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The Moderating Effect of Age on the Influence of Environmental Factors and Consumer Behaviour in Drinking Establishments in Cameroon

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Abstract: *The purpose of this paper is to test the moderating effect of consumer age on the relationship between drinking establishment atmosphere and behavioural responses. To this end, seven hypotheses were formulated. In order to test the hypotheses of this study, data were collected by means of a questionnaire from a convenience sample of 1000 drinkers in pubs. After data collection and processing, we performed moderated multiple regressions. This research shows that age moderates the relationship between coloured light and time spent by drinkers in a pub. Age moderates the relationship between the social crowd and the amount spent by consumers in a drinking establishment. Age moderates the relationship between music and the amount spent by consumers in a pub. As a result of this research, bartenders need to exploit the atmosphere of their outlet by taking into account the age of the consumers.*

Keywords: *Atmosphere, Age, behaviour, consumer.*

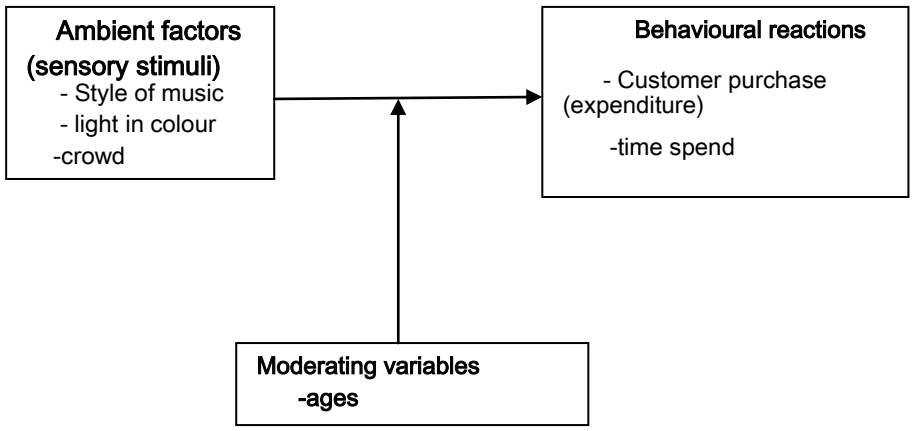
I. INTRODUCTION

Age plays a role in explaining the degree of involvement of the individual in music and his or her different musical tastes (Donnat, 1998; Guibert, 1998). Musical preferences would tend to vary according to the age of the listener. Younger individuals would have a high preference for popular musical compositions (Holbrook and Schindler, 1989). Age also seems to be an important variable in explaining the degree of involvement of the individual with music and his or her musical tastes (Donnat, 1998; Guibert, 1998). Rieunier (2000) revealed that age could be considered as a moderating variable in the relationship between musical atmosphere and individuals' responses. Younger people were found to have a higher purchase intention in the presence of music, and they evaluated the atmosphere as different from that of competitors when unknown music was played. As for older customers, they tend to buy more products and spend more with unknown music. It should also be noted that there is a negative relationship between age and odour detection threshold (Barbet et al., 1999). According to Tagou and Nzongang (2020), the style of music does not have a significant influence on the amount of time spent and the amount spent by consumers in a pub. In other words, the style of music does not allow managers of drinking establishments to retain their customers. The same research reveals that the volume of music significantly influences the buying behaviour of drinkers in a pub. Following this research we found that individual moderating variables were not included in this study and in several other studies in the Cameroonian context. The literature review on the moderating role of individual variables shows that age plays a moderating role in the influence of environmental factors on consumer behaviour. It is therefore possible that age has a moderating role that deserves to be integrated into the relationship between environmental factors and behavioural responses in this study. Hence the relevance of studying the moderating role of consumers' age in the relationship of influence of environmental factors on consumers' behavioural responses in drinking establishments in Cameroon.

II. The theoretical framework of the research

In this section we will present the conceptual model of this study. In other words, the model that highlights the moderating effect of age on the influence of environmental factors on behavioural reactions in a drinking establishment in Cameroon. This conceptual model will be that of Tagou and Nzongang (2020) because this work aims to complement the work of the latter.

