The Decline of Tie/Dye and Batik Centres in the Ho Municipality of Ghana

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Abstract: Batik and tie-dye are popular local Ghanaian fabrics. The fabrics are inexpensive and can be afforded by anybody. They are patronised by both the rich and the poor. The fabrics are characterized by beautiful and colourful designs ranging from planned to accidental designs. In the Ho Municipality of Ghana, the production of batik and tie-dye fabrics has started to take a nose dive. Most of the production centres in the Municipality have collapsed. Only few have survived. Even those which have survived dedicate most of their production hours to other income-generating activities such as screen printing and painting. This results in the production of small quantities of the fabric which cannot meet the high demand in the Municipality. Now the fabrics are brought from other parts of the country at high cost. The study is therefore aimed at investigating and unravelling the causes of the decline of batik and tie-dye centres in the Ho Municipality of Ghana. In the study, the qualitative research method was adopted and a sample population of two-hundred and fifty (250) respondents was selected for the study. Data was analysed using the Statistical Package for Social Sciences. A major finding of the study is that, lack of funds is the contributing factor to the decline of the batik and tie-dye centres in the Municipality. It is therefore recommended that government should support the centres financially by giving them soft loans.

Keywords: Batik, Tie-Dye, Municipality, Income-Generating Activities, Statistical Package for Social Sciences

1. Introduction

Tie-dyeing and batik production are resist methods of dyeing in which certain portions of a fabric are prevented from absorbing dye liquor through knotting, binding, folding or sewing and application of molten wax onto the fabric while the open areas of the fabric readily absorb dye. These crafts have been practised from very early times by people in many parts of the world. [1]

It is uncertain when and where it originated from or whether in the first place resist dyeing was discovered accidentally. The earliest records from India and Japan date back to the 6th and 7th centuries A. D. Fragments of tie-dye fabrics were found in the tombs of the ancient Incas of Peru. [2]

As far as batik is concerned, evidence of early examples of batik has been found in the Far East, Middle East, Central Asia and India from over 2000 years ago. It is conceivable that these areas developed independently, without the influence from trade or cultural exchanges. However, it is more likely that the craft spread from Asia to the islands of the Malay Archipelago and west to the Middle East through the caravan route. Batik was practised in China as early as the Sui Dynasty from 581-618 AD. [3]

Indonesia, most particularly the island of Java, is the area where batik has reached the greatest peak of accomplishment. The Dutch brought Indonesian craftsmen to teach the craft to Dutch warders in several factories in Holland from 1835. The Swiss produced imitation batik in the early 1940s. [4]

The origin of Batik lies in Indonesia and was first used in the 13th century. But also in Africa, especially in Ghana, Batik has a long history and was been passed on from generation to generation with every part of the country creating its own unique styles. Still today, the traditional technique is passed down from mother to daughter who earn
The production of tie-dye/batik fabrics has also found uses in areas outside of garment production such as interior decoration and in the making of fashion accessories such as footwear, bags, etc. It has also featured prominently in the production of souvenir for tourists. The techniques of tie-dye and batik seems to have originated in Asia and spread down to sub Indian continent to the Malayan archipelago and also across to Africa. Tie and dye technique was most developed in Indian sub continent, particularly in Republic of India. This method of decorating the fabric was very popular all over India, particularly in Rajasthan, Central India, Gujarat and Bombay district. An important centre was Sanganer, where the ties were not normally untied before selling, except in one corner to show the colours and patterns. This also helped prospective customers to distinguish between machine- printed imitations and genuine handmade fabrics”. [6]

In Africa, tie and dye reached from the French Sudan to the Cameroon, and Belgian Congo. The craft is still practised in Nigeria and Ghana where much greater accuracy of both tying and placing of the pattern is shown by Yoruba women of the West. Here, the process is known as adire (tie and dye) and produces magnificently patterned cotton cloths on an indigo-dyed ground, employing the pleating, rope tying, binding and as well as sewing in of seeds, small stones and beads. [7]

