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DIACHRONIC AND SYNCHRONIC EXAMINATION OF SALTPOND CERAMICS LIMITED

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DIACRHONIC AND SYNCHRONIC EXAMINATION OF SALTPOND CERAMICS LIMITED

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JULY, 2023

DECLARATION

Student's Declaration

I, Vincentia Attipoe, hereby declare that this Thesis project, with the exception of quotations and references contained in published works which have all been identified and dully acknowledged, is entirely my own original work, and it has not been submitted, either in print or whole, for another degree elsewhere.

Signature: ……

Date: ……

Supervisor's Declaration

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Thesis as laid down by the University of Education, Winneba.

Dr. John Benjamin K. Aidoo (Supervisor)

Signature: ……

Date: ……

Dr. Emmanuel R. K. Amissah (Co-Supervisor)

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Date: ……

DEDICATION

To my daughters, Vivica Grace Amihere Acheampong and Viola Alexa Oforiwaa Acheampong.

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ABSTRACT

This study sought to investigate the collapse of the Saltpond Ceramics Limited. Specifically, the study sought to: trace the historical background of Saltpond Ceramics Limited, examine the operations of Saltpond Ceramics Limited, assess the impact of Saltpond Ceramics Limited on the people of Saltpond and Ghana in general and investigate the causes of collapse of Saltpond Ceramics Limited. The qualitative approach specifically, case study design was employed in collecting, analyzing and interpreting data from the selected respondents of the study. The population of the study comprised past but alive staff of the Saltpond Ceramics Limited living in Saltpond and some people from the Saltpond community. Correspondingly, sample size of thirteen respondents were purposively sampled as former employees for the study. Semi-structured interview guide was used to conduct with the research participants. The interview data was complemented with secondary sources, such as handbooks, website information, legal documents, as well as cite observation. Subsequently, data gathered was thematically analysed. The study revealed that greater abundance of clay deposits in the area of Saltpond that supported the sustainability of production and the proximity of Saltpond to the Takoradi Sea Port, led to its establishment by Dr. Kwame Nkrumah. It was also discovered that; the Saltpond Ceramics Limited operated within four (4) mini factories for different products which were being made, however, the initial processes to be carried out before the products come into place were similar, except exceptional cases where customization was needed. Furthermore, it emerged that there was a high level of positive impact of the factory on the people of Saltpond and Ghana at large many of these impacts were cultural, economic, educational and social. Again, the study disclosed that rivalry between the expatriates and the indigenes, poor administrative and industrial management, fall in demand of its product and high cost of production caused the collapse of the factory. From the findings, the study concludes that the establishment of the factory was a prudent idea due to the over-abundance of clay and other raw materials in the locality, however, poor and ineffective management led to its demise. The collapse of the Factory has rendered the youths jobless which has resulted in many social vices in the community. The study recommends among others that as a matter of urgency, governments and potential investors should do due, deep and reflective feasibility studies regarding effective management.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The Ceramic industry was once a very vibrant industry, which employed sizable workers. Among the firms that constitute the Ceramics industry were the Saltpond Ceramics Limited, the Tarkwa Glass factory, Ekem Ceramics, Winneba and Tamakloe Ceramics, Dodowa (Asante-Kyei, 2019). Most of these companies in the industry produced high quality ceramic wares, which had high patronage on the local, West African and International markets. Finished ceramic wares such as sanitary wares, cups, plates, bowls, flower pots, glass bricks, tiles, water coolers and many others produced by these companies were in high demand on the Ghanaian markets because they were predominantly used in the food and beverage industries, households and building industries (Asante-Kyei & Addae, 2016).

The industry was not only a source of employment to sizeable Ghanaians but also contributed to about 1% to 2% of the country's total Gross Domestic Products (GDP), (Ministry of Trade & Industry-Ghana, 2004). In trying to consolidate the gains the nation had made, in respect of this industry at the time, the government of Ghana established academic institutions to train students in ceramics, so as to take up different responsibilities in the ceramic industry (Asante, Opoku-Asare, & Wemegah, 2015).

Research works pertaining to history and case studies are best tackled from the diachronic and synchronic point of view due to its blended approach. Diachronic studies are those that investigate how or why something happens or exists overtime

whereas a synchronic approach deals with the whole existence at a particular point in time (Gerring, 2007)

Since independence, there has been a number of motivations towards making Ghana as an industrialized nation. Several among these efforts were policies on domestic production and manufacturing in general. Notable among these were; Plywood factories, oil refineries, textile productions, Ceramics, glass production, foot ware production etc. Introduction of these industries were in line with Ghana's economic policy initiatives; that were based on the principle and philosophy of self-reliance geared towards economic stability and control. Not living any viable sector unturned, initiatives were also taken to develop on the already existing small scale ceramics production which led to the industrial ceramics production (Kusimi, 2019)

Although, history traces some countries such as Egypt, China, Persia and Mesopotamia as pioneers of Ceramics and pottery in general, Ghana is also recognized as one of the nations where Ceramics production was given much prominence (Nyarko, 1975; Iddrisu & Adu-Gyamfi. 2017). This was evident in the merchandized of the trans-sahara trade in which Ghana played a crucial role. Ceramics production became dominant during this era because, after the dissolution of the Ghana empire, some of the people who moved to the South along the forest belt continued to make their craft and pottery production was one of the wide spread products due to the abundance of clay (the basic raw material) around their settlements.

The people of Ghana are contributing immensely to the modern world culture with their projection of rich traditional cultures, civilization and values. This has primarily been linked to cultural diversity that exists among its people (Twumasi, 2005). A

critical study of the arts and culture of the people makes it interesting and forms an attractive aspect of tourism in Ghana. The visual or physical aspects of art can be said to be one of the key ways in bringing out the philosophies and concepts of a given society's material culture (Hofstede, 2001). Usually, it is these philosophies and concepts that become the norms and ethics which keep the society together in one accord. It can also help to educate people about the mindset (perception) of those who made it and the use it was intended for.

Similarly, it can be used to teach others in the society to make art forms not just for its aesthetic purpose but also as a way of preserving the culture of the people. Thus it could be realised that, knowing the socio-cultural, educational as well as the philosophical importance of a particular work of art helps to tell others about the work, how it was made and what it is intended for. This helps in preserving the culture of a particular society for subsequent generations. It also helps the individuals in the society to have a common cultural identity. In Ghana, a range of art forms have over the years been used to serve a similar purpose. One such art forms is pottery making which is the subject of this research.

The importance of pottery making in the total lives of the people in most part of the indigenous Ghanaian societies is highly remarkable. Twumasi (2005), citing the traditional arts, talks about its significance in the identity it gives to the people and also the strong belief that it brings the presence of ancestors around for continuing development. Pottery making have several artistic significance which may be overlooked or not caught the attention of many. An important characteristic of art and culture (material aspect) that is most revered in most communities according to Teku (2008) is pottery, paintings, sculpture, beads among others. According to Teku, the

nature and characteristics of the art of pottery and other ceramic works among some groups of people or communities has justified the reason why scholars from within and outside Ghana have travelled to witness and write extensively on ceramic making processes.

According to Suleiman (2014), pottery excavations in many parts of the world have shown clearly that pottery making began since the prehistoric era. Pottery making had begun in the Middle East as early as 6,500 B.C. From the various archaeological discoveries, it was established that pottery first reached the Aegean in the Stone Age. While in the ancient Egypt, Mesopotamia and Rome, pottery was known as an age long industry among the people". Apart from the economic and socio-cultural values of their pottery, the high aesthetic quality of their clay pots achieved through skillful handling of decorations and forms is quite remarkable. Their pots are characterized by beautiful forms. Examples of such forms are the wine pot with long narrow neck (*lekythos*), bowls with incised decoration, drinking pot (*kylix*), cooking stove, cooking pots and ritual pots.

Fati (2013) stated that, in the past potters depended on their craft as a means of livelihood. Even today it still receives certain level of patronage, because it is still part of the material culture of the people. In spite of the availability of modern plastic wares few local pots are still being produced in some parts of the country. Despite the challenges imposed by massive production of plastic wares in this advanced technological age, locally made pots still enjoy certain degree of acceptance and popularity. Among the people of Saltpond in the Central Region of Ghana, pottery making has a special significance in their culture and as a community. Among crafts produced in the area, pottery is one of the principal craft practices which is associated

with the area. Pottery making to them is considered an avenue for out-dooring their rich traditional culture of their ancestors who adopted the art and has left them with the skills to continue in it. It was for this abundance of clay and other ceramic materials in the Mfantseman municipality why Saltpond Ceramics was established.

Saltpond Ceramics was to serve the nation's Ceramic needs such as plates, cups, wall tiles, porcelain, insulators and others. Most Ghanaians still prefer some clay pots to plastic wares because of the different roles they play in the traditional society. According to Korankye (2015), Pots *(ahina*) could be used for storing water and could remain cool for a very long time, (*Akatakyiwa)* a local pot was also used for storing palmwine. For instance, *(Apotoyiwa)* was also used as a grinding bowl or eating bowl, *(Abusuakurwa)* was used to store the dead ashes of relatives. Unlike the plastic wares, local clay pots are used for cooking and, for various other purposes where plastic wares will be of little or no use. For example in ritual practices, some of these pots were dedicated to gods and native doctors use them for worship.

It is recalled by Mensah (2011) that in the past, almost every housewife made pots for the sake of housekeeping. However, today, most people find it more convenient to buy them from certain villages that still exhibit high standard craftsmanship and have access to good and abundant clay deposits. Besides, they are also highly valued for their aesthetic appeal and cultural significance. Pottery making is often recognized not only for its cultural and artistic significance, but also for its economic significance in the creation of jobs and tourism. Pottery is one of the craft of the ancient Saltpond that is still being practiced in most parts of the town today. That area is of most significant cultural material that has caught the attention and interest of many visiting tourists.

Ceramic products are made for several purposes. These forms are preferred because of their considerable increased strength and the spread of heat evenly when used for cooking on the swish stoves (local stoves made of clay which use charcoal or firewood as fuel). Additionally, the quality to stand either in depressions in the ground or on rings and easy balancing on the head when used as water pot cannot be ruled out. Issues of sustenance of industries and their attendant effects are not new to this generation. Collapse of industries is complex phenomenon in development and economic life of a country. It has been from the past to the present day and is assuming an increasing rate in Ghana, Africa and the world at large, since it has social, physical, psychological and economic effect on the people of the country. Particularly, in Ghana, it is so rampant that its physical psychological and economic effects are on millions of people.

Even though one can safely argue that there is no dearth of ethnographic reports and writings on ceramic making among the people of Saltpond, yet it can equally be contended that few of such reports or writings, particularly those of them emerging from Christian missionaries and British colonial ethnographers had mainly been targeted at painting a general picture of the changing artistic culture of pottery making of the people of Saltpond (Danso, 2008). The essence of such writings appeared intended only to present the generation as traditional community people given to expression of their inherited ancestral practices. Among the Saltpond communities, pottery making is one of the most important inherited aspects of the life the people and it is observed in the use of several forms of pottery artifacts in their daily activities.

However, it seems, the people have not delved deeper in understanding the relationship between pottery making as introduced to them by their ancestors, the present state of pottery making and their future of pottery making in Saltpond. Nevertheless ceramic making is among the oldest and most conservative arts practiced in Ghana. In recent times most of the methods used in making ceramics in Ghana are still traditional, with low patronage as compared with imported ceramic products. A report on ceramics in Ghana, published by, Ghana Investment Promotion Centre reveals that the introduction of the potter's wheel by Michael Cardew and Von Stocker, European ceramists, in 1942 to potters in the Greater Accra Region revolutionized ceramic production to some extent. Nevertheless, most ceramic materials and methods still remain traditional and are hand-made in small quantities for only the local market (Priddy, 1974).

1.2 Statement of the Problem

A review through a Public-Private Partnership Programme between Ministry of Local Government and Rural Development (2006) indicates that clay, the major raw material is still abundant in most communities making industrial production of ceramic products a viable business (Kusimi, 2019). However, ceramic production, especially industrial production is limited in Ghana (Iddrisu & Adu-Gyamfi. 2017). The situation was not as it is in some time past. Government in the early 1970s made provision for small scale ceramic industries in Ghana as a way of creating employment for the people but it all proved futile. The Ceramics Teaching Syllabus by The Ministry of Education, Ghana stated some of the Ceramic industries which were established in Ghana but due to certain reasons failed to achieve the purpose for which they were established (Sarkodie, Kuffour & Daniel, 2014).

The Ceramic industries which were established in Ghana were; Mallam Brick and Tile, Prampram Brick and Tile, Saltpond Ceramics, Clay Products Limited at Alajo, Mbroh Tiles at Winneba, Ekem Art Pottery at Winneba, Tamakloe Ceramica, Accra, Ash Bricks Ltd. Afari, Unique Ceramics, Okponglo Vume Pottery Centre, Mfensi Pottery Centre, Afari Pottery Centre and many others but most of these industries have collapsed or not able to achieve large scale production. For example, the demise of Saltpond Ceramic Industry has resulted in unemployment of the youth of today in Ghana; industrial production of ceramics was associated with the Saltpond Ceramic Limited. Saltpond Ceramics Limited was established to produce the nation's ceramic needs such as tiles, sinks, toilet basins, porcelains, electrical insulators and others. Due to some factors it collapsed drastically, rendering a whole number of skilled and unskilled labour jobless. As at now there is no State owned Ceramics company which could subsidize the rate of expensive ceramic products obtained internationally.

The collapse which occurred is nowhere in tune with availability of raw materials because 95% of the company's raw materials were obtained locally, in which 80% of them were obtained from Saltpond and its neighbouring towns (Iddrisu & Adu-Gyamfi. 2017). Saltpond had the opportunity of a Ceramic manufacturing company due to the availability of ceramic raw materials such as clay, kaolin, feldspar, talc and many others in the area and its environs. Kaolin serving as the basic raw material for production could not sustain the company whereas other companies in the ceramic industry, that had their basic raw materials imported, could survive the test of time.

With such a massive contribution and abundance of raw materials, one would expect that Saltpond Ceramics Limited operate for the foreseeable future. Consequently, prior studies have taken a cursory look at some research issues such indigenous

(Asante et al., 2015), challenges facing ceramic industries (Asante-Kyei, 2019; Ekem, 2014). Despite these research efforts, few studies emphasised on the challenges of ceramic industry (Tamakloe, 2014) in the Ghanaian context with little research emphasis to the causes of the collapse of the Saltpond Ceramics Limited, thereby limiting the richness of knowledge about the historical background, operations, challenges and impact particularly, Ghana. In this regard, Asante-Kyei (2019), Iddrisu and Adu-Gyamfi (2017) explain that culture and other contextual elements influence what individuals prioritise and affect ceramic businesses and their impacts.

As a result, this limits research effort and practitioners' knowledge of holistically studying the different facets of Saltpond Ceramics Limited actors; community, business, ownership, management and other stakeholders simultaneously. Further, there is relatively limited knowledge on the conditions under which led to the collapse of Saltpond Ceramics Limited. Additionally, the social and cultural contexts within which Saltpond Ceramics Limited operate determine the corporate governance systems that align different stakeholder's coalition goals. Consequently, the study seeks to fill the knowledge gaps raised above

1.3 Purpose of the Study

The purpose of this research is to assess the diachronic and synchronic examination of Saltpond Ceramics Limited with emphasis on historical background, operation, impact, causes of the collapse of the then flourishing Saltpond Ceramics Limited.

1.4 Objectives of the Study

The study was guided by the following research objectives.

1. To assess the diachronic and synchronic examination of Saltpond Ceramics Limited.

2. To examine the operations of Saltpond Ceramics Limited.
3. To assess the effects of Saltpond Ceramics Limited on the people of Saltpond and Ghana in general.
4. To investigate the causes of collapse of Saltpond Ceramics Factory.

1.5 Research Questions

The following research questions were derived from the objectives of the study.

1. What was the diachronic and synchronic examination of Saltpond Ceramics Limited?
2. What was the operations of the Saltpond Ceramics Limited?
3. What was the effects of Saltpond Ceramics Limited on the people of Saltpond and Ghana in general?
4. Which factors led to the collapse of Saltpond Ceramics Limited?

1.6 Significance of the Study

The contribution of the ceramic factory cannot be over emphasized. The study seeks to unearth how important a study on the collapse of a ceramic factory in Ghana can contribute to the success of the country in terms of socio-economic developments. The importance of this study can be viewed from three ways; policy, practice and knowledge. This study will contribute in minimizing the gaps identified in the literature and thereby establish the basis to understanding of the factors that led to the collapse of the ceramic factory and its impact on the lives of the people in Ghana. Concerning policy, the study will provide bases for the formation of effective rules, regulation and policies to ensure that future governments can deal with the causes of the collapse Also, the study will help the country in saving costs. Thus, siting of factories, selecting, hiring and training new employee take time and need budget to

revive the factory. The study might also help the Ministry of Trade and Industry to avoid fraud within which maybe between employees and other parties. Again this study will contribute to knowledge of the researchers as well as provide much needed information to the governments and human resource managers of the ceramic industry. The outcomes of this study would be useful to the management of the public tertiary institutions across the globe particularly those in Ghana as they search for ways to develop students' and stakeholders interest in the ceramic industry.

1.7 Delimitation

The study was limited to Saltpond and its environs, focusing on the historical background, operations, the effects of the Saltpond Ceramics factory and the the causes of the collapse of the factory.

1.8 Limitations

Identifying and convincing participants to take part in the study was challenging, as they perceived that any information sought from them may expose them to the general public or be used against them. Despite the researcher's assurance of their anonymity, such respondents withheld some vital information which to a greater extent could have provided the researcher with a more quality data and findings for the study. However, the researcher took the necessary steps to explain the intended purpose of this investigation to the respondents to understand that it is solely for academic purpose and that whatever information they provide will be dealt with utmost confidentiality and anonymity. As such, ethical considerations were duly adhered to by obtaining the necessary supporting documents from the Department of Music Education, School of Creative to achieve the axiology of the systematic investigation

of this kind to obtain accurate and reliable data that helped to draw the necessary conclusions and recommendations of a study of this kind.

