RELATIONSHIP BETWEEN LABORERS' SKILL FORMATION AND DIVISION OF LABOR IN THE ETHIOPIAN LEATHER-SHOE INDUSTRY

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ABSTRACT Ethiopia is one of few countries whose manufacturing industries have been recording high growth rates in sub-Saharan Africa. The Ethiopian leather-shoe industry has been rapidly growing as well. Before 1991 which was the year of regime change, the number of medium and large enterprises had been only two, but the number increased 21 in 2015. Ethiopia has a complete supply chain of shoes production from raw materials, namely hide and skin, up to final goods with the country being endowed with abundant livestock. This study aims to clarify skill formation and division of labor in the leather-shoe industry as a typical example of high-performing manufacturing sectors in Ethiopia. Generally speaking, human resource is one of the important factors for enterprise development. Therefore, this study attempted to analyze working modes and organization of leather-shoe production. Six enterprises in Addis Ababa were targets of this research. There are differences in both division of labor and skill formation in accordance with enterprise scale. The larger enterprises scale is, the more division of labor are segmented. With regard to skill formation, while all enterprises adopt on-the-job training irrespective of their scale, notably medium-sized and large enterprises organize systematic training programs.

Key Words: Skill formation; Division of labor; Laborer; Manufacturing industry; Ethiopia.

INTRODUCTION

Despite recent high growth of overall African economy relied on primary goods, the African manufacturing industry has on the other hand been declining in GDP composition rate from 1980 to 2014 (METI, 2016). In the countries in sub-Saharan Africa in particular, competition between domestic and imported products intensified, leading to low performance of state-owned or large-scale formal manufacturing enterprises and liquidation of the unprofitable, and this situation raised concerns that "negative deindustrialization" would proceed (Kitagawa & Takahashi, 2016: 127). Determinants of international competitiveness (productivity, factor endowment, labor cost, and exchange rate) are generally more disadvantageous for the African manufacturing industry than those in other developing countries (Fukunishi, 2004). An important factor of stagnancy in African manufacturing is seemingly productivity. Previous researches on labor skill claimed that there is a strong correlation between labor skill and productivity in African countries (Bigsten et al., 2000; Söderling, 2000; Adenikinju et al., 2002).

Compared to other countries in sub-Saharan Africa, the Ethiopian economy has been rapidly growing. The Ethiopian total GDP has grown by an annual average of 11.2% from 2009 to 2018, relative to the GDP growth of sub-Saharan Africa,

which is on average 4.5% (The World Bank, 2019a). On the other hand, the agricultural sector accounts for 37.2% of the Ethiopian GDP. This proportion shows that the Ethiopian economy relies on agriculture (AfDB et al., 2017). Although the manufacturing industry has also been growing faster than those in other African countries, the proportion of manufacturing is as small as 5.8%. The rate of Ethiopian value added by manufacturing is on average 16.32% in contrast with the average of 4.83% in sub-Saharan Africa from 2009 to 2018 (The World Bank, 2019b).

The Ethiopian government aims at transforming the mainstay of the industrial structure from agriculture to manufacturing. The government started Growth and Transformation Plan I from 2010, and has been continuing with another plan, which is Growth and Transformation Plan II from 2015, with the intention of becoming a middle-income country by 2025.

Currently, the Ethiopian leather industry is regarded as one of the promising manufacturing sectors. In this context, Ethiopia is believed to have the largest livestock population in Africa (CSA, 2018) and thus produces abundant hides and skins as raw materials for the leather industry. Tannery enterprises, which use hides and skins as raw materials, and multitude final leather goods manufacturers operate in Ethiopia. It indicates that the leather industry formed wide-ranged supply chains in the domestic market.

In the Ethiopian leather-shoe manufacturing sub-sector, there had been only two medium and large enterprises before 1991. But the number had increased to 21 enterprises by 2015 (LIDI, 2015). There is no statistical data, but previous studies indicate that there are 1,000 or more small factories producing leather-shoes in Addis Ababa (Sonobe et al., 2006). Quite a few researches have focused on the industrial cluster of small and medium enterprises in the Ethiopian leather-shoe sub-sector (cf. Sonobe et al., 2006; 2009; Birru, 2011; Gebreeyesus, 2013). Other previous research described the current situation of quality and production management system of the leather-shoe industry (Alehegn et al., 2017). Having reviewed previous researches, however, laborers' skill development in the Ethiopian leather-shoe industry was found not to be discussed.

However, skill development has attracted keen attention from a number of academics. Becker (1964) pointed out the importance of human capital. Human capital is formed by on-the-job training (hereafter OJT). Various studies have distinguished general training and specific training for laborers' skill formation within enterprises. Laborers formed general and firm-specific skills through OJT which in undertaken inside each enterprise. Koike (1977) noted that laborers' skill formation through OJT is important for enterprise development through comparative study between Japanese and American systems. It is possible to deduce from the previous researches that OJT is important for the successful operation of manufacturing enterprises in Ethiopia. Therefore, this study clarifies how OJT is conducted in the Ethiopian manufacturing industry. Other previous researches on skill formation within enterprises in developing countries focused mainly on Asian countries (cf. Ohno, 2007: 205–231; Uchida, 2012). Previous studies about skill formation indicated that training inside enterprises related to laborers' skill formation including frim-specific training is important to enterprises'

development.[1] This study examines how laborers formed their skills within enterprises to which the laborers belong. This study also considers the contribution of OJT, internal or external training of enterprises, and technical schools.