In Ghana, tie and dye/ batik production is not an indigenous fabric production method. It is believed to have been introduced into the country from Guinea, Sierra Leone and La Cote D’Ivore many years ago and later found its way into the educational system. Its introduction came along with materials and methods that are not necessarily Ghanaian. [8]

Although the technique is not indigenous, it has caught up easily with most Ghanaians as one of the easiest ways of starting a business. Most organizations – governmental and non-governmental – have trained and continue to train people of all age groups in the making of these fabrics in an attempt to create employment and alleviate poverty. Others have also acquired the technique at different levels of the educational ladder and they have also gone into business. [9]

Not only are batik and tie-dye fabrics inexpensive but they are very colourful and portray the vibrant nature of Ghanaians. They are worn by all class of people including MPs, Ministers of State and even the President of the country. The production of tie-dye/batik fabrics has also found uses in areas outside of garment production such as interior decoration and in the making of fashion accessories such as footwear, bags, etc. It has also featured prominently in the production of souvenir for tourists. But over the years, the patronage of these fabrics has started dwindling due to varied reasons. According to [10], batik and tie-dye fabrics which used to be the toast of many people now appear to have gone out of fashion, as the popularity of western clothes has grown over the years. Characterised by bright colours and unique patterns, these fabrics were most preferred for outfits from shirts for men to women’s floor length designs. Most traders who buy these fabrics in bulk and distribute to other buyers have complained about low patronage of the fabric in recent times.

In the Ho Municipality of Ghana, the Batik and Tie-dye industry is gradually grinding to a halt as both producers and buyers complain about low patronage of their products. A Modern Ghana. Com report in June 2018, states that Batik and Tie-Dye business hitherto, a thriving business in the Volta region, is dying slowly due to financial difficulties, the players in the sector have said. Most of the producers explained that both the Micro- finance and Small Loans Centre (MASLOC) and the National Board for Small Scale Industries (NBSSI) have not been able to help the Association. [11]

This study therefore seeks to investigate and identify the causes of the decline of the batik and tie-dye business in the Ho Municipality and to suggest possible solutions to the problem.

2. Methodology

2.1. Research Design

Qualitative research design was employed in this study to investigate and identify the causes of the decline of batik and tie-dye centres in the Ho Municipality of Ghana. Qualitative research is a field research in which the researcher makes an effort to study all elements in the setting in order to understand the reality of the situation. [12]. The researchers therefore adopted this research approach to understand and be informed about the extent to which the batik and tie-dye industries have declined. The descriptive method (based on qualitative research design) was employed to give account of the various stages of the research and to ascertain how the research questions can be addressed.

2.2. Population for the Study

A population is the group of people or objects of which the results of the study are intended to apply. [13] states that, given the constraints of limited research funds that almost all scientists live with, the next best strategy is to take a portion of a larger group of participants and do the research with that smaller group. In this context, the larger group is referred to as a population and the smaller group selected from a population is referred to as a sample.

The study area for this study covers batik and tie-dye centres in Ho and its environs but since the area is vast, the researchers decided to limit their research work to Ho in the Volta region of Ghana. The population is therefore made up of consumers of batik and tie-dye, buyers and sellers as well as producers in Ho. The estimated population for the study is 500.

Sampling

According to [14], a ‘sample’ in a research study refers to any group from which information is obtained. Giving the large population and scarce resources for the study, the
researchers thought it wise to employ the Stratified Random Sampling technique in which 3 strata were developed. Stratum 1 is made up of consumers of batik and tie-dye while stratum 2 encompasses buyers and traders of the batik and tie-dye fabric. Stratum 3 on the other hand is made up of producers of batik and tie-dye. Consequently, a sample size of 250 which represents 50% of the total population (500) was used for the study. The researchers consider this sample size to be convenient and manageable; giving the circumstances they find themselves in. Table 1 below shows a schematic overview of the Stratified Random Sampling method:

| Population level       | Stratum1-160Consumers of batik and tie-dye |
|------------------------|--------------------------------------------|
| Equalization level     | 160                                        |
| Randomization level (50%) | 80                                        |
| Sample Population      | 250                                        |

### Table 1. Schematic Overview of Stratified Random Sampling Method.

2.3. Data Collecting Instruments

The research instruments used for collecting data for the study include: interview guides and the survey approach (questionnaire).

