

Masiya, Michael

Working Paper

Lessons from Voluntary Compliance Window (VCW): Malawi's tax amnesty programme

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Lessons from Voluntary
Compliance Window (VCW):
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programme

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Poschingerstr. 5, 81679 Munich, Germany

Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email office@cesifo.de

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Lessons from Voluntary Compliance Window (VCW): Malawi's tax amnesty programme

Abstract

The Malawi Revenue Authority (MRA) implemented the Voluntary Compliance Window (VCW) in 2013/2014 fiscal year as a means of bringing non-compliant taxpayers into the tax net. The programme was a huge success in terms of revenue and the cost of collection at 0.8% was by far below the 3% benchmark for the gross tax revenues of the Authority. However, the long-term compliance impact of the programme was not evaluated. Hence, the paper intends to bridge knowledge gap. Firstly, observing trends in debts and penalty payments covering and extending beyond the amnesty period, the paper finds that debts substantially declined after amnesty period while penalties rose sharply after VCW. Secondly, by constructing a counterfactual for large taxpayers, the paper finds that tax payments of participants significantly improved after the programme. Thirdly, the paper examines tax payment patterns by VCW participants one year after the programme. About 75 percent of amending filers subsequently paid their taxes one year after VCW with a higher mean income than the non-subsequent taxpayers. Lastly, the paper finds that smuggling remains high after observing variations in customs offences during VCW and a year later, in FY2015/16. The question remains "Should Malawi reconsider another Voluntary Compliance Window after 3 years?" The paper agrees with most previous studies by strongly discouraging another amnesty while encouraging post-amnesty enforcement efforts.

JEL-Codes: H260.

Keywords: Malawi, voluntary compliance, tax amnesty.

Michael Masiya
Economist-Policy Planning & Research Division
Malawi Revenue Authority
Blantyre / Malawi
mmasiya@mra.mw

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1 Introduction

Despite raising a significant amount of revenues, there has been controversy as to whether governments should conduct tax amnesty programs. Contrary to recognizing good tax behavior with rewards (Bornman & Stack, 2015), tax amnesties may discourage law-abiding taxpayers who perceive law breakers being rewarded for non-compliance and they make current taxpayers believe that there will be future amnesties thereby reducing their incentive to be filing timely (Leonard & Zeckhauser, 1987). However, despite this possibility, several countries, even as far developed as the USA, have been conducting tax amnesties time and again. The understanding is that the more taxpayers accumulate debts including interest and penalties, such debts swell up, hence there is continuous reluctance to straighten tax affairs. In such cases, an amnesty programme acts as a fresh start for the taxpayer to begin a new chapter of compliance once the penalties and interests are waived and better still, prosecution purged. In general, reasons for granting tax amnesty programmes can be classified as political, financial, administrative, and technical (Gerger, 2012). Gerger (2012) provides an example of a case where a tax amnesty would take place for a political reason-including where the government wants to overcome political and financial crises and stimulate the market. At times, there is a financial motivation for the government to conduct a tax amnesty programme “as a pure revenue-raising device” (Leonard & Zeckhauser, 1987). Other times, the government may simply want to generate more revenues at a time when voluntary participation of taxpayers is not enough to meet the costs of running government operations (Gerger, 2012). Administrative and technical reasons include reducing administrative costs of recovering debts and closing previous tax periods respectively (Gerger, 2012). Turning to taxpayers, there are a number of reasons why they may want to participate in tax amnesty programmes. First, Andreoni (1991) cites consumption shock between an initial declaration and amnesty programme making taxpayers reluctant to shoulder the risk of an audit. Second, taxpayers are not sure about their risk preferences and only learn or determine when an amnesty is offered (Malik & Schwab, 1991). Third, by participating in tax amnesties, taxpayers potentially avoid fines if authorities detect earlier period non-filing (Graetz & Wilde, 1993). Fourth, taxpayers are credit-constrained and a tax amnesty offers them an opportunity to settle, absent interest, the tax arrears they used to smoothen consumption (Andreoni, 1992). Lastly, Langenmayr (2017) observes that

taxpayers participate according to the detection probability—if it is low, they participate, depending on their level of moral cost. Due to some of the reasons for participation cited previously, taxpayers have the potential to deliberately (or unanimously without explicit collusion), force a government to declare a tax amnesty programme by creating a large tax debt (Bayer, Oberhofer, & Winner, 2015). Thus, according to Bayer et al. (2015), the occurrence of tax amnesties can be viewed as “an endogenous outcome of a strategic interaction between many taxpayers and a government that tries to balance benefits and costs of amnesties”. As always the case with game theory, outcomes always vary depending on the players’ strategies and so whether tax amnesties will attain the projected outcome has never been cast in stone. To shed more light, The World Bank (2011) states that “impact of a one-time amnesty is highly context-dependent”. For this reason, every case study of a particular tax amnesty is of high importance and in each context, may yield novel outcomes that may be highly informative to policymakers. It is in the same spirit that this paper aims to draw lessons from Malawi’s tax amnesty programme, viz the Voluntary Compliance Window (VCW) in order to take appropriate compliance-enhancing measures as well as inform whether MRA should consider another tax amnesty programme.

2 Malawi’s Tax Amnesty Programme

The Malawi Revenue Authority (MRA) implemented the Voluntary Compliance Window (VCW) in the 2013/2014 fiscal year as a means of bringing non-compliant taxpayers into the tax net. The window was a three-month period from the 1st November 2013 through 31st January 2014 (a period of 92 days). During this period, taxpayers were required to voluntarily come forward and declare their tax liabilities and in so doing, would only pay the principal amount and not the associated penalties. The programme also meant to recruit new taxpayers who had never filed a tax return since the start of their businesses. The VCW program applications generated a total of MK4.25 billion in tax revenue (1.1% of gross tax revenues for FY2013/14)¹ from 949 taxpayers. Of the

¹The ranges vary wildly, for instance, Leonard and Zeckhauser (1987) suggests that a realistic estimate of revenue gained from tax amnesty could be 1.5 percent of total tax revenues. On the other hand, Mikesell and Ross (2012) gives a range of 6-30 percent of tax amnesty recoveries as a share of total tax revenues

total generated amount of MK4.25 billion, MK122.80 million was from new taxpayers and MK4.13 billion was from the payment of existing taxpayers who committed tax offences before the programme was announced (henceforth, succinctly referred to as amending taxpayers). The tax that was paid by the most taxpayers (437) was the corporate tax which accounted for 47.1 percent of all of the taxpayers who participated in this program. This was seconded by Pay As You Earn (PAYE) (31.8%) and Value Added Tax (VAT) (23.3%) taxpayers. In short, the programme was a huge success in terms of revenue and the cost of collection at 0.8% was by far below the benchmark of 3% for the gross tax revenues of the Authority. What is missing after 3 years of implementing the programme is an understanding of how the programme has affected compliance. The paper examines payment behavior of taxpayers before the programme, during the programme and after the programme and observe if there were any changes in the compliance of taxpayers. I examine the changes by taxtype while focusing on taxpayers who were present prior to and after the program implementation. The question remains “Should Malawi reconsider a Voluntary Compliance Window after 3 years?” The paper agrees with most previous studies by strongly discouraging another amnesty while encouraging present enforcement efforts that are evident in the data. I examine a few of such studies before delving into methodology, analysis and lastly, recommendations.

