AKENTEN APPIAH-MENKA UNIVERSITY OF SKILLS TRAINING AND ENTREPRENEURIAL DEVELOPMENT

REPURPOSING USED APPAREL: TECHNIQUES FOR CREATING NEW GARMENTS FROM RECYCLED CLOTHING

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REPURPOSING USED APPAREL: TECHNIQUES FOR CREATING NEW GARMENTS FROM UPCYCLED CLOTHING

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DECLARATION

I, Mavis Osei-Poku, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

MAVIS OSEI-POKU …… ……..……

(CANDIDATE) SIGNATURE DATE

SUPERVISOR'S DECLARATION

Declare that the preparation and presentation of this work was supervised by me in accordance with the guidelines for the supervision of thesis laid down by the Akenten Appiah Menka University of Skills Training and Entrepreneurial Development.

DR. NINETTE AFI APPIAH …… ……..……..…

(SUPERVISOR) SIGNATURE DATE

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DEDICATION

This work is dedicated to my dear husband, Patrick Tetteh and my daughter Kimani Maa Efia Tetteh. Thank you for your support and love.

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ABSTRACT

This study was to examined the repurposing of used apparel: techniques for creating new garments from recycled clothing. Purposive sampling technique was used to sample twenty (20) participants for the study. The data for this study was gathered through an interview guide the responses were then analysed qualitatively. It was revealed that the quality and attractiveness of the fabric constitutes factors for repurposing of used apparel. The review of the results from the twenty (20) participants demonstrated that factors such as environmental benefits, perceived quality, safety, risks, emotions, and individual differences influence consumer acceptance of products made from recycled materials. The findings from this research study therefore contribute to knowledge regarding techniques for creating new garments from recycled clothing in Ghana on a large scale. It is recommended that the government embarks on public education on the benefits of repurposing of used apparel and to encourage patronage of these products. This will eventually create job opportunities thereby reducing the unemployment challenges the nation is facing. Laws regarding the importation of second-hand clothing should be flexible and well-regulated such that Ghana will not be a dumping ground for such goods.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Every government makes sure that the populace has access to proper clothing in addition to food and shelter since clothing is a necessary component of any civilized human establishment. Producing textiles and garments to meet this demand is thus a challenge for the apparel and textile industry, particularly in the majority of developing nations (Agra et al., 2015). garments producers go above and above to make all different types of garments in order to meet this challenge. This has introduced new methods for designing clothing, such as selecting already-made outfits to be taken apart, redesigned, cut, and reassembled.

The idea of upcycling presents opportunities for fashion designers to lead the way forward by responsibly using the numerous tons of textile waste produced to create increased value and satiate the ongoing demand for new fashion, even as technological advancements move toward more environmentally friendly methods of production. Due to consumer desire for novelty, there is currently an excess of production and consumption, which has led to waste, pollution, toxic emissions, resource exploitation, and depletion. Although it was previously believed that high levels of textile waste would spell the end for those products, the fashion industry may be able to harness this resource to create well-designed, upcycled clothing made of sustainable materials. (2015) Han, Tyler, and Apeagyei.

The practice of upcycling, also known as repurposing and mending, has long been a part of daily life. In an effort to shift production toward economies of scale, the logic of mass production progressively took control and introduced new values such as

exchangeability, replaceability, and throwaway mentality (Hawkins, 2001). What came next was a new kind of consumption that took the place of the traditional long-term engagement with a product by replacing products frequently with new versions and resulting in a deterioration in product quality and consumer expectations about product performance. The ability to maintain and repair things has also virtually disappeared in the west as a result of the emergence of the consumer society (Salvia et al. 2015). Upcycling is the practice of repurposing, repairing, upgrading, and remanufacturing materials and goods that are no longer in use or are about to be disposed of in a way that raises their value. The method can be utilized in the design and production of new clothing or in the renovation or remanufacturing of already-existing clothing (Gwilt, 2014: p.146).

In the years following World War II, this was of the utmost importance. The British people were reportedly encouraged to "make do and mend" by reusing the wool from worn-out knitwear or chopping up old curtains to make skirts and dresses during World War II (1939–1955) due to limited supplies of fabric and rationing of goods. (Ryder, 2015)

By utilizing hand-crafting techniques and the recycling of textiles and clothing, recent fashion trends like slow fashion (Clark, 2008), upcycling (Gwilt, 2014), re-fashioning (Brown, 2013), and "craftivism" (Greer, 2014) reflect and respond to economic environmental ethics and the nature of work. These hand-making trends may also be influenced by issues related to the environment, poverty, and people's need for connection. Since then, upcycling has become a key component of many clothing designers' ideas, and it is especially common in impoverished nations like Ghana.

The chance to choose clothing items with minor flaws, rejected apparel, or items that have been used before is taken advantage of by garment designers and manufacturers in order to transform them into something even more valuable (Myers, 2014). As a result, the majority of people engage in this activity and take advantage of the chance to develop fresh concepts and designs, giving men a way to make a living. For instance, during the past few decades, the Ghanaian town of Kantamanto-Accra has gained a reputation for managing fashion trash.

Nevertheless, the fashion waste management has, over the last few years, deteriorated, and thus, caused a huge environment pollution due to the heaps of gathered garment waste, left unattended to. It is worth finding and very crucial to identify problems associated with inadequate utilization of these heaped garments among various fashion designers with special reference to fashion and garment designers.

It is therefore necessary to examine the techniques used for creating new garments from recycled clothing. Also, there is the need to highlight on the various approaches to this subject that can be employed to motivate and enable up and coming dressmakers and tailors to recognize the value of repurposing used apparel thus, the objective of this study tends to achieve. The objective of this study is further to explore the environmental, economic and social implications of repurposing used apparel and to assess potential innovations and advancements in technology that could improve the efficiency and effectiveness of repurposing used clothing.

1.2 Statement of the Problem

According to data from the United Nations Com-trade Database, Ghana spent $65 million a year importing secondhand clothing from the UK, according to McDonough and Braungart (2013).

Dutton again claimed that Ghana imports 30,000 tons of used clothing annually in 2014; most of it arrives in Accra. Dutton noted once more that the country's second-hand apparel trade is really growing and becoming even more substantial despite higher import duties and a limit on the importation of particular items. This was related to a 2003 study by Fields, who found that some used clothing imported into Sub-Saharan African countries, including Ghana, was occasionally recycled, repaired, or deconstructed, redesigned, and reconstructed, which led to the expansion of the used clothing market.

According to studies of the used clothing market in Accra, Ghana's renowned Kantamanto second-hand market, the practice of upcycling worn clothing has risen moderately over the years. According to Bharradwaj, Clark, and Kulviqwat's (2005) research, there are both pull and push elements that may influence a person's decision to enter a certain firm in order for it to grow rapidly and attract new customers. According to Agyemang (2001), the high demand for used clothing is not simply a result of the low economic standing of the majority of Ghanaians, but is also connected to a number of issues that affect all phases of the industry, from the purchase of raw materials to its sales. According to Myers (2014), one benefit of the new trend of upcycling used clothing is that it gives young people little jobs.

The upcycling of clothing has been the subject of numerous studies about its viability as a fashion trend, customer acceptance, as a design approach, waste management issues, product lifespan optimization, social innovation, and other factors. The design and construction of fashion items employing upcycling in the creation and selling of used clothing in Ghana, however, has received little to no research, if any at all. This has, in a sense, left a knowledge gap. By researching the methods for making new

garments from recycled clothing in Kantamanto market of Accra, this study aims to close the knowledge gap in the area of repurposing used clothing.

1.3 Purpose of the Study

This study focuses on repurposing used apparel. The particular purpose of this study was to examine the techniques for creating new garments from recycled clothing. Study participants include dressmakers and tailors in the Kantamanto market, Accra. This geographic region was selected due to it being the popular market for buying and selling second hand clothing where most dressmakers and tailors ply their trade in recycling second hand clothing into new garments. The purpose was also to explore the environmental, economic and social implications of repurposing used apparel and to ascertain whether there are any drawbacks. This research will further assess whether there could be potential innovations and advancements in technology and how to improve its efficiency and effectiveness. The study will thus contribute with insights towards consumer perception, demand and willingness to purchase recycled clothing.

1.4 Objective of the Study

The following were the objectives of this study:

i. To examine current techniques used for repurposing used apparel into new garments and analyze their effectiveness.
ii. To explore the environmental, economic and social implications of repurposing used apparel.
iii. To assess potential innovations and advancements in technology that could improve the efficiency and effectiveness of repurposing used clothing.

iv. To assess consumer perception, demand and willingness to purchase repurposed clothing items.

1.5 Research Questions

In support of the stated objectives, the following research questions are proposed:

i. What techniques are currently employed in the repurposing of used apparel into new garments and how effective are they in terms of quality, durability and aesthetics of the final product.

ii. What are the environmental, economic and social benefits and drawbacks of repurposing used apparel? How does this compare to producing new clothing?

iii. What potential advancements in technology or novel methods could be used to improve the process of repurposing used apparel into new garment?

iv. How do consumers perceive repurposed clothing items and what is their level of demand and willingness to purchase such items? Are there specific demographics more inclined towards these products?

1.6 Significance of the Study

This study is vital in that it offers a knowledge contribution and a policy contribution. By revealing the impact of recycling on productivity, the study is significant so as to provide for better understanding the techniques dressmakers and tailors used in the recycling process and how to inspire them to increase and sustain productivity in the fashion sector. The study will significantly serve as literature that would add to academic knowledge in the area of garment recycling and productivity in the fashion and design sector.

Also, it will be of direct benefit to fashion designers and other stakeholders to understand the process and concept of recycling techniques used for repurposing used apparel into new garment. By analyzing the potential innovations and advancements in technology that could improve the efficiency and effectiveness of repurposing used apparel, it would help to find measures to address problems in the Fashion Industry.

The management of the fashion industry and the government can use the study's conclusions and recommendations to develop or redefine efficient recycling systems that will benefit the industry and increase production. Additionally, it will aid in the formulation of laws that would support dressmakers and tailors in the fashion business as well as policies that will encourage growth in the fashion sector. Once more, the study will act as a knowledge base for future researchers who wish to reproduce the study elsewhere and want to delve deeper into concerns pertaining to the business of recycling processes.

1.7 Delimitations

In order to provide in-depth knowledge on the repurposing used apparel, the study uses data relating to the area of interest which covers selected dressmakers and tailors in the Central business city of Accra, particularly, Kantamanto. The study involves business owners who are into the business of creating new garments from recycled clothing.

1.8 Limitations

With regards to limitations of the study, the research should have covered the entire population of dressmakers and tailors in the catchment area, Accra, but the study was

limited to only twenty selected dressmakers and tailors in Kantamanto to ensure better coverage and effective work. The study looked at only repurposing used apparel: techniques for creating new garments from recycled clothing. Some participants were skeptical about giving out information about their jobs which made it difficult for the study to make comparison of the data collected with the different data collecting instruments and in some cases responses from the participants was biased and contradictory which required a lot of time to edit and code to ascertain the relevant data needed for the analysis. This therefore resulted in a delay for the completion of this study. However, be that as it may, the limitations encountered thereon will not affect the validity and reliability of the results of the study.

1.9 Organisation of the Text

The study is divided into six primary chapters, each of which focuses on a different area of the research. The introduction, which is the first chapter, gives background information about the study, the problem it addresses, its aim, objectives, and research questions. It also outlines its constraints and delimitations as well as how it was organized. The study's second chapter covers the pertinent literature related to the topic of the investigation. The theoretical and empirical literature that was pertinent to the subject being studied is reviewed and discussed in this chapter.

In chapter three, the study explains the methodology adopted for the research, data collection techniques and analysis. Chapter four focuses on the analysis of the study and analyses the results that were revealed thereon. Chapter five present discussions with reference to results of chapter 4. Chapter six provides summary, conclusion and recommendations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

The theoretical and empirical literature that was pertinent to the subject being studied was reviewed and discussed in this chapter. The growth of upcycling clothing, theories on upcycling clothing, the goal of upcycling, the current trend in clothing manufacturing and consumer behavior, used clothing, the trade in used clothing in Ghana, market tactics, and theoretical framework were some of the subjects covered in the discussion.

2.2 Development of Repurposing Used Clothing

According to Kittler, Kayser, and Stoneking (2003), anthropologists believe that humanity first began to wear clothing between 50,000 and 100,000 years ago, while the exact date is unknown. As they continued their research, they quoted Deoxyribonucleic Acid (DNA) experts who determined that humans first began wearing clothing around 72,000 years ago based on the appearance of the human lice species. The earliest sewing needles, which showed that clothing was being created, had been around for roughly 40,000 years, according to another school of thought (Aus, 2011). The above-mentioned finds gave a clue as to when people may have started to cover themselves with clothing, which may have been about 100,000 years ago.

According to Aus (2011), people have been able to create garments over the vast majority of our long history of production without adversely damaging the environment or wasting non-renewable resources. Initially, people or those with

higher talent fashioned garments, and later, skilled tailors. Once more, specific pieces of clothes were recycled within the home and used once more as rags or quilts after being repaired, mended, or fitted to fit other family members. However, during the Second World War, it became popular among those who had previously discarded their partially worn or outdated clothing (Hyde, 2003).

With the start of the industrial revolution at the end of the 18th century, steam engines and power looms were created. These made a significant difference in how clothing is created. The traditional, private production approach, which saw clothing made by hand and passed down from generation to generation, has been replaced by a faceless industrial juggernaut and a mass manufacturing paradigm (Aus, 2011).

