WILL BROADENING OF THE TAX BASE BROADEN TAX REVENUE BASE? A CASE STUDY OF PAKISTAN

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ABSTRACT

Policymakers in Pakistan are focusing on Broadening the Tax Base (BTB), and the purpose is twofold: to decrease informality in the economy and to increase tax revenue. In this study, we aimed to evaluate the revenue efficiency of vertically broadening the tax base. Specifically, in the first phase of our analysis, we assessed the per-taxpayer revenue benefit for each new taxpayer added to the current tax base. Over the seven years (2015-2021) we examined, BTB activities resulted in nearly 3 million new taxpayers being added to the tax register. However, almost 45% of these new taxpayers are salaried individuals who contribute no new income, as their income tax is deducted at source. Additionally, among the new business individuals registered, we observed only Rs. 190 billion in untapped income declared, which, even with constant tax rates at 35%, would yield only about Rs. 9 billion in tax revenue per year.

PREFACE

In this study, we aim to evaluate the revenue efficiency of the vertical broadening of the tax base. This research will provide the first-ever evidence of the yield from BTB activities in Pakistan and their potential to access untaxed revenue. Furthermore, since the increased tax administration costs are often covered by higher tax levies or the reallocation of funds from other public resources, our analysis will offer policymakers a perspective to assess BTB activities and adapt them to meet the specific needs of Pakistan's current economic climate.

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INTRODUCTION

At the outset, we can clearly see that Pakistan faces two significant problems: a tax gap issue and a tax revenue problem. According to the Tax Gap report published by the FBR in 2022, the tax gap, which is the difference between potential tax revenue and the actual revenue collected, stood at approximately PKR 730 billion for income tax and PKR 519 billion for sales tax. This indicates that in 2020, when the FBR collected PKR 1,655 billion in income tax revenue, there was an economic potential to collect PKR 2,385 billion. Various international donor agencies and researchers have asserted that the tax revenue collected by the country's revenue authorities is significantly below the maximum potential that could be achieved. Not only is there a wide tax gap, but there are also horizontal and vertical inequities that are exacerbated by a lack of structural reforms to the tax code. This leads us to the second problem: a narrow tax base is a primary concern and an underlying reason why Pakistan struggles to collect all taxes owed and reach its revenue potential.

To broaden the tax base across the world, registration drives (broadening of the tax base through new taxpayer registrations) have gained increased popularity especially in developing countries (Moore, 2020). These drives have been considered a good policy measure adopted to tackle two problems: decrease informality in the economy and increase tax revenue generation (Brockmeyer et al., 2019). Furthermore, in the case of mass registration or the "formalization" of firms, it has been indicated that forcing firms to register can lower their cost of business (Benhassine et al., 2018). A relevant political economy context was provided by Moore (2023) in which he pointed out that in addition to the practical expectations from registration campaigns, there are political motivations linked to expanded tax registers especially for countries that have foreign donor agency requirements to fulfill. Despite their undisputed popularity across the developing world, especially witnessed in substantial evidence that exists for sub-Saharan Africa (Gallien et al., 2023), studies have shown that post-registration revenue contributions by newly registered taxpayers, especially firms, have been disappointing (Benhassine et al., 2018).

All these observations point toward a gap within the literature. To the best of our knowledge, there is a lack of research that analyses historical trends in revenue generated by newly registered taxpayers (both in terms of type of taxpayer and type of income) and evaluates these "gains" against the administrative cost of monitoring new registrations. Our study aims to fill this gap using data from Pakistan. Given that registration drives, as well as their outcomes, are so context-specific, where the needs of one country's revenue requirements and political priorities may not overlap perfectly with another developing country, and the fact that most of the current evidence within the literature focuses on sub-Saharan Africa; our study will be the first to evaluate the merits of mass registrations and empirically establish if, for Pakistan, they have the capacity to tap into previously untaxed revenue thereby broadening the revenue base.

Within Pakistan, several measures have been adopted to broaden the tax base in recent years. However, most of them have focused on vertical broadening of the tax base, that is, adding more tax persons to the tax register. In most cases, the efforts have resulted in the addition of individuals and small businesses to the tax base, and as such, contribution to revenues is meager, if at all. Amongst all the newly added individuals, barely 50% file their tax returns regularly and voluntarily, and amongst those that do, a small percentage file a positive and previously untaxed amount under

income. This observation raises a question: does vertical broadening[1] of the tax base yield enough revenue to justify the public expenditure needed for it?

Using FBR latest annual performance reports (FBR, 2020 and 2021), we observe the following trends for the years 2020 and 2021 (all amounts in PKR):

Table 1: Tax Collection Trends for Tax Years 2020 & 2021

Head	2020	2021	Increase/(Decrease)
Collection from Income Tax	1,523 billion	1,726 billion	203 billion
Collection from Sales Tax	1,596 billion	1,981 billion	385 billion
Collection from Income Tax withholding	1,091 billion	1,237 billion	146 billion
Total Tax Revenue Collection	3,996 billion	4,734 billion	738 billion
Collection from Individuals	1,085 billion	1,311 billion	226 billion
%age contribution to total revenue	27.1%	27.6%	0.5%
Collection from Corporations	2,648 billion	3,174 billion	526 billion
%age contribution to total revenue	66.2%	67.0%	0.8%
Collection from AOPs	241 billion	249 billion	8 billion
%age contribution to total revenue	6.03%	5.25%	-0.78%
Number of new taxpayers registered	1,202,487	735,488	(466,999)

Source: Tax Collection Data from PRAL & FBR.

It must be noted that efforts to broaden the tax base are not a new policy measure within Pakistan. In fact, BTB directorate was established by the FBR in 2017 (Paracha, 2017) and up until that year, a total number of 1.07 income tax returns were filed with the FBR in total whereas FBR has data of 3.1 million domestic electricity consumers. However, these efforts, having consistent attention, have proven to be useful in terms of the size of the tax register. As can be seen from the table, in the year 2020 alone, almost 1.2 million new taxpayers were added to the income tax net and in 2021, despite economic problems posed by the Covid-19 pandemic, 0.735 million new taxpayers were added to tax net. With the addition of these new taxpayers, the total population of tax persons for income tax stands at 7.287 million according to the annual performance review of the FBR. The table also highlights some other interesting trends, for example, FBR collected an additional 738 billion in tax revenue in the year 2021 but 71% of that revenue can be attributed to taxes receipts from corporations. AOPs contributed less than 10% to total tax revenue and individuals contributed nearly 27%. Even though seemingly positive, looking at these trends alone, there is no way to determine the amount of revenue generated by the taxpayers that were newly registered, nor is it easy to tell how much revenue can be attributed to different tax persons, or different income streams, highlighting the need for a deeper analysis that our study aims to conduct. Most importantly, it must be noted that these numbers are not adjusted for inflation, and once adjusted, the insights can be significantly different.

What is immediately evident, however, is the number of taxpayers that have been added to the tax register and will demand monitoring, administrative oversight, and tax enforcement. One way to think about why this can be a concern in a low tax enforcement capacity environment is through the following numbers: FBR has a total number of 23,000 employees under its ranks for Inland Revenue Service (IRS). For a taxpayer population of more than 10 million including individuals and

[1] Within our context, when we use the term vertical broadening of the tax base, we mean addition of new taxpayers to the tax base but not an addition of previously untaxed income into the tax base.

corporations, this means 434 probable taxpayers per employee. But then this work force even includes the clerical staff which is generally not responsible for tax enforcement functions directly. From amongst the total 23,000 employees, there are 1,752 officers, personnel responsible exclusively for the enforcement of tax laws. This means 5,707 probable tax persons per officer. This in turn means, 68,493[2] new Sales Tax Returns, 68,493 new Federal Excise Duty returns, and 5,707 new Income Tax Returns to be reviewed and desk audited per officer per year. And this is in addition to the audits mandated by the FBR.