Several previous researches on micro-scale enterprises in urban centers reported the transfers of skills through networks under fluid employment (cf. Kayanula & Quartey, 2000; Hanson, 2005). However, variance of laborers' skill formation in the manufacturing industry according to the scale of enterprises were not discussed. The objective of this study is to clarify how laborers form their skills across enterprises with different scales and different ways of the organization and division of labor.

This article is composed of four sections. First of all, the BACKGROUND explained the overviews of focus enterprises and the methodology of this study. Second, the DIVISION OF LABOR IN FOCUS ENTERPRISES clarified variations of organizational structures and laborers' duties in enterprises in relation to the scale of enterprises. Thirdly, the LABORERES' SKILL FORMATION UNDER DIVISION OF LABOR indicated the diversity of OJT in relation to the scale of enterprises from the three cases of comparatively long-term employees in focus enterprises. Finally, the DISCUSSION AND CONCLUSION discussed the relations between ways of division of labor and laborers' skill formation with special consideration to differences in the scale of enterprises.

BACKGROUND

1. The Focus Enterprises and the Methodology

This research was conducted in Addis Ababa, Ethiopia. The object enterprises were two large, two medium, and two small enterprises in the leather-shoe manufacturing industry. This study did not mention the names and the locations of each enterprise for the purpose of privacy protection. The enterprise names were also coded as: Small Enterprises A and B, Medium Enterprises C and D, and Large Enterprises E and F. Enterprises in the manufacturing industry are classified by the Ethiopian government according to the amount of capital and the number of employees (Table 1). Manufacturing enterprises need to fulfill both the capital and the number of employee criteria in order to be assigned to any given category. This research focused on laborers in all categories of enterprises.

Table 1. The scale of enterprise and their categories.

The size of enterprises	Capital	The number of employees
Small	100,001—1,500,000 birr	6—30 people
Medium	1,500,001–20,000,000 birr	31–100 people
Large	20,000,001– birr	101– people

Source: Federal Negarit Gazette (2016).

The field survey conducted over a total of 202 days from 9th September to 12th December 2016, from 23rd February to 20th March 2017, and from 12th June to 31st August 2017. The methodologies are participant observation and interviews. In the participant observation, this study targeted laborers who worked in focus enterprises and observed their works in the factories. In particular, the observation focused on the processes of leather-shoe manufacturing, the range of laborers' duties, and each laborer's training. On the other hand, this study conducted semi-structured interviews with 481 laborers from the focus enterprises, of whom 164 laborers were male and 317 laborers were female (Table 2). The interview was about their range of duties, and educational backgrounds as well as their skill formation processes and the people who trained them on leather-shoe manufacturing methods. This study asked employees who agreed to participate in the research various questions. Therefore, the employees were not selected by random sampling.

Table 2. The number of interviewees in focus enterprises.

Focus Enterprise	The number of sample	The number of population	Male	Female
Small Enterprise A	N = 12	Same as the number of sample	4	8
Small Enterprise B	N = 24	Same as the number of sample	11	13
Medium Enterprise C	N = 18	Same as the number of sample	9	9
Medium Enterprise D	N = 37	Same as the number of sample	10	27
Large Enterprise E	N = 255	Approximately 300	51	204
Large Enterprise F	N = 135	Approximately 560	79	56

2. The Histories of Focus Enterprises

This sub-section presents the establishment year and the histories afterwards of focus enterprises. Medium Enterprises D and Large Enterprises E and F were established before the formation of the current administration in 1991. On the other hand, Small Enterprise A and B and Medium Enterprise C were established after 1991. Some cases presented the establishment year showing two consequent Western calendar years such as 2018/2019 because interviewees answered in the Ethiopian calendar and then the authored modified it to the Gregorian calendar.

Small Enterprise A was established in 2008/2009 by a woman, her elder brother and sister. The elder brother started leather-shoe manufacturing after he had worked for a shoe-repairman. The woman and her elder sister got involved in shoe making and started learning how to do it because the elder brother had started leather-shoe manufacturing business. He once withdrew from leather-shoe manufacturing, he resumed it after invitation by the sisters. Finally, they established Small Enterprise A, and changed their workplace from their house to a small apartment at startup and started manufacturing leather-shoes for two years. The enterprise started hiring laborers after they moved their base to the current factory in 2011/2012.

The founder of Small Enterprise B had worked in a leather-shoe manufacturing enterprise in *Merkato*(2) before established in the enterprises 2008/2009. He quit leather-shoe manufacturing once because he started working in an NGO. He resumed leather-shoe manufacturing and established factory α in *Merkato*. He built factory β at 2011/2012. The founder's younger brother managed factory β.