3 Previous research on Tax Amnesties

Examining the impact of tax amnesties and compliance in Turkey, Gerger (2012) concluded that tax amnesty has negative effect on taxpayers’ attitudes and behavior. By interviewing 240 taxpayers, slightly over 80 percent showed lack of trust that amnesty is a one-time opportunity, thereby decreasing compliance as they expect more amnesties in the future. Consequently, tax amnesties are “self-fulfilling in the sense that initial compliance gets worse if taxpayers expect that an amnesty will be coming along soon” (Bayer et al., 2015). Findings from a study on taxpayer attitudes towards South African tax amnesties revealed that offering multiple tax amnesties might not generate additional revenues as non-compliance taxpayers keep on evading taxes in anticipation of additional future amnesties (Junpath, Kharwa, & Stainbank, 2016). This finding was shared by Said (2017) in the evaluation of the Indonesian tax amnesty that due to

taxpayers' reliance on the next highly probable tax amnesty programme, tax amnesties have "adverse impact on compliance". Langenmayr (2017) observed that though the administrative cost of assessing the taxes of evaders is very low, existence of a Voluntary Disclosure Programme (VDP) increases tax evasion. Some evidence points that tax amnesties are perceived as unfair to law abiding citizens as they "reward tax evaders with a lower-effective tax rate than law abiding taxpayers" (Le Borgne, 2006). From the few studies summarized, we observe a negative impact of tax amnesties on compliance. A tabular summary of further research on tax amnesties is included in Appendix 1.

4 The Degree of Doubt: A Simple Notion

For a pioneer amnesty programme like the one Malawi had, it is not easy for taxpayers to believe that this is going to be purely altruistic on the part of government. So there are indeed some doubting Thomases. Thus, I suggest the "degree of doubt" which reduces overtime as more and more taxpayers start filing and word spreads out about credibility of the programme (See Proof in Appendix C).

Suppose the degree of doubt is given by λ_t since it is not static but adjusts downwards as time progresses.

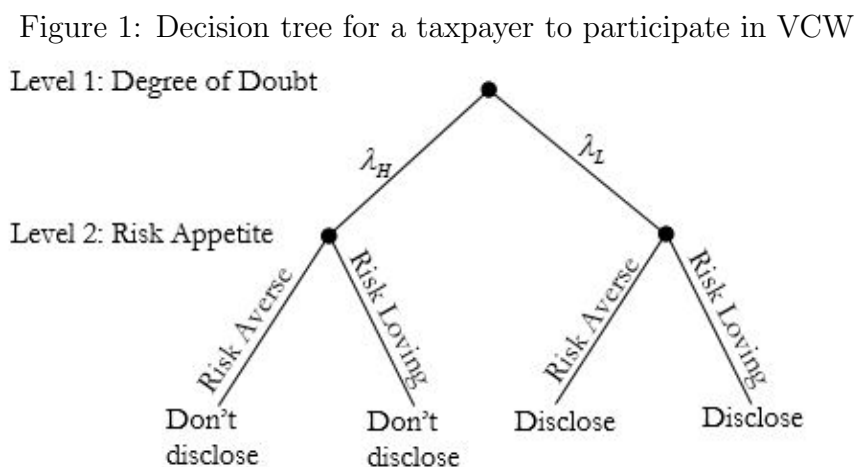
Then $\lambda_t = f(\text{Number of previous tax/other amnesties, information exchange, magnitude of tax debt})$. I explain how the suggested factors would impact the degree of doubt. First, given no previous tax amnesty, the degree of doubt would be very high as taxpayers have no experience how the government reacts when such an offer is made. While if there were other amnesties before, even not related to tax, taxpayers have an idea of what to expect and are not suspicious that it is neither a means of tracking nor subsequently prosecuting them, among other fears that they may have in mind. Secondly, information exchange entails the extent to which the doubting taxpayers are being informed of how other taxpayers who have participated in the early days of the amnesty are being treated. Similarly, taxpayers may be exposed to external sources of information which entail how governments of other countries have treated taxpayers during amnesty periods². Thirdly, the larger the tax debt the more skeptical a taxpayer is on the credibility of government in offering an olive branch. This is due to the

²Only credible information or good quality information

emphasis given on maximizing revenue collection and in such a case, a taxpayer would be unsure if indeed the revenue administration is willing to waive penalties and interest and indeed forgo prosecution for the sake of straightening their tax affairs ³. As part of information fishing, very large corporations are likely to send out a small subsidiary in order to test the waters, then upon successful filing, the bigger corporation may also proceed to declare hidden income or taxes ⁴.

4.1 How different is the degree of doubt from risk?

The degree of doubt is different from risk-inclination because risk-aversion is semi-permanent characteristic of an individual while doubt depends on an event. A risk-taker does not choose which situation to be wary of risk but is mostly inclined to risk or is daring for most of the situations. In that case, I develop a decision tree on whether a taxpayer will choose to participate in VCW depending on their degree of doubt and risk appetite.



Thus, from Figure 1, I conclude that in the presence of high degree of doubt, it does not matter whether a taxpayer is risk-loving or risk-averse. Either way, they will not disclose all income on which they evaded taxes to the authorities. On the other

³The government is not forthcoming that an amnesty is also a means of revenue generation on their part. They make it appear as if it is purely altruistic and only beneficial to the taxpayer alone. Thus, the perception is that the government is losing out on revenues through waiving of the fines and interest.

⁴The “testing the waters” proposition can be tested by observing amnesty filing patterns of taxpayers and magnitude of initial amounts versus amounts declared later in the amnesty by the same taxpayer or by a taxpayer and their subsidiaries

hand, with a low degree of doubt, a taxpayer will disclose but the risk-averse one will engage in “testing the waters” by either disclosing a small amount of income or for a big company, sending a subsidiary to declare and then observing how that subsidiary is treated. Risk neutral individuals will purely decide based on the degree of doubt, deciding to declare when degree of doubt is low and not disclosing when degree of doubt is high. Langenmayr (2017) cites a high-moral cost of evasion and probability of detection as determining factors whether disclosure will occur having either evaded or not and Bayer et al. (2015) cite a higher detection probability as key in disclosure. I propose that when your degree of doubt is very high, you perceive a higher degree of detection since you do not have trust in the government’s intention. And the moral cost of evasion gives rise to a higher degree of doubt, among other key factors. Subsequently, a higher degree of doubt encompasses a compounded perceived detection probability and moral cost of evasion.

