Functional and structural changes of Kyaukmyaung’s glazed pottery production under strong market competition
Aung Kyaw¹, Yin Myint², Cho Mar Oo³, Ei Ei Khaing³, and Ye Ye Than³

Abstract
Restructuring is a constantly occurring process in capitalist society. The competitive relations of production under capitalism generate a permanent tendency to transformation. Transformation occurs both structurally and functionally and always follows by spatial shift of production. Thus, transformation is associated with economic declining of some unfavourable region and economic development of relatively favourable region. Kyaukmyaung is a glazed pottery production site existing through a history of one and half century. This paper analyzed the restructuring process of glazed pottery industry in Kyaukmyaung Area based on data and information derived from structured and open interviews during 3 field trips in 2010. The results pointed out that there were two functional and structural changes in glazed pottery industry after the 1960s. First change caused with the participation of large firms in the business and second change follows the increasing substitution of plastic and steel wares in the place of kitchen and household glazed wares. These changes caused spatial shift of production and subsequent uneven economic development in the study area.

Key words: Functional and structural changes, glazed pottery, spatial shift, economic development

Introduction
Restructuring is a constantly occurring process in capitalist society. The competitive relations of production under capitalism generate a permanent tendency to transformation (Johnston, et. al, 1995). A firm should always be competitive to survive in capitalist environment. There are two means to get competitive power in production: new product development and production process innovation. By means of new product development, a firm could get the profit from selling its new products at good price before other firms could produce the same product. Production process innovation, on the other hand, could reduce total production cost by means of standardization.

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and as a consequence could get more profit, even if the firm sells their products with the same price as other firms.

As shown in the above two processes, firm with competitive power always follow a restructuring in terms of functional and structural changes. New product development needs highly qualified technicians and widely accumulated customer information. Thus, it usually occurred in large cities of the developed world. Production process innovation help standardization of product and usually follows by the searching of low labour cost in the developing countries. Thus, restructuring spatially occurred in both national and international scales and it is highly concerned with national and international variations of production and its subsequent uneven economic developments.

Globalization of economy and development of information technology greatly help in restructuring processes since the late 1980s. Thus, every country practicing open economic system will be affected by the restructuring process. New plants are established in relatively more favourable regions (in term of technology or production cost) while old plants are closed in unfavourable regions. Some regions gain economic opportunities, while others lost their economic values in terms of number of job, and amount of production, etc. with these restructuring processes.

Scholars explained these restructuring processes by two basic concepts: product cycle theory and concept of new international division of labor (NIDL) (Aung Kyaw, 2010). In product cycle theory price elasticity is postulated as being low in the early stage of the manufacture of a new product, and therefore little locational consequences. The maturing stage of product, however, bring product standardization, therefore, need of flexibility in input source decline, then mass production rather than customer product become main means of profit. After maturing stage standardized product stage is reached. In this stage competition from same product become severe and the firm have to move to less developed countries to search for low production cost (Vernon, 1966).

NIDL explained that pressure of international competition has forced capital to search for cheaper and more docile workers in developing countries of the world to restore profitability. This transfer of capital was favoured by advance in transportation and communication technologies (Bluestone and Harrison, 1982). Thus, NIDL is occurred by circulation of semi-finished manufacturing products from one nation to another. Skilled and
technologically contrived labour task are commonly assigned to the core countries while unskilled, routine tasks tend to be shifted to selected regions of periphery (Scott, 1987). Capitalist multinational corporations play an important role in NIDL (Dicken, 1992).

Before 1988, Myanmar practiced socialist economic system and private participation was limited in many economic activities. After 1988, however, Myanmar changed its economic system to market oriented one. With this economic system change, private participation was encouraged in many economic sectors. Foreign capital investment also involved in some sectors. These economic system changes caused traditional economic activities to restructure in their production in accordance with changing economic environment. With these restructuring, some small economic activities disappeared while others grew up as large companies.

Glazed pottery industry of Kyaukmyaung Area is established since the country was ruled by King Aluungphaya. Although the amount of this industry is very small in terms of western capitalism, its market area covers throughout the country. In addition, it is one of the major glazed pottery production areas and the one that produced large glazed pottery in Myanmar. Another distinguishing point of this area is its existence under both socialist and market oriented economic system. Thus, glazed pottery industry of Kyaukmyaung Area was selected as study area and about its restructuring process and subsequent spatial pattern changes related to regional development is examined.

