Effects of antiquity, health insurance and exemptions on refunds of CSU VITA users

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ABSTRACT

This paper is an extension of Baryeh and Ezeka 2019 that previously examined the tax liability or refund of VITA users. This study's additional dependent variables included the return type, exemptions, area of residence (zip code), income and age of the client as well as the prior study's healthcare.

The results of the study showed that the refund was positively and highly corelated to the number of IRS exemptions that the client was allowed. Health insurance coverage was also positively and highly dependent. The age of the client affected the refund obtained; older clients were less likely to obtain refunds than younger ones. The income and area of residence had no impact on the tax liability and or refunds obtained.

Keywords: Taxation, Refunds, Liability, Volunteer, Health Insurance

INTRODUCTION

This paper extended Baryeh and Ezeka (2019). The Coppin State University (CSU) through its Business College's Accounting Department had provided a volunteer income tax assistance (VITA) program from 1998 to 2005 and then from 2010 to 2019. CSU was a small predominantly Black university in urban Baltimore City. The clients of Coppin's VITA program encompass people who earn below $55,000; such as community members, staff, students, and some faculty of the University. The May 2015 riots in the City had negative socio-economic impact on the community including the destruction and closure of several businesses. VITA through Coppin State, therefore immensely assisted the community by helping clients including community residents obtain $813,380 in tax refunds in addition to between $119,328 to $185,094, that would have been paid as fees for preparation of taxes. The complexity of the tax return including itemization and schedule filed determined the tax preparation fees charged by most preparers.

We were motivated in conducting this research because of the importance of taxation to the society at large. Our sample was from the low income and under -privileged population who may not be able to afford professional tax practitioners in tax planning. Hindrances towards filing of taxes among low income earners included fees charged and lack of expertise in tax law. As emphasized in Baryeh and Ezeka (2019) the moral responsibility towards the under privileged was heightened with the results of such studies. Furthermore, regulations could be modified or adjusted using the results of such studies. This paper extended the prior paper by analyzing additional factors that affected refunds or tax liability. The variables chosen included the income, age of the client, number of IRS exemptions, the health insurance coverage, and the area of residence based on the zip code.

This study's results showed that the tax liability or refund was positively correlated to the number of IRS exemptions that the client was allowed. The more the exemptions the bigger the refund and the less likely the client would owe. The refund was also positively corelated to Health insurance. Clients who had insurance for health were not penalized. It was further found that that the age of the client negatively affected the refund obtained. The income and the zip code did not affect the amount of refunds due to the homogeneity of the sample with respect to location and income.

This paper contributes to the existing literature since as far as we can ascertain it is the first study to examine the health insurance and additional factors that influence liability or refund from taxes of VITA clients from the urban areas in Baltimore in that sample time frame. The study proceeds with Section 2 showing the literature review and section 3 Coppin State VITA while Section 4 and 5 shows Analysis, and Results; respectively and finally Section 6 shows the Conclusion.

LITERATURE REVIEW

Availability and affordability of tax preparation services aid in tax compliance. According to the Internal Revenue Service (IRS) in 1979, 44.2% of filed returns were self-filed and contributed to 22. 8% of non-compliance. 55.8% of returns were compiled by third parties and they contributed to 77.2% of non-compliance. Among the third parties 10.6% used non- paid preparers and this accounted for 3.6% of under-reported tax. 16.7% used tax practitioners and this accounted for 42.7% of under reported tax. Dubin et al (1992) analyzed the tax preparation

services choices. They categorize them according to nonpaid preparers, paid third parties, and self-preparation. They found "significant differences in the factors which explain the demand for paid third parties who are and are not able to represent clients before the IRS" this included IRS audit rates and the frequency of IRS penalties.

Brondolo (2009) recommended that in cases of economic downturn or crisis the tax administration must encourage tax compliance by expanding assistance to taxpayers among others. The importance of volunteer income tax services, which is a non-paid preparer service cannot therefore be over-emphasized.