In this context, adding new taxpayers can impact broad-based taxation efforts in two significant ways: Firstly, expanding the tax net increases the taxpayer-to-tax-officer ratio, potentially diluting enforcement as each officer must manage more cases for assessment, auditing, or monitoring. Secondly, accommodating a vertically broadened tax net with additional officers and logistical resources will lead to increased public expenditure. On the other hand, there is one key benefit of having more taxpayers in the tax net and that is documentation of the economy. Even though the potential to reap immediate revenue benefits may not be there, the possibility continues to exist. On the cost side, it has been reported that Pakistan has recently established 145 new district offices (FBR, 2023) across the country for the purposes of bringing 2 million new taxpayers within the tax net during this fiscal year. As a key element of stronger enforcement, these new offices will be able to utilize third-party data from other organizations in Pakistan such as NADRA, electricity vendors, and telecommunication companies. Furthermore, to ensure stringent tax compliance, officers will be empowered to invoke section 114B of the income tax ordinance and will be well within their rights to disconnect electricity, gas, or telephone connections for all non-compliant taxpayers. According to the press release issued on its website by the FBR, it seems that the primary objective of this initiative is to bring in additional tax revenue however, before this expectation can be realized, two salient facts bear mentioning. First, for most salaried individuals, income is already taxed at source and therefore even after forced registration, it is unlikely that these individuals will add anything to the tax revenue base. Secondly, the tax code is set up in a way that makes it difficult for firms that are earning substantial profits, to simply escape the tax net. If they are operating in the informal sector, they lose access to banking facilities (or suffer heavy transaction costs), they are often unable to participate in government programs and/or transact with other formal firms due to the input/output claims register within the sales tax return. If larger, more profitable firms, are already part of the tax net, and no new stream of income is being added to the tax base even after mass registrations, will the revenue benefit justify the cost of these new registrations? Our study will provide an answer to this question along with other stylized facts.

[2] This number seems large but the main difference between income tax return and sales tax return is that the prior is filed once every year whereas 12 sales tax returns are filed every year for every taxpayer – one every month.

REVIEW OF THE LITERATURE

Due to empirical evidence suggesting that mass tax registration drives aimed at broadening the tax base have the potential to reduce informality within a country's economy and increase tax revenues as more taxpayers are added to the tax register, tax base broadening activities have been especially famous in developing countries (Moore, 2020). While most of his evidence originates from sub-Saharan Africa and the exact tax environment may vary significantly between different countries, the "obsession with registration" that Moore (2023) notices about African tax systems is synonymous with that of Pakistan. He correctly notes that the expansion of the tax register is motivated not only by revenue needs but also by political economy considerations; a robust tax register enhances credibility when presenting cases to donor agencies. Furthermore, the fact that formalization brings with it certain other advantages such as creating an indirect deterrence effect and allowing state machinery more facetime with the target population, has been highlighted as the third most likely reason for the popularity of this policy measure (Gallien & Boogaard, 2023).

Given their popularity, there are several papers that have evaluated such registration drives and estimated the benefits of adopting such measures. However, registration drives vary significantly in how they are implemented. For example, Brockmeyer et al. (2019) study an email experiment in Costa Rica and show that enforcement emails that required firms to register did in fact increase not only registration in numbers but also compliance post-registration by the new firms. They note that formalization of these new firms also has other spillover benefits such as the ability of these firms to act as a source of third-party information and furthermore, by engaging in "formal" transactions with other firms, their ability to bring more economic activity within the tax net. In other studies, is was noted that, while there are obvious benefits, these forced registrations might be accompanied with increased costs and these costs might even be higher than what standard estimates might indicate (Benhassine et al., 2018). This point is further enforced by other studies that demonstrate that what underscores the benefit of mass registrations, especially of firms, is the size of the firms in terms of productivity and market share, their potential to bring in revenue, and its capacity to bring in additional untapped revenue (Mascagni et al., 2022; Lediga et al., 2020).

While most of the work mentioned thus far, focuses on the implications of registration drives, there is some work (Gallien et al., 2023) that focuses on the politics of it all and explains why the outcomes of registration drives are poor, why they do not generate enough revenue, and why, one inadvertent result of these untargeted registration drives might be that the tax register ends up overrepresenting the low-income strata within the economy which is in itself, bad for equity.

Finally, trailing away from work that focuses on mass registration drives of firms (which constitutes the bulk of this literature), there is a paper (van den Boogaard & Beach, 2023) that looks at the implications and efficiency losses of untargeted enforced registrations and tax collections in Sierra Leone and Togo. Their focus, however, are registration drives aimed at rural areas where, they find, that the tax potential is barely enough to cover the cost of these registration drives, let alone account for surplus tax revenue as a result.

Our study contributes to several strands of literature barring a direct discussion on the political economy aspect, but is different in two keys aspects: one, it looks at the entire tax register of Pakistan

and not just firms, and two, it takes into account and evaluates all new registrations added to the tax register.

RESEARCH QUESTION AND METHODOLOGY

Our main research question is "In an environment with low tax enforcement capacity, is public expenditure on vertical broadening of the tax base an efficient policy choice for raising tax revenues?" The core hypothesis of our paper is that BTB drives do not tap into large sources of previously untaxed incomes. This may meant that per-taxpayer gains of formalization are not large enough to outweigh the cost of broadening (Lediga et al., 2020).

The problem statement of this study stems from a broad question on tax policy vis-à-vis public expenditure, and accordingly, we will provide empirical evidence and analytical context on four broad dimensions. We will start with analyzing the trends in BTB efforts over the last ten years and aim to identify exactly how many taxpayers (individuals, AOPs, and firms) were added to the tax net every year (on a year-on-year) basis. In addition to that, we will look at compliance trends amongst those who were added to the tax net i.e., do they continue to file returns in a timely manner since being added to the tax net and are they declaring previously untaxed income in these declarations. Next, we will question whether the addition of new taxpayers changed the distribution of sources from which income taxes are collected by the FBR? Did new taxpayers allow FBR to tap into additional streams of income which had previously escaped the tax net? If yes, is the increase in tax revenue commensurate with the effort and resource cost of monitoring these new taxpayers in the tax net? The next logical step will be to estimate the approximate cost of enforcement for the newly added taxpayers and compare that to the revenue that they bring in? Finally, building upon our analysis, we will argue whether, in the absence of structural reforms, the policy to broaden the tax base vertically is revenue efficient.

3.1. Data

Our analysis is based on an in-depth case study of Pakistan tax policy vis-à-vis vertical broadening of the tax base and our primary aim is to evaluate BTB activities and associated revenue gains to determine the revenue efficiency of these policies. Accordingly, our study consists of a diverse range of agents and therefore, we will draw our data from a variety of sources. The data and methods presented in this section are intertwined given the nature of this study.

The first step of our analysis would be to evaluate the number of tax persons added to the tax register every year from 2014-2021. Tax person, within the context of our study, will mean either a salaried individual or a self-employed individual given that BTB drives focus on registering individuals rather than companies and businesses. Furthermore, amnesty schemes, such as those in 2018 that we will analyze, also tend to focus on individuals. We will use FBR year books, and the online tax register published by the FBR to compile this data. We will then distinguish between these new taxpayers added to the tax register by their activity status i.e., whether they are active tax filers or not.

We will then take a deeper look into precise characteristics of tax filings by these newly registered tax persons to determine the types of income that have been added to the tax base, the exact contribution to the revenue base, how much of this revenue contribution is automated and generated through existing sources such as tax withholding, and finally, how much of this new revenue is conditional upon monitoring. The last part of this equation is especially important if we have new taxpayers whose contribution to revenue is contingent upon compliance. Given that tax evasion rate has within Pakistan has been established at 70% (Best et al., 2021), if the newly registered taxpayers

require monitoring to draw in the revenue, this means an increased cost of administration and enforcement will have to be taken into account. For the purposes of this research, we are using increase/decrease in employee related expenses and operating expenses in the field offices as a measure of increase/decrease in the cost of enforcement. For this step of our analysis, we will use restricted access administrative data on tax returns filed by tax persons from tax year 2014-2021. We have already acquired access to these restricted datasets.

In the next step of our analysis, we will move away from the revenue benefit side towards the public expenditure side of the equation. We will start by determining the number of officers that are responsible for tax enforcement within FBR field offices and determine the taxpayer to tax officer ratio that exists before new additions to the tax register. We will then build a new dataset that will hold information on the cost of administration and enforcement for each field office of the FBR. This data will come from AGPR and the Ministry of Finance.

Finally, to understand the policy making part of BTB and connect it to the intention and expectations behind these registration drives, we will conduct in-person interviews of tax administrators and field officials from the FBR headquarters and also field formations.

A notable aspect of our study is that it will bring together a variety of different administrative datasets, both public and restricted access, for the purposes of this analysis.

