International Journal of Research Publication and Reviews

Statistical Investigations on Disparity in Spending Habits of Teaching and Non-teaching Staff of Tertiary Institutions in Imo State, Nigeria: A Non-Parametric Approach

[1]Nwosu, U.I., [2]Okolie, D.C. and [3]Onukwube, O.G.

[1,2,3]Department of Statistics, Federal University of Technology Owerri, Imo State, Nigeria

ABSTRACT:

In this paper, disparity in spending habits of teaching and non-teaching staff of some selected tertiary institutions in Imo State, Nigeria was investigated. The target population comprised six tertiary institutions in Imo State environment and the institutions were sampled using the quota sampling technique. Data were collected by administering structured printed and online (Google form) questionnaires to the quotas sampled. The data were nominal and therefore non-parametric approaches – Chi-square test of independence and Mann-whitney U test of independence were applied to analyze the various spending pattern, the factors that influence the spending habits and investigate if there is disparity in spending habits of teaching and non-teaching staff in the selected tertiary institutions. The results showed that monthly budget and money spent on utility bills did not depend on the employment category of the staff. However, amount spent on food and transportation fare to workplace depended on the category of the staff. Non-teaching staff were more influenced by factors that encourage more spending. We recommend that the non-teaching staff should be sensitized and exposed to frequent financial knowledge seminars that will better inform them on the rudiments for better financial management for sustainability of their finances.

Keywords: Chi-square test, Mann-whitney u test, Quota sample, Non-parametric, Spending habit.

INTRODUCTION

Spending habit is undoubtedly one of the essential factors that can lead to financial satisfaction of an individual no matter the education level, occupation, gender, age and other socio-demographic characteristics. It is well noted that price is the key determinant of consumption patterns (Nwosu and Vincent, 2020); however spending habit is a characteristic- it can be inherent or acquired. D' Silva (2008) defined spending habit as a conduct influencing the manner in which a person utilizes money to fulfill needs and wants with no utilization control. Utilization control reflects that spending habit should ordinarily depend on decision made by the individual (Robb and Woodyard, 2011). If someone's intention or decision controls one's spending habit, financial satisfaction will ultimately be realized. Briefly, financial satisfaction usually arises from the ability of people to manage their income with respect to their spending habit. Financial satisfaction works effectively when the individual has the required financial knowledge. Fazleena and Suresh (2018) stated that financial knowledge is indispensable for effective financial management.

Spending is part of people's daily life and normally, people buy goods and pay for services daily, weekly, monthly, quarterly, half-yearly or annually to meet their basic needs. However, making purchase of goods or services not really needed causes financial instability. To ensure one does not become financially unstable or bankrupt, then his spending decision must influence his financial and entire well-being. It is true that lots of purchase decisions can be financially and psychologically impactful. Bad spending habit a major cause of financial instability has rendered many people bankrupt (Sullivan, 2005). Bankruptcy can be averted by spending less than the income and saving for the future. Also, proper financial management awareness will increase judicious use of finances to further prevent bankruptcy. Therefore, managing personal finances effectively will help staff of tertiary institutions escape impoverishment, maintain a balanced livelihood and grab the unbounded opportunities ahead (Nandanan and Fernandez, 2017). Financial insensitivity and overspending are reckless and avoidable habits which have become widespread problems among civil servants. Therefore, there is a need for routine studies on disparity in spending habits of teaching and non-teaching staff of tertiary institutions in order to provide valuable economic suggestions. Bunn and Rostom (2014) opined that household debt plays a role in affecting consumption and financial stability in a given family. Affected households suffer payment difficulties since their incomes are less than their expenditures and high interest rates emanate from high level of indebtedness. However, if financial awareness increases among people, financial difficulties will reduce significantly (Fazleena and Suresh, 2018). In the same year, Habitudes (2018) argued that inability to maintain financial-history is one of the causes of disparity in spending habit. Salary Finance Limited in 2018 revealed that many people find monthly budgets very challenging and usually face a cycle of short-term expensive debt. The average employee is compelled to leverage on payday loans through financial institutions, credit cards or overdrafts till the next pay day.