Linnenbrink et al (2008) analyzed data from Volunteer Income Tax Assistance (VITA) Program participants to ascertain the intended usage of direct deposit refunds and Earned Income Tax Credit (EITC). They found that while a third of the participants intended to save or obtain assets with the refund, a majority planned to pay bills or debts. They did not find a significant association between direct deposit and EITC for savings or asset accumulation except for houses. They concluded that there was the need to educate people about free e-filing as well as the fact that refunds can be deposited directly into both savings and checking accounts.

Tach et al (2018) studied families with low income. They found that above 75% of their sample experienced a shock in either expense or income in the three years prior to the study. Families therefore used refunds as emergency funds against such future uncertainties in their income or expenses to improve family's future economic security. Refund usage varied from savings, stockpiling, household staples, purchasing durable goods, and paying off debts. Even though this may seem like current consumption, these low-income earners could not afford to set aside income for the long term as such partook in such precautionary forms of investment.

According to Hall, C. C., & Romich, J. L. (2016) refund and tax credit check represents about a fifth of the annual income of the low- and moderate-income tax filers. The study compared the estimates made by the filers to the that of trained VITA volunteers. They found that "most filers (75%) underestimated their refunds, and 52% underestimated by $500 or more" This resulted in the arrival of refunds as unanticipated windfall. This sample therefore needed counselling and planning of income. The study also shows the accuracy of trained volunteers.

Porto,N., Collins, J.M (2017) studied the use of proceeds of income tax refunds for spending and saving. They saw evidence that "prior programs to encourage savings show low take-up rates." Their study showed that many filers did not make a prior estimate of their refund before filing their taxes; however, those who made an advance estimate were somehow accurate. Most importantly filers who estimated refunds prior to filing had a tendency of saving the refund that those who did not. With regards to savings decision the importance of expectations and planning cannot be overemphasized.

The above studies show that volunteer income tax assistance along with the associated counselling in tax planning can positively impact communities who cannot afford or do not have the required expertise. Most importantly, the advantages of VITA included higher accuracy, reduction in errors, timeliness and savings.

COPPIN STATE VITA

The IRS in collaboration with CSU's Accounting faculty have run a VITA program for many years. The program prepared taxes for the members of the surrounding community without any charge. The program begun its operations from early January to April. The elderly, persons with disabilities and limited English-speaking taxpayers who needed assistance in preparing their

tax returns could use this program. People who did not feel comfortable preparing their own taxes and could not afford to pay for professional tax services also used the program. The IRS offered consulting, technical assistance and software while the University offered logistics such as computers and office spaces, waiting areas and parking. Furthermore, the Accounting faculty not only trained but also supervised the volunteers. Volunteers were mainly accounting majors taking the Taxation course at the University and some Baltimore Community College students. The students gained real-world and practical experience while volunteering their time. The IRS provided a VITA certification course which all volunteers were required to pass in order to participate in VITA.

Table 1 shows the VITA certification results for the volunteers as well as other tax examinations required for the tax accounting course. The volunteers passed with a score of 80% or more in 2016.

ANALYSIS

The filing status of the taxpayers is exhibited in Table 2. Most taxpayers filing status were single; 529 out of 678. 100 taxpayers' status were head of household. There was 30 and 18 taxpayers filing as married filing together and married but not filing together respectively. Only 1 taxpayer had a filing status of a Widow. Table 3 portrays the tax refunds and or liability for the taxpayers in the sample. Both federal($605,081) and state of Maryland($208,299) tax refunds were more than tax liabilities owed for federal($19, 628) and state($76,431).

