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**VALUING INTANGIBLE CULTURAL HERITAGE.  
A CONTINGENT VALUATION STUDY OF  
PRESERVING KENTE WEAVING IN GHANA.**

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## **ABSTRACT**

Ghanaian culture has a long and proud textile tradition as one of the most significant features. Kente cloth as an intangible culture heritage has become the best known and most widely recognized of all African textiles. It has a unique ability to induce powerful emotions and symbolizes some of the fundamental human ideas ever imagined in Africa, within Ghana, and can cut across ethnic divisions and inculcates a sense of national pride. While there are many studies valuing tangible cultural heritage, there are only a few valuation studies of intangible cultural heritage and to my knowledge none in a developing country context. This study adds to this scarce literature by documenting the economic value of preserving kente weaving in terms of households' willingness-to-pay (WTP) for establishing kente national centres in Ghana.

A random sample of 415 households in the cities of Accra and Kumasi were interviewed in-person in a Contingent Valuation (CV) survey about their knowledge, attitude, kente buying behaviour, and WTP to preserve kente weaving by establishing kente national centres. Mean WTP/household/year was 47 GHS (10.4 US\$), which constituted 0.3% of the mean annual household income.

Respondents who are young, female, have higher education and say they are likely to visit kente centres have a significantly higher WTP. Further, respondents with a higher level of knowledge about kente weaving, the interpretation of kente symbols and kente cloth in general, have higher WTP. Also, households in Accra, who live further away from the kente weaving towns are willing to pay more to establish these kente centres than households in Kumasi who live in the kente weaving area. However, public education must be embarked on to create awareness on the need to establish these kente national centres. Only 7.2, 8.7 and 11.8% of the respondents have a high level of knowledge about kente weaving, knowledge in interpretation of kente symbols and about kente cloth in general; respectively. Thus, stakeholders should create national programs to preserve kente weaving. A majority of the respondents (51.3%) said, they are likely to visit the centre if they were to be established.

**Keywords:** Contingent Valuation, Payment Card, Intangible Cultural Heritage, Kente weaving, National Centres.

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Heritage deals with, specifically goods which are in general unique, cannot be replicated and are sustained overtime. Political focus on cultural heritage has being heightened because of higher public interest in heritage per se and because many people see heritage as a channel to quicken economic activity in regions with economic problems (Bowitz & Ibenholt, 2009).

UNESCO Convention on the protection of world (UNESCO, 1972), Grenada convention for the protection of European architectural heritage of (Europe, 1985) and the Charter for the Protection of historic cities (ICOMOS, 1987) all recognized both tangible and intangible values of culture heritage as object of protection. UNESCO in 2001 incorporated nineteen new masterpieces categorized as cultural goods linked with orality or the immaterial dimension (Blake, 2001).

Intangible cultural heritage (ICH) involves the expressions, practices, representations, knowledge, and skills that belong to communities and are embraced by given members. It continually transforms and innovates but not static. ICH elements are deeply delved in communities and territories and embody critical factors for creating new global and competitive scenarios (Cominelli & Greffe, 2012).

Furthermore, a proposal by UNESCO gave music, dance, theatre, oral traditions and languages much prominent. It expressed the opinion that craft techniques formed part of the intangible heritage and wished that traditional handicrafts which were often on the verge of vanishing may be added among the activities for preservation as a matter of significance (UNESCO, 1993).

Local economy boomed not only in terms of cultural consumption but increased employment and income when we invest in cultural heritage and other forms of culture. Economists try to estimate the value of various aspects of culture. They are characterized as public goods, thus not traded in an ordinary market (Bowitz & Ibenholt, 2009; Choi, Ritchie, Papandrea, & Bennett, 2010; Dalmas, Geronimi, Noël, & Sang, 2015).

Largely, visitors and non-visitors obtain the economic benefits accumulated from the preservation of cultural heritage. Visitors are willing to pay to access the heritage sites which hold both use and non-use values. Thus, contingent valuation survey can be applied on the site (Navrud & Ready, 2007). Valuation on cultural heritage policy depend on income and on any form of cultural and educational related investments (Mourato & Mazzanti, 2002).

Furthermore, clothing is an integrated part of culture and most societies have developed because they paid attention to their cultures which consists of beliefs, local languages, religious customs as well as costumes in the core of modernization (Gyekye, 1996).

Ghanaian culture has long and proud textile tradition as one of the most significant features. Kente cloth as an intangible culture heritage has become the best known and most widely recognized of all African textiles. It has a unique ability to induce powerful emotions and symbolizes some of the fundamental human ideas ever imagined in Africa, within Ghana, and has the ability to cut across ethnic divisions and instils a sense of national pride (OFORI, 2016). Kente is a visual representation of history, religious beliefs, oral literature, social values and political thoughts (OFORI, 2016).

Kente weaving in Ghana has attracted the attention of both domestic and foreign tourists who visit these weaving towns to learn more about how the cloth is woven. Again, willingness to - pay- estimates should be added to obtain overall outcome of the social benefits to emerge from this intangible cultural heritage.

## 1.2 Problem statement

Cultural heritage concept in recent years, has gone through twofold change and adapting content. Primarily, it has widened the nature and scope of the tangible elements open to inclusion. In addition, it has expanded its range to incorporate goods that are also intangible and its range to incorporate goods that are also intangible and are able to express the idiosyncrasy of a group, reflect the recognition of an identity, or convey the value of a tradition. a kente weaving thus provide one emblematic example of immaterial cultural heritage, since they express artistic innovations but also draws on traditions (del Barrio, Devesa, & Herrero, 2012).



Although, there are several studies on valuation of tangible cultural heritage, but there are only a few studies on valuation of intangible cultural heritage. However, to the best of my knowledge, no studies have been done on valuation of preserving kente weaving as a form of intangible cultural heritage in a developing country context. This tend to preserve its tradition. Therefore, I will use logit and tobit regression analyses to find out the factors that affect the public willingness to pay for kente national centres. These centres will be for demonstrating kente weaving and interpretation of kente symbols.

Thus, my thesis intends to answer the following research questions

1. What are the public knowledge of kente weaving and interpretation of its symbols?
2. How much are the public willing to pay to establish kente national centres in Ghana?
3. What are the key factors that determine the public willingness to pay for kente national centres in Ghana?
4. What are the key factors that determine the amount of money (both zeros and positive WTP amounts) that public are willing to pay for establishing kente centres?

### 1.3 Hypothesis

It was expected that, respondents who have kente cloth (HaveKente) knows the significance of the culture embodied in the cloth and will be willing to pay to preserve these traditions. Therefore, I hypothesized that;

H1: HaveKente has positive and significant effect on willingness to pay for national kente centres.

Respondents who are likely to visit the kente national centres (VisitCentre) will value the essence of kente weaving and its symbols being preserved. They are open to learn to attain knowledge of the kente traditions. Thus, I hypothesized that,

H2: Visit Centre has a positive and significant effect on willingness to pay for national kente centres.

Most younger folks love fashion. Therefore, they will like to have knowledge on how kente is weaved. Also, understand the symbols on the kente cloth that they wear for outdoor activities. Thus, I hypothesised that,

H3: Age has a negative and significant effect on willingness to pay for national kente centres

This study expects female respondents to be more willing to pay than men, since women have more fashion sense. Likewise, they have high purchasing power in terms of patronizing of cloth. Therefore, I hypothesized that:

H4: Men have a negative and significant relationship with willingness to pay for national kente centres

Educated respondents are more enlightened and knowledgeable about the kente cloth and its symbols. They would value the need to establish centres to preserve its traditions in order not to disappear. Thus, I hypothesized that:

H5: Education has a positive and significant relationship with willingness to pay for national kente centres.

According to economic theory, one would expect individuals with higher incomes to have higher willingness to pay value than those with lower income. Thus, the following hypothesis is formulated

H6: Annual Household income has a positive and significant effect on willingness to pay for national kente centres

It is expected that, respondents who have better knowledge on kente weaving, interpretation of its symbols and cloth in general will be willing to pay more to establish and maintain the national centres. The KnowledgeMeanStat is calculated by finding the average score of the knowledge of kente weaving, interpretation of kente symbols and kente cloth. This is because of the similarities in the statements. Thus, I hypothesized that;

H7: KnowledgeMeanStat has a positive and significant effect on willingness to pay for national kente centres.

Generally, it is expected that, the differences in distance between Accra and Kumasi from kente weaving centres will lead to higher WTP for respondents in Kumasi. This is because, kente weaving towns such as Bonwire are closer to Kumasi. I thus hypothesized that,

H8: Distance has a negative and significant relationship with WTP for establishing kente centres

#### 1.4 Literature Review on Preserving Kente as Intangible Cultural Heritage

Traditional costumes are characteristic of an ethnic group or a nation, which normally retains strong elements of the culture from where it originates. These costumes are usually worn in connection with special events and celebrations, mostly those linked with cultural traditions, heritage, or pride (ADZOBU, 2016).

Diverse cultures have diverse costumes and fashion history that spots them. That is, from the old to the modern, using adornments and cloths as means of publicizing their personal status and social age. Therefore, clothes design remains as a significant tool for non-verbal communication mode of the fashion or language, showing the importance that accompany the symbols expressed in them (Jones, 2005; Omatseye & Emeriewen, 2012).

The republic of Ghana is identified with its rich kente cloth which has become synonymous with the country and the country's traditional rulers, who always highlight this rich national asset during festivals and other occasions. The kente cloth is made from silk and cotton fabric. The cloth serves as a source of pride to its owners as it exhibits one's status and position in the community depending on the kind worn (Badoe & Opoku-Asare, 2014; GoG, 2018).

Again, Kente is used as symbol of respect for departed souls during burial rites and ancestral remembrance ceremonies. Its significance as symbol of joviality and prestige is clear during festivals and community celebrations when people proudly wear the best of their kente cloth to display the spirit of the event (OFORI, 2016).

Another stimulating development in the traditional kente is the introduction of diverse colour formations and yarns in weaving (Fening, 2006). That is, colour usage in kente weaving has distinctive importance. Prevalent colours such as white for purity or for the funerals of the very old; black, red, orange and dark colours are used for funerals and mourning; gold for richness; blue and silver for the Queen mother and brown for seriousness of purpose or war (Asmah, Gyasi, & Daitey, 2015).

Tyler (2016) did a study to explore the use and knowledge of Ghana's kente cloth by African and Caribbean and American college students. Two focus groups were held with 20 students who either identified as African, Caribbean, or African American. The results showed that,

students use kente cloth during special occasions, although they have little knowledge of the history of kente.

Tuan and Navrud (2008) conducted a contingent valuation survey of a preservation program for a world heritage site (My Son). Again, the study did a cost-benefit analysis (CBA) of the preservation project and showed how the outcome can be applied to validate investments in cultural heritage preservation. Results show that, the adoption of optimal pricing regime would both increase revenues and reduce congestion at the site. In addition, the level of preservation of My Son will not be optimal for the site nor the society if the investments were only based on entrance fees. Also, the CBA results indicate that, My Son cultural heritage preservation project is an economically viable proposition.