Objectives

The major objectives of this study are

1. To examine the changes of business environment in glazed pottery industry in Kyaukmyaung Area after the 1960s

2. To analyse the restructuring process of glazed pottery work

3. To examine the location shift of glazed pottery industry as a process of restructuring

Data and Methods

Data used in this study were collected by open and structured interviews conducted during three field trips. First field trip was mainly concerned with open interviews to local authority concern and glazed pottery makers conducted in January 2010. During the second field trip (April, 2010),
opened and structured interviews were conducted to both authority concern and glazed pottery makers from four villages: Nwenein, Shwegon, Shwedaik and Malar. Third trip was conducted in August 2010 to verify some missing points of restructuring process by interviewing some key glazed pottery works. Table (1) shows the number of registered and interviewed glazed pottery makers.

Table (1) Distribution of registered and interviewed glazed pottery works in study area

<table>
<thead>
<tr>
<th>Village</th>
<th>Large</th>
<th>Medium</th>
<th>Small</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Register</td>
<td>Interview</td>
<td>Register</td>
<td>Interview</td>
</tr>
<tr>
<td>Nwenein</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Shwegon</td>
<td>0</td>
<td>-</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Shwedaik</td>
<td>0</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Malar</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>8</td>
<td>13</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: Register No. from Association of Glazed Pottery Makers.

About 74 per cents of glazed pottery makers were interviewed. In addition, 4 raw pot makers (2 from Nwenein and 1 each from Shwegon and Shwedaik), 3 art craft makers (1 each from Nwenein, Shwegon and Shwedaik), and 2 glass and clay grinding machine owners were interviewed to cover the whole glazed pottery making process.

Structured interviews were mainly concerned with their development history, changes of technology, marketing system, and locational shift of each maker. Simple descriptive methods were used to analyze derived information.

Geographical Background of Study Area

There are small potteries in many villages throughout the country, among various ethnic groups producing their own styles of pottery or glazed ware. At present large glazed pottery works are found in Twante, Kyaukmyaung, Pyinmana, Inle (Kyauktaing Village), Pathein, Bago, Pyapon, Maingaing, and Nyaungbinseik (Mon State) (Khin Oo Maung, 2007). Among them, Twante (Yangon Division) and Kyaukmyaung (Sagaing Division) are distinguished for their large production amount. Continuous glazed pottery
making passed about 9 centuries in case of Twante and about two and a half centuries in case of Kyaukmyaung (Khin Lat, 2009). Kyaukmyaung has more favourable conditions such as soil and climate in producing large glazed pots than Twante.

Figure (1) Location of study area

Source: Prepared by author base of topographic map No. 84-N-14.
Origin of glazed pottery work in Kyaukmyaung dated back to the period of King A-laungpaya. Shwebo which is located about 17 miles west of Kyaukmyaung was an administrative capital at that time. Since waterway was important for both warfare and transportation Shwebo depended on Kyaukmyaung for its existence. In 1754, Hantharwady King sent his forces to attack A-laungpaya through the Ayeyarwady River way and severe battles occurred between two forces near Kyaukmyaung Area. Hantharwady force was defeated in these battles and about 5000 war prisoners were seized by A-laungpaya. Among these war prisoners, some Mon races were skilled in making of pottery. Thus, the king granted a land near Ma-U and Ohnbin (Yonbin) villages, those located about 6 miles distance from Kyaukmyaung in the north along the Ayeyarwady River and was allowed for production of glazed pottery. When clay using for pottery was exhausted in these two villages potters searched a new place where clay for pottery are available. Then, they found that clay exist on the Nwekway Range located near Nwenyein Village is good for pottery production. Thus, A-laungpaya established Shwegon, Shwedaik villages as glazed pottery production site (TWJA, 1983). Although pottery production was originally established for the peoples of Shwebo, its products have been distributed to the whole country by waterway for centuries.