4.2 Modelling the degree of doubt

The challenge is to create a benchmark which would represent trend without degree of doubt. This depends on whether the benchmark exists in the current amnesty period or subsequent ones. Thus, I create two cases, when $n = 1$, representing one amnesty and case 2: $n > 1$, for subsequent amnesties.

4.2.1 Case 1: $n = 1$

Assuming a uniform increasing function of time (t) in number of filers (N) for the first VCW as the plausible benchmark. This is presented as:

$$N_{t+1} = tN_t + N_0 \quad (1)$$

I assume that in the presence of the degree of doubt, the number of taxpayers filing in the next period is a positive natural exponential function of the previous number of taxpayers in the first amnesty period. This assumption is made in light of information spread, as more delinquents testify to the good news that they have been forgiven of all previous tax offences, more and more will begin to participate in the amnesty, hence overtime and exponential growth is likely to be experienced as the degree of doubt wears out. Thus,

$$N_{t+1} = e^t N_t + N_0 \quad (2)$$

Thus, the degree of doubt would be estimated as follows in the time period $t \in [t, t+1]$

:

$$\lambda_t = \left| 1 - \frac{\int_t^{t+1} (e^t N_{t-1} + N_0) dt}{\int_t^{t+1} (t N_t + N_0) dt} \right| \quad (3)$$

for $t \geq 1$. Consequently, λ_t is restricted to $0 \leq \lambda_t \leq 1$.

In general terms, without assumption of functional form

$$\lambda_t = \left| 1 - \frac{\int_t^{t+1} f_1(t) dt}{\int_t^{t+1} f_2(t) dt} \right| \quad (4)$$

Where $f_1(t)$ is the functional form of the actual payments and $f_2(t)$ is the potential functional form (i.e. in the absence of the degree of doubt)

4.2.2 Case 2: $n > 1$

In this case, the second-period amnesty acts as a benchmark for the degree of doubt. Since we cannot compare the two trends because the number of filers will be different and will most likely vary, we use the growth rate of the second amnesty as an indicator of growth of number of filers with reduced degree of doubt. However, this possess challenges where the second-period amnesty exhibits a constant number of taxpayers for two time periods t and $t + 1$. In that case, the slope would be zero and would pose a challenge in case it is a denominator for comparative purposes. Again, depending on whether the initial number of taxpayers in period 1 is greater than the initial number of taxpayers in period 2, the growth rates will vary wildly and without bound. Thus, being a complex case, I propose reliance on within-amnesty measure of degree of doubt as presented in Case 1 and then compare the independent measures for period 1 and subsequent periods to observe any variation.

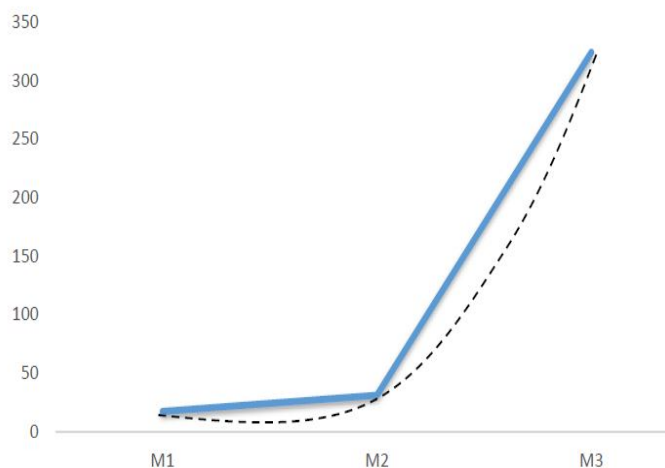
4.3 Testing the Degree of Doubt

We apply real data of the frequency of payments by month to test whether the degree of doubt applies to the first VCW.

Figure 2 shows the trend of number of VCW applications by each month of the VCW.

If an exponential line is plotted alongside the graph, one observes that the trend is near-exponential thereby agreeing with the earlier assumption made about the functional form of first tax amnesty payments.

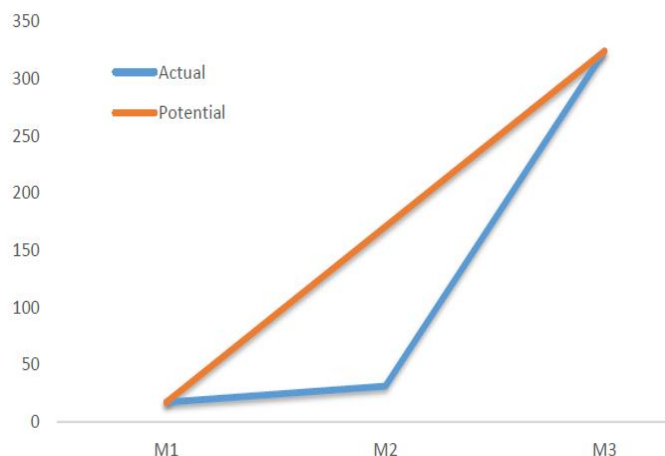
Figure 2: VCW Payment Frequency by Month



Source: Author using MRA data

In Figure 3, I plot the potential line using the values $a, a + \frac{a+l}{2}, l$ where a is the first term and l is the last term. The line plotted is labeled potential line representing the trend of payments if the doubt was absent. We use figure 3 to calculate the shares of the areas

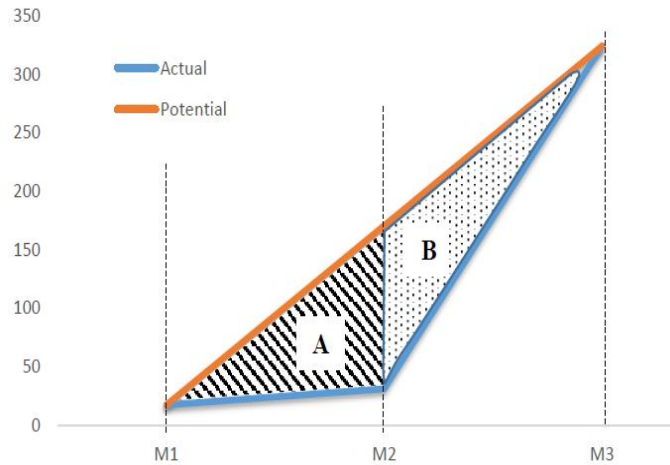
Figure 3: VCW Payment Frequency by Month



Source: Author using MRA data

A and B presented in Figure 4 as an indication of the degrees of doubt between two time periods. The calculation reveal that λ_1 (share of area A in period M1-M2)=0.74, while

Figure 4: VCW Payment Frequency by Month



Source: Author using MRA data

λ_2 (share of area B in period M2-M3)=0.28. This shows that not only is the degree of doubt within the assumed range but it is also declining as the end-period of the amnesty approaches. Thus, the data has plausibly provided evidence of the degree of doubt in the first amnesty. I discuss further the implications in the policy recommendations. Next, I discuss the methodology of the paper guiding the measurement of the extent of the change in taxpayer payments after VCW.

