Prospects for a Geographical Indication (GI): Evaluation of the Willingness to Pay (WTP) of Two Food Products: Peanut Oil (Agonlinmi) and Wafers (Kwlikwli) of the Agonlin Area's of Benin

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Abstract: The concept of Geographical Indication (GI) is a local development tool. In 2010, on ten thousand GIs identified in the world, Africa had none. However Africa has food products that have reputations or specific characteristics links to their origin. This is the case of two peanut food sub products (Agonlinmi and kwlikwli) in Benin, that undergoing counterfeits. This study aims to assess consumer's willingness to pay for these two products. This assessment is carried out on a sample of 400 Agonlin oil consumers and 150 kwlikwli consumers selected randomly in the city of Cotonou and surroundings and also in the Agonlin area. The assessment was made using hedonic price method. Quality attributes and implicit price of both products were calculated. The results showed that the quality attribute variable "geographical origin" of the two products is not significant. Prices of quality attributes "color" for Agonlin oil and "crispness" for Kwlikwli are significant. The potential for GI protection for the two products is not evident on the basis of this analysis of willingness to pay. It will take more research by other analysis or investigative tools.

Keywords: Geographical indications; Willingness to pay; Implicit prices; Attributes; Agonlinmi; Agonlin Kwlikwli.

1. Introduction

Peanut oil (Agonlinmi) and peanut wafers (kwlikwli) are by-products of peanut small-scale processing in Agonlin region (Benin). In this region, processors have developed knowledge over time that make the reputation of these products and contributed to their expansion. Both products are inseparable because they are obtained from the same transformation method. Artisanal Agonlin peanut oil competes with many potential replacements, such as other artisanal and industrial ones produced in the country and imported oils. Indeed, the prices of imported oils and local oils (crude palm oil, for example) are often lower than the Agonlin peanut oil price. The kwlikwli is a complementary source of protein and lipids for cassava flour named "gari". The couple food remains a basic feeding for children but also apprentices, students and poor households which can't cook. This study aims to assess the social and territorial identity that consumers give to these local products, their propensity to prefer other less identifiable and to pay for the quality of these products. This recognition and preference is a prerequisite before considering a more formalized by a distinctive sign of quality protection, such as for example the Geographical Indication (GI). This recognition and preference for the product can be measured by assessing the willingness to pay of consumers. This assessment is made using the method of hedonic price. This article objective is to determine quality attributes that explain Agonlin oil and ''kwlikwli'' price by hedonic price method.

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2. Concept and Methodology

The first empirical work on the hedonic approach date back to the 1920's (Colwell and G., 1999), but it is Lancaster (1966) and especially Rosen (1974) that allow the hedonic method to be rooted in economic theory. Such being considered by the light of the hedonic approach, goods do not exist. There is only a list of amounts of characteristics possessed by this property and will vary its prices (Gravel *et al.*, 1998). This is what makes us think that the consumer attaches an implicit price to each characteristic of the goods.

The starting point of the hedonic approach is simple. It is based on the observation that different goods which are traded in markets are not sought for themselves but for the quantities of different characteristics which define them.

Sirieix and Dubois (1999) showed that as regards food, experience attributes dominates. They are evaluated by the product's sensory characteristics. While some aspects of the «mix marketing» such as advertising, packaging or distribution permit to generate interest in the product and a first market acceptance, it is the sensory quality of the product that will allow him to keep the product on the market (SSHA and Strigler, 1998). Demangeot-Valançot (1996) confirms that due to the organoleptic characteristics of food products, it is not enough to see them exposed on to shelf to want to eat them, but we must also take into account the sensory dimension, as well as psychological and cultural factors.

In the Philippines, the same analysis was conducted to assess consumer preferences for rice. The analysis results showed that rice consumers attach importance to economic quality attributes such as whiteness, breaking rate, aroma (Abansi, 1990).