Although glazed wares produced from the study area is known as "Kyaukmyaung Pots", actual glazed ware production occurred sequentially in four located villages of Nwenyein, Shwegon, Shwedaik and Malar in the southern part of Kyaukmyaung. Kyaukmyaung is a transit point between water way and road transport in the region. Study area has highly rolling topography due to presence of hills extended from the Nwekwe Range (Figure 1). Its location on the bank of the Ayeyarwady River gives advantages to the area in both procurement of firewood and transporting of glazed wares to the market. Rolling topography of study area also help in making of large pots. If it is located in relatively flat plain, time will take in drying up the pot and difficult of make large pots. Availability of two types of clays from the Nwekwe Range is another locational factor contribution to the development of glazed pottery work.
Table (2) Number of household and population of study area

<table>
<thead>
<tr>
<th>No.</th>
<th>Village</th>
<th>Household</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nwenyein</td>
<td>336</td>
<td>1734</td>
</tr>
<tr>
<td>2</td>
<td>Shwegon</td>
<td>154</td>
<td>723</td>
</tr>
<tr>
<td>3</td>
<td>Shwedaik</td>
<td>136</td>
<td>769</td>
</tr>
<tr>
<td>4</td>
<td>Malar</td>
<td>163</td>
<td>913</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>789</td>
<td>4139</td>
</tr>
</tbody>
</table>

Source: Village Tract Peace and Development Councils of Shwegon-Nwenyein and Malar.

Table (2) shows the number of household and population in the study area. Among four villages, Nwenyein has the largest population. From interviews it is revealed that nearly all working age peoples from Nwenyein, Shwegon, and Shwedaik are engaged in glazed pottery industry. Of them, some are working in large glazed pottery and some make easier and cheaper production process of glazed wares in their houses. The rest of the working force is engaged in repairing of damaged glazed pots, carrying of glazed wares from production sites to boats and rafting of glazed pots. There is a large glazed pottery maker in Marlar. Differ from other glazed wares producing village, there are some cultivable areas in Malar. Thus, some people are engaged in glazed pottery while others in farming.

Production Process of Glazed Wares

It is necessary to briefly mention the production process of glazed wares to understand its restructuring process. Glazed pottery is made by covering mechanically hard and glistening glazed layer on the terracotta to protect the inner structure of the terracotta material against chemical and mechanical damage. The basic material of the terracotta glaze is SiO₂ (Silicon dioxide). It has high melting-point of 1670°C. In order to decrease this temperature and color of the glaze, different metal oxides such as PbO (Lead oxide), BaO (Barium oxide), SrO (Strontium oxide), K₂O (Potassium oxide), Na₂O (Sodium oxide), ZnO (Zinc oxide), CaO (Calcium oxide), MgO (Magnesium oxide) and Al₂O₃ (Aluminium oxide) are added to the SiO₂. The
higher the contents of metal oxides in the glaze material the lower is the melting-point (Somogyi, et.al, 1999).

Glazed pottery making process can be broadly divided into three steps: clay preparation, pot making, and glaze coating and baking. Clay preparation step involves carrying of two different clays from western (yellow clay) and southwestern (red clay) parts of the Nwenyein Village, pounding and mixing of these clays, and softening of clay powder by putting in water. Pot making process could be sub-divided into two: making of various kinds of pots, and decoration on the finished pots. Decoration process is recently (about 20 years) developed production process when market demand of glazed wares added for decorative use. Raw materials and labour used in these two major steps could be derived locally. However, it is necessary to pay money in advance for pottery workers. Interviews revealed that one pair of pot makers (master and its follower) receive about 500,000 Kyats for one working period (from May to February). This money is payback in terms of wages earn from making of each pot. In summer it is difficult to make large glazed wares successfully and is assumed as holidays of pottery work.

Third step could be subdivided into two: glazed coating and baking. Glazed liquid that is basically a mixture of lead carbonate and glass powders was coated on the dried terracotta before baking. Since the early 2000s, some glazed ware producers used borax to reduce the percentage of lead carbonate. Baking process is final and the most difficult stage and directly related to the benefit of glazed pottery maker. The role of fire master is very important in this process since there is no scientific measurement in glazed pottery baking. All fire masters used their personal experiences rather than scientific measurements in baking process of glazed wares. In addition, large amount of investment has to be used in baking process. Firewood used in baking of glazed wares is collected in early rainy season from the river water-borne tree. Thus, large amount of capital investment is essential to store firewood for the whole year in rainy season. Figure (2) shows the share of cost in production of a glazed pot in Kyaukmyaung Area. Cost of firewood and glazed material occupied nearly 70 percent of total production cost. Potter wage and clay powder occupied 16 percent and 13 percent, respectively.
Restructuring of Glazed Pottery Work

As mentioned in introduction section, restructuring is restless process for more competitive market. Shift of glazed pottery work from Ma-U and Ohnbin villages to Kyaukmyaung Area is also a restructuring process based on availability of raw materials and rising of its production cost. These changes occurred under the administration of Alaungpaya, so it is difficult to collect evidence. Thus, it is omitted from this study.