5 Methodology

The analysis comprises three parts-the first being trend analysis where I draw lessons from trends of variables which are very crucial to amnesty such as tax debts and penalties. I consider the later based on data availability. In such a case, a synthetic control method, which extends the difference-in-differences framework would have been plausible where I would have identified a number of countries sharing similar economic and demographic characteristics to Malawi and develop a weighted average (a control region-without policy changes) for use in comparison to Malawi before, during and after the amnesty period. Such countries would probably be in Africa, particularly Southern Africa. However, data challenges have not afforded this study a synthetic control method hence, Malawi trends are studied purely in isolation.

Secondly, I study payment behavior of VCW participants one year after VCW, in 2015/16.

By examining tax payments after the amnesty programme for the VCW participants, a new insight on the compliance levels of taxpayers after the programme is yet to be unbundled. Out of a total of about a thousand (precisely 949) applications, I focused on the domestic taxes due to the frequency and predictability of the domestic taxes⁵ rather than trade/customs taxes⁶. In that case, the sample (hereafter the “VCW sample”) comprised 639 taxpayers of which 611 (95.6%) are amending filers while 28 (4.4%) are new filers. After the amnesty period, I skip one fiscal year (this is provision for a period when taxpayers were settling tax arrears completely). I then match the taxpayer identification number (TIN) of each VCW participants to the returns filed in the fiscal year 2015/16 (FY2015/16) in order to track how many taxpayers qualified as subsequent filers and pair with their associated tax payments. I adopt a common trends approach by developing a counterfactual from large taxpayers who did not participate in the programme and compare their tax payments to large taxpayers who benefitted from VCW. I also compare the various tax type contributions during the VCW and during the subsequent tax year 2015/16.

Lastly, I study customs offences data comparing the category of items under VCW and a year later in 2015/16. This section does not track taxpayers by their TINs as the random nature of import demand makes it hard to consistently predict the behavior of an importer. Hence, we resort to the aggregate comparison of the offences a year after VCW.

6 Results

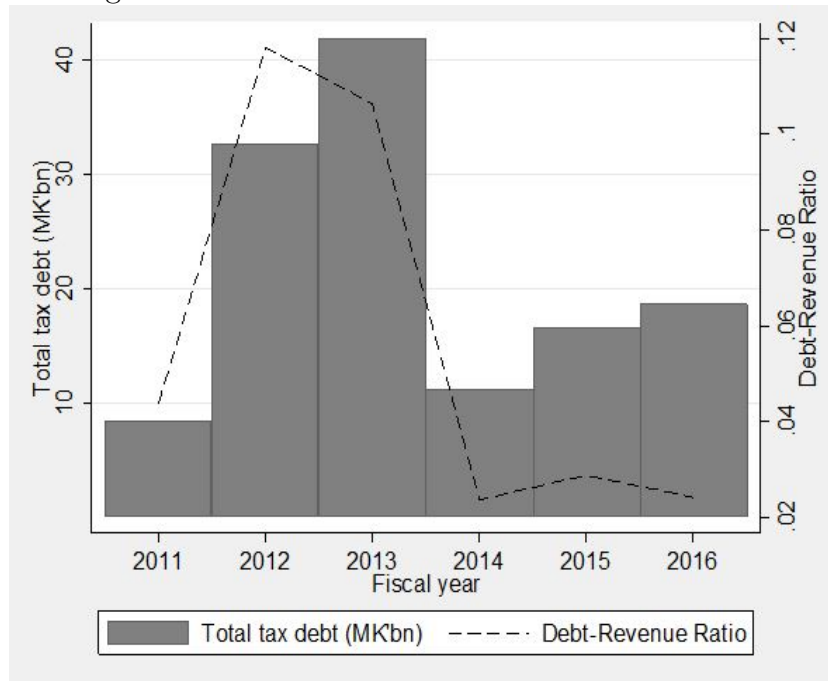
6.1 Trend Analysis

Figure 5 shows trend of nominal tax debt and debt-revenue ratio covering a 6-year period, 2011 to 2016.

⁵The fact that most domestic tax businesses have a physical presence, others with high corporate relocation costs, makes it easy to track them

⁶For customs taxes, it may take more than three months for an average importer to order goods across the border depending on how the current/previous stock clears. Hence, one cannot predict with certainty when a taxpayer is likely to import again and settle customs duties. However, we present some general customs VCW and subsequent period statistics in the Results section without tracking taxpayers.

Figure 5: Total Tax Debt and Debt-Revenue Ratio



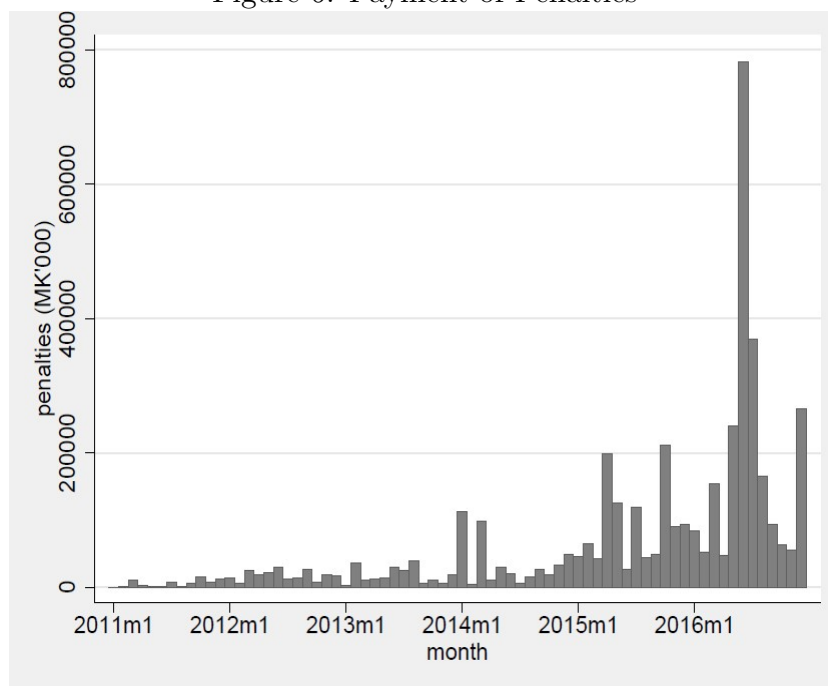
Source: Author using MRA data

For the first three years under study, 2011-2013, tax debt grew sharply coupled with a similar trend in the share of tax debt to gross tax revenues. In the VCW year 2013/14, tax debt fell significantly with the associated share in tax revenues. This is the period where taxpayers could declare their outstanding debts and pay without penalties and interest. It was a perfect opportunity for the taxpayers to clear their accounts and get a fresh start with the revenue administration. The sharp decline in tax debt in the VCW fiscal year signifies how successful the programme was in reducing the outstanding taxes. After 2013/14, the debt has been rising but much less than the period prior to the VCW. On average, two years before the VCW, tax debt grew approximately thrice while two years after the VCW, tax debt grew by about 50 percent⁷. Hence, for the years 2014-2016, with the minimal rise in tax debt, there is no compelling need to conduct another tax amnesty programme solely based on the rationale to clear tax debt and provide taxpayers with a fresh start. In addition, there is evidence that the tax revenue administration has improved its debt collection strategies in the period after the VCW. In its 2014/15 Annual Report, MRA stated that it employed some measures to enhance debt

⁷This may partly agree with Bayer et al. (2015) who postulated that taxpayers unanimously (without explicit collusion) force a government to declare a tax amnesty programme by creating a large tax debt.

recovery such as “making phone calls to the taxpayers, paid some visits, issued initial, strong notices and appointment of agents (A of A)”. This has helped reduce the debt stock and has significantly hampered growth of the tax arrears much to the advantage of the tax administration. Taking the latter into account, the need for a second VCW programme is further redundant.