Medium Enterprise C was established in 1993. An entrepreneur had started a joint venture, which manufactured leather jackets and exported it to Korea, with a Korean enterprise a year before establishment of Medium Enterprise C. The joint venture was a small business, with three laborers and which used three machines. From 1993, the entrepreneur owned a workplace which included a retail shop. The enterprise manufactured leather jackets to hire seven laborers and sold it at the same place. In 2001, the entrepreneur shifted the workplace to other areas and hired 15 laborers. In 2006, the enterprise moved the factory again, started operating as a medium enterprise, and expanded the scale from medium-sized to large-sized. In 2013, the enterprise established the leather-shoe department. In 2016, adopted the *Kaizen*(3) method and changed their management system as well as augmented management positions. From 2017, they relocated the factory to another area. At the time, approximately half of the laborers in total in both the leather bag and jacket department, and the leather-shoe department, quit the enterprise. Therefore, the enterprise scaled down to a medium-sized enterprise while the enterprise once had expanded its scale from small-sized enterprise to large-sized enterprise. The entrepreneur's son succeeded the family business over ten years ago and has been taking care of it by himself since then.

In 1981, Medium Enterprise D was established after the founder graduated from a university. He worked one Ethiopian tannery and learned management before establishment of the enterprise. The enterprise hired 10–12 laborers in 1981 and was still small-sized. In 1992/1993, the enterprise moved the factory and the number of laborers increased to 17–18. In 1994/1995, the enterprise changed its current management system. From 1996/1997 to 2001/2002, their business was in the best situation. The enterprise hired over 150 laborers and was a large-sized enterprise, which dealt with both wholesale and retail businesses. From 2001/2002 to 2015/2016, the enterprise transacted business with foreign-affiliated enterprises and exported to Europe, USA, and Africa. In 2017, the enterprise sold their leather-shoes only in the domestic market and had declined down to the scale to a medium-sized enterprise.

Large Enterprise E was established in *Merkato* as an informal enterprise before

1980. An entrepreneur hired two to three laborers and started leather-shoe manufacturing. He also manufactured leather-shoes with laborers at startup. It assumed that the entrepreneur developed his skill in Large Enterprise F because the entrepreneur had job experience in Enterprise F. In 1982, Large Enterprise E was approved by the Ethiopian government and hired 12 laborers. In the same year, the enterprise built the sole manufacturing factory in another area and operated in two factories. In 1983/1984, the enterprise built the third factory to manufacture leather-shoes. In 1985, three factories were integrated into the third factory. The management rights of the enterprise were transferred to three sons of the entrepreneur. The entrepreneur passed away and the three sons became the family enterprise's managers. In 2012/2013, they changed one part of the management system. Moreover, they integrated the *Kaizen* method to change the current management system in 2015. The enterprise transacted with foreign-affiliated enterprises in the past two years.

In 1935, Large Enterprise F which is the oldest Ethiopian leather-shoe enterprise was established by Italian. In 1942, property of the enterprise was transferred to an Armenian. In 1975, the enterprise was nationalized by the Ethiopian government. In 2011, the enterprise was privatized by a person who had several enterprises.

3. The Number of Laborers in Focus Enterprises

This research was conducted on Small Enterprises A and B and Medium Enterprise C in 2016 and 2017. In the cases of Medium Enterprise D and Large Enterprises E and F, the research was conducted only in 2017. Therefore, this study compared the number of laborers in both years in regard to enterprises A, B and C. The following is the number of laborers except managers and white-collar employees.

In 2016, the number of laborers in Small Enterprise A was 10–17. In 2017, the number declined to 11–12. The laborers who worked at the time of the research in both 2016 and in 2017 was only six.

In 2016, the number of laborers in factory α of Small Enterprise B was only four. The entrepreneur reported that causes for this small number of employees was negative impacts of the Ethiopian State of Emergency 2016 and frequent demonstrations at the time of the research in 2016. In 2017, the research was not conducted in factory α. On the other hand, the number of laborers in factory β of Small Enterprise B was 16–17 in 2016. In 2017, the number of laborers in factory β increased to 20–24. The enterprise hired part-time laborers in 2017 because of demand expansion. Several students worked in the enterprise for three months because the research was conducted during a long vacation for Ethiopian students. The laborers who had worked at the time of the research in 2016 remained seven at the enterprise in 2017.

Medium Enterprise C has two separate departments, namely the garment department which manufactured leather bags and jackets and the leather-shoe department. In 2016, the total number of laborers was 122 and the number of laborers in the leather-shoe department was 36. In 2017, the total number of laborers was 57 and the number in the leather-shoe department was 19. Also,

only half of the laborers remained in the enterprise. In the case of leather-shoe department, there were five laborers who started their work at the time of the interview in 2017.

In 2017, the number of laborers in Medium Enterprise D was 37.