There are two functional and structural changes in glazed pottery industry during the last 50 years. The first change is related to emergence of large glazed pottery works and second change is concerned with increasing competition in the market generated from replacement of plastic and steel wares in the place of glazed products.

Changes Caused by Participation of Large Glazed Ware Makers

According to personal interviews it is found that glazed pottery industry was developed in Shwegen and Shwedaik villages after shifting from Ohnbin and Ma_U villages (Figure 1). After the 1960s, some entrepreneurs shifted their works from Shwegen and Shwedaik to Letyway Village that is very close to Kyaukmyaung (a steamer port). However, glazed pottery makers
faced with some difficulties in production and transportation of products to the market. Since Letyway is located in relatively flat area and relative humidity is high it takes longer time to dry up the pot and difficult to make large pots. In addition, since it is directly located on the bank of strong winds and waves, rafting of glazed pot is faced with occasional lost. Thus, the glazed pottery industry shifted to Nwenyein that is located in the rolling topography and has a river bank that is saved from strong wind direction. Large fires outbreak in Shwegon and Shwedaik in three successive years in the 1960s which is also a reason that pushed glazed ware makers to relocate their production sites in Nwenyein. In addition to shifted glazed wares makers, many new comers also established glazed works in Nwenyein Village. New businesses established in Nwenyein became bigger and could use large amount of capital investment for getting economic of scale. Thus, some small entrepreneurs located in Shwegon and Shwedaik gradually faced with difficulties in competition for both marketing and production.

Up to the 1960s glazed pottery producers received advance payment from traders and customers. Then, they paid back this money in terms of glazed wares. When newly invested producers participated in the business with large amount of capital investment, capital relationship between producer and trader changed. Some glazed producers benefited much from the former system and become traders as well as producers during the 1970s and 1980s. Glazed pottery production was made by large scale factories and amount of production increased. Thus, supply exceeds the demand. In this situation, traders reluctant to pay the advance money to the producers since they could buy glazed wares from newly established producers with cash down system. Since practicing of cash down system, traders have a chance to refuse buying of inferior quality products that were generally accepted in prepaid system. In other words, traders get more advantage in marketing system.

In former production system, small producers received capital investment in terms of advance payment. Thus, they could store glazed materials and firewood, those which are the major expenditures in production. Advanced payment derived from trader is also used to control workers by giving advance payment. Capital relationship of former glazed production is solely based on traders and producers do not need much capital investment. Thus, many small-scale glazed ware makers developed. When capital relationship changed with the participation of large new comers and establishment of large factories, small producers were faced with difficulties for capital investment.
In this situation, originally integrated small glazed pottery works were restructured by job specializations of some production processes (Figure 3). Two ways of specialization developed. One is emphasized only on production of small glazed wares such as small kitchen utensils and decorative items. Other are conducted only one step of glazed wares production process. However, small entrepreneurs mainly conduct in clay and glass grinding or raw pot making process. After completing these processes they sell their semi-finished products to large entrepreneurs for glazed coating and baking process. Large firms also realized that it is more profitable to give subcontract for some production processes rather than producing in-house.

![Diagram](image)

**Figure (3) Structural changes and its spatial context of glazed pottery industry**

Source: Based on opened interview results (2010).

In Shwegen and Shwedaik villages where a number of glazed pottery works were decreasing, a new art craft production works emerged. This new economy was established since the early 1980s and developed in the 1990s. Art crafts were made by both clay and white clay powder. Up to the 1980s, small glazed wares were made by using clays. Thus, it is difficult to produce uniform and beautiful products in large quantity. However, white clay powder was mainly used to mold various kinds of small kitchen and household utensils after 1990. These mould wares were coated with glazed materials and baked to get beautiful glazed wares. By means of this new development large
amount of uniform and beautiful kitchen and household (image of Buddha, vases, etc.) glazed wares were produced. These art craft works were mainly developed in Shwedaik where large glazed pottery production works were severely affected by its structural changes.

Changes Caused by Product Substitution

Second structural and functional changes occurred together with two situations: substitution of glazed products by plastic and steel wares, and development of new market (for decoration) in glazed ware usage.