Similar to this, Birtwistle and Moore's later research from 2007 showed that industrialization moved swiftly at the beginning of the 20th century, setting the stage for increased production of all consumer goods, including clothing. Allwood, Laursen, Malvido de Rodriguez, Bocken, and Nancy (2006) added to this by pointing out that a larger percentage of the population now has access to these items as a result of industrialization.

The widespread consumption of clothing that followed had a big impact on the economy. Achieving economic growth now requires the constant promotion of new items and the eradication of outmoded ones, which are only discarded since changing stylistic fads expedited their demise (Aus, 2011). The aforementioned research showed how technology has advanced over time to make it possible to produce numerous clothing items in the twenty-first century, but Australia gave a hint that the increase in consumption of these items has resulted in a new way of using clothing that is a kind of buy-use-discard because fashion is out of style. To stop the waste of

fabrics, some sort of recycling is now required. Since the late 1980s, high street fashion has become increasingly affordable and disposable, driven by global conglomerates. This has turned into one of the ugly little secrets of the fashion world (Black, 2008).

Consumers spent $1 trillion on clothing worldwide in 2000, according to Allwood et al. (2006). This amount's sales were distributed roughly as follows: a third in Western Europe, a third in North America, and a quarter in Asia. For instance, Inditex, a garment manufacturer and fashion designer, reported a combined turnover of 12,527 million euros and a net profit of 1,732 million euros in 2010 (Inditex, 2011). The aforementioned examples showed that there has been a considerable rise in the use of garment products globally. Additionally, Allwood et al. (2006) pointed out that a closer look at the enormous amounts of clothing and garments produced in comparison to the rate of distribution and consumption point to the fact that there is an excessive demand on textile raw materials, leading to the depletion of natural resources, harm to the environment, and even more waste being produced for landfills. An average American household discards 70 pounds of clothing, shoes, and other textiles every year, according to McCaster (2012), who cited Allwood et al.

All of these textile wastes, according to Anyango (2009), are disposed of in landfills where they contribute to the trash and aggravate sanitary problems. Anyango stated, "In light of the social difficulty of how clothes are used and disposed-of generating environmental traits, it would be prudent to develop the discarded clothing into looks that reflect the aesthetic concerns of the period. She continued, "Evolved fashion must be highly original while still being environmentally conscious. In order to do this, according to Myers (2014), certain manufacturers have embraced a sustainable

fashion trend that makes use of recycling methods involving the deconstruction and reconstruction of used clothing and accessories. Consequently, by producing unique and fashionable works of art, you can extend the life of clothing and fabrics by giving them a new lease on life.

In support of Myers, Aus (2011) argued that recognizing how wasteful clothing consumption is and how current fashion industry trends jeopardize sustainability on both an environmental and social level leads to a deeper understanding of the garment design process. The goal of doing this, he continued, is to learn different upcycling approaches and methods as well as how to incorporate textile waste back into the fashion design manufacturing process. In his investigation into the best ways to recycle discarded clothing, Anyango (2009) discovered that the fashion industry's movement encourages people to try out new things that will make them stand out and become the trend setters. According to her, this sparked interest in redesigning discarded clothing to catch the eye of fashion enthusiasts and explain the recent surge in demand for repurposed apparel. This is supported by a prior study by Fields (2003), who found that using the recycle technique of garment production results in the creation of new jobs in addition to resolving environmental and hygienic issues.

The deconstruction and rebuilding recycling of worn clothing can be used to attract the attention of fashion designers, as the aforementioned literatures point out. In a way, this would draw in the interest of fashion enthusiasts, and it might also provide employment while addressing environmental and hygienic issues. Hyde (2003) pointed out that garment makers try to keep up with current fashion trends and consumer needs in order to stay in business when new trends in consumer interest in fashionable fashion emerge. Hyde explained that it had produced creative methods for

obtaining raw materials at a quicker but lower cost and developing clothing designs that will sell more quickly. Because of this, there is currently a trend known as upcycling, which involves gathering factory fabric scraps, secondhand clothing, and clothing that has been on store shelves for too long (Field, 2003).

2.3 Theories on Recycling of Clothes

The initial application of recycling was in rubbish disposal. Pilz (1994), who opposed the EU Demolition Waste Streams Directive and questioned the recycling approach, coined the phrase in an interview he gave in 1994. He defined recycling as "down-cycling," in which everything is broken, even bricks. Upcycling, in which worn things are valued higher rather than lower, is what we need. (Pilz)

As a result, according to Claudio (2007), the current supply of clothing in consumer wardrobes, secondhand shops, and abandoned items could be a rich source of raw materials for profit if recycled. He claimed that, in a sense, recycling might satisfy both the profitable fashion industry and the fashion-hungry consumers by putting huge stockpiles and massive amounts of discarded clothing back into use in an environmentally responsible way. According to McDonough and Braungart (2013), clothing is a necessity, whereas fashion is a luxury that is best enjoyed in style. Some schools of thought might view the usage of secondhand clothes that has undergone competent upcycling as elegant (Aus, 2011).

According to Sull and Turconi (2008), fashion shops have substituted recycled designs for traditional ones in an effort to draw customers and retailers as they quickly adjust to market developments. They argue that a fashion fan would be wasting their

chance if they passed by a well-made recycled item without buying it. Interacting with novel objects, according to Sull and Turconi, awakens their senses.

The phenomenon of meeting people's clothing demands in a trendy manner by utilizing new garment production models and processes has given rise to the movement of collecting abandoned clothes and rebuilding it into a different fashionable, wearable piece of clothing (Myers, 2014). Although some authors referred to it as a fad, others believe it to be a movement that will endure.

Fletcher and Grose (2012) assert that careful reclamation can increase the value of recycling. In a different piece, Fletcher and Grose (2012) describe upcycling generally and mention that it aspires to produce an ecosystem that is enjoyable, diverse, secure, and healthy with clean air, water, and soil. This is done to provide individuals greater economic power in a just and sustainable environment. Despite this, the apparel industry has recently boosted the amount of recycling it does in an effort to repurpose textile waste (McDonough and Braungart, 2013). Upward reprocessing, another name for recycling, is the deliberate movement of waste up the consumption chain from where it was previously situated. Future sales, aesthetic appeal, and environmental considerations are all taken into account (McDonough and Braungart).

In the 20th century, the word "recycled" was included to the Concise Oxford English Dictionary along with other phrases related to clothing, like "mankini" and "jeggings" (Ngack, 2011). Ngack (2011) continued by stating that the terms upcycling and downcycling stem from different types of recycling, which are typically associated with reducing our trash and reusing what we discard. According to Ngack, the same dictionary defines recycling as the act of employing waste materials to transform something into something more valuable than it was before. Myers (2014) also noted

that upcycling offers the chance to reuse a garment where its quality is maintained or improved by the process, even though occasionally when trying to recycle particular fabrics, the usual challenge experienced is lowering the quality of the original materials.

According to the information gained from these concepts and the various meanings, a deconstructed dress might potentially be recycled and repurposed into new garments to stay in style.

It was important to clarify that upcycling practices follow the guideline controlling production-related environmental issues while discussing environmental concerns. Anyango (2009) had a similar viewpoint when he asserted that the source material for recycling is often obtained in the same region as where production takes place. As a result, this helps to address social and environmental issues resulting from the globalization of the apparel industry and its reliance on transportation.

The use of the upcycling approach, according to Palmer (2005), enables the designer to make decisions about the design and production processes from the perspective of environmental ethics. In this sense, environmental factors rather than lucrative opportunities or current trends serve as the key determinants of material and process choice. People used to buy dresses and wear them until they tore or until they were tired with them and tossed them aside, according to McDonough and Braungart (2013).

After then, they didn't consider where it went. Consumers, according to Birtwistle and Moore (2007), don't feel bad about throwing away their old clothes. Additionally, they claimed that the majority of consumers are unaware of or do not understand the environmental problems associated with the production of fibers, textiles, and clothes.

Birtwistle and Moore continued by saying that research revealed that consumers showed minimal interest in ethical and social issues and had little to no knowledge of the vast amounts of apparel that textile companies manufacture each year. Recycling addresses the issues related to clothing waste by enabling the greatest quantity of discarded clothing to be given new life.

According to Aus (2011), it's crucial to understand that, even though reused and recycled approaches concentrate on reducing waste management-related repercussions within a business, it is still feasible to completely stop the production of fabric waste. McCaster (2012) stated that recycling also has an intra-sector strategy, which supports this. Within the textile sector, issues are resolved, but not at the level of waste management. According to Von-Busch (2009), the recycling process reformulates one of the fundamental principles of fashion by creating new things out of old things and one-of-a-kind clothing for mass production. As a result, it serves as a sort of shortcut to the special item because the cloth itself is noticeably diverse. It is crucial that the designer learn to appreciate and use existing materials.

2.4 Purpose of Repurposing Used Clothing

The Industrial Revolution, which took place more than 150 years ago, shaped the energy-intensive, complicated linear supply chain that leads to today's waste stream from the clothing industry and consumer use. The World Economic Forum refers to this system as the "take, make, and waste model" since it turned the flow of goods into a one-way street (Whitty, 2015). Manzi (2008) calculated that in the UK, roughly 16 million pieces of branded corporate clothes are discarded annually. This is

equivalent to over 39.2 million separate articles of clothing, the most of which are made of the durable polyester that is difficult to disintegrate.

A further 1000 tons of discarded garments are collected for shredding, but just 9% of them are being saved for reuse, according to Manzi's research. According to Whitty (2015), the destruction of these items may be caused by a number of things, including end-of-life products, new logos or colors, outdated uniforms, or a failure to sell clothing. She went on to note that the usual procedure for dealing with this rubbish is shredding for fleeces and polo shirts, which occasionally results in a low-grade material that can be utilized for filling, or else they are burned or thrown in landfillsThe biodegradable element of the clothes breaks down in the landfill, releasing toxins that cause pollution and greenhouse gas emissions including methane emissions into the groundwater (Fletcher, 2008).

According to Uniform Reuse Cooperative (2015), the UK's clothing business emits 3.1 million tonnes of CO2 equivalent annually, or 0.4% of all UK emissions. By discarding these garments, you are also discarding all the embodied energy and materials they hold, including the fibers, dyes, and chemicals they hold, as well as water, human labor, fossil fuels, electricity, and chemicals. Recycling could, in the meanwhile, preserve or cut these. 45% of clothing may go through a second or third life cycle before being removed, according to Hollingsworth (2007). Therefore, using second-hand clothing as opposed to tossing it in the trash has several positive environmental effects.

For instance, recycling discarded textiles reduces atmospheric CO2 emissions by 20 tonnes per tonne, according to the Uniform Reuse Cooperative (2015). One school of thought contends that gathering, classifying, and reselling used clothing uses 10–20 times less energy than creating new apparel (Fletcher, 2008). Despite this, the literature on recycling is discussed under the following headings: current trends in clothing production or consumer behavior, the lifespan of fibers and fabric compared to waste management, the source of employment, and consumer demand for clothing compared to current cost of living.

2.5 Consumer Behavior and the Current Trends in Clothing Production

According to McDonough and Braungart (2013), urban and industrial growth is sometimes equated to a cancer since it expands for its own benefit as opposed to the benefit of the organism it occupies. An illustration of this method of thinking in the apparel industry is the concept of fast fashion change.

The 1990s are when the idea of transformation in fashion first emerged. Brands like Zara and Mango led the movement. The clothing brand Zara launched its first location outside of Spain, where it was founded, in 1988. Mango did the same in 1992. This brand-new idea, which was based on quick turnaround times and product variety, led to a series of modifications in the fashion industry, where quality was no longer the first priority. The current objective of fast fashion change is to deliver replicas of high-fashion trends to the consumer as quickly, affordably, and efficiently as feasible (Anyango, 2009).

Again, designers must move creations as quickly as possible from the runway to the shop shelf. As a result, it offers a way to react to the market swiftly as well as a basis for retailer competition distinction.

Retailers need to be able to act swiftly on real-time sales information in order to get the bestselling products into the stores before a particular fashion trend or style fades away in order to preserve their business. Therefore, there are innovative and imaginative ways to produce and collect the basic materials needed to make garments. This sparked the growth of upcycling in the apparel industry (Tokatli, Elon & Geaoge, 2008; Farrer & Finn, 2008). For instance, Prada and Sander from 2009.

According to their article about changes in fashion brands, a constant analysis of data on consumer behavior and trends shows that, of the thousands of prototypes the company's designers create each year, only 40% are approved by a small sample of consumers. In order to discover where there is a significant demand for design prototypes and how quickly a design can be recreated if it sells out quickly, this test sample was then used (Prada & Sander, 2009).

In addition, some schools of thought asserted that the current shift in the consumption of clothing is more motivated by an emotional need to keep up with trends that are changing more quickly than ever before than by the customer's actual needs or the value of the garment's design. The usual rhythm of the fashion industry, which focused on two years between collections, was thus utterly refuted by the current revolution in garment fashion chains (Farrer & Finn, 2008). Consumers' relationship with clothing has changed as a result, which has increased the throw-away clothing trend or altered garment fashion (Birtwistle & Moore, 2007; 2008 (Fletcher). These include an increase in the availability of low-quality apparel, a fall in price levels, and an increase in the frequency of purchases. The majority of these disposable garments

end up as secondhand clothing that is either recycled and sold or donated to charities (Fletcher, 2008). The garment industry now must create and process things more quickly and inexpensively than ever before due to the enormous consumption of apparel, frequently changing fashion trends, and low prices that encourage people to buy more than they need (Farrer & Finn, 2008). The traditional six-month window before a new trend is introduced for the setup and switch-over times for batch manufacturing of apparel is currently rapidly changing. Due to the increased demand for fashion among customers, retailers increasingly rotate their displays of designs every few weeks rather than twice a year (Allwood et al., 2006).