In 2017, the number of laborers in Large Enterprise E was approximately 300. The interview conducted in the 2017 research targeted all laborers who accepted the research in the enterprise. However, the research was not able to grasp an accurate number because some laborers took long vacations or were on maternity leave.

In 2017, the number of laborers in Large Enterprise F was approximately 560 in factory γ and approximately 310 in factory δ. The research was not able to grasp an accurate number because some laborers of both factories took long vacations while others were on maternity leave as well as Large Enterprise E or were dispatched to be trained in Leather Industry Development Institute (LIDI).

4. Methods of Leather-Shoe Manufacturing

Regarding previous studies (Alehegn et al., 2017), the leather-shoe manufacturing processes are divided into three stages, namely, cutting (*qorata*), stitching (*sefet*), and lasting (*witara*). The first process is leather-cutting using machines or hands (Fig. 1).

Fig. 1. Cutting in Medium Enterprise D.

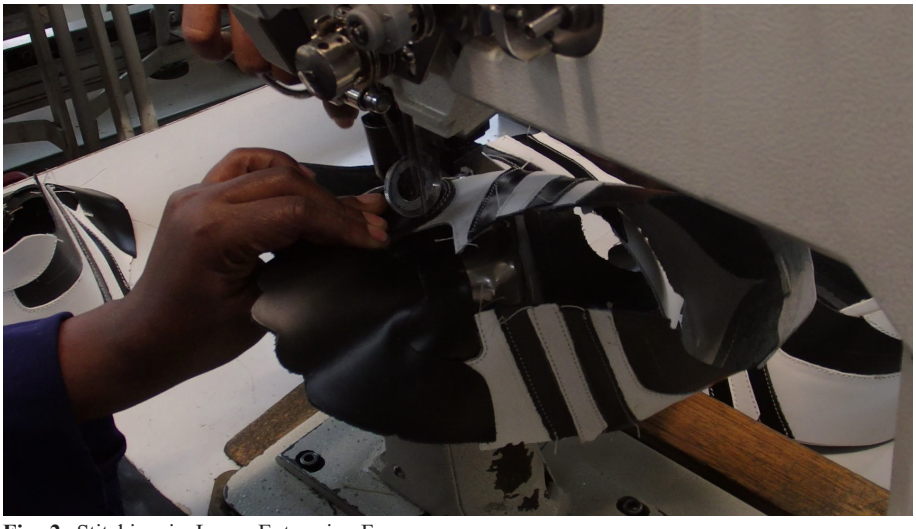

Fig. 2. Stitching in Large Enterprise F.

In stitching, preparation (*zgjit*) involved leather skiving using machines; lining material and attaching outer leather using adhesives. After preparation, laborers make the upper parts by sewing on the machine (Fig. 2). Preparation is classified as the work that it is relatively easy in the process.

In the lasting process, laborers fixed an insole into the mold, covered the mold with the upper part of the shoe, and then adhere the edges of the insole and the upper parts with glue. After that, the small enterprises' laborers seal the insole and the upper by hand while large enterprises attach it by machines (Fig. 3).

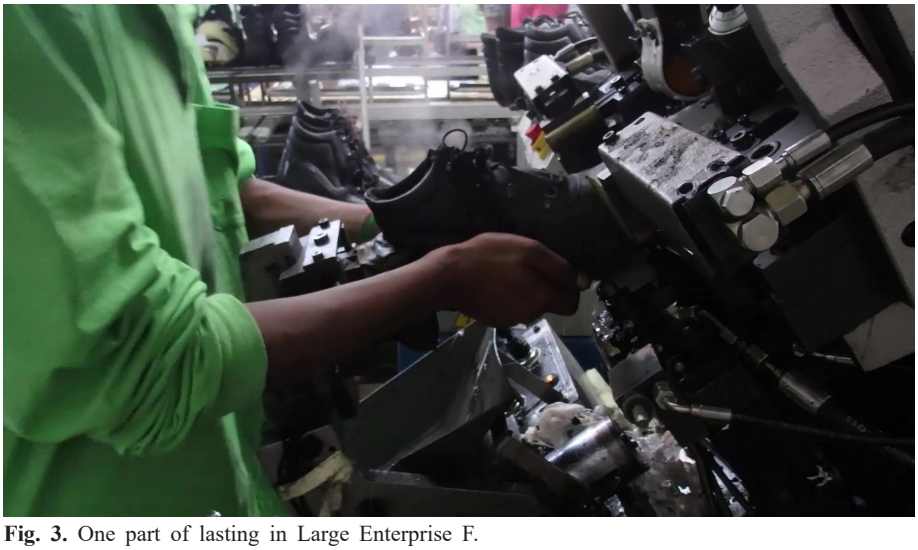

Fig. 3. One part of lasting in Large Enterprise F.

Fig. 4. Sole attaching of the lasting in Medium Enterprise D.

Laborers paint the upper shoe parts and the sole with glue, attach the two by hand, and press the shoe by a machine (Fig. 4). Finally, laborers polish and check the quality of the leather-shoes and pack it.