Figure 1: Conceptual model of the study

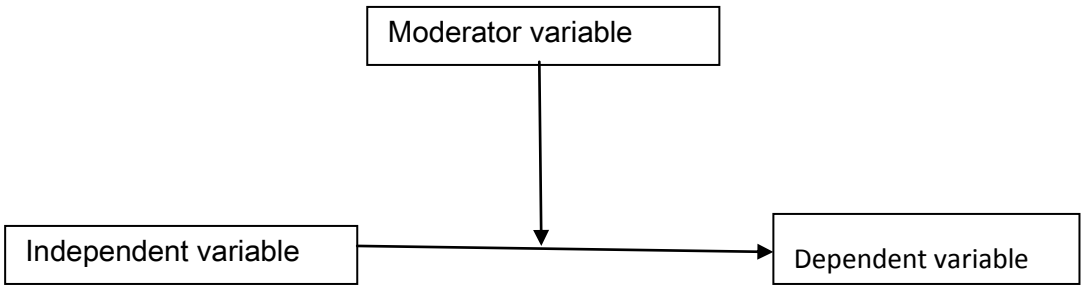


Source: Tagou and Nzongang (2020) "Influence of the atmosphere of the points of sale on the behavioural and emotional reactions of Cameroonian consumers in drinking establishments".

2-1-Presentation of the moderator variable: age

A moderator variable is a variable that essentially affects the relationship between two other variables (Chumpitaz Caceres and Vanhamme, 2003). This variable systematically modifies the magnitude, intensity, direction and/or form of the effect of the independent variable on the dependent variable (Sharma et *al*., 1981). El Akremi and Roussel (2003) state that the observed link between the two variables will be different depending on the different levels of a third moderating variable. According to Baron and Kenny, (1986), "a moderator is a qualitative (e.g. gender, CSP ...) or quantitative (age) variable that influences the direction and/or strength of the relationship between an independent or predictive variable and a dependent variable (...). An elementary moderating effect can be represented by an interaction between a main independent variable and a factor that specifies the appropriate conditions for its impact on the dependent variable (...)" (See Figure 2).

Figure 2: Diagram of moderation



2-1-1- Procedure for testing the moderating character of variables

A variable is moderating if the relationship 'c' is significant. It may be that the relationships 'a' and 'b' are also significant but they are not relevant to show the existence of the moderator. It is desirable that the moderator variable is not correlated with both the independent and the dependent variable. There are various methods for testing the moderating role of a variable including analysis of variance (ANOVA), multi-group analysis and moderated multiple regression (Aiken and West, 1991). The moderating character of the different variables selected will be highlighted according to the third method. Thus, regression analyses were conducted by inserting the moderator variable as a fixed factor.

In order to analyse the moderating effect of a variable Z on the relationship between an independent variable $_{XP}$ and a dependent variable Y, the product of the two variables (×Z), which represents the non-linear interaction effect, is first calculated. Two regressions are tested. The first is a test of the main effects of $_{XP}$ and Z on Y. The second regression is performed after the introduction of the multiplicative

term (×Z).

Y= a +b1XP+b2Z

Y= a +b1XP+b2Z+ b3 $_{XP}$ ×Z

The moderating role of Z is established if the coefficient b3 is statistically significant. The coefficient of determination R2 of the second regression should also be better than that of the first regression to show that the addition of the moderating effect improves the predictive validity of the model.

2-2-research hypothesis

Young children would have a more developed olfactory function than adults. Daucé and Rieunier (2002) state that from the age of 30 and 40, olfactory sensitivity and the ability to identify odours tend to decrease. As for the impact of the social dimension, several authors agree in attributing a moderating role to the age of individuals (Smith et al., 1981; Sinha et al., 1995; Dion, 1999). There would therefore be an evolution in the reactions of individuals to density with age. More precisely, it appears that with age, individuals tend to tolerate crowded or high density situations less. Such situations would be associated more with a feeling of security for children, whereas adolescents would have a strong need to have their own space. Dense situations would also be experienced well by the elderly. Furthermore, Ben Memi (2004) revealed that age did not moderate the relationship between perceived crowding and customers' reactions.