According to the Inditex Group's 2009 Annual Report, "The Group's distribution process is designed in such a way to ensure that the products on offer in the stores are continuously renewed throughout the world, each store receives merchandise clothing twice a week, and each delivery includes new models of clothing. Although there is a large flood of new model garment designs on the market and the majority of consumers have average incomes and enjoy trendy clothing, they consider the high price and try to find the same clothing at a lower cost whenever possible (Farrer & Finn, 2008). By offering cheaper equivalents of these trendy items, if not exact replicas, certain garment manufacturers profited from the circumstance.

According to Taylor (2001), the continuously changing technology for producing clothing, along with advancements in the fields of politics, economics, and population increase, combine to provide a general pattern of global clothing usage and consumption. According to him, this has significantly changed due to a recent rise in consumer complaints about the lack of fresh, stylish clothing. The most significant elements in this situation are the rise in global population and the influences that are boosting both the total global clothing production and the need for new, exclusive

fashion, as well as the influences of unemployment and per capita global consumption.

From the aforementioned claims, it can be concluded that changes in clothing manufacture affect every stage of the process. In order to give the consumer, the option to select from a wider variety of clothing and garments for specific purposes, occasions, or needs, creative ideas and new ways have been developed for everything from designing through line production to finishing as well as marketing and waste management. Therefore, in order to stay in business, it is necessary to be innovative, install cutting-edge equipment, hire skilled labor, and maintain a competitive edge in production in order to meet the high standards set by the fashion industry as well as the demands for clothing and garments as far as the global population is concerned.

Additionally, ecologically friendly manufacturing and production methods should be used to create jobs. This, however, might have made it difficult for most apparel industries to incorporate clothing upcycling into their manufacturing. For instance, Whitty (2015) noted that EDU fashion at the University of the Arts London in collaboration with Kering, a garment manufacturing company with headquarters in London, has employed a number of individuals who comb boutiques for store reject clothing and accessories before remaking them into current trendy designs that are in vogue and are sold at a somewhat higher price. This is in line with the current changes in fashion, garments, and consumer demands. The majority of models on the runway and celebrities on the red carpet both enjoy wearing these clothes.

2.6 Recycled versus Standard Fashion Design and Production

The stages of manufacture, distribution, wholesale, retail, and consumer purchase are shared by the recycled fashion design and production supply chain and the conventional fashion design and production supply chain. When thinking about

scaling up the recycling procedures involved for the mass market, it is important to take into account the considerable distinctions between these seemingly similar but different processes that are revealed by research into present recycling practice. Several small, independent upcycling designers are currently working in Ghana, successfully utilizing waste fabrics, a largely untapped source of supplies for the fashion industry.

These recycling companies are frequently tiny, artisan-led businesses that specialize on specialty product production and local sales (Payne 2011: 11).

It may be possible to grow this specialist business into a large-scale industry with increasing environmental benefits by employing essential research on the key differences and similarities between standard and recycled production, as well as by prioritizing design-led production. The assumption is made that the design and production process for recycling must be very different from the design process for original ready-to-wear clothing because recycling designers' source from waste streams and do not make purchase orders with fabric suppliers. Understanding the major distinctions between these two processes may enable Cassidy and Han's (2012:157) work to conceptually model the recycling process as well as the successful and entirely advantageous integration of sustainable practices into large-scale fashion manufacturing.

Standard fashion design and manufacturing processes from the literature were investigated to facilitate comparative evaluation of the primary design and production processes used by the production of recycled fashion articles in Ghana. This work expanded on earlier work by Cassidy and Han (2012:159), comparing processes.

These processes are highly iterative and occasionally non-linear, but for the purposes of comparison, they have been condensed into a single process model. This model has then been streamlined and used to compare recycling to traditional fashion procedures. Each of the design models from the literature that have been analyzed begins with a brief that describes the task or issue that needs to be solved (Burke 2008: 110). Following that, market and creative research is done for the range that will be produced. Problems are solved and potential solutions are conceived during the design process, often known as the synthesis phase. Following this, trial products are created, which serve as the basis for marketing and promotion, before the final products are created and shipped to stores, where they may be purchased by customers. A streamlined design and manufacturing process model has been developed and is depicted in figure 2.1. It is based on procedures described by McKelvey and Munslow (2003: 3), Jenkyn Jones (2005: 128), Burke (2008: 110), Matharu (2010: 88), and Armstrong and LeHew (2011: 37).

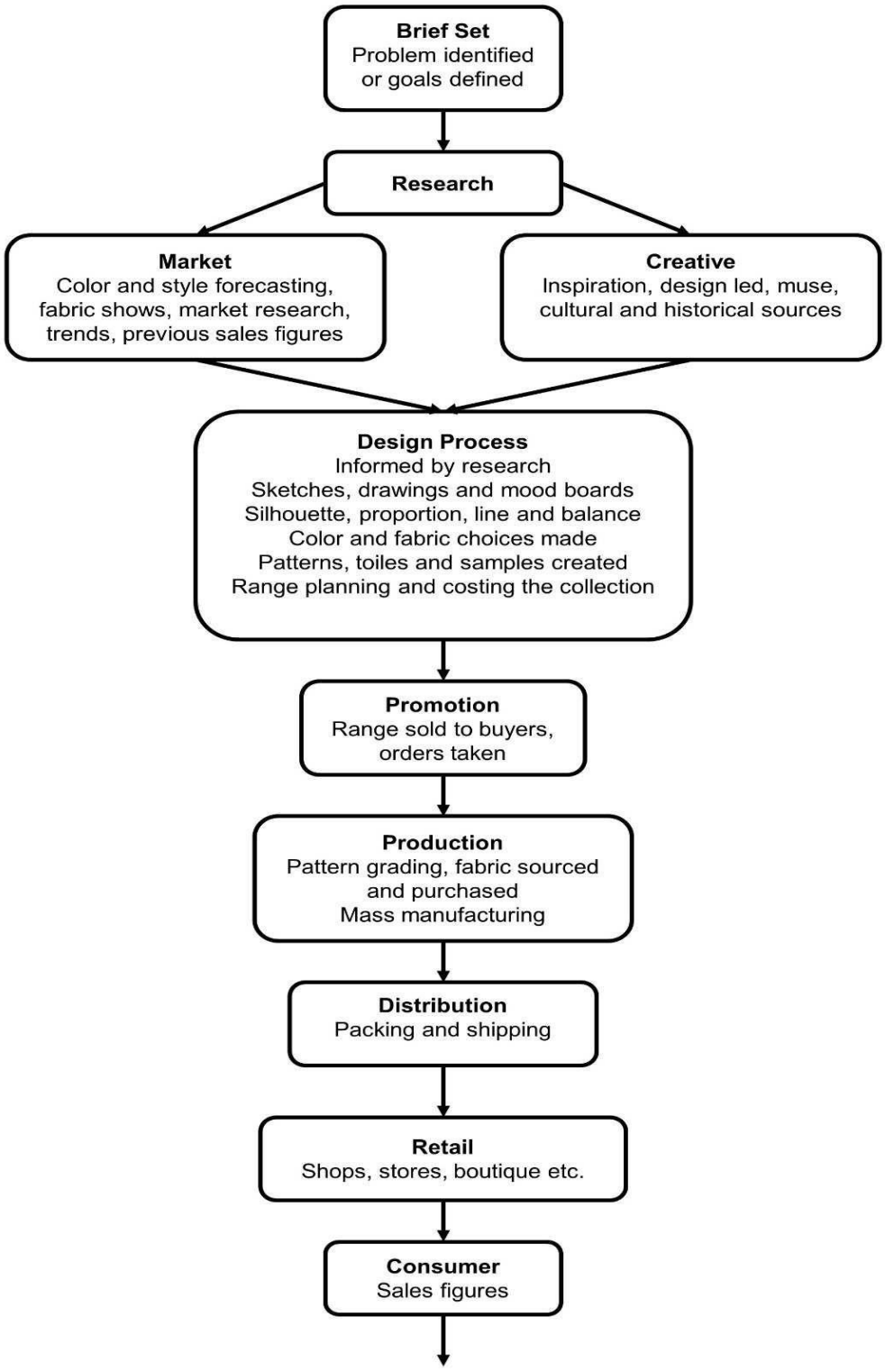

Figure 2.1. The Summarized Standard Design and Production Process Model

(Adapted from: McKelvey and Munslow (2003: 3); Jenkyn Jones (2005: 128); Burke (2008: 110); Matharu (2010: 88) and Armstrong and LeHew (2011: 37).

2.7 Second-Hand Clothing

Consumption of used clothing is a big rising trend that cannot be reversed. This fashion trend has had, and will continue to have, a significant impact on the global apparel market. Used clothes has a long history that may be traced to Europe in the middle of the fourteenth century (Seidel, 1991). Europe was going through a severe economic crisis during this period, as well as population growth, political and social uprisings, a catastrophic famine, and widespread starvation (Smitha, 2015). Used clothes has emerged as a significant option to meet the apparel demands of regular customers as a result of these poor economic and living conditions (Lemire, 2006; Barahona & Sanchez, 2012).

In these trying times, there were four significant ways that the circulation of used apparel reached consumers. First of all, clothing was inherited from the estates of deceased family members or masters (Lambert, 2004) in order to pay off debts (Van Damme & Vermoesen, 2009), settle debts (Hansen, 2000), or make money for the accused (Seidel, 1991). Second, used clothing was handed to family members as gifts, mementos, or patrimony (Charpy, 2008; Lambert, 2014; Barahona & Sanchez, 2012). Thirdly, buyers were able to buy used clothing by having their previous garments adjusted or repaired (Lemire, 2006). For instance, a mother might have changed her clothing to fit the latest trends or given it to her daughters (Benson, 2007). Last but not least, shoppers purchased their used items through second-hand clothing merchants (Lemire, 2006).

Today, there are many places to find second-hand clothing, including thrift stores, flea markets, vintage boutiques, secondhand shops, auctions, garage sales, yard sales, specialty markets for second-hand clothing, local and traditional markets, and online

(Charbonneau, 2008). Since both low- and middle-income workers buy the goods, the second-hand clothing industry is quite lucrative. In Africa, some people favor these garments because of their high quality, while others favor them because, in contrast to contemporary clothing, particularly that from China, it is unusual to see two people wearing the same outfit. However, since the costs are typically lower than those of brand-new items, affordability is what appeals to the majority of individuals.

In the modern era, second-hand clothing is no longer considered to be a low-level fashion trend; rather, it has emerged as a global fashion movement, attracting customers from various socioeconomic classes (Milgram, 2012), including artists (Apatoff, 2014), celebrities (Huffpost, 2013), and members of the royal family (Besnier, 2004). The number of second-hand merchants has increased as a result of this trend, which implies that used clothes offers something of value to everyone (Besnier, 2004).

Scholars in the fashion and marketing fields have looked at the problems in terms of both internal and exterior components in an effort to completely comprehend the second-hand clothes phenomena (Walter, 2008). A few examples of internal factors are cultural (Naamneh & Al Huban, 2012), social (Beard, 2008), psychological (Castillo, 2014), economic (Baden & Barber, 2005), and social (Bianchi & Birtwistle, 2012; Birtwistle & Moore, 2007). On the other hand, external components are things like recycling centers (Abimola, 2012), laws and regulations (Haggblade, 1990), and avenues for distribution (Mhango & Niehm, 2005).

2.8 Second-Hand Clothes Trade in Ghana

One of the biggest industries in the nation is used garments. About 15 million discarded clothing items sent from the West arrive in Ghana each week (Kaledzi,

2022). However, due to low quality, just around 40% of the products are rejected. They wind up in landfills and waterways, where they contaminate entire ecosystems. During the colonial era, when clothing was exported to the colonies, the importation of used clothing began. Used clothes is known as "Obroni Wawoo" in Ghana, which translates to "the white person is dead." Some people also refer to it as "foes" (people).

The main location for secondhand Western apparel in West Africa is the Kantamanto Market, which is located in Accra, the capital of Ghana. Every day, merchants scramble to quickly sort through stacks of clothing in order to find the greatest deal. However, more frequently than not, rags outnumber riches. Over 30,000 traders may be found in Kantamanto, however some of them specialize in building supplies and

Plate 2.1: Second Hand Clothes on Display at Kantamanto Market

Although the majority of these used clothing items are frequently donated from developed nations with the best of intentions, many of them have already turned into environmental hazards in Ghana and elsewhere. The objects that are rejected because there is no use for them initially wind up in landfills before continuing into the ocean. Additionally, the used clothing that is dumped into the ocean ultimately washes up on the nation's beaches. Environmentalists have described it as a potential big catastrophe, and organizations like the Ghana Water and Sanitation Journalists Network (GWJN) are working to increase awareness of this unreported problem (Kaledzi, 2022).

2.9 Benefits of Recycle Business to the State

Ghana became the world's top importer of secondhand apparel in 2021, bringing in $214M, according to the Observatory of Economic Complexity Report (2021). In Ghana the same year, used clothing was the 16th most imported good. United Kingdom ($80.8M), China ($48.4M), Canada ($15.1M), Poland ($9.63M), and the Netherlands ($9.3M) were the main countries from which this import was made. According to the Ghana Used Clothing Association (GAUCA), the import duty on a 40-foot container will cost GH15,000.00 in the first quarter of 2022. By the first quarter of 2023, this had increased to GH38,000.00. This is supported by Fields (2003), who stated in his statement that the second-hand clothing market is a sizable source of money for the state. According to the US-based human rights and environmental NGO OR Foundation, 15 million individual pieces of old clothing come in Ghana each week. Given the tons of used clothing that are brought into Ghana each month, the trade is unquestionably a significant source of economic income for the country.