Báez and Herrero (2012) studied an approach which merges contingent valuation and cost-benefit analysis to design a cultural policy aimed at restoring the urban cultural heritage of the city of Valdivia, Chile. That is, Contingent valuation was used to estimate the expected benefits from heritage for both residents and tourists visiting Valdivia. Also, cost-benefit analysis was applied to the findings to evaluate the project to restore the historical ensemble through a non-profit foundation.

Tuan, Seenprachawong, and Navrud (2009) compared the results of two contingent valuation studies involving historic temples in Vietnam and Thailand. The study found that, adjustments for differences in purchasing power parity, income level and income elasticity between the sites substantially increased rather than decreased transfer errors in many instances. It further suggests that, there are other significant factors such as cultural, physical and institutional variables that need to be taken into consideration in explaining the differences in WTP for cultural heritage apart from the normal income and socio-economic variables captured in contingent valuation studies.

Wright and Eppink (2016) did a study to find common drivers of the economic value of cultural and historical heritage by performing a meta-analysis of heritage valuation studies. The study found that, conservation that supports adaptive re use of sites generates higher values than passive protection. Again, heritage sites in areas with higher population density hold higher value. Also, it sought the need for economic valuation on non-built heritage.

del Barrio et al. (2012) conducted a study on evaluating intangible cultural heritage. That is, cultural festival was the case. The study seeks to suggest a proposal for evaluating cultural festivals; estimating the value given to individuals, calculating economic impact and evaluating the efficiency of public institutions.

Lee (2015) used the contingent valuation to determine the economic benefits of Intangible Cultural Hall in Jeonju, Korea. Results show that, the mean WTP for Jeonlabuk-do and other regions were estimated to be 4.53 USD and 4.92 USD respectively. In addition, the study used a spike model to consider these zero responses because 46.7% of respondents stated no to the given bids for the project. The results also reveal that, an increase in the respondent's income will have a direct impact on their interest in cultural facilities.

Several studies have been conducted on cultural heritage as stipulated above. However, there are few studies conducted in valuing intangible cultural heritage. Thus, performing economic valuation on establishing kente national centres is the first study to be conducted on intangible cultural heritage in a developing country context. These centres will be places for demonstrating kente weaving and interpretation of kente symbols.

### 1.5 Structure of the Study

The main objective of my research is to assess the public willingness to pay for the establishment of national kente centres. The entire research will lay emphasis on four research questions. The study is organized into five chapters. Chapter one contains the background of the study along with the problem statement, research questions, literature review and the hypotheses of my study. Chapter two discusses the various economic theories such as consumer theory, environmental valuation technique and estimation strategy. The chapter three describes in detailed the study area, data collection and sample size used in the study. Chapter four provides descriptive analysis from the survey data and discusses the empirical findings. The last chapter presents conclusions with recommendation aspect focusing on some concluding remarks along with a summary of the research findings, some policy implications. It further discusses about the limitations and recommendations for further research.

## CHAPTER TWO

### THEORY

#### 2.1 Consumer's Utility and Measures of Welfare Change

Welfare measures or descriptions of changes in well-being may be explained by concepts equivalent variation (EV), compensating variation (CV), willingness to accept and willingness to pay (Engel, 2008).

Willingness to pay is termed as the maximum amount of income the individual will be willing to pay for an enhancement or to avert a decline in their conditions. Also, WTP is defined using the indirect utility function as:

$$V(p, q^*, m - WTP) = V(p, q, m) \dots \dots \dots (1)$$

Where  $p$  is the price of goods,  $q$  is the public good and  $m$  is defined as income

Where  $q^* \geq q$  and increases in  $q$  are advantageous  $\left(\frac{\partial v}{\partial q_i} > 0\right)$  signifying that higher consumption levels of  $q$  result in higher utility.

Empirical measures of economic surplus such as EV and CV as indicators of welfare change cannot be directly derive, because utility cannot be observed directly. Nonetheless, it can be derived from demand functions indirectly which can be empirically specified using revealed preference data. Moreover, empirical research on measures of WTP and valuation turn to substitutes such as stated preference methods when data on observed actual choices of consumers or products are not obtainable for a couple of reasons (Engel, 2008).

Thus, in the situation of kente national centres in Ghana, where data on observed market choices are not available and so the need to use stated preference methods such as the contingent valuation (Carson & Hanemann, 2005).

#### 2.2 Environmental Valuation Technique

Normally, the focus in valuation studies is in estimating total economic value, which contains not only use values, but also intangible non-use values not usually captured in private market transactions (Choi et al., 2010). Cultural institutions and heritage sites often provide a range of

public contributions (Hansen, Christoffersen, & Wanhill, 1998; Sable & Kling, 2001; Throsby, 2001). Thus, their economic values are not easily determined from transactions in actual markets.

However, stated preference nonmarket valuation techniques can be used to estimate total economic value (Bateman et al., 2002; Bennett & Blamey, 2001; Hensher, Rose, & Greene, 2005; Noonan, 2003). Priorities are given to such methods because cultural goods have the features of nonmarketed goods (Choi et al., 2010). Also, revealed preference approaches are applicable only when data on market activities or transactions are present (Choi et al., 2010). In addition, stated preference method is used to estimate both use and non-use values whilst revealed preference method estimates only use values.

Under stated preference methods, individuals are asked to directly state how much they are willing to pay or accept for a given good through contingent valuation method (CVM). Also, to choose the preferred option among a given set of choices through choice modelling (Noonan, 2003; Venkatachalam, 2004).

CVM have numerous variations that are used to elicit WTP information including, dichotomous choice, auction bidding and payment cards. In this study, payment cards approach was used, whereby respondents were asked to choose from a list of prices the one that best reflects their WTP for the good (Choi et al., 2010).

Moreover, CVM estimates are exposed to different kinds of biases such as hypothetical or strategic bias and starting point bias (Bateman et al., 2002; List, 2001; Loomis, Brown, Lucero, & Peterson, 1996; Neill, Cummings, Ganderton, Harrison, & McGuckin, 1994). Starting point bias happens whereby the respondent is influenced by the initial bids given as part of a range in a survey. Strategic bias occurs where the respondents want a specific outcome. These biases are characteristic in the method, whether applied to natural or urban heritage (Dalmas et al., 2015).

However, the peculiarity of contingent valuation, a direct method, is that it allows intangible or non-use values to be assessed and has been subsequently the most preferred method of assessing heritage (Navrud & Ready, 2002; Noonan, 2003; Provins, Pearce, Ozdemiroglu, Mourato, & Morse-Jones, 2008)

Furthermore, the application of CVM approach to cultural heritage is right because respondents accept the concept of public provision of these goods (Navrud & Ready, 2002). This makes it an apparent choice for valuing cultural heritage goods. Further recommendations by the findings of the NOAA panel of experts on CVM (Arrow et al., 1993), and extensively applied in both developed and developing countries (Mourato & Mazzanti, 2002; Tuan & Navrud, 2007; Whittington, 1998).

### 2.3 Estimation Strategy

The method that was used to assess the characteristic of the public willingness to pay for national kente centres was logit model. To analyse the factors of WTP for national kente centres, the study applied threshold decision-making theory suggested by Hansen et al. (1998) and Pindyck and Rubinfeld (1981). It further stated that, when an individual is confronted with a circumstance to decide in this instance to pay for establishing national kente centres or not to pay he or she has a reaction threshold, which is dependent on a specific set of factors. That is, at a certain value of stimulus below the threshold, no reaction is observed whilst at the critical threshold value, a reaction is stirred. Thus, such happenings are usually modelled using the relationship,

$$Y_i = \beta X_i + \mu_i \dots\dots\dots(2)$$

where  $Y_i$  is equal to one when a choice is made to pay for establishing kente national centres and zero otherwise, this implies,

$Y_i = 1$  if  $X_i$  is larger than or equal to a critical value,  $X^*$  and  $Y_i = 0$  if  $X_i$  is less than a critical value,  $X^*$

That is,  $X^*$  indicates the threshold value of the independent variables ( $X$ ). Equation (2) signifies a binary choice model concerning the estimation of the probability of willingness to pay for establishing kente national centres ( $Y$ ) as a function of explanatory variables ( $X$ ). Also  $\mu$  represents the error term.

Mathematically shown as,

$$\text{Prob}(Y_i = 1) = F(\beta' X_i),$$

$$\text{Prob}(Y_i = 0) = 1 - F(\beta' X_i) \dots\dots\dots(3)$$



That is,  $Y_i$  is the observed response for the  $i$ th observation of the response variable,  $Y$ . This shows that  $Y_i = 1$  for an individual who is willing to pay for establishing kente national centres and  $Y_i = 0$  for an individual who is not willing to pay for kente national centres. Also,  $X_i$  consist of explanatory variables.

However, the logit model applies a logistic cumulative distributive function to estimate  $P$  as follows,

$$P(Y=1) = \frac{e^{\beta'X}}{1 + e^{\beta'X}},$$

By implication  $P(Y=0) = 1 - P(Y=1) = 1 - \frac{e^{\beta'X}}{1 + e^{\beta'X}} = \frac{1}{1 + e^{\beta'X}}$  .....(4)

The method that was used to estimate the parameters was maximum likelihood. Again, the estimation procedure applied resolves the problem of heteroscedasticity and restricts the conditional probability of making the decision to pay for establishing kente national centres lie between one and zero (Awunyo-Vitor, Ishak, & Seidu Jasaw, 2013).

Furthermore, to estimate the determinants of the amount of money the public are willing to pay, the method used is the Tobit model. Also, the model used follows Tobin (1958).

The general formulation of the Tobit model is normally given in terms of index function (Cameron & Trivedi, 2005). This function is shown in (5) as

$$y_i = X_i' \beta + \varepsilon_i$$
 .....(5)

That is,  $y_i$  is the dependent variable, that is, the amount of money, the respondents are willing to pay.  $X_i$  is comprise of independent variables, and  $\varepsilon_i$  is presumed to be an independently and normally distributed stochastic term with zero mean,  $(\mu)$  and constant variance,  $(\sigma^2)$ . Let assume that, there is a perceived utility  $U(y)$  for paying for establishing kente national centres, and a utility  $U(0)$  for not paying for kente national centres (Awunyo-Vitor et al., 2013), then

$y_i = 0$  if  $y_i^* \leq 0$  for not paying for kente national centres,

$y_i = 1$  if  $y_i^* > 0$  for paying for national kente centres.

where  $y_i^*$  is the threshold which is observed only when  $y_i$  or the amount of money individuals are willing to pay is positive or unobserved latent variable. Again, the expected value  $E_y$  of the amount of money they are willing to pay to establish kente national centres is given as;

$$E_y = X_i \beta F(z) + \sigma f(z) \dots \dots \dots (6)$$

Thus,  $X$  is the vector of independent variables;  $F(z)$  is the cumulative normal distribution of  $z$ ;  $f(z)$  is the value of the derivative of the normal curve;  $z$  is given as  $\frac{X\beta}{\sigma}$ ;  $\beta$  is a vector of Tobit maximum likelihood estimates;  $\sigma$  is the standard error of the model (Awunyo-Vitor et al., 2013).

Furthermore, Greene (2008) stated the log likelihood of the Tobit model as;

$$\ln L = \sum_{y_i > 0} -\frac{1}{2} \left[ \log(2\pi) + \ln \sigma^2 + \frac{(y_i - X_i' \beta)^2}{\sigma^2} \right] + \sum_{y_i = 0} \ln \left[ \frac{1 - \phi(y_i - X_i' \beta)}{\sigma} \right] \dots \dots \dots (7)$$

In addition, maximising this likelihood function with respect to  $\beta$  and  $\sigma$  presents the maximum likelihood estimates of these parameters.