FINDINGS

During the first phase of our analysis, we have focused on answering the following questions: how many new filers were added to the tax register over the years we observe i.e., 2014-2021; what types of incomes were made part of the revenue base to analyze as to what extent these incomes were previously untapped and untaxed; we look at compliance trends for all newly registered taxpayers, and regardless of whether they are salaried or business individuals, non-compliance would mean taxpayers need increased monitoring for the enforcement of tax laws; the amount of income that is declared by newly registered taxpayers in the year of registration; and finally, the aggregated growth in incomes declared once registered for taxes. Table 1-6 presents the results of our data analysis.

Table 2: Number of Old and New Filers for Every Year, 2014-2021

Tax Year	Number of filers	Number of newly registered
2014	1,108,177	
2015	1,350,325	367,732
2016	1,599,220	330,375
2017	1,930,069	398,529
2018	2,830,049	949,199
2019	3,142,855	560,352
2020	3,286,852	306,589
2021	2,871,756	74,579
TOTAL		2,987,355

Source: Administrative Income Tax Return Data from PRAL

In Table 3 we use data from individual tax returns to calculate the number of tax return filers for every year and then bifurcate the number of taxpayers that were newly registered. It is useful to note that since our data starts from the tax year 2014, in all the analyses presented here, we will ignore the values for the year 2014, given that in the absence of data from 2013, a comparative analysis is impossible. Take Table 1 as an example; the number of newly registered taxpayers for 2014 is impossible to calculate in the absence of data on total taxpayers in 2013.

From Table 3, on average, around 300,000 taxpayers are registered by the FBR annually. Two years stand out within this data i.e., tax years 2018 and tax year 2021. In 2018, we find that the largest number of taxpayers there were registered with the FBR amounting to nearly 1 million individuals whereas the lowest number were registered in 2021 amounting to just under 75,000 individuals. In 2018, these vast differences can be accounted for by the fact that a large-scale amnesty schemes for individuals were introduced by the government and the return filing date, which under normal circumstances would have been 30th September 2018, was extended to 9th August 2019. A spike in the number of newly registered taxpayers for tax year 2019 may also be attributed, to some extent, to the spillover effect of the amnesty schemes. On the other hand, the low number of registrations for 2021 can clearly be attributed to the aftermath of the global COVID-19 pandemic.

Prima facie, these numbers indicate a good yield from BTB activities although it can justifiably be argued that taxpayers also become filers due to application of higher rates for non-filers. Thus even if partial increase in the taxpayer population can be attributed to BTB activities, without looking at

the bifurcation of these newly registered taxpayers by the type of income they are bringing to the revenue base, not much can be said about the impact on revenue or expenditure.

In Table 4, we bifurcate all newly registered individual taxpayers into two groups: salaried and non-salaried that is those who generate income from business or other sources.

Table 3: Newly Registered Taxpayers Bifurcated by Type of Income

Tax Year	Number of Newly Registered	New Salaried	New Non-Salaried	Percentage of Salaried in Newly Registered
2014	0			
2015	367,732	164,488	203,244	45
2016	330,375	142,772	187,603	43
2017	398,529	159,703	238,826	40
2018	949,199	498,645	450,554	53
2019	560,352	232,618	327,734	42
2020	306,589	111,062	195,527	36
2021	74,579	41,877	32,702	56
TOTAL	2,987,355	1,351,165	1,636,190	Avg: 45%

Source: Administrative Income Tax Return Data from PRAL

In Table 4, we also present a quick statistic on what percentage of newly registered taxpayers are salaried individuals. In the Income Tax Ordinance (ITO), a salaried individual is defined as someone for whom more than 50% of income is being generated from a salary, on which tax is withheld at source. Whereas a non-salaried individual is defined as one for whom more than 50% (which has risen to 75% in 2021) of their total income comes from running a business and tax from that business income is paid along with filing of annual income tax return. The reason we decided to bifurcate into salaried and non-salaried in this study is because registration of salaried individuals brings in incomes that have already been taxed whereas registration of new business individuals will likely bring within the tax net, incomes that previously escaped taxes.

As can be seen in Table 4, for nearly every year that we observe in our data, almost 45% of all newly registered taxpayers are salaried individuals. Even in the years that appear as outliers in terms of the number of newly registered taxpayers, we observe that 53% of all new registrations were salaried individuals in 2018, and in 2021, 56% of all new registrations were salaried individuals.

From the point of view of cost-of-enforcement, these results present a good picture because for salaried individuals, given that their taxes are withheld at source, no additional enforcement monitoring is required and salaried individuals are also exempt from audits thereby further reducing the cost of enforcement. However, enforcement and monitoring will be required if new taxpayers are non-compliant, as in, they do not regularly file their tax returns post-registration.

We explore post-registration behavior in Table 5. For our context, we define **non-compliers** as those who have failed to file at least one return or more in the years post-registration. As can be seen in the table, we find that up until 2018, it was mostly non-salaried new individuals that were observed as non-compliant but in tax year 2018 and onwards, we observe that a greater share of newly registered salaried individuals are found non-compliant. Regardless of the number, it is worth noting that the point of this inquiry was to see whether newly registered taxpayers add to the expenditure required to administer and enforce taxes. Salaried individuals, whose taxes are deducted at source, typically

do not require active monitoring or enforcement unless they fail to file their tax returns. However, if non-compliance is observed among this group, who ideally should not need such oversight, it results in increased public expenditure. This happens as additional resources are needed to enforce compliance among newly registered taxpayers, especially if the workforce at the FBR does not expand proportionally to the growth in the tax register. While it is true that initially 13% of all newly registered taxpayers in 2015 were found to be non-compliant for at least one year, non-compliance (to the extent of tax return filing) keeps decreasing in the years that follow where we find that non-compliers amount to nearly 8% in 2016, 4% in 2017, 3% in 2018 and 1% of newly registered taxpayers in 2019 before going to 0% of non-compliers.

Table 4: New Registered Taxpayers by Compliance Status

Tax Year	Number of Newly Registered	Salaried Non_Compliers*	Non-Salaried Non_Compliers**
2014	0	0	0
2015	367,732	21,366	26786
2016	330,375	12,680	15,223
2017	398,529	7,102	9,762
2018	949,199	21,409	9,779
2019	560,352	4,737	2,580
2020	306,589	0	0
2021	74,579	0	0
TOTAL	2,987,355	67,294	64,130

*Note: *: Salaried non-compliers: the numbers in this column indicate the number of newly registered salaried individuals who failed to file their tax return for at least one-year post-registration. **: Non-salaried non-compliers: the numbers in this column indicate the number of newly registered non-salaried individuals who failed to file their tax return for at least one-year post-registration.*
Source: Administrative Income Tax Return Data from PRAL

In Table 6, we estimate the amount of income that is brought in by both types of new taxpayers in every year. In the table, all income amounts are reported in billions of Rupees, and the tax year means the year in which the taxpayers were registered. Under type-of-taxpayer, 0 indicates a non-salaried individual and 1 indicates a salaried individual. It may be useful to note that while salaried individuals are those for whom more than 50% of their total income comes from a salary, they may still have some business income even though it accounts for less than 50% of their total income. The same is the case for business individuals; more than 50% of their total income comes from their business, but they may still have an office job from which they draw salary even though it may account for less than 50% of their total income. The table, therefore, can be read in the following way: Row 3 of the table shows that new business individuals (type 0) registered in 2015 brought in total income amounting to Rs. 417.9 billion, out of which income from business amounted to Rs. 31.08 billion and Row 4 shows that new salaried individuals (type 1) registered in 2015 brought in total income of Rs. 136 billion out of which income from salary amounted to Rs. 135 billion.

As stated before, while reading the table, we will ignore the year 2014 as those figures represent the total income in those years for all registered taxpayers and not just newly registered taxpayers.