Interview was basically used to solicit vital information on the decline of the batik and tie-dye centres in Ho Municipality. This instrument was administered to obtain information from 10% of the sample population who could neither read nor write. The research guide was interpreted in Ewe and administered to the respondents on one-on-one basis. With the adoption of this research instrument, the researchers were able to obtain hands-on and credible information from the field.

The questionnaire approach was employed to obtain relevant information from 225 respondents on the topic under discussion. The questions which were mostly open-ended focused on the demographical background of the respondents, their experience in dyeing, use of dyed fabrics, the number of batik and tie-dye centres which existed in the study area for the past 10 years and the number which exists now. Questions were also asked about the reasons why the batik and tie-dye centres were folding-up and the remedy thereof. This was done by administering a 3-page well structured questionnaire copies to 225 respondents (90% of sample population). The questionnaires were administered to the 3 strata which constitutes the sample population of the study. Table 2 below displays the number of questionnaire copies administered and returned per stratum.

| Respondents | Number of Questionnaires administered | Number of Questionnaires returned |
|-------------|--------------------------------------|----------------------------------|
| Stratum1    | 75                                   | 75                               |
| Stratum2    | 110                                  | 107                              |
| Stratum3    | 40                                    | 40                               |
| Total       | 225                                  | Total=225                        |

Field Data: January 2019.

3. Results and Discussions

Primary data obtained for the study were analyzed and presented using tables. The data collected were synthesized for any ambiguities that may exist, coded and analyzed using the Statistical Package for Social Science (SPSS).

### Table 3. Age Distribution.

| Frequency   | Percent | Valid | Percent |
|-------------|---------|-------|---------|
| 15-25       | 45      | 19.2  | 20.3    |
| 26-35       | 101     | 43.2  | 45.5    |
| 36-45       | 54      | 23.1  | 24.3    |
| 46 and above| 22      | 9.4   | 9.9     |
| Total       | 222     | 94.9  | 100.0   |

Field Data: January 2019.

Table 3 above presents the age distribution of respondents. It is clear 26 to 35. This is indicative of the fact that most of the people who learn the trade of batik and tie-dye production are very youthful. Additionally, 54 respondents (24.3%) belonged to 36-45 age range while 20.3% of the respondents belonged to the age range of 15-25. Meanwhile only 9.9% of the respondents who participated in the study fell within the age range of 46 and above.

### Table 4. Gender Distribution.

| Frequency | Percent | Valid | Percent |
|-----------|---------|-------|---------|
| Valid     | 84      | 35.9  | 37.8    |
| Female    | 138     | 59.0  | 62.2    |
| Total     | 222     | 94.9  | 100.0   |

Field Data: January 2019.

In table 4 above, the gender distribution of respondents is displayed. From the table, it can be seen that 62.2% of the respondents were female while 37.8% of the respondents were male. This shows female dominance in the trade of
batik and tie-dye in the Ho Municipality.

### Table 5. Status of respondents.

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| Consumer  | 75      | 32.1          |
| Trader/Marketer | 107   | 45.7          |
| Producer/Manufacturer | 40    | 17.1          |
| Total     | 222     | 94.9          |

Field Data: January 2019.

Table 5 located above defines the status of respondents of the study. It is evident from the table that 48.2% of respondents who participated in the study are traders of tie-dye and batik while consumers of the product constitute 33.8% of the respondents. Meanwhile the producers of the fabrics constitute only 18.0% of the respondents.

### Table 6. Educational Level.

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| JHS       | 93      | 39.7          |
| SHS       | 101     | 43.2          |
| Tertiary  | 28      | 12.0          |
| Total     | 222     | 94.9          |

Field Data: January 2019.

Table 6 above displays the Educational level of respondents. As much as 45.5% of the respondents were SHS leavers while 41.9% were JHS leavers. Additionally, 12.6% of the respondents had tertiary education. This shows that most of the people engaged in batik and tie-dye production are JHS and SHS drop-outs.