Additionally, the trade supplies local City Councils with much-needed funding. For instance, the City Council must issue a trading license to each of the over 25,000 secondhand clothing vendors operating in Kantamanto alone. This is merely one of many different revenue strategies. Trading licenses are the government's second-largest source of income after import rates, which generate the most money. In order to raise money for the government, city councils also levy daily or weekly tolls or rent per stall from vendors (Agra et al., 2015).

2.10 Market Strategies Used in the Sale of Garments and Clothing

Micro-enterprises' expansion depends heavily on marketing (Stokes & Wendy, 2008). This is mostly due to the fact that a marketing strategy helps in identifying clients that the company can serve effectively and in focusing product offers, prices, distribution, promotional activities, and services on those customers. An organization can also create long-term plans with the help of a solid strategy, which will guarantee its survival, profitability, expansion, and perpetuity (Schiffman & Kanuk, 1992; Cohen, 2000; Fifield, 1992).

E-marketing, interactive marketing, market penetration, pricing, branding, cost-cutting, product differentiation, customer focus, and product quality are just a few of the marketing techniques used for clothing and apparel. These were mentioned by Kinuthia, Mburugu, and MilcahMulu-Mutuku (2014) as the marketing tactics used by the micro-enterprises producing clothing to promote their sales.

2.10.1 Interactive Marketing and Customer Focus

Gwin (2009) asserts that interactive marketing is the most effective strategy for adding value for customers and is essential for meeting their demands both now and in the future. The customers are well-cared for as a result of this. By chatting to the

consumers, hearing what they want, paying close attention to them as soon as they enter the store, and engaging in personal negotiations, this method facilitates communication between merchants and customers. This was feasible when businesspeople interacted with clients directly (Kinuthia et al., 2014). According to Ngoze (2006), customer-centric businesses use customer-based strategies, which entail preparing how to handle customers at every stage. According to Kinuthia et al. (2014), in figuring out how to attract as many clients as possible, garment micro-enterprises consider customer feedback on prices to be extremely significant. According to Stokes and Wendy (2008), in order to grow and survive in a cutthroat market, microbusinesses employ a customer-oriented strategy.

2.10.2 Product Quality Strategy

According to Cooklin (1991), the word "clothing quality" is frequently used to characterize a garment's qualitative features, which collectively serve as the justification for buying it. It is fit for the intended use. As a result, clothing quality refers to a person's opinion or attitude about how much better the garments are overall (Parasuraman, Zeithaml, & Berry, 1988). The quality of the garment is further explained as the outcome of an evaluation process wherein the consumers compare their expectations of the garment with the performance of the garment they bought, they put the garment performance against the expected quality, and the process will produce the quality of the garment as the result (Gronroos, 1984). However, certain schools of thought also contend that the usefulness or functionality of clothing can be used to gauge its quality.

The level of happiness that consumers have with the textiles or clothing they own is known as serviceability. This will depend on both the performance of the product and the individual's values (Hollen, Kadolph, Langford & Saddler, 1988). Simply said,

serviceability is the measurement of a product's capacity to satisfy consumer needs. The serviceability of textile items is evaluated using five criteria, according to Hollen et al. (1988). These ideas include beauty, toughness, comfort, maintaining look, and care. From a marketing standpoint, Elias (2015) claimed that pre-sales service, post-sales service, shipping, and price are all crucial factors for any manufacturer of clothing when it comes to quality control. That is, the goods must be of the proper quality when they are delivered to customers.

According to their findings, Kinuthia et al. (2014) discovered that 37% of the micro-enterprises that manufacture clothing out of all the respondents adopt a marketing strategy focused on product quality, whereas 63% did not. They cited it as evidence that few entrepreneurs in the clothing industry are concerned with product quality. However, one requirement that clients have while ordering clothing is high quality.

The benefits to the customer as a result of utilizing the product and the actual product features or traits that provide these benefits are once again referred to as product quality, according to Stokes and Wendy (2008). In the production of clothing, the fabric's quality is crucial since, as highlighted by Hollen et al. (1988), it influences the product's feel, texture, and other performance characteristics. According to Swinker and Hines (2007), around 65% of fashion customers prioritize quality while making garment purchases. Therefore, the owners of small businesses that produce clothing have a responsibility to make sure that the goods they provide to customers are made of high-quality materials and workmanship.

2.10.3 Branding

Malinowska-Olszowy (2005) suggested that it is getting harder and harder for a business to maintain long-term success in today's market economy, which is marked

by a highly variable environment and fierce competition brought on primarily by expanding globalization. The value of using methods that merely maintain low prices or creative solutions is waning. Because of this, brands' importance and meaning have recently increased. Every company's brand is a strategic resource. Having a brand and knowing how to maintain and manage it effectively are increasingly important for achieving success in the market and gaining a competitive edge.

According to Malinowska-Olszowy (2005), brand values are characteristics that appeal to the emotional side of a person's perception. Azevedo and Farhangmehr (2005) assert that brands give consumers emotional and self-expression benefits, which promote economic success since consumers are more likely to associate the product with the maker. This enhances consumer adherence to a certain product. For instance, a consumer who sticks to a single designer finds satisfaction in doing so and makes additional purchases. A brand-name product provides a sense of security and assures excellence and dependability. According to Gwin (2009), buyers are more likely to make repeat purchases if they identify with a particular product brand or name (the owner's name or the business name) and link it to the producer. This indicates that businesses engaged in the manufacture of clothing were more likely to retain clients, which led to more orders and more revenue.

2.10.4 Pricing and Cost Reduction Strategy

Stokes and Wendy (2008) claim that the pricing strategy and the price penetration technique are equivalent. According to their findings, Kinuthia et al. (2014) concluded that individuals that used this strategy sought to maximize sales by maintaining prices as low as possible. This suggests that some clothing micro-entrepreneurs will always set prices lower than their rivals using the market price as the benchmark, according to Kinuthia et al. Kinuthia et al. (2014) have once more pointed out the significance of

advertising, garment quality, and garment workmanship in developing a brand in the clothing market. As part of this strategy, microbusinesses also looked for various ways to cut costs or minimize them. They discovered that using modern machinery like electric over-lock, embroidery, and sewing machines increases efficiency and lowers operating expenses. According to Kinuthia et al. (2014), this suggests that utilizing an electric sewing machine allows for the production of more pieces per hour than manual machines, which saves time. Since the workers were only hired when there was work to be done, this type of setup ensured minimal production costs (Bharradwaj, Clark, & Kulviwat, 2005). Bharradwaj et al. (2005), Gakure (2006), and Ngoze (2006) considered this to be more cost-effective than a waged or salaried worker who was required to be paid at the end of the month whether there was work or not, and they recommended that for a business to be competitive, the enterprise needed to be the lowest cost producer relative to its competitors.

2.10.5 Market Penetration

According to Stokes and Wendy (2008), businesses use this method to grow both their consumer base and sales without significantly altering their products. As an alternate method that connects products to the markets with the least risk in the larger enterprises, market penetration was presented (Kotler & Armstrong, 1994). However, because it aims to gain market share with the current products, this strategy is also relevant to micro-enterprises. This implies that one must continuously seek out new channels through which to advertise his or her designs and seek out new clients.

2.10.6 Product Differentiation

Differentiation in the clothing industry is accomplished by having fresh, one-of-a-kind designs as well as by providing after-sale services. A consumer who is price conscious will stick with a particular clothing manufacturer because they are

confident, they will receive discounts on the things they order (Kinuthia et al., 2014). The owners of clothing businesses pay close attention to what is popular (fashionable) in order to make sure that their goods are distinctive and have a competitive advantage. According to Swinker and Hines (2007), since clothing is utilized as a means of self-expression, fashion customers are also interested in what is invoked in fashion and constantly strive to be unique. In their findings, Kinuthia et al. (2014) also revealed that fashion consumers prefer original designs and that they detest seeing similar designs on other people. If this happens, they will never wear that item of clothing, even if it is brand-new.

2.10.7 E-marketing

According to Therond (2005), this is the selling of goods and services using electronic channels like the internet, which includes mobile marketing environments. As a result, online marketing entails advertising and marketing initiatives that leverage the Web and email to generate direct sales through electronic commerce, in addition to sales leads from Web sites or emails.

E-marketing strategy exhibited factor loadings that ranged from.731 to 0.860 with a mean factor loading of 0.811, according to research done by Kinuthia et al. (2014). These accounted for 10% of the variation in their data, of which the majority of respondents (79%) said they had never engaged in E-marketing and only 21% said they had. This indicates that despite the fact that using the internet for communication and design sourcing is regarded as a contemporary business practice, garment-making micro-enterprises in sub-Saharan African nations, including Ghana, have not yet adopted it. The findings of McCormick et al. (2002) and Kinuthia et al. (2014) reveal that the majority of Kenyan garment firms do not use E-marketing. According to Stokes and Wendy (2008), the entire influence of the internet on business strategies

for the fashion industry has not yet been realized. According to the results of the interviews, face-to-face and cell phone communication are the primary methods of client interaction. However, there is a need for the small-scale manufacturers of clothing to use the internet more as a tool for communication and as a source of new creative ideas.2.11 Theoretical framework

2.11.1 Diffusion of Innovations Theory

The Diffusion of Innovations hypothesis provides a framework for understanding how innovations—described as ideas, behaviors, or products—are introduced and how society adopts or accepts them (Rogers, 2003). This hypothesis was first presented by Rogers in 1962, and it was most recently restated in the fifth edition of his book Diffusion of Innovations. In this study, the concept of using fashion items manufactured from previously recycled materials to close the recycling loop is introduced. According to Robinson (2009), this idea does not focus on getting individuals to change but rather on how products change or are reinvented to better suit customer demands. Upcycling is all about reinvention. Rogers lists five reasons why consumers are likely to incorporate an attractive product into their lifestyles in order to recreate it. Can recycled clothing answer the following questions:

1. Does the product provide a comparative advantage? Benefits can be financial, socially prestigious, convenient, or satisfying. The adoption happens more quickly the larger the perceived benefit.

2. Is the product consistent with accepted principles and standards?

3. Is the product straightforward and simple to use?

4. Can customers check it out or experiment with it?

5. Are there tangible outcomes? (2003) Rogers

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the study's research design, the study's population, the sample and sampling procedure, the data collection tools, the validity of the tools, the data gathering processes, the data processing and analysis (discussion), ethical considerations, and a summary of the chapter.

3.2 Research Design

The study used a qualitative research approach to look at how to make new clothes out of old ones. Instead of supplying and analyzing statistical data, the qualitative design was used since it allowed researchers to gather descriptive data, provide in-depth descriptions and explanations of the recycling processes and operations under evaluation (Merriam, 2009).

There are several helpful beginning points for research design and ethical considerations in qualitative research in Denzin & Giardina (2007) and Denzin & Lincoln (2011). Participant-led inquiry was developed using Charmaz's (2002) methodological framework of grounded research, and rounded research techniques were used. According to Merriam (2009), the paradigm of qualitative research is evolving toward process quality as opposed to product quality with an emphasis on a person's experience and depiction of real circumstances. Through thorough observation of the participants' environments, procedures, and support systems as well as interpretation of the data, the qualitative research method enables the researcher to interact closely with the participants (Osuala, 2001).

3.3 Population

A study's population is a group of people or things that are known to share certain traits or characteristics. Due to the magnitude of the population, it would take a long time and be expensive for researchers to test every person or object. All dressmakers and tailors who recycle worn clothing are the target audience for this study, which focuses on the processes for making new clothes from recycled clothing at Kantamanto market. Since dressmakers and tailors who participate in the recycling of worn clothing at the Kantamanto market were not registered, it was impossible to provide the precise number of the targeted population due to the nature of the population. Therefore, there was no registration from which to create a population frame. Again, due to the market's widespread nature and the fact that the dressmakers and tailors were not concentrated in one area but rather dispersed throughout the market, it was challenging for the researcher to identify all of the dressmakers and tailors who recycle second-hand clothing and compile a list that would serve as the study's population.

3.4 Sampling Procedure

The researcher uses purposive sampling to obtain the sample. A total sample of twenty (20) dressmakers and tailors were purposely selected for this study. In conducting a research study, it is basically difficult, time-consuming and too costly to test every single entity in the entire population. According to Arikunto (2010: 183), purposive sampling is the process of selecting sample by taking subject that is not based on the level or area, but it is taken based on the specific purpose. This can be collaborated by Mugenda and Mugenda (1999:50) who observe that, purposive

sampling is a sampling technique that allows a researcher to use cases that have the required information with respect to the objectives of his or her study.

Therefore, subjects are hand-picked because they are informative or they possess the required characteristics. A small portion of the population was selected to represent the related elements of the entire units (Graziano & Raulin, 1997). The participants are thus selected based on the purpose and according to the needs of the study.

3.5 Data Collection

The following section outlines data collection and describes the research setting, sample type, recruitment and selection of participants, a synopsis of data sources and a summary of the themes focused on during the interviews (Lunenburg & Irby, 2008).

3.6 Selection Procedure

A criterion sampling method of selection was used to select prospective participants. The inclusion criteria required the participants have between 5 to 10 years of experience in the aspect of recycling used clothing, manufacturing, and retailing recycled clothing under their own label. Each of the participant was interviewed on ‘one-on-one” depending on how long the participants' responses were, it took anywhere from 40 minutes to an hour and a half while they were working. Reliable qualitative data were provided by the participant's vivid descriptions (Maxwell, 2013).