## CHAPTER THREE

### DATA AND METHODS

#### 3.1 Sampling Techniques and Methods of Data Collection

The data used in this study was obtained through a WTP survey performed in Greater Accra and Ashanti regions of Ghana in 2018. The surveyed population was all users and non-users of kente cloth.

For the first step, the metropolis was purposively sampled each from both regions. That is, Accra and Kumasi metropolis respectively.

In the second step, suburbs in these metropolis were conveniently sampled based on three income groups. Namely; low, middle, and high-income areas respectively. It was based on income groups just to ensure fairly representation across the metropolis.

Furthermore, respondents were proportionally and randomly sampled from the various income groups areas from these selected metropolis.

Again, key informants such as local authorities and other expert's opinions were included.

As shown in table are the distribution of users and non-users of kente cloth according to the type of income groupings communities in both metropolis.

Table 3. 1 Distribution of Respondents within the Cities Sampled

Region	Cities	Communities	Income Groupings	No. of respondents
Greater Accra	Accra	East Legon/ Airport Residential Area	High Income	71
		Osu/Art Centre	Middle Income	71
		Jamestown	Low Income	66
Ashanti	Kumasi	Maxima/Atonsu/Bomso	High Income	66
		KNUST G/F, B/A Lines	Middle Income	70

KNUST D/E Lines, Low Income Ayigya	71
Total	415

Source: Field Survey, 2018.

In all a total of 415 (that is, at least 200 respondents from each metropolis) were interviewed for the study with the expression;  $n = \frac{N}{1+(e)^2}$ ; where, n is the sample size; e is the level of

precision (5 percent) and finally, N is the population of individuals living in both metropolis (Yamane, 1967). Therefore, the populations of both Accra and Kumasi metropolis are 3,883,678 (GSS, 2010).

That is;  $n = \frac{3883678}{1+3883678(0.05)^2} = 399.95 \approx 400$ ; However, 15 samples were added to make 415

respondents.

The beneath table 3.2 presents some results of the sample characteristics in comparison of the population statistics of Ghana. This to ensure fairly representation of the country's population.

Table 3. 2 Results of Some Socio-economic Characteristics

Variable	Sample	Population
Age	35.6	45.1
Male	47.0	48.2
Female	53.9	51.8
Education levels		
Junior Secondary or Less	21.0	85.2
Senior Secondary/Tertiary	79.0	14.7
Total Sample	415	

Source: Field Survey, 2018 and GSS (2014).

The average age for the sample size and the population is 36 and 45 years respectively. Again, both sample gender variables (47.0 and 53.9 %) are close to the population gender variables (48.2 and 51.8 %). Therefore, the sample size for gender is not skewed. Contrary, the educational levels go in opposite direction. That is, the sample size for senior secondary and above level of education (79%) is very higher than the population statistics (14.7%).

Moreover, the questionnaire comprised of series of sections. It included questions on knowledge and attitudinal statements on kente weaving and interpretation of its symbols. Again, the questionnaire contained questions on the public socio-economic characteristics such as, age, gender, educational levels, income status and so forth. Also, a section obtained information on the public WTP for national centres for demonstration of kente weaving and interpretation of kente symbols.

The WTP questions were design with payment card format. The contingent valuation method questions were included in the survey instrument to assess the public WTP an amount for establishing national kente centres.

Furthermore, the survey questionnaire was pre-tested in some suburbs in Kumasi to validate the logic and content of the questionnaires. Also, focus group discussion was used to check the validity of the data obtained from the individual interviews. Additionally, the questionnaire consisted of both closed-ended and open-ended questions.

In the contingent valuation part of the questionnaire, respondents are presented with various bids and asked to circle the maximum amount they would be willing to pay. This method imitates real life by allowing individuals to shop around for the value which is the most they would pay (Boccaletti & Nardella, 2000; Donaldson, Jones, Mapp, & Olson, 1998). In addition, this method is appropriate for its simplicity (Boccaletti & Nardella, 2000).

Furthermore, a scenario was presented to the respondents before the WTP questions. It states that, the Government of Ghana considers establishing nation centres to demonstrate the weaving of kente and to interpret kente symbols and thus contribute to preserving this tradition in Ghana. Therefore, to ask the respondents the highest amount that they are willing to pay annually over the next years. The amounts range from 0 cedi (GHS) to 100 GHS. Respondents had the option to pay an amount higher than 100 GHS.

Moreover, a face to face interview technique was chosen given the low response rates of mail surveys encountered in developing countries in particular (Engel, 2008). Again, this provided the chance to explain questions which are difficult to answer, to obtain the specific information needed for the study, and to afford the interviewer the opportunity to educate the respondents (Owusu, 2009).

### 3.2 Methods of Data analysis

Descriptive statistics such as frequency distribution tables, mean and standard deviation were used to analyse the socio-economic characteristics of the respondents. Likewise, knowledge and attitudinal statements. Also, the mean willingness to pay amounts were analysed by descriptive statistics.

The logit model was used to examine relationship between willingness to pay and respondents' socio-economic and other characteristics respectively. Classification test was done on the model to predict whether the model was correctly specified. Again, the estimation procedure applied minimized heteroscedasticity problems. Also, multicollinearity test was done.

The relationship between willingness to pay amounts (both zeros and positive WTP) and respondents socio-economic and other factors respectively, were analysed using tobit regression analysis.

The parameters of the models were estimated with the maximum likelihood estimation technique, and the above analyses were estimated by the statistical packages such as SPSS and STATA.

### 3.3 Dependent Variables Definition and Description of Independent Variables

In the logit analysis, the dependent variable called WTP\_binary is dummy. That is whether respondents are willing to pay for kente national centres or not. Again, in the tobit analysis, the dependent variable called WTPMidpoint are midpoints of the bid the respondents choose and the next higher bid. The likelihood that respondents may not reveal their true WTP and lead to biases are high. Thus, midpoint gives the average of the upper and lower bids limits of the respondents. This better gives us close to the true WTP amounts of respondents and therefore minimizes biases. Again, the tobit model relies critically on normality, so the WTP midpoint values were modelled as lognormal (Cameron & Trivedi, 2010). Also, this further reduces the skewness of the WTP amounts data.

Furthermore, some of the independents variables as pertained on the questionnaire were modified in the analysis. For instance, the education and income status were reduced to three and four levels respectively. That is, junior secondary education level or less was used as a base or reference variable in the analysis. Likewise, low income level was used as base or reference variable in the model. In addition, VisitCentre responses were further reduced to two levels.

Also, an average was calculated on the knowledge on kente weaving, interpretation of kente symbols and kente cloth in general likert statements to get an individual score called KnowledgeMeanStats. This was done because of similarities of the kente knowledge statements.

Again, the areas of study, that is Kumasi and Accra metropolis. Accra was used as a dummy variable and takes on a value of 1. Kente weaving towns such as Bonwire and Adanwomase are close to Kumasi metropolis compare to Accra metropolis. Thus, this study will seek to find whether WTP differ between these metropolis due to distance.

Correlation and covariance matrix analysis performed on the independent variables revealed that, multicollinearity is not an issue in these models.

Moreover, there were other socio economic and other variables indicated in the primary study, but they were not included in analysing the WTP estimates.

Specifically, the logit regression explaining the household WTP for establishing kente national centres is specified as:

$$\begin{aligned}
 WTP\_binary = & \alpha_0 + \alpha_1 Age + \alpha_2 GENDER + \alpha_3 Education Senior + \\
 & \alpha_4 Education Tertiary + \alpha_5 Hincome Dontknow + \alpha_6 Hincome Middle \\
 & + \alpha_7 Hincome High + \alpha_8 Knowledge MeanStats + \alpha_9 Havekent New + \alpha_{10} Visit Centre + \alpha_{11} Dis tan ce \\
 & \dots\dots\dots(8)
 \end{aligned}$$

Empirically, the tobit regression explaining the household WTP amount for establishing kente national centres is given as:

$$\begin{aligned}
 WTPMidpoint = & \beta_0 + \beta_1 Age + \beta_2 GENDER + \beta_3 Education Senior + \\
 & \beta_4 Education Tertiary + \beta_5 Hincome Dontknow + \beta_6 Hincome Middle \\
 & + \beta_7 Hincome High + \beta_8 Knowledge MeanStats + \beta_9 Havekent New + \beta_{10} Visit Centre + \beta_{11} Dis tan ce \\
 & \dots\dots\dots(9)
 \end{aligned}$$

Where  $\alpha_0$  and  $\beta_0$  are the constant terms, and  $\alpha'_s$  and  $\beta'_s$  are the vectors of coefficient that have information about the marginal effects.

Further, detailed definition of the variables employed in the empirical models (8-9) are provided in table 3.3

Table 3. 3 Variables Used in the Regression Models

Variable	Definition of Variable	Mean	Standard Deviation
<b>Dependent Variables</b>			
WTP_binary	Willingness to pay for Kente Centre	0.91	0.29
WTPMidpoint	Willingness to pay in Midpoints Amounts for Kente Centre	47.13	289.41
<b>Independent Variables</b>			
Age	Age of respondents in years	34.7	10.9
GENDER	1 if respondent is male, 0 otherwise	0.49	0.50
EducationSenior	1 if respondent has senior secondary education, 0 otherwise	0.39	0.49
EducationTertiary	1 if respondent has tertiary education, 0 otherwise	0.44	0.49
HincomeDontknow	1 if household dontknow income, 0 otherwise	0.34	0.48
HincomeMiddle	1 if household has middle income, 0 otherwise	0.20	0.40
HincomeHigh	1 if household has high income, 0 otherwise	0.29	0.45
KnowledgeMeanStats	Average scores of knowledge of kente statements	2.69	1.36
HavekentNew	1 if respondent has kente cloth, 0 otherwise	0.62	0.49



VisitCentre	1 if respondent will likely visit kente centres, 0 otherwise	0.92	0.28
Distance	1 if respondent from Accra, 0 if respondent from Kumasi	.48	.50

GHS is the unit of currency in Ghana. At the time of the survey, GHS4.47 = US \$1

Source: Field Survey, 2018

A total of 307 observations out of the overall total of 415 were used in the models. This excluded respondents who gave zeros and don't know responses to the willingness to pay bids. This constituted about 108 respondents. About 91% of respondents were willing to pay for the establishment of kente weaving and demonstration centres. The average of respondents interviewed was about 35 years.

Again, males (49%) and females (51%) were near equally represented in the survey. Furthermore, respondents educational level was measured at three levels; junior secondary or less as reference variable, senior secondary, and tertiary education respectively. Most of the observations in the models had higher level of education, that is senior secondary (39%) and tertiary education (44%). Moreover, about 34% of respondents did not know their household income. That is in a majority as compare to high and middle household income levels.

Over 60% of the respondents interviewed had a cloth made of kente. Also, respondent's knowledge level of kente weaving, interpretation of kente symbols and kente cloth in general was low (2.7 mean score). Also, 92% of the respondents are likely to visit the kente national centres when established.