Table 5: Income Declared by Newly Registered Taxpayers (Rs. billions)

S. No	Type of Taxpayer	Tax Year	Total Income	Total Salary Income	Total Business Income (loss)
1	0	2014	-	-	-
2	1	2014	-	-	-
3	0	2015	417.90	0.46	31.08
4	1	2015	136.30	135.09	0.32
5	0	2016	40.04	0.48	26.60
6	1	2016	105.50	104.80	0.11
7	0	2017	51.40	0.25	34.60
8	1	2017	116.50	115.80	0.16
9	0	2018	111.20	0.67	(101.01)
10	1	2018	335.70	333.30	0.49
11	0	2019	179.03	0.97	159.90
12	1	2019	147.10	145.80	0.32
13	0	2020	36.80	0.19	29.05
14	1	2020	69.20	68.90	0.14
15	0	2021	0.03	0.05	7.30
16	1	2021	33.40	33.30	0.05
Total			**1,780.1**	**940.06**	**189.11**

Source: Administrative Income Tax Return Data from PRAL

If we ignore the year 2014, we can see that the total income brought in amount to Rs. 2.2 trillion but when we look at the bifurcations, we can see that total salary income brought in as a result of BTB activities amounts to Rs. 940 billion. To restate, salary income may not be considered an addition to the revenue base given that taxes on salary are withheld at source and are likely part of the tax revenue even in absence of these new registrations. On the other hand, income brought in from the registration of new business individuals, income that we may consider to be previously untaxed and hence an addition to the revenue base, amounts to Rs. 189 billion only, a mere 20% of total salary income and 8.6% of all income brought in through new registrations.

As we have mentioned before, the year 2018 stands out because the government had announced amnesty schemes during that time serving as an exogenous shock that impacted registrations and declarations for tax year 2018. While we are only presenting stylized facts and not causation here, our findings still show startling differences. We have already discussed that there were nearly 1 million new taxpayers registered during 2018, an amount much higher than other years. Table 4 provides further evidence of the impact of the amnesty schemes. In Row 9 of the table, we can see that those who registered as new business individuals during 2018 filed losses instead of taxable incomes in their declarations. While they may have declared cash, properties, and other assets to avail the benefits of amnesty schemes and may also have paid tax revenue on those assets as per the amnesties, they failed to declare taxable income, declaring Rs. 101 billion in losses instead.

Table 6 also highlights another important finding when it comes to an analysis of newly registered taxpayers. As can be seen in the final row, ignoring the year 2014 where we cannot bifurcate between old and new taxpayers, we observe the total yield in terms of income that is tapped into, as a result of BTB activities, amounts to Rs. 2.2 trillion out of which only Rs. 190 billion can be attributed to previously untaxed income and thus is an addition to the revenue base. Even if we were to assume

that a tax rate of 35% was applied to this income to generate tax revenue, we can say that at most BTB activities have generated Rs. 66 billion in additional tax revenue over 7 years from nearly 3 million newly registered taxpayers. This translates to approximately Rs. 9.4 billion per year. Compared to nearly Rs. 3 trillion (2014) or Rs. 7 trillion (2021) of annual FBR budgetary target or to the figure of Rs. 6 billion that is paid only in advance taxes by just one of the largest tobacco manufacturers of Pakistan (to quote one example), this amount isn't even peanuts.

Table 6: Year-on-Year Growth in Salary Income for New Taxpayers

S. No.	Type of Taxpayer	Tax Year	Salary Income Growth (%)
1	0	2014	-0.26
2	1	2014	8.44
3	0	2015	-0.27
4	1	2015	9.70
5	0	2016	-0.23
6	1	2016	9.76
7	0	2017	-0.15
8	1	2017	9.04
9	0	2018	-0.13
10	1	2018	7.26
11	0	2019	-0.10
12	1	2019	5.76
13	0	2020	-0.05
14	1	2020	4.56
15	0	2021	0.00
16	1	2021	0.00

Source: Administrative Income Tax Return Data from PRAL

In addition to focusing on immediate term compliance trends, another aspect of our analysis was to focus on income declaration trends for newly registered taxpayers, post-registration. Tables 7 and 8 present this analysis. For both Tables 7 and 8, we will ignore the results for tax year 2014 given that in absence of data for tax year 2013, it is not possible to calculate the growth or decline in incomes for those in 2014. For the results in these tables, we first calculated year-on-year growth (or decline) in incomes declared for every taxpayer that we observed and then aggregated these growth rates by groups based on type of taxpayer and the year of registration. Therefore, Table 7, which shows results for year-on-year growth in salary income can be read as follows: Row 3 of the table shows that salary income for new business individuals (type 0) registered in tax year 2015 showed a decline at rate of -0.27% when averaged over years 2016 to 2021. This can be expected because recall that type 0 identifies business individuals and while they may have some income from salary, it constitutes less than 50% of their total income. Similarly, Row 4 of the table shows that salaried individuals (type 1) registered in 2015, declared an average growth in salary income at the rate of 8.44%. In fact, for all of the years, we observe a growth in salary income of about 10% on average which is close to annual increments that are usually expected in salaries.

Table 8 presents the same results but for year-on-year growth in business income. It is startling to observe that for all of the newly registered taxpayers, business income, which, to reiterate, actually is previously untaxed income, shows a negative trend. In nearly all the years, we see at least a 10%

decline in declared business incomes which in some years even exceeds a 100% decline in income which means the business started filing losses. While we noted meager amounts in total income being filed by newly registered business individuals, our results indicate that the picture looks even bleaker for the years' post-registration.

Table 7: Year-on-Year Growth in Business Income for New Filers

S. No.	Type of Taxpayer	Tax Year	Business Income Growth (%)
1	0	2014	-806
2	1	2014	-4.11
3	0	2015	-11.0
4	1	2015	-7.58
5	0	2016	-24.7
6	1	2016	-1.66
7	0	2017	-233
8	1	2017	-0.92
9	0	2018	-3.74
10	1	2018	-2.50
11	0	2019	-84.1
12	1	2019	-0.28
13	0	2020	1.76
14	1	2020	-0.06
15	0	2021	0.0
16	1	2021	0.0

Source: Authors' Own Calculations Using Administrative Income Tax Return Data From PRAL

In this part of the analysis, we discuss income declared per taxpayer, the composition of income declared in every year of new taxpayer registrations that we observe and determine specifically what kind of income is being declared. For this section, we focus our attention on the year 2018 because tax return filings in this year were impacted large scale amnesty schemes targeting the entire population of potential taxpayers.

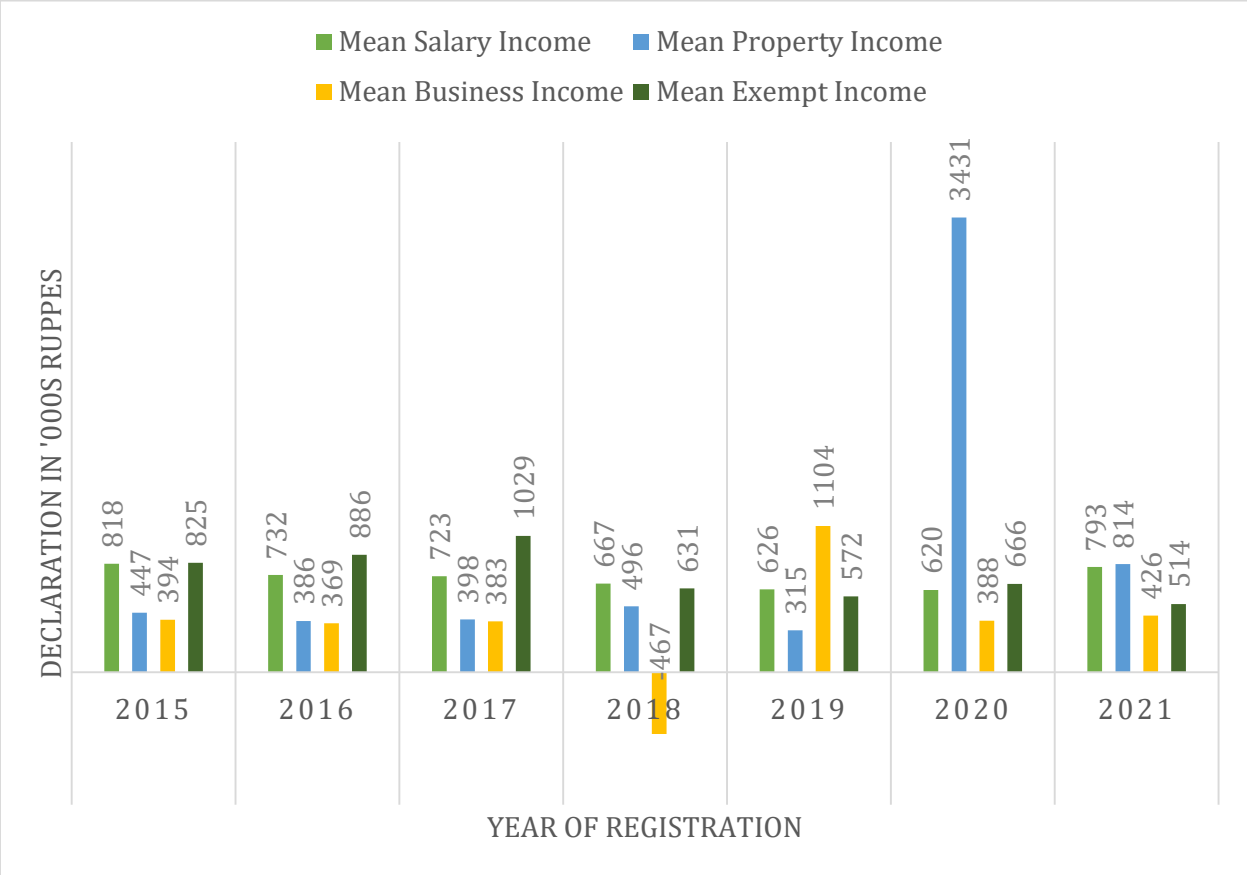
In Table 9, we show the year of registration and then for each year we show the total amount of income, less income declared as exempt from tax, that is declared by the taxpayers who registered in that year alongside the income per taxpayer that is being declared. It is interesting to note that while the highest number of taxpayers registered in 2018 – presumably to avail the amnesty scheme, the amount of income declared per taxpayer is the lowest in all the other years we observe. This shows that even though the amnesty scheme successfully attracted more people into the tax net, it drew in the low-income segment of the population. This may even include individuals who would have previously not registered due to the small quantum of their taxable activity but were compelled by the amnesty. As mentioned earlier, an ideal goal of BTB is not only to increase the number of taxpayers in the register, but also to enhance the tax base in terms of untapped revenue potential. Our data analysis indicates that the revenue potential per new taxpayer is relatively low. From an enforcement angle, if many of those who availed the amnesty scheme were lower-income earners, ensuring and sustaining their compliance will involve an increase in administrative challenges. Resultantly, the cost of this enforcement may outweigh the potential revenue gains from this segment of the population.