Prior to the actual data collection, plans for the visits were formed with the dressmakers and tailors. Prospective participants were invited to consent to an interview that would last between 40 minutes and one and a half hours once the research's aim was explained to them. The appointments were neatly planned with a time and date. In accordance with the respondents' preferences, the interview

schedules were also set. Prior to the scheduled time for the interview, visits and follow-ups were made to the businesses to remind the authorities of the visits. Additionally, this was done to establish a relationship with the respondents and make personal introductions in order to know where to begin and end the interview. The appropriate respondents received copies of the interview guides to read through before to the actual interview part. They needed this in order to respond to the items in a knowledgeable manner. However, participants were informed that they might leave the study at any time while participating in the interview and any of the information gathered up until the withdrawal would be erased.

For the purpose of gathering pertinent information, the researcher went to each of the recycling businesses situated in the Kantamanto market. The data was gathered over the course of four days. The researcher arrived at the Kantamanto market very early on the first day to familiarize herself with the second-hand clothes industry, do a study of the many stores where these bales of used clothing are sold, and speak with some of the dealers. This made it possible to gather visible data on the purchase and origin of raw materials.

On the second and third days, participants were "one-on-one" interviewed while at work. In addition, data that could be observed was gathered before, during, and after the interview portions. While the participants were still working, some observable data were also gathered throughout the interview parts

Where there is the need for Photographs were taken where there was the need to be taken after seeking permission from the participants for ethical reasons. The observable data gathered through interviews was supported with data and images. The researcher had the opportunity to take part in some of the upcycling activities

throughout the interview. This freed the researcher from having to rely entirely on what respondents stated during the interview and allowed them to immediately observe what respondents do while recycling.

The researcher visited the participants on the fourth day to check the accuracy of the written and audio notes made during the interview. She also took photos of various fashion items that had been upcycled and were being sold at the time.

3.7 Data Processing and Analysis

According to the various research themes, field recordings were played, transcribed, looked over, and analyzed. Each focus group of the business owners and auxiliary staff had their own transcription completed. To guarantee accuracy and consistency, the transcribed data was compared with the field notes that were made during the interviews. A prefix was developed and used to designate each firm in order to convey the data and analysis simply. The individuals were likewise coded using numbers from 1 to 20. In order to illustrate and analyze respondents' demographic information as well as information on their educational backgrounds, frequency and percentage tables were used in descriptive narrative form. Taherdoost (2016) claims that frequency and percentage tables were used since they are frequently built on individual category data. The other study questions were presented and evaluated using the descriptive narrative format. Edited data from observations and relevant digital images that were obtained at the research location were downloaded into computers and used to support or contradict information gathered through interviews. The results and debate were presented with the use of descriptions, tables, and figures.

3.8 Ethical Considerations

All participants received information about the study's purpose in advance. The respondents had the option of using their real names throughout the interview or receiving a pseudonym. This was done to protect their identify from being revealed. In a written form, the responders received a guarantee of confidentiality. For privacy and ethical reasons, supporting employees' demographic information was gathered through one-on-one interviews.

A week before the interview, the respondents were given a copy of the questions that will be covered during the interview. Once more, those who responded had the option to answer questions they felt uncomfortable with or not. Respondents' permission to record their voices was requested before any recordings were made. Again, consent was obtained from respondents before observable data was gathered from them and pictures of their settings were taken for ethical reasons and to uphold the initial confidentially agreements between researcher and respondents. The researcher made no effort to sway the respondents' responses in any way.

The methodologies used in this qualitative investigation were reviewed in the methodology chapter. To put the findings into context, the next chapter gives a brief summary of each participant's product line.

3.9 Production Process in Repurposing Used Apparel

The production process outlines the processes and tools used in execution of the project work. It provides a detailed description and uses of all the tools and materials and how they helped in the project.

A tool is a machine used to create a work. It is a tool made to perform a specific type of job, such as cutting or chopping, utilizing either physical force or a motor. Although they are not a part of the finished product, the materials are. Certain materials, tools, and equipment are required to design a set of clothing. The materials, tools and equipments include but not limited to: sewing machine, scissors, French curve, chalk, pins, razor blade, ironing board, iron, a cutting table, ruler, thread, needle, seam ripper and measuring tape.

This study uses recycling process in creating new apparel from used clothing. Recycling is a way of mending a used material through a special process so that it can become useful again. It is also a change of feature on an article where the new product is seen to serve the consumer better than the former. For example, when a long sleeve blouse is burnt, it can be reconstructed into short sleeve or jeans trousers can be shortened into skirt.

Tips on Recycling

i. Cut the legs from pants to make pants into shorts.
ii. Sew leather or suede patches on worn elbows
iii. Shorten a dress with no waistline into a blouse length garment
iv. Recut a full skirt into a straight skirt
v. Remove collar and sleeves from jackets to make a vest
vi. Extend the length of sleeves, pants skirts with contrast colour bands or cuffs or insert a row of lace or braids.
vii. Dye a faded shirt to restore or change its colour.

Scissors

Seam Ripper

Pins

Pins

Plate 2.2: Tools Used by Researcher

Electric Sewing Machine

Electric Iron

Tape Measure

Thread

Plate 2.3: Tools and Equipment Used by Researcher

Cleaning and Pressing Ripped Fabric

i. Spots and stains were meticulously removed from the old clothing by hand and machine washing.

ii. Some of the used clothing were also cleaned by brushing, sponging and dry cleaned to remove spots.

iii. Pieces were steam pressed using an electronic iron.

Production

During the production stage, physical production of the garments take place. According to Myers (2014), the three processes (Collect and Sort, Reprocess, Recycle, or Remodel to add value in the process and resale) that characterize the process of reusing textile items are depicted in a wheel or circle.

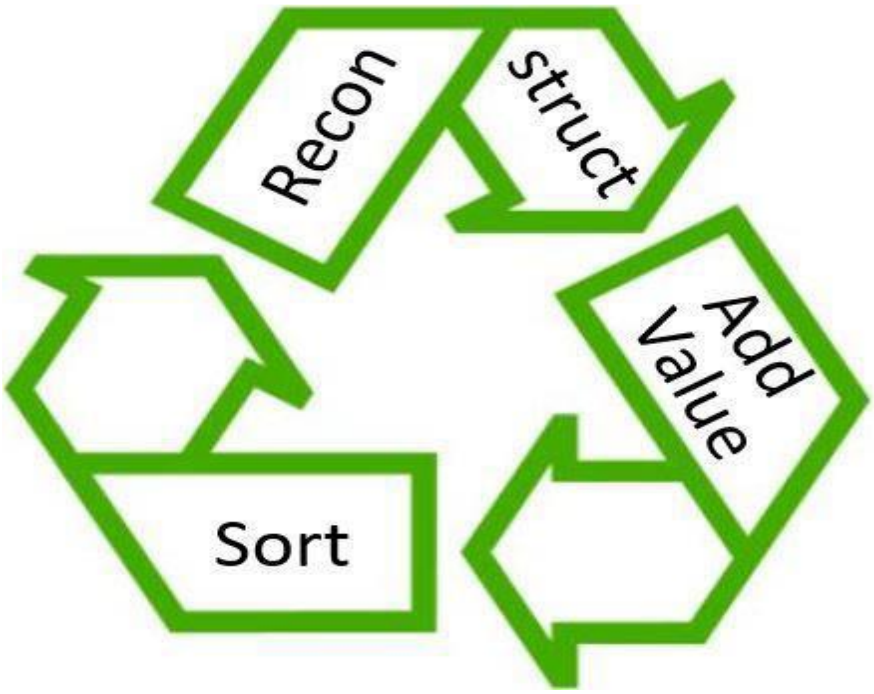

Figure 2.1- Process of Re-using Textile Products
Source: Myers (2014)

i. The different fabrics were organized and sorted on the spreading table after it was agreed to utilize the fabric. Taking into account the dimensions of the vintage garment, the researcher chose the trims and design elements to employ.

ii. Designs that would fit the new garment were sketched up.

iii. A pattern design was chosen to create the new outfit. The new pattern should most often have some stylistic similarities to the old garment. Laying out the pattern will be simpler as a result. If you plan to use another fabric with the older material, it is preferable to choose a pattern or design that will make the combination of color, texture, or pattern straightforward. A different-colored pleat, a lapel or yoke with a different figure design, or insets with a different pattern or color can all be worn with a low waistline.

Plate 2.5: Researcher Making Pattern

Cutting and arranging the pattern.

i. On a cutting table, all the pieces were arranged so that the longitudinal grain runs parallel to the edge. Before the pattern piece was tacked on, the fabric pieces' right sides were marked with pins to indicate the direction of the grain.

ii. The worn areas of the used garments were avoided when arranging it. To give interest to the design, trims were placed over seams. In other instances, piecing was done in areas where it won't be visible, including the underside of the collar, the facing, or the underside of the sleeve.

iii. The fabric pieces were then covered in the pattern. The new outfit was cut out and put together using customary sewing procedures.

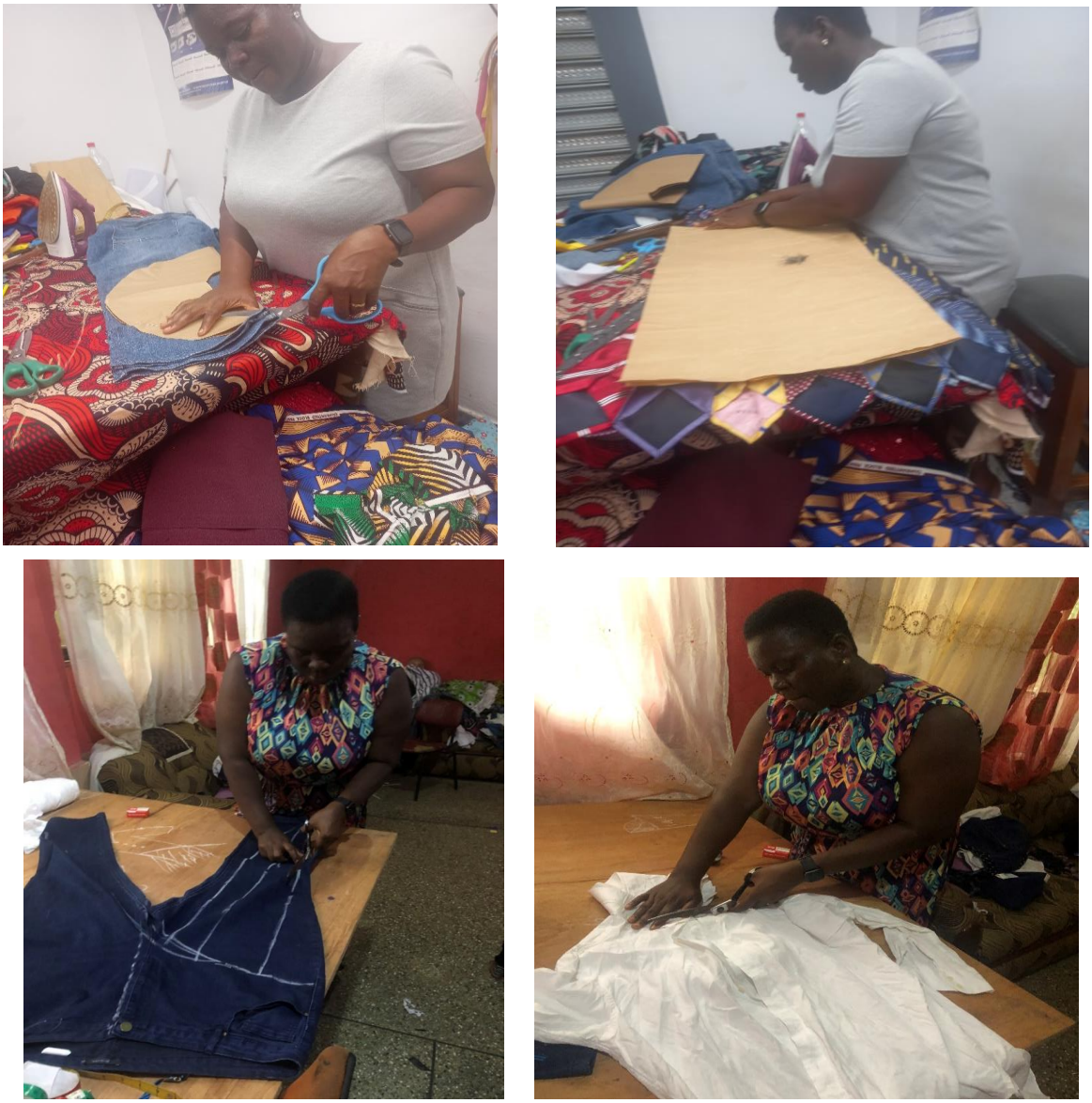

Plate 2.6: Researcher Laying Pattern and Cutting

Sewing Process

After cutting out the fabric, pieces were carefully joined together making sure that the seams and grains are all meeting. The various cut fabrics are sewn together to make a full garment. Since jeans is a heavy fabric, there was no need applying a lining.

Plate 2.7: Researcher Sewing the New Garment

Post Production

Finishing, ironing, packing, and distribution for sale are all tasks carried out in the post-production phase.

i. Defects like open seams, improper stitching techniques, missing stitches, and mismatched threads were checked on all newly finished items. First, this serves as a quality control check for the newly finished garment, and after all corrective actions have been taken, a second inspection is carried out before pressing.

ii. The newly completed clothing was pressed and given a few finishing touches, like thread loose cutting.

iii. The final stage of quality control was checking the clothing to pick out any flawed items.

iv. The finished, freshly made clothing was next sorted by size and design before being packaged for sale. The clothing is wrapped before being dispatched to the shops or stores where it will be sold.

Plate 2.8: Researcher's Finished Repurposed Apparel

Plate 2.9: Researcher's Finished Repurposed Apparel

CHAPTER FOUR

ANALYSIS OF FINDINGS

4.1 Introduction

The analysis of the data gathered from the field is presented in this chapter. Tables and narrative descriptions were used to present the participant data that had been compiled. The results on the other study topics were only presented in descriptive narrative form, while the biographical information on the participants was presented using frequencies and percentages, descriptive narrative forms, and narrative forms.