Figure 6: Payment of Penalties



Source: Author using MRA data

Figure 6 shows the trend of penalty payments from 2011 to 2016. One can observe that penalties have been below the 50th percentile from 2011 to 2014. This period encompasses the VCW period during which all the penalties were waived. Thus, if the low values of penalties denote stagnant payment of outstanding taxes (a proposition being backed in Figure 5 by sharp growth of tax debt during the same period), then the VCW was a success in terms of relieving taxpayers of outstanding penalty amounts. Since, after the VCW, the penalties have risen beyond the 75th percentile denoting two possible underlying scenarios-first, taxpayers have been relieved of previous debt and penalties associated with their tax arrears, now they have a clean start and they have begun complying and paying penalties instantly to avoid accumulating insurmountable debt. The second possible factor is the increased aggression of the revenue administration in enforcing instant payments of penalties after elapse of the leniency period. Hence, the

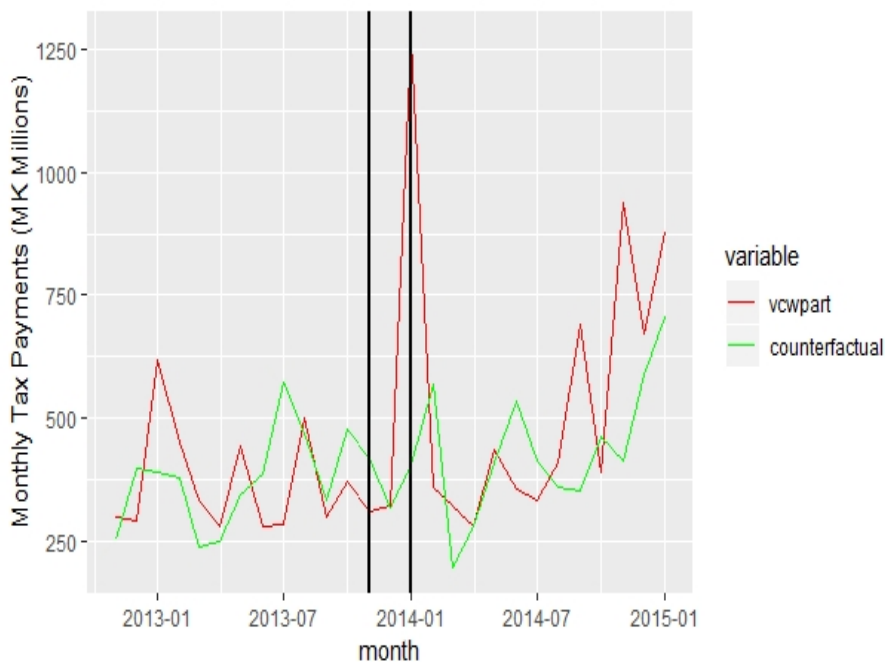
recent rise in payment of penalties does not necessitate for a second VCW as there seems to be tremendous improvement which has not left taxpayers with a huge debt mountain to climb as was the case before the amnesty was announced.

6.2 Effectiveness of the Voluntary Compliance Window: A Common Trends Approach

I attempt to measure the impact of VCW on compliance of taxpayers by constructing a counterfactual and plotting the trends of tax payments comparing the participants to the counterfactual from November 2012 to January 2015. The time period specified encompasses three sub-periods; 1 year before VCW, the VCW period and 1 year after VCW. The Malawi Revenue Authority (MRA) has three main sections of taxpayers: Large Taxpayer Office (LTO), Medium Taxpayer Office (MTO) and Small Taxpayer Office (STO). The LTO alone accounts for over 68 percent of domestic tax revenues. In terms of organization, the LTO is very well centralized with well archived data of taxpayers with details covering Location, Sector, description and monthly payments by tax type. Thus, in terms of data availability, the LTO has very detailed data and spanning a very long period at high frequency. However, only 24 of the 639 domestic taxpayers who participated in the VCW are Large Taxpayers. But to develop a plausible counterfactual, I relied on the details of this small number of taxpayers as I could not obtain similar data from the other two sections. Despite the small number, the large taxpayers were significant in terms of tax revenues contributing MK1.25 billion to a total of MK4 billion from Domestic taxes during VCW thereby accounting for about 31 percent of the total revenues during VCW leaving the other 69 percent among 615 small and medium taxpayers. Hence, to develop the counterfactual for the 24 taxpayers who participated in the VCW, I considered among non-participants, one taxpayer at a time looking at their industry, nature of business, location and amount of taxes remitted in November 2012, the first period of analysis. For each taxpayer, I identify a similar taxpayer in order of priority of the following: industry, nature of business, size of taxes remitted and lastly location. With that I develop a new list of 24 taxpayers who did not participate in VCW but have similar characteristics to the participants in order to satisfy a parallel/common trends assumption (ref Appendix 2 for a summary of the taxpayer identification details). I now extend the monthly tax

payments of the two groups of taxpayers from November 2012 through the VCW period to January 2015. Using these payment trends, I plot two lines assuming a common trends assumption and observe the trends after the VCW period. The graph presented in Figure 7 shows the plotting of the payments of the participants and the counterfactual for the entire period.