The study like any other scientific study was not free from limitations. The first limitation of this study is inscribed in its inability to use theory to investigate the collapse of Saltpond Ceramics Limited in the Ghanaian context. Also, qualitative approach adopted for the study elicited in-depth understanding of the phenomenon; however, this approach limits generalization of findings to cover those companies and other industries that were not included in this study. Further, the impact of the collapse was not measured quantitatively to unleash the extent of the impact on socio-economic development in the locality.

Last but not the least; challenge was that the researcher sought to interview A Senior Most Past General Manager of Saltpond Ceramic Limited who ought to have relevant general information on the operations and collapse of the industry. However, this did not come off, because on the appointed day and time, the Senior Most General Manager had a health related complication and was rushed to the hospital and he was subsequently admitted, hence, the interview scheduled to kick off was canceled. However, the researcher substituted that interview with an Elderly Clay Miner who was the Senior Most Past Employee of the Company who equally granted interview to provide detail information that would have been required form the General Manager. The interview granted with the Elderly Clay Miner was complemented with personal observation by the researcher.

1.9 Organization of the rest of the Text

This study is organized into five chapters. Chapter One is the introduction which covers the background to the study, statement of the problem and purpose of the

study. It also covers the research questions, significance of the study, delimitations and limitations. Chapter Two covers review of related literature, and also discusses theoretical concepts of the topic and empirical studies conducted and which are relevant to the subject under consideration. Chapter Three deals with the methodology used to gather and analyse data for the study. It covers population for the study, sample and sampling technique, research instrument, pilot-testing of instrument, data collection procedure and data analysis plan. Chapter Four of the study is devoted to the presentation and discussion of the findings. Chapter Five, the final chapter, deals with the summary of the findings, conclusions drawn from the study, recommendations made, and areas for further research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter examined relevant literature related to the study. It discusses the relevant literature on the collapse of the Saltpond Ceramics Limited with emphasis on the historical background, operations, causes of the collapse as well as the impact of the industry on the lives of the people of Saltpond and Ghana as a whole .To better understand this topic and achieve the stated objectives, relevant literature was reviewed. The review was organized under the following subheadings:

- Theoretical Framework
- Industrialization in Ghana
- Diachronic & Synchronic Approaches
- History of ceramic making
- Forms of ceramic artifacts and production processes of industrial ceramics
- Economic prospects and benefits of ceramic making
- Challenges of industries in Ghana

The literature was reviewed using information from published thesis, online books, journals and articles, and newspapers. Information from these sources provided immense contributions to reviewing literature related to this research work. Where possible, empirical findings were presented to support statements made by other authorities. However, literature reviewed focused much on books, published thesis, and online materials from the internet.

2.1 Theoretical Framework

The sustainability theory formed the basis for this study due to the three main structures of this theory namely; Environmental, Social and Economic factors. The idea of this theory came to public attention after a 1972 report, "Limits to Growth," issued by the international think tank Club of Rome (Jenkins, 2008). The concept of sustainability was initially launched as an environmental idea, which focused on the conservation of resources (Adams, Muir, & Hoque, 2014). Now, it has become necessary for the entire business community (Herbohn, Walker, & Loo, 2014; Przychodzen & Przychodzen, 2013). The Brundtland Report (1987) heighted on three main dimensions of sustainability namely; environmental protection, economic development, and social equity (Lackmann, Ernstberger, & Stich, 2012). Consequently, the most widely acknowledged definition of sustainability that has emerged over time is the triple bottom line (TBL) consideration of economic viability, social responsibility, and environmental responsibility (Yu & Zhao, 2015). A single-minded concentration on economic sustainability can succeed only in the short term, however, in the long term, it needs all three components to be satisfied simultaneously (Dyllick & Hockerts, 2002). Further, they added that when transposing the sustainability idea to the corporate level, it should meet the firm's all the stakeholders' needs, without compromising firm's ability to meet the future stakeholders' needs as well. Therefore, sustainability literally means the capacity to maintain an entity's outcome or process overtime (Jenkins, 2008).

The theory of sustainability prioritizes and integrates social responses to environmental and cultural problems. Thus, to say that to sustain the Saltpond Ceramics Limited, attention should have been given to the cultural and financial capital, biological and ecological integrity, human dignity and motivational resources

for cultural change (Jenkins, 2008). An analogous use of the term "sustainability" refers to dependent social conditions; for example, a peace treaty, an economic policy, or a cultural practice may be called sustainable if it will not exhaust the support of a political community (Jenkins, 2008). In its increasingly common use, the concept of sustainability frames the ways in which environmental problems jeopardize the conditions of healthy economic, ecological, and social systems (Agyeman, 2005; Norton, 2005; Jenkins, 2008).

The theory attempts to provide answers to the question "what must we sustain?" The answers to this question can be analysed from two main approaches of sustainability these are "strong" and "weak" (Jenkins, 2008). "Strong sustainability" gives priority to the preservation of ecological goods, like the existence of species or the functioning of particular ecosystems (Agyeman, 2005; Norton, 2005; Jenkins, 2008). A "weak sustainability" disregards specific obligations to sustain any particular good, espousing only a general principle to leave future generations no worse off than we are. In terms of protecting soil (clay) from mineral winning, for example, a strong view might argue for preservation of soil, even if it requires foregoing development that would increase opportunities for future generations. A weak view would take into account the various benefits clay provides, and would then attempt to measure the future value of those benefits against the values created by development.

The two views loosely correspond to ecocentric (ecologically centered) and anthropocentric (human centered) positions in environmental ethics, but not perfectly. The ecocentric view requires that moral decisions take into account the good of ecological integrity for its own sake, as opposed to exclusively considering human interests. But a strong sustainability view could be held from an anthropocentric

perspective by arguing that human systems depend on rich biodiversity or that human dignity requires access to natural beauty. Note also that a weak view would not necessarily approve the expiration of natural resources, even with the prospect of lucrative profit. For insofar as opportunities for future generations depend on certain ecological processes (e.g., breathable atmosphere), some ecological goods will always be more valuable than the economic development they make possible.

There is a third approach: A pragmatic middle view holds that, while we may not have obligations to sustain any particular nonhuman form of life or ecological process (the strong view), neither should we assume that all future opportunities can be measured against one another (the weak view). The moral and political philosopher Brian Barry (1997) argues that preservation of some opportunities for future generations requires the enduring existence of particular ecological goods. For example, the opportunity to decide whether or preservation of soil (clay) is required for a decent human life depends on their preserved existence. This approach effectively proposes that we must sustain conditions for the ongoing debate over sustainability.

In another pragmatic approach, the philosopher Jonas has proposed that new powers of human agency, able to comprehensively threaten their own conditions, require a new moral imperative to act responsibly for the sake of human survival. Perhaps sustainability is neither a strong question about nature's intrinsic value nor a weak one about producing opportunities but rather a pragmatic question about keeping our species in existence (Jonas 1984). Sustainability is then a question about maintaining a decent survival. Critics will object to such pragmatic approaches from two angles. On one hand they look too humanistic: Preservation of soil is not a priority of the

pragmatic view. On the other hand, they look insufficiently humanistic: reducing sustainability to survival of the species may multiply inequality and ongoing poverty. By now it is evident that theories of sustainability have become too complex to organize with dualistic terms like “strong” and “weak” or “ecocentric” and “anthropocentric.” We might instead think in terms of models for sustainability, each prioritizing its own component of what must be sustained. These models include; economic, ecological, and political which are not mutually exclusive and often integrate complementary strengths of the others.

This theory is applicable to this particular study because it provides the basis for analysing the reasons why the Saltpond Ceramics Limited could not survive despite the negative repercussion that hit on the Ghanaian economy as a whole. It also provides the lens for analysing the cultural, economic, ecological, and political backgrounds or factors that led to the demise of the industry despite those operations that the Saltpond Ceramic Industry had engaged in.

2.2 Industrialization in Ghana

Industrialization as defined in the Business Word article (2018), states that; Industrialization basically is the process by which an economy is transformed from primarily agricultural to one based on the manufacturing of goods. It involves:

- The use of technology and technological innovation.
- Efficient use of division of labour
- Production of goods making use of mechanical advantage.

It further states that; Industrialization therefore refers to the shift in the pattern of a country’s output and workforce toward manufacturing or toward secondary industry.

This assertion is in the right dimension due to the underpinned factors listed. Industrialization is only possible when the primary raw materials are transformed through machinery processes to produce goods or commodities.

2.3 Evolution of Industrialization

The process of Industrialization in Ghana has been through certain phases with regard to years. It is in this light oxford scholarship published the Historical Development of Industrialization after Independence. It categorized the phases from the Pre-Economic Recovery Programme, 1965 to the Post-Economic Recovery Programme, 1983–2000.

Historical Developments since 1965. Ghana has since independence undergone three major episodes of industrialization namely an inward overprotected ISI (import substitution industrialization) strategy (1965–83), an outward liberalized industrialization strategy (1984–2000), and since 2001 industrial architecture based on value-added processing of Ghana's natural resource endowments through a private sector-led accelerated industrial development strategy.

Pre-Economic Recovery Programme, 1965. Ghana's industrial development post-independence has evolved from an ISI strategy to the current private sector-led industrialization programme (Twumasi, 2005). Prior to Ghana's attainment of political independence in 1957, the industrial sector, a corollary of the colonial economic system, was a small sector (mainly made up of a domestic manufacturing sector) that contributed very little to economic growth (Iddrisu & Adu-Gyamfi, 2017). The industrial sector that was inherited from the colonial rulers was one that had been underdeveloped mainly because the regime was more interested in extracting raw materials from the Gold Coast (Ghana) while at the same time creating an economic system heavily dependent on manufactured products from Britain (Twumasi, 2005).

At the time that Ghana gained political independence from Britain, the Nkrumah led Convention Peoples Party (CPP) government viewed industrialization as a key factor for modernization and development. The extensive industrialization programme, which emphasized import substitution, was pursued to transform the industrial structure and reduce the Ghanaian economy's dependence for goods on colonial powers and other foreign economies. According to Killick (2010), the CPP government gave priority to import substitution because it was believed that it would help dispense with the distorting effect of the colonial system, escape from dependence on primary exports, and break the vicious circle of poverty.

At the centre of the ISI strategy was the development of large-scale, capital intensive state owned manufacturing industries. Government invested heavily in infrastructure and was involved in domestic production of previously imported consumer goods, processing of exports of primary products (agricultural and mining), and the expansion and development of building materials and electrical, electronic, and machinery industries. According to Steel (1972), the development of these industries was intended to serve as one that would provide the necessary inputs needed to expand the industrial sector in the near future. As noted by Steel (1972), it seemed that Nkrumah's industrialization programme had been entwined with socialism and macroeconomic policy within the broader development plan of Ghana.

From the mid-1960s the ISI strategy was characterized by a strong reliance on import substitution through high levels of effective protection, to reduce economic dependence on imported goods and to resolve balance of payment difficulties arising from increasing import bills and stagnant export earnings (Abbey, 1990). In addition, the government resorted to administrative controls in the form of import tariffs and

licensing. As indicated by the World Bank in their economic report in 1985, these direct controls were not successful in achieving their intended objectives but instead formed incentives that created excess capacity and inadequate linkages with other growth enhancing sectors (World Bank, 1985; Pickett & Shaeeldin, 1990).

The initiative to create a state managed ISI strategy through the development of large-scale, state owned capital intensive manufacturing industries did have the intended impact. From a contribution of 19 per cent to gross manufacturing output in 1962, SOEs (state owned enterprises) produced 32 per cent and 42 per cent of gross manufacturing output in 1966 and 1967 respectively. As indicated by Steel (1972), output in both the wholly state and state-private joint venture companies (JVCs) grew at rates over 250 per cent faster than the average for privately owned between 1962 and 1966. Over the same period there was a dwindling contribution from the predominantly non-Ghanaian privately owned enterprises to gross manufacturing output. This significant decline in privately led manufacturing was a direct result of the government strategy to take over the domain of many private enterprises, and as a result led to an uncertain climate for private investments (Pickett & Shaeeldin, 1990).

By the beginning of the 1970s, the ISI strategy began to face structural bottlenecks against the backdrop of a shift from a centrally planned to a market-based economy during the Busia-led government in 1969. However, as a result of the liberalization of imports and interest rates, high public expenditure, and a huge surge of imports which led the economy into severe balance of payment problems and to a 90 per cent devaluation of the cedi in 1971, the National Redemption Council, led by General Acheampong, overthrew the Busia regime in 1972, denounced its laissez faire policies, and reintroduced comprehensive import controls, price controls, a rent

freeze, and a revaluation of the cedi (reversing the devaluation of 1971) (Pickett & Shaeeldin, 1990; Green, 1987).

As indicated by the World Bank, by its nature the ISI strategy was self-limiting in two ways. By discouraging growth of exports and agriculture, the ISI strategy ensured that foreign exchange earned by Ghana could not keep pace with the need to import raw materials and spares for the many import substituting industries that had been set up. Second, the effective protection granted to the industries under the ISI strategy made such import dependent industries inefficient in utilizing domestic resources (Birmingham, Neustadt & Omaboe, 1966).

As a result of external shocks and inappropriate domestic policies during the period from the mid-1970s to 1983, the industrial sector and the Ghanaian economy as a whole suffered a severe worsening in economic and financial performance. According to the World Bank, the period 1975–83 was characterized by a decline in Ghana's export earnings (estimated to be about two-thirds of imports), a significant reduction in capital flows, official aid, and lack of credit worthiness (Pickett & Shaeeldin, 1990). In addition to these external shocks, there were a number of inappropriate macroeconomic policies pursued by various governments that negatively impacted on the industrial sector and the economy, including large fiscal deficits financed primarily by borrowing from the domestic financial sector leading to sharp increases in money supply and resultant inflationary pressures, an increasingly overvalued exchange rate, a high lending rate, and the crowding out of private investment (Loxley, 1988).

These structural bottlenecks resulted in a decline in the growth of the economy throughout the late 1970s, with real GDP declining by an average of 2 per cent per

annum between 1979 and 1982. Over this period the structure of production shifted away from industry to services and trade, while agriculture maintained its importance by contributing over half of real GDP (World Bank, 1985).

Post-Economic Recovery Programme, 1983–2000. The initiation of the Economic Recovery Programme (ERP) as part of the Structural Adjustment Programme (SAP) in April 1983 was intended to arrest and reverse the decline in all sectors of the Ghanaian economy and also to rehabilitate ruined productive and social infrastructure (Government of Ghana, 1984). The SAP/ERP sought to correct the structural macroeconomic imbalances that the Ghanaian economy faced by restructuring almost all sectors of the economy including the industrial sector (Pickett & Shaeeldin, 1990). Important economic policy reforms under the SAP included: introduction of a market-determined exchange rate with minimal interventions; removal of price and distribution controls; liberalization of the financial sector and interest rates; abolition of the import licensing system; rationalization of import tariffs and the taxation system; promulgation of a new investment code (PNDC Law 116); establishment of the Ghana Investment Centre (GIC); and the privatization of the SOEs (Nyanteng 1993). In addition the SAP sought to initiate the SOEs' reform programme in order to introduce more competition into state dominated industrial sectors. All these policy objectives had impact on the structure and development of the industrial sector (Szerezewski, 1965; Lall, 1995).

Soon after the initiation of the ERP, the industrial sector in general and the manufacturing sector in particular responded positively to the reforms and this laid the foundation for Ghana's industrial recovery after a decade of decline. Over the initial five-year period after the launch of the ERP (i.e. 1984–8), the industrial sector grew

on average by 11.2 per cent annually, this coming from a negative growth spell three years prior to the launch of the ERP in 1984 (Pickett & Shaeeldin, 1990). This remarkable performance by the industrial sector was largely accounted for by the encouraging recovery of manufacturing and improved performance of the electricity and water sub-sectors. These improvements were largely due to reforms in trade policies, the provision of financial and technical assistance in the rehabilitation, modernization, and expansion of potentially productive and efficient industries, the improved utilization of installed capacity, and correction of price distortions that served as a disincentive to industrial production and the initiation of reforms in allied sectors (Pickett & Shaeeldin, 1990).

Per the above review, it is identifiable that, The Late Dr Kwame Nkrumah having led Ghana to its independence strategized means to make the nation self-independent. Self-independence in the sense that, its aim was to make good use of the raw materials into processed forms or goods for exportation to acquire income and also to suit the nation's basic needs. Along the line, his plans to make the nation a better one fell on the rocks resulting in most industries incapacitated. The Private industrialist sought to revive these industries by the consent of the sitting Government but to no avail. Till date it is only a few of the 'Nkrumah Industries' which were able to stand the test of time (Abbey, 1990).

Abbey (1990) narrates that most Ghanaian industries can be said to be import substitution industries in that, they seek to produce for domestic purposes goods which were formerly imported. Before independence, the country depended heavily on its colonial master-Britain for industrial needs while it concentrated on the production of primary raw materials like cocoa, rubber, timber and gold. A lot of

foreign exchange was used to import basic industrial goods. After independence in 1957, Ghana sought to industrialize (Pickett & Shaeeldin, 1990).

Important rationale for industrialization includes the conservation of foreign exchange and income to both workers and the government. Others include the development and expansion of agriculture in the form of agro-based industries which in the long run stimulates other sectors of the economy, diversification of the economy to help reduce the reliance on agriculture products whose prices keep fluctuating at the world market, increase self-reliance and sufficiency and employment (Lewis, 1953).