4.2 Analysis of Results

Section A

4.2.1 Demographic profiles of participants.

Participants' demographic profiles include information on their age, gender, educational background, and occupation. Results for participant age and gender were shown in Tables 4.1 and 4.2, respectively. Results for participant occupational history were shown in Table 4.3, while results for participant educational level were shown in Table 4.

Table 4.1: Distribution of Participants by Age

Age	Frequency (n) (n = 20)	Percentage (%)
20 - 29 years	2	10%
30 - 39 years	9	45%
40 - 59 years	6	30%
50 years and above	3	15%
Total	**20**	**100%**

Source: Field Work, 2023

Results about the participants' ages are shown in Table 4.1. According to the results, the majority of participants were between the ages of 30-39 and 40-49, or 45% and 30%, respectively. In response to the question of whether the participants' ages had any bearing on their decision to engage in the repurposing of discarded clothing, the participants said that obtaining work had become extremely difficult and that they had instead chosen to start their own repurposing business rather than loiter. Others believed that relying on parents at their age does not speak well of them and that they are motivated to start this business. Some participants responded that it is convenient to carry out your own business instead of working for somebody or a corporate institution.

Responses to the question whether the age of participants influence their decision to engage in the repurposing of used apparel;

Tailor 1 aged 47years stated that:

"It is difficult finding a job and I have to be going round everyday with my application letter to various companies seeking for white color jobs. At my age, I think I can do something for myself so I settled for this job to avoid moving around".

Dressmaker 1 aged 35 years said:

"I have completed school as well as my National Service but yet to find work and I cannot continue depending on my parents so I got engaged in the recycling business".

Table 4.2: Distribution of participants by gender

Age	**Frequency (n)** **(n = 20)**	**Percentage (%)**
Male	8	40%
Female	12	60%
Total	**20**	**100%**

Source: Field Work, 2023

From table 4.2 above, out of the 20 participants who took part in the study, 8 participants, representing 40% were male, and the remaining 12 participants, representing 60% were female. The result shows that there were more female than male participants.

In answering the question: with your gender, why not any other business but repurposing of used apparel, almost all the participants stated that daily source of income was assured to cater for their family as compared to earning monthly income. Also, since it is a self-employed business, you do not work under anybody therefore

there is no pressure or stress so you work at your convenience. Furthermore, you can make time for your family.

Responses by tailor 2 in answering the question with your gender, why not any other business:

"I have a family to fend for and as a man of the house, they look to me to provide for their needs. This business therefore creates a source of daily income for me".

*D*ressmaker 2 said:

"I work on my own time without anybody putting pressure on me and also, I get time to attend to my family"

Table 4.3: Results on occupational history

Variable	Frequency **(n)** (n=20)	Percent %
Former Occupation	4	20%
No Former Occupation	16	80%
Total	**20**	**100%**

Source: Field Work, 2023

Responses on occupational history of participants indicated that, 20% before deciding to work in the recycling industry, they had previously had positions in other carriers and professions. This means that some of the participants were laid off employees from the public and private sectors, and some of them had also worked as shopkeepers or as seamstresses in the past. However, due to factors including layoffs, low pay, unsafe working conditions, and commercial failure, they ceased operations and have now made the decision to recycle used clothing. 16 members, or 80%, had

no previous employment and joined the firm to provide a means of support for both themselves and others.

Dressmaker 2 said:

"I was working as stores assistant but the salary was not good so I stopped and joined a friend who was in the recycling business and after becoming a master on my own, I left to start my own business".

Tailor 2 responded that:

"After completing Senior High School, I started dealing in second hand clothing thereafter, I began recycling them into fashion articles. I have no former occupational history".

Table 4.5: Distribution of participants by educational qualifications

	Frequency **(n)**	Percent
Variable	(n=20)	%
Tertiary	3	15%
Senior High	6	30%
Junior High	5	25%
Basic	4	20%
None	2	10%
Total	**20**	**100%**

Source: Field Work, 2023

Results of participants educational background shows that majority (90%) of the participants have some level of education. Six (6) participants representing 30% had

Senior High School education, three (3) participants representing 15% had Tertiary education and two (2) participants representing 10% had no education. The educational background of the chosen participants revealed that the Senior High School graduates were working at the company to make money so they could continue their schooling. However, practically all of the junior high school graduates and those who only completed basic education said they chose to work in the industry since they were unable to continue their education owing to financial limitations.

A dressmaker 2 who has completed Senior High School (SHS) responded to this query with the following statement:

"After SHS, my parents said they do not have money to enable me further my education so I got engaged in this business to raise money for my education".

Tailor 2 who has completed Junior High School (JHS) said:

"I could not further my education and have to make a living so I joined this business to make ends meet".

Section B

This section seeks to examine the techniques employed, environmental, economic and social benefits or drawbacks, and consumers perception of repurposed used clothing as well as explore what potential advancements in technology that could be used to improve the process of repurposing used apparel into new garments.

In answering the question on the techniques that are currently employed in repurposing used apparel into new garments and the effectiveness of these techniques in terms of quality, durability and aesthetics of the final product, some of the dressmakers and tailors said the use The technique of upcycling involves transforming leftovers, waste goods, superfluous items, or undesired items into new materials or

objects that are deemed to be of higher quality, such as those with artistic or environmental significance. In a nutshell, it is the process of transforming waste resources into products of comparable or higher quality. This is a term used to describe the creative reuse of used fabrics in the fashion business. Some people employ remodeling or darning.

Dressmaker 1 said:

I use general repairs for creating new garments from recycled clothing. These include the mending of fallen off seams, replacement of buttons, elastics and zips that are worn out, lengthen of garments by releasing the seam, or adding matching fabric in a decorative manner. Edge lace or pleat can be introduced to the fabric where the joining is made, sleeves and pants can be shortened, worn out collars can also be replaced or removed completely. I also removed stains by using the appropriate stains from grease, tea, coffee, and gravy can be eliminated from clothing items during a regular wash cycle. Pre-soaking in lukewarm water and detergent containing protein-digesting enzymes makes it easier to remove protein stains like egg or blood.

I also utilize the upcycling process to make new clothes out of used clothes. Upcycling is the process of adding value to a material or deconstructed clothing in order to produce something better or more valuable than the original. Upcycling starts with a design and may require a full manufacturing cycle, much like with a new product.

Dressmaker 2 had this to say:

I create new garments from recycled clothing through patchwork. This is to mend holes and tears in a decorative manner. Articles like bedspread, housecoat, table

cover, chair headrest and armrest can be mended in this manner. Patchwork can also be done by cutting the entire out of use articles into pieces for the purpose of using it for total restructuring. Such articles are now used as new household articles.

I cut a piece of fabric that matches the article to be mended and leave seam allowance for necessary turning then I place the wrong side of the cut patch on the right side of the garment pin, tack and machine stitch finish the raw edges. This can also be a form of decoration on an article and this includes the use of embroidery stitches or cutting of appliqué to place on. At times it might be necessary to use adhesive at the back to make the affect area look firmer.

A tailor also said he uses renovation:

This is a way of making an old article to look new. This is in order to enhance its face value and also to improve its appearance. Apart from refreshing faded colour; garments can also be re-dyed into desired and appropriate colour and taste as forms of renovation. Also, faded white can be made into tie and dye or any pattern of batik designs; which is as good as having a new garment. Many garments could be altered, improved and made fashionable with a little initiative. Many garments can be altered by introducing the following. Lengths can always be brought up to date by adjusting hems, shorter or longer, necklines may be cut out, faced or bound; collars and cuffs, smart pockets, belts and trimmings added.

When asked about the environmental, economic and social benefits of creating new garments from recycled clothing, responses from participants reveal that, participants are very much concerned about the environmental benefits of using recycled clothing to create new garments and the willingness to reduce waste and conserve resources.

Tailor 1 said:

"I feel an obligation to save the environment and would do what I can do to conserve resources. I therefore feel very committed to engage in the repurposing use apparel in creating new garments from recycled clothing".

Tailor 2 had this to say:

"By creating new clothes from recycled clothing, I drastically reduce their manufacturing cost if they were to be produced new. Giving an item a new life is a great skill and a wonderful feeling and nothing beats that warm feeling you get inside when you have done something great for the planet and knowing that it supports small local businesses as well as rural village industries".

Participants were unanimous in their response to comparing the creation of new garments from recycled clothing and producing new clothing that it is highly expensive and time consuming in producing new garments.

Tailor 2 responded thus:

"I have to raise enough funds to purchase the fabrics, lining, trimmings, fasteners and other accessories needed to complete the intended garment whilst money needed to purchase the recycled clothing is not so much".

Dressmaker 2 said:

"It is time consuming and tedious to produce a new garment. A lot of decision making had to be taken through measurement, style of the intended garment and a lot of things you have to do before coming out with a new clothing. It is however not so difficult to create a new garment from recycled clothing because the material is

already available. You only have to had your creativity to it to add value and make it trendy. The quality and attractiveness of the materials used also makes the recycled clothing very trendy and appeals to the eye so there is high patronage".

Participants noted that there are several drawbacks in repurposing used apparel. They reiterated that while creating new garments from recycled clothing offers numerous benefits and holds great potential, it also faces several drawbacks.

Dressmaker 1 opined that:

"The quality and availability of materials used for repurposing can vary, potentially affecting the durability and aesthetics of recycled garments an indication of material limitation. Repurposing used apparel also reduces spending within the economy since the raw materials are waste materials which are low cost rather than virgin materials which are expensive therefore there is less spending on repurposed garments".

Tailor 1 responded that:

"Repurposed garments do not always work out the way it is intended and this may be a waste of time, effort and resources which is very frustrating. Repurposed apparel may also make people keep more junk than they truly need. This can also make your wardrobe cluttered with clothing you cannot use or do not need".

Question 7 sought to find out the potential advancements in technology that could be used to improve the process of repurposing used apparel. Technology in this current era plays a significant part in the development and evolution of the reuse of worn clothing. Technology advancements in the recycling of textiles and the fabrication of

eco-friendly materials enable the production of creative recycled products while reducing the environmental impact of the fashion industry.

Participants assert that:

Technologies enable dressmakers and tailors to repurpose worn clothing and change it into new forms with minimum waste, resulting in unique recycled outfits and accessories. Technology used in the repurposing business are not standardized therefore the standardization of equipments and machines used by the dressmakers and tailors in line with those used in the garment production factories could be used to improve the process of repurposing used apparel into new garments. This will mean introducing modern technology and machineries in the production processes in the recycling business by so doing reducing time taken for production and improve the quality and trendiness of the repurposed apparel. The creation of eco-friendly dyes and finishes will help to lessen the negative environmental effects of recycling procedures and ensure the longevity of recycled goods.

With emergence of repurposing used apparel gaining popularity in the economy, the researcher sought to find out how consumers perceive repurposed used apparel. Participants were of varied opinion arising from the negative effects waste is gaining grounds in the country thereby posing environmental concerns as well as economic and social perceptions.

The participants expressed their view that:

Instead of spending a premium on environmentally friendly, green products, consumers believe that by buying reused clothing, they are actively promoting sustainability. Due to a multitude of factors, such as buying repurposed used clothing

is increasingly gaining popularity because to ethical consumption, a desire to live in a green and sustainable environment, and financial insecurity. Products created from recycled clothing are viewed in terms of dangers as well as environmental advantages. Consumers frequently believe that recycled clothing products are inferior to brand-new conventional products. Some clients use recycled clothing as a way to express their individuality or improve their image. Due of aesthetic danger, customers may put off or skip buying products made from recycled clothing. Concerns regarding how well these garments fit or how well they go with other clothing the wearer currently has, which would suggest whether they satisfy the need for a constant self-image, are examples of the aesthetic risk associated with clothing made from recycled material.. During their evaluations of products created from recycled clothing, consumers also encountered psychological risk in the form of emotive emotions, such as fear and regret brought on by the acquisition and usage of the product. On the question about consumers level of demand and willingness to purchase repurposed apparel, the dressmakers and tailors had this to say.

Customers' degree of demand and readiness to buy were found to be significantly influenced by perceived safety, favorable image, attractiveness, and attitudes. When these elements are seen more favorably, buying intentions likewise rise.

Additionally, lower purchase intentions were the result of lower quality perception. Functional risk and contamination risk were also shown to have similar impacts because these risks were known to have a detrimental impact on customer willingness and degree of interest in buying such items. Another factor influencing willingness to buy products created from recycled clothing was their recognizability. The existence of ecolabels was discovered to be a strong predictor of degree of demand.

Importantly, people are more likely to buy things manufactured from recycled clothing if they can immediately identify the products' sustainable qualities.

It was discovered that emotions like anticipated conscience and emphasizing the recycled alternative's prior identity through narrative techniques on the packaging significantly influenced the amount of demand and willingness to pay a premium for goods made from recycled clothing.

Age, income, and gender are three demographic variables that affect how consumers react to products manufactured from recycled clothing, according to demographics that are more likely to reuse worn clothing. Compared to the general population, young individuals are probably more inclined to value products manufactured from recycled clothing and to be environmentally conscientious. Another source showed that age has a considerable detrimental impact on consumers' intentions to buy particular recycled clothing products. Finally, some studies showed a considerable gender difference in preferences for recycled clothing, with women being more inclined to buy these items than men.