Traditional usage of glazed pottery could be divided into three categories: as a container, as a kitchenware, as a household ware. People from both central and delta areas have long been using large glazed pot namely “ya win oh” to store rain water. Since fresh water is only available seasonally, people from the above regions stores water by using large glazed pots. It is also used to store various kinds of foods such as edible oil, molasses, pickled fish, fermented bamboo shoots, crushed sesame seed and rice. Small glazed wares such as basins or bowls are extensively used in kitchen both for storing of salts and washing plates. It is also used to collect milky sap in rubber plantation. Finer and more beautiful glazed wares were used as vase in shrines at both household and pagodas. It is also used as a cheroot holder and ashtray (Khin Lat, 2009).

Myanmar people traditionally use glazed wares in their daily life throughout the history. When the country practiced market oriented economy after 1988, these glazed wares were gradually substituted by plastic and steel. Steel and plastic tanks become available at cheaper price since the late 1990s. Establishment of private fiber-plastic factories in Yangon made plastic tank cheap and easily available at customer preference. However, there are some difficulties to use plastic in the case of storage materials containing salts and other chemicals. Due to reaction plastic and steel could be quickly worn out and harm human health. Thus, demand for large glazed pot is not severely affected as other glazed wares.

Kitchen utensils and household goods made of plastic and steel were imported into the country from neighbouring countries immediately after practicing market economy. Later, these imported kitchen utensils were produced domestically with the acquisition of technology and government encouragement for industrial development. Thus, foreign and domestic steel
products are available in cheap price. Plastic and steel wares are more portable and less fragile compared to glazed wares. If one could spend a few more money one could buy steel ware that last for a long time. As a result, demand for kitchen glazed ware is highly reduced in the market after the 1990s.

Figure (4) Functional changes of glazed pottery industry in Kyaunkmyaung Area

Source: Based on opened interview results (2010).

These changes generally occurred since the 1980s (Figure 4). Through these changes some glazed ware producers are faced with difficulties in marketing of their products and many of them stop their works or change to production of more detail and beautiful art craft and household wares productions. These changes also occurred spatially, since majority of small scale producers are located in Shwedaik. According to personal interviews, it is revealed that there were 12 integrated large glazed pottery producers in Shwedaik before 1990. The number, however, gradually decreased and there were only 2 of them at the time of interview. The main reasons for the decreasing of integrated glazed pottery producer were already mentioned in the previous section. Although art craft making works developed in Shwedaik and Shwegen, they only produces raw craft, while glazing, baking and marketing were mainly carried out by large integrated glazed makers from Nwenyein. When market competition for kitchen and household goods from plastic and steel wares became pronounced art craft works from Shwedaik and
Shwegon villages were affected again. So this was the second effect for the area during last 50 years.

But after the 1990s, the usage of glazed wares has expanded from the utilitarian to decorative purpose as a product innovation. They occupied a place in the adorning lobbies, and some have been even turned into lamps. Large glazed pots were placed in the gardens as decoration. Development of decorative market encourages some potters to make new shape and colour while not to stray from traditional design. In addition, glazed usage is extended to construction (flooring with glazed tile and using of glazed brick) and decoration in religious buildings (by means of revealing history of Buddha on the glazed tile, as a stage for offering light, pillar in pagoda). Painting on the terracotta instead of glazed coating is very recently developed innovation in the area. Although only three entrepreneurs are conducting this job, it creates a new market. Majority of above developments are mainly occurred in Nwenein where large glazed ware producers were located. Production of painting wares are developed in Shwegon and Shwedaik.

Decorative glazed wares are relatively customer oriented and customers are mainly located in large urban areas. As a consequence of this development, two entrepreneurs extended their production works to Yangon.

In addition to above product innovation, production processes were also changed through its history. Up to the 1980s, used lead carbonate slats were mainly used in glazed making. When, lead content of used lead carbonate slates decreased with development of refining system, old battery plats were added as a material of glaze up to end of the 1990s. Since the beginning of present decade ore lead carbonate were directly used in glazed making. During last 8 years, people become aware of lead content in the product and producer increasingly used borax in the place of lead carbonate.

With the practicing of market oriented economy some developments were also occurred in Kyaukmyaung glazed production. After 1988, Nwenein become an attractive tourist site for its glazed pottery production. According to interviews it is found that in average 150 tourists visited daily to the area during peak season. Customers from foreign countries also ordered glazed pots by giving their own design. Thus, it can be said that the area is producing customer oriented product for export. There are four producers who used to export or are also exporting their products to foreign countries (Table 2). Products are sometimes directly exported to foreign countries and sometimes exported through Singapore. Customers come from both Europe
(France, England, and Italy) and Asia (Thailand, Malaysia, Singapore, and Japan). Although exported products slightly varied with countries it is basically black and brown colour glazed pots.