Some basic features of the industries include heavy reliance on imported raw materials, financial institutions for their capital base, state owned and supported. They also rely mainly on the local market, are labour intensive, located close to coastal cities which are mostly capital towns of the country with dense population and high purchasing power (Pickett & Shaeeldin, 1990; Lall, 1995).

The structure of the industries in Ghana as elsewhere is based on three structures; Small, Medium and Large. According to the GSS, firms with less than 10 employees are small scale and they employs about 85% of the manufacturing labour force; those with more than 10 employees are medium scale and take up about 10% of the labour force; and those with more than 50 employees are regarded as large enterprises and takes 5% of labour force (Steel & Webster, 1992; Abor & Quartey, 2010; Batiat Ghana Report, 2014). These basic features of industries in Ghana have led to some environmental problems in the country (Asante-Kyei, 2019; Iddrisu & Adu-Gyamfi, 2017).

A review through a Public-Private Partnership Programme between Ministry of Local Government and Rural Development (2006) indicates that, clay, the major raw material is still abundant in most communities making industrial production of ceramic products a viable business. However, ceramic production especially industrial production is virtually absent in Ghana (Asante-Kyei, 2019). The situation was not as it is in some time past. Government in the early 1970s made provision for small scale Ceramic industries in Ghana as a way of creating employment for the people but it all proved futile. The Ceramics Teaching Syllabus (2010) by The Ministry of Education, Ghana lists some of the Ceramic industries which were established in Ghana but due to certain reasons never saw the dim light. Some of the Ceramic industries which were established in Ghana are; Mallam Brick and Tile, Prampram Brick and Tile, Saltpond Ceramics and Clay Products Limited at Alajo, and many others but most of these industries collapsed in the 1980s and 1990s. These ceramic industries do not exist resulting in unemployment of the youth of today (Asante-Kyei, 2019; Twumasi, 2005).

2.4 Diachronic and Synchronic approaches in research

The terminological distinction between synchronic and diachronic linguistics was first made by the Swiss linguist; Ferdinand de Saussure (1857-1913). In a synchronic approach, he sees it as a living whole existing as a state at a particular moment of time. In this view, it is always necessary to carry out some degree of synchronic work before making a diachronic study. A diachronic study is one that views phenomena over time. Diachronic studies are important because they address research questions pertaining to the past. Diachronic studies are those that investigate how or why something exists over time (Gerring, 2007). Studies related to change, process, continuity, development, transformation, or evolution

are types of diachronic studies. Diachronic studies contrast with synchronic, snapshot-like studies of phenomena limited to singular moments, such as the present situations related to continuity, discontinuity, development, and evolution (Widdersheim, 2018). Synchronic variation of times past may finally be studied with a context-form or context-to-function focus. Such research is carried out in sociology, an area belonging to the recently emerged field of (socio)pragmatics (Culpeper 2009; Archer 2017).

2.5 Challenges of Ceramic Industry Survival in Ghana

A thorough review of literature through the domain of the challenges facing ceramic industry reveal a number of factors serving as inhibitors, despite the prospects inherernt in carrying out ceramic and poetry. Prior studies such as Asante-Kyei (2019), Tamakloe (2014), Nsiah (2014), Ekem (2014), Lokko (2014), Abiodun *et al*. (2013) have identified a number of factors impeding the success of ceramic industry. The factors include inconsistent government policies, Exorbitant Utility Cost Affecting Ceramic Production, Obsolete Machine in the Ceramic Industry, Poor Attitude of some Ceramic Factory, Evasion of Duty on Imported Ceramic or Similar Products Workers. The following sections discuss each of the challenges mentioned above detail

2.5.1 Trade Liberalization and Inconsistent Government Policies

The production of ceramic wares has considerably declined in Ghana over the years, due to inconsistent government policies (Asante-Kyei, 2019). The Trade Liberalization Policy, which formed part of Ghana Government's Structural Adjustment Programme pursued in the 1980s and 1990s paved way for increased in the establishment of metal and plastic factories in Ghana in the wake of urbanization

and the importation of refrigerators, metallic and plastic plates, cups, bowls, flower pots, tiles, blenders, metallic cooking pots and plastic buckets into the country. The items either serve or have similar purposes for the ceramic products.

Happy (2013) attests to the fact that most of the ceramic industries have shut down due to cheap imports from China. He argues that not only is Chinese plastic product less durable as compared to made-in-Ghana ceramic products, but also sells far below the price of Ghanaian ceramic products. Industry observers are worried that if the flood gates are opened for the foreign ceramic products to saturate the Ghanaian market, then the industry will totally collapse. They posit that the current situation has made it difficult for local producers of ceramics and pottery to sustain production levels and to operate profitable. They believe that the dwindling fortunes can be addressed if the Government strengthens agencies such as the Customs Excise and Preventive Service (CEPS) to intensify border patrols. They further suggest that the port operations should be tightened to ensure that cheap imports do not sneak in. But how well and soon will the authorities respond to the calls that remain an issue of concern to ceramic industry players whose hope of continued survival in the business depend on it? However, Ekem (2014) argues that the use of obsolete technology by local ceramic and pottery manufacturers is the bane behind their problems and not unfair competition. According to him, the industry cannot do well when it is still operating with machines that are over 40 years old. It is therefore very clear that the ceramic industry is in very difficult times and its current situation needs immediate attention to curb it from total collapse (Nsiah, 2014).

2.5.2 Influx of Ceramic Products from Foreign Countries

Further, Asante-Kyei (2019) posits that competition in the ceramic industry in the distance past was just among the local industries but the equation has changed. The local companies now have to compete with influx of ceramic products or similar products from China and other countries. These products seem to offer value for money and are affordable. To compete with these foreign products will mean the local producers reducing their prices. This will also mean they will be underpricing their products and this will have dire consequences on their profit margins. For example, the threats to Ghana's ceramic industry stemmed from problems at the ECOWAS regional borders. Some ECOWAS countries, notably Nigeria, have banned the importation of certain ceramic goods; and as a result, the entry of ceramic and similar products into Ghanaian market through unofficial channels had also become a problem, depressing the market for locally produced ceramic wares (Tamakloe, 2014).

2.5.3 Exorbitant Utility Cost Affecting Ceramic Production

In Ghana, one of the biggest problems faced by the manufacturing sector and for that matter, the ceramic industry is the exorbitant energy cost and that of water (Asante-Kyei, 2019). In other countries such as China, Japan, United States of America, United Kingdom, and Korea, water and electricity use for the manufacturing sector is highly subsidized by the government, whereas in Ghana, full costs of electricity and water are borne by local manufacturers (Abiodun, 2011; Abiodun, *et al*., 2013). Additionally, cost of ceramic raw materials is comparatively lower in foreign countries as against importation of certain raw materials such as glazes into Ghana. This is due to import duty and the dollar-cedi rates. It could be inferred from the above that, because the biggest chunk of the cost of production of foreign ceramic

firms is highly subsidized by their various governments, their products are far cheaper as compared to those produced by Ceramic Manufacturers in Ghana, since the cost of production in Ghana is extremely high.

2.5.4 Obsolete Machine in the Ceramic Industry

Most of the ceramic and pottery industries in Ghana use obsolete and outdated machines; and that is why they are finding it very difficult to compete with the foreign ceramic products (Asante-Kyei, 2019; Abiodun, *et al*., 2013). Assuming that is true, what it means is that their cost of production will increase due to loss of man-hours as a result of machine breakdowns and stoppages in production lines. This cost is likely going to be passed onto the consumer. Secondly, old machines are likely to be less efficient. This will lead to the companies not meeting their production targets for any given time. The implication is that there will be delays in meeting orders and this could result in customer dissatisfaction.

2.5.5 Poor Attitude of some Ceramic Factory Workers

Asante-Kyei (2019), points out that the attitude of some unscrupulous workers in the Ghanaian ceramic industry, have largely contributed to the woes of the sector. Issues such as theft, lackadaisical attitude towards work, bad customer care practices, and absenteeism, under invoicing and over invoicing have combined to hasten the decline of many of the ceramic and other industries in Ghana (lokko, 2014). It came out that there have been incidences of theft of finished goods, materials, and machine parts in the ceramic factories by workers. Again, unavailability of raw materials and cost; and loose government policies were also serious factors that had led to the collapse of ceramic industries (Asante-Kyei, 2019).

2.5.6 Evasion of Duty on Imported Ceramic or Similar Products

The fact that importers of ceramic or plastic products with similar functions in most cases did not pay realistic duties in Ghana basically because they: (i) Under-declared their imports (declaring lower quantities than was actually brought into the country. In some cases, out of eight (8) containers imported duty was paid on only two (2) containers and the same documents were recycled to clear the other six (6) containers without payment of duties). (ii) Under invoiced their imports (thus, declaring lower values rather than the actual value in order to attract lower duties). (iii) Were not honest in their imports descriptions (thus, fraudulently misrepresenting the actual type of ceramic products imported (Asante-Kyei, 2019). For example, cups and bowls instead of glazed tiles which attract higher duty (Pardo, 2018). This unfair advantage made these imports have cheaper marks up than the locally produced ceramic wares that are highly taxed.

2.5.7 Lack of Innovation and Creativity

The lack of innovation and creativity as a business model is also an integrated feature in the Asian country. Its main advantage is its labor market with low wages and long hours of work, which allows companies to obtain greater profitability (Romero, 2019). Although at present, workers demand higher wages and labor improvements that could destabilize the current economic model. In addition, the ceramic sector must increase its efforts in innovation, digital transformation and industry 4.0. These technologies will allow them to open new channels with customers and gain competitiveness and profitability. For example, Inkjet technology has allowed an increase in environmental efficiency and the ability to perform endless finishes and creative possibilities. These printers inject an exact amount of ink on the ceramic surfaces and also allow reproducing reliefs without the need for molds. In addition,

with this technology it is not necessary to mix the inks separately so that it reduces the consumption of raw materials, electricity and water.

2.5.8 Cultural Practices toward Ceramics

According to Rodica-Mariana et al. (2016), artefacts belonging to the ceramic heritage are mostly based on all clay types used by humans over the ages, because the sources of clays were easily available and people were interested to produce ceramics and pottery to preserve their cultural heritages. This is the reason why the conservation of cultural heritage is of great concern (Ion et al., 2007). Ceramics, until the twentieth century, was essentially used for utilitarian cultural purposes for ritual acts (Maniatis & Tite, 1981, Asihene, 1978). This implies that no society, community or institution can exist without a culture (Hofstede, 1991). The truth of this assertion lies in the fact that, culture deals with the life style of a people and every group of people live in a particular way. Therefore, it is just natural that every society should have its own culture. Any society without culture means it has no way of life and therefore is dead or is non-existent.

For archaeologists, anthropologists and historians, the study of ceramics and pottery can help to provide an insight into past cultures (Asihene, 1978, Ion et al., 2016). The study of ceramics and pottery products is helpful in the development of theories on the organisation, economic condition and the cultural development of societies that produced or acquired pottery ware (Bens, 2007, Blier, 1995). The study of ceramics and pottery may also allow inferences to be drawn about a culture's daily life, religion, social relationships, attitudes toward neighbours and attitudes to their own world (Barley (1994; Bodley, 2006; Wikimedia, 2007). This insight is vital in the sense that the past way of life of a people provide an opportunity to look at the

various forms of pottery and the possible uses they were put to. Sterner, as cited in Barley,1994) revealed that ceramic and for that matter making pots is one of the many ways available to a culture to think about itself. This is because pottery conveys different messages to different sections of the community and the African love for it turns out to be something of a regional stylistic feature. Sterner's point therefore suggests that making pots is one vital area in reflecting on the culture of a people. Ceramics is only one of the many ways available to a culture to think about itself (Barley,1994). It may convey different messages to different sections of the community and the preference for it by Africans may amount to a particular style adopted within a geographical area (Sterner as cited in Barley,1994). In this regard, the study of ceramics and pottery in any society is one vital area in reflecting on how to live as a people. Ceramics then is a way of life, not something regarded primarily as an activity. The way it conveys feelings and thoughts to people of one community may differ from the other depending on how it is carried out.

2.6 History of Ceramic Making

Certainly, there are distinct philosophies that Saltpond stick to, so it will be inappropriate for any single person or community to declare that Saltpond have a common philosophy. To also say that the Saltpond migrated from the same roots and speak the same language, therefore they have the same philosophy may also be totally inaccurate. This makes it extremely difficult to identify the philosophy of the Saltpond in general. However, a number of authors have expressed their views on African philosophy which is worth considering for this discourse.

From the ideological viewpoint, Hountondji (1996) states, "philosophy is any kind of wisdom, individual or collective, any set of principles presenting some degree of

coherence and intended to govern the daily practice of a man or a people" (p. 47). Wiredu as cited in Eze, (1998) specifically sees African philosophy as a "community thought" and not confined to an individual. He added that, it is the common property of everybody within a community. Omoregbe, also in Eze (1998) thinks otherwise that, since "community thought" emanates from individuals it therefore stands for the thoughts of the community at large. This implies that by nature, individuals as well as groups of people engage in philosophical thought, as such, they are philosophers as well and have a system of social beliefs they practise of which the Saltpond are no exception.

Bodunrin, as cited in Appiah (2008) agrees that, the African philosopher cannot intentionally disregard the study of the traditional belief system of its folks. In Africa, even now, traditional culture and beliefs have immense control on the thinking and actions of men. It follows that traditional belief systems are fundamental to African philosophy. The crucial difference between traditional African folk philosophy and philosophy proper is that the Western philosopher tries to argue for his thesis, clarifying his meaning and answering objections known or anticipated, whereas the transmitter of folk conceptions merely says, "This is what our ancestors said" (Wiredu as cited in Appiah, 2008).

African philosophy in this context suggests that philosophy is a body of ideas which have been transmitted from one generation to the other by the precursors of communities. One can therefore argue that African philosophical ideas are not found in documents, but in the mind of individuals and groups guided by belief systems which are preserved and passed on to members of society. As put forward by Appiah (2008), African philosophy is folk-philosophy or ethno-philosophy (beliefs pertaining

to traditional African societies). In this regard, African philosophy and for that matter Eʋe philosophy is not a kind of philosophy that is based on academic knowledge. If African philosophy is folk based one, then what does it constitute and how is it passed on? Simply, it consists of myths, wise-sayings, proverbs, stories and particularly religion and these components are transmitted through unwritten means (Omoregbe in Eze 1998). It is also said to be transmitted orally or by word of mouth from generation to generation through proverbs, myths and folktales, folksongs, rituals, beliefs, customs, traditions of the people and art symbols (Appiah, 1998; Gyekye, 1995). Selectively, an attempt will be made to discuss some of the components or elements of African philosophy which emerged in the discussion. These include; myths, proverbs, symbols and religion. In the light of this project, the discussion of these constituents is vital to the philosophy of Saltpond and ceramic in particular.

2.7 Forms of Ceramic Artifacts

In conformity with the type of complicated pots made by men, Asihene (1978) maintains that men make the following categories of Ceramic artifacts; ceremonial and funeral. These groupings of Ceramics which include the figurines attached to lids of pots are kept by families or used in shrines and during festivals. The pots contained the nail and hair clippings of close relatives of the deceased, water or other offerings. A prestigious version of an *abusua kuruwa* is an *abebudie* (proverb pot). Barley (1994) in a contrary view declares that till now, among one group, the Yungar, women make most of the ritual ancestral pots. While women are restricted to making only utilitarian pots in some cultures, women in other cultures produce ritual or ancestral pots. It will be unfair therefore to maintain the stance that, only men can mould complicated forms meant for purposes other than domestic. To this end, it is apparent that women are capable of producing all-purpose Ceramic vessels

In a different point of view, men and women in Upper Egypt may be responsible for different stages of the production of a single pot. Among the Chokwe and Lwena, men beat out pots and women form them from spirals of clay (Roy as cited in Barley, 1994). Here, the final product is a result of both men and women working together. Schildkrout and Keim cited in Perani and Smith (2009) also adds that men and women work together in building anthropomorphic pots with a woman making a pot and a man adding the head. The making of anthropomorphic pots in this context is rather based on the principle of division of labour where each sex makes just a component of the finished pot.

In relation to the art of weaving, Drost, as cited in Barley (1994) reveals, "It is more interesting to note that this is one of the few areas where the manufacture of basketry and pots by the coil technique is limited to women" (p. 156). Rattray in Barley (1994) also points out that, Asante potters talk of weaving pots" *nyon nkuku",* thus, ceramic becomes a sort of female equivalent to male weaving. This implies that, ceramic as a female vocation corresponds to weaving in view of the use of similar techniques. . In the area of decoration, Massaoudi (2007) discloses, when a variety of objects are assembled they permit one to examine that the same geometric patterns found on textiles and tattoos are the same as those on the Berber ceramic, for example; chevrons, triangles, diamonds and zigzags,. It is significant to acknowledge and appreciate the ability of Berber potters who apply their skill in transferring designs applied on other artifacts to ceramic. Undoubtedly, the arts in this grouping can be interpreted as being interdependent.

The impression of Schimelman (2007) when she first saw photographs of Sirigu women's houses at Northwest Bolgatanga in the Upper East Region was that, they

live in large, beautifully decorated pots. “I’m a potter and I see the world in terms of pots”, she said. The houses are made of mud as such mud and clay have a lot in common. Like clay, mud can be sculpted, incised and moulded into relief decorations. Dried mud adobe can be painted. She said, when she visited the potters, she learned that the methods and materials potters use for the decoration of their houses and ceramic are very alike. . The effectiveness of Sirigu women’s art depends on the following factors. Firstly, clay and mud are familiar materials to both ceramic and wall painting. Secondly, the nature of the materials lends a hand to easy manipulation of forms.