Finally, 48% and 52% of respondents sampled were from Accra metropolis and Kumasi metropolis respectively.

## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

This chapters covers public level of knowledge of kente in general. Also, the likelihood of visits if the national centres are established. Again, public mean WTP to pay and the empirical results on WTP with their characteristics are presented.

#### 4.1 Public Level of Knowledge on Kente

The definition of the knowledge level was defined by the number of public responding to the top scale levels in ascending order.

Table 4.1 Levels of Public Knowledge on Kente

Knowledgeability statements	Knowledgeability Levels (%)						
	1	2	3	4	5	6	Total
Kente Cloth in General	21.2	19.3	20.7	19.5	7.5	11.8	100
Kente Weaving	52.3	18.3	10.8	6.3	5.1	7.2	100
Kente Symbols	32.5	17.1	18.6	14.5	8.7	8.7	100
N= 415							

Source: Field Survey, 2018

Surprisingly, majority of respondents interviewed had little knowledge on kente weaving (7.2%) and interpretation of its symbols (8.7%) as presented in table 4.1. Similarly, the public had little knowledge of kente cloth in general (11.8). This results concurs with the findings by Tyler (2016) which indicated that respondents had little information on the history of kente.

#### 4.2 Household Likelihood of Visits to Kente National Centres

Results showed that, if the national centres are established for kente weaving and interpretation of the symbols as shown in table 4.2.

Table 4. 2 Visitation to Kente National Centres

Visitation Statements	(%)
I will certainly visit one of the National Centres	51.3
I am likely to visit one of the National Centres	18.6
I may visit one of the National Centres	17.3
I may not visit one of the National Centres	5.1

I am not likely to visit one of the National Centres	5.8
I will certainly not visit one of the National Centres	1.9
Total	415

Source: Field Survey, 2018

Majority of the respondents will likely visit these centres. A smaller percentage of respondents (1.9%) will certainly not visit the national centres if it were to be established.

#### 4.3 Estimating Willingness to Pay for Establishing Kente National Centres

A total of 415 respondents were interviewed in the survey. About 12 % of the sample did not give any response to the WTP amount to choose as presented in table 4.3.

Table 4. 3 Mean WTP Amounts for Establishing Kente National Centres

WTP Amounts	With Protest Zeros		Without Protest Zeros	
	WTP(GHS) )	WTP(GHS)- Midpoints	WTP(GHS) )	WTP(GHS)- Midpoints
Mean	36.3	36.9	42.8	47.1
Standard Deviation	265.9	265.9	289.5	289.4
Median	10	12.5	10	12.5
Minimum	0	0	0	0
Maximum	5000	5000	5000	5000
Sub Total	365		307	
% of Zeros Response	20.2			
% of Protest response	26			
%of.Don't Know Response	12.0			
Total	415			

Note: 1US Dollar = 4.47 Ghana Cedi (GHS) at the time of the survey

Source: Survey Data, 2018

However, 20.2% responded paying zero amounts and 26% WTP answers were protest responses. Moreover, with regards with midpoint values, the sample with protest zeros responses recorded 37 GHS (8 US\$) for the establishment of kente centres per household per annum. Thus, the mean WTP for the establishment of kente centres is 47 GHS (10.4 US\$) per

household per annum without protest zeros. That is, when protest zeros responses are taken from the observations, we get a much higher and better mean WTP estimates. In addition, the mean WTP amount constituted about 0.3% of the mean annual household income (16,644.59 GHS) of Ghana (GSS, 2014). Again, the mean WTP amount indicated about 0.9% of mean annual per capital income of Ghana (GSS, 2014). This implies that, respondents WTP bids are quite low as compare to their mean annual household and per capital income per year.

#### 4.4 Empirical Estimates of Willingness to Pay for Establishing Kente National Centres

The logit regression results of factors influencing willingness to pay for establishing kente centres in Ghana are presented in table 4.4. This explains whether respondents are willing to pay for establishing kente centres or not. The first model explained the household WTP with both income and education variables. The second model estimates had no education variables. Also, the third model excluded the income variables. Again, the fourth model estimates included Distance variable.

Table 4. 4 Logit Regression Results of Factors Affecting Household Willingness to Pay for Establishing Kente National Centres

Variable	Model 1	Model 2	Model 3	Model 4
	Coeff (S.E)	Coeff (S.E)	Coeff (S.E)	Coeff (S.E)
HavekentNew	-0.308 (-0.499)	-0.347 (-0.491)	-0.282 (-0.495)	-0.415 (0.506)
VisitCentre	2.330*** (-0.551)	2.379*** (-0.545)	2.415*** (-0.541)	2.162*** (0.563)
Age	0.003 (-0.023)	-0.012 (-0.020)	0.002 (-0.022)	0.003 (0.023)
GENDER	-0.975** (-0.483)	-0.759* (-0.455)	-0.969** (-0.469)	-0.870* (0.492)
EducationSenior	-1.335** (-0.647)		1.198** (0.614)	1.450** (0.667)
EducationTertiary	1.043* (-0.653)		0.895* (0.567)	1.323** (0.697)
HincomeDontknow	-0.077 (0.677)	0.110 (0.673)		0.152 (0.719)

HincomeMiddle	-0.574 (0.696)	-0.271 (0.676)		0.251 (0.844)
HincomeHigh	-0.367 (0.758)	0.056 (0.673)		0.517 (0.903)
KnowledgeMeanStats	0.131 (0.173)	0.113 (0.177)	0.133 (0.171)	0.077 (0.182)
Distance				1.339** (0.705)
Constant	0.025 1.203	1.093 1.073	-0.197 1.068	-0.892 (1.323)
Observations	307	307	307	307
Pseudo R2	0.149	0.126	0.144	0.169
Loglikelihood	-79.781	-81.933	-80.244	-77.910

\*\*\* Significant at 1%, \*\* Significant at 5%, \* Significant at 10%

Source: Field Survey, 2018

The VisitCentre variable shows positive and significant relationship with willingness to pay for kente centres for all models at 1 percent. The marginal effect (table 4.5) revealed that, a unit increase in visits to the centres will increase the likelihood of person's willingness to pay for the establishing kente national centres by over 30%. This means that, people who are likely to visit the centres if established will be willing to pay a premium. Although income and education models have a slightly higher impact on WTP than the full model. This is in line with hypothesis that, respondents who are likely to visit the centres will be more willing to pay.

The coefficient GENDER variable is negative and significant at 5% for model 1 and model 3 and 10% level of significance for model 2 and model 4. The result signifies that, female respondents have a higher likelihood of willingness to pay for kente centres as compare to their male counterparts by 6% for models 1 and 3 respectively. In addition, females have the higher probability to pay for establishing of kente centres by 5% for models 2 and 4 respectively. The result agrees with the hypothesis set. This is especially so, because in Ghana women spend more on clothing than their male counterparts. That is, women have a lot of fashion sense than men.

The coefficient of EducationTertiary was positive and statistically significant at 10% and 5% in the WTP model 1 for establishing kente centres. The marginal effect showed that, whether the respondents had tertiary education would increase the likelihood of their willingness to pay for kente centres by 8% than Junior secondary or less education as base variable for model 1 and 4. This means that, as individuals receive education, they need to understand the essence of preserving traditions and culture. Surprisingly, the EducationSenior variable is negative and significance at 5% level of significance for model 1. This implies that, whether respondents had secondary education will decrease the likelihood of their willingness to pay for national kente centres by 8% compare to junior secondary or less education.

The coefficients of EducationSenior variable shows positive and significant relationship with willingness to pay for national kente centres at 5% level of significance respectively for model 3 and 4 respectively. Again, the coefficients of EducationTertiary variable was positive and statistically significant at 10% and 5% for model 3 and 4 respectively. The marginal effect revealed that, whether respondents had senior education would increase the likelihood of their willingness to pay for national kente centres by 7% Likewise, whether respondents had tertiary education increases the likelihood of their willingness to pay for national kente centres by 5% and 7% for models 3 and 4 respectively. The higher the education, the higher the probability of the person's willingness to pay for national kente centres. The higher the education, the higher they tend to understand the need to establish centres for demonstration of kente weaving and interpretation of the symbols.

Furthermore, the coefficient of the Distance variable shows a positive and significant relationship with WTP for kente centres at 5% level of significance. The marginal effect indicated that, respondents in Accra would increase the likelihood of willingness to pay for kente centres than respondents in Kumasi by 8%. This is in contrary with the hypothesis formulated. This can be attributed to Accra having the highest mean annual household and per capital income in the country (GSS, 2014). In addition, people in the capital city are more concerned about fashion and for matter, kente. Again, Accra dwellers are more concerned about their tradition, (their roots and kente symbols) as they come from other parts of the country and thus will be willing to pay more to preserve kente. Moreover, there are multiple kente weaving centres in Ghana. For instance, there are even few kente weaving centres in the capital city. Also, Kente is worn by people across the country, so geographical location may not affect their WTP to preserve this tradition.

Table 4. 5 Marginal Effects Results of Factors Affecting Public Willingness to Pay for Establishing of Kente National Centres

Variable	Model 1	Model 2	Model 3	Model 4
	dy/dx	dy/dx	dy/dx	dy/dx
HavekentNew	-0.018	-0.022	-0.017	-0.023
VisitCentre	0.316	0.343	0.339	.267
Age	0.000	-0.000	0.000	0.000
GENDER	-0.060	-0.051	-0.062	-0.051
EducationSenior	0.075		0.069	0.076
EducationTertiary	0.062		0.054	0.074
HincomeDontknow	-0.005	0.007		0.008
HincomeMiddle	-0.041	-0.019		0.013
HincomeHigh	-0.024	0.003		0.027
KnowledgeMeanStats	0.007	0.007	0.008	0.004
Distance				0.078

Source: Field Survey, 2018

The HaveKentNew, Age, KnowledgeMeanStats and income levels variables were insignificant in the willingness to pay logit models for establishing national kente centres.

#### 4.4.1 Logit Model Model Diagnosis

The pseudo R2 among the three models are slightly different. But all models predicted over 12% of the variability of WTP. The log likelihood of ratio (LR) statistics for all models are significant at one percent, implying that at least one of the variables has coefficient different from zero. Thus, the logit models used have integrity and should be retained.

One measure of goodness of fit is the percentage of correctly classified observations based on classification tests.

First, the overall rate of correct classification (Appendix) is estimated to be 91.86% for model 1 with 99.64 % of the WTP group correctly classified (sensitivity) and only 14.29 % of not WTP group correctly classified (specificity). Thus, it does a good work when predicting of WTP for establishing national kente centres. Thus, it is a good model and should be retained

Again, the overall rate of correct classification is estimated to be 90.88% for model 2 with 98.92 % of the WTP for establishing kente centres group correctly classified (sensitivity) and only 10.71 % of not WTP group correctly classified (specificity). Thus, it does a good work when predicting when WTP for national kente centres. Therefore, it is a better model.

Also, the overall rate of correct classification is estimated to be 92.18% for model 3 with 100 % of WTP for establishing kente centres group correctly classified (sensitivity) and only 14.29 % of not WTP group correctly classified (specificity). Thus, it does a good work when predicting when WTP for national kente centres. Thus, this is a better model.