Figure 7: Tax Payments of VCW Participants and Non-Participants

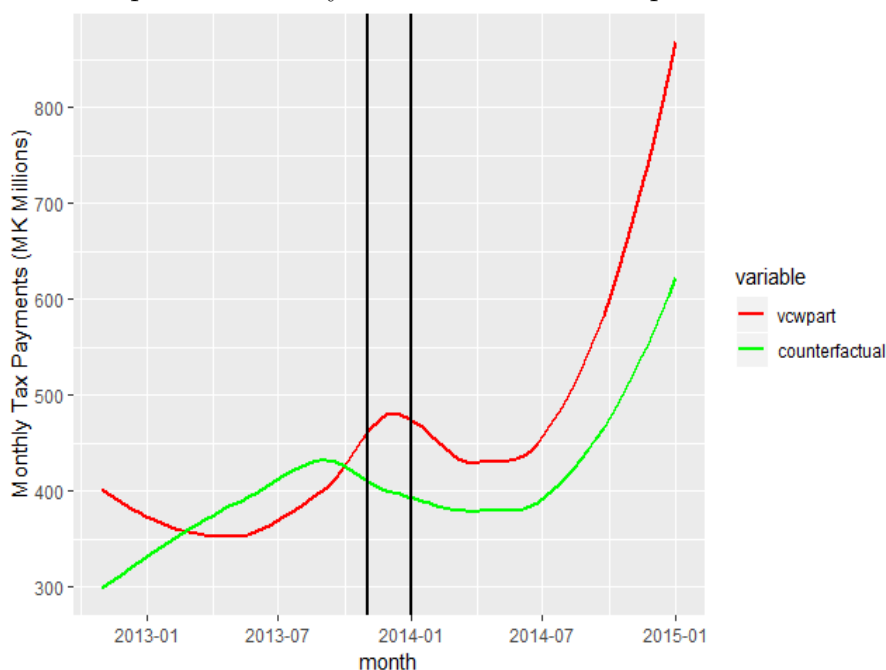


Source: Author using MRA Data

From the figure 7, the common trends assumption is not strictly met in the period prior to VCW much as there are slight similarities in the trends. The VCW period is enclosed in the two vertical lines and one can observe the sharp rise in the payments of the VCW participants in the period of the VCW. In both periods, before and after VCW the trends are interchanging either being on top of the other at some point thus making it hard to provide a solid conclusion. Hence, in figure 8, I plot a smooth function of the same graph to observe general trend which is slightly obscured in Figure 7.

From Figure 8, one observes that prior to the VCW, for a longer period, the counterfactual lies above the trend of VCW participants' payments. But a few months closer to the VCW period, the participants graph rises above the counterfactual which may signify an immediate response to the news of VCW by amending taxpayers who have resorted to immediately start remitting actual tax due before making a decision to

Figure 8: Smooth plot of Tax Payments of VCW Participants and Non-Participants



Source: Author using MRA Data

declare ‘hidden’ tax arrears. The sharpest rise is observed during VCW and after that, persistently, the graph of participants lies everywhere above the counterfactual, according to the smooth graph. I try to compare the means of the two groups before and after the VCW to further validate the findings in Figure 8.

Table 1: Means of the two groups by period (MK Millions)

	Average-PRE VCW	Average-POST VCW
VCW	370.97	506.14
NON-VCW	374.93	441.32

Source: Author’s computation using MRA data

Table 1 shows slightly similar payment averages of the two groups prior to VCW where the difference is only 1 percent higher for the Non-participants (counterfactual) at MK374.93 million. On the other hand, after VCW, the average payment of the participants is now above the average of the counterfactual by 14 percent which is a significant rise. Going by the results in Figure 5 and Table 1, one can confidently conclude that payments of the VCW participants improved after VCW period compared to those of the non-participants. This implies that in the absence of the tax amnesty programme the overall tax payments would have remained persistently low.

6.3 Frequency of Subsequent Tax Payments

I now turn to the subsequent payment behavior of taxpayers who benefited from VCW one year after the programme. From Table 2, out of the 611 amending taxpayers, 457 taxpayers subsequently made tax payments in the fiscal year 2015/16 representing 74.8 percent of the amending filers. For the new taxpayers, the percentage of subsequent payments was higher at 77.3 percent albeit from a small total number of 22. The 154 remaining amending taxpayers are not appearing in the comprehensive payments data of 2015/16 fiscal year. It is possible that among these taxpayers are some who may have filed nil returns and/or made losses hence no tax payment that fiscal year but the challenge of the study was to obtain data on filing as it is not centralized due to lack of unified central system in the Authority. Hence, I relied on readily available payments data as a proxy for subsequent filing. However, tax payments are very important as they signify that the taxpayer had indeed filed before making the payment. For purposes of this study, we shall be using the words filing and payment interchangeably.

Table 2: Frequency Distribution of subsequent payments by VCW participants

STATUS	VCW				Total	Total
	SUBSEQUENT PAYMENT					
	NO	NO	YES	YES		
		%		%		%
AMENDING	154	25.2	457	74.8	611	100
NEW	5	22.7	17	77.3	22	100
VCW SAMPLE	159	25.1	474	74.9	633	100

Source: Author's computation using MRA data

Despite a small number of new taxpayers (3 percent of VCW taxpayers), they remain a good catch by the VCW programme. In terms of VCW participants' payments in FY2015/16, the new taxpayers accounted for just 0.1 percent which is small but it could not have been realized if not for the VCW. Unlike the new taxpayers who registered through the VCW, the challenge is to estimate how much payment the amending taxpayers would have made if VCW was non-existent. Considering that these amending filers took advantage of VCW to straighten their tax affairs ⁸, without the

⁸During VCW, the amending filers accounted for over 22 percent of total VCW revenue gain.

programme, their subsequent tax payments would have been very low since they would have had insurmountable amount of debt. However, the magnitude of the disparity cannot be stated with certainty.

Table 3: Mean Incomes of Amending filers by Subsequent Filing (Amount in MK)

		Mean	Median
SUBSQ	Freq.	(VCW Amount)	(VCW Amount)
NO	154	720,732.31	103,892.05
YES	457	1,569,134.28	300,000.00

Source: Author's computation using MRA data

Based on VCW data, subsequent filers have higher incomes (as proxied by higher tax payments) than filers who did not make subsequent payments. Among amending filers, subsequent filers had a higher income average. The mean (median) of their VCW payments stood at MK1.57m (MK300,000) compared to those that did not file subsequently. This provides some small consolation that the missing payments from taxpayers who did not file subsequently would not have accounted for a larger proportion of revenue compared to those that subsequently filed. In other words, VCW has enabled higher-income taxpayers to file subsequently further enhancing revenues for the tax administration in the long-run.

During the VCW, Value-Added Tax (VAT) and Corporate Tax constituted a larger proportion of the tax arrears remitted at 29 percent. This was followed by Pay As You Earn (PAYE) with a 26 percent contribution. In the subsequent payment, Pay As You Earn (PAYE) led the lot as it comprised 34 percent of the total tax payment followed by VAT at 27 percent. While during VCW, these large shares signified that these tax types had larger shares of tax arrears signifying higher non-compliance among the subsequent taxpayers. After one year, during the subsequent payments, the same top three tax types have exhibited larger shares in payments probably signifying an improved compliance in these tax lines. This also signifies growth of small businesses over the year thereby compounding the benefit of VCW and showing positive externalities trickling down to other tax types. Hence, the benefit accruing from the amnesty has not been restricted to the tax types that were initially filed during the programme-it has had far-reaching effects on revenue-intensive tax types thereby compounding its benefit through the subsequent filers.