Finally, the processes and techniques used in both arts are remarkably alike. . Schimelman again sees the women of Sirigu as laborious and creative in making baskets. She says, the typical Sirigu design is the *pio* which is conical in shape with a square base basket and round opening. The basket is considered a symbol of womanhood in the house. Schimelman further identifies that Sirigu baskets are used to keep or carry all kinds of things like millet, cassava, groundnuts, fruit items, pots, personal belongings, etc. The baskets are decorated with different geometrical designs. The natural colours used are black, red and white. It is interesting to note that the colours used in painting walls and ceramic wares are also employed in the weaving process. Women usually make baskets by the coil method - winding fibers into coils and then binding the coils together with additional strips of fiber. This technique is similar to the coil building technique in ceramic.

Zulu and Ndebele women from South Africa use binding strips made of coloured fibre to create intricate patterns in their baskets. Inspiration for these patterns comes from nature - the joints of sugarcane plants, for example - and from spearheads and

other handmade items (Reif,1992). Clearly, the methods and materials used by women in ceramic are similar to a number of arts stated above. These include, black smithing, textiles, basketry, wall painting and decoration. Knowledge about the methods used in these arts, for example weaving, is transferred to ceramic. Additionally, people with special creative abilities such as ceramic and smithing are revered in their societies. With this idea in mind, artists may be motivated to perform their role well. The subject of marriage is also a favorable factor to urge women to engage in the ceramic industry. The rights of women to marry blacksmiths and the mere fact that they belong to blacksmiths‟ family give them the opportunity to engage in ceramic.

2.8 Economic Prospects or Benefits of Ceramic Making Business

According to Manu (2008) in developing economies such as Ghana most of the employed categories of persons find themselves in the informal sector for which the ceramic making is part. Ceramic making business has been known to provide secured and ready employment for most youth in Ghana. Employment has been defined by Lugo (2007) to include both formal and informal activities from which individuals earn an income for their wellbeing.

As highlighted by Gordon (2006), clay recycling holds a huge potential to meet the future requirement of the increasing demand of metals globally. With this argument, and in the absence of any procedural change in the current mechanism of ceramic making business, the possibilities of creating income opportunities for poor people engaged in this activity can be ascertained to be secure. There is a need for stakeholder agencies and ministries to put in place regulation if the benefits provided by this activity are to be meaningful to people engaged in ceramic collection. For the

regulations to be meaningful and effectively implemented, the participation of all stakeholders in the formulation of such regulations is deemed very vital.

Gusso (2010) asserts that due to the size of the informal and in-transparent nature of the ceramic making business, it was not possible to come to a sound quantitative assessment of the employment creation in ceramic making business. Gusso (2010) further explains that this attempt is also complicated by the fact that most ceramic makers and recyclers do not solely address the work, but work in parallel on various works. Therefore, it is almost impossible to count or estimate the number of persons that either solely or amongst other materials collect and recycle ceramic products. Nevertheless, the Ceramic Making Association claims to have about 200 members in Saltpond alone (Ghana News Agency, 2013). Here it is important to note, that although Ceramic making dealers are involved in the activity but often are not directly engaged in operations themselves but act as a link between the potters and on the one side and volume markets or refineries on the other.

Generally, it can be assumed that there are by far more informal collectors and recyclers than dealers. Therefore, it can be assumed that in whichever way the ceramic business is organized it creates an avenue of employment as well as gives income to people involved in the business as it is made evident by the several thousands of informal ceramic making, dealers and recyclers operating in Ghana.

Although this business is good for big ceramic making or middlemen but not so good small dealers like the pot collectors. Commenting on the income earned by these potter, Amoyaw-Osei (2010) reveals that those who solely focus on collection activities, and not on dismantling and recovery of materials, their income depends upon the amount of pots collected from different parts of the city and subsequently

sold to marketers or major ceramic purchasing companies. The assessment of the socioeconomic data in the study by Amoyaw-Osei et al (2010) revealed that a potter earns on an average between GHS 600 to 2000 per month, depending upon the total amount of products made. This income actually reflects the profit margin generated by a potter at the end of the month.

In the case of marketing ceramic products, the study suggested that the average income or rather profit of a recycler lies between GHS 250 to 400 per month. The income is calculated by deducting the amount of money paid to potters for bringing in the products from the sites. Most industries and ceramic making yards located in the major ceramic making clusters are subject to various types of taxes to be paid to the local government and to Ghana government (Kwame-Adu, 2010). These taxes include factory tax, income tax and a fee for trade permits. Depending on the factory size, these taxes range from GHC 100 to GHS 1000. Taking into account the size of the informal sector involved in ceramic business in Ghana, this means that the annual tax generation can be estimated at GHC 20 Million. In contrast this revelation, most collectors and recyclers do not pay any form of tax or fee at all except for the major ceramic making companies. This, according to Kwame-Adu (2010) is due to the vastly informal nature of the sector and the fact that most collection and small scale recycling activities do not depend on a permanent installation or workshop, which would have to be registered with the local administration. Nevertheless, recyclers and not collectors that work in a permanent location in ceramic product markets usually do pay taxes to the local government.

CHAPTER THREE

METHODOLOGY

3.0 Overview

This chapter contains all aspects of the methods adopted in the data collection and the analysis of this study. It describes the theoretical paradigms that guided the collection and analysis process of the data and provides a description of the research design by detailing the specific methods used in the data collection and analysis. The chapter was organized under the following headings: Research Design, Population of the Study, Sample and Sampling Techniques, Instrumentation, Trustworthiness of the Instrument, Reliability of the Instrument, Pilot Testing of the Instrument, Data Collection Procedure and Data Analysis.

3.1 Research Approach

In order to achieve the purpose of this study, the researcher used the qualitative research paradigm. This paradigm was useful for establishing a relationship that may create changes in the research settings (Cohen, Manion & Morrison, 2000). The qualitative research paradigm also enabled the researcher to collect data in the form of words rather than numbers and such data requires subjective considerations of the perspectives, accounts and experiences of participants during the interpretation and analysis of data Creswell (2008). The purpose of this research was to investigate the causes that led to the collapse of the then promising Saltpond Ceramics Limited.

3.2 Research Design

This study utilised a case study design to investigate the collapse of the Salpond Ceramic Industry, situated in Saltpond of the Central Region of Ghana. This design emerged from the field of anthropology specifically from the contributions of Bronislaw

Malinowski Robert Park and Franz Boas (Jacob, 1987 as cited in Creswell, 2008). The researcher chose to employ case study as the design because the research is specifically studying the case of a specific entity and therefore, results will not be generalised.

3.3 Population of the Study

The population of the study comprised former employees of the Saltpond Ceramics Limited living in Saltpond and some important personalities from the Saltpond community.

3.4 Sample

The total sample for the study was thirteen (13) respondents. This number included two (2) former workers from the production unit (PU), one (1) former production manager (PM) , two (2) former workers from the packing unit (PA), one (1) former account supervisor (AS), two (2) former clay miners (CM), two (2) elderly men (EM) from Saltpond township, one (1) former assembly man (AM), two (2) former security personnel (SP). This number (13) was found adequate as it enhanced the collection of the required data for the study. Degu and Yigzaw (2006), advised, sampling strategy must be guided by four key factors. These are the sample size, the representativeness and parameters of the sample, access to the sample and finally the sampling strategy to be used.

3.5 Sampling Technique

Purposive sampling is a non – probability sampling technique that is used to select individuals from a given population who have unique characteristics and hold specific information desired for the study. In this research, the purposive sampling technique was employed which consisted of individuals with special qualifications or who were deemed representatives based on prior evidence of knowledge they had on the

establishment of the industry. Staff were chosen based on the number of years they had spent in the industry and community as well. Based on this criteria, thirteen (13) staff with not less than fifteen (15) years working experience with the industry were used for the study and based on Creswell's (2008) advice sample size for interviews should be relatively small to allow for in depth collection of information from respondents. The power of purposive sampling lies in selecting information rich cases for in –depth analysis related to the central issues being studied.

3.6 Research Instruments

The research instruments used for the study were interview, observation, documents review and reports to investigate the collapse of the Saltpond Ceramics Limited.

The semi-structured interview guide, made up of ten open ended items was used to illicit responses from the respondents. The semi-structured interview guide centered on the guiding research questions for the study. This falls in Bryman's (2008) view that it is "to glean the ways in which research participants view their social world" (Bryman, 2008). Creswell (2009) points out that interviews, observation and documents review have the potential to focus on understanding the thinking and behaviors of individuals and groups in specific situations.

A semi-structured interview for the respondents intended to elicit descriptive and in-depth data from participants, who in their own words, would respond to questions posed by the interviewer (Cohen, Manion & Morrison 2000; Kumar, 1996). There are reasons why a semi-structured interview was employed for the study: The information gathered could triangulate, confirm or challenge the data from the other methods, theories, sources, instruments Merriam (1998). It can also provide findings for analysis when the

reliability of some data is in doubt. Additionally, research participants can bring a fresh view point to the topic under review (Merriam, 1998).

3.7 Data Collection Procedure

The researcher personally collected data for the study. The researcher obtained an introductory letter from the head of the department of Music Education, University of Education, Winneba. The introductory letter aided the researcher to get the needed assistance and co-operation from the respondents of study.

Attention was given to the way the interview was conducted and data recorded in order to ensure that the information obtained and the interpretations of the information, provided accurate representation of what was said and what was meant. The taping and transcription of the interviews verbatim dealt with the accurate recording of data, but the transcription was shown to the interviewees to confirm that it represents what he intended to say. For this research, the following steps were taken;

1. All interview schedules followed a semi-structured format based mainly on open-ended questions which allowed for probing.
2. Where there was the need to obtain comparative data from different sites the same questions were asked in different interview schedules subject to any variation in wording that was necessary to deal with significant contextual details.
3. All interview schedules were critically scrutinized by my supervisor, senior colleague students and some lecturers. All schedules were tried with a knowledgeable colleague and relevant person in order to test the meanings of

questions, procedures for recording data and the time needed to complete the interview.

4. The researcher pre-tested the interview guides on two senior lecturers in order to sharpen the researcher's interviewing skills.

Again, the researcher had the rare opportunity to visit the dilapidated ceramics factory and thus data was also collected through observation. The researcher also reviewed some old documents and artifacts in the factory. Together with interviews, observation and review of documents and artifacts, the researcher was able to collect the needed data for the research.

Again, the interview data was complemented with secondary sources, such as Saltpond Ceramic Limited handbooks, website information, reports, legal documents which were reviewed by the researcher to triangulate the data sources with the field data. Also, a site visit was carried out by the researcher to observe some of the structures and operations at the Saltpond Ceramic limited. This exercise was carried out on five occasions. By doing this, data was triangulated with interview, documents and observations.

3.8 Data Analysis

Data Analysis entails some important components such as transcription and coding.

Transcription is the process of creating a textual version from an audio or video recording of some kind of interaction, media report or research event.

Coding on the other hand, is about breaking data into smaller pieces and then recombining those pieces in order to identify and explore relationships and discover new connections.

Data gathered from the interviews were manually transcribed and classified by the researcher based on the objectives of the study. The transcribed data was analysed thematically. Subsequently, all interviews were coded using well established qualitative techniques; the coding of data was subject to an independent sample check for testing the validity of codes and the reliability of coding. The researcher also used data gathering tools like observation and documents review.

3.9 Measures to Ensure Trustworthiness

According to Shenton (2004), the trustworthiness of research generally is often questioned by positivist most probably because the concepts of validity and reliability cannot be addressed in the same way as they are in naturalistic work. All the same, one author Guba, proposed four criteria that he believed should be considered by researchers in pursuit of a trustworthiness. The four criteria according to Shenton (2004) are:

a) Credibility
b) Transferability
c) Dependability
d) Confirmability

Credibility: Ensuring credibility is one of most important factors in establishing trustworthiness. Credibility is about how credible are findings of the study. The findings should be able to be equated to the internal validity in which the object is to show that the study was conducted to ensure that the subject was appropriately identified.

Transferability is the generalization of the study findings to other situations and contexts. Transferability is not considered a viable naturalistic research objective. The context in which data collection occurs defines the data and contributes to the

interpretation of the data. For these reasons, generalization in qualitative research is limited.

Dependability, shows that the findings are consistent and could be repeated or replicated with the same participants in the context similar to the original. As per the plan, the researcher engaged three research assistants who will among other things do the transcription and coding of the research data that was recorded by the researcher.

Confirmability, is a degree of neutrality or the extent to which the findings of a study are shaped by the respondents and not researcher bias, motivation, or interest.

It is important to state that, these elements of trustworthiness are more applicable in the qualitative domain of research. The benefit the researcher has to employ interviews, documents and observations to triangulate the data responses.

3.10 Ethical Concerns

Ethical concerns are very critical research principles that every researcher must understand what it means and the need to adhere to a high ethical standard. According to May (2001), ethics is concerned with the attempt to formulate codes and principles of moral behavior.

A distinction is sometimes made between ethics and morals. While both are concerned with what is good or bad, right or wrong, ethics is usually taken as referring to general principles of what one ought to do, while morals are usually taken as concerned with whether or not a specific act is consistent with accepted notions of right or wrong. The term ‘ethical’ and ‘moral’ are subsequently used interchangeable in this context to refer to proper conduct. Robson (2002).

Druckman (2005) listed three critical ethical elements that must guide any research. The first according to Druckman is that, a research should do no harm. The researcher must consider whether the questions being asked pose any risk to the respondent.

The second ethical issue, as stated by Druckman (2005) is ‘‘that responses must be kept confidential’’ Druckman advised against identifying information that would connect a respondent with an interview, such connection must be hidden and as soon possibly destroyed.

The third concern is that, research takes time of the respondents and this contribution of time should be respected. The individuals or respondents may derive psychological benefits from participating in the research they have nevertheless contributed and valuable resource to it.

Following the forgoing, the researcher discussed with the participants the general purpose of the study without disclosing the research problem. Before the exercise was carried out, each participant’s rights to partake or withdraw was explained. The researcher further informed the participants of their rights and assured them of the researcher’s obligations to maintain their confidentiality and anonymity.

CHAPTER FOUR

PRESENTATION OF FINDINGS AND DISCUSSION

4.0 Overview

The purpose of the study was to examine the diachronic and synchronic analysis of the Saltpond Ceramics Factory. The objectives were to examine the diachronic analysis of the Saltpond Ceramics Factory, to examine the synchronic state of the Saltpond Ceramics Factory, and assess the effects of the factory on the people of Saltpond community as well as Ghana and to investigate the causes that led to the collapse of the seemingly flourishing Saltpond Ceramics Limited. This chapter presents the findings gathered and provides the necessary discussions. Based on this, the following questions were set to guide the course of the study;

1. What was the diachronic and synchronic examination of the Saltpond Ceramics Limited?
2. What was the operations of the Saltpond Ceramics Limited?
3. What was the effects of Saltpond Ceramics Limited on the people of Saltpond and Ghana in general.
4. Which factors led to the collapse of Saltpond Ceramics Limited?

4.1 Findings of Research Question 1: The diachronic analysis of the Saltpond Ceramics Factory

As earlier stated, the first research question was concerned with establishing the diachronic analysis of the Saltpond Ceramics Limited. Based on establishing the historical roots of the factory, three themes were developed thus; the earliest people who started pottery in the Saltpond community, the ideology behind the establishment of the factory and the history of the factory's set-up.

On tracing the historical antecedent of Ceramic making in Saltpond, it was found out that it is difficult to point to specific periods which ceramic raw materials were of useful purpose to the inhabitants of the community. In one narration of the passed on history to the people, it was unclear if the specific given were accurate as another family identifies itself to be known to clay and earliest production of ceramic products. This was explained as due to lack of proper documentation and recording of events.

However, the data gathered indicated that prolific production of ceramic products in Saltpond began in 14th century. This was mostly the craft work of women in the communities until in the 16th century where it was discovered by the community in general that it was lucrative venture. It has been identified that between the period of 1400 to 1600 the European settlers in the community seemingly made use of the raw clay that was abundant. Saltpond up to the middle of the 20th Century was still largely engrossed in the production of traditional pottery, thus it became a fertile ground for Ceramics materials exploration, Ceramics training experimentation as well as Ceramics industries location. However, almost five decades later it was observed that, Ghana's prime Ceramics Industry sited in Saltpond was collapsing due to certain unforeseen factors. These factors rippled down to the industry been closed down entirely.

4.1.1 The ideology behind the establishment of the industry

According to a former production manager, the factory's name initially was Saltpond Ceramics Limited (SALCERAM) and was later changed to Ghana Ceramics Industrial Manufacturing Factory Limited. On record, the coming into existence of the Saltpond Ceramic Limited was necessitated by the abundance of ceramic raw

materials as well as the popularity of the area to be associated with pottery and sale of the raw materials. On realizing the abundance of the raw materials in saltpond in the Mfantseman district, a mine was established to provide raw materials that were used in the production activities of the industry.

What actually prompted the siting of Saltpond Ceramic Industry was the type of archaic raw materials that were found in the area. These were red clay, feldspar, kaolin (white clay), talc, lithium and many other ceramic materials. The dominance of these raw materials has strongly been accepted as the reason for the location of the Saltpond Ceramics Factory.

One other reason for the location of the factory was the vision of the then President of Ghana, Dr. Kwame Nkrumah for the promotion of Industrialization in Ghana. Kwame Nkrumah had a nice industrialization policy in Ghana but right after he was overthrown the industries did not see the dim light. Industries such as the Bolgatanga Tomato Factory, Komenda Sugar Factory, Saltpond Ceramics, Anomabo Citric Factory, Ghana Investment Holdings. Based on feasibility studies that were carried out in central region on the location of a ceramic industry, Saltpond was found to be suitable on its abundance of kaolin and other ceramic raw materials for ceramic production. Again, on its closeness to Takoradi which had a sea port, the intention was to establish the trade and export of ceramic products to other countries for foreign exchange.