Villanueva (2017) has shown that ethnicity can also have an effect on spending habits. Ethnicity defines a typical group of people based on acquired and inherited characteristics. Usually, these acquired and inherited characteristics have the capacity to influence one's spending habits. Koç and Ceylan (2012)

stated that social class affects the purchasing concepts of individual. Lower social class consumers spend more of their income on food products while highest social class consumers always check the price labels of the food products carefully before purchasing. According to Cummin *et al.* (2009), spending habit has three indicators: planning concept, saving and purchasing concepts. Planning concepts refer to how an individual plans to spend his money, saving concept refers to whether the individual has savings or not while purchasing concept refers to the habit of buying necessities. These concepts are essential because they play connected roles in causing disparities in financial stabilities due to spending habit.

In the study by Hayhoe *et al.* (2000) and Villanueva (2017), results showed strong dependency of spending habit on gender. Females were found to have more financial management practices such as monthly-spending budget, spending and saving regularly. However, Roberts and Jones (2001) stressed that females are more likely to exhibit spending habits, particularly compulsive buying compared to men and that financially, males are more independent and confident in managing their money. It has been documented that women are more likely to adopt retail therapy to improve their mood (Nandanan and Fernandez, 2017). These authors further reported that there is a significant dependency of choice of spending avenue on gender. Additionally, financial experience of women plays vital role in any economy because they are the critical decision makers and caregivers in their households. Notably, a considerable body of evidence indicates that women's propensity to spend income under their control on family provisioning and children's nutrition is greater because they make more charitable contributions than men (Blumberg, 1988).

Financial education begat desired results based on some conducted studies from distinct target populations such as employees, students and others. This financial education brings about long-term financial habit. Similarly, a positive difference and connection between financial education and spending habits has been established (Nguyen, 2016). Financial education helps consumers in acquiring the required knowledge and skills to have a better spending habit (Ambuehl *et al.*, 2014). In addition, (Hilgert *et al.*, 2003) stated that well-informed and financially-educated consumers make good and better decisions for their families. Therefore, to improve in financial practices, households will have to increase their financial education and experience. In fact, consumer's decision to purchase goods or pay for services is influenced by culture, personality, income, attitude, motivations, feelings, financial knowledge, ethnicity, gender, family as well as available resources. The present study would investigate disparity in spending habits of teaching and non-teaching staff of tertiary institutions in Imo State, Nigeria with the specific objectives to reveal spending patterns among teaching and non-teaching staff and determine the factors that influence their spending habits.

MATERIALS AND METHODS

Data Structure: Source and Collection

The study was undertaken in selected six tertiary institutions in Imo State, Nigeria. The primary data were collected with the use of structured printed and online questionnaires. The target respondents were teaching and non-teaching staff of Imo State University (IMSU), Federal Polytechnic, Nekede (Fed. Poly. Nek), Federal University of Technology, Owerri (FUTO), Imo State Polytechnic, Umuagwo (Imo State Poly), Alvan Ikoku Federal College of Education, Owerri (ALVAN) and Federal College of Land Resources Technology, Owerri (FECOLART).

Determination of Sample Size

The sample size was estimated using the method of (Cochran, 1977) as follows.

$$n_o = \frac{z^2 pq}{e^2} \tag{1}$$

where

n_0 = sample size,

z = confidence level critical value,

p = estimated proportion of the attribute in the population,

q = estimated proportion not in the population $(1 - p)$,

e = chosen precision level.

Sampling Technique

The quota sampling technique which is one of the non-probabilistic sampling techniques was used because there was no suitable list of population units. Each of the tertiary institutions sampled, was regarded as quota (group). Reasonable number of questionnaires was administered to each group.

Chi-Square Analysis

The standard procedures for Chi-square analysis of data were employed in this study. Data were collected with the use of structured questionnaires, collected independently, at least fifty observations and no less than five observations in each cell were involved. Therefore, a non-parametric statistical method, Chi-square test was applied. The Chi-Square test of nominal (frequency) data was used to test hypotheses about the distribution of observations

in the different categories (teaching and non-teaching staff). The test of independence of variables using the Chi-square approach tested disparity in spending habits between the two categories of staff. The Chi-square test statistic for contingency is given as

$$\chi^2 = \frac{(O_1 - E_1)^2}{E_1} + \frac{(O_2 - E_2)^2}{E_2} + \ldots + \frac{(O_k - E_k)^2}{E_k} \tag{2}$$