Table 8: Income Declared per New Taxpayer Registered - Bifurcated by Year

Year of Registration	Total Taxpayers	Total Income less Exempt Income	Income per Taxpayer
2015	367,732	172,282,235,635	468,499
2016	330,375	134,949,223,320	408,473
2017	398,529	150,986,760,887	378,860
2018	949,199	233,702,613,471	246,210
2019	560,352	307,117,382,530	548,079
2020	306,589	98,491,753,570	321,250
2021	74,579	40,769,176,249	546,658

Source: Authors' Own Calculations Using Administrative Income Tax Return Data From PRAL

Figure 1: Composition of Income in the Year of Registration



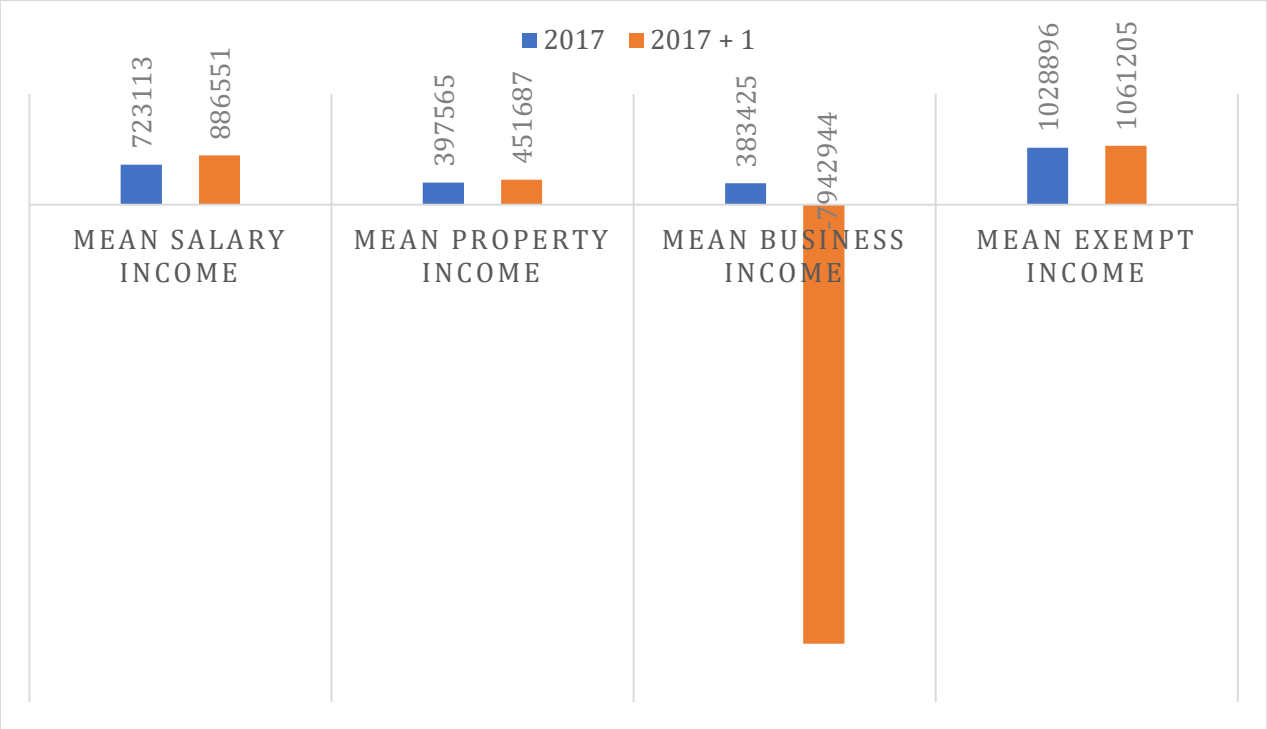
Source: Authors' own calculation using data tax return data from PRAL (2024).

In Figure 1, we go beyond looking at the total income to instead focus on the composition of income declared in the year of registration. The purpose behind this analysis is to discern the types of income that are dominating the declaration from newly registered taxpayers. We are focusing on four types of income i.e., income from salary, income from business, income from property, and income declared as exempt from the levy of tax. Especially for 2018, this detailed breakdown helps in understanding the sectors that were most influenced by the amnesty scheme or the kind of income that was whitened (declared). This analysis is also useful in ascertaining the effectiveness of the amnesty at

targeting a diverse population of previously unregistered taxpayers and bringing them into the tax net.

Right at the outset we can see that except for some deviations, the composition of income declared remains consistent across all years. The year 2018 stands out in three distinct ways, as evident from Figure 1. Those who were newly registered in the year 2018 declared the lowest income from property, nearly the lowest exempt income, and most noteworthy, business losses amounting to Rs. 467,000 on average. This reveals reporting behaviors that points towards strategic financial disclosures among the individuals declaring these incomes. Such a significant declaration of business losses indicate that several individuals may have viewed the amnesty scheme as an opportunity to regularize their financial statis and use the declaration of accumulated losses to safeguard against future tax liabilities. Furthermore, low income from property and nearly the lowest amount of exempt income declared indicates that the amnesty was seen as an opportunity to report previously hidden or unreported assets at a lower cost, especially since it was announced that taxpayers availing the amnesty will not be audited. This aspect is especially important because it highlights the role of the amnesty scheme in changing the composition of declared incomes impacting tax policy and enforcement strategies in the long run.

