. Since the production collapsed in 2004, these contracts constitute the main source of income for the company that pays only advance to salaries to workers who keep up the basic infrastructures. The last section concludes this article.

Conclusion

This article analyzed the development of Musoshi mine to process the copper metal in Katanga starting with the Japanese management and beyond. Relying on the company’s archives and personal memories of employees, the article argues that Japanese managers refrained from training the senior managers at Musoshi mine. The Japanese managers succeeded in training the blue collar workers through on-the-job training system. Workers became able to perform more than three tasks in mining operations at Sodimico. During the Japanese management, Sodimico had developed a very strong training-oriented culture, but it did not sufficiently focus on coaching its local employees how to prepare for the next generation of managerial leaders. The difference was that its miners were capable of accomplishing specific tasks associated with running a mine, but they were not ready to use sound judgment in making the difficult decisions that have to be made to effectively run the company. Therefore, Canadian managers attempted to intensify the training and promotion of Congolese into the managerial positions for three years. After the merger of the two companies, some employees of Sodimico achieved the highest level of copper metal output in 1976. Both internal and external factors explain the decline of the production. In fact, the Congolese government decided to merge Gecamines and Sodimico. This decision of merger failed to maintain the production of copper metal at Sodimico. First, the internal cause that explains the decrease in production occurred when managers mismanaged the funds that led to the collapse of production. Second, the government interference was the external cause that intensified the mismanagement of Sodimico. The other factors such as demand for copper, market price, and transportation influenced the activities of Sodimico to a limited degree.

The study of Musoshi mine provides the evidence that African governments have missed the opportunity to combine meaningfully the available resources including capital, human, and natural to move toward the path of economic growth in post-colonial period. African stakeholders should understand that they are dealing with the multinational companies that hide their own profit-seeking agenda. They should negotiate the mining contracts in which both parties benefit from the outcomes of the projects.

Notes

1) Nihon Kogyo Company was created in August 1956 to carry industrial work such as manufacturing, developing to three fields of landscape, exterior, and civil engineering.

2) La Générale des Carrières et des Mines (Gecamines) is the government owned company created in 1967 after the nationalization of the Union Minière du Haut-Katanga.

3) La Société de Développement Industriel et Minier du Congo (Sodimico) is the government owned company originally created as joint company with Japanese consortium in 1969. It was renamed as Sodimiza under the Mobutu regime of Zaire.

4) London Metal Exchange is the world’s premier non-ferrous metals market established in 1870. It is located in the heart of the City of London in England.

5) Zaïre was the currency that existed between 1967 and 1997.
replacing the Congolese Franc issued for 1 Zaire against 1000 Congolese francs in 1967. The currency had a fixed exchange rate to the US dollar, which was set at 2 Zaire for 1 US dollar between 1967 and 1976. In October 1993, the Zaire exchanged with the US dollar at 8 million Zaire for 1 US dollar. In 1997, the country reissued the Congolese franc as its official currency.

6) Interview with a Miner at Musoshi on 23 March 2012.
7) Interview with the General Director at Lubumbashi on 21 February 2011.
8) Interview with the Director of production at Musoshi on 30 March 2010.
9) Battle of Kolwezi was the war of rebellion against the Mobutu regime backed by Angola in 1978.
10) Interview with the Director of research and development at Musoshi on 22 February 2011.
11) Interview with the General Director at Lubumbashi on 21 February 2011.
12) Belgolaise Bank was created on 11 January 1909 as the Belgian Bank in Congo. It was renamed in 1965 as the Belgolaise until 1997. Then it changed as the Bank Commercial du Congo (BCDC) which is the reliable private bank in DR Congo for individual and companies that operate in DR Congo.
13) Interview with the Director of Research and Development at Musoshi on 22 February 2011.
14) Interview with the Director of production at Musoshi on 22 February 2011.
15) Lifetime employment is a distinctive characteristic of postwar Japan’s labor system. It refers to the practice of allowing male workers to remain with the company throughout their work life; Seniority refers to a system in which promotion and wages are determined based on the number of years in the company; On-the-job training refers to training based on learning from senior workers. Employees would have to depend on their supervisor and other senior workers for their training; Enterprise unions refer to single company unions, as opposed to trading unions, which the employee belonged to. There is no differentiation based on occupation or job category. These unions are more cooperative than confrontational with management. Just in time production is a management philosophy to promote elimination of waste and continuous improvement of productivity.

16) Interview with the Miner of geology department at Musoshi on 22 February 2011.
17) Interview with the Mechanic of maintenance department at Musoshi on 22 February 2011.
18) Interview with the Employee of accounting department at Lubumbashi on 21 February 2011.
19) Interview with the Director of human resource at Musoshi on 23 February 2011.
20) Belgian policy both in colonial and post-colonial periods of the Congo consisted of refraining from training the local workers in order to maintain the control and exploitation of mineral resources of the country.
21) Interview with the Mine engineer at Lubumbashi on 21 February 2011.

22) Interview with the Miner at Musoshi on 22 February 2011.
23) Interview with the Representative of Lubumbashi office at Lubumbashi on 21 February 2011.
24) Interview with the General Secretary at Musoshi on 30 March 2010.
25) Interview with the Vice-general Administrator at Musoshi on 23 February 2011.

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