Pre-Production

Pre-production is the process of planning and organizing. It involves the arranging and carrying out all of the tasks that have to be completed before production can begin. In the pre-production process, the researcher went to the Kantamanto market to buy the used clothing to be repurposed. The following activities took place.

i. Carefully examine the fabric to determine its condition. To make sure the fabric is firm, it was pushed against the grain and on the bias, and the garment was held up to the light to check for worn-out or weak areas.

ii. Using a single-edge razor blade, small scissors, and a seam ripper, the seams were carefully torn apart. Used clothes was carefully torn in order to avoid cutting or overstretching the fabric. Seam edges were cut off rather than torn when it was anticipated that the new pattern would be smaller than the previous one.

iii. All of the snaps, buttons, zippers, and scraps were put away until the new garment was finished, and the lint from the folds and hems was brushed out.

iv. To check for snags or worn-out places, the used clothing was once more brought up to the light. The locations were marked with chalk in a contrasting hue so that they would stand out as places to avoid when the designs were laid out. All construction-related edges were sewn to prevent fraying or stretching.

v

Plate 2.4: Researcher Buying Used Clothing at Kantamanto Market

CHAPTER FIVE

DISCUSSION OF RESULTS

5.1 Introduction

This chapter discusses the results presented in Chapter 4 using the same order in which the results have been presented under the research questions for easy comprehension.

5.2 Demographic Profile

The findings related to this research question were centered on the gender, age, educational background, and occupational history of dressmakers and tailors.

In light of the respondents' gender, the findings indicated that the used clothing recycling industry is a mixed-gender endeavor. However, the sample was significantly more dominated by women (60%) than men (40%). The study by Fields (2003), which highlighted that due to the open nature of the second-hand clothes trade, all people are welcomed to enter the trade whenever one feels like doing so, has a connection to this discovery. Furthermore, it was found that out of the 12 female participants in the sample, (85%) chose to start an upcycling business in order to maintain their family's income and free up time to care for their family. On the other side, it was discovered that (79%) of the men worked in the industry to make money for their own subsistence as men, to pay for housekeeping, and to support the education of their children. The finding suggested that the participants' decision to start an upcycling business was influenced by their gender. Therefore, a study by Myers (2014) that found that the second-hand clothing trade has enhanced options for women to earn a living provided support for these findings. Myers' study provided

additional evidence that women make up a bigger number of informal merchants, particularly in the majority of the second-hand clothes industry.

Myers continued by saying that women's dominance in informal trade, including the second-hand clothing industry, can be attributed to the fact that they can manage many domestic responsibilities while working in trade, something that is not always possible in formal employment. These elements, together with women's desires to support their families' financial needs, may also contribute to the predominance of women in the upcycling industry and the decision of the majority of women to work in the industry. However, characteristics including having a paid employment, simple access to the market, the ease of starting an upcycling business, and the low startup costs were all linked to the business's balance of male and female employees. Imo & Maiyo (2012) recalled that many people in Sub-Saharan African nations, including Ghana, regard the sales of second-hand clothing as the simplest and an alternative solution to their work difficulties. These people are confronted with the rising cost of living, declining salaries, and increase in unemployment.

Again, the results showed that 90% of the participants had formal education, whereas 10% had none (i.e., 30% Senior High, 25% Junior High, 20% Basic and 15% Tertiary). The majority of them were secondary school graduates, but 4 senior high school graduates (20%) said they were looking to use the money they were making from the upcycling business to further their education. Two of them (10%) said they were in it to make money so they could start a new business. This was made possible by Field's explanation in 2003 that anyone, regardless of formal education, can find work in the second-hand clothing industry. In addition to other factors, such as the inability of the Senior High School graduates to afford their schooling, most participants decided to start an upcycling business in order to support themselves.

The results once again demonstrated that participants' ages affect their decision to engage in the upcycling of used clothing; consequently, it was indicated that even though participants aged 20 and older to 50 and above were involved in the upcycling business, participants aged 30-39 and 40-49 made up the majority of participants (75%), or 45% and 30%, respectively. During the interview, the majority of the participants had mentioned that they needed to be independent and capable of taking care of themselves and their families at their age, which is why they decided to start an upcycling business.

According to Agra et al. (2015), young people typically struggle to discover ways to raise money so they may support themselves and their family's essential needs. The decision of the majority of participants to enter the recycling company was based on the fact that it was the easiest job to come by, as expressed by the majority of participants, and that these obligations, as noted by Agra et al. (2015), will push individuals, especially the youth, towards employment that are easy to come by majority of the participants

According to Fields (2003, paraphrased), in addition to the fact that the second-hand clothes market is open and simple to enter, it also requires less capital than the upcycling market. As a result, anyone with even a small amount of capital can invest in it and start a business. Additionally, the recycling industry creates more opportunities that are open to all groups of people who are of working age by allowing for the demand for specialized labor. According to the results of the responses to questions about the participants' prior employment, 20% of the participants had previously worked in a variety of jobs before ceasing due to retrenchment, low pay, unfavorable working conditions, the failure of a business, etc. They have since made the decision to start a company that recycles used clothing.

The current study's findings are based on those of Fields (2003), who noted from his survey that more than half of the second-hand clothing industry had either recently lost their jobs or had been laid off in the past, while the other half had temporary or seasonal jobs or were employed in low-paying service industries. Given the findings and Fields' claim, it is possible to conclude that the participants had left their previous jobs for a variety of reasons, and that secondhand clothing had offered them the chance to start their own self-employed business as a substitute. This was corroborated by a result made by Agra et al. (2015) who stated that the majority of factory workers who are laid off and looking for work for a living end up in the second-hand clothes industry.

A review of the data showed that dressmakers and tailors use a variety of inventive procedures, such as general repairs, patchwork, remodeling, darning, embroidery, screen printing, and rehabilitation, to transform recycled clothing into new items from old clothing. These techniques enable the dressmakers and tailors to customize and adorn recycled clothes, giving it a distinct, individual look. Recycled clothing can push the limits of conventional fashion design and produce wholly unique designs by experimenting with various approaches.

Fabrics' depreciation value varies depending on the purpose for which they are used, and they may also be susceptible to repeated laundering, creasing, soiling, and abrasion. Fabrics must therefore be handled or cared for in accordance with their obvious issues. Taking good care of things makes them last longer. Clothing is affected by stains, moths, sweat, dirt, and stains. Additionally, how some items are handled helps to maintain shapes, avoid wrinkles, and keep items in good condition. It is important to take proper daily care of the clothing and repair at the early indication of wear in order to keep its appearance.

The results of a study by Taylor (2001), which found that modern man's pursuit of novelty, suitability, comfortability, and quality in textile and clothing applications has resulted in the development of innovative and production of high-performance fibers and fabrics, had a connection to the quality, durability, and aesthetics of the repurposed clothing. It is made more explicit by Claudio (2007) that these textiles are initially employed by the apparel industry for clothing but eventually wind up in farm fields or markets for worn clothing. These results backed up the claims made by recyclable clothes designers that appealing design and high quality are sufficient to draw clients to their products. According to research done by dressmakers and tailors, reusing used clothing has the following positive effects on the environment, the economy, and society.

5.2.1 Reducing Waste and Conserving Resources

Reducing waste is one of recycling's major environmental advantages. Recycling keeps used clothing, textile waste, and deadstock fabrics out of landfills and gives them a new use. This not only aids in waste reduction but also preserves precious resources like electricity and water that would otherwise be used in the manufacture of new clothing.

5.2.2 Lowering the Carbon Footprint of the Fashion Industry

It also aids in reducing the fashion industry's carbon footprint. Recycling lessens the demand for new raw materials and the related greenhouse gas emissions from their extraction, transportation, and processing by reusing existing materials. Additionally, it frequently involves local production, which reduces the transportation-related

environmental effect compared to mass-produced clothing produced in far-off factories.

5.2.3 Promoting a Circular Economy

It backs the idea of a circular economy, which reduces waste and resource consumption by continuously reusing and repurposing things. The fashion industry may move from a linear, "take-make-waste" strategy to a more sustainable, circular one by embracing recycling. This change has the potential to drastically lessen the fashion industry's environmental impact and promote a cleaner future.

The majority of dressmakers and tailors stated their production procedures as "Examine-Rip-Shape-Cut-Sew-Neaten and Iron". This was based on the principles laid out by Myers (2014), who noted that in order to upcycle a previously made piece of fabric or garment, the following steps must be followed: inspect the fabric of the old item of clothing; rip it, obtain a design and pattern, lay out and cut the cloth, follow traditional sewing and garment building processes, then clean and press the torn fabric. Myers merely divides this into three components to represent the recycling of a textile good. Collect and sort the things, put value into the process by reprocessing, remodeling, or reconstructing them, and then sell them.

The most widely used manufacturing tools were measuring tapes, scissors, industrial and manual sewing machines, knitting machines, and metal and electric irons made locally. These findings supported the claim made by Aus (2011), who said that a garment's fabric has to be able to be worn or utilized a second time for an extended period of time before it could be recycled? Because well-recycled clothing or fashion goods provide comparative advantages in terms of economics, social prestige, convenience, and satisfaction, Sheth, Sethia, and Srinivas (2011) contend that this

Australian statement will considerably boost consumer pleasure. Consumers incorporate the upcycling of clothing into their lifestyles thanks to manufacturers. While interacting with the producers, it became apparent that the traders do not follow any particular philosophy of garment manufacture that is common in factories that make garments, despite several stages and characteristics being observed and followed in their production. According to Early Theories of Production (2010), the majority of factories that are now in operation use normative or descriptive theories of production to guide their manufacturing process. As a result, the descriptive theory aids in modifying production to better meet present requirements, while the normative theory of production offers generally applicable information and procedures that may be applied in the management of production.

The objective, according to early theories of production, is to plan new production lines and optimize current ones. If there could have been a way for these traders to adapt to any of these theories or established production methods, the repurposing business and its clients would have been maximized. Applying one of the theories of production is congruent with the creation of tangible products, such as clothing, in order to maximize productivity and produce commodities that are competitive on the market, as stated in the Early Theories of Production.

The outcome showed that recycled clothing had been expertly processed to create skirts, shorts, shirts, baby gowns, ladies' bags, slippers, furniture, etc. This result is related to one made by Myers (2014), who highlighted that old or abandoned clothing might be recycled into any sort of apparel, including those for personal use, the home,

the workplace, and even industrial applications. The findings suggested that creating new clothing is more time- and money-consuming than reusing clothing.

Plate 2.10: Researcher Examining Used Clothing at Kantamanto Market

Although recycling fashion has a lot of potential and offers many advantages, there are also a lot of disadvantages. Recycling is frequently a labor- and time-intensive procedure, making it challenging to scale up manufacturing and satisfy the rising demand for sustainable clothing. The longevity and appearance of recycled clothing may be impacted by differences in the quality and accessibility of the materials used for recycling. Recycling's growth and general acceptance may be constrained by certain buyers' perceptions that recycled clothing is less stylish or of lesser quality than conventionally made clothing. Due to the labor-intensive nature of the process and the use of quality materials, recycled fashion can cost more than mass-produced garments. This may limit the number of people who can purchase recycled clothing.

The necessity for sustainable practices within the fashion business is being increasingly recognized, and despite these shortcomings, the recycling fashion movement is still gaining ground. Recycling clothes has the ability to change the fashion landscape and contribute to a more responsible and sustainable future for both the industry and the world by tackling these issues and coming up with creative solutions. The investigation demonstrates that technology is crucial to the development and expansion of recycling fashion. Technology enables the production of creative recycled items while reducing the environmental impact of the fashion industry, thanks to advancements in textile recycling and the manufacturing of eco-friendly materials.

Technologies for recycling textiles include advances in mechanical and chemical recycling methods that enable the efficient breakdown of textile waste into fibers, which may subsequently be spun into new yarns and fabrics for recycled clothing.

By recycling materials and reshaping them into new forms with the least amount of waste, designers may produce distinctive recycled clothing and accessories thanks to 3D printing and digital fabrication technologies. sustainable dyes and finishes The creation of eco-friendly dyes and finishes enhances the durability of recovered goods and lessens the environmental impact of recycling operations. The expansion of the recycling movement and the promotion of the flow of ideas and resources within the sustainable fashion community are facilitated by the connection between recycling fashion designers, craftsmen, and customers through online platforms and market places.

Products manufactured from recycled clothing may be seen by consumers as "circular," "environmentally friendly," or otherwise "green" in their eyes, which can

result in a positive perception (Calvo-Porral & Lévy-Mangin, 2020; Queiroz et al., 2021). Because they care about the environment and are aware of environmental issues, consumers are becoming more and more "recycled consumers" (Micklethwaite, 2004) and appreciating products manufactured from recycled clothing (e.g., Sun et al., 2018). For instance, the dressmakers and tailors claimed that the environmental impact of products created from recycled clothing is low (Kuah & Wang, 2020). Last but not least, Kim et al. (2021) and Chi et al. (2021) emphasized the various perceptions of value connected to goods created from recycled clothing, including the social value, epistemic value, and environmental value. However, it is improbable that consumers who care about the environment will buy any type of product made from recycled clothing because of the environmental advantages (Rucker, 2009); we must also understand the compromises consumers are willing to make before buying such products after they have also assessed their perceived risks.

Consumers frequently believe that products manufactured from recycled clothes are inferior to new conventional products (Bei & Simpson, 1995; Hamzaoui-Essoussi & Linton, 2014). Products made from recycled clothing are viewed not just in terms of environmental advantages but also in terms of hazards. We use the notion of perceived risk (Mitchell, 1992 in Magnier et al., 2019) to provide consumers' perceptions of potential dangers in a comprehensive way. articles on customers' opinions on goods created from recycled clothing in particular have illuminated the perceived hazards that can prevent the adoption of these substitutes. Understanding the perceived dangers associated with products created from recycled clothing is crucial because they may prevent consumers from buying them (Sun et al., 2018). The perceived risks of products made from recycled clothing include financial risk (Park & Lin, 2020), safety risk (Calvo-Porral & Lévy-Mangin, 2020; Magnier et al., 2019;

Queiroz et al., 2021), performance (or functional) risk (e.g. Kuah & Wang, 2020), and even aesthetic risk (e.g. Kim et al., 2021).