On activities that preceded the actual establishment of the factory, a participant revealed that during the late 1964 the National Investment Bank in collaboration with technical assistance from Czechosloviaka conducted a feasibility study on the ideal location to establish the industry for the production of Ceramic products such as wall

tiles and sanitary ware. The results of the feasibility studies prompted the extension of the factory to producing dinner wares (plates, cups, jar) and insulators for electric power distribution in Ghana at which time extension of electricity to remote areas in Ghana had strongly constituted the developmental policies of the country. It was proposed and planned that the factory would be producing 1500 pieces of wall tiles and 600tons of sanitary ware. At a time when the country was growing in need for ceramic products the production level was assumed to be adequate but with the anticipation that, their production levels would improve as demand and supply of the products met market requirements.

Owning to kaolin mining sites in Saltpond, a consensus was reached that 50% of the raw kaolin materials was going to be extracted and complimented with raw materials from other parts of the country notably Kibi which provided the deficit of the raw materials.

Sadly the initial machinery and expertise requested from the Czechs that was needed for the commencement of the project never saw the light of day because there was an overthrow in government in 1966. The occurrence of this development led to the termination of the initial contract with Czechs which another factory was to be awarded a new contract under a new government. At this point the National Investment Bank and the Ministry of Industry after receiving several tenders settled on a factory from Germany, Agrob Anlagenbau GmbH under an exclusive joint ventureship. This meant that the new factory became a shareholder in the new agreement. Under the new agreement, the shareholders were Ghana Commercial Bank (GCB), Union Trading Company (UTC), State Construction Corporation (SCC) and Agrob Anlagenbau GmbH. It is on record that the initial agreement was reached on

1970 for the construction and installation of machinery and equipments to be used for production. Nana Baah who was the then divisional Chief of Nkusukum traditional area, handed over the land for the establishment of The Saltpond Ceramics Limited. The Saltpond Ceramics Limited was officially established and commissioned in 1973 with the original mandate of producing wall tiles, sanitary wares and electric insulators. The installations done by Agrob Anlagenbau GmbH included Kaolin washing plant, raw materials production area, dryers, tunnel kiln among others. The industrialization policy and Saltpond raw materials was perfect where at the time where Dr. Nkrumah's desire for growth in job creation and economic development was needed. Saltpond Ceramics Limited (SALCERAM) were mainly into the production of sinks, washing basin, wall tiles, crockery and decorative wares in three dimensions, electrical insulators etc.

4.1.2 The history of the industry set-up

The Saltpond Ceramics Limited was established on 23rd November, 1973. On this date, the first production began in the factory. In commissioning the factory, the late Colonel Ignatius Acheampong, the then head of state of Ghana, in his opening speech, said that he was particularly happy that the factory had been sited in compliance with the government's dispersal of industry policy and that 90 per cent of its raw materials were located in the area. Too many factories were mere manufacturing plants for foreign products, he pointed out. However, he complained that it took nine years to set up, and further stressed on the need for management and other stakeholders to work more diligently to prevent "embarrassment and frustration" The Saltpond Ceramic Limited will manufacture 1,500 tons of wall tiles, 600 tons of sanitary tiles, 600 tons of crockery and 50 tons of low-voltage insulators annually at full production. The figures (1-8) below are the pictorial evidences of the inaugural ceremony of

Saltpond Ceramic Limited. Please refer to the link for a video coverage and pictures of the inaugural ceremony of the factory https://reuters.screenocean.com/record/588662.

Figure 1 below is a picture of the edifice of the once vibrant Saltpond Ceramics Factory. It displays a young lady brushing her teeth in front of a hand-washing basin and also the factory's details.

Figure 1: An image of the Factory's entrance.

Source: https://reuters.screenocean.com/record/588662

The company was ceded to a German Ceramics Factory by name German Agrob Alangebau. With several years of expertise in production of Ceramic products, the top managerial positions were held by the Germans and few trained Ghanaians. The group of Germans had the highest percent of the profit that were accrued from the

industry with a small percentage of shares owned by the Ghana Government. All the major machinery needed for operations were shipped from Germany.

A German by name Kingsley Bullinger was the first head of the Factory. A report by the production manager was narrated that the first Kiln for example was built and shipped from Germany for the production. The factory was set up to produce earthen ware products such as plates, cups, sanitary ware, floor and wall tiles as well as porcelain insulators for electric poles. At the time of its establishment, there was high demand for products locally and to neigbouring countries, however, there was little competition in the country as well as sub-region for ceramic products.

With high demand both locally and internationally, there was the need to have a human resource base that would be adequate to meet demand and supply standards. A workforce or staff strength of 200 was recorded at the inception of the factory in 1973. Majority, comprising about 70% of total staff strength, were Ghanaians. It is however described that about 35% of the staff were indigenous people of Saltpond; an idea which was welcomed by the chiefs and people of the town.

Initial concern for the establishment of the factory was greeted with enthusiasm as most of the factory hands were indigenes of Saltpond. The primary understanding of the chiefs and the people was that, the establishment was a changing opportunity which was expected to bring development to the town in particular and the country as a whole. Out of this high expectation, there were initial misunderstandings that existed among the chiefs, people of Saltpond and the Management of the Factory.

The Late DK Menya was the head after Kingsley Bullinger (the German head). Mr Menya was assisted by one Mr Benning who also is of blessed memories. It was in

DK Menya's time the factory started collapsing. The historical revelations of the data analysis indicate that Former President Jerry John Rawlings resorted to dispose of the Saltpond Ceramics Company in 1996 as part of the measures to unravel the mishaps on the management of the company: For instance, the quote below provides evidence to support this claim as narrated by one respondent;

> *Until the gradual collapsing of the Factory, the Government stepped in to man the affairs and this was under President Jerry John Rawlings regime. In this new phase too, the local indigenes had a high number of staff as workers both in the lower rank and upper rank. Instead of identifying and meting out proper methods to warrant the progress of the factory, they did not and things begun to slide down suddenly" (PM).*

After the coup by Former President Jerry John Rawlings around 1996, he decided to sell the company because there was no better earnings generating from there. Buyers from The United Kingdom, United States of America, Italy and China showed interest in the factory. Eventually it was sold to a Chinese businessman by the legal aid of one Lawyer Cann. The late Mr Ko who was the Chinese business guru acquired the company with the purpose of reviving it. This Chinese business guru tried all efforts to revive the industry with little staff strength about 200 workers aiming at producing Porcelain, insulators and electrical plugs but still faced certain challenges. Mr Ko's son; Francis Ko was heading the factory as at the time.

After the selling of the industry to the Chinese, things changed to worse. The Chinese began work at the company in 1996. Workers were employed on a casual basis for a maximum of three (3) months and later laid off. Some workers did not receive their compensation fees after being laid off. These Chinese occupied the Factory's residence for the then German expatriates. At a point, they converted the factory's

canteens into places of abode because there were misunderstandings and friction between them and the Saltpond Indigenes.

Further, some of the respondents revealed that, they felt cheated as their belongings were wrongfully sold by the government to the Chinese and expatriates without prior authorization from the indigenes. This is contained in the following quotes as narrated by some elders in the community

An elderly man from Saltpond Township stated that*:*

> *"…the Chinese had come to take what is rightfully ours! The Government did not seek our full authorization before selling the Factory out rightly to these Chinese. "The Chinese were enjoying more than we the custodians. They have taken charge over our land's benefit. They have to give back what is rightfully ours".*

Another elder from the community also narrated the following:

> *"…the industry site has been transcended to some Chinese business expatriates whose son is using the place as a packaging industry which is more of Graphics Design. Before they could have the site for their Graphics works they had to destroy and burn most items used by then Ceramics industry. The heavy duty machines were cut into scraps".*

The evidences on administrative, managerial and production historical phases are indebted to the claim of archeologists. For instance archaeologists, anthropologists and historians in the field of ceramics and pottery can help to provide an insight into past cultures (Asihene, 1978, Ion et al., 2016). The study of ceramics and pottery products is helpful in the development of theories on the organisation, economic condition and the cultural development of societies that produced or acquired pottery ware (Bens, 2007, Blier, 1995). The study of ceramics and pottery may also allow inferences to be drawn about a culture's daily life, religion, social relationships, attitudes toward organisations, its neighbours and attitudes and their altitudes to their own world successes and failures (Barley (1994; Bodley, 2006; Wikimedia, 2007).

4.2 Finding of Research Question 2: The Operation in the Saltpond Ceramics Factory

It was revealed in the research that; the Saltpond Ceramics Limited had four (4) mini factories. The mini factories had different products which were being made there but the initial processes to be done before the products come into place were similar. Only a few changes occurred in the process of production.

Based on the operation of the Saltpond Ceramics Limited, two (2) themes were developed thus: the four (4) main mini factories in the Saltpond Ceramics Limited and the processes involved in the factories. This research will generalize the production phases in the four mini factories and give specifications where necessary.

Respondent PM who was with the production room in the vibrant days of the industry gave a description of the images which were captured by the researcher at the industry. Indeed the respondent was teary when the images demonstrated how lonely and abandoned the company looked. The respondent said “how could a factory which fed us be left to rot in this manner”.

4.2.1 The Four mini factories of the Industry

- **Low tension insulators section:**

This section of the factory was producing electrical plugs, electrical insulators etc. These items were components of electrical poles to prevent current passing through the conductors. Ceramic insulators like any other piece made from clay undergoes the preparation stage to the firing and glazing stage. Respondent PM mentioned that there were particular recipes in the preparation of electric insulators. He further on stated the systematic approach in attaining this low - tension insulators.

Figure 2 and 3 below were among the abandoned products from the low-tension insulator factory captured by the researcher.

Fig 2: Sample of Electrical insulators found in the factory

Fig 3: Disc insulators found in the factory

- **Wall tiles Factory**

Respondent PM further on described the Wall tiles section in the factory. In his description he stated that; the wall tiles factory produced the square- shaped (4 by 4)

measurement whitish wall tiles which were used for sanitary and aesthetic purposes. The wall tiles were used mostly on kitchen walls, bathroom walls, laboratories and the likes.

Figure 4 is an image of some abandoned wall tiles captured by the researcher in the wall tile factory unit.

Figure 5 also is an example of a tiled surface captured by the researcher inside the factory.

Figure 6 and Figure 7 shows the wall tiles unit's entrance and exit respectively.

Fig 4: Pack of wall tiles found in the factory

Fig 5: A Tiled surface in the factory

Fig 6: A cross section of the Wall Tiles factory

Fig 7: Another cross section of the Wall Tiles factory

- **Sanitary ware Factory**

The operations in the factory were mostly supervised by Respondent PM and this rendered him credible enough to give an abreast description in the four mini factories within the factory. He said this section produced sanitary wares which ranged from toilet seats, basins, sinks and others. Upon reaching the factory, the researcher observed some abandoned water closets and hand washing basins which could have been in good use. It looked like the production of these items were actively done when they decided to shut down the factory.

Figure 8 and Figure 9 below shows some abandoned water closets and hand washing basins which the factory was producing.

Fig 8: A set of abandoned water closets found in the factory

Fig 9: A set of hand washing basins found in the factory

- **Crockery factory**

This factory was responsible for the production of utilitarian items such as bowls, cups and plates according to Respondent PM. He remembered how the society was fed with these home items. These items had the short form of Saltpond Ceramics which was 'SALCERAM' printed on to serve as a form of identity.

Below is an image of an abandoned bowl captured by the researcher inside the factory. The researcher also obtained images of an analysis sheet on a sample crockery body which was used by the factory in 1979.

Fig 10: A Ceramic bowl with lid found in the factory

Figures 11,12,13,14,15,16 and 17 depicts the factory's commissioning day and the first batch of production which occurred on the same day.

Fig 11: Colonel Ignatius Kutu Acheampong giving the keynote address at the commissioning of the factory.

Source: https://reuters.screenocean.com/record/588662

Fig 12: A cross section of the invited guests (local indigenes and expatriates) of the commissioning of the factory.

Source: https://reuters.screenocean.com/record/588662

Fig 13: An image of Colonel Ignatius Kutu Acheampong unveiling a plaque.

Source: https://reuters.screenocean.com/record/588662

Fig 14: Colonel Ignatius Kutu Acheampong with his entourage cutting the ribbon leading to the factory

Source: https://reuters.screenocean.com/record/588662

Fig 15: First sanitary products executed which are been packed into the kiln.

Source: https://reuters.screenocean.com/record/588662

Fig 16: First water basins manufactured in the factory.

Source: https://reuters.screenocean.com/record/588662

Fig 17: Tiles Production Section

Source: https://reuters.screenocean.com/record/588662

4.2.2 The Production Processes

The operations of these four factories were almost the same just that, their products and certain machineries used differ according to Respondent CM. This respondent gave an elaborate process which was used in the Saltpond Ceramics Limited. He began from the clay preparation method to the finishing stage.

4.2.3 Clay preparation

The researcher was informed by 'respondent CM' about the systematic process in clay preparation.

As earlier stated that; clay was the basic raw material used in the Saltpond Ceramics Limited, there was therefore the need to extract clay from a parent rock known as the feldspartic rock. The process where the feldsparthic rock breaks down into minute particles is known as weathering.

In the respondent's explanation of clay preparation, he said it was expedient they mixed the clay (kaolin) with other materials which can be in the form of carbonaceous materials, organic matter and silica (sand). Two respondents from the production department (PU 1 & 2) said that; *the factory relied on 'man power' means in the extraction of clay. This they felt did not auger well in the industry's production process.*

4.2.3.1 Types of Clay Used in the Industry

Clay was grouped under two main categories according to how they were obtained. These categories were Primary and Secondary clays. It was revealed that clays of different types were collected. There was also a conscious effort in mixing any of the types of clay with other materials to attain a very good composition of clay. This act was termed as Clay body. Clay body was believed to be effective in production because it renders good strength, shrinkage level, plasticity level, workability and so on.

- **Primary clays**

These were located just around the parent rock (feldspartic rock). This type had a distinctive feature thus; it's pure and whitish nature. It was very difficult to work with it alone hence the mixing with carbonaceous materials. Kaolin happened to be the basic example of Primary clays. The respondent boasted of the fact that Saltpond was the best site for Kaolin in the whole of Ghana. He also said the factory was acquiring

clay from other towns which they believe to be very effective for production. A clay from a nearby town known as Abonko was often times used. The towns were tagged as codes on the clay heaps for identification purposes. So if a clay was brought from Saltpond it will be tagged SA/1 or SA/2 just like the tags below in Figure 18.

Fig 18: Cubicles of different kinds of clay with codes

- **Secondary Clays**

Secondary clays were also obtained after they have been transported from the parent rock to another location. The transportation was of a natural means that is by rains or the winds. Secondary clays had a lot of foreign particles in them because of their transportation. It contained a higher amount of impurities, these impurities were somehow good with regards to the clay strength.

With these breakdown of the Primary and Secondary clays, it created more room for the kind of clay to be used for a particular work. As earlier stated by the respondent that; certain clay contained a higher amount of foreign particles, it was necessary to wash the clay in a specially built machine in the factory known as the Kaolin Washing Plant (K.W.P)

The KWP had a feeder which allowed the raw materials to be washed into it with the help of some agitators. The rough materials were then exited from the KWP by means of a long conveyor. The smooth slurry also passed through another machine known as the Worm Wheel. The name Worm wheel was as a result of it worm-like nature. The slurry was then pumped into Hydroclone tanks which removed other materials from the slurry making it smoother. Afterwards the smoother slurry was sieved over sixty-three (63) micron mesh into settling tanks. Excess water from the slurry were then removed and if the slurry had required water ratio (litre weight) it was then filter pressed. The filtered cakes were then dried before use.

4.2.4 Other Raw Materials

The respondent further on gave a breakdown on the kind of raw materials which were added to the clay to facilitate production. He again stated that the raw materials were more of chemical base therefore safety precautions were to be taken into consideration when working on them. The respondent said clay was the major raw material used at the production site and this was obtained locally except some few chemicals which were imported. Below are some of the materials which were added to kaolin (clay) in the production processes.

- **Ball clay**

This was used to increase plasticity in wares, giving them the required strength. It was mainly added to kaolin because it possessed certain opposite characteristics with kaolin. The ball clay had a high maturing temperature so was often added to kaolin.

- **Silica**

Silica was obtained from quartz through some natural cause of breakdown into very minute particle size. It aided in the factory's production especially when there is the need for a clay body to attain a glassy feel. In certain situations where a clay body required a glassy nature, silica (sand) and feldspar were mixed with it. Therefore the silica (sand) and feldspar acted as agent. Below is a heap of Silica sand which was used as a major glass former in the production process.

Fig 19: A heap of silica sand found in the factory

- **Earthenware clay**

The respondent revealed that, the earthenware clay was also a source of raw material. This was because of its maturing temperature and the reddish to brownish colour which it possessed. In the case where the factory needed a reddish to brownish colour in the clay body preparation, the earthenware clay was mostly added to the kaolin.

- **Water**

Water mostly aided in the slurry mixtures. Without water almost all aspect of the factory's preparations could not be a success said the respondent. In certain cases, water served as lubricant in the form of slip (clay slip). The factory had various inlets of fresh water and notable among them was a huge water tank which had been erected inside the factory. Figure 20 below is an evidence of the abundant water inside the factory.

Fig 20: A water tank situated inside the factory

4.2.5 The Clay Body Preparation

In the research it was revealed that; raw material preparations during the production days of the industry differed according to the ware it was going to be used for (sanitary wares, wall tiles, crockery, casting and insulators)

- **Sanitary body**

This was prepared by suspending the clay in water and addition of formail 'Ap' (electrolyte) to disperse the particles. Barium Carbonate was added to dissolve the soluble salts and slurry allowed to settle and solid water ratio (litre weight) controlled. The mixture was then sieved through fine mesh that was one hundred and sixty (160) microns into another storage arc, to affect the next stage that was ball milling.