This study is an extension of Baryeh and Ezeka 2019 which analyzed what affects refunds or payments of the taxpayers who used the VITA services at Coppin for that tax year 2016. The variables chosen included the income and age of the client, the IRS exemptions given, the filing status and the return type as well as the area of residence based on the zip code. Regression was deployed and the dependent variable chosen was tax liability or refund. The independent variables chosen included insurance for health, exemptions, area of residence (zip code), income and age of the client. The regression equation is found below.

$$Y_i = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon_i$$

Y_i represented the tax liability or refund. X_1 represented adjusted gross income, X_2, age, X_3 exemptions, X_4 returntype, X_5 area of residence (zip code), X_6 , Insurance for health and finally X_7, clients age over 60. For regression purposes X_1 for Income was depicted as AGI. X_2 for Age was represented by the variable Age. X_3 for Exemptions given by the IRS to taxpayers was represented by the variable TOTALIRSEXEMPTIONS, X_4 for the return type was represented by the variable RETURNTYPE. X_5 for the zip code was represented by the variable Zip. X_6, Insurance for health was presented as Dum Health, a dummy variable. X_7 for Taxpayer being older than 60 was represented by the variable PRIMARYORSECONDARY60+.

RESULTS

The study's results can be found in Table 5. Exemptions given by the IRS to taxpayers was represented by the variable X_3 TOTALIRSEXEMPTIONS, this was positively and highly significantly correlated 1250 with the dependent variable tax refund; a 14.15 t-statistic. This indicates that the more the exemptions, the bigger the refund and the less likely the client would

owe. The results support tax accounting theory in that exemptions lower the tax liability.

X_6, Insurance for health was also highly correlated positively 472 with the dependent variable; a 2.7 t-statistic. X_6, assumed a dummy variable which took on a value of 1 for taxpayers with insurance for health and 0 otherwise. Findings reveal taxpayers who had insurance for health obtained a refund while those who did not had more tax liability. The findings were aligned to the policy in place at the time, the Obamacare that penalized the uninsured.

X_2, Age was negatively correlated 8.9 with the refund and was significant with a t statistic of 2.08. This means that the older the client the less likely they were to get a refund. The results indicate that the age of the client negatively affected the refund obtained. Younger people had a greater probability of obtaining a refund. This was due to the fact that younger people seem to have less income and also had more dependents than older people so could claim more exemptions. Age was represented by the variable Age. However, after the age of 60 age was not a significant factor. Taxpayer being older than 60 was represented by the variable X_7 PRIMARYORSECONDARY60+, this variable was insignificantly correlated to the refund obtained. (t statistic of 0.9)

X_1, Income was negatively correlated with the dependent variable tax refund, however was insignificant with a 0.05 t-statistic. Additionally, the results indicate that the return type did not affect the amount of refunds. The return type was represented by the variable RETURNTYPE, X_4. (T-statistic of 1.23 respectively). The zip code, X_5 was not significantly associated to refunds (t-statistic of 0.912). The zip code for this particular sample was insignificant because of the location of this sample, mostly impoverished area. Results could change if the zip code was more diverse with both affluent and poor citizens.

CONCLUSION

CSU VITA had assisted the community by preparing taxes for free over a long period. The program had been heavily patronized over the years. The Baltimore area community had been impoverished by riots and economic decline. The economic benefits as a result of the VITA program of roughly 1 million dollars by virtue of tax refunds and prevention of fees for tax preparation tremendously benefited the community. This study extends the prior investigations of Baryeh and Ezeka (2019). Findings show that the more the exemptions the bigger the refund and the less likely the client would owe. Taxpayers with insurance for health also obtained a bigger refund. Furthermore, the age of the client negatively affected the refund obtained. However, the zip code and the income had no impact.

This investigation adds to the literature because it expounds how exemptions, age and insurance for health affects underprivileged citizens. The underprivileged do not have the luxury of expensive tax consulting. The results of this research can assist regulatory bodies and other organizations that work with the underprivileged. Further studies will investigate the factors that promote tax compliance among the underprivileged in society.