To estimate the willingness to pay of consumers, different business models can be used :(i) evaluations methods of contingent from surveys, (ii) hedonic price from standard consumption data; (iii) the joint analysis (iv) experimental economics techniques assessing the role of information on willingness to pay (WTP) of consumers. As part of this study, analysis method used to determine the willingness to pay of consumers is the hedonic prices method. As above mentioned, the basic assumption for the application of this method is part of the observation that different goods traded in markets are not sought for themselves but for the quantities of different characteristics that define them. Analysis of hedonic price is based on the assumption that, each packet can be processed as qualities attributes differentiates goods related to each other. Waugh (1928) formulated the hedonic price analysis based on the observation of different kinds of tomatoes, as paragus and cucumbers on the plant market in Boston. He tried to identify quality characteristics that influenced significantly the daily market price. Later, Rosen (1974) presented a product differentiation model based on the assumption that any property is assessed for its usefulness producing attributes. According to him, consumers evaluate the product quality attributes by taking a purchase decision.

3. Price Analysis Method

The price of the observed market as the sum of implicit prices paid for each quality attribute can be regressed on the quality attributes as independent variables; coefficients indicate the weight of each quality attribute in the formation of the product price. The choice of this model is not only based on the typical character of Agonlin peanut oil (taste, flavor, etc.) and Kwlikwli of Agonlin but also taking into account the geographical identity of the product. The equation of the model takes the following form

$$P_t = \alpha_0 + \sum \beta_{it} X_{it} + \mu_t$$

With Pt = price explained; Xit = vector of explanatory variables; α_0 = constant = oil prices regardless of the quality attributes; μ_t = Errors.

Alternative hypotheses are:

H$_0$: β_i = 0, The implicit price of the explanatory variables are equal to zero, i.e. there is no significant diffirence among the implicit prices of the explanatory variables

et **H$_1$:** $\beta_i \neq 0$, it exist a least one implicit price different of zero, i.e. there is significant diffirence among the implicit prices of the explanatory variables

The implicit price is the economic value that consumers attach to a product attribute. A positive implicit price is positive willingness to pay of consumers. The implicit price of each attribute is obtained by the derivative of the price function with respect to this attribute. Thus the implicit price of an attribute is given by:

$$\beta_{it} = \frac{\partial P_t}{\partial X_{it}}$$

3.1. Variables Identified as Agonlin Peanut Oil and Kwlikwli Attributes

Based on the collection of information from desk research and exploratory studies, some variables that maybe Agonlin peanut oil and kwlikwli of Agonlin attributes were identified and integrated into the information collection device. These variables presented in Table 1, vary from one oil to another and from one wafer to another. Indeed, transformation techniques of oils in Benin vary whether the Agonlin peanut oil or other oils such as crude palm oil, coconut oil, Fludor. As for wafers, Benin is full of many similar products that have the same name. However, changes in procedures and inputs used to get the "kwlikwli" of Agonlin make it a preferred feature. These differences reflect the specific attributes of each oil and "kwlikwli" of Agonlin and serve to guide consumers in their choice.

The quality attributes of a product may be classified into three categories namely, depending on the type of consumer economists (Darby and Karni, 1973; Nelson, 1970;1974): search attributes, experience attributes and credence attributes.

Table-1. Typology of the attributes of a product

Attribute	Meaning	Identified attributes
Search	Possibility for the consumers to acquire the information about the product quality before the transaction	Color Aroma
Experience	Acquisition of the information about the product quality after the transaction thanks to the consumers experience	Taste Seasoned Nutritive
Belief	Impossibility for the consumers to acquire the information about the product quality neither before nor after the transaction. So the consumers buy the product due to his belief.	Geographical origin Natural and local Free of cholesterol

Source: Adapted from (Darby and Karni, 1973; Nelson, 1970;1974)

The following table provides the definition of variables and the expected signs for these two products. The choice of modalities was done ex-ante based on the literature review and a brief survey of some consumers.

Table-2. Expected Signs for Agonlinmi and Kwlikwli attributes

Variables	Type	Modalities	Expected signs for Oil	Expected signs for Kwlikwli
Color	Nominal dichotomous	1= Yellow color 0= If not	+	……
Aroma	Nominal dichotomous	1= Good aroma 0= Bad aroma or non-appreciated aroma	+	……
Taste	Nominal dichotomous	1= Good taste 0= If not	+	+
Natural et Local	Nominal dichotomous	1= peanut is the only inputs and there is no additive 0= With additive	+	+
Origin	Nominal dichotomous	1= From region of Agonlin 0= If not	+	+
Nutritive	Nominal dichotomous	1= Rich of nutritive elements 0= If not	+	……
Free of cholesterol	Nominal dichotomous	1= Free of cholesterol 0= If not	+	……
Seasoned	Nominal dichotomous	1= Well seasoned 0= If not	……	+
Sex	Nominal dichotomous	1=Male 0=Female	……	……