Furthermore, the overall rate of correct classification is estimated to be 92.51% for model 4 with 100% of the WTP group correctly classified (sensitivity) and only 17.86% of not WTP group correctly classified (specificity). Therefore, it does a good work when predicting when WTP for national kente centres. Thus, this is a good model.

#### 4.5 Empirical Results on the Factors that Affect the WTP Amounts for Establishing Kente National Centres.

The estimates on factors influencing how much household are willing to pay for establishing national kente centres in Ghana are presented in table 4.6. The Tobit model was used, because some of the response variables are censored. In addition, the dependent variable includes both zeros and positive WTP amounts. The first model explained the amount, households are willing to pay with the inclusion of all independent variables. Also, the second model estimates had no education variables. Likewise, the third model excluded the income variables. Again, the fourth model included the Distance variable.

Table 4. 6 Tobit Regression Results of Factors Affecting Public Willingness to Pay Amounts for the Establishment of Kente Centres

Variable	Model 1T	Mode 2T	Model 3T	Model 4T
	Coeff (S.E)	Coeff (S.E)	Coeff (S.E)	Coeff (S.E)
HavekentNew	-0.038 (0.167)	-0.079 (0.169)	-0.003 (0.166)	-0.115 (0.166)
VisitCentre	1.406*** (0.285)	1.441*** (0.289)	1.481*** (0.284)	1.316*** (0.281)



Age	-0.006 (0.007)	-0.012* (0.007)	-0.007 (0.007)	-0.006 (0.007)
GENDER	-0.156 (0.156)	-0.119 (0.157)	-0.175 (0.155)	-0.102 (0.154)
EducationSenior	0.667*** (0.227)		0.602*** (0.224)	0.720*** (0.224)
EducationTertiary	0.277 (0.232)		0.166 (0.218)	0.378* (0.231)
HincomeDontknow	0.006 (0.216)	0.057 (0.218)		0.095 (0.214)
HincomeMiddle	-0.338 (0.241)	-0.257 (0.242)		0.103 (0.273)
HincomeHigh	-0.272 (0.239)	-0.241 (0.227)		0.263 (0.287)
KnowledgeMeanStats	0.206*** (0.058)	0.198*** (0.059)	0.204*** (0.058)	0.185*** (0.057)
Distance				0.704*** (0.217)
Constant	0.923 (0.457)	1.462 (0.415)	0.803 (0.430)	0.417 (0.477)
N	307	307	307	307
Pseudo R2	0.052	0.042	0.048	0.062
Loglikelihood	-500.516	-505.673	-502.430	-495.300

\*\*\* Significant at 1%, \*\* Significant at 5%, \* Significant at 10%

Source: Field Survey, 2018

The coefficient of VisitCentre variable shows positive and significant relationship with the amount of money the respondents are willing to pay for establishing kente national centres at 1% level of significance for all models. As the number of visits increase by one unit, the amount of money individual's will be willing to pay would increase by 1.4 units while holding all other variables in the model constant.

The coefficient of the KnowledgeMeanStats variable was positive and significant relationship with the amount of money individuals are willing to pay for national kente centres at 1%

significance level for all models. A unit increase in knowledge of kente weaving, interpretation of the symbols and cloth in general are likely to increase the amount of money the respondents are willing to pay for establishing kente national centres.

The Age variable had negative and statistically significant relationship with WTP amounts at 10% level of significance for model 2T. This means that, younger respondents are willing to pay higher amount of money for establishing national kente centres.

Again, the coefficient of senior secondary education variable was positive and significant relationship with WTP amounts at 1% level of significant for all models. Also, tertiary education variable shows positive and significant relationship with WTP amounts at 10% significance levels for model 4T. The higher the education level, the higher the likelihood of the individual's willingness to pay an amount of money for establishing kente national centres.

Moreover, the coefficient of the Distance variable show a positive and significant relationship with WTP for kente centres at 1% level of significance. The general demand of goods and services in Accra metropolis (capital city) is high than all the other metropolis. This can be attributed to Accra having the highest mean annual household and per capital income in the country (GSS, 2014). Thus, it is expected that the WTP amounts differ between Accra and Kumasi. That is, residents in Accra are likely to pay higher amounts than their counterparts in Kumasi. In addition, people in the capital city are more concerned about fashion and for that matter, kente. Again, Accra dwellers are more concerned about their tradition, (their roots and kente symbols) as they come from other parts of the country and therefore will be willing to pay more to preserve kente. Moreover, there are multiple kente weaving centres in Ghana. For instance, there are even few kente weaving centres in the capital city. Also, Kente is worn by people across the country, so geographical location may not affect their WTP to preserve this tradition.

The HavekentNew, Gender, the income levels, and Age variable for models 1T, 3T and 4T show insignificant relationship with the amount of money the respondents are willing to pay for national kente centres.

#### 4.5.1 Tobit Model Diagnosis

The pseudo R2 among the three models are slightly different. The independent variables for all models explain about 5% of the variation in the WTP midpoints values in the sample. The log likelihood of ratio (LR) statistics for all models are significant at one percent, implying that at least one of the variables has coefficient different from zero. Thus, the tobit models used are appropriate and should be maintained.

#### 4.6. Model Robustness Checks

The estimates on characteristics influencing WTP positive amounts for establishing national kente centres in Ghana are shown in table 4.7. Therefore, when the dependent variable for model 4T change to only WTP positive values. The results indicate that, the coefficients and the significance levels are the same.

Table 4. 7 Tobit Regression Results of Factors Affecting Public Willingness to Pay Positive Amounts for the Establishment of Kente Centres

Variable	Coefficient	Standard Errors
HavekentNew	-0.049	-0.133
VisitCentre	0.535**	0.266
Age	-0.007	0.006
GENDER	0.109	0.122
EducationSenior	0.483***	0.183
EducationTertiary	0.153	0.188
HincomeDontknow	0.093	0.168
HincomeMiddle	0.042	0.216
HincomeHigh	0.116	0.227
KnowledgeMeanStats	0.183***	0.045
Distance	0.451***	0.411
Constant	1.655	0.411
N	279	
Pseudo R2	0.057	
Loglikelihood	-379.056	

\*\*\* Significant at 1%, \*\* Significant at 5%, \* Significant at 10%

Source: Field Survey, 2018

Thus, just one model robustness checks imply that, the models used are valid. The factors that affects both WTP zeros and positive amounts are the same factors that influence positive WTP only values.

#### 4.7 Hypothesized Signs Results Checks

The hypothesis VisitCentre variables was accepted for both logit and tobit models as presented in table 4.8. Also, the hypothesis signs for education variables in all models were accepted.

Table 4. 8 Logit and Tobit Regression Results Hypothesized Checks

Hypothesized Variable	Expected Signs	Decision to accept or reject (True or False) (Tobit models with the T's)							
		Mode 1	Mode 2	Mode 3	Mode 4	Mode 1T	Mode 2T	Mode 3T	Mode 4T
H1: HaveKente	+	False	False	False	False	False	False	False	False
H2: VisitCentre	+	True	True	True	True	True	True	True	True
H3: Age	-	False	False	False	False	False	True	False	False
H4: Male	-	True	True	True	True	False	False	False	False
H5: Education	+	True		True	True	True	True	True	True
H6: Household Income	+	False	False		False	False	False	False	False
H7: Knowledge MeanStat	+	False	False	False	False	True	True	True	True
H8: Distance	-				False				False

Source: Field Survey, 2018.

Furthermore, the hypothesized signs for the KnowledgeMeanStat variables in the tobit models was accepted. Also, the male variable hypothesis for the logit models was accepted. Moreover, the age hypothesis sign for tobit model 2T was accepted.

## **CHAPTER FIVE**

### **CONCLUSION**

This study presents the findings of household's knowledge level on kente weaving, interpretation of kente and kente cloth in general. It further explores the likelihood of visits to the kente national centres if they were to be established. Again, it discusses the average amount individuals are WTP and examine the factors that affect household's WTP for establishing kente national centres using the logit model. In addition, the research sought to find the likely factors that will influence household WTP amounts for establishing kente national centres using the tobit model. These centres will be used to demonstrate kente weaving and interpretation of kente symbols.

To my knowledge, no valuation studies have ever been done on intangible cultural heritage in a developing country context. Therefore, assessing the public WTP for establishing kente centres is the first study to be conducted.

This is a primary study with 415 observations which was done from both Accra and Kumasi metropolis of Ghana. A contingent valuation survey with a payment card was used to estimate WTP for establishing kente national centres. The study finds that, majority of the respondents have little knowledge about kente weaving and the interpretation of kente symbols. However, most respondents reported that, they are likely to visit the kente national centres if they were to be established.

The effective sample size for calculating WTP was 307 after protest zeros and don't know responses had been eliminated. The mean WTP estimate is 47 GHS (10.4 US\$) per household per annum, which constitutes about 0.3% of the mean annual household income.

The study found out that, female respondents have a higher likelihood of willingness to pay for kente centres as compare to their male counterparts. Also, individuals who are likely to visit the kente centres if established will be more willing to pay a premium. Again, the higher the education level of respondents, the higher the willingness to pay for establishing kente centres. Moreover, contrary to what is expected under Distance variable, Accra respondents who live far from kente weaving towns are more willing to pay as compare to their Kumasi counterpart who live near. This is because, people who live in Accra are more concerned about their

tradition, as they come from other parts of the country and thus will be willing to pay more to preserve kente. Again, there are multiple kente weaving centres in Ghana. Also, geographical location may not affect their WTP, since kente is worn by people across the country.

Again, it can be seen from the results that, respondents who are likely to visit kente centres will have higher WTP amounts. Furthermore, the higher the education levels, the higher the WTP amounts. Also, respondents level of knowledge on kente will influence the WTP amount for establishing kente centres. In addition, younger respondents are willing to pay higher amounts to establish kente centres in Ghana.

The scope of this thesis, like all others, is and had to be limited. A limited number of communities and metropolis were examined in both regions of the study. Future studies should be replicated for other communities, districts, and regions to get a more representative estimate of WTP for preserving kente among households in Ghana overall. Also, the collected data on kente weaver's willingness to accept compensation to demonstrate their techniques at the centres should be analysed in the future.

Furthermore, some of the variables tested in the WTP models were not statistically significant which could be due to the small sample size, due to limited time and budget for surveys. Thus, to address this statistical limitation, future studies should consider a larger sample size to increase the degree of freedom.