DIVISION OF LABOR IN FOCUS ENTERPRISES

1. Variation of Organizational Structure of Enterprises in Relation to the Scale of Enterprises

This sub-section clarifies how the laborers worked under different organizational structures of factories to explain the state of division of laborers in the scale of enterprises.

In the case of Small Enterprise A, the woman who owns a business managed day-to-day leather-shoe production as well as the enterprise as a whole. During her absence to attend meetings outside the enterprise, a female laborer who had been working for relatively long gave directions to the laborers.

In the case of Small Enterprise B, the entrepreneur managed day-to-day works in factory α. The younger brother of the entrepreneur managed works in factory β. The people interviewed were not directly engaged in the leather-shoe manufacturing works but were engaged in management.

In the case of Medium Enterprise C, the interviewed laborer was a supervisor of the whole leather-shoe department, who worked under a production manager who managed both the leather-shoe department and the garment department. There were one department supervisor and three supervisors in each section (cutting section, stitching section, and lasting section) under the respondent. The laborers were put under and worked in each department. The production manager and the

whole department supervisor were white-collar employees and did not manufacture the leather-shoes directly. The supervisors in each section basically monitored and controlled laborers' production and sometime manufactured leather-shoes. A supervisor was a skilled laborer of works in each section. At the time of the research in 2017, half of the laborers had quit their jobs and several employees who were engaged in the management also quit. At the time, the production manager also took charge of the leather-shoe department supervising as the company had not been able to hire another supervisor of the same department. The enterprise also had not been able to hire the cutting supervisor.

In the case of Medium Enterprise D, a production manager managed the laborers' job as production management. The production manager sometimes helped the production laborers depending on the situation due to his familiarity with all of the processes of leather-shoe manufacturing. The production manager's role could be described as the combined work of supervisors of each department and the supervisor of the whole leather-shoe department in case of Medium Enterprise C. However, only the stitching section had a supervisor, and she was engaged in the management of the stitching section and support of the laborers' job. The laborers belonged to the three separate sections.

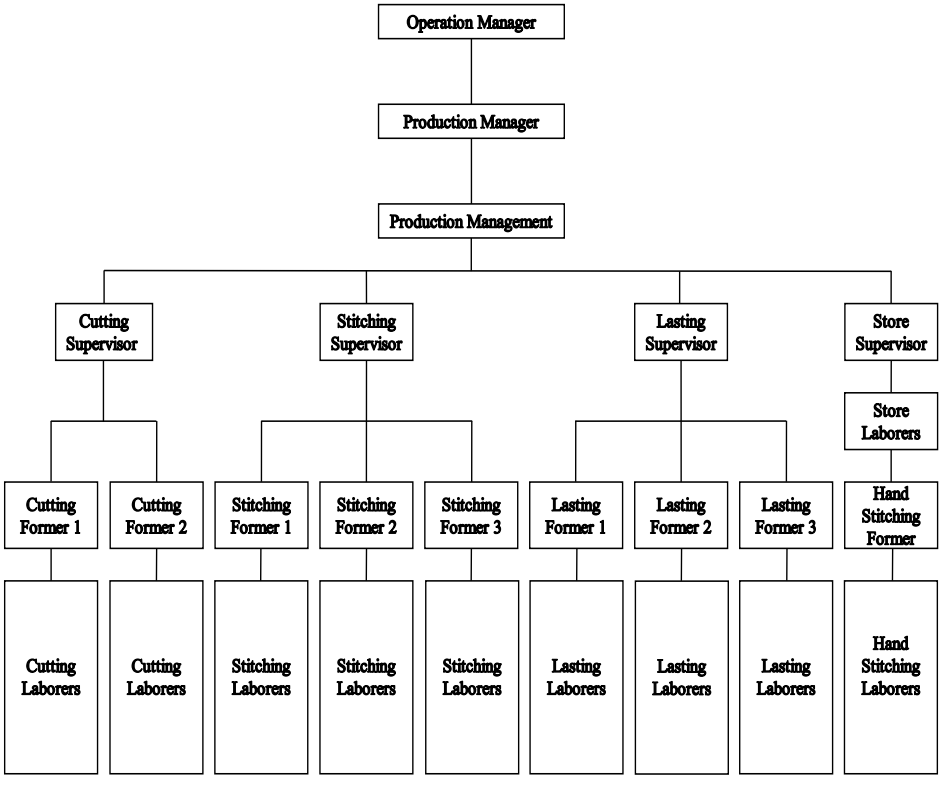

Fig. 5. Organizational structure of Large Enterprise F.
Source: Author made from the interview with the HRM of Large Enterprise F.

In the case of Large Enterprise E, a production supervisor under a production manager managed the leather-shoe production department. There were supervisors of each section under the production supervisor. The laborers belonged to separately under three sections. The supervisors of each section were engaged in their work in the same way as the supervisor of Medium Enterprise C. Two laborers who worked in quality control section(4) were engaged only in quality management across different sections.