Source : Investigation, 2014

4. Investigation Area and Data Collection
4.1. Investigation Area
The area covered by our investigation was composed of two main cities and three districts or municipalities as shown in Figure 1. The two main cities are Cotonou, the economic capital of Benin and Abomey-Calavi, which is located about 15 km from Cotonou. The three districts (municipalities) are Covè, Za-kpota and Zangnanado which are located about 120 km from Cotonou. Covè, Za-kpota and Zangnanando constitute Agonlin region. The three districts were chosen because they are the focus of Agonlin oil production activity in Benin and the two main cities were chosen because they are the major marketing places of this oil.
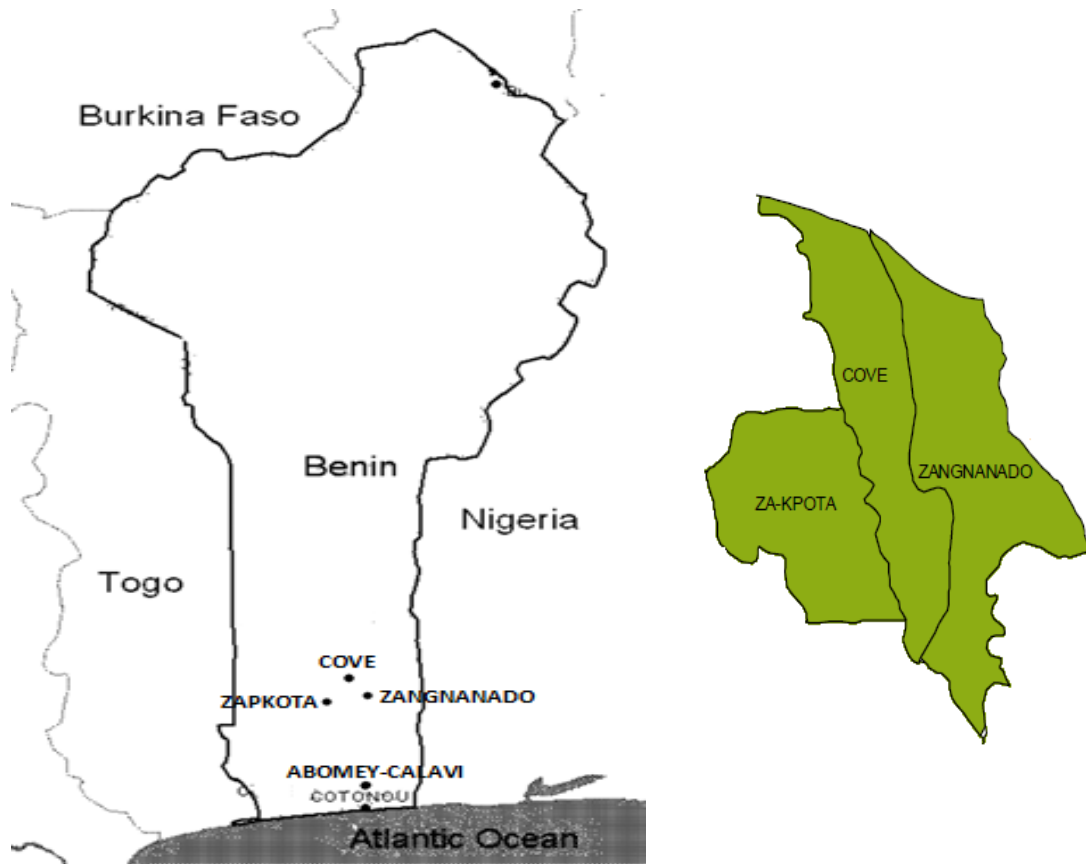
4.2. Data Collection
This survey purpose was to obtain information to assess the social situation of consumers, distribution, product attributes and the willingness to pay using the hedonic pricing for both products. Sample size was determined by taking into account population consuming these products size importance. Previous studies and statistical publications were used to determine a sample size allowing obtaining significant results using the random sampling method of Dagnelie (2007) and Le Maux (2009). The sample size was determined using the formula below:

$$n = \frac{z^2 p(1-p)}{e^2}$$

With:

n: sample size

z: constant issue from the normal distribution at a certain confidence level (usually 95% and z=1.96)

p: individuals percentage representing the observed character

e: sampling error margin choose

Figure-1. Map of Benin showing the regions included in the study.