The controlled clay suspension was put in a ball mill and the non-plastic materials like silica, sand and feldspar was added in order to make it have that glass-like texture. Later on was milled to attain a uniform consistency. Right after this process, the milled mixture was sent to the laboratory to test for particle size. At this juncture if there is any corrections to be made on the mixture that was found to be coarser or too smooth it was rightfully done.

After attaining the mixture, it was then pumped into another mixing arc for a process termed as 'Blending' which enables the mixture to be more uniform. The blended mixture was then passed through a sieve of two hundred and fifty (250) micron mesh to extract any particle. The magnetic particles which were present in the mixture was further on extracted by using a magnetic substance. The sanitary bodies of the factory were composed mainly from silica, clays (Kaolin) and feldspar.

A sample sanitary body composition obtained is as follows:

Raw materials	Dry weight	Percentage
Agbozume sand	234.0	7.8
Feldspar moree	1000.0	33.3
Mankessim clay	294.0	9.8
Dadwem clay	234.0	7.8
Agrobume sand	234.0	7.8
Saltpond Kaolin	415.0	13.9
Dorfiner Kaolin	589.0	19.6
	3,000.0	**100.0**
Formsil Ap	3.0	0.1
$BaCO_3$	0.6	0.02
$CoSO_4$	1.0	0.033
H_2O	1400	32.0

- **Crockery body**

The crockery which consisted of plates, cups, bowls, dinner sets, water sets etc was prepared by weighing the raw materials such as the ball clay, silica sand and the feldspar all into a ball mill. By getting the correct particle size, the milled batch is pumped by means of compressed air into a mixing arc. The kaolin which is already washed and treated is then blended in a separate mixing arc. After some time the blended materials is allowed to become homogenous before pumping by means of a 'mono pump' to meet the milled batch in the mixing arc. This is also left for some time before the slip is sieved over one hundred and sixty stroke two hundred and fifty (160/250) micron sieves through a permanent magnet into a storage arc.

The aftermath of the mixture from the blending stage was a slip state. This was further on put into a storage arc and then filter pressed into cakes. This process of filter pressing the slip in a storage arc is termed ‘dewatering slip’ and this is later transported into the pugmill machine to remove the air pockets.

It was then extruded into various sizes depending on the type of mouth piece used. Some of the filter cakes are then re-dissolved in a casting blunger and electrolyte (silicate of sodium and carbonates) added to disperse the particles making the slip fluid and castable. Some quantity of barium carbonate is also added to dissolve all soluble salts. The slip is allowed to stir for some time until homogenous mixture obtained. The slip is then sieved over one hundred and fifty (150) micron mesh into a storage arc.

- **Casting**

The major production method is casting. This method of production was effective for producing a large number of ceramic items with the same designs. The items which were mainly cast included electrical insulators, crockery, sinks, sanitary ware etc.

The ceramic wares at this casting stage were manufactured by the aid of moulds made from Plaster of Paris (POP). The factory had a stipulated method in producing moulds for casting. The factory’s casting method were as follows;

i) Before a mould was made a model was turned with the percentage shrinkage of the ware added to its size.

ii) Then a working case was made either with Plaster of Paris or araldite.

iii) Working moulds were then produced by mixing Plaster of Paris and water and casting it around the case by means of casting rings.

iv) Time was allowed for the Plaster of Paris to solidify and the mould removed from the case. Plaster of Paris was used in the fabrication because of its high rate of absorption.

The Plaster of Paris moulds, which were made of multi pieces after drying, were cleaned and aligned for casting to take place. Below is also a laid down steps in producing ceramic wares from the moulds made in the casting chambers.

i) The mould was filled with slip and allowed over some period to settle down effectively.

ii) The rest of the slip was poured off

iii) The Plaster of Paris (POP) absorbs the water and a solid layer was formed in the mould.

iv) The ware was left in the mould until it could be removed.

v) Care was taken during dismantling of the moulds and removal of the ware since any distortion would affect the final product.

vi) After the removal, wares were left to dry under normal atmospheric temperature until leather-hard.

vii) Polishing was then effected, by means of removing with a knife and foam.

- **Turning/Polishing**

The Saltpond Ceramics Limited applied an exclusive method in the fabrication of hollow shapes such as tea cups, bowls and plates. The method applied was the jiggering and jollying operations using roller machines. Jiggering was used to form the outside of plates whilst Jollying was used in forming the inside. The study found out that this method was most suitable at the time because it was semi -automatic and thus reduced the use of many factory hands. The essential work was done by the

heated die, unskilled or semi-skilled labour. Jiggering and Jollying also allowed stiffer clays (one with lower moisture contents) to be used which reduced the risk of distortion and sped up the operation considerably. The Factory relied on the jiggering and jollying machine below to suit its purposes.

Fig 21: The Jiggering and Jollying machine found in the factory

4.2.6 The Jiggering Procedure at the factory was as follows:

During the jigger operation, the pug pieces obtained from the raw material preparation was divided into equal parts by means of a pug outer. The pug pieces were sub divided and then put on plaster moulds shaped like the type of ware to be manufactured. The roller head was then heated to provide lubrication. When the operation starts, the roller head shaped the outside of the ware and the plaster moulds the inside. The excess obtained after turning was trimmed by means of a cutting knife.

As a quality control measure the differential speed of the roller head and the spindle was checked and this had effect on the quality if wrongly set. Additionally, the thickness of the ware was checked to make sure production was in its specification. After turning, the wares were placed in a dryer which dried them slowly until leather-hard. The dried pieces were then discharged and edges trimmed and fettled with foam.

4.2.7 The Jollying Procedure

In the case of jollying, roller head shapes the inside of the ware and the plaster moulds the outside. The Ceramic wares which had other parts like the handles, were joined to the main ware by means of a flocculated slip. The flocculated slip was manufactured from casting slip and some addition of hydrochloric acid. After polishing and the handles were stuck to the ware, they were given equal treatment until leather hard state.

4.3 Saltpond Ceramics Glaze Preparation and Application

The Saltpond Ceramics usually applied porcelain glazes to their wares for the purpose of its high maturing temperature (1200^{O} C). Also Porcelain glazes were simple to mix, hard, durable and non-poisonous. It was revealed that, the factory could develop their own glazes from locally obtained raw materials such as feldspar, silica and kaolin. Their glazes were mainly composed from the following glaze materials. Agbozume sand moree, Feldspar, Dolomite, Kaolin (wet), Kaolin (calcined), Barium carbonate, Zirconim Silicate and Zinc oxide.

The Steps Involved in Glaze Preparation

i) The glaze materials obtained locally were first of all weighed-out with a scale to ensure uniform consistency and after dried.

ii) The dried content was after put in the ball mill containing either flint or porcelain, pebbles and then ground by electrical means.

iii) The particle size was however controlled since if ground fine it would give rise to excessive shrinkage which in turn brings about cracks.

iv) After the grinding operation, a sample was sent to the laboratory to determine the residue on a finer mesh. If the laboratory result showed that the glaze is coarse, extra grinding was effected but when it was up to the specification, a sample was taken out and applied to a biscuit ware.

v) The ware was then fired and sent back to the laboratory for crazing test. This was done by heating the ware in the laboratory kiln at different temperature and quenched in water to see whether same fine cracks will develop.

vi) If the laboratory test indicated that the glaze was in the industry's specification it was then discharged by means of compressed air through a constructed pipeline to the glazing section for use.

4.3.1 Saltpond Ceramics Glaze Application

The wares to be glazed were thoroughly checked to avoid any defaults. Some of the things to be checked were the porosity level of the ware and then making sure there was no dirt on the wares. This was done by cleaning the wares with a damp sponge and in the case where the wares were too dirty, they were completely merged in water to wash them thoroughly. These things if not checked properly would result to certain Glaze defects known as crawling, pin-holing, crazing and shivering.

The glaze mixture was applied to the Ceramic wares in two ways:

i) **Spraying** which was a process used in sanitary production and this, the glaze was applied by means of a spraying gun with pressure.

ii) **Dipping** was a method usually applied to small items such as crockery wares and low tension insulators.

The ware was dipped in the glaze and its porous nature prompts it to absorb the water in the glaze. A glaze layer was formed on the ware depending on the thickness required which was usually governed by the length of period the ware stays in the glaze.

The glaze thickness on the ware was then checked since excessive thickness could rise to glazing faults. The part of the ware that will be in contact with the kiln car furniture was then cleaned before placing the ware for glost firing. Glaze preparation and application are carefully employed to ensure glazes are free of defects the factory sometimes encounters. These are crawling which occurred when the glaze parts from ware exposing certain tiny spots on the ceramic wares. Others are pinhole, crazing and shivering.

4.3.2 The Kiln Operation

Saltpond Ceramics had a large number of Kilns varying in sizes because of the large scale production there were into. The Kiln was a furnace made from refractory materials which facilitated the firing of the Ceramic wares to make them permanent hard. The factory operated both a number of periodic kilns and a large continuous kiln fitted with a pyrometer and a large monitor that indicates firing schedule. It was revealed that this kiln was over a fifty meter long and was mainly used for firing sanitary wares.

Figure 22 below is an indication of the long tunnel kiln which the factory was using.

Fig 22: Tunnel Kiln used in the factory

There were separate kilns for electrical insulators, crockery and wall tiles. Wares were carefully packed or loaded in required kilns below for bisque and glost firings.

Fig 23: An image of a test kiln which was used in the industry

The articles in the kiln underwent a series of chemical and physical changes from dry or semi-dry states when placed or set to fired condition. Below are the heat conditions which occurred inside the kiln during firing.

i) The Pre-heating stage

This is the very first stage of firing where the physically held water were removed at about one hundred and fifty degrees Celsius (150^0C). It was believed that, this stage paved way for the minute water particles in the clay object to be completely dried. Again wares were subjected to the (150^0C) heat temperature initially before adjusting them to higher heat temperatures. This prevented the clay objects inside the kiln from cracking.

ii) **After the pre-heating stage**

The Kiln right after the pre-heating stage was re-adjusted to a higher heat temperature to extract the chemically combined water in the clay articles. This was more or less classified as the actual firing.

iii) **Glost firing**

Glost firing paves way for the melted glaze to be in compression with the clay article whilst the body is in tension. This brings about matching of body and glaze. There cannot be a definite explanation on what actually happened during glost firing, but this was affected by the glaze type, body type and firing schedule. In glost firing, the feldspar melts first and dissolves the other refractory materials to bring about non-porous wares. The refractory materials like the silica and alumina (SiO_2 and Al_2O_3) are left dissolved in the glassy phase of the glaze lower than the thermal expansion of the glaze and increase the craze resistance.

iv) Cooling off

The gas burners sprayed the fuel directly to where the firing was taking place. The smoke from the gas kilns exited via the chimneys. After the required temperature was attained, the kiln was subjected to cooling until the wares were cooled enough before the cars were removed and packed aside whilst another car packed with wares, fused into the kiln for another firing cycle. Temperature control of the kiln was done by fixing thermocouples which registered the temperature on the kiln minus the resistance of the connecting wires on the panel. The hot fumes from the industry exited through the chimney into the atmosphere. Figure 24 shows the chimney projecting through the factory's roofing.

Fig 24: An image of the chimney outlet of smoke from the kiln

After the wares had been fired, they were sent to the next processing centre that was the Sorting section where air cracks, sand stains, deformed wares etcetera were taken

out and the best grade. Additionally the cups and other hollow items were fired with one rim to the other. This was to prevent differential thermal expansion during firing.

- **Decoration**

The Saltpond Ceramics Limited involved many types of decorations but the most striking one was achieved by colouring. Both bodies and glazes could be coloured. Colour was used in the form of decorative patterns. These were applied either on the biscuit (under glaze) or the glost fired pieces (on glaze)

Majority of the wares were decorated by means of transfer papers that is the colours were already printed on a sheet and transferred onto the wares. These decorative patterns or images were mainly European very colourful and bright. At this stage the Ceramic colours were obtained in certain metallic oxides. The metallic oxides were seldom used alone but are usually mixed with either a filler if used at a high temperature or a flux if used at low temperatures. Fillers such as alumina, quartz, feldspar, china clay and this stretches the colour and at the same time makes the metal oxide more refractory.

The colours were mainly used in the form of powdered stains or in solutions and before applying a colour to the ware, a colour tone which was usually influenced by the under mentioned factors was ascertained. The factors were:-

a) The temperature of firing.

b) The atmosphere of firing

c) Calcination temperature and fineness of the colour

d) The type of filler or flux used

e) The compound used for introducing the metal oxide concerned.

f) The type of application for example whether used to stain or glaze

The main coloured glazes used in Saltpond Ceramics were;

1. White with Zirconia as a coloring agent.
2. Yellow with colouring oxide (tin oxide plus vanadium compound)
3. Brown with colouring agent manganese compounds and iron

Coloured glazes used in Saltpond Ceramics were high temperature fired. The glazes were thus rich in alkaline. Most colouring agents and stains acted as fluxes in the glaze causing it to soften and this softening helped to bring about additional artistic effective. Where the glaze layer was thin for example at the edges, the colour was much lighter.

On the ware, the coloured glaze had a tendency to run off the sharp edges and raise portions of relief and be collected in thick pools in the depressions of the relief. Decoration of the wares took place in the decoration section. Two main methods employed at the factory were hand painting and lithographic.

- **Hand Painting**

Some of the white wares were decorated by means of hand painting and giving thin bands with colours. In this regard colours making up the design or pattern are applied by brush. For the bands and lines, the piece was centred on horizontal wheel when the decorator slowly rotates with his left hand while the brush was in his right hand touches the rotating plate, his right being kept still on a hand rest.

- **Lithographic**

The Saltpond Ceramics Limited engaged in this lithographic form of decoration in unglazed wares. Large sheets with multi coloured patterns were pressed on the wares and after painted over. The backing paper was then sponged off as in printing.

Some were also made in the form of transferred papers which the patterns is printed by the silkscreen method on a special paper issued for lithography and covered with a plastic medium. The decorator soaks this transfer in water, slice the pattern off the paper and applied it on the ware by sponging and squeezing. The plastic medium burns away during the decorative firing. This method apparently was better than the conventional lithographic method as it was quicker and required effective skills.

4.4 Finding of Research Question 3: Effects of the Saltpond Ceramics Limited on the people of Saltpond and Ghana in general

Based on the data collected from the field, there was a high level of positive impact of the factory on the people of Saltpond and Ghana at large. These impacts could be grouped into cultural, economical, educational and social.

Cultural: Culturally, the factory served as tourist site where people who traveled to Saltpond could visit and see what was been done at the place. Again, some Ghanaian symbols such as Adinkra symbols were incorporated into the designs of products. This did not only add to the aesthetics of the products, they preserved the traditional symbols. Similarly, some of the traditional pottery features were incorporated into the ceramic designs. To this end, the factory became a resort by which the indigenous Ghanaian pottery knowledge could be preserved and harnessed into more quality ceramics for both local and international markets. These results agree with contemporary evidence such as Rodica-Mariana et al. (2016), who opined that artefacts belonging to the ceramic heritage are mostly based on all clay types used by humans over the ages, because the sources of clays were easily available and people were interested to produce ceramics and pottery to preserve their cultural heritages (p.159). This is the reason why the conservation of cultural heritage is of great

concern (Ion et al., 2007). Ceramics, until the twentieth century, was essentially used for utilitarian cultural purposes for ritual acts (Maniatis & Tite, 1981, Asihene, 1978). This implies that no society, community or institution can exist without a culture (Hofstede, 1991). The truth of this assertion lies in the fact that, culture deals with the life style of a people and every group of people live in a particular way. Therefore, it is just natural that every society should have its own culture. Any society without culture means it has no way of life and therefore is dead or is non-existent.

Economic: The study revealed that there was a very positive economic impact of the Saltpond on the lives of the people of Saltpond. Although at a point the townspeople felt that they had been denied of the opportunities promised them from prior to the establishment of the factory. It was however revealed that about 35% of the staff of the factory was reserved for the indigenes of Saltpond. This means that the establishment of the factory provided the people of Saltpond with employment opportunities within their locality. The factory employed about five hundred personnel who catered for the production maintenance of machinery and administration of the factory. This evidence corroborates with Ghana News Agency (2013), that revealed that ceramic business in Ghana is organized and creates an avenue of employment as well as gives income to people involved in the business as it is made evident by the several thousands of informal ceramic making, dealers and recyclers operating in Ghana. Another supporting evidence provided by Amoyaw-Osei et al (2010) on the assessment of the socioeconomic data in their study revealed that a potter earns on an average between GHS 600 to GHS 2,000 per month, depending on the total number of products made. This income actually reflects the profit margin generated by a potter at the end of the month.

In the case of marketing ceramic products, the study suggested that the average income or rather profit of a recycler lies between GHS 250 to 400 per month. The income is calculated by deducting the amount of money paid to potters for bringing in the products from the sites. Most industries and ceramic making yards located in the major ceramic making clusters are subject to various types of taxes to be paid to the local government and to Ghana government Kwame-Adu (2010).

In the brighter sense most of the indigene of Saltpond who had the opportunity to work in the Factory were able to acquire some level of properties same way they were able to put their wards on a higher academic ladder and could also extend some amount of aid to others.

Most of the people worked as miners of the clay while others were involved in the production. The factory was producing a medicine by name mix kaolin and also white wash for painting. The factory was undergoing a 5 hour shift in a maximum hour of 8 per shift. Workers undergone overtime for more money. Coupons for collection of food from the canteen at a rate of 5 pesewas were given to the workers. For example, CM opined that in him time, he was receiving 30 cedis now 3 cedis. He further stated that there were buses which were moving in sub towns to convey workers to and fro the factory. The factory even had a football team which played in the 2nd division league also a clinic was situated in the factory.