It is interesting to collect information on the socio-demographic characteristics of individuals to determine the extent to which age influences the overall relationships in the study design. Yalch and Spangenberg (1993) showed that background music had different effects on the behaviour of individuals depending on their age; age appears to be a moderating variable in stimulation seeking. Indeed, older people seek stimulation less than younger people (Zuckerman, 1979). This has been shown in the context of listening to music at home: young people report listening to music to "seek stimulation", whereas the over-55s report finding this activity "a source of relaxation" (Woods, 1987). It would be tedious to formulate the hypotheses on all the links in the model. We will therefore prefer to formulate the following general hypothesis for the effect of a moderator variable on the relationship between the atmosphere of drinking establishments and the behavioural reactions of consumers. Hence the hypothesis:

H- Age moderates the link between ambient factors and consumer behavioural responses.

From this main assumption, seven assumptions follow

-H1-Age moderates the influential relationship between spatial crowding and time spent in a drinking establishment

-H2-Age moderates the influential relationship between social crowd and time spent in

a drinking establishment

-H3-Age moderates the relationship between light and time spent in a drinking establishment

- H4-Age moderates the relationship between music and time spent in a drinking establishment

H5-Age moderates the influential relationship between social crowd and amount spent in a drinking establishment

-H6-Age moderates the influence of light on the amount spent in a pub

-H7-Age moderates the influence of music on the amount spent in a pub

III. Research methodology

The survey was conducted in Cameroon among drinkers in drinking establishments. The questionnaires were administered face-to-face in the pubs. A convenience sample of 1000 consumers was selected. The data were processed using SPSS software and moderated multiple regressions were performed to test the relationship between the variables. This study highlights the moderation of age on the relationship between store atmosphere and consumer behavioural responses. For this purpose we found it useful to present the explanatory and explained variables concerned by our study.

3.1-Explanatory variables

The different explanatory variables in this study are: music, coloured light and crowd (presence of others in the store)

3.2-The explained variable

In this study, the main variable explained is the purchasing behaviour of consumers. This behaviour is captured through the time spent in a pub and the amount spent (Milliman, 1986; Herrington, 1993; Areni and Kim, 1993; Yalch and Spangenberg, 1993).

3-3- The moderator variable

A moderator (or modulating) variable is a variable that modulates the effect of the independent variable x on the dependent variable y (Brauer, 2000). In other words, the direction and/or strength of the influence of x on y varies with the levels of the moderator variable (Baron and Kenny, 1986). The study of moderators usually follows studies that have tested the simple empirical relationship and found a different strength or even contradictory results (positive relationship in some studies and negative in others, or no relationship in some studies). This kind of phenomenon typically indicates the likely existence of moderating processes (Caceres and Vanhamme, 2003). Thus, the moderating variable in this study is the age of the consumers.

IV. The results of the study

The results will be obtained after moderate regression analysis with age between the explanatory variables and the variables to be explained. For this purpose we will first present the structure of our sample according to age.

4-1-The structure of the sample according to age.

Table 1: Age distribution of the study population

Age of respondent	**Workforce**	**frequency**	Frequency **Cumulative**
Between 15 and 25 Years old	317	31,7	31,7
Between 26 and 5 Years old	414	41,4	73,1
Between 36 and 45 Years old	152	15,2	88,3
Between 46 and 55 Years old	94	9,4	97,7
Over 55 years old	23	2,3	100,0
Total	1000	100,0	

Source: Not our care after counting

This table shows us that our sample is largely composed of young people between the ages of 26 and 35, followed by the 15 to 25 age group. Thus our sample is dominated by young people aged 15 to 26.

4-2-Testing the moderating effect of age on the relationship between spatial crowding and time spent .

Table 2: Summary first regression of the moderating effect of age on the relationship between spatial crowding and time spent

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,133[a]	0,018	0,016	1,00367

Source : SPSS

Table 3: Summary second regression of the moderating effect of age on the relationship between spatial fule and time spent

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,139[a]	0,019	0,016	1,00328

Source: SPSS

Table 4: Summary second regression of the moderating effect of age on the relationship between spatial crowding and time spent

Model		Non-standardised coefficients		standardised coefficients	t	Sig.
		A	Standard error	Beta		
1	(Constant)	2,565	0,072		35,479	0,000
	SMEAN(Fouleun)	0,014	0,076	0,014	0,182	0,856
	Age	0,082	0,031	0,083	2,629	0,009
	foulspAg	0,044	0,033	0,100	1,330	0,184

Source: SPSS

Looking at the three previous tables we see that the R2 (0.019) of the second regression is better than that of the first regression (0.018), which verifies the first condition, but the B3 coefficient (0.184) is not significant, so age does not moderate the relationship between spatial crowding and time spent by consumers in a drinking establishment. Therefore the first hypothesis is rejected.