### Table 7. Residential Status.

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| Yes       | 222     | 94.9          |

Field Data: January 2019.

Table 7 above confirms the residential status of respondents who participated in the study. It is clear from the table that all respondents (100%) who participated in the study are residents in the Ho Municipality. This is an implication for credible and accurate information.

### Table 8. Residential Duration.

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| 1 year    | 9       | 3.8           |
| 2 years   | 17      | 7.3           |
| 3 years   | 14      | 6.0           |
| 4 years   | 23      | 9.8           |
| 5 years   | 56      | 23.9          |
| 5 years and above | 103 | 44.0 |
| Total     | 222     | 94.9          |

Field Data: January 2019.

In table 8 as located above, the residential duration of respondents in the Ho Municipality was measured. The results revealed that most (46.4%) of the respondents have lived in the Municipality for over 5 years. Only a handful (4.1%) of them has lived in the Municipality for 1 year. This implies that most of the respondents will give credible information as to whether the production of tie-dye and batik is declining in the Ho Municipality or not.

### Table 9. Responses to the question “have you used batik or tie-dye before?”

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| Yes       | 206     | 88.0          |
| No        | 16      | 6.8           |
| Total     | 222     | 94.9          |

Field Data: January 2019.

The table above displays results obtained after quizzing respondents about whether they have used batik or tie-dye before. The results are quite revealing. 92.8% of respondents gave an affirmative answer that they have used the above mentioned fabrics before while only 7.2% of the respondents gave a negative answer. This parameter was tested to consolidate the validity of responses obtained from the sample population.

### Table 10. Batik and tie-dye production is an attractive venture in the Ho Municipality.

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| Yes       | 47      | 20.1          |
| No        | 175     | 74.8          |
| Total     | 222     | 94.9          |

Field Data: January 2019.

Table 10 above presents the results obtained after questioning respondents on the assertion that batik and tie-dye production is an attractive venture for the youth in Ho. 78.8% of the respondents said “No” to the assertion while 21.2% of the respondents responded in the affirmative.

### Table 11. Responses to the assertion that there are numerous batik and tie-dye Centres in Ho.

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| Yes       | 75      | 32.1          |
| No        | 147     | 62.8          |
| Total     | 222     | 94.9          |

Field Data: January 2019.

In table 11 above, the view of respondents was sought on the assertion that there are numerous batik and tie-dye centres in Ho. The result as shown in the table above is that 66.2% of respondents said “No” to the assertion while 33.8% said “Yes” to the assertion. This result goes a long way to
strengthen the hypothesis of the study.

**Table 12. List of batik and tie-dye centres in Ho.**

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| Anointed Batik and tie-dye centre | 76 | 32.5 | 34.2 |
| Vegus Batik and tie-dye centre | 67 | 28.6 | 30.2 |
| Favour Batik centre | 32 | 13.7 | 14.4 |
| GRATIS Tie-dye and batik centre | 17 | 7.3 | 7.7 |
| Kenzie Place Batik | 15 | 6.4 | 6.8 |
| Centre for National Culture batik centre | 15 | 6.4 | 6.8 |
| Total | 222 | 94.9 | 100.0 |

Field Data: January 2019.

Table 12 above summarizes the results obtained after instructing respondents to list the batik and tie-dye centres which exist in the Ho Municipality. The responses were quite revealing. As much as 34.2% of the respondents’ listed Anointed batik and tie-dye centre while 30.2% of the respondents mentioned Vegus batik and tie-dye centre. The next centre is Favour Batik centre which was listed by 14.4% of the respondents. Meanwhile 7.7% of the respondents mentioned GRATIS Tie-dye and Batik centre. Finally, 6.8% of respondents mentioned Kenzie Place Batik and Centre for National Culture Batik centre as some of the centres found in the Ho Municipality. It is clear from the results that Anointed and Vegus are the most popular and well-organized centres in the Municipality.

**Table 13. Responses to the assertion that there were more centres in the past than these days.**

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| Yes | 188 | 80.3 | 84.7 |
| No | 34 | 14.5 | 15.3 |
| Total | 222 | 94.9 | 100.0 |

Field Data: January 2019.