Figure 2: Evaluating Persistence in Composition for Tax Year 2017

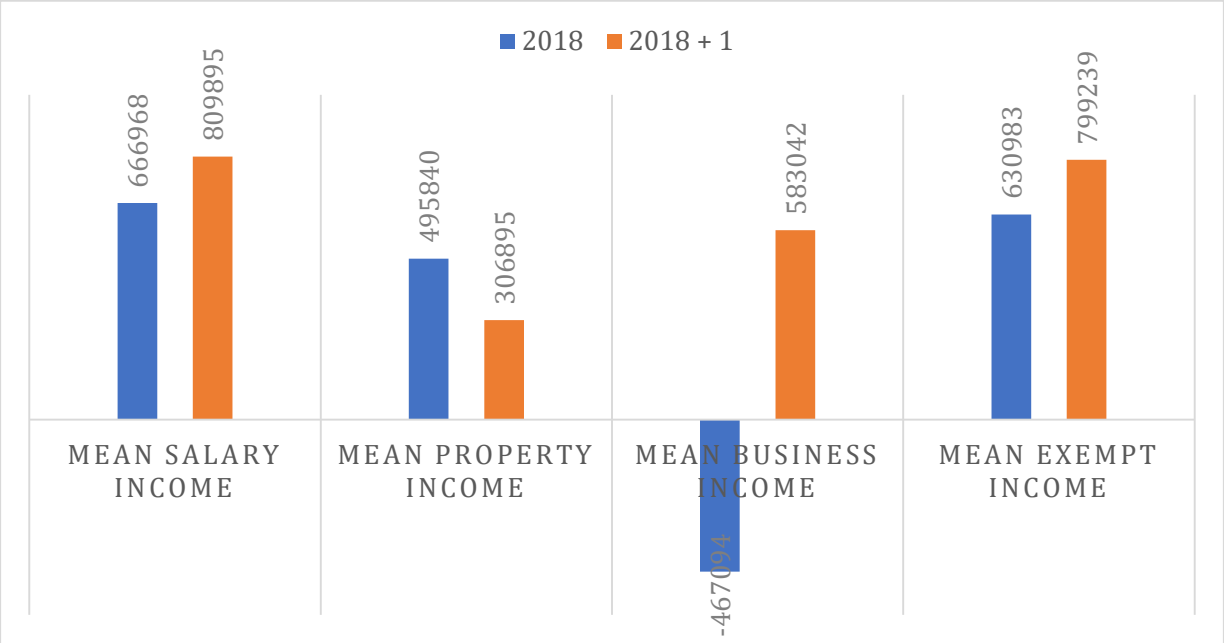


Source: Authors' own calculation using data tax return data from PRAL (2024).

When we take a deeper look, we come across an even more diverse range of reporting behaviors. Figures 2,3 and 4 zoom in on years 2017, 2018, and 2019 respectively and show the composition of income of those newly registered in these years and how the composition of reported income changes for these new people in the next year of filing. Focusing on the year 2018, we see that reported salary income, business income, and even exempt income are higher in the next year after being registered. The increase in business is especially worth noting since in the year of registration,

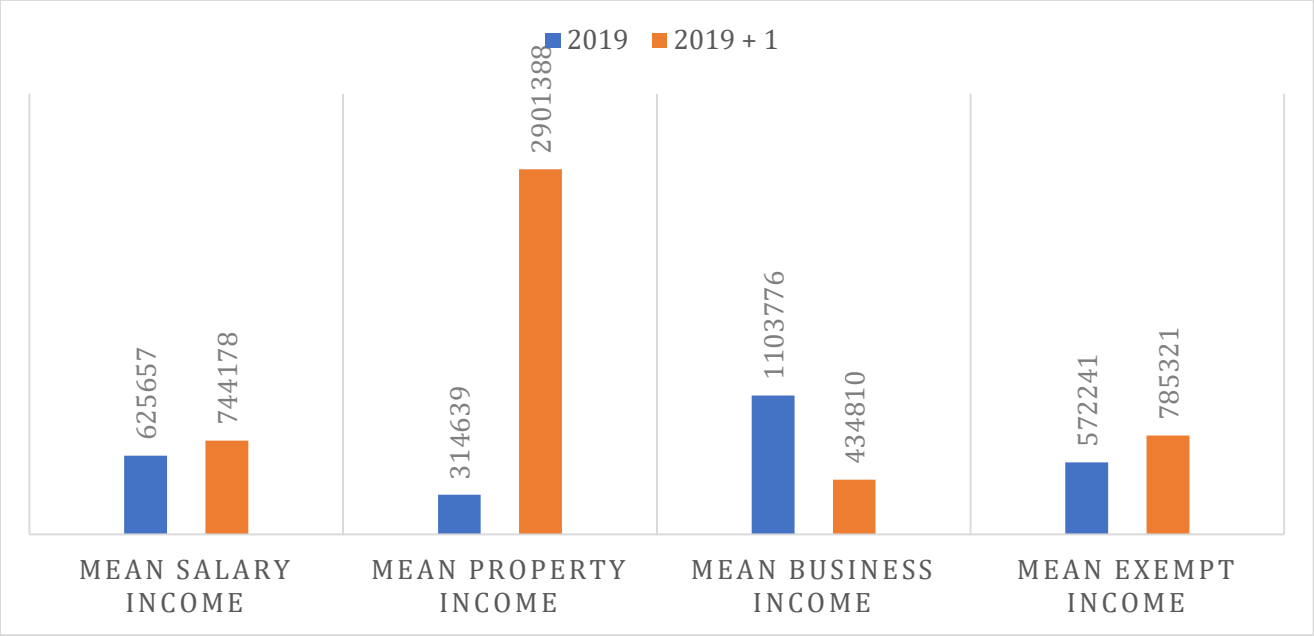
2018, business losses were reported. As discussed earlier, this may just be strategic financial reporting where the initial declaration of losses was just a financial tactic to minimize tax liability and therefore, the subsequent increase in reporting may indicate a correction of this initial strategic response. From a positive lens, it could be presumed that after having registered, the business may have adjusted their reporting behaviors. This could be the result of an improved understanding of their tax obligations, a ripple effect of the positive benefits associated with being part of the formal economy, and even also a response to the expectation of closer scrutiny by the tax administration – something short of an audit. Given that we are looking one year ahead, and Figure 4 is specifically looking at the year 2019, the ongoing effects of the amnesty itself could have encouraged a more accurate reporting of incomes.

Figure 3: Evaluating Persistence in Composition of Income for Tax Year 2018



Source: Authors' own calculation using data tax return data from PRAL (2024)

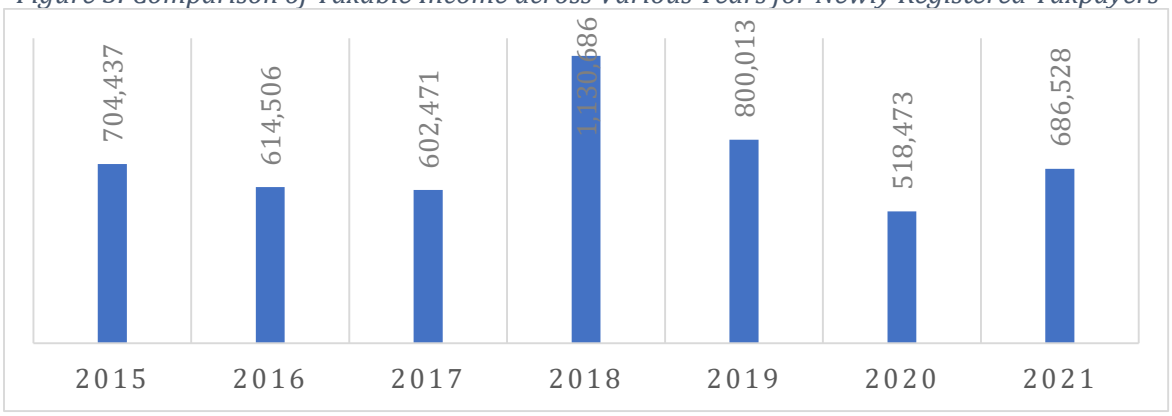
Figure 4: Evaluating Persistence in Composition of Income for Tax Year 2019



Source: Authors' own calculation using data tax return data from PRAL (2024).

Similarly, Figures 5 and 6 look at average taxable income reported during all the years under observations by those who are newly registered. The trends in both the figures clearly shows that while declarations under other heads of income may not be the highest in the year 2018, the year of the amnesty, declared taxable income is the highest. This is a positive in several different ways.