Similarly, Ghana benefited from the sales of the products in and outside the country. By employing a number of Ghanaians in the factory, the factory reduced the level of unemployment in the country and by that heightened the standard of living of some Ghanaian who benefited directory or in-directory.

Educational: One major positive impact that the Saltpond Ceramics Limited brought to the people of Saltpond and Ghanaian in general is education. During the flourishing days of the factory, the factory offered scholarships to the desirable employees to undertake courses that pertained to improvement of production and maintenance of machinery. Again, occasionally, students of Visual Arts in various second cycle and tertiary institutions were taken on field trips to the factory where they learnt about industrial ceramic processing. They also learnt about the production of ceramics and the ceramics industry in general to augment their theoretical knowledge. It was also revealed that Scholarships were offered to brilliant but needy students in Saltpond. This helped such students to access education despite of their family's inadequacies to support them with their educational needs. This brought some amount of equity to the people in the community.

Socially: The presence of Saltpond Ceramics Limited helped the Saltpond township attain some level of civilization. Civilization in the sense that; the indigenes socialized with the foreigners both local and international. In executing its corporate social responsibility in the society, the factory provided various donations to the Saltpond General Hospital. The factory's infrastructures including their bungalows helped beautify the Saltpond vicinity and of course the edifice of the factory lying just along the Saltpond-Mankessim highway was very enticing.

These findings on the impact of the Saltpond Ceramic Limited on the townspeople fits within sustainability proposition. This is because it provides the basis for analyzing the reasons why the Saltpond Ceramics Limited could not survive despites the enormous effort put in by the government of Ghana and other stakeholders. It also provides the lens for analysing the cultural, economic, ecological, and political

backgrounds or factors that led to the demise of the factory despite the plausible opportunities that the operations of Saltpond Ceramic Limited offered to the inhabitants of Saltpond.

4.5 Finding of Research Question 4: The causes of the collapse of the Saltpond Ceramics Limited

The study revealed the following as factors responsible for the halt of the Saltpond Ceramic Limited; rivalry between the expatriates and the indigenes, poor administrative and industrial management, fall in demand of its product and high cost of production.

4.5.1 Misunderstanding/Friction between the German Expatriates and the Indigenous workers of the industry

One major challenge that endangered the Saltpond Ceramics Limited was disputes between German workers and the Saltpond indigenous workers in the industry. 8 of the sample, representing 61.5% revealed that before the birth of the industry, there was an agreement which was to employ a higher percentage of workers from Ghana, thus 70% out of which 35% should be from Saltpond. As part of the working policy, some Ghanaian workers in the industry were sent for training in Germany.

Years after their return, the indigenes felt cheated or being denied of certain promises and opportunities and thereby became discontent with the management which was predominantly German. There is an affirmation from the stated percentage of the sample that at this point, the Ghanaian workers were convinced that the German trained Ghanaians as well as the other Ghanaian workers in the management were fit to steer the affairs of the industry. Some of the charges that were leveled against the Germans were that the Germans were enjoying more than enough from the Industry's

revenue. The Germans occupied better bungalows and had access to pretty benefits which they did not. This dispute created an unhealthy working atmosphere for the workers of both origins. The discontentment among the Ghanaian workers continued until the Germans finally left the factory. This according to the 61.5% of the sample is the major cause for the collapse of the industry. For instance, one of the respondents coded PA intimated:

> *There was no doubt that the standard of living for the German workers was exceedingly great as compared to that of the Ghanaian workers, especially the field workers. But I think we did ourselves a great disservice for believing that the Ghanaians were capable of handling the affairs of the industry and that it was time for the Germans to go.*

4.5.2 Failure in administrative and industrial management (manpower equipment, apathy)

Another issue that caused the collapse of the Saltpond Ceramics Limited was the failure in administrative and industrial management. 10 respondents, representing 76.9 of the sample revealed that there was a serious administrative failure after the departure of the Germans. Unlike the Germans, the Ghanaians who took over lacked the expertise in human resource management. Again, they lacked the technical knowhow that was required for the job. Also, the management begun to amass wealth for themselves.

This respondent felt if the industry was to be established on an Ashanti Land, it would not have collapsed. The Factory to him should not have collapsed because people were moving from all tribes in Ghana and even Africa as a whole to purchase Ceramics items which had an inscription ‘SALCERAM’ as the brand right from the industry.

Furthermore, there was lack of equipment for production since some of the ones the Germans left behind got broken down. There were no machines for the extraction of clay from the earth mainly man power means were used. Moreover, supply of spare parts needed to fix some of the machines were lacked. One of the sample, coded SP revealed:

> *We had high hopes that things were going to be fine after the departure of the Germans. But it was a dream. Things went very bad with successive managements and their administrations. That was it. Undoubtedly, the Germans were efficient in handling issues. They were firm in their decisions and I think that was good for the existence of the industry that fed all of us. We who had raised our voices against the Germans not long after their departure came to the recognition that we did a great mistake, but it was too late. There was apathy towards work. The discipline level fell. There was pilfering, products sold outside were not brought back. The seniors were squandering the earnings from products sold and the junior staff were also stealing some products and tools home. Machines broke down and they were not repaired, I mean, there was a lot of failures in administration. And besides what had been the major issues for which voices were raised against the Germans saw no serious changes. Those who filled the positions of the Whites lived no different from that of the whites. However, their expertise was below that of the whites. You know, whites are whites.*

Also another respondent revealed:

> *There was no need for people to work hard if their hard work worth nothing to the people in leadership. Can you imagine they felt that those who had not got their level of education were not fit to be adequately rewarded with benefits that they deserved? Look, the most basic raw material for our production was clay, but a point in time, clay became a scarce commodity while it is believed that there is an excessively huge quality ceramic raw-material deposits in and around Saltpond. At least that was what we were made to believe. But because they were not paying the man power clay miners well, they refused to mine clay for the production. That was one of the most serious causes of the collapse.*

4.5.2.1 High cost of production

The above mentioned causes in the collapse of the industry had a rippling effect on the cost of production. When some of the management were busily embezzling funds

of the industry, things began to fall apart with the level of income generation to the industry. Seven (7) of the respondent representing 53.8% of the sample revealed that; Automatically, the revenue involved to acquire certain raw materials had fallen short. The negative practices in the industry had caused so. Income was diminishing gradually whereas taxes were shooting up. The industry had gotten to the middle of the road whether to fold up or be at a standstill. Another pressing issue was the cost of fuel to run some machines in the industry and especially the fueling of Generator in times of energy crises. Respondent PA declared that;

> *Most of the machineries were running full time from day and night as such needed more fuel. Since the industry could no longer supply adequate fuel to the machineries, some of the workload had to be halted. The machineries which could not be fueled were left idle to wear and tear not minding the cost involved in the acquisition of Machines and other Heavy Duty Equipment*

4.5.2.2 Fall in demand for its product

What at all could cause a very vibrant industry like Saltpond Ceramics to have a low demand in goods all of a sudden? There was a very high competition in this era between locally manufactured ceramic products and imported ceramic products. The imported ones were very much interesting in terms of designs as compared to Saltpond Ceramic products. Respondent PM revealed that;

> *There was a fall in demand, people did not patronize in our products as it used to be. Well some said the products were not as it used to be and of course they were then comparing our products with the imported ones. But I hope you would agree with me that; Ghanaians have great taste for foreign products? This did not mean that ours was inferior, no! We were doing pretty great products but the bottom line was the demand was very low and it could not support the growth of the business any longer. But I still blame this on poor administration, if we had people in the realms of affairs really thinking, conducting serious researches and coming out with proactive measures to surmount the challenges that arose we would still be working in our beautiful factory. But now all is lost, they started laying most of us off because the income generated after sales of products could*

> *not cater for the number of workers in the industry. However, even the laying off of workers could not survive the industry. The harm had long been caused and the effects stared right in our faces.*

In an interview with a past worker in the production unit (PU 1), it was stated that, the senior staff members were squandering the earnings from products sold and the junior staffs were also stealing some products and tools home. He also indicated that the machines and equipment were not upgraded to suit the current trend at the time. For example, the factory only had machines for producing 6"x6" tiles while they could equally have been producing larger tiles. Also, there were no machines for the extraction of clay from the earth, only man power means were used he added. According to him reminiscing these issues made him sad and attributed it to bad administrative and industrial management. The researcher can thus say that, it was for this reason that there was a fall in demand for its products because they kept producing items of the same style and size. Subsequently, the factory was sold to the Chinese; things changed to worse. The Chinese began work at the industry in 2003. Workers were employed on a casual basis for a maximum of 3 months and later laid off. Some workers did not receive their compensation fees as a starter for any business which they so desire after been laid off.

From the study, it was revealed that there was mismanagement of the staff welfare as well as theft and this he believes was generic in all industries. The factory may have invested so much funds in purchasing the raw materials, and not due to the fact most of the raw materials used in the industry were obtained locally. In that sense the industry should not have collapsed. The factory should not have collapsed because people were moving from all part of Ghana and even Africa as a whole to purchase

Ceramics items which had an inscription 'SALCERAM' as the brand right from the factory.

In an interview with the then account supervisor (AS), it was indicated that the then German head (Kingsley Bullinger) was making the factory pay for so much of his expenses in terms of his upkeep, residence etc. He was then overthrown for a local head by name Mr. D.K Menya and this Ghanaian head who was expected to lift the factory higher rather was making the factory run at a loss. After the entire collapse of the factory, the Chinese who bought the factory had access even to the factory's bungalow allocated to the management team which should not have been so. Through inquiry, we also noted that there was power shortage during firing which was rendering the factory at an extra cost. Another factor too was theft cases among the workers. Further, he stated that, He believes both the Management team and staff led to the collapse of the factory. He said raw materials was not a problem at all to the factory because most of the materials were obtained locally at about 95% which seem very encouraging to the future of the factory. The running of the canteen was also at a loss, from the kitchen staff looting the food stuffs for cooking and also little money taken as charges for food. Lack of discipline was also a factor especially under the heading of Mr. D.K Menya.

Apathy towards work and properties are a major cause of the decline of many industries of which the ceramics industry is not an exception (Appiah, 2005). About 50% of the respondents interviewed indicated that the workers used the properties of the saltpond ceramic limited carelessly. Machines, equipment and tools were poorly maintained due to poor supervision which eventually boils down to poor administrative and industrial management. If this occurs, employees may become

emotionally distant and have no interest in the success of the factory, hence the display of apathy towards work and properties. Apathy at the work place results in decrease in productivity, which can cause major setbacks in a business' bottom line (Mikson, 2016)

Based on the data collected from the samples, disputes between the German Expatriates and the Indigenous workers of the industry, failure in administrative and industrial management (manpower equipment, apathy), high cost of production, fall in demand for its product were identified as the contributory factors to the collapse of the Saltpond Ceramics Limited. Moreover, the findings is consistent with the sustainability theory which formed the basis for this study highlighting on three main dimensions of sustainability namely; environmental protection, economic development, and social equity that are critical to survival of firms (Lackmann, Ernstberger, & Stich, 2012). This theory prioritizes and integrates social responses to environmental and cultural problems. Thus, to say that to sustain the Saltpond Ceramics Limited, attention should have been given to the cultural and financial capital, biological and ecological integrity, human dignity and motivational resources for cultural change (Jenkins, 2008).

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

This chapter deals with the summary, conclusions, and recommendations made based on the findings from the study.

5.1 Summary of Findings

5.1.1 The diachronic and synchronic examination of Saltpond Ceramics Limited

The establishment of the Saltpond Ceramics Limited in 1973 was preceded by a long history of pottery production in the area. Based on the fact that, feasibility studies had proved; there was a great abundance of Clay deposits in the area of Saltpond that could support the sustainability of production and the proximity of Saltpond to the Takoradi Sea Port, the choosing of Saltpond over Kibi was not a hard decision to make.

Products such as plates, cups, sanitary wares, floor and wall tiles, porcelain insulators for electric power distribution were some of the items that were to be produced by the factory. However because of the change in Government, later the Czechoslovakia Factory was denied the partnership deal which was later granted to Agrob Alengebau GmbH in 1973. Production began with 200 workers out of which about 70% were Ghanaians and out of the 70%, 35% were indigenes of the Saltpond community. However top managerial positions were occupied by the Germans with few Ghanaian trained personnel. Products were to be sold in Ghana and neighboring countries.

This study was conducted on Saltpond Ceramic Industry otherwise known as Ghana Ceramic Industry Manufacturing Factory Limited. Specifically the study focused on

managerial and production phases of ceramic wares of the factory since 1973 as well as the challenges it has faced over the years. In all there were (13) respondents who were former of the industry. The main instrument used to gather data was a semi-structured interview which was organized on one on one basis. In addition, documents such as handouts from workshops, newsletters, internet information and any other information related to the topic from libraries were retrieved for analysis.

5.1.2 The operations of Saltpond Ceramics Limited

It was also discovered that; the Saltpond Ceramics Limited operated within four (4) mini factories for different products which were being made, however, the initial processes to be carried out before the products come into place were similar, except exceptional cases where customization was needed. The factory was set up to produce earthenware products such as plates, cups, sanitary ware, floor and wall tiles as well as porcelain insulators or electric poles. Due to high production cost, high taxation and a fall in demand for its products, authorities were forced to shut down most of the plants which resulted in low production in 2003.

As at the time of the research, the industry was non-operational and was to start the production of carton boxes in June after a just ended renovation under the name Saltpond Packaging Manufacturing Factory Limited.

5.1.3 The effects of the Saltpond Ceramics Limited on the lives of the people of Saltpond and Ghana in general:

Saltpond Ceramics Factory was of much merit to the indigenes of Saltpond and the nation as a whole. These merits were underlisted as economic, cultural, social and educational impacts. The nation was served with basic Ceramic needs from utilitarian purposes to building projects. The impact of the industry was not only realized in the

lives of the people of Saltpond only but in the lives of Ghanaians in totality for the promotion of Arts and Culture.

5.1.4 Factors which led to the halt in production of the Saltpond Ceramics Limited

The findings revealed the following as the factors responsible for the halt in production of the factory.

- Disputes between the German expatriates and the Indigenous workers of the industry
- Bad administrative and industrial management (apathy towards properties, theft cases, lack of spare parts for the machineries, dependency on Man-power clay extraction)
- High cost of production
- Fall in demand for its product

5.2 Conclusions

It could be argued that the inception of the German Factory to partner with Ghana for the production of Ceramics in Saltpond was a right decision because the factory's expertise and its closeness to major raw materials could not be underestimated.

This beautiful history concerning the planning and establishment of the Saltpond Ceramics factory was dented with misunderstandings because the hopes of the townspeople were not met. This might have been as the result of exaggeration of the benefits and opportunities that the establishment of the factory would bring to the people in the attempt to soliciting the cooperation of the townspeople for the development and sustainability of the factory.

All these factors tell of the fact that, very good conditions were put in place for the establishment of Salptond Ceramics Limited which was commissioned by General Ignatius Kutu Acheampong on 23rd November 1973.

Again, the operation of the Saltpond Ceramics Limited relied mostly on the expertise of the expatriates because they had the technical know-how and were abreast with the phenomenal changes which might have occurred in the Ceramics field of production overtime.

The greater percentage of workers and prominent staff in the factory were indigenes from Saltpond who were taken abroad for some studies in Ceramics Technology. Despite these opportunities made available to these indigenes, they were still not satisfied with the opportunities given them. They rather rebelled to overthrow the Germans from the factory. This affected both the production and managerial phase of the factory due to the fact that indigenes were incompetent to handle the affairs of the organisation. Malpractices set in and the factory began treading on the way of bankruptcy.

Also the Saltpond Ceramics Limited was living the purpose with which it was established. Saltpond Ceramics Limited served the needs of the indigenes of Saltpond, Ghana and Internationally. Currently, some of the designs from the old Saltpond Ceramics Limited has influenced the International Ceramic designs which are precisely to be imported into Africa. Although the factory has collapsed, the impact of its exuberant days are still felt. Some workers of the factory who had the opportunity to acquire properties are till date a legacy for their families. Again those who could educate their wards during the flourishing days of the factory has gone a long way to put their children on a higher academic level enabling them to serve their family and

Ghana. Socially, Saltpond Ceramics Manufacturing factory elevated the name of Saltpond.

In conclusion, the study revealed that Saltpond Ceramics has been faced with lots of challenges which rendered the survival of the factory impossible. It was further established that most of these challenges occurred as a result of poor and ineffective management because nearly every respondent the researcher interviewed ended in one way or the other with poor management as a major reason and a careful examination of the challenges affirms that. Saltpond Ceramics was a huge factory and if it had been well managed, it would have and still would be bringing huge income to the government as well as serving as a major source of employment for the indigenes of Saltpond and Ghana as a whole.

5.3 Recommendations

Basing on the findings of this study, it becomes pertinent to recommend to governments and potential investors that, in the bid to establishing companies in Ghana, very critical considerations should be made before finally settling on the decision. For instance, the government of Ghana in the quest to alleviate poverty through One District One Factory Policy Initiative (1D1F), due, deep and reflective feasibility studies regarding the intended location, availability of raw materials, labour force, prerequisite training and expertise, closeness to market and road means of transportation, should be considered.

The need to properly document any decision taken by the stakeholders must be encouraged before establishing any business set up. This must be done through proper documentation so that people cannot just raise issues without basis in the future as things go on. These will grant a perfect level ground and atmosphere for the

sustainable development of that factory in the locality. If possible the 'Paperless system' of documentations should be reinforced to have a longer lasting effect on record keeping.

It is expedient to also note that, further studies and seminars must be organized for workers in a particular field. We live in a technological world where things keep advancing from time to time. Consequently, there is the need to channel all production and managerial phase to suit the demands of the local and international market at large. Research works should be encouraged even in the case of a failure or loss. A perfect example is this research work which seeks to bring to light the flaws of Saltpond Ceramics Limited for any future readjustment.