Source: INSAE (2002)

Table-3. Sample size based on the parameters.

Answers distribution		Sampling error				
P	*1-p*	1%	5%	10%	15%	20%
50%	50%	9604	385	97	43	25
60%	40%	9220	369	93	41	24
70%	30%	8068	323	81	36	21
80%	20%	6147	246	62	28	16
90%	10%	3458	139	35	16	9

Source: Dagnelie (2007) and Le Maux (2009)

Assuming that half of the population consumes Agonlin oil, sample size required to estimate a proportion (P = 0.5) with 5% error marginand 95% confidence level, is then 385.However, for error margin matters, sample size used for Agonlin oil and ''*kwlikwli*'' consumption survey is respectively 400 individuals and 150 individuals.

Table-4. Agonlinoil consumers Distribution

Area	Towns	Numbers
Urban	Cotonou	250
	Abomey-Calavi	
Rural	Covè	69
	Zakpota	16
	Zagnanado	65
Total		400

Source: *Consumer Survey, 2014*

Table-5. ''*Kwlikwli*'' consumers Distribution

Area	Towns	Numbers
Urban	Cotonou	100
	Abomey-Calavi	
Rural	Covè	23
	Zakpota	5
	Zagnanado	22
Total		150

Source: *Consumer Survey, 2014*

The collected data were processed and analyzed using SPSS 21.0 and Stata software 12. The data were entered in SPSS 21.0 software and regression was conducted using Stata 12 software

5. Agonlin Oil Consent to Pay Assessment
5.1. Socio-Economic Characteristics and Monthly Income Distribution of Agonlin Oil Consumers

Table-5. Socio-economic characteristics of Agonlin oil consumers

Variables	Modalities	Urban area	Agonlin area	Both area
Sex	Female (%)	61,04	68,21	63,75
Marital status	married (%)	60,65	68,87	63,75
formal Education	No (%)	20,48	49,00	31,25
Age	[30 – 45 ans [	24,50	15,50	40,00
	[45 – 60 ans [	13,00	05,25	18,25
Income	[0 - 40000[	18,50	24,50	43,00
	[40000 - 75000[	17,75	07,75	25,50
	[75000 - 100000[	08,00	02,00	10,00
	[100000 - 150000[	09,00	01,75	10,75

Source: *Consumer Survey, 2014*

Table-6. Agonlin oil econometric analysis Results *Dependent variable: purchase price of oil*

	Coefficients	standard error	Student's t
Color	79.76***	12.44	6.41
Aroma	12.39	25.39	0.49
Taste	-89.48*	46.86	-1.91
Natural and local character	-36.31	16.77	-2.16
Geographic origin	2	12.86	0.16
Nutritious character	-25.34**	13.4	-1.89
Free of Cholesterol	19.23	13.73	1.4
Age	9.61***	3.44	2.79
Age squared	-0.1**	0.04	-2.54
Sex	-12.98	14.1	-0.92
Education	45.78***	15.4	2.97
Ethnic group	-50.03***	15.86	-3.15
Income level	-89.88***	15.81	-5.68
Number of dependents	-4.62	2.86	-1.61
Marital status	-48.87***	15.43	-3.17
Constant	978.72	88.13	11.11
F test	11.47***		
R^2 adjusts	0.3174		
Number of observations	386		

Source: *Consumer Survey, 2014*

From above table analysis, it appears that, among the 400 surveyed consumers; 63.75% are women; in the age [30-45 years [; having been neither educated nor literate (31.25%) and are married (63.75%).This trend observed in terms of marital status and sex is the same in both areas (Agonlin and urban areas). Educated individuals rate is higher in urban area than Agonlin area. Oil is mainly used for cooking and food. In general, women are the one who deal with food, marketing, purchase and oil using aspects. This therefore seems natural that more than half of the respondents are women. The majority of respondents have a relatively low income (lower than 75000 FCFA).