In the case of Large Enterprise F, organizational structure was more subdivided than other enterprises (Fig. 5). Basically, white-collar employees who worked in the office managed the whole of the enterprise. The organizational structure differed from other enterprises because the number of laborers in the production department was huge. Regularly, the supervisors of each section supported formers who managed each line of different processes of leather-shoe manufacturing. The formers took charge of one line among a few lines under one section and they supported and controlled laborers' works. The leaders under a quality control supervisor and a quality control manager managed all of the quality control laborers. The enterprise developed its middle management. For example, there were positions of assistant formers under formers, and several people who would be white-collar were trained in the factory.

2. Difference in Laborers' Duties in Relation with the Scale of Enterprises

This section shows three cases (Small Enterprise B, Medium Enterprise D, and Large Enterprise F) of different duties of the enterprises with different scales to prove the difference of division of labor.

In 2016, laborer Z who worked in Small Enterprise B was mainly engaged in the sole attaching machine and finishing in the lasting section and also operated the skiving machine and then took charge of preparation of the stitching section on one day. She was engaged in simple stitching using machines on another day. During participant observation in 2016, laborer Z was sometimes trained on the job because she had entered the enterprise only a few months earlier. In 2017, Z was engaged in stitching mainly using machines. Z moved into the factory according to her job content in 2016 while she became more specialized in 2017. On the other hand, some laborers who adhered insoles and the upper shoe parts by hand in the lasting section only worked in the process. Depending on the laborers, some laborers worked beyond three sections, other laborers worked under specialization. It means that there were two types of taking work responsibilities according to the work contents in Small Enterprise B.

Laborer M in Medium Enterprise D worked in the stitching section and operated stitching machine. In participant observation at regular intervals on the same day, she changed parts of leather-shoe to stitch in the same section.

Laborer U in Large Enterprise F worked in the stitching section and repeatedly sewed one part of leather-shoes in large quantities for several days till the model of the leather-shoe was changed. Job contents and labor distributions in Large Enterprise F were controlled and changed by the middle management.

From the cases of the enterprises' organizational structures and the job contents of the three laborers, the study clarifies that there was a difference of working range according to the scale of enterprises. In small enterprises, the laborers were few and worked beyond a single section. In medium enterprises, the laborers were assigned to one section only and operated several job contents within the section. In large enterprises, the laborers were engaged in a minutely subdivided job content continuously without change. Therefore, it can be said that the greater the scale of enterprises expanded, the more laborers' work ranges were fixed and subdivided. Focusing on management systems of factories, it is suggested that organizational structures of small enterprises were more horizontal while medium and large enterprises had more vertical organizational structures because the enterprises needed to integrate various production sections which were subdivided.

LABORERES' SKILL FORMATION UNDER DIVISION OF LABOR

This chapter describes the processes of laborers' skill formation from the results of participant observation and interviews. Each of the laborers in the following cases worked long-term in one enterprise and descried their experiences and situations in detail. From the result of a semi-structured interview (Table 2), a majority of employees were young and the rate of long-term employment was low in all the focus enterprises. On the other hand, according to the considered cases of three laborers, it is possible to argue that the difference of processes and details of skill formation depend on the scale of enterprises. The cases showed that they were trained for their works by other laborers or people outside the enterprise and formed their skills through training. The cases were based on the research at the time of the research in 2017.

CASE 1. Laborer G in Small Enterprise A (female/19 years old)

Laborer G worked for three years in Small Enterprise A. Her hometown is out of Addis Ababa and she came to Addis Ababa to escape being forced into marriage by her parents. She did not have anyone to rely on in Addis Ababa. However, the woman who owns the business hired laborer G and took care of her, such as helping her to find the place to live. Laborer G lived alone at another place near the enterprise in 2016 because she had been unable to get along with the female laborer. The female laborer quit Small Enterprise A in September 2016.

G gradually acquired her skills on the job from the business owner and her elder sister. She was able to do attaching in lasting, preparation of stitching, temporary management of the whole factory, and training of newcomers.

CASE 2. Laborer M in Medium Enterprise D (female/28 years old)

Laborer M was born in Eritrea and moved to Addis Ababa in 1991. In 2017, she lived around the enterprise and went to a night college. She was able to do cutting and stitching. She worked in Medium Enterprise D for ten years and was

consistently engaged in preparation and sewing in the stitching section. However, she had at first been assigned to the cutting section and worked in the section. She could cut leather and some materials by hand and by machine in the cutting section. She told me the reason of shifting from the cutting section to the stitching section was that she was more interested in stitching than cutting and that her feet were tired as she had to stand most of the time when working at the cutting job. The change of manufacturing section was not common in the enterprise.

Laborer M formed her skills across two sections through she learned cutting and stitching from previous production manager on the job. It was presumed that she learned through on the job training because there was no special training in Medium Enterprise D. She had reportedly gained experience by learning hand cutting from a foreign expert who was seconded from the foreign-affiliated enterprise, which enterprise D had done business with previously. Laborer M formed her skill through on the job training and teaching by the foreign expert.