Table 13 above presents the sampled views of respondents on the assertion that there were more centres in the past than present. After the sampling, it was observed that most of the respondents (84.7%) gave an affirmative answer to the assertion while 15.3% of them said “No” to the assertion. It can therefore be inferred from the results that there were more batik and tie-dye centres in the Ho Municipality in the past than these days.

**Table 14. Responses to the assertion that there are more centres these days than in the past.**

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| Valid Yes | 46 | 19.7 | 20.7 |
| No | 176 | 75.2 | 79.3 |
| Total | 222 | 94.9 | 100.0 |

Field Data: January 2019.

In table 14 above, the objective views of respondents were tested on the assertion that there are more centres these days than in the past. After testing the views of the respondents, it was revealed that majority of the respondents (79.3%) said “No” to the assertion while 20.7% responded in the affirmative. The result indicates that there are fewer batik and tie-dye centres in the Ho Municipality these days than in the past.

**Table 15. Has the number of centres decreased?**

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| Valid Yes | 187 | 79.9 | 84.2 |
| No | 35 | 15.0 | 15.8 |
| Total | 222 | 94.9 | 100.0 |

Field Data: January 2019.

In table 15 above, an attempt was made to test the hypothesis of the study and to strengthen the research questions. After the test, it was recorded that majority of the respondents (84.2%) gave an affirmative answer to confirm the hypothesis while 15.8% of the respondents answered “No”. The result is a clear indication that the hypothesis is positive.

**Table 16. If yes, what are some of the causes?**

| Frequency | Percent | Valid Percent |
|-----------|---------|---------------|
| Valid High cost of production | 47 | 20.1 | 21.2 |
| High cost of materials | 28 | 12.0 | 12.6 |
| Low patronage of batik and tie-dye fabrics | 28 | 12.0 | 12.6 |
| Piracy of designs by foreigners | 9 | 3.8 | 4.1 |
| The great taste of the youth for white colour jobs | 14 | 6.0 | 6.3 |
| Lack of funds for batik and tie-dye business | 96 | 41.0 | 43.2 |
| Total | 222 | 94.9 | 100.0 |

Field Data: January 2019.

Table 16 above presents the findings obtained after quizzing respondents on some of the causes of the decline of batik and tie-dye centres in the Ho Municipality of Ghana. The result reveals that 43.2% of the respondents were of the view that lack of funds for batik and tie-dye centres is the major cause. Additionally, 21.2% of the respondents are of
the view that high cost of production is one of the causes of the decline of the batik and tie-dye centres. While 12.6% of the respondents believe that high cost of materials as well as low patronage of batik and tie-dye fabrics are the major causes of the decline of batik and tie-dye fabrics. Meanwhile, 6.3% of the respondents link the decline to the great taste of the youth for white coloured jobs. Finally, 4.1% of the respondents stated that the piracy of designs by foreigners is a contributing factor responsible for the decline of the batik and tie-dye centres.

### Table 17. How can the decline of batik and tie-dye production be addressed?

| Recommendation                                                                 | Frequency | Percent | Valid Percent |
|---------------------------------------------------------------------------------|-----------|---------|---------------|
| The price of raw materials should be subsidized.                                | 29        | 12.4    | 13.1          |
| There must be a ban on the importation of pirated goods into the country        | 55        | 23.5    | 24.8          |
| Government must support the batik and tie-dye business by giving them soft loans.| 119       | 50.9    | 53.6          |
| The raw materials must be readily available.                                   | 19        | 8.1     | 8.6           |
| Total                                                                           | 222       | 94.9    | 100.0         |

Field Data: January 2019.

Table 17 above shows the results obtained from respondents on how the decline of batik and tie-dye production in the Ho Municipality can be addressed. The results show that majority of the respondents (53.6%) who participated in the study suggested that government must support the batik and tie-dye business by giving soft loans. Also, 24.8% of the respondents supported the ban on the importation of pirated goods into the country while 13.1% of the respondents strongly recommended that the price of raw materials for the production of batik and tie-dye in Ghana should be subsidized to keep the traders in business. Additionally, 8.6% of the respondents suggested that stakeholders in the dyeing industry including government must ensure that there is a constant supply of raw materials for the trade.