$$\chi^2 = \sum_{i=k}^{k} \frac{(O_i - E_i)^2}{E_i} \tag{3}$$

where

"O_i" is the Observed value

"E_i" is the expected value and calculated as

$$E_{ij} = \frac{sum\,of\,row\,i\,x\,sum\,of\,column\,j}{sample\,size} \tag{4}$$

and the sum is taken over all rows = r and columns = c in the contingency table ie (k = rc). When the Chi-square value is small it implies that there is little relationship between the categorical variables. A large Chi-square value means that there is a definite relationship between the two variables. When there is a perfect agreement between the observed and the expected values, $\chi^2 = 0$. Chi-square value can never be negative. The null hypothesis is rejected when the test value (statistic) is greater than the critical value or the probability value is less than the alpha level. Otherwise, we fail to reject the null hypothesis.

Mann-Whitney U Test

Mann-Whitney U test is a non-parametric equivalent of *z* and *t* test for independence samples (Allan, 2007). The major assumption for Wilcoxon rank sum (Mann-whitney U) test of independent samples is that both samples must be greater than or equal to 10. The critical value was found using the standard normal table. The test value was computed. The data from the two samples were combined, arranged in order, and each value was ranked. Data for the two samples were obtained by adding all the scales that correspond to the responses that were ticked by each respondent in the questionnaire. The ranks of the group with the smaller sample size were summed, but for groups of equal sample size, either one was used. The test value was calculated using (5), (6) and (7).

$$\mu_R = \frac{n_1(n_1 + n_2 + 1)}{2} \tag{5}$$

$$\sigma_R = \sqrt{\frac{n_1 \times n_2(n_1 + n_2 + 1)}{12}} \tag{6}$$

$$z = \frac{R - \mu_R}{\sigma_R} \tag{7}$$

Where; R is the sum of the ranks for the groups

$n_1\,and\,n_2$ are the sample sizes that are each greater than or equal to 10.

Inference was drawn in line with conventional statistics.

RESULTS AND DISCUSSION

Data Structure of the Respondents

Table 1 presents the bivariate percentage distribution of age and employment status of the respondents in the study. The cross tabulations of age groups and employment status were precisely for 384 respondents. For both teaching and non-teaching staff, there were higher numbers of respondents whose age fall between 36 to 45 years. The number of people in each age category reduced across the age groups which are indications that number of teaching and non-teaching staff depends on age. Only 6.5% of the respondents were between 56 years and above, this also shows that the tertiary institutions consist mainly of younger people (93.5%) than older people as teaching and non-teaching staff.

Table 1. Bivariate Percentage Distribution of Age and Employment Status

Employment status	Age				Total
	26-35	36-45	46-55	56 and above	
Teaching	62	67	44	19	192
	32.3%	34.9%	22.9%	9.9%	100.0%
Non-teaching	82	79	25	6	192
	42.7%	41.1%	13.0%	3.1%	100.0%
Total	144	146	69	25	384
	37.5%	38.0%	18.0%	6.5%	100.0%

Table 2 summarizes the demographic characteristics of the respondents. None of the teaching staff had ND/NCE/DIPLOMA as highest level of education and no non-teaching staff had a PhD. This is a strong indication that level of education plays an important role in characterizing staff category. Higher number of male and married staff responded to the questionnaires than females and separated or widowed. Table 3 shows the distribution of data by employment status and name of institution. The percentage number of staff from the institutions sampled is relatively the same except for FECOLART with the smallest number of respondents.

Table 2. Demographic Profile of the Respondents

	Category	Teaching	Non-teaching	Frequency (N)	Percentage (%)
Gender	Male	139	72	211	54.9%
	Female	53	120	173	45.1%
Marital status	Married	144	140	284	74.0%
	Single	37	48	85	22.1%
	Divorced	1	1	2	0.5%
	Separated	4	1	5	1.3%
	Widowed	6	2	8	2.1%
Highest level of Education	WAEC	2	24	26	6.8%
	ND/NCE/DIPLOMA	0	15	15	3.9%
	HND/BSC/BTECH /BENG	39	137	176	45.8%
	Masters	107	16	123	32%
	PhD	44	0	44	11.5%