4-3-Testing the moderating effect of the relationship between the social crowd and time spent

Table 5: First regression of the moderating effect of the relationship between the social crowd and time spent

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,093[a]	0,009	0,007	1,00818

Source : SPSS

Table 6: Second regression of the moderating effect of the relationship between the social crowd and time spent

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,104[a]	0,011	0,008	1,00757

Source : SPSS

Table 7: Summary second regression of the moderating effect of the relationship between the social crowd and time spent

Model		Non-standardised coefficients		standardised coefficients	t	Sig.
		A	Standard error	Beta		
1	(Constant)	2,567	0,073		35,340	0,000
	Age	0,081	0,031	0,082	2,605	0,009
	SMEAN(Fouldeu)	0,156	0,081	0,154	1,937	0,053
	foulsoAg	-,055	0,037	- 0,118	-1,487	0,137

Source: SPSS

Looking at the three previous tables we see that the R2 (0.011) of the second regression is better than that of the first regression (0.009), which verifies the first condition, but the B3 coefficient (0.137) is not significant, so age does not moderate the relationship between the social crowd and the time spent by consumers in a drinking establishment. Therefore the second hypothesis is rejected.

4-4-Testing the moderating effect of the relationship between light and time spent

Table 8: First regression of the moderating effect of the relationship between light and time spent

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,082[a]	0,007	0,005	1,00921

Source: SPSS

Table 9: Second regression of the moderating effect of the relationship between light and time spent

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,114[a]	0,013	0,0010	1,00654

Source: SPSS

Table 10: Summary second regression of the moderating effect of the relationship between light and time spent

Model		Non-standardised coefficients		standardised coefficients	t	Sig.
		A	Standard error	Beta		
1	(Constant)	2,577	0,073		35,463	0,000
	Age	0,075	0,031	0,076	2,394	0,017
	SMEAN(lumiere)	0,151	0,071	0,149	2,140	0,033
	LumAge	- 0 ,077	0,031	- 0,175	-2,509	0,012

Source : SPSS

The three previous tables show us that the R2**(0.013) of the** second regression is better than that of the first regression **(0.007), which** verifies the first condition, in addition to that, the B3 coefficient is significant **(0.012)** so age moderates the relationship between coloured light and the time spent by consumers in a drinking establishment. The third hypothesis is therefore accepted. In view of the structure of our sample, we would say that young people between 15 and 25 years of age are more sensitive to coloured light diffused in a drinking establishment.

4-5- Testing the moderating effect of the relationship between music and time spent

Table 11: First regression on the moderating effect of the relationship between music and time spent

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,089[a]	0,008	0,006	1,00858

Source : SPSS

Table 12: Second regression

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,092[a]	0,008	0,006	1,00881

Source : SPSS

Table 13: Summary second regression first regression on the moderating effect of the relationship between music and time spent

Model		Non-standardised coefficients		standardised coefficients	t	Sig.
		A	Standard error	Beta		
1	(Constant)	2,568	0,073		35,317	0,000
	Age	0,080	0,031	0,081	2,574	0,010
	SMEAN(Musiq)	-0,087	0,075	-0,086	-1,159	0,247
	musAge	0,024	0,032	0,055	,747	0,455

Source : SPSS

The three previous tables show us that the R2**(0.008) of the** second regression is the same as that of the first regression **(0.008), which** does not verify the first condition, in addition to that, the coefficient B3 is not significant **(0.455)** so age does not moderate the relationship between music and the time spent by consumers in a drinking establishment. Therefore the fourth hypothesis is rejected

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4-6-Testing the moderating effect of age between the social crowd and expenditure