Table (2) shows spatial variation of restructuring process in the study area. It is evident that four exporters and other 12 firms have their marketing channel and controlling the economy of study area. Majority of these firms could adapt to the changing economy and could adjust their firm structurally and functionally to changing economy for their survival. Majority of them produced decorative glazed pots for new market. This table also revealed the spatial variation of economic development and changes in the study area. Nwenyein developed since the 1960s became a center in the development and future of glazed pottery industry.

### Table (2) Spatial variation of restructuring process in Kyaukmyaung glazed pottery industry

<table>
<thead>
<tr>
<th></th>
<th>Nwenyein</th>
<th>Shwegen</th>
<th>Shwedaik</th>
<th>Malar</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm exporting or used to export their product to foreign country</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Firm possessing own glazed wares shops in regional area</td>
<td>13</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Firm producing decoration products</td>
<td>7</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: Structured interview (2010).

### Conclusion and Discussions

Glazed pottery industry of Kyaukmyaung Area experienced spatial restructuring throughout its history. This study analyzed these restructuring process and subsequent spatial shift related to regional development after the 1960s. Two changes were evident. First structural change was related to participation of large firms in the business, while second functional change was generated from substitution of plastic and steel wares in the place of glazed wares.

Although Shwegen and Shwedaik villages were thriving with small integrated glazed makers until the 1960s and 1970s, production gradually shifted to Nwenyein after the 1960s. Push factor for this spatial shift is due to fires occurring for three successive years in the above two villages while pull factor is related to the advantages in its physical location and transportation of
newly relocated area. Development of large production works in Nwenyein was followed to this spatial shift. Both shifted firms and newly participated firms were well developed in Nwenyein based on large scale production by investing capital derived from traders. With gradual accumulation of capital in the large firm and increasing amount of production, capital relationship between traders and producers changed in the 1970s and 1980s. Traders generally come from Yangon and Ayeyarwady Divisions who do not give advance payment for producers and made strict selective buying on the glazed wares. In this situation small integrated glazed ware producers could not survive anymore. Then, they change to specialized jobs such as grinding of lead carbonate, glass and clay, making of raw pot. A new business was also developed based on plaster molding technology. Art crafts for kitchen and household uses were produced in economic declining regions of Shwegon and Shwedaik.

Second functional change occurred since the 1980s, when plastic and steel wares gradually substitute the glazed wares. Although kitchen and household wares could be effectively replaced by steel and plastic, large glazed pots were difficult to be replaced by plastic and steel, since those substitute items could easily react to salt and acid. Plastic and steel wares could be easily worn out if it is used for storage of fish paste and preserved fruits, etc. which produced acids. Thus, Shwegon and Shwedaik those were affected by first structural change struck again in second functional changes. Many art craft producers reduced their production or stop their job and work in glazed producers of Nwenyein as potter.

Thus, it can be concluded that restructuring of glazed pottery resulted from changing economic environment in two periods. Then, restructuring caused spatial shift and subsequent declining of economy in unfavourable region and development of economy in regions of good business environment.

However, the process of changes differs from product cycle theory used in western literature. It is due to different nature of product and amount of production. Glazed pot needs specific climatic conditions to be successfully produced. Clays used in the production also is a contributing factor to get best quality glazed wares. There is no definite norm in making of glazed pot, especially in baking process. The materials used for glazing is different among the makers and fire masters use their experience rather than scientific measurement of temperature. These two points make glazed pottery technology difficult to be standardized and production shift to other areas.
Division of labour mentioned in NIDL concept, however, is observed in local scale in this case study. This is also due to nature of production and capital involvement in the production. Majority of products, considered in NIDL concept could be divided into production processes and finished product is much bulky than semi-finished products. Thus, it could be practiced at international level. In case of glazed pottery, semi-finished product and finished product has nearly same weight and bulkiness. In addition, in case of NIDL concept, multinational corporations are main agents of production. In case of Kyaukmyaung only small scale regional capitals are involved.

Although restructuring of Kyaukmyaung glazed pottery work could not fully explained by existing concepts, this paper clearly explained the spatial shift of production and division of labour as a process of restructuring and subsequent uneven regional development by means of large capital participation and severe market competition. It leads to the new research question that “Does participation of large capital and intensification of market competition (in some industries) cause the spatial variation of economic activities and economic development at local scale?”

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