Table 3. Bivariate Frequency Distribution of Institution and Employment Status

	Name of institution					
	IMSU	Fed. Poly. Nek.	FUTO	Imo State Poly.	ALVAN	FECOLART
Teaching	32	34	39	31	32	24
Non-teaching	32	30	39	34	32	25
Total	64	64	78	65	64	49
% of Total	16.7%	16.7%	20.3%	16.9%	16.7%	12.8%

Disparity on Monthly Budgets

The data shown in the contingency table in Table 4 were generated when sample of 192 staff for each of the category of employment in tertiary institutions (teaching and non-teaching staff) selected was asked: "Do you have a monthly budget for spending?" Using $\alpha = 0.05$, the claim that the proportion of staff who have monthly budget are the same for the two categories of employment was tested. However, the complete contingency table of the respondents with and without monthly budgets is presented in Table 5.

Table 4. Monthly Budget for Spending Versus Category of Respondents Cross-tabulation

		Category of respondents		Total
		Teaching	Non-teaching	
Monthly budget for spending	YES	128	135	263
	NO	64	57	121
Total		192	192	384

The hypotheses considered were:

H_o: The choice of having a monthly budget is independent of the category of employment.

H_A: The choice of having a monthly budget is dependent on the category of employment.

Table 5. Complete Contingency Table of Respondents with and without Monthly Budgets

		Category of respondents		Total
		Teaching	Non-teaching	
Monthly budget for spending	YES	128 (131.5)	135 (131.5)	263

NO	64 (60.5)	57 (60.5)	121
Total	192	192	384

The Chi-square test value was computed using equation (3) as follows:

$$\chi^2 = \frac{(128-131.5)^2}{131.5} + \frac{(64-60.5)^2}{60.5} + \frac{(135-131.5)^2}{131.5} + \frac{(57-60.5)^2}{60.5} = 0.5913$$

From the results, the decision is not to reject the null hypothesis, since the Chi-square test value is lesser than the critical value (0.5913 < 3.841). This means there is no enough evidence to reject the null hypothesis, in other words, the choice of having a monthly budget is independent of the category of employment. Therefore, there is no disparity in the proportion of teaching and non-teaching staff with or without monthly budgets. This was a significant observation.
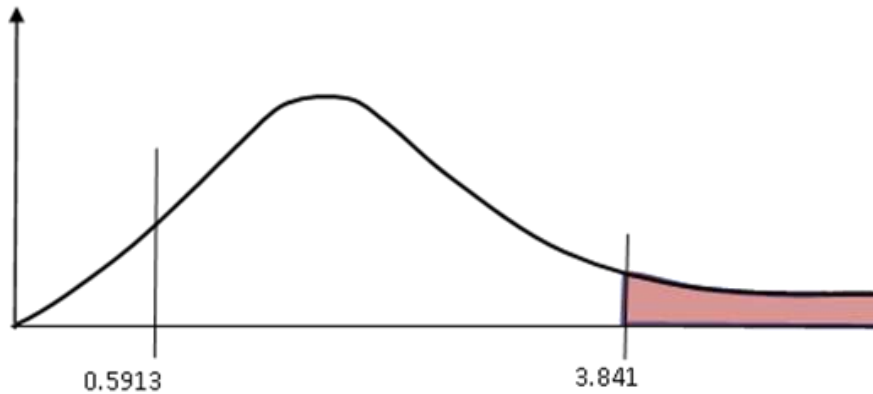

Fig 1. Critical and Test Value for Disparity on Monthly Budgets

Amount Spent on Food Items

The result on amount spent on food items based on a sample of 192 staff for each of the category of employment in the tertiary institutions studied. Each of the staff was asked: "On the average, how much do you spend on food items monthly?" At $\alpha = 0.05$, we tested the claim that teaching staff spends the same amount as non-teaching staff on food items.

The hypotheses considered and tested were:

H$_o$:   There is no disparity in the amount spent on food items monthly.

H$_A$:   At least there is a disparity in the amount spent on food items monthly.

Table 6 shows the complete contingency table of monthly expenses on food items. Differences occurred between the two staff categories.