CASE 3. Laborer S in Large Enterprise F (female/52 years old)

S was born in the Amhara region and came to Addis Ababa as a child. She left the primary school at the grade six and went to a private vocational school for learning apparel stitching by herself. She acquired experiences by working in an apparel factory for approximately two years before entering enterprise F.

When she entered enterprise F, she started works in the stitching section for preparation for 12 years and changed her roles mostly within the same stitching section. After preparation, she worked in the hand stitching section for approximately a year and half. She then worked as a sewing worker for seven years and was in charge of the stitching line as a former for three years. She thereafter worked as a stitching section supervisor. She had developed skills through various ways. She learned stitching in the vocational school and in a previous working place. She learned preparation and hand stitching on her job time. She learned the job from other laborers in the section and also took 40 days of management training at LIDI, to which the enterprise dispatched her. Laborer S worked in enterprise F for a relatively long time, steadily promoted her position and formed her skills.

There have been foreign experts who were hired by the enterprise or were dispatched by Ministry of Industry though she did not mention the foreign experts. She might also grow her skill through them.

The cases show the characteristics of each enterprise. In the case of laborer G of Small Enterprise A, she and the enterprise owner were close and their relationship were as para-siblings. The number of the enterprises was also small (Table 2). For this reason, laborer G could learn her jobs from the owner directly on the job. Moreover, she acquired her skills across two sections (stitching and lasting).

Laborer M of Medium Enterprise D also acquired her skills on the job. Unlike the case of Small Enterprise A, she learned them from the production manager and a foreign expert. This indicates that she could acquire more than one skill of a section from more than one person on the job.

Laborer S of Large Enterprise F developed her skill, staying in only one section. On the other hand, she built her management skill through her job experience and external training. She was in limited job positions as a laborer. This reflects the fact that she had been appreciated by her previous superior and current superior in the factory since her ability matched the skills needed by the enterprise.

Compared to the cases in on laborers' skill formation, the laborers in small enterprises acquired skills beyond one section while the laborers in medium and large enterprises formed their skills in one specific section. It means that their skill formation was strongly related to organizational structure and thus the enterprise scale.

Moreover, the OJT contexts were also different, depending on the scale of enterprises. In small enterprises, laborers learned their jobs from the enterprise owner or other laborers directly, while laborers in medium and large enterprises learned their job from other laborers and foreign experts. The case of three laborers showed that OJT largely contributes to skill formation in the Ethiopian leather-shoe industry.

DISCUSSION AND CONCLUSION

The aim of this study was to clarify the characteristics of division of labor and laborers' skill formation in relation with the scale of enterprises in the Ethiopian leather-shoe industry.

With regard to the division of labor in focus enterprises, clear differences have been observed in labor division according to the scale of enterprises. Laborers in small enterprises were engaged in multiple works across sections while laborers in medium and large enterprises were single-skilled laborers. It related to the difference of organizational structures within which the laborers were assigned. The larger the enterprise scale, the more subdivided the laborers' work is.

From the cases on skill formation, the study clarified that laborers formed their leather-shoe manufacturing skills within enterprises and on the job. Some laborers in medium and large enterprise were trained by foreign experts or LIDI. It revealed that laborers' skills formed divergently according to the scale and the characteristics of enterprises.

OJT also serves an important channel for laborers' skill formation in Ethiopia. On the other hand, contents and ways of OJT were different in relation with the scale of enterprises as were the cases of laborers. This study indicated OJT only in focus enterprises had diversity. It linked the situations with the number of laborers of each enterprise.

From the three cases of laborers, a difference in laborers' career formation was observed. In the case of laborers in small enterprises, laborers became multi-skilled laborers through OJT; however, only their salaries were raised but they could not be promoted in terms of their positions because of the horizontal organizational structure. On the other hand, in the case of the large enterprise, laborers formed their skill as single-skilled laborers and part of them became middle-level managers through training of management by enterprises.

As the conclusion of this study, the laborers' skill and career formation were different in relation with the scale of enterprises. It caused diversity of laborers' working methods in the same industrial sub-sector.

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NOTES

(1) Regarding skill formation in Africa, multitude researches focused on skill formation in the contexts of skill transfer between craftsmen who are in same ethnic groups and rural society (cf. Lave, 1977; Kaneko, 2011).
(2) *Merkato* is the largest market in Addis Ababa. There are many micro enterprises manufacturing leather-shoes.
(3) The *Kaizen* project in Ethiopia was initiated by Japan International Cooperation Agency (JICA) since 2009. Ethiopian Kaizen Institute (EKI) was established in 2011.
(4) This study unifies the word because the large enterprises of focus, called inspection department to quality control.

REFERENCES

Adenikinju, A., L. Söderling, C. Soludo & A. Varoudakis 2002. Manufacturing competitiveness in Africa: Evidence from Cameroon, Cote d'Ivoire, Nigeria, and Senegal. *Economic Development and Cultural Change*, 50(3): 643–665.

African Development Bank (AfDB), Organisation for Economic Co-operation and Development (OECD) & United Nations Development Programme (UNDP) 2017. *African Economic Outlook 2017*. Online. https://www.et.undp.org/content/dam/ethiopia/docs/African%20Economic%20Outlook_Ethiopia_EN_2017.pdf (Accessed December 20, 2017).