Table 14: First regression on the moderating effect of age between social crowd and expenditure

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,030[a]	0,001	-0,001	1,20704

Source : SPSS

Table 15: Second regression on the moderating effect of age between social crowd and expenditure

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,114[a]	0,013	-0,010	1,20026

Source : SPSS

Table 16: Summary of the second regression on the moderating effect of age between the social crowd and expenditure

Model		Non-standardised coefficients		standardised coefficiens	t	Sig.
		A	Standard Error	Beta		
1	(Constant)	2,659	0,087		30,729	0,000
	Age	-0,031	0,037	-0,027	-0,843	0,399
	SMEAN(Fouldeu)	0,308	0,096	0,254	3,206	0,001
	foulsoAg	-0,154	0,044	-0,278	-3,505	0,000

Source: SPSS

The three previous tables also show us that the R2 **(0.013) of the** second regression is better than that of the first regression **(0.001), which** verifies the first condition, in addition to that, the coefficient B3 is significant **(0.000)** so age moderates the relationship between social crowd and the amount spent by consumers in a drinking establishment. Therefore, the sixth hypothesis is accepted. In other words, young consumers like drinking establishments where there are many other consumers.

4-7-Moderation of the relationship between light and expenditure

Table 17: First regression

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,030[a]	0,001	-0,001	1,20704

Source: SPSS

Table 18: Second regression

Overview of models

Model	R	R-two	R-two adjusted	Standard error of the estimate
1	0,030[a]	0,001	0,002	1,20764

Source: SPSS

Table 19: Summary of second regression

Model		Non-standardised coefficients		standardised coefficients	t	Sig.
		A	Standard Error	Beta		
1	(Constant)	2,664	0,087		30,557	0,000
	Age	-0,035	0,038	-0,030	-0,944	0,346
	SMEAN(lumiere)	-0,006	0,085	-0,005	-0,076	0,939
	lumAge	0,004	0,037	0,007	0,105	0,916

Source : SPSS

The three previous tables show us that the R2**(0.001) of the** second regression is the same as that of the first regression **(0.001), which does** not verify the first condition, in addition to that, the coefficient B3 is not significant **(0.916)** so age does not moderate the relationship between light and the amount spent by consumers in a drinking establishment. Therefore the sixth hypothesis is rejected.

4-8-Moderation of the relationship between music and expenditure

Table 20: Summary of the moderate age regression between music and expenditure

variable	B	P
Age	-0,028	0,373
Music	-0,098	0,188
Music × Age	0,150	0,043
	R_1^2= 0,002 R_2^2=0,006	

Source: SPSS

The previous table shows us that the R2**(0.006) of the** second regression is better than that of the first regression **(0.002), which** verifies the first condition, in addition to that, the coefficient B3 is significant **(0.043)** so age moderates the relationship between music and the amount spent by consumers in a drinking establishment. Therefore, the seventh hypothesis is accepted. This means that 15 to 25 year olds like the places where music is played.

V. DISCUSSION

Our study differs from previous studies because in those studies, the authors did not include age as a moderating variable in the holistic study of the influence of point atmosphere on consumer behavioural responses. This is what makes this article special. Thus, the analysis of our data shows that age does not moderate the relationship between spatial crowding and time spent by consumers in a drinking establishment. Age does not moderate the relationship between the social crowd and the time spent by consumers in a drinking establishment. Age does not moderate the relationship between light and the amount spent by consumers in a drinking establishment. These results simply mean that the age of drinkers in Cameroon has no influence on the relationship between certain factors of outlet atmosphere (spatial crowding, social crowding and light) and behavioural responses (time spent by consumers in this environment). No previous study has tested such a moderation relationship in the Cameroonian context, even outside Cameroon. Age moderates the relationship between coloured light and time spent by consumers in a drinking establishment. Age moderates the relationship between the social crowd and the amount spent by consumers in a drinking establishment. Age moderates the relationship between music and the amount spent by consumers in a pub. We cannot make a comparison with these results and the results of previous studies, because authors such as: Ben Dhamane (2006) and Elbachir (2017) tested the relationship with age and the same variables as us but in a different context.