Table 6. Complete Contingency Table of Monthly Expenses on Food Items

	Monthly expenses on food items				
	N 1,000 - N 25,000	N 26,000 - N 50,000	N 51,000 - N 75,000	N 76,000 - N 100,000	N 101,000 and above
Teaching	37 (44.5)	64 (80.5)	58 (42.5)	20 (13.5)	13 (11)
Non-teaching	52 (44.5)	97 (80.5)	27 (42.5)	7 (13.5)	9 (11)
Total	89	161	85	27	22

The Chi-square test value was computed using equation (3) as follows:

$$\chi^2 = \frac{(37-44.5)^2}{44.5} + \frac{(64-80.5)^2}{80.5} + \frac{(58-42.5)^2}{42.5} + \frac{(20-13.5)^2}{13.5} + \frac{(13-11)^2}{11} + \frac{(52-44.5)^2}{44.5} + \cdots + \frac{(9-11)^2}{11} = 27.5845$$

From the results, the decision is to reject the null hypothesis, since the Chi-square test value is greater than the critical value (27.585 > 9.488). Conclusively, there is no sufficient evidence to support the claim that there is no disparity in the amount spent on food items. Therefore, there was a significant disparity (P < 0.05) in the amount of money teaching and non-teaching staff spent on food items.
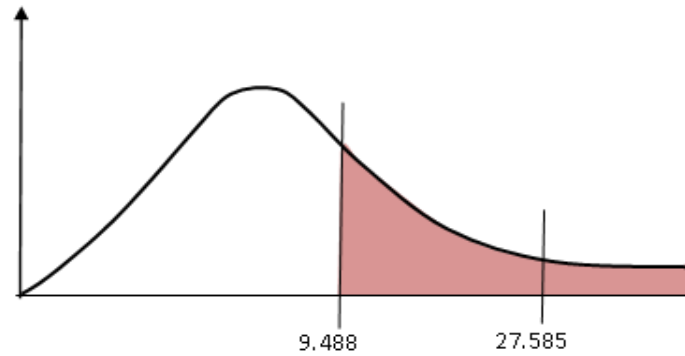
Fig 2. Critical and Test Value for Disparity on Amount Spent on Food Items

Amount Spent on Transportation

Prior to the analysis of results of the Chi-square test of independence for the amount of money spent on transportation, Table 7 shows the percentage of the frequent mode of transportation used by the respondents.

Table 7. Percentage Distribution of Mode of Transportation for both Categories of Staff

		Frequent mode of transportation			
		Own vehicle	Public vehicle	Friends vehicle	Walk
Category	ofTeaching	46.4%	50.0%	0.5%	3.1%
respondents	Non-teaching	20.3%	73.4%	1.6%	4.7%
Total		33.3%	61.7%	1.0%	3.9%

The cross tabulation of mode of transportation for the categories of staff in the selected tertiary institutions shows that most of the staff (both teaching and non-teaching) do not own a vehicle (Table 7). The use of public vehicle was the prevalent mode of transportation among the non-teaching staff. To achieve this result, a sample of 192 staff for each of the category of employment in tertiary institutions was selected. Each of the staff was asked: "How much do you spend on transportation monthly?" At $\alpha = 0.05$, the claim that teaching staff spend the same amount as non-teaching staff on transportation monthly was tested.

The hypotheses considered and tested were:

H_o: There is no disparity in the amount spent on transportation monthly.

H_A: At least there is a disparity in the amount spent on transportation monthly.

Table 8 shows the complete contingency table of monthly expenses on transportation. The analysis of results showed that differences occurred between teaching and non-teaching staff in monthly expenses on transportation.

Table 8. Complete Contingency Table of Monthly Expenses on Transportation

	Monthly expenses on transportation				
	N 1,000 - N 5,000	N 6,000 - N 10,000	N 11,000 - N 15,000	N 16,000 - N 25,000	N 26,000 and above
Teaching	25 (53)	65 (58)	26 (20.5)	39 (34.5)	37 (26)
Non-teaching	81 (53)	51 (58)	15 (20.5)	30 (34.5)	15 (26)
Total	106	116	41	69	52