Importantly, the community in which the establishment is being made should be made to fully understand what is in it for them in terms of opportunities and benefits as well as hazards that they stand to share in.

On the other hand, failing to make the community understand their opportunities and dangers, neglecting them or denying them of their part in the establishment can have very perilous consequences on the sustainability of productivity which could have very damning impacts on the life of the establishment.

The researcher recommends that, various industries should be encouraged to positively impact the communities within which they find themselves. By so doing the Government would be relieved from excessive budget allocations to improve their lives. This should be seen in areas such as the cultural, social, economic and educational support.

Stringent law enforcement must be encouraged in any case of business establishment. Stakeholders should be properly enlightened on the parameters which they all can go, so as not to have one encroaching on the jurisdiction of the other.

Managements should always seek to find new and innovative ways to cut down production cost in Ceramic factories. Responsible work attitudes must be encouraged in any business set-up to ensure the workers putting up a good attitude in the workplace. In the case of a good output by a worker, motivations could be meted out to serve as inspiration to others.

The Ghana Standard Board (GSB) should organize workshops to educate new Ceramic Industries in the system on modern techniques of production as well as new trends that emerge in the market so as to produce their artifacts to meet these standards.

The Trade and Industries sector has a great mandate in the sustainability of many business set up in the nation. Certain taxes could be exempted in the case of a fresh business set-up and can go the extra mile to review policies on importation to favour industries so as to make it easier to import both spare parts and some raw materials which is out of reach in the nation.

Students offering Ceramics in the various school cycles should be encouraged more on the need to become a Ceramics entrepreneur after studies. Many at times, students graduate from schools and all they care about is white-collar jobs which sometimes are not easy to come about. Enterprising Ceramics can serve the nation's Ceramic needs rather than purchasing those imported ceramic goods which do not have a longer lasting effect.

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APPENDIX A

SEMI-STRUCTURED INTERVIEW GUIDE

Introduction

This interview has the primary intent of investigating the collapse of the Saltpond Ceramics Limited.

Prompts

Help participants to be relaxed before the interview session.

1. How are you?
2. How long have you been living in this community?
3. How long have you worked in the Saltpond Ceramics Limited?
4. Please narrate your views on the growth of Saltpond Ceramics Limited.
5. Please mention some of the top managerial staff who worked in the industry
6. What forms of ceramic artifacts were made in the Industry?
7. Which benefits did Saltpond Ceramics Limited bring to the people in Saltpond and Ghana as a whole?
8. What do you think was the causative agents for the Collapse of the Industry?
9. What is the current state of the Saltpond Ceramics Limited?
10. Would you recommend Government to revive the Industry again?

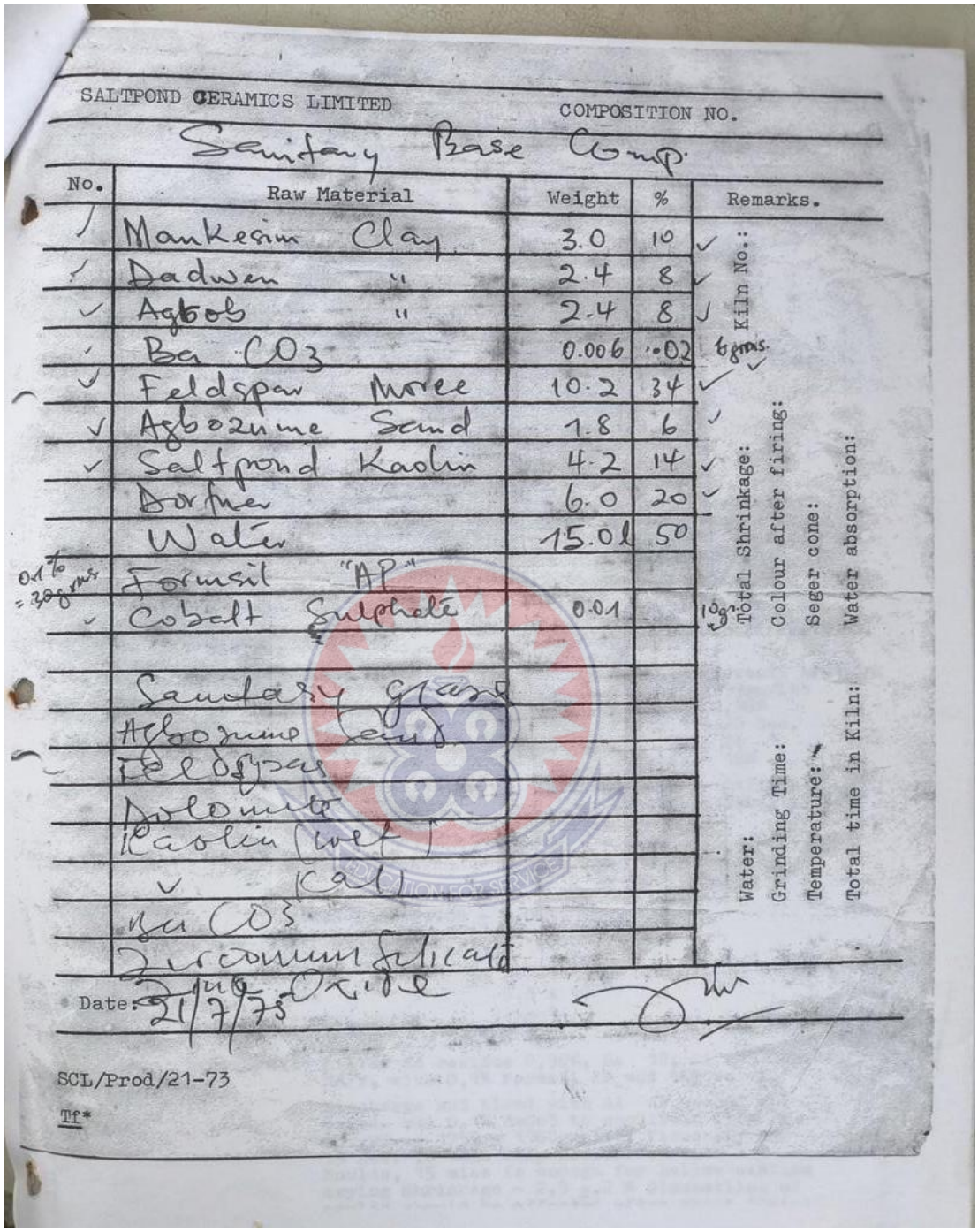
SEMI-STRUCTURED OBSERVATION CHECKLIST

This checklist has the primary intent of assisting the researcher to observe and review artefacts and machinery at the Saltpond Ceramics Limited.

Prompts

1. How does the researcher intend to get into the factory?
2. Does the factory have occupants?
3. Is the factory's ambience in good shape?
4. Are machinery which were used in the production process still in good shape?
5. Were there some products available in the factory?
6. Was there a machinery manual or production manual kept in the factory?
7. Did the factory have any safety exits which were clearly marked?
8. What has become of the factory's facilities?
9. How is the place maintained after its long break from work?
10. What is the total outlook of the factory?

APPENDIX B



SALTPOND CERAMICS LIMITED — COMPOSITION NO.

Sanitary Base Comp.

No.	Raw Material	Weight	%	Remarks.
✓	Mankesim Clay	3.0	10	✓
✓	Dadwen "	2.4	8	✓
✓	Agbob "	2.4	8	✓
✓	Ba CO_3	0.006	.02	6 gms.
✓	Feldspar Moree	10.2	34	✓
✓	Agbozume Sand	1.8	6	✓
✓	Saltpond Kaolin	4.2	14	✓
	Dorfner	6.0	20	✓
	Water	15.0 l	50	
0.1 to = 30 gms	Formsil "AP"			
✓	Cobalt Sulphate	0.01		10 gms
	Sanitary grade			
	Agbozume Sand			
	Feldspar			
	Dolomite			
	Kaolin (wet)			
	✓ Cal			
	Na CO_3			
	Zirconium Silicate			
	Oxide			

Kiln No.:
Total Shrinkage:
Colour after firing:
Seger cone:
Water absorption:
Water:
Grinding Time:
Temperature:
Total time in Kiln:

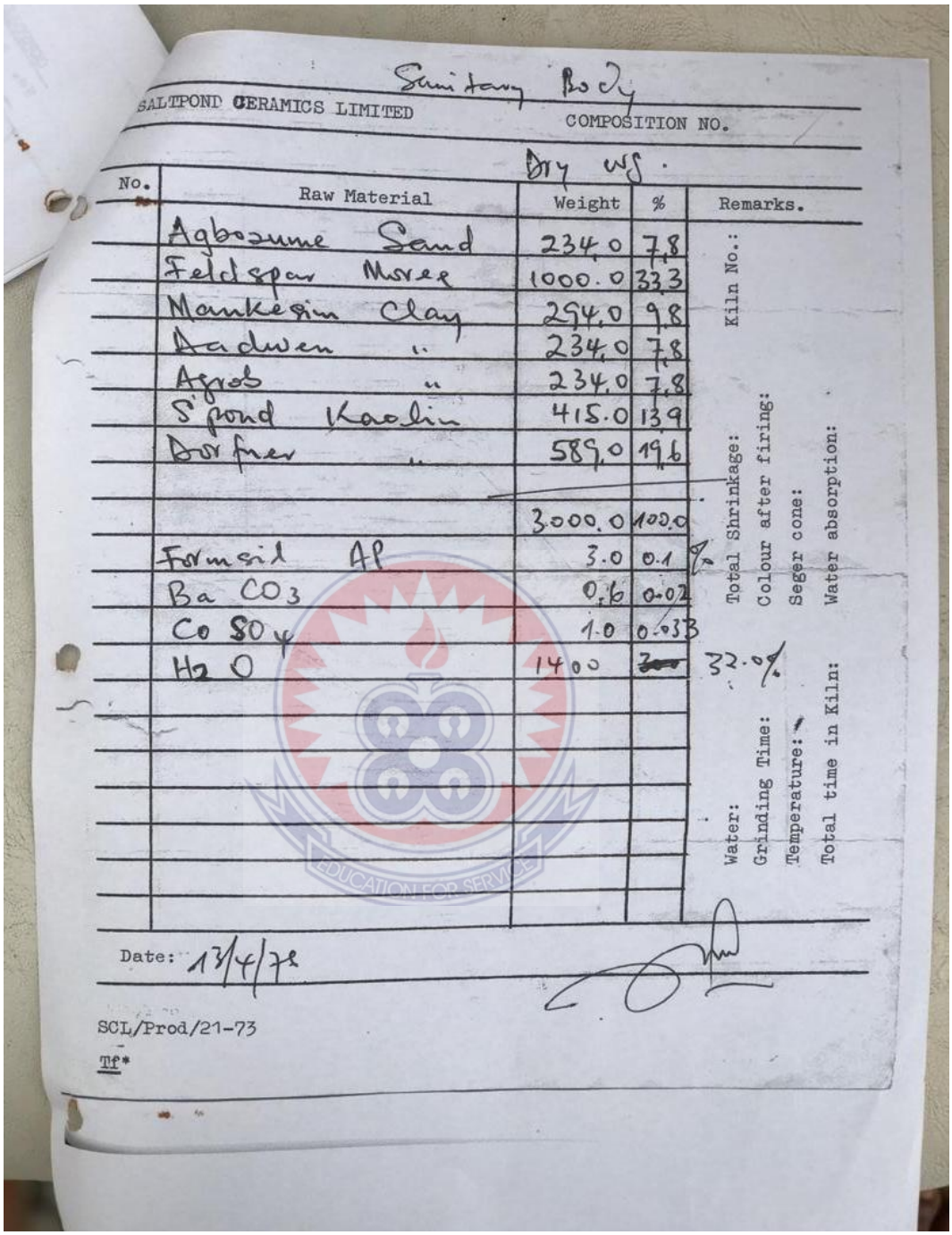
Date: 21/7/75

SCL/Prod/21-73

Tf*

Fig 25: A sanitary base composition of the factory

APPENDIX C



Sanitary Body

SALTPOND CERAMICS LIMITED — COMPOSITION NO.

Dry wgs.

No.	Raw Material	Weight	%	Remarks.
	Agbozume Sand	234.0	7.8	
	Feldspar Moree	1000.0	33.3	
	Mankessim Clay	294.0	9.8	
	Aadwen "	234.0	7.8	
	Agbo "	234.0	7.8	
	S'pond Kaolin	415.0	13.9	
	Dorfner "	589.0	19.6	
		3000.0	100.0	
	Formsil AP	3.0	0.1	
	$Ba\ CO_3$	0.6	0.02	
	$Co\ SO_4$	1.0	0.033	
	H_2O	1400	~~300~~	32.0%

Kiln No.:
Total Shrinkage:
Colour after firing:
Seger cone:
Water absorption:
Water:
Grinding Time:
Temperature:
Total time in Kiln:

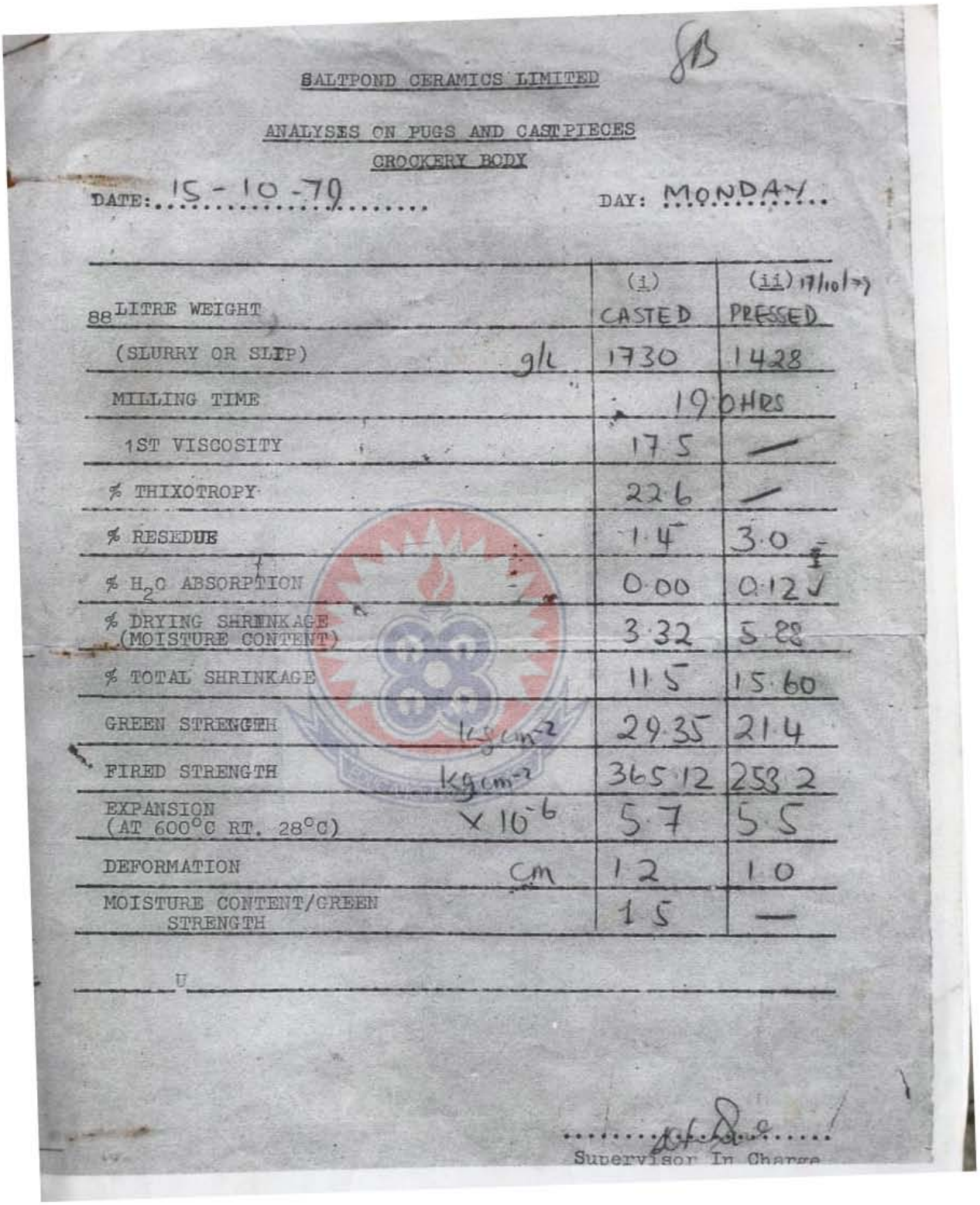
Date: 13/4/72

SCL/Prod/21-73

Tf*

Fig 26: A sanitary body composition of the factory

APPENDIX D



SALTPOND CERAMICS LIMITED

ANALYSES ON PUGS AND CASTPIECES

CROCKERY BODY

DATE: 15-10-79 DAY: MONDAY

88 LITRE WEIGHT (SLURRY OR SLIP)	g/l	(i) CASTED 1730	(ii) 17/10/79 PRESSED 1428
MILLING TIME		19 0HRS	
1ST VISCOSITY		17.5	—
% THIXOTROPY		22.6	—
% RESEDUE		1.4	3.0
% H_2O ABSORPTION		0.00	0.12
% DRYING SHRINKAGE (MOISTURE CONTENT)		3.32	5.88
% TOTAL SHRINKAGE		11.5	15.60
GREEN STRENGTH	$kg\,cm^{-2}$	29.35	21.4
FIRED STRENGTH	$kg\,cm^{-2}$	365.12	258.2
EXPANSION (AT 600°C RT. 28°C)	$\times 10^{-6}$	5.7	5.5
DEFORMATION	cm	12	10
MOISTURE CONTENT/GREEN STRENGTH		15	—

Supervisor In Charge

Fig 27: An analysis on the crockery body captured by the researcher