Figure 5: Comparison of Taxable Income across Various Years for Newly Registered Taxpayers

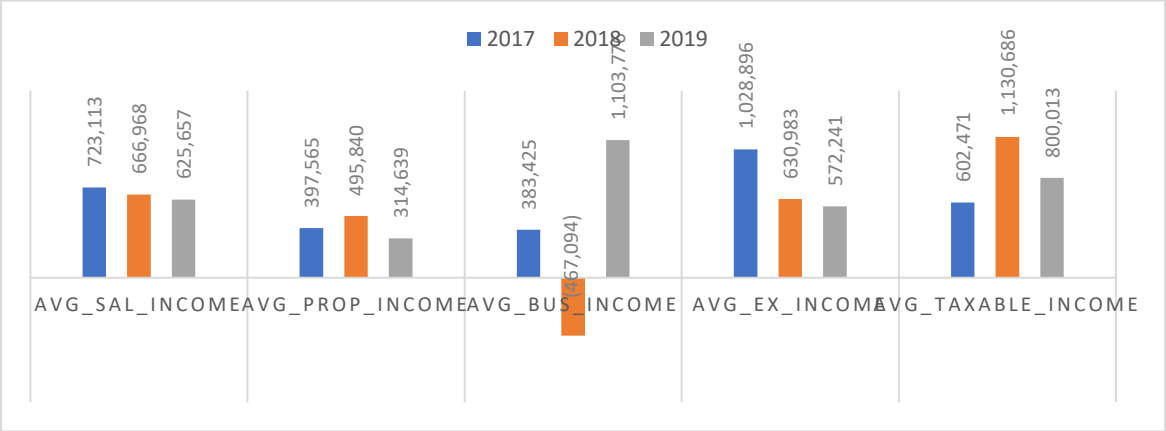


Source: Authors' own calculation using data tax return data from PRAL (2024).

To begin with, this trend indicates that the amnesty scheme was successful at targeting and incentivizing taxpayers to declare their previously hidden taxable income in 2018, as compared to other types of income. The tax amnesty was geared towards targeting and correcting under-reported income especially for increasing tax revenue. Therefore, taxpayers may have been more willing to declare this income with the knowledge that they will be able to avail lower tax rates and no penalties as well as immunity from audit on their declarations. Furthermore, uptick in taxable income in 2018 points towards an immediate revenue benefit thereby supporting the short-term goals of the amnesty which was revenue generation. The spike in the taxable income also suggests that the amnesty served as a behavioral rest for the taxpayers, and the pivot towards increased compliance

shows that there may be a shift in norms. This could result in more compliance and thus more revenue in the future, but long-term gains will have to be ascertained through continuous monitoring.

Figure 6: Comparing Declared Incomes to Taxable Incomes for Years 2017, 2018, and 2019



Source: Authors' own calculation using data tax return data from PRAL (2024).

Lastly, the amnesty's success in increased taxable income declarations may also reflect growing public confidence although this assumption will need to be weighed within the political economy backdrop. Having said that, increase in taxable income serves as a strong case for the strategic use of amnesty schemes to improve compliance and evasion.

Figures 7, 8, and 9 look at the data at the tax field office levels to one, ascertain taxpayer persistence and two, to determine the impact on employee related and operating expenses. It was critical to analyze these charts given that they provide an analytical overview of the direct outcomes of the amnesty in terms of taxpayer behavior as well as administrative response from the tax administration. The purpose is to comment, albeit in a limited way, on the effectiveness of the amnesty, resource allocation, and accordingly, informing policy.

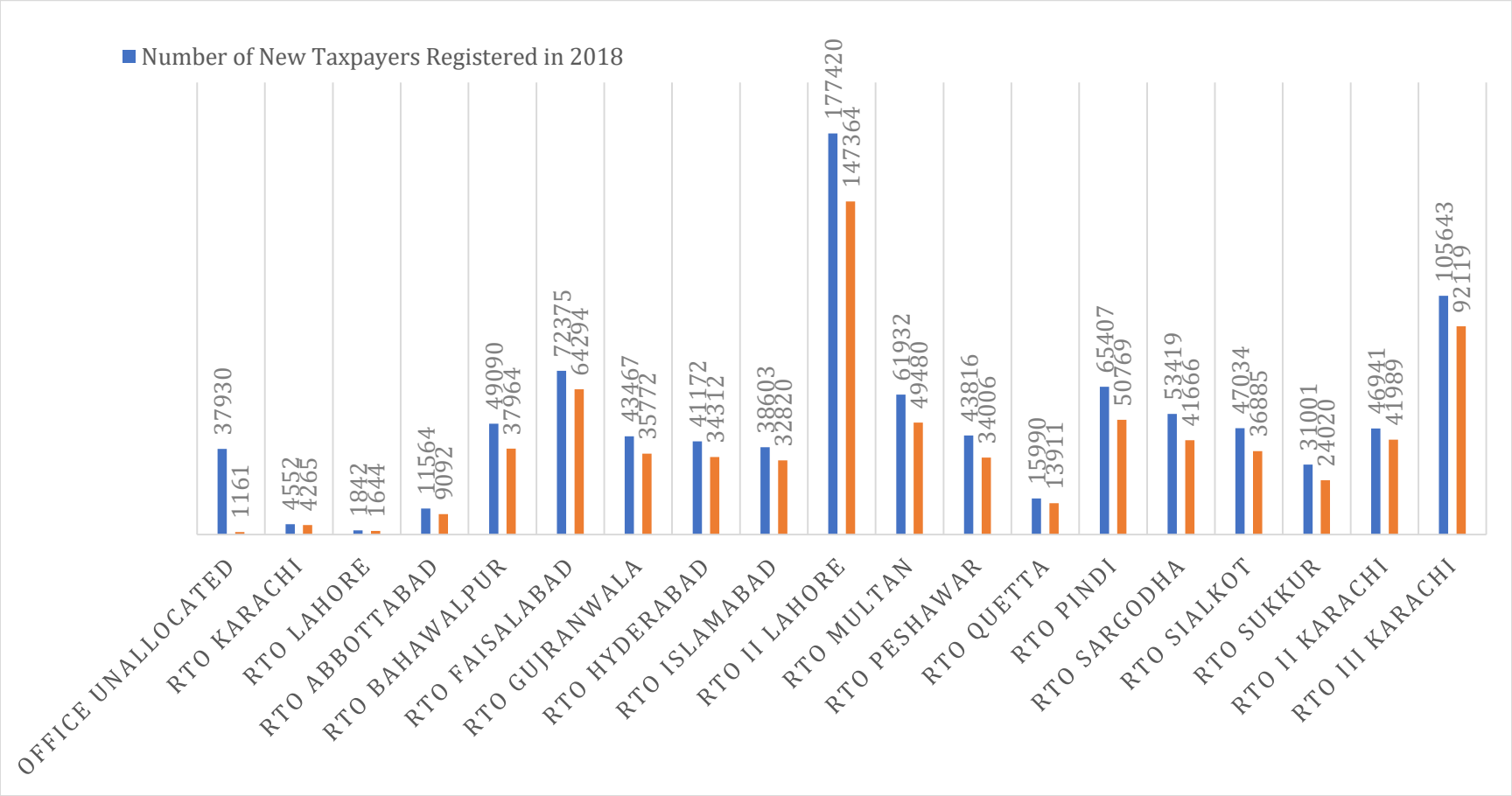
Figures 7 and 8 look at persistence. We have tried to demonstrate, in Figure 7, that what proportion of the newly registered taxpayers in 2018 remained compliant by filing taxes in the following year 2019 – but we bifurcate this analysis by tax field office. As the Figure 8 shows, the retention rates remained at around 80% on average for all field offices. The slight variability can indicate the differences in effectiveness of the field office particularly in engaging with the taxpayer. Furthermore, the fact that not all those who registered in 2018 were retained shows that while the amnesty was effective in encouraging initial registrations and declarations, the tax compliance was not sustainable or requires more monitoring and enforcement to sustain.

Figure 9 compares the changes in employee-related expenses and operating expenses for each tax office from 2018 to 2019. There are three notable observations. Most tax offices show an increase in both the employee-related expenses and the operating expenses. This is to be expected given that large increase in the number of taxpayers due to the amnesty in 2018 and the resultant need for enhanced enforcement capacity.