The Chi-square test value was computed using equation (3) as follows:

$$\chi^2 = \frac{(25-53)^2}{53} + \frac{(65-58)^2}{58} + \frac{(26-20.5)^2}{20.5} + \frac{(39-34.5)^2}{34.5} + \frac{(37-26)^2}{26} + \frac{(81-53)^2}{53} + \cdots + \frac{(15-26)^2}{26} = 44.707$$

From the results, the decision is to reject the null hypothesis, since the Chi-square test value is greater than the critical value (44.707 > 9.488). Consequent upon this, there is no sufficient evidence to support the claim that there is no disparity in the amount of money spent on food items. Therefore, there is a significant disparity (P < 0.05) in the amount of money teaching and non-teaching staff spend on transportation monthly.
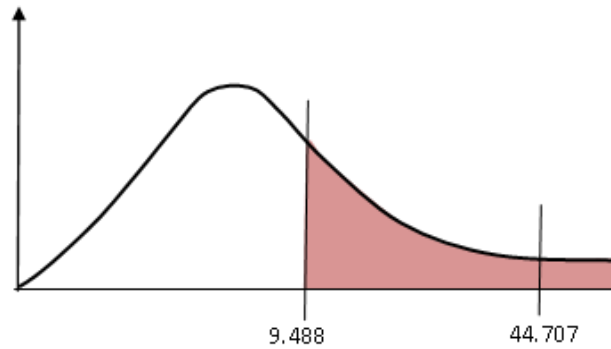
Fig 3. Critical and Test Value for Disparity on Amount Spent on Transportation Monthly

Amount Spent on Utility Bills

Table 9 presents the complete contingency table of monthly expenses on utility bills. At $\alpha = 0.05$, we sought to test the claim that teaching staff spend the same amount as non-teaching staff on utility bills monthly. Similarly, a sample of 192 staff for each of the major category of employment in tertiary institutions was selected. Each of the respondents was asked: "How much do you spend on utility bills monthly?" Briefly, utility bills included bill for electricity, refilling of gas, water and sewage, internet, telephone, cable, trash and other.

The hypotheses considered and tested for statistical outcome were:

H_o: There is no disparity in the amount spent on utility bills monthly.

H_A: At least there is a disparity in the amount spent on utility bills monthly.

Table 9. Complete Contingency Table of Monthly Expenses on Utility Bills

	Monthly expenses on utility bills				
	N 1,000 - N 5,000	N 6,000 - 10,000	NN 11,000 - 15,000	NN 16,000 - 25,000	NN 26,000 and above
Teaching	49 (55)	62 (67)	37 (30.5)	25 (22)	19 (17.5)
Non-teaching	61 (55)	72 (67)	24 (30.5)	19 (22)	16 (17.5)
Total	110	134	61	44	35

The Chi-square test value was computed using equation (3) as follows:

$$\chi^2 = \frac{(49-55)^2}{55} + \frac{(62-67)^2}{67} + \frac{(37-30.5)^2}{30.5} + \frac{(25-22)^2}{22} + \frac{(19-17.5)^2}{26} + \frac{(61-55)^2}{55} + \cdots + \frac{(16-17.5)^2}{17.5} = 5.901$$

From the results analyzed, it was decided not to reject the null hypothesis, since the Chi-square test value is lesser than the critical value($5.901 < 9.488$). Therefore, we conclude that there is no significant disparity in the amount teaching and non-teaching staff spend on utility bills monthly.
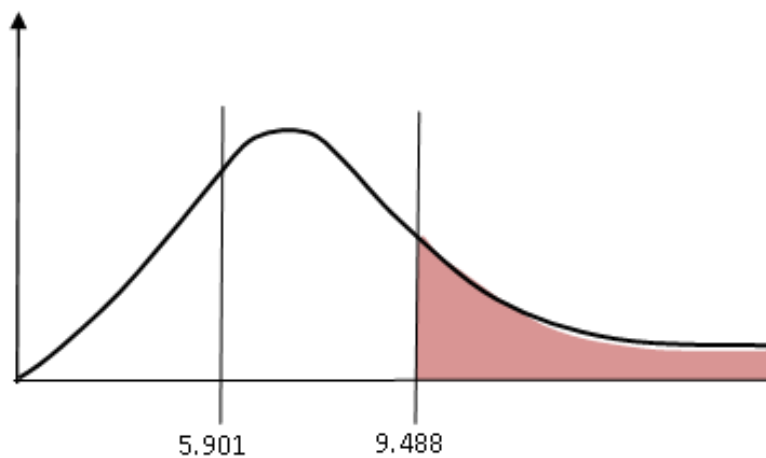