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**APPENDIX A**

Map of Ghana Showing Accra and Kumasi



**APPENDIX B**

**Kente Weaving in Bonwire Ghana**

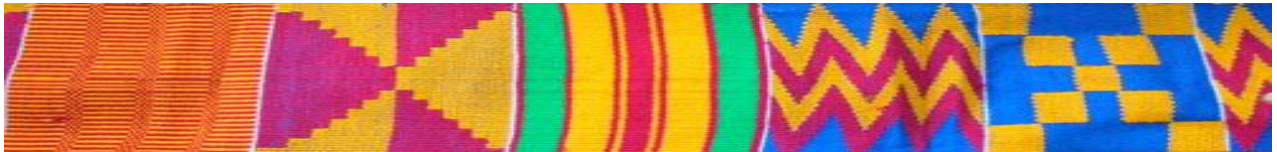


Source: Field Survey, 2018

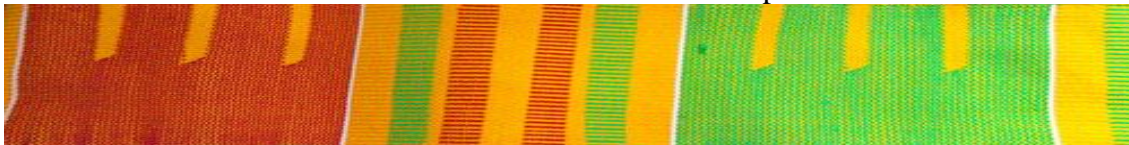
## Kente Cloth Symbols



The Golden Stool - The Golden Stool is a symbol of absolute power in Ghana



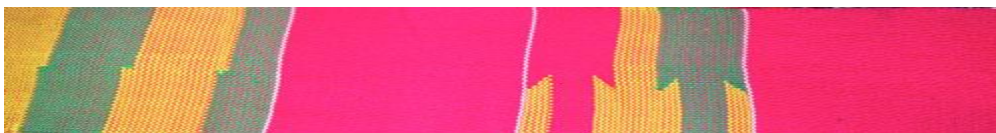
*Fathia Nkrumah* - Fatha Nkrumah was the wife of the first president of Ghana



*Baako mmu man* - It takes two to council; One man cannot rule a country



*Nsatea* - All fingers are not equal



*Nnuatoma* - You must measure everything that you do.



Your heart's desire

Source: (Home, 2018)

## APPENDIX C

### Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
WTP_binary	307	.9087948	.2883708	0	1
WTPPremium	307	42.76873	289.5207	0	5000
WTPMidpoint	307	47.13355	289.4127	0	5000
HavekentNew	307	.6221498	.4856415	0	1
VisitCentre	307	.9153094	.2788752	0	1
Age	307	34.67427	10.8636	19	86
GENDER	307	.4983713	.5008137	0	1
EducationJ~r	307	.1791531	.3841066	0	1
EducationS~r	307	.3876221	.488003	0	1
EducationT~y	307	.4364821	.4967588	0	1
HincomeDon~w	307	.3420195	.4751606	0	1
HincomeLow	307	.1726384	.3785514	0	1
HincomeMid~e	307	.2019544	.4021138	0	1
HincomeHigh	307	.2899023	.4544576	0	1
KnowledgeM~s	307	2.694897	1.355186	1	6

### Correlation Analysis

	Haveke~w	VisitC~e	Age	GENDER	Ed~unior	Ed~enior	Educat~y	Hinc~now	Hinc~Low	Hincom~e	Hincom~h	Knowl~ts
HavekentNew	1.0000											
VisitCentre	0.2455	1.0000										
Age	0.2045	0.0750	1.0000									
GENDER	-0.1369	-0.0010	0.0365	1.0000								
EducationJ~r	0.1714	0.0201	0.3328	-0.1259	1.0000							
EducationS~r	-0.0970	0.0019	-0.1882	0.0093	-0.3717	1.0000						
EducationT~y	-0.0321	-0.0154	-0.0692	0.0948	-0.4112	-0.6867	1.0000					
HincomeDon~w	0.1228	0.0960	-0.0347	-0.1830	0.0929	0.0747	-0.1499	1.0000				
HincomeLow	0.0893	0.1080	0.0956	0.0618	0.2361	-0.0273	-0.1587	-0.3293	1.0000			
HincomeMid~e	-0.0598	-0.0510	0.0091	0.0665	-0.0234	0.0994	-0.0828	-0.3456	-0.2298	1.0000		
HincomeHigh	-0.1388	-0.1409	-0.0583	0.0667	-0.2611	-0.1547	0.3641	-0.4455	-0.2919	-0.3214	1.0000	
KnowledgeM~s	0.2198	0.0871	0.2272	0.1814	0.0865	-0.0907	0.0253	-0.0184	0.0075	-0.0245	0.0238	1.0000

## Logit Results of WTP for kente centres

```
Iteration 0: log likelihood = -93.732445
Iteration 1: log likelihood = -89.163715
Iteration 2: log likelihood = -80.561885
Iteration 3: log likelihood = -79.784643
Iteration 4: log likelihood = -79.781089
Iteration 5: log likelihood = -79.781089
```

```
Logistic regression                Number of obs   =           307
                                   LR chi2(10)        =           27.90
                                   Prob > chi2         =           0.0019
Log likelihood = -79.781089        Pseudo R2       =           0.1488
```

WTP_binary	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
HavekentNew	-.3083032	.4990255	-0.62	0.537	-1.286375 .6697688
VisitCentre	2.330111	.5509533	4.23	0.000	1.250263 3.40996
Age	.0031472	.0219845	0.14	0.886	-.0399416 .0462361
GENDER	-.9750965	.4829404	-2.02	0.043	-1.921642 -.0285506
EducationSenior	1.334844	.6469071	2.06	0.039	.0669296 2.602759
EducationTertiary	1.043074	.6525314	1.60	0.110	-.2358637 2.322012
HincomeDontknow	-.0766646	.677482	-0.11	0.910	-1.404505 1.251176
HincomeMiddle	-.5740993	.6957329	-0.83	0.409	-1.937711 .7895121
HincomeHigh	-.3672394	.7575856	-0.48	0.628	-1.85208 1.117601
KnowledgeMeanStats	.1309308	.1732258	0.76	0.450	-.2085855 .4704471
_cons	.0251056	1.203462	0.02	0.983	-2.333636 2.383847

## Marginal Effects of Logit Model

```
Marginal effects after logit
y = Pr(WTP_binary) (predict)
= .93499962
```

variable	dy/dx	Std. Err.	z	P> z	[ 95% C.I. ]	x
Haveke~w*	-.0181782	.02845	-0.64	0.523	-.07394 .037584	.62215
VisitC~e*	.3157408	.11228	2.81	0.005	.095667 .535815	.915309
Age	.0001913	.00133	0.14	0.886	-.002425 .002808	34.6743
GENDER*	-.0608254	.02986	-2.04	0.042	-.11935 -.002301	.498371
Ed~enior*	.0746662	.03325	2.25	0.025	.009506 .139826	.387622
Educat~y*	.0615932	.03736	1.65	0.099	-.011639 .134825	.436482
Hinc~now*	-.0047094	.04205	-0.11	0.911	-.087121 .077702	.34202
Hincom~e*	-.0407353	.05669	-0.72	0.472	-.151838 .070367	.201954
Hincom~h*	-.0239416	.05257	-0.46	0.649	-.12698 .079097	.289902
Knowl~ts	.0079574	.01047	0.76	0.447	-.012571 .028486	2.6949

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

## Classification Test Results of Logit Model

. estat classification

Logistic model for WTP\_binary

Classified	True		Total
	D	~D	
+	278	24	302
-	1	4	5
Total	279	28	307

Classified + if predicted Pr(D) >= .5

True D defined as WTP\_binary != 0

Sensitivity	Pr( +   D)	99.64%
Specificity	Pr( -   ~D)	14.29%
Positive predictive value	Pr( D   +)	92.05%
Negative predictive value	Pr( ~D   -)	80.00%
False + rate for true ~D	Pr( +   ~D)	85.71%
False - rate for true D	Pr( -   D)	0.36%
False + rate for classified +	Pr( ~D   +)	7.95%
False - rate for classified -	Pr( D   -)	20.00%
Correctly classified		91.86%

## Correction Matrix of Logit Model

Correlation matrix of coefficients of logit model

e(V)	WTP_bi~y										
	Haveke~w	VisitC~e	Age	GENDER	Ed~enior	Educat~y	Hinc~now	Hincom~e	Hincom~h	Knowl~ts	_cons
WTP_binary											
HavekentNew	1.0000										
VisitCentre	-0.3821	1.0000									
Age	-0.1126	-0.0242	1.0000								
GENDER	0.2036	-0.1442	-0.0878	1.0000							
EducationS~r	0.0417	0.0203	0.3124	-0.2241	1.0000						
EducationT~y	-0.0009	-0.0084	0.2873	-0.2675	0.6524	1.0000					
HincomeDon~w	-0.0070	0.0340	0.0831	0.1881	-0.1189	-0.1621	1.0000				
HincomeMid~e	0.0298	0.1070	0.0059	0.1068	-0.2317	-0.2313	0.6088	1.0000			
HincomeHigh	0.0558	0.1423	0.0408	0.1795	-0.2565	-0.4540	0.6286	0.6535	1.0000		
KnowledgeM~s	-0.1744	-0.0101	-0.0957	-0.1818	0.0760	0.0130	-0.0288	-0.0013	-0.0521	1.0000	
_cons	-0.0438	-0.2441	-0.6875	-0.1102	-0.3959	-0.3054	-0.4134	-0.3576	-0.3623	-0.2208	1.0000



## Logit Estimates without Education Levels

```
Iteration 0: log likelihood = -93.732445
Iteration 1: log likelihood = -91.081251
Iteration 2: log likelihood = -82.748765
Iteration 3: log likelihood = -81.937799
Iteration 4: log likelihood = -81.93263
Iteration 5: log likelihood = -81.93263
```

```
Logistic regression                Number of obs   =       307
                                   LR chi2(8)         =       23.60
                                   Prob > chi2         =       0.0027
Log likelihood = -81.93263         Pseudo R2      =       0.1259
```

WTP_binary	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
HavekentNew	-.3471146	.4910914	-0.71	0.480	-1.309636	.6154068
VisitCentre	2.378659	.5445812	4.37	0.000	1.311299	3.446018
Age	-.011674	.0203027	-0.57	0.565	-.0514665	.0281185
GENDER	-.7591834	.455009	-1.67	0.095	-1.650985	.1326179
HincomeDontknow	.109747	.6729128	0.16	0.870	-1.209138	1.428632
HincomeMiddle	-.2713005	.6757479	-0.40	0.688	-1.595742	1.053141
HincomeHigh	.05559	.6729549	0.08	0.934	-1.263377	1.374557
KnowledgeMeanStats	.1128708	.1773746	0.64	0.525	-.234777	.4605185
_cons	1.092548	1.073356	1.02	0.309	-1.011191	3.196288

## Marginal Effect of Logit Model without Education Levels

Marginal effects after logit

$$y = \text{Pr}(\text{WTP\_binary}) \text{ (predict)}$$

$$= .92914916$$

variable	dy/dx	Std. Err.	z	P> z	[ 95% C.I. ]		X
Haveke~w*	-.0221001	.03008	-0.73	0.463	-.081063	.036863	.62215
VisitC~e*	.3434752	.11345	3.03	0.002	.121127	.565823	.915309
Age	-.0007685	.00133	-0.58	0.564	-.00338	.001843	34.6743
GENDER*	-.0507533	.03035	-1.67	0.094	-.110236	.00873	.498371
Hinc~now*	.0071201	.04301	0.17	0.869	-.07718	.091421	.34202
Hincom~e*	-.0191689	.05115	-0.37	0.708	-.119418	.08108	.201954
Hincom~h*	.0036233	.04344	0.08	0.934	-.081519	.088766	.289902
Knowl~ts	.0074304	.01162	0.64	0.523	-.015353	.030214	2.6949