Table 4: Subsequent Payments by Tax Type

TAX TYPE	VCW		2015/16	
	AMOUNT (MK MILLIONS)	SHARE	AMOUNT (MK MILLIONS)	SHARE
Domestic Excise	6.42	1%	661.07	6%
Dividend	-	0%	70.42	1%
Fringe Benefit	19.87	3%	276.77	3%
Corporate	217.68	29%	448.69	4%
Non-Resident	20.90	3%	208.96	2%
PAYE	192.23	26%	3,484.33	34%
Provisional	0.67	0%	1,455.73	14%
Value-Added	217.62	29%	2,806.45	27%
Withholding	68.37	9%	918.17	9%
Miscellaneous	-	0%	0.26	0%

Source: Author's computation using MRA data

6.4 Customs Offences

During VCW, 110 taxpayers declared previous customs offences and had penalties waived. Total penalties waived accounted for 30 percent of total import duty estimated. I categorized the unpaid duty items into Assorted items, Luxury vehicles, other vehicles and motor parts. Outstanding duty on luxury vehicles alone accounted for over 65 percent of duty of the total items declared. I allowed for one year to elapse similar to the treatment in the previous section with the same rationale. I observe the trend in 2015/16 noting the amounts and shares of penalties for the same categories using seizure data omitting taxpayer details.

While nominally, the amount of duty under luxury vehicles is higher in 2015/16 than during the VCW ⁹, the share is lower as evidenced by a penalty share of 31 percent second from assorted items. Thus, there has been an increase of over 20 times in the duty amount from smuggled assorted items. Despite announcing a reduction in the excise

⁹The VDP is much less than during VCW yet the duty is large because the seizure data did not effectively record the VDPs as most smuggled goods had no proper documentation. Hence, the subsequent tax is 'prejudiced duty' and not actual duty as recorded in the VCW.

Table 5: Customs Offences during VCW and FY2015/16

	VCW			2015/16		
	VDP	DUTY	PENALTY	VDP	DUTY	PENALTY
Assorted items	175.63	21.5	11%	40.82	379.37	41%
Luxury vehicles	175.29	127.93	67%	35.52	441.02	31%
Other vehicles	75.22	40.06	21%	67.36	226.83	27%
Motor parts	11.10	2.11	1%	0	2.15	0.3%
Grand Total	437.24	191.60	100%	143.70	1,049.37	100%

Source: Author's computation using MRA data

duty of luxury vehicles in the 2015 budget statement (Government of Malawi, 2015) by at least 15 percentage points, there has been a rise in smuggled luxury vehicles one year after VCW.

It is worrisome to note that the seized goods only constitute a proportion of the total of smuggled goods since some manage to escape unnoticed. Assuming a VCW were announced today, surely, some taxpayers would come forward to declare tax offences. Thus, if the conspicuous proportion of smuggled goods is this alarming after VCW, there is indeed need to intensify border patrols and seal our borders. More should be done by the Authority to close all unchartered routes to lessen the amount being smuggled. In the next section, I offer a number of policy implications arising from the VCW lessons.

7 Policy Implications

I draw some policy relevance from the findings that the paper has yielded in order to inform the reader how the VCW has impacted the revenue administration through change in taxpayer behavior.

7.1 Repentant sinners bringing more offertory

Using the common-trends approach, large taxpayers who participated in the VCW exhibited higher subsequent tax payments than the counterfactual. The study has also revealed that about 75 percent of the amending filers are subsequently filing and yielding a significant amount of revenues among subsequent taxpayers. In as far as the

VCW was very beneficial in the short-term, yielding a substantial amount of tax revenues at a lower cost of collection of 0.8 percent, the revenues continue tricking in one year after the programme through previous participants who have resorted to be compliant. Hence, the programme has exhibited longer-term benefit albeit being carried out in only three months.

7.2 A handful of silent beneficiaries

About 25 percent of the amending taxpayers have not exhibited any payment pattern one-year after the VCW despite benefiting from the programme. There could be several reasons why there is a residual non-subsequent group. Among these, some could be expecting another amnesty, others have simply not made any taxable profits or income in the year under review, others could have left business, or the enforcement may not have been sufficient enough after the programme to convince them to be compliant. There is need to investigate further why there is such a handful of taxpayers not subsequently making tax payments after VCW.

7.3 A dog that barks but does not bite

During the VCW programme, MRA dished out a resounding warning to all taxpayers who would choose not to participate in the VCW but would later be found to have been eligible after the programme had elapsed. Massive enforcement was promised, prosecution and increased penalties were all part of the threat to non-participants. However, after the programme was completed, there were no special enforcement effort allocated to flushing out non-participants of VCW. Even those that were caught to have had offences were not subjected to special penalties as these were not prescribed in ink ¹⁰. Hence, the taxpayers may have not taken the Authority seriously in as far as honoring the threat is concerned. Another resounding promise was that the VCW was a one-time offer. In light of the aforementioned notices, offering another VCW would result in loss of credibility for the revenue administration which reneged against its own promise. In the second VCW, the non-participants who got away would do the same and spread word about the

¹⁰For instance, in Indonesia, the government imposed a fine of 200% to non-participants of the tax amnesty programme to discourage taxpayers who rely on the next amnesty programme (Said, 2017)

empty promises of massive enforcement after the programme, hence the success would be hampered.

7.4 Some light at the end of the tunnel

After the VCW, MRA resorted to effective methods of debt recovery and these have been showing some positive results. The reduction of debt-revenue ratio after VCW and the rise in penalty payments signify the efforts that the Authority is engaging in recovery of debts and enforcement of penalty payments including distress warrants, appointment of agents, issuance of notices and agreements on payment period. The authority should also consider risk-based approaches to debt management to significantly recoup tax arrears. Despite increasing the cost of collection, maintaining such efforts consistently will result in significant reduction of the debt stock unlike resorting to offering another tax amnesty. On the customs front, the authority may consider reducing import duty or excise rates on most smuggled items. This has shown some positive light on the luxury vehicles after reduction of excise taxes, the share of luxury vehicles to smuggled goods reduced. The authority should conduct studies that ascertain how tax rates have impacted smuggling. For instance, a study by Gondwe and Masiya (2016) which identified, among imports from China, RSA and Mozambique, those which are more prone to be smuggled due to their tax rates can be cascaded to cover the seized goods only.

7.5 No more doubting Thomases

During the first tax amnesty, taxpayers are unsure of the government's intentions in offering the amnesty. Most suspect it as a means of drawing out the non-compliant taxpayers to enable the government monitor them closely. However, after the degree of doubt has lessened, a second tax amnesty would be very welcome by the taxpayers. They would look forward to the opportunity to settle their tax arrears since they are no longer unsure what happens during VCW period. Thus, the response for a second amnesty is likely to be overwhelming. However, the revenue yield may not be very promising considering the enforcement efforts the Authority instituted after VCW period which have reduced outstanding arrears and the effect of negative publicity from renegeing of earlier promises.