According to Sun et al. (2018), perceived quality is the evaluation of how well a product manufactured from recycled clothing performs in comparison to non-recycled equivalents. Consumers' perceptions of the quality of a product may be lowered if it contains recycled apparel (Achabou & Dekhili, 2013; Bei & Simpson, 1995; As a result of decreasing views of the product's value for money (e.g. Hamzaoui-Essoussi & Linton, 2010), higher performance risk and consequently higher financial risk are created (Kuah & Wang, 2020; Magnier et al., 2019, Mobley et al., 1995; Sun et al., 2018).

Another aspect to take into account when deciding whether to accept products created from recycled clothing is the risk related perceived safety (Calvo-Porral & Lévy-Queiroz et al., 2021; Mangin, 2020; Magnier et al., 2019; Akkucuk, 2011). Uncertainty, which may be a barrier to the purchase choice due to factors like lack of prior experience or knowledge regarding product safety, is one element that is associated to (lack of) perceived product safety (Calvo-Porral & Lévy-Mangin, 2020). Consumers took into account potential health hazards (for sanitary products) when assessing goods created from recycled clothing, according to Akkucuk (2011). Similar to this, Kim et al. (2021) highlighted the sanitary risk of garments created from recycled clothing as a reflection of consumers' belief that such products may not be hygienic and so potentially hurt one's health.

Finally, aesthetic risk is the possibility that a product will not be aesthetically pleasing (Testa et al., 2021) or that it will not be perceived as being in keeping with the consumer's self-image (Kim et al., 2021). Kim et al. (2021) specifically showed that the aesthetic risk of clothing made from recycled clothing may refer to worries about

whether these clothing products are well coordinated with the other clothing the consumer owns, and thus whether they satisfy consumers' need for a congruent self-image, or whether their size is an unsatisfactory fit. Therefore, buyers may postpone or forego purchasing goods made from recycled materials (such as clothing) due to aesthetic risk (Kim et al., 2021; Testa et al., 2021).

However, there are also good emotions that sentimental responses encompass, such as the sensations that customers have as a result of their efforts to lessen environmental harm (Mobley et al., 1995). Because they are making a constructive contribution to a better environment, consumers predict that like and preferring products manufactured from recycled clothing would make them feel good feelings like pride (Adigüzel & Donato, 2021). According to Magnier et al. (2019), expected conscience is the consumer's expectation of how the product will make him or her feel ethically. Last but not least, Tezer & Bodur (2020) referred to the good feelings connected to green products as "warm glow" feelings; the authors highlighted an increase in how much society values consumers as individuals, which leads to these warm glow feelings and subsequently enhances the enjoyment of the associated consumption experience.

Consumers view products manufactured from recycled clothing as a method to enhance their image or fulfill their demand for self-expression in addition to its environmental advantages. Consuming goods manufactured from recycled materials might be seen as a positive social indicator. According to Kamleitner et al. (2019), consumers frequently view products manufactured from recycled materials, particularly products made from clothing, as a way to express themselves and feel distinctive.

Reactions that are unfavorable to products manufactured from recycled clothing are associated with disgust and the perception of a risk of contamination. When

consumers feel uneasy or even disgusted after using specific products that incorporate recycled materials, perceived contamination may have taken place. Customers believe that the product's materials are still tainted as a result, despite the fact that it underwent significant state modifications to arrive at its current form (Meng and Leary, 2021).

Through affective emotions, such as fear and regret brought on by acquiring and using the product, consumers may encounter psychological risk while evaluating products created from recycled clothing (Hamzaoui-Essoussi & Linton, 2010). According to Hamzaoui-Essoussi and Linton (2010) and Sun et al. (2018), psychological risk is the sensation of anguish brought on by expected post-behavioural effects that don't occur.

There was ample proof of the variables affecting consumers' level of desire and willingness to buy recycled clothing-made clothing. The following analysis highlights the key findings. When these factors are perceived to be positive, purchase intentions are more likely to occur (Calvo-Porral, & Lévy-Mangin, 2020; Luu & Baker, 2021; Queiroz et al., 2021); when these factors are perceived to be negative, purchase intentions are more likely to occur (Testa et al., 2021; Wang et al., 2022); and when these factors are perceived to be available, purchase intentions are more likely to increased Additionally, lower perceived quality resulted in a reduction in purchase intentions (Kuah & Wang, 2020; Luu & Baker, 2021; Nguyen et al., 2020; Queiroz et al., 2021; Sun et al., 2018; Testa et al., 2021). Both functional risk and contamination risk, which are known to have a negative impact on purchase intentions, were found to have similar impacts (Magnier et al., 2019; Meng and Leary, 2021).

With variances among product categories, several factors once more suggested that the inclusion of recycled clothing in products had conflicting effects on consumers' willingness to pay (Akkucuk, 2011; Hamzaoui-Essoussi & Linton, 2014).

The capacity to recognize recycled clothes products is a prerequisite for consumer readiness to pay. In addition, emotions like anticipated conscience and emphasizing the recycled alternative's past identity through storytelling techniques on the packaging were found to positively influence consumers' willingness to pay a premium for products made from recycled clothing (Magnier et al., 2019; Kamleitner et al., 2019). According to previous research (Chi et al., 2021; Hamzaoui-Essoussi & Linton, 2014; Magnier et al., 2019), perceived quality and safety are major antecedents of willingness to pay for a variety of product categories. Functional risk and willingness to pay showed comparable impacts (Akkucuk, 2011; Hamzaoui-Essoussi & Linton, 2010, 2014).

Consumer reactions to goods created from recycled materials are also influenced by demographic factors including age, income, and gender. To begin with, younger adults are likely to have a stronger appreciation for products created from recycled materials and higher levels of environmental consciousness, compared to the general population (Hamzaoui-Essoussi & Linton, 2014). Other research revealed a strong negative impact of age on purchase intention for some recycled-materials items (Park & Lin, 2020; Srinivasan & Blomquist, 2009). Intriguingly, a US study on paper towels (Srinivasan & Blomquist, 2009) found that as customers get older, they are less likely to buy paper towels with an eco-label and less inclined to pay more for them. A higher income increases one's likelihood of purchasing clothing in Korea manufactured from recycled materials, according to Park & Lin (2020). In contrast,

research on income in the US found that when a consumer's income rises, the likelihood of buying recycled paper towels declines (Srinivasan & Blomquist, 2009). According to Srinivasan and Blomquist (2009), this appears to go against the conclusions reached by Grasso et al. in 2000 and the notion that consumers in wealthy and affluent nations seek goods with better levels of environmental quality. Finally, certain studies (Achabou & Dekhili, 2013; Grasso et al., 2000) showed a gender difference in preferences for recycled clothing, with women being more inclined to buy such items than males.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter includes an overview of the study, its findings, and suggestions for further research. Thus, the chapter focuses on the significance of the study's results for formulating policies and conducting more research. On the basis of the study's main conclusions and important findings, suggestions are made.

6.2 Summary

This research looked at methods for making new clothes out of recycled clothing in order to explore the practice of reusing worn clothing. Four research questions served as the study's compass. The qualitative research technique was used to find answers to the study questions since it allowed for the collection of pertinent data and information for thorough analysis. The study specifically targeted dressmakers and tailors who recycled used clothing. Twenty (20) participants were chosen for the study, which properly represented the population. As for the tools used for data gathering, cameras, audio-visual recorders, and interview guides were the most used ones. Before, during, and after data collection, ethical consideration was guaranteed. The gathered information was written down, examined, and qualitatively debated. The results were addressed in relation to earlier research under the various research issues.

Fashion designers, the fashion media, retail buyers, and consumers are becoming more interested in recycling, a new activity. The success of this sustainable design strategy has been demonstrated by designers who have been producing recycled clothing and accessories for more than 15 years. While technical advancements move

toward more environmentally friendly means of manufacturing, the idea of upcycling offers dressmakers and tailors the chance to take the lead in using the numerous tons of textile waste created to fulfill the ongoing desire for new fashion. Consumers' desire for novelty has resulted in the current condition of overconsumption and overproduction, which has led to waste, pollution, and toxic emissions as well as a depletion and exploitation of natural resources.

High volumes of textile waste have been viewed as the end of the line for those discarded garments; however, the fashion industry could be utilizing this resource to create well-designed and sustainably sourced upcycled fashion articles.

The current economy can be described as a linear system, in which products. The modern economy may be characterized as a linear system in which goods are produced and then often dumped into landfills, leading to environmental issues including toxic contamination and carbon emissions. Research has revealed that a sizable fraction of discarded clothing still contains when they were disposed of, of the potential productive life they may have had. While we make the transition to future systems that produce zero waste, recycling aims to optimize the end-of-life operations of an otherwise inefficient industrial system.

6.3 Conclusions

Based on the study's findings, it can be deduced that the open nature of the recycling industry, low wages, unemployment, and several demographic traits of dressmakers and tailors drew the majority of the participants to the company.

The findings demonstrated that the second-hand clothing's textiles are of high caliber, distinctive, and appealing. Again, it can be inferred that one does not require a

significant amount of cash to start a recycling firm. The observations and interviews provide proof that, in order to produce recycled clothing, dressmakers and tailors use established processes, tools, and machinery; however, it can be inferred that these tools, machinery, and production procedures are not as uniform as those used by the garment production industries.

A conclusion is reached that the upcycling industry is successful based on the volume of clothing recycled and sold in a week and how numerous the sales points are, as shown in the findings, Therefore, the government and other stakeholders should give it considerable thought.

The interviews and observations further supported the conclusion that the recycling industry is a company that is helping to reduce the nation's unemployment problems by offering work possibilities.

6.4 Recommendations

This qualitative research has recommended the following mitigating factors based on the findings:

1. The government should create an enabling environment for the importation of raw materials used in the recycling business by lowering taxes and reducing import charges to increase the appeal of the business. This would assist the nation's unemployment issues to some level while also improving the standard of living for those who started businesses.

2. The Public Educational Units in collaboration with the media, should embark on educational activities to educate the public on the benefits and the need to recycle clothing. In order for people to accept the usage of such items, recycled clothes should also be publicized. Once again, this will draw non-governmental organizations and local garment businesses to the company. In turn, this will stop the stigmatization linked to the usage of such products, increasing demand for recycled goods.

3. Recommendation for the standardization of equipment's and machines used by the dressmakers and tailors in line with those used in the garment production factories/industries. This will mean introducing modern technology and machineries in the production processes in the recycling business by so doing reducing time taken for production and enhance the recycled clothing's style and quality. Stakeholders in Ghana should be urged and encouraged to adopt the recycling industry, including Non-Governmental Organizations (NGOs), local apparel enterprises, clothing and textile institutions, colleges, and schools.

4. The lack of white-collar jobs has been a concern for the nation, and as a result, young people are being pushed to pursue entrepreneurship. Given the variety of positions accessible in the recycling industry and how profitable the industry is, it is advised that entrepreneur, young people and businesspeople are urged to enter into the recycling industry.

5. The implementation within the fashion design programs more practice and exploration by students that may contribute to the development of more fashion recycling strategies. Workshops led by fashion recycling leaders could be developed and offered at public and private institutions to train fashion designers on recycling.

6.5 Suggested for Further Studies

1. The current study mainly focused on recycling worn clothes by examining methods for making new outfits out of recycled clothing. It is consequently advised that next research might broaden the study to include additional recycling-related issues.

2. This study utilized an interview guide as the instrument for gathering data and just a qualitative technique for analysis. To provide the study with greater statistical support, several methods of quantitative data analysis might be used.

3. Labor expenses must be decreased for the firm to grow and remain competitive. Future technological development would offer the manufacturing tactics required to reduce labor expenses.

4. Future studies should look into how fashion design curricula at postsecondary institutions throughout the world relate to sustainable practices, open-source design, and co-creation models, in addition to fashion recycling.

5. The inclusion of empirical studies to examine novel design principles for redesigning end-of-consumer textile items and how these concepts may be presented to fashion design curricula and to professionals in the fashion industry is another proposal for future exploratory study.

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APPENDIX A

AKENTEN APPIAH MENKA UNIVERSITY OF SKILLS TRAINING AND ENTREPRENEURIAL DEVELOPMENT DEPARTMENT OF FASHION AND TEXTILES EDUCATION

Preamble

By examining the methods for making new garments from recycled clothing, this study aims to investigate the practice of reusing worn clothing.

The subject can be examined better with the help of your open opinion in this interview. Please rest assured that the information you provide will be used just for academic purposes, will be treated with the highest confidentiality, and will not in any way identify your identity. I appreciate your assistance.

Section A: Demographic Profile of Participants

1) Age
2) Gender
3) Occupation history.
4) Educational background.
5) How many years have you being in the recycling business?

Section B:

Interview Guide

1) What techniques are currently employed in the repurposing of used apparel into new garments?

2) How effective are these techniques in terms of quality, durability and aesthetics of the final product?

3) What are the environmental, economic and social benefits of repurposing used apparel?

4) How does this compare to producing new clothing?

5) What are the drawbacks of repurposing used apparel?

6) What potential advancements in technology or novel methods could be used to improve the process of repurposing used apparel into new garments.

7) How do consumers perceive repurposed clothing?

8) What is their level of demand and willingness to purchase such items?

9) Are there specific demographics more inclined towards these products?

10) How do you sell your products?