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

## Classification Tests of Logit Model without Education Levels

Classified	True		Total
	D	~D	
+	276	25	301
-	3	3	6
Total	279	28	307

Classified + if predicted Pr(D) >= .5  
 True D defined as WTP\_binary != 0

Sensitivity	Pr( +   D)	98.92%
Specificity	Pr( -   ~D)	10.71%
Positive predictive value	Pr( D   +)	91.69%
Negative predictive value	Pr( ~D   -)	50.00%
False + rate for true ~D	Pr( +   ~D)	89.29%
False - rate for true D	Pr( -   D)	1.08%
False + rate for classified +	Pr( ~D   +)	8.31%
False - rate for classified -	Pr( D   -)	50.00%
Correctly classified		90.88%

## Logit Results without Income Levels

Iteration 0: log likelihood = -93.732445  
 Iteration 1: log likelihood = -89.565055  
 Iteration 2: log likelihood = -80.934343  
 Iteration 3: log likelihood = -80.247655  
 Iteration 4: log likelihood = -80.244159  
 Iteration 5: log likelihood = -80.244159

Logistic regression	Number of obs	=	307
	LR chi2(7)	=	26.98
	Prob > chi2	=	0.0003
Log likelihood = -80.244159	Pseudo R2	=	0.1439

WTP_binary	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
HavekentNew	-.2817719	.4949147	-0.57	0.569	-1.251787	.688243
VisitCentre	2.415018	.5408503	4.47	0.000	1.354971	3.475065
Age	.0021973	.0218581	0.10	0.920	-.0406438	.0450384
GENDER	-.9692863	.4690057	-2.07	0.039	-1.888521	-.050052
EducationSenior	1.198445	.6136309	1.95	0.051	-.0042491	2.40114
EducationTertiary	.894523	.5673807	1.58	0.115	-.2175227	2.006569
KnowledgeMeanStats	.1326128	.1712528	0.77	0.439	-.2030366	.4682621
_cons	-.1971763	1.068061	-0.18	0.854	-2.290538	1.896185

## Marginal Effects without Income Levels

Marginal effects after logit

$$y = \text{Pr}(\text{WTP\_binary}) (\text{predict}) \\ = .93360908$$

variable	dy/dx	Std. Err.	z	P> z	[ 95% C.I. ]	X
Haveke~w*	-.0169861	.02892	-0.59	0.557	-.073674 .039702	.62215
VisitC~e*	.3386247	.11066	3.06	0.002	.12174 .555509	.915309
Age	.0001362	.00135	0.10	0.920	-.002518 .00279	34.6743
GENDER*	-.0616285	.02964	-2.08	0.038	-.119723 -.003534	.498371
Ed~enior*	.0686471	.03262	2.10	0.035	.004713 .132581	.387622
Educat~y*	.0538995	.03333	1.62	0.106	-.011435 .119234	.436482
Knowl~ts	.0082198	.01055	0.78	0.436	-.012467 .028906	2.6949

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

## Classification Tests of Logit Model without Income Levels

Logistic model for WTP\_binary

Classified	True		Total
	D	~D	
+	279	24	303
-	0	4	4
Total	279	28	307

Classified + if predicted  $\text{Pr}(D) \geq .5$   
 True D defined as  $\text{WTP\_binary} \neq 0$

Sensitivity	$\text{Pr}(+ D)$	100.00%
Specificity	$\text{Pr}(- \sim D)$	14.29%
Positive predictive value	$\text{Pr}(D +)$	92.08%
Negative predictive value	$\text{Pr}(\sim D -)$	100.00%
False + rate for true ~D	$\text{Pr}(+ \sim D)$	85.71%
False - rate for true D	$\text{Pr}(- D)$	0.00%
False + rate for classified +	$\text{Pr}(\sim D +)$	7.92%
False - rate for classified -	$\text{Pr}(D -)$	0.00%
Correctly classified		92.18%



### Tobit Regression Results (Without Income Variables- normal data)

Tobit regression Number of obs = 307  
LR chi2(7) = 16.73  
Prob > chi2 = 0.0192  
Log likelihood = -2003.7594 Pseudo R2 = 0.0042

WTPMidpoint	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
HavekentNew	16.35051	39.10316	0.42	0.676	-60.60071	93.30173
VisitCentre	107.1219	68.9383	1.55	0.121	-28.54197	242.7858
Age	-.3732748	1.753323	-0.21	0.832	-3.823645	3.077096
GENDER	7.372151	36.17427	0.20	0.839	-63.8153	78.55961
EducationSenior	93.40883	52.90913	1.77	0.079	-10.71121	197.5289
EducationTertiary	16.30117	51.33938	0.32	0.751	-84.72975	117.3321
KnowledgeMeanStats	37.21434	13.61836	2.73	0.007	10.41473	64.01394
_cons	-218.0177	102.771	-2.12	0.035	-420.2609	-15.77438
/sigma	297.7161	12.63215			272.8572	322.5749

Obs. summary: 28 left-censored observations at WTPMidpoint<=0  
279 uncensored observations  
0 right-censored observations

### Tobit Regression Results (WTP Amounts in lognormal form)

Tobit regression Number of obs = 307  
LR chi2(10) = 56.74  
Prob > chi2 = 0.0000  
Log likelihood = -498.17657 Pseudo R2 = 0.0539

lWTPPremium	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
HavekentNew	-.0450148	.1662902	-0.27	0.787	-.3722711	.2822414
VisitCentre	1.417669	.2855289	4.97	0.000	.8557531	1.979586
Age	-.0057916	.0074219	-0.78	0.436	-.0203977	.0088146
GENDER	-.1373021	.1554504	-0.88	0.378	-.443226	.1686217
EducationSenior	.704663	.2268289	3.11	0.002	.2582674	1.151059
EducationTertiary	.3046846	.2318966	1.31	0.190	-.151684	.7610532
HincomeDontknow	.0252661	.2150709	0.12	0.907	-.3979899	.4485221
HincomeMiddle	-.3185669	.2408758	-1.32	0.187	-.7926066	.1554728
HincomeHigh	-.2468949	.2386393	-1.03	0.302	-.7165331	.2227433
KnowledgeMeanStats	.2161603	.0578681	3.74	0.000	.1022768	.3300438
_cons	.608422	.4568443	1.33	0.184	-.2906401	1.507484
/sigma	1.273716	.0554179			1.164654	1.382777

Obs. summary: 28 left-censored observations at lWTPPremium<=0  
279 uncensored observations  
0 right-censored observations





## Tobit Regression Results of WTP Midpoint (Income Variable Excluded- lognormal form)

Tobit regression Number of obs = 307  
LR chi2(7) = 51.02  
Prob > chi2 = 0.0000  
Log likelihood = -502.42993 Pseudo R2 = 0.0483

lWTPMidpoint	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
HavekentNew	-.0027772	.1664902	-0.02	0.987	-.3304136	.3248593
VisitCentre	1.481482	.2836124	5.22	0.000	.92336	2.039603
Age	-.006746	.007471	-0.90	0.367	-.0214483	.0079562
GENDER	-.1747499	.1545451	-1.13	0.259	-.4788797	.1293799
EducationSenior	.6015016	.2243784	2.68	0.008	.1599467	1.043057
EducationTertiary	.1659911	.21756	0.76	0.446	-.2621459	.5941281
KnowledgeMeanStats	.2035336	.0582797	3.49	0.001	.0888448	.3182225
_cons	.8029635	.4304612	1.87	0.063	-.0441424	1.65007
/sigma	1.285821	.056058			1.175504	1.396138

Obs. summary: 28 left-censored observations at lWTPMidpoint<=0  
279 uncensored observations  
0 right-censored observations

## Logit Regression Results with distant decay included

Iteration 0: log likelihood = -93.732445  
Iteration 1: log likelihood = -87.393276  
Iteration 2: log likelihood = -78.643192  
Iteration 3: log likelihood = -77.912933  
Iteration 4: log likelihood = -77.910406  
Iteration 5: log likelihood = -77.910406

Logistic regression Number of obs = 307  
LR chi2(11) = 31.64  
Prob > chi2 = 0.0009  
Log likelihood = -77.910406 Pseudo R2 = 0.1688

WTP_binary	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
HavekentNew	-.4154247	.5068032	-0.82	0.412	-1.408741	.5778914
VisitCentre	2.161607	.562703	3.84	0.000	1.05873	3.264485
Age	.0029907	.0228563	0.13	0.896	-.0418069	.0477883
GenderNew	-.8707711	.4916174	-1.77	0.077	-1.834324	.0927813
EducationSenior	1.450073	.6667704	2.17	0.030	.143227	2.756919
EducationTertiary	1.328702	.6972317	1.91	0.057	-.0378471	2.695251
HincomeDontknow	.1516294	.7196334	0.21	0.833	-1.258826	1.562085
HincomeMiddle	.2513453	.8435487	0.30	0.766	-1.40198	1.90467
HincomeHigh	.5169378	.9028078	0.57	0.567	-1.252533	2.286409
KnowledgeMeanStats	.0767777	.182098	0.42	0.673	-.2801277	.4336832
Distant_Decay	1.338518	.7047824	1.90	0.058	-.0428302	2.719866
_cons	-.8920001	1.322522	-0.67	0.500	-3.484095	1.700095



## Marginal Effects of Logit Model with Distant Decay included

Marginal effects after logit

$$y = \text{Pr}(\text{WTP\_binary}) \text{ (predict)}$$

$$= .93935519$$

variable	dy/dx	Std. Err.	z	P> z	[ 95% C.I. ]	X
Haveke~w*	-.0227396	.02665	-0.85	0.393	-.074965 .029486	.62215
VisitC~e*	.2672774	.11042	2.42	0.015	.050863 .483692	.915309
Age	.0001704	.0013	0.13	0.896	-.002379 .00272	34.6743
Gender~w*	-.0506943	.02867	-1.77	0.077	-.106896 .005508	.498371
Ed~enior*	.0758586	.03223	2.35	0.019	.012681 .139036	.387622
Educat~y*	.0737519	.03753	1.96	0.049	.000188 .147316	.436482
Hinc~now*	.0084631	.03934	0.22	0.830	-.068636 .085563	.34202
Hincom~e*	.013426	.04222	0.32	0.750	-.069321 .096173	.201954
Hincom~h*	.0269557	.04355	0.62	0.536	-.058403 .112315	.289902
Knowl~ts	.0043738	.01038	0.42	0.674	-.015978 .024726	2.6949
Distan~y*	.0780346	.04189	1.86	0.062	-.004067 .160136	.478827

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

## Tobit Regression Results with Distant Decay Variable

Tobit regression

Number of obs = 307

LR chi2(11) = 65.28

Prob > chi2 = 0.0000

Pseudo R2 = 0.0618

Log likelihood = -495.30099

lWTPMidpoint	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
HavekentNew	-.115644	.1655215	-0.70	0.485	-.4413921 .2101041
VisitCentre	1.315961	.2818135	4.67	0.000	.7613489 1.870573
Age	-.0062868	.007312	-0.86	0.391	-.0206768 .0081033
GenderNew	-.1023905	.153966	-0.67	0.507	-.4053973 .2006162
EducationSenior	.7200532	.2241016	3.21	0.001	.2790189 1.161087
EducationTertiary	.3779104	.2306426	1.64	0.102	-.0759967 .8318174
HincomeDontknow	.095119	.2136827	0.45	0.657	-.3254109 .5156489
HincomeMiddle	.1034993	.2733858	0.38	0.705	-.4345269 .6415256
HincomeHigh	.263377	.2870998	0.92	0.360	-.3016385 .8283925
KnowledgeMeanStats	.1850191	.057367	3.23	0.001	.0721202 .297918
Distant_Decay	.7044642	.2166335	3.25	0.001	.2781272 1.130801
_cons	.4171429	.4769091	0.87	0.382	-.5214194 1.355705
/sigma	1.255258	.0546999			1.147609 1.362908

Obs. summary: 28 left-censored observations at lWTPMidpoint<=0  
 279 uncensored observations  
 0 right-censored observations



## APPENDIX D

### QUESTIONNAIRE – PUBLIC (USERS AND NON-USERS OF KENTE) SECTION 1: INTRODUCTION

1.1: Do you have kente cloth (or a clothing that is completely made of kente)?