5.2. Determination of Consumers' Willingness to Pay for Agonlin Oil Quality

To determine consumers' willingness to pay (WTP) for Agonlin oil quality, hedonic price method has been used. It estimates a product quality attribute implicit prices or economic value by regressing market observed price on the identified attributes. Intrinsic variables included in the model are selected based on the ranking of attributes made by consumers and on Nelson (1970); (Nelson, 1974) and Darby and Karni (1973) typology. Hedonic price regression model results related to Agonlin oil are shown in Table 6.

5.2.1. Model Quality and Predictive Power

Fisher's test carried out showed that the overall model is the significance level of 1%. Correlation matrix analysis of the show that none of the partial correlation coefficients were high for the variables included in the models. It is, therefore, hoped that the estimates do not suffer from multicollinearity problems. In addition, Breusch-Pagantest suggest heteroscedasticity problem absence. The results of the analysis can be considered valid and can therefore serve as a basis to make predictions on the modalities of the dependent variable knowing those of independent variables. Adjusted Determination's coefficient is 0.3174; this means that 31.74% of Agonlin oil prices variations is explained by variations of explanatory variables included in the model.The requirements for validation of a linear regression are met, and model overallsignificant, the regression equation can then be written:

Agonlin oil price = 79.76Color +12.39 Aroma -89.48 Taste -36.31 Natural and local character + 2 Geographic origin -25.34 Nutritious character + 19.23 Cholesterol absence + 9.61 Age -0,1 Age squared -12,98 Sex + 45,78 Education -50,03 Ethnic -89,88 Income – 4,62 Number of dependents -48,87 Marital status + 978,72

5.2.2. Results Analysis

The information in Table 6 show that there are eight variables that determine the price of oil.They are: color, taste, nutritional character, age, education, ethnicity, income level and marital status. Coefficients of explanatory variables of oil attribute represent the implicit price or willingness to pay of individuals for an attribute additional unit in oil.As for the other variables, their coefficients can be directly interpreted in terms of elasticity.

5.2.3. Effect on the dependent variable «Agonlin oil prices» explanation

Table-7. Agonlinoil attributes coefficient's significance

Independent variables	Implicit price or economic value
Color	79.76***
Aroma	12.39
Taste	-89.48*
Local and natural charachter	-36.31
Geographic origin	2
Nutritious character	-25.34**
Cholesterol absence	19.23

*** Significant at 1% level (p <0.01); ** Significant at 5% level (p <0.05); * Significant at 10% level (p <0.10).

Economic value associated with each quality attribute analysis (Table 7) shows that color gets the higher economic value for different attributes ranking.The price that consumers attach to the color is 79.76 FCFA/L. Other features that hold the attention of consumers and for which they are willing to pay oil are respectively: Its "taste" and "nutritious character". Implicit price of the two last attributes are negative for Agonlinoil: -89,48 FCFA/L and -25,34 FCFA/L respectively. Efforts remain to be done to improve this trend. Insignificant attributes can be considered not perceived or do not contribute to the price of Agonlin oil from consumer's point of view.
Other oil price determining factors are age, education, ethnicity, income level and marital status.

5.2.4. Age

Age is positively correlated with Agonlin oil price with a coefficient significant at 1% level.This result indicates that a 1% increase in the age unit induce an increase of 9.61 FCFA in consumer ability to pay oil Agonlin. However, this trend is not linear since the age squared, is negatively correlated with oil price with a significant coefficient at the 5% threshold.Thus, a decrease in consumer's attitude to pay Agonlin oil would be observed from a certain age.

5.2.5. Education Level

Regression carried out results reveal that education level positively influences consumer'sability to buy Agonlin oil with a coefficient significant at only 1%. Thus education level 1% increase would lead to an increase of 45.78 FCFA on consumer's ability to buy Agonlin oil.

5.2.6. Ethnic Group

This variable informs whether or not the consumer has its origins linked to the oil production region. Its coefficient is significant at 1%, but is, paradoxically, negatively correlated with oil buying price.

5.2.7. Income

Household income is also one of the factors influencing consumer's ready to buy Agonlin oil price. This variable is, surprisingly, negatively correlated with oil price and its coefficient is significant at 1% level.