Fig 4. Critical and Test Value for Disparity on Amount Spent on Utility Bills

Factors that Influence Spending Habit

Two independent samples of teaching and non-teaching staff of tertiary institutions (Table 10) were selected and the sum of all the scales that correspond to the answers ticked by each respondent was recorded. The results were the outcome of the Mann-Whitney U test. At $\propto= 0.05$, is there a difference in responses to the factors that influence spending habits?

Table 10. Responses of Two Independent Samples of Teaching and Non-Teaching Staff of Tertiary Institutions on Factors that Influence Spending Habit

Teaching	38 27 32 18 21 27 37 24 40 23 28 43 … 25	Mean = 30.19
Non-teaching	31 26 28 35 38 29 23 31 32 37 28 36 … 40	Mean = 31.17

Hypotheses tested were:

H_0: There is no disparity in the factors that influences spending habits

H_1: There is disparity in the factors that influences spending habits

Critical value: Since $\propto = 0.05$ and this test is a two-tailed test, we used the z values of $+1.96 \ and -1.96$.

Test value:

Sum of the ranks

$R_{Teaching} = 36232$

$R_{Non-teaching} = 37688$

Substituting the values in equations (4), (5) and (6) yield:

$$\mu_R = \frac{192(192 + 192 + 1)}{2} = 36960$$

$$\sigma_R = \sqrt{\frac{192 \times 192(192 + 192 + 1)}{12}} = \sqrt{1182720} = 1089.52$$

$$z = \frac{36232 - 36960}{1089.52} = -0.668$$

Decision: The decision is not to reject the null hypothesis, since $-0.668 > -1.96$. Therefore; there is enough evidence to support the claim that there is no disparity in the factors that influence spending habits of teaching and non-teaching staff of tertiary institutions in Imo State. The sum of the ranks for non-teaching staff is greater than that of the teaching staff, this implies that the non-teaching staff are more influenced by factors that encourage spending habits. Previous studies have shown that ethnicity (Villanueva, 2017), social class (Koç and Ceylan, 2012), gender (Hayhoe, 2000; Roberts and Jones, 2001) and financial education (Ambuehl *et al*., 2014; Nguyen, 2016) were significant factors that affect spending habit. In the present study, disparities in spending habits for selected expenditure-types (as contribution to knowledge) were investigated among teaching and non-teaching staff. The results revealed that generally, the spending habit of teaching and non-teaching staff is not significantly different but differs for some expenditure-types namely, amount spent on utility bills monthly, food items and transportation. However, the results further revealed that the ranks for non-teaching staff were greater than that of teaching staff. In other words, the non-teaching staff were more influenced by factors that encourage spending habits. This is part of the major findings of the present study. Judging from the limitations of the present research, subsequent study on disparity in spending habit of teaching and non-teaching staff should contain list of all the teaching and non-teaching staff under consideration from Personnel Office of the institutions. The list will help in the effective application of a probability random sampling technique instead of a non-probabilistic sampling technique such as quota sampling. Probabilistic sampling technique will give all the individuals in the enumeration area equal chances of being selected. It will be interesting to extend this research to other professions and other states in Nigeria. With increased economic problems in Nigeria and widespread hardship among the citizenry, workers, especially civil servants must make judicious use of their financial resources. The current econometric problems in Nigeria and associated impoverishment is supported by Nwosu and Okonkwo (2020) and Nwosu and Vincent (2020).

Conclusion:

The paper focused on statistical investigation of disparity in spending habits of teaching and non-teaching staff of tertiary institutions in Imo State, Nigeria. The data used were collected using both structured online and paper questionnaire to get responses from the targeted respondents. The required size of sample was calculated with a formula that was developed by Cochran which resulted to an approximate of 384 samples. Quota sampling technique was applied due to the difficulties encountered when trying to get proper population lists of all the teaching and non-teaching staff working in the tertiary institutions of interest. Mann-Whitney U test also known as Wilcoxon rank sum test and Chi-Square test of independence with the help of contingency tables were applied. The results of this study revealed that there is:

    i.   A significant disparity in the amount of money spent by teaching and non-teaching staff on food items and transportation.

ii. No significant disparity in the amount of money spent on utility bills monthly by teaching and non-teaching staff in the selected tertiary institutions.

iii. No disparity in the choice of having a monthly budget for spending by teaching and non-teaching staff in the selected tertiary institutions.

iv. No disparity in the factors that influence spending habits of teaching and non-teaching staff in the selected tertiary institutions.