- Yes
- No
- Don't know

1.2: Are parts of some of the clothing you have now made of kente?

- Yes
- No
- Don't know

1.3: How often do you use clothing made of kente?

- Everyday
- Once a week
- Once a month
- 5 – 11 times a year
- 2 – 4 times a year
- Once a year
- Less than once a year
- Not at all

1.4: How often do you see kente weaving?

- Everyday
- Once a week
- Once a month
- 5 – 11 times a year
- 2 – 4 times a year
- Once a year
- Less than once a year
- Not at all

1.5: Please tick which brand(s) of kente do you have? (*Tick all that apply*).

- Ashanti kente
- Ewe kente
- Northern kente
- Kente from other African countries
- Other, please indicate -----

1.6: Please tick which brand(s) of kente do you prefer? (Tick all that apply).

- Ashanti kente
- Ewe kente
- Northern kente
- Kente from other African countries
- Other, please indicate -----

1.7: How knowledgeable are you of kente cloth in general? Please rate on a scale from 1 - 6 with 1 being “not very knowledgeable at all” and 6 being “very knowledgeable”.

1	2	3	4	5	6
Not knowledgeable at all					Very knowledgeable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.8: How knowledgeable are you of kente weaving? Please rate on a scale from 1 - 6 with 1 being “not very knowledgeable at all” and 6 being “very knowledgeable”.

1	2	3	4	5	6
Not knowledgeable at all					Very knowledgeable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.9: How knowledgeable are you of kente symbols? Please rate on a scale from 1 - 6 with 1 being “not at all knowledgeable at all” and 6 being “very knowledgeable”.

1	2	3	4	5	6
Not knowledgeable at all					Very knowledgeable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.10: How important do you think these **threats are** to maintaining kente weaving in Ghana? Please rate each threat on a scale from 1 to 6 with 1 being “not important at all” as a threat and 6 being “very important” as a threat to kente weaving .

	<b>Threats to kente weaving</b>	<b>1 Not important at all</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6 Very important</b>	<b>Don't know</b>
1.10.1	Imitation of kente designs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.2	Little Documentation of kente symbols	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.3	Low Public knowledge of interpretation of kente symbols	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.4	Inadequate public interest in kente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.5	Low patronage of kente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.6	High importation of clothing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.7	Informality of kente weaving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.8	High price of kente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.9	Out-moded production method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.10	Unattractive kente designs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.11	Unprofitable kente weaving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.12	Low use of kente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.13	Lack of export opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.10.14	Lack of credit/finance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.10.15	Other factors: -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.11: How important do you think these threats to maintaining the interpretation of kente symbols in Ghana are? Please rate each issue on a scale from 1 to 6 with 1 being “not important at all” as a threat and 6 being “very important” as a threat to the interpretation of kente symbols

	<b>Threats to interpretation of kente symbols</b>	<b>1 Not important at all</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6 Very important</b>	<b>Don't know</b>
1.11.1	Imitation of kente designs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.2	Little documentation of kente symbols	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.3	Low Public knowledge of interpretation of kente symbols	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.4	Inadequate public interest in kente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.5	Low patronage of kente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.6	High importation of clothing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.7	Informality of kente weaving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.8	High price of kente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.9	Out-moded production method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.10	Unattractive kente designs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.11	Unprofitable kente weaving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.11.12	Low use of kente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.13	Lack of export opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.14	Lack of credit/finance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.11.15	Other factors: -----	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.12: How do you rank the responsibility of the following groups on the promotion of kente weaving? Indicate your opinion on a scale from 1 - 6 with 1 being “not responsible at all” and 6 being “very responsible”.

	<b>Groups</b>	<b>1 Not responsible at all</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6 Very responsible</b>	<b>Don't know</b>
1. 12.1	General public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.2	Kente users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.3	Individual kente weavers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.4	The Association of weavers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.5	Kente festivals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.6	Non-Governmental Organizations (NGOs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.7	Global certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.8	National certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.9	The Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. 12.10	Other important stakeholder(s); please specify_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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1.13: How do you rank the responsibility of the following groups on the promotion of public understanding of kente symbols? Indicate your opinion on a scale from 1 - 6 with 1 being “not responsible at all” and 6 being “very responsible”.

	<b>Groups</b>	<b>1 Not responsible at all</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6 Very responsible</b>	<b>Don't know</b>
1. 12.1	General public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.2	Kente users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.3	Individual kente weavers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.4	The Association of weavers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.5	Kente festivals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.6	NGOs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.7	Global certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.8	National certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. 12.9	The Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



1.12.10	Other important stakeholder(s); please specify_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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1.13. How do you rank the responsibility of the following groups on the promotion of use of kente in Ghana? Indicate your opinion on a scale from 1 - 6 with 1 being “not responsible at all” and 6 being “very responsible”.

	<b>Groups</b>	<b>1 Not responsible at all</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6 Very responsible</b>	<b>Don't know</b>
1.13.1	General public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13.2	Kente users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13.3	Individual kente weavers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13.4	The Association of weavers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13.5	Kente festivals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13.6	NGOs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13.7	Global certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13.8	National certification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.13.9	The Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.13.10	Other important stakeholder: ---	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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## SECTION 2: WILLINGNESS TO PAY FOR WEAVING OF KENTE WEAVING AND INTERPRETATION OF KENTE SYMBOLS

### **National Centres for demonstration of kente weaving and interpretation of kente symbols**

2.1.1: Imagine that the Government of Ghana considers establishing National Centres throughout the whole of Ghana to demonstrate the weaving of kente and to interpret kente symbols and thus contribute to preserving this tradition in Ghana; and would like to find out whether households in Ghana support the establishment of these Centres. These Centres will serve as the main places where weaving of kente will be demonstrated, and information on the interpretation of all kente symbols will be available to all citizens in Ghana free of any entry charge.

However, the final decision on the establishment of these Centres depends on the support of the households in Ghana as indicated by the households' willingness to pay for the establishing and running of these Centres. If the households in Ghana are willing to pay the costs of establishing and running the centres, they will be established. If households are not willing to pay for the establishment and operation of the Centres, the Government will not establish the Centres.

Think about what the preservation of kente weaving and kente symbols means to you and your household. Taking into account your income and your usual expenses, what is the highest amount that your household is almost certainly willing to pay annually over the next 10 years in increased value-added tax (VAT) for these Centres to be established and running?

- 0 GHS per year
- 2 GHS per year
- 5 GHS per year
- 10 GHS per year
- 15 GHS per year
- 20 GHS per year
- 30 GHS per year
- 40 GHS per year
- 50 GHS per year
- 75 GHS per year
- 100 GHS per year
- More than 100 GHS per year; please specify amount; \_\_\_\_\_per year
- Don't know

2.1.2: For those who indicate 2 GHS or higher amounts in 2.1 above, how much of your WTP should be devoted to demonstration of kente weaving and interpretation of kente symbols?

- Out the amount indicated in 2.1 above, this ----- should be devoted to demonstration of kente weaving.
- Out the amount indicated in 2.1 above, this ----- should be devoted to the interpretation of kente symbols.
- Out the amount indicated in 2.1 above, this ----- should be devoted to other aspects of kente weaving and interpretation of kente symbols.  
Please, specify what other aspects: \_\_\_\_\_

2.1.3: For those who choose 0.GHS or “Don’t know” in 2.1 above, please select the main reason for your decision (JUST ONE REASON ALLOWED)

- I cannot afford to pay.
- I think other public goods are more important to pay for.
- I do not care about preserving kente weaving and/or interpretation of kente symptoms.
- I think the government should pay from what they already collect in VAT and other taxes.
- I don’t think the extra VAT collected will be used to establish the Centre.
- I don’t think the Centres will benefit me.
- I think kente weaving and/or interpretation is best preserved *without* the centres
- Other reason; please specify: \_\_\_\_\_

**2.2:** If the National Centres are established for both kente weaving and interpretation of kente symbols and are accessible to you free of charge, how likely is it that you will visit one or more of them?

- I will certainly visit one of the National Centres.
- I am likely to visit one of the National Centres.
- I may visit one of the National Centres.
- I may not visit one of the National Centres.
- I am not likely to visit one of the National Centres
- I will certainly not visit one of the National Centres

### SECTION 3: SOCIO-ECONOMIC BACKGROUND

3.1: In which year you were born? \_\_\_\_\_

3.2: In which city/town/ country do you come from? \_\_\_\_\_

3.3: Are you?

- Female
- Male

3.4: What is your highest education level that you have completed?

- Have not been to school
- Primary school
- Junior Secondary school
- Senior High school
- College/ university
- Postgraduate/graduate/professional

3.5: What is your main work status?

- Work full time
- Work part time
- Student
- Housework/unpaid work
- Retired
- Unemployed
- Other, please specify: \_\_\_\_\_

3.6: Are you and/or anyone in your household and/or your family is in kente business (weaving, trade, and/or interpretation of kente symbols)? Tick all relevant alternatives.

- Yes, I am in the kente business
- Yes, others in my household is in the kente business
- Yes, others in the family (outside my household) is in the kente business
- No
- Don't know

3.7: Household size:

3.7.1: number of people above 18 years (including yourself) living in the household: \_\_\_\_

3.7.2: number of people who are 18 years or younger living in the household: \_\_\_\_

3.8: What was your annual personal gross income including social security payments, pensions, etc (i.e. before taxes were deducted) in 2017?

- less than 1000 GHS
- 1000 – 2000 GHS
- 2000 – 3000 GHS
- 3000 – 4000 GHS
- 4000 – 5000 GHS
- 5000 – 6000 GHS
- 6000 - 7000 GHS
- 7000 - 8000 GHS
- 8000 - 9000 GHS
- 9000 - 10 000 GHS
- Above 10 000 GHS; please specify\_\_\_\_\_
- Don't know/Don't want to answer

3.9: What was the annual gross income (i.e. before taxes were deducted) in total for your household in 2017?

- less than 2000 GHS
- 2000 – 4000 GHS
- 4000 – 6000 GHS
- 6000 – 8000 GHS
- 8000 – 10 000 GHS
- 10 000 – 12 000 GHS
- 12 000 - 14 000 GHS
- 14 000 – 16 000 GHS
- 16 000 – 18 000 GHS
- 18 000 – 20 000 GHS
- Above 20000 GHS, please specify:\_\_\_\_\_
- Don't know/Don't want to answer



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