5.2.8. Marital Status

This characteristic of household is negatively correlated with consumer ability to pay more for Agonlin oil. Coefficient's negative sign indicates that more the household size increases, more income per household member decreases.Thus, the household head will be less willing to pay more for Agonlin oil.

5.3. Evaluation of Willingness to Pay ''*Kwlikwli*''
5.3.1. Social Consumer Profile

Table-8. Socio-economic characteristics of Agonlin ''*Kwlikwli*'' consumers (n = 149)

Variables	Modalities	Urban area	Agonlin area	Both area
Sex	Féminin (%)	41,58	25,00	36,24
Marital status	Married (%)	49,50	66,67	63,75
Formal Education	Non (%)	13,86	18,75	15,44
Age	[30 – 45 ans [	32,89	32,67	33,33
	[45 – 60 ans [	07,92	16,67	10,74
Income	[0 - 40000[	36,25	14,76	51,01
	[40000 - 75000[	14,76	05,37	20,13
	[75000 - 100000[	06,04	08,05	14,09
	[100000 - 150000[	07,38	02,01	09,40

Source: *Consumer Survey, 2014*

From above table analysis, it appears that from 149 consumers surveyed, 63.76% are men; in the age group [15-30 years [; who was educated (in 84.56% of cases); and are married (63.75%) or single (36.25%).This trend observed in terms of marital status, educational level and gender is the same in both Agonlin and urban areas. Individuals in school rate is higher in urban than in Agonlin area. Agonlin ''*kwikwli*'' is a snack that can be eaten alone or in combination with other products. From explanations received, it appears that married and unmarried buy the product because of its affordability.Consumer's majority, has an income below 75000 (in 71.14% of cases).This general trend is observed in both urban and Agonlin area.

Table-9. Agonlin ''*kwikwli*'' econometric analysis Results *Dependent Variable: ''kwikwli'' purchase price*

	Coefficients	standard error	Student's t
Taste	-0.550	1.27	-0.43
Aroma	-0.621	0.98	-0.64
Color	-1.706*	1.00	-1.7
Geographic origin	0.614	0.76	0.81
Seasoned	-0.245	1.00	-0.24
Natural and local character	-1.258	1.06	-1.19
Nutritious character	3.013	2.17	1.39
Crispness	1.838**	0.93	1.98
Age	0.064	0.04	1.49
Sex	-3.488***	0.85	-4.11
Education	0.266	0.40	0.66
Purchase place (transformers)	-2.421**	1.10	-2.2
Constant	11.033***	2.11	5.22
F test	2.96***		
R2 adjust	0.2185		
Observations number	140		

*** *Significant at 1% level (p <0.01); ** Significant at 5% level (p <0.05); * Significant at 10% level (p <0.10).*

5.3.2. Determination of Consumer's Willingness to Pay for Agonlin ''*Kwikwli*'' Quality

To determine consumers' willingness to pay (WTP) for Agonlin ''*kwikwli*'' quality, hedonic price method has been used. It estimates a product quality attributeimplicit prices or economic value by regressing market observed price on the identified attributes.

Hedonic price regression model results related to Agonlin ''*kwikwli*'' are presented in Table 9.

5.3.3. Model Quality and Predictive Power

Fisher's test implemented showed that the model is globally significant at 1%. Correlation matrix analysis showed that no partial correlation coefficients were high for the variables included in the models.It is, therefore, hoped that the estimates do not suffer from multicollinearity problems. In addition, Breusch-Pagantest suggest heteroscedasticity problem absence. The results of the analysis can be considered valid and can therefore serve as a basis to make predictions on the modalities of the dependent variable knowing those of independent variables. Adjusted Determination's coefficient is 0.2185; this means that 21,85% of Agonlin oil prices variations is explained by variations of explanatory variables included in the model.

5.3.4. Results Analysis

Table 10 information show that ''*kwikwli*'' cost is determine by four variables. They are: color, crispness, sex and the type of vendor from whom the product is purchased. ''*Kwikwli*'' attribute explanatory variables coefficients represent the implicit price or individuals willingness to pay an additional unit for''*kwikwli*'' attribute.As for the other variables, their coefficients can be directly interpreted in terms of elasticity.