REFERENCES

Allan, GB (2007). Elementary Statistics: A Step by Step Approach (6th ed.). New York, NY: McGraw-Hill.

Ambuehl, S; Bernheim, B; Lusardi, A (2014). Financial education, financial competence, and consumer welfare. *SSRN Electronic J*. DOI:10.2139/ssrn.2585219.

Blumberg, RL (1988). Income under female versus male control: Hypothesis from a theory of gender satisfaction and data from the Third World. *J. Fam. Issues* 9(1): 51-84.

Bunn, P; Rostom, M (2014). Household debt and spending. *Bank Engl. Q. Bull*. 54(3): 304-315.

Cochran, WG (1977). Sampling Techniques, (3rd ed.), New York: John Wiley & Sons.

Cummin, MM; Haskel, JH; Jenkins, S (2009). Financial attitude and spending habits of university freshmen. *J. Econ. Educ*. 10(1): 470-490.

D'Silva, NV (2008). College students' spending behavior. Retrieved from https://www.bartleby.com/essay/college-students-spending-behavior-F3MAS9EC8B6S.

Fazleena, BA; Suresh, AR (2018). Relationship between financial knowledge and spending habits among faculty of management's staff. *J. Econ. Info*. 5(3): 1-6.

Habitudes, M (2018). Understanding and changing spending habits. Lifewise strategies. Retrieved from https://www.moneyhabitudes.com/understanding-and-changing-spending-habits/ .

Hayhoe, CR; Ieach, IJ; Turner, PR; Bruin, MJ; Lawrence, FC (2000). Difference in spending habits and credit use for college students. *J. Consum. Aff*. 34(1): 113-133.

Hilgert, MA; Hogarth, JM; Beverly, SG (2003). Household financial management: The connection between knowledge and behavior. *Fed. Reserve Bull*. 89: 309.

Koç, B; Ceylan, M (2012). The effects of social-economic status of consumers on purchasing, behaving and attitude to food products: Case study of Van, Turkey. *Br. Food J*. 116. Retrieved from https://doi.org/10.1108/00070701211230006.

Nandanan, P; Fernandez, SP (2017). A study on the gender differences in the spending attitude and behavior of IT professionals in Urban Bangalore. *Int. J. Bus. Manag. Invent*. 6(7): 55-59.

Nguyen, T (2016). Exploring the impacts of financial education on behaviour change in personal finance management. Retrieved from

https://oro.open.ac.uk/48662/1/Dissertation%20Tam%20Nguyen%20- %20submission%20final.

Nwosu, UI; Okonkwo, CA (2020). Statistical analysis of the effect of changes in pump price on consumption of petrol in Owerri Municipal, Imo State, Nigeria 1973-2016. *Niger. Ann. Pure appl. Sci*. 3: 185-196.

Nwosu, UI; Vincent, U (2020). Econometric analysis of the effect of changes in price on consumption pattern of petrol, rice and bean in Owerri city, Imo State, Nigeria. *J. Appl. Sci. Environ. Manage*. 24 (8): 1403-1408.

Robb, CA; Woodyard, AS (2011). Financial knowledge and best practice behavior. *J. Financ. Couns. Plan*. 22(1): 36-46.

Roberts, JA; Jones, E (2001). Money attitudes, credit card use, and compulsive buying among American college students. *J. Consum. Aff*. dio: 10.1111/J.1745-6606.2001.TB0011.X.

Sullivan, TA (2005). Gender differences in accounts of bankruptcy. *St. Louis Univ. Public L. Rev*. 24: 433-443.

Villanueva, S (2017). An analysis of the factors affecting the spending and saving habits of college students. Factors influencing financial behaviors, 4. Retrieved from https://www. westga.edu/~ bquest/2008/ local08.pdf.