Alehegn, C., K. Tsukagoshi & M. Yamashiro 2017. The present conditions and problems of the production management system, the quality management system in the Ethiopian footwear manufacturer. *Research Reports, Ashikaga Institute of Technology*, 51: 12–20.

Becker, G.S. 1964. *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. National Bureau of Economic Research (Distributed by Columbia University Press), New York.

Bigsten, A., A. Isaksson, M. Söderbom, P. Collier, A. Zeufack, S. Dercon, M. Fafchamps, J.W. Gunning, F. Teal, B. Gauthier, A. Oduro, R. Oostendorp & C. Pattilo 2000. Rate of return on physical and human capital in Africa's manufacturing sector. *Economic Development and Cultural Change*, 48(4): 801–827.

Birru, W.T. 2011. Horizontal inter-firm cooperation in Ethiopian small and medium enterprises: evidence from leather shoe manufacturing firms in Addis Ababa. *Journal of Small*

Business and Enterprise Development, 18(4): 806–820.

Central Statistical Agency of Ethiopia (CSA) 2018. *Agricultural Sample Survey 2017/18 (2010 E.C.), Volume II, Report on Livestock and Livestock Characteristics (Private Peasant Holdings)*. Central Statistical Agency, Addis Ababa.

Federal Negarit Gazette 2016. *Council of Ministers Regulation to Provide for the Establishment of the Federal Small and Medium Manufacturing Industry Development Agency. Regulation No. 373/2016*. Federal Democratic Republic of Ethiopia, Addis Ababa.

Fukunishi, T. 2004. International competitiveness of manufacturing firms in sub-Saharan Africa (in Japanese). *Asian Economics*, 45(8): 38–62.

Gebreeyesus, M. 2013. Innovation performance and embeddedness in networks: Evidence from the Ethiopian footwear cluster. *World Development*, 41: 302–316.

Hanson, K. 2005. Vulnerability, partnerships and the pursuit of survival: Urban livelihoods and apprenticeship contracts in a West African City. *GeoJournal*, 62(1–2): 163–179.

Kaneko, M. 2011. *Ethnography of Pottery Making: Community-Based Technology of Woman Craftworkers in Ethiopia* (in Japanese). Showado, Kyoto.

Kayanula, D. & P. Quartey 2000. *The Policy Environment for Promoting Small and Medium-Sized Enterprises in Ghana and Malawi* (*Finance and Development Research Programme Working Paper Series*). Institute for Development Policy and Management, University of Manchester, Manchester.

Kitagawa, K. & M. Takahashi 2016. *Contemporary African Economies: A Changing Continent under Globalization*. African Development Bank Asia External Representation Office, Tokyo.

Koike, K. 1977. *Labour Union of Workplace and Participation* (in Japanese). Toyo Keizai, Tokyo.

Lave, J. 1977. Consequences of traditional apprenticeship training in West Africa. *Anthropology & Education Quarterly*, 8(3): 177–180.

Leather Industry Development Institute (LIDI) 2015. *Leather Industry Development Institute* (*LIDI*). Leather Industry Development Institute, Addis Ababa.

Ministry of Economy, Trade and Industry (METI) 2016. *Annual Report on Trade 2016* (in Japanese). Online. http://www.meti.go.jp/report/tsuhaku2016/2016honbun/i2410000.html (Acessed December 20, 2017).

Ohno, A. 2007. *Formation of Factories' Labor Force in Asian Countries: Modification of Labor Management and Awareness of Duties* (in Japanese). Nihon Keizai Hyouronsha, Tokyo.

Söderling, L. 2000. Dynamics of export performance, productivity and real effective exchange rate in manufacturing: The case of Cameroon. *Journal of African Economies*, 9(4): 411–429.

Sonobe, T., J. Akoten & K. Otsuka 2006. *The Development of the Footwear Industry in Ethiopia: How Different is it from the East Asian Experience? (FASID Discussion Paper Series on International Development Strategies)*. Online. https://www.researchgate.net/publication/228381212_The_development_of_the_footwear_industry_in_Ethiopia_How_different_is_it_from_the_East_Asian_experience (Accessed December 30, 2019).

——— 2009. An exploration into the successful development of the leather-shoe industry in Ethiopia. *Review of Development Economics*, 13(4): 719–736.

The World Bank 2019a. *GDP (Current US$)—Ethiopia, Sub-Saharan Africa*. Online. https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=ET-ZG (Accessed December 30, 2019).

——— 2019b. *Manufacturing, Value Added (Current US$)—Ethiopia, Sub-Saharan Africa*. Online. https://data.worldbank.org/indicator/NV.IND.MANF.CD?locations=ET-ZG (Accessed December 30, 2019).

Uchida, T. 2012. The formation process of skilled labor in the case of Bangladesh: A verification by a panel survey (in Japanese). *Journal of Inquiry and Research*, 96: 43–61.

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