While the increase-in-cost per taxpayer seems to be in sync with the taxable income declared per taxpayer, it needs to be evaluated against the retention rates and the revenue generated from these new taxpayers in the long-run. Not to mention, the costs also increase in the long-run and therefore,

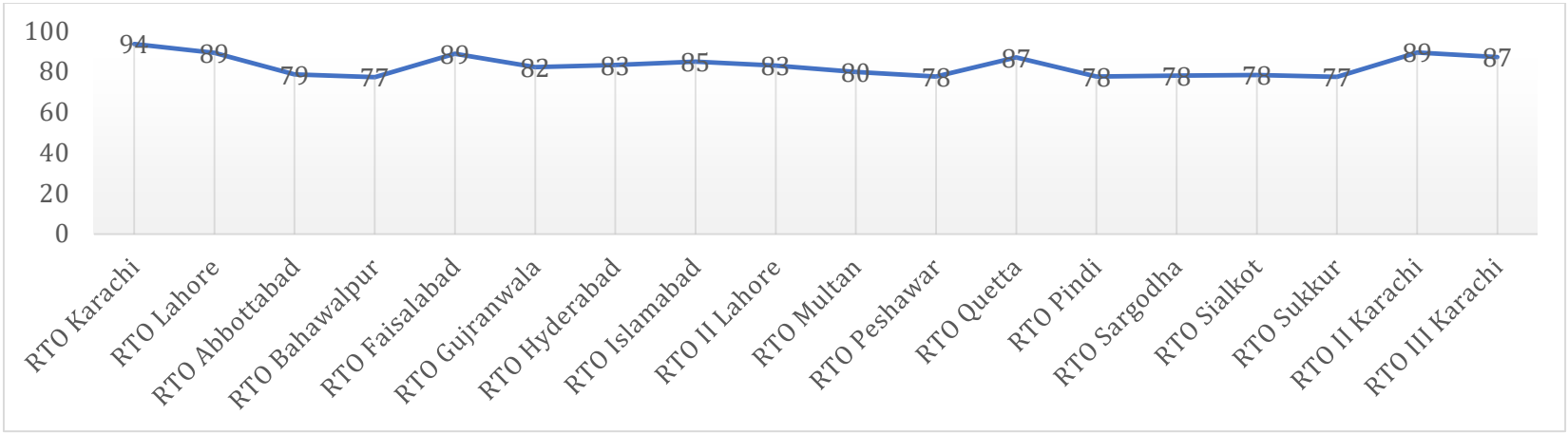
offices with high-cost increases but modest taxpayer retention rates can be indicative of administrative inefficiencies or misallocation of resources. It can also be seen that even though the retention rate is evenly spread across all tax offices, some offices have managed to keep their expenses relatively stable which is indicative of more efficient capacity utilization. This particular insight highlights the potential for more in-depth research into understanding the strategies that allow for such efficiency and how those insights could inform improvements in other tax administrative offices in the field.

Figure 7: Comparing the Number of Taxpayers That are Newly Registered in 2018 That are Still Filing (are Persistent) in 2019



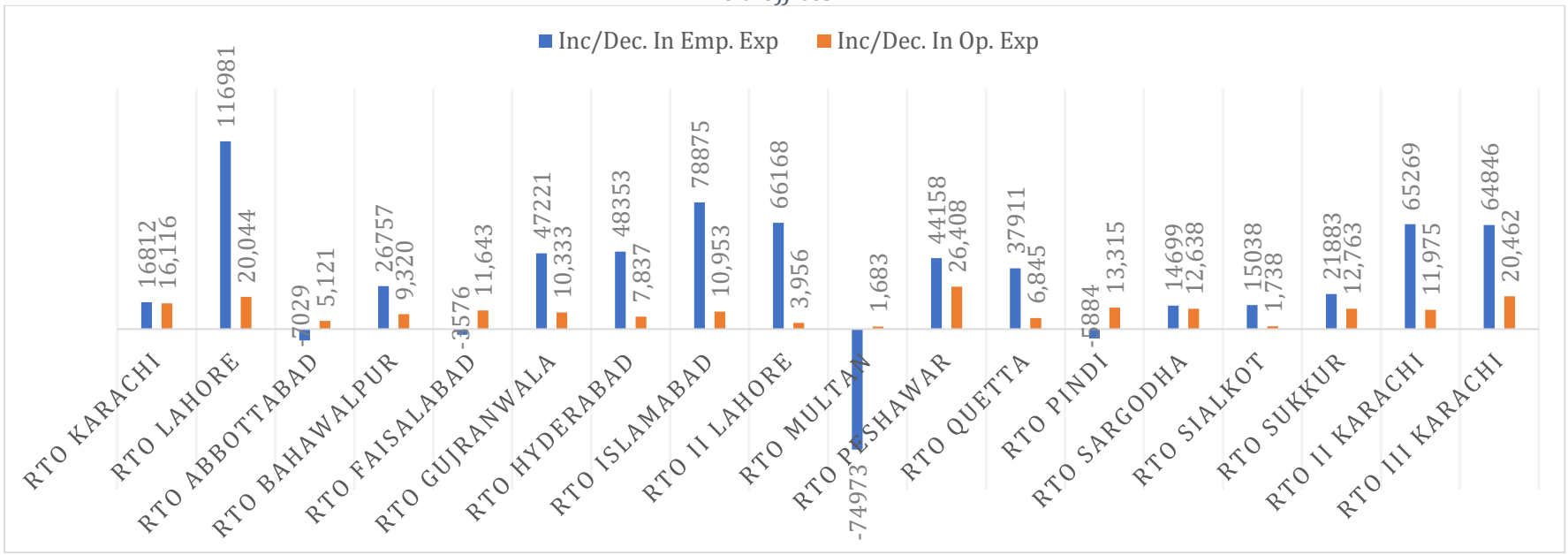
Source: Authors' own calculation using data tax return data from PRAL (2024).

Figure 8: Percentage Retention of Newly Registered Taxpayers by Tax Office for 2018/2019



Source: Authors' own calculation using data tax return data from PRAL (2024).

Figure 9: Evaluating the Increase/Decrease in Employee Related Expenses and Operational Expenses from 2019 To 2019, Separately for all Field Offices



Source: Authors' own calculation using data tax return data from PRAL (2024).

CONCLUSIONS AND RECOMMENDATIONS FOR POLICY

From a policy perspective, our research findings will be beneficial across several key dimensions. It is important to note that the ultimate goal of any policy aimed at broadening the tax revenue base is to generate additional tax revenue. One way to achieve this is through the inclusion of new taxpayers, which constitutes the vertical broadening of the tax base. Based on our analysis to date, our study has provided evidence regarding the feasibility of this option, particularly in a tax environment with low enforcement capacity, such as that of Pakistan. Over the seven years (2015-2021) that we have analyzed, we find that while BTB activities result in nearly 3 million new taxpayers, almost 45% of these new taxpayers are salaried individuals, thus contributing no new (untaxed) income. Furthermore, among the business individuals registered, we observe only Rs. 190 billion in untapped income declared which, even in an ideal scenario, may yield only up to Rs. 9 billion in tax revenue per year. Our analysis also indicates that while compliance trends are not wholly disappointing, the year-on-year reported income is trending negatively in the years following registration for business individuals.

Our analysis of the composition of incomes declared by newly registered taxpayers, especially in the year impacted by the tax amnesty scheme, i.e., 2018, reveals strategic reporting behaviors amongst taxpayers. Analysis of the details by income heads shows that while the amnesty scheme did attract a substantial number of new taxpayers, the revenue potential of their declared incomes was low and significantly high declarations of business losses was suggestive evidence of strategic financial planning to lower present and future tax obligations. Furthermore, focusing on the years 2018-2019, our analysis of taxpayer persistence and administrative costs shows that there are challenges in sustaining compliance post-registration and the fact that an increase in operating costs or employee-related costs of the field office does not necessarily translate into better taxpayer retention. This highlights the need to revisit structural inefficiencies with field offices and better equip them for full capacity utilization.

Our findings highlight the need for a more nuanced approach to BTB and to leverage the true potential of these efforts we recommend the use of multiple data sources to target previously untapped sources of taxable income across industries and sectors. This can help address the problem of low revenue potential in tax declarations. Furthermore, it is crucial to ensure high compliance rates and deter evasion in income reporting especially post-registration to lower the cost and challenges of tax enforcement. Predominantly, this requires continuous engagement with taxpayers and machine-learning-driven monitoring and compliance mechanisms. This is especially true for non-salaried individuals. Lastly, it is key to ensure the efficiency of administrative expenses while focusing on improved service delivery. The cost-effectiveness of taxpayer addition against retention and revenue generation potential should be the benchmark for all future BTB activities.

Our results highlight that for BTB efforts to have a significant impact on revenue, multiple data sources should be used to target previously untapped income from sectors such as business, agriculture, and real estate. Although our evidence is primarily correlational, it provides analytical insights that can guide tax policy on vertical BTB. It is evident that simply adding taxpayers to the tax register will not produce the desired outcomes and point toward the need for a more strategic and targeted approach. Furthermore, our results emphasize that Pakistan's revenue authority can only

benefit from mass registrations if post-registration compliance is high and income that escaped taxation prior to registration is consistently integrated into the tax net in the years following registration.

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