4. Conclusion

In this study, an attempt was made to investigate the causes of the decline of batik and tie-dye centres in the Ho Municipality of Ghana. Batik and tie-dye fabrics have fulfilled the local fabric needs of Ghana and neighbouring countries over the past 50 years. The production of tie-dye/batik fabrics, although not indigenous to Ghana has come to be accepted as a fabric production method with an identity that has largely been noted as African. Most visitors to Ghana acquire garments made from these fabrics in order to identify with the local culture and also to blend in and feel a part of the local fashion. Perhaps apart from kente, the next cultural icon in terms of textiles is tie-dye/batik. This has served to create an identity uniquely Ghanaian in a world that is constantly changing with cultures borrowing from each other.

These fabrics are used to produce varied items such as bags, dresses, belts shoes, caps, table cloths, napkins and even curtains. These fabrics therefore do not only fulfill the utilitarian needs of the citizenry but they are also a force to reckon with when it comes to the preservation of our cultural heritage.

The findings of the study point to the fact that the trade of batik and tie-dye production in the Ho Municipality of Ghana which hitherto was vibrant and lucrative has started to dwindle. The study was able to unravel some of the causes of the decline and the main reason adduced to is lack of funds for the batik and tie-dye producers as well as high cost of raw materials. The piracy of designs by foreigners as well as the importation of cheap textiles into the country was also prominent.

According to [15], the woes of the industry started in the early 2000s when original designs made by Ghanaian textile companies were stolen and reproduced cheaply in China for the Ghanaian market. The industry which had so much potential was pushed to its knees, as high cost of production and the influx of cheaper and pirated textiles from China left it helpless. Based on the findings of the study, the following recommendations have been given below:

a) The price of raw materials, dyes and chemicals should be subsidized by government.

b) A ban must be placed by government on the importation of cheap textiles into the country.

c) Government must support the Small and Medium Scale Enterprises such as the batik and tie-dye producers by giving them soft loans.

d) Raw materials must be made easily available.

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References

[1] Maile A. (1971) *Tie and dye made easy*, Taplinger Publishing Company, New York.

[2] Maile A. (1963) *Tie and dye as a present-day craft*, Taplinger Publishing Company, New York.

[3] Charan. *Indian batik: Another Ancient Art of Printing on Textiles*: retrieved 30 April 2014.

[4] Natasha R. (2012) *batik: spectacular textiles of Java*, the Newsletter International Institute for Asian Studies.

[5] The Creation of Handmade Batik in Ghana, artsandculture.google.com/exhibit: retrieved 13th February 2019.
[6] Stuart, R. (1969), A History of Dyed Textiles. London, Studio Vista Ltd.

[7] Adetoun A. (2009) Strategies for Economically Sustainable Resist Dyeing Industries in Abeokuta, Ogun State, Nigeria (Unpublished PhD thesis), University of Southampton.

[8] Picton J. (1995) the Art of African Textiles: Technology Tradition and Lurex, London, Lund Humphries.

[9] Frimpong C. (2009) User-friendly colour matching system for tie-dye/batik producers, unpublished these. Pp 15.

[10] Akwa F. (2014) batik and tie/dye loose popularity as modern clothing takeover, myjoyonline.com.

[11] ModernGhana.com (2018) Batik and Tie-dye Business Operators in Ho cry for help: retrieved 15th January 2019.

[12] Borg, W. R., & Gall, M. D. (1989). Educational research. An introduction (5th ed.). White Plains, NY: Longman.

[13] Neil J. S. (2000) Statistics for People Who (Think They) Hate Statistics, Sage Publications, Inc.

[14] Fraenkel, J. R., & Wallen, N. E. (1996). How to design and evaluate research in education (3rd Ed.). New York: Mc Graw-Hill.

[15] GhanaWeb.com (2017) Left to die: Ghana’s textiles Industry nears collapse: retrieved 17th March 2019.