To sum it up: “Should Malawi reconsider a Voluntary Compliance Window after 3 years?” The study discourages any further amnesty and encourages enhancement of current enforcement and debt-recovery strategies. This is likely to yield more revenue in the short-term while keeping arrears at bay thereby rendering a subsequent amnesty redundant.

A

Summary of Literature Review

Author/s (Year)	Country	Methodology	Finding	Conclusion/ Recommendation
Ross and Buckwalter (2013)	USA	OLS and IV/2SLS in testing the presence of strategic tax delinquency.	An announced amnesty will cause some compliant taxpayers to become temporarily delinquent, effectively treating the state as a short-term loan officer.	In order to deter strategic tax planning and maintain constant revenue collections, a tax amnesty should exclude new delinquents from benefitting from the programme.

Saraçoğlu and Çaşkurlu (2011)	Turkey	Face-to-face Survey from a sample drawn from the public	<p>-Frequent tax amnesties are considered a reward for tax offenders.</p> <p>-Compliance of taxpayers in Turkey is non-responsive to increased tax audits or toughened penalties and fines thereby defying theory about compliance enhancing measures.</p>	<p>In order for tax amnesty to improve tax compliance it must be non-recurring and this must be emphasized to the taxpayer. This can be achieved by subjecting tax amnesties to constitutional provisions and not at the discretion of government.</p>
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<p>Torgler, Schaltegger, Schaffner, et al. (2003)</p>	<p>Switzerland and Costa Rica</p>	<p>Experimental (120 subjects; 68 drawn from Switzerland and 52 from Costa Rica)</p>	<p>Offering a second tax amnesty gives the impression that government could not be trusted thereby increasing expectations of further amnesties. -Multiple tax amnesties within a short time reduce the efficiency of the program.</p>	<p>Tax amnesty should be a “once- per-generation” opportunity for taxpayers to straighten their tax affairs. -For tax amnesty to improve compliance, taxpayers have to be given an opportunity to vote on an amnesty during pre-amnesty period.</p>
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<p>Christian, Gupta, and Young (2002)</p>	<p>USA</p>	<p>Followed TINs of taxpayers who participated in Michigan tax amnesty and observed how they were filing in later period, after a year</p>	<p>-About two-thirds of the new filers that came forward in Michigan's amnesty filed a state income tax return subsequently. -A higher subsequent filing rate for amending filers relative to the federal rate suggests that the state's threat of enhanced enforcement may have been credible.</p>	<p>Amnesties at the state-level have little, if any, positive impact on compliance and revenues.</p>
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Table 7: VCW Participants and Counterfactual Summary Identification Details

SECTOR	Number of Taxpayers		Tax Revenue (MK'Millions)	
	VCW	NON-VCW	Tax Revenue VCW	NON VCW
Public Administration and Defence	1	0	0.97	-
Manufacturing	7	6	199.96	144.69
Financial and Insurance Services	2	2	5.92	5.53
agriculture Forestry and Fishing	4	4	37.97	41.04
Wholesale and Retail Trade	5	6	18.06	17.55
Transportation and Storage	1	2	15.52	18.21
Other Services	2	2	15.22	20.64
Mining and Quarrying	1	1	5.54	5.83
Real Estate Activities	1	1	0.79	1.15
	24	24	299.96	254.64

B

Details of VCW Participants and Non-Participants

C

Degree of Doubt as a decreasing function of time

Theorem: Over the time period of an amnesty, $t \in [T, T + n]$, the degree of doubt, λ_t , is a convex and exponential decreasing function of time, t \square

Proof Recall, the degree of doubt is given as:

$$\lambda_t = \left| 1 - \int_T^{T+1} \frac{e^t N_{t-1} + N_0}{tN_t + N_0} dt \right| \quad (5)$$

Take the integral component,

$$\int_T^{T+1} \frac{e^t N_t + N_0}{tN_t + N_0} dt$$

Assuming no taxpayers in the initial period,

$$= \int_T^{T+1} \frac{e^t N_t + 0}{tN_t + 0} dt$$

Considering the indefinite component,

$$= \int \frac{e^t}{t} dt$$

Using Maclaurin series for the natural exponent function, $e^t = 1 + t + \frac{t^2}{2!} + \frac{t^3}{3!} + \dots = \sum_{n=0}^{\infty} \frac{t^n}{n!}$

Then, $\frac{e^t}{t} = \frac{1}{t} + 1 + \frac{t}{2!} + \frac{t^2}{3!} + \dots = \frac{1}{t} + \sum_{n=0}^{\infty} \frac{t^n}{n!}$

$$\begin{aligned} \int \frac{e^t}{t} dt &= \int \left(\frac{1}{t} + 1 + \frac{t}{2!} + \frac{t^2}{3!} + \dots \right) dt \\ &= \ln(|t|) + t + \frac{t^2}{2 \cdot 2!} + \frac{t^3}{3 \cdot 3!} + \dots + C \\ &= \ln(|t|) + \sum_{n=1}^{\infty} \frac{t^n}{n \cdot n!} + C \end{aligned}$$

Take

$$\begin{aligned}
 \sum_{n=1}^{\infty} \frac{t^n}{n \cdot n!} &= \sum_{n=1}^{\infty} \frac{n \cdot t^n}{n^2 \cdot n!} \\
 &= \sum_{n=1}^{\infty} \frac{t \cdot (t^n)'}{n^2 \cdot n!} \\
 &= t \sum_{n=1}^{\infty} \frac{(t^n)'}{n^2 \cdot n!} \\
 &= \sum_{n=1}^{\infty} \frac{1}{n^2 \cdot n!} \frac{t}{(t-1)^2} \\
 \int \frac{e^t}{t} dt &= \ln(|t|) + \sum_{n=1}^{\infty} \frac{1}{n^2 \cdot n!} \frac{t}{(t-1)^2}
 \end{aligned}$$

Taking limits,

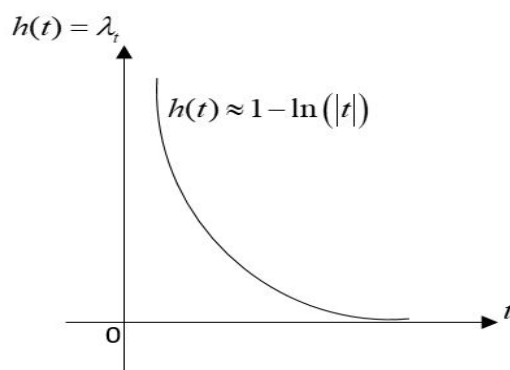
$$\lim_{n \rightarrow \infty} \int \frac{e^t}{t} dt = \lim_{n \rightarrow \infty} \ln(|t|) + \lim_{n \rightarrow \infty} \sum_{n=1}^{\infty} \frac{1}{n^2 \cdot n!} \frac{t}{(t-1)^2}$$

Ultimately,

$$\int \frac{e^t}{t} dt = \ln(|t|) + 0$$

Consequently,

$$\lambda_t \approx 1 - \ln(|t|)$$



Thus, indeed, the degree of doubt is a decreasing function of time

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