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APPENDIX

Table 1

Last Name (initial)	First Name (initial)	Student ID	IRS Standards of Conduct%	IRS VITA Basic Exam%	Class Quiz %	VITA Reflection Paper %
B	B	547	100.00%	83.00%	100.1	94
C	S	497	100.00%	93.00%	97.24	95
C	S	786	80.00%	83.00%	94.38	90
C	H	467	90.00%	86.50%	94.38	94
D	T	619	100.00%	83.00%	91.52	90
D	S	574	80.00%	80.00%	97.24	94
E	A	783	80.00%	80.00%	100.1	95
H	T	610	90.00%	83.30%	94.38	90
R	N	946	80.00%	83.30%	71.5	94
T	L	817	80.00%	80.00%	85.8	90

Table 2: Status when Filing

Single	529
Household Head	100
Married Filing together	30
Married not filing together	18
Widow	1
Total	678

Table 3: Tax Refund and Liability
Federal Refund and Liability

Federal Tax Refunds	$605,081
Average Tax Refund	$700
Total AGI	$13,644,315
Average AGI	$20,090
EITC	$171,027
Child tax Credit	$23,750
Educational Tax Credit	$20,372
Tax liability	$19,628
Electronic Returns	678
Rejects	23
Tax savings	135,600
State Refund and Liability	
Maryland Refunds	$208,299
MD Tax liability	$50,842
State EITC	$76,431
MD Tax filing	$610
Rejection	4

Table 4: Data Statistics

Refund		*AGI*		*Age*	
Mean	707.172566	Mean	20124.35841	Mean	50.19026549
Standard Error	57.3966942	Standard Error	566.7404798	Standard Error	0.647438292
Median	536	Median	17750.5	Median	54
Mode	0	Mode	0	Mode	54
Standard Deviation	1494.51998		14757.03409	Standard Deviation	16.85827866
Sample Variance	2233589.98	Sample Variance	217770055.1	Sample Variance	284.2015595
Kurtosis	5.3092414	Kurtosis	4.013060793	Kurtosis	-0.698849753
Skewness	0.874888	Skewness	1.254017465	Skewness	-0.281514613
Range	14641	Range	132481	Range	77
Minimum	-6543	Minimum	-6737	Minimum	17
Maximum	8098	Maximum	125744	Maximum	94
Sum	479463	Sum	13644315	Sum	34029
Count	678	Count	678	Count	678
Largest(1)	8098	Largest(1)	125744	Largest(1)	94
Smallest(1)	-6543	Smallest(1)	-6737	Smallest(1)	17

Table 5

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.49897954							
R Square	0.24898058							
Adjusted R Square	0.24113411							
Standard Error	1301.91983							
Observations	678							
ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regression	7	376493598.8	53784799.83	31.73153418	4.36529E-38			
Residual	670	1135646820	1694995.254					
Total	677	1512140419						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	-2086.67818	1366.050843	-1.527526	0.127102195	-4768.934019	595.5777	-4768.93	595.5777
AGI	-0.00016058	0.00353652	-0.04540732	0.963796178	-0.007104579	0.006783	-0.0071	0.006783
Age	-8.90752326	4.270732511	-2.08571322	0.037382395	-17.29315346	-0.52189	-17.2932	-0.52189
TOTALIRSEXEMPTI	1250.47669	88.1313071	14.18879089	3.80186E-40	1077.429898	1423.523	1077.43	1423.523
RETURNTYPE	89.1478206	72.57707807	1.228319229	0.219758454	-53.35806941	231.6537	-53.3581	231.6537
Zip	0.05892287	0.064035117	0.920164948	0.357817742	-0.066810785	0.184657	-0.06681	0.184657
Dum Health	472.59505	174.067372	2.715012266	0.006798027	130.8118533	814.3782	130.8119	814.3782
PRIMARYORSECON	-119.295157	132.0462066	-0.90343494	0.366619801	-378.5693339	139.979	-378.569	139.979