VI. CONCLUSION

The purpose of this research was to test the moderating effect of consumer age on the relationship between drinking establishment atmosphere and behavioural responses. To this end, seven hypotheses were formulated. In order to test the hypotheses of this study, data were collected by means of a questionnaire from a convenience sample of 1,000 drinkers in pubs. After data collection and processing, we performed moderated multiple regressions. This research shows that age moderates the relationship between coloured light and time spent by drinkers in a pub. Age moderates the relationship between the social crowd and the amount spent by consumers in a drinking establishment. Age moderates the relationship between music and the amount spent by consumers in a drinking establishment.

As a result of this research, bartenders need to exploit the atmosphere of their outlet, taking into account the age of the consumers. They should be aware that young people between the ages of 15 and 26 are more sensitive to the atmosphere factors of their outlet. Specifically, these young people like pubs with music, with the presence of other customers (social crowd), and with coloured light. These results should be taken with caution as the sample in this study is a convenience sample that is not representative of the Cameroonian population.

REFERENCES BIBLIOGRAPHIQUES

[1]. **-Barbet V., Breese P., Guichard N., Lecoquierre C., Lehu J.M., Van Heems R.,** (1999), Le marketing olfactif, Les presses du management, Paris.

[2]. **-Baron, R. M., & Kenny, D. A. (1986).** The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of personality and social psychology, 51(6), 1173

[3]. **-Ben Dahmane Mouelhi N. et Choura Abida F. (2006),** Does music have same effects on different shops?, 5ème congrès international de Tendances marketing – 5th International Marketing Trends organisé par l'ESCP, Venise, Janvier.

[4]. -**Baron, R. M., & Kenny, D. A. (1986).** The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of personality and social psychology, 51(6), 1173.

[5]. **-Brauer, M. (2000).** L'identification des processus médiateurs dans a recherche en psychologie. L'année psychologique, 100 (4), 661-681.

[6]. **-Caceres, R. C., & Vanhamme, J. (2003).** « Les processus modérateurs et médiateurs: distinction conceptuelle, aspects analytiques et illustrations ».Recherche et applications en Marketing, 18(2), 67-100.

[7]. **-Donnat O. (1998),** Les pratiques culturelles des Français, Enquête 1997, Paris, Editions La Découverte.

[8]. **-Elbachir .S., (2016),**L'impact des facteurs d'ambiance au sein d'un point de vente sur le comportement du consommateur. Thèse de doctoral Université Mustapha Stambouli Mascara

[9]. **-Guibert G. (1998),** Les nouveaux courants musicaux : simples produits des industries culturelles ?, Paris, Mélanie Séteun, Collection sociologie.

[10]. **-Milliman R.E (1986),** The influence of background music on the behavior of restaurant patrons, Journal of Consumer Research, 13, 286-289.

[11]. **-Rieunier S. (2000),** L'influence de la musique d'ambiance sur le comportement des consommateurs dans le point de vente, Thèse de doctorat en sciences de gestion, Université Paris 9 Dauphine, Paris.

[12]. **-Rieunier S., Daucé B., Dion D., Gallopel K., Maille V., Rémy E., Roullet B. (2002**), Le Marketing Sensoriel du point de vente : Créer et gérer l'ambiance des lieux commerciaux, 1ère édition, Dunod, 236 pages.

[13]. **-Smith H., (1981),** Territorial spacing on a beach revisited: a cross-national exploration, Social Psychology Quaterly, 44, 2, 132-137

[14]. **-Sinha S. et Sinha S. (1991),** Personal space, density as factors in task performance and feeling of crowding, The journal of social psychology, 131, 6, 831 – 837

[15]. **-Tagou. K. & Nzongang J. (2020)** « L'influence de l'atmosphère des débits de boisson sur les réactions comportementales et émotionnelles des consommateurs Camerounais » Revue Internationale des Sciences de Gestion « Numéro 6 / Volume 3 : numéro 1 » pp : 628 – 649

[16]. **-Yalch R. F., Spangenberg E. (1993),** Using store music for retail zoning: a field experiment, Advances in consumer research, 20, 632 - 636.

[17]. **-Zuckerman M. (1979),** Sensation seeking: Beyond the optimal level of arousal, Hillsdale, Laurence Erlbaum.