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**Tax Policy of Pakistan:  
A Review Paper**

**Ghulam Mustafa**



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**PAKISTAN INSTITUTE OF DEVELOPMENT ECONOMICS**  
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## ABSTRACT

Reforming Pakistan's Tax Policy is one of the key instruments to make URAAN Pakistan's goal of a trillion-dollar economy happen through internal resource mobilization. It is widely discussed that Pakistan's tax policy suffers from a narrow base, relying heavily on regressive indirect taxes while elites evade payments. Weak enforcement allows widespread informality (50 percent of GDP) to escape taxation. Complex federal-provincial overlaps and frequent ad-hoc changes deter compliance and investment. Low progressivity (only 2 percent file income tax) worsens inequality instead of redistributing wealth. Given such limitations of tax system, there is a dire need for conducting a study to gather evidence based on widespread literature available for Pakistan's tax policy. The underlying piece of research maintains focus on two objectives: (i) evaluating the Pakistan's tax system whether it is effective and flexible through a comprehensive literature review, and (ii) to reveal the contributions and research gaps by local researchers and organisations. The overall findings of the all-reviewed research papers demonstrate that in the short run, the estimates of elasticity and buoyancy were greater than unity for overall taxes and tax heads. Nonetheless, in long-run, all estimates went declining and characteristics of the system to work automatic stabilisers failed to work. Due to the system's inability to respond positively and lowering resilience power, the country drowned in the vicious trap of debt and unsustainable economic growth.



## 1. INTRODUCTION

### 1.1. Background

The Pakistan's tax system has been experiencing numerous reforms which have the objective of raising tax revenues to fund economic development. The fruits of such reforms went vain because our tax system was unable to generate a sufficient amount of revenues to fulfill financing requirements of incumbent governments, resulting in a vicious cycle of fiscal deficits. This leads the government to hugely depend on internal and external financing such as commercial banks, International Monetary Fund (IMF), World Bank (WB), and Asian Development Bank (ADB), which are not considered as a sustainable solution of financing. Thus, it is very crucial to develop an efficient tax system which enhances the government's ability to finance public services without heavily depending on external financing, while devising an efficient tax system has been a challenging task for developing countries. Formulating a tax policy devoid of having the knowledge of percentage change in tax revenues at its base would distort the expectations of the decision makers regarding economy's ability to generate and enhance tax revenues, which would bring about fiscal imbalances. In the light of aforesaid discussion, it is significantly important to evaluate the level of effectiveness of Pakistan's tax system and some other pertinent issues.

### 1.2. Objectives of the Study

The underlying study comes up with bridging up this research gap by setting up two objectives: (i) to evaluate the effectiveness of Pakistan's tax system by reviewing all available published studies, and (ii) to reveal the contribution and gaps of local (Pakistani) researchers in this regard-to unravel where the local researchers from academia and non-academia stand pertaining to provide evidenced-based feedback in reforming tax system.

The existing literature has employed generally two measures to assess the effectiveness of any tax system such as elasticity and tax buoyancy<sup>1</sup> (e.g., Suppanavar & Pujari, 2024; Seydou, 2020; Tanchev and Todorov, 2019; Ashraf & Sarwar, 2016; Belinga, et al. 2014; Cotton, 2012; Skeete, et al. 2003). While measuring the productivity of the tax system, the differentiation between tax elasticity and buoyancy carries its weights because both terms leads to growth in tax revenues, which could either be because of an automatic response or discretionary changes brought about by the concerned authorities. The tax elasticity is considered as a key measure of efficiency of the tax system, which indicates the automatic response, referring the growth in tax revenue collection by setting up tax base, the rules, and tax rates constant. On contrary, the buoyancy indicates the combined