5.3.5. Effect on the dependent variable «''*kwikwli*'' price» explanation

Table-10. Agonlin ''*kwikwli*'' attributes coefficients significance

Variables indépendantes	Prix implicite ou valeur économique
Taste	-0.550
Aroma	-0.621
Color	-1.706*
Geographic origin	0.614
Seasoned	-0.245
Local and natural character	-1.258
Nutritious character	3.013
Crispness	1.838**

*** Significant at 1% level ($p < 0.01$); ** Significant at 5% level ($p < 0.05$); * Significant at 10% level ($p < 0.10$).*

Economic values associated with each quality attribute analysis (Table 10) shows that "crispness" gets the higher economic value for different attributes ranking. The price that consumers attach to that attribute is 1,838 FCFA / unit.The other feature that captures consumer's attention is color. But this attribute implicit price is negative (-1,706fcfa).Efforts remain to be done to improve this trend. Insignificant attributes can be considered not perceived or do not contribute to Agonlin ''*kwikwli*'' price from consumer's point of view.

Other determining factors in Agonlin ''*kwikwli*'' price are sex and type of vendor from whom the product is purchased.

6. Discussion
6.1. Agonlin Peanut Oil Case

The "geographic origin" attribute is not significant. It can be regarded from consumer point of view as uncollected or does not contribute to Agonlin oil price. Only the attributes color, taste and nutritive character are significant and therefore contribute mainly to the price of Agonlin oil. For cons, Gle (2010) show that geographical origins attribute of Togo Kovié rice is significant and has the highest price tag followed by the natural / fresh character and nutritious character. Admittedly the geographical origin is not perceived by consumers; however, it remains an important feature for the geographical indication. That oil manufacturing processes are intrinsically linked to Agonlin region. So, if Agonlin oil has these attributes, it's because it comes from Agonlin region. Also, the region's name evokes general regional beliefs (tradition, culture and people) which can be an important source of emotional feelings related to regional product. It should be noted that this product doesn't only come from Agonlin region. Indeed, migrants have settled in Cotonou and surroudings and are engage in this activity and provide the same product to consumers. A product origin region can evoke feelings of pleasure and joy based on the consumer's experience with the region. These evoked emotions directly influence the regional product preference (Obermiller and Spangenberg, 1989; Van Ittersum, 2001; Verlegh and Steenkamp, 1999).

Other variables such as, gender, age, education, ethnicity, income level and marital status are key factors in Agonlin oil price.

This is the case of ethnicity variable which is significant at the 1% level but is, paradoxically, negatively correlated with Agonlin oil buying price.

6.2. Agonlin ''Kwlikwli'' Case

Wafer production is associated with oil production. It is not possible to separate productions. Data analysis shows that color and crispness quality attributes explain the price; however quality ''geographical origin'' attribute is not significant. So, like Agonlin oil, consumers do not perceive this attribute in ''kwlikwli'' pricing. Some attributes, such as seasoning and taste that make the difference between Agonlin ''kwlikwli'' and others Benin regions peanut wafer could be explain by the following reasons:

- In Agonlin region, two types of kwlikwli are produced, seasoned and unseasoned kwlikwli as in the others Benin region.
- Agonlin kwlikwli is also produced in Cotonou and surroundings and in Calavi and surroundings by the migrants from Agonlin region.
- Consumer's sampling is mainly composed of Cotonou its surroundings habitants

To this end, consumers have kwlikwli or Agonlin oil in their locality of residence. The main thing for consumers is these products sensory quality.

Sum all, in Geographical Indication process, the link of the product to the geographical origin must be demonstrate, so we must analyze the consumer's consent to pay for the product for this attribute. However, hedonic price method is not the only method to consider, further reflection analysis by other tools must be done.

7. Conclusion

Willingness to pay assessment indicates that attribute "geographical origin" variable of the two products is not significant. The implicit price for this attribute is not significant. For cons, the quality attribute "color" for the oil and "crispness" for kwlikwli are significant and have consistent implicit price. However, one can deduce that consumers do not value to the geographical origin of the product, since the results of quality attributes survey show that consumers attach importance to the product's origin. It is also point out that the two products are manufactured in Cotonou and surroundings where much of surveyed consumers find the product available to them in their area of residence. Therefore, the prospects for the development of a Geographical Indication (GI) for the two products are not obvious. It will take more research by other analyzes and investigation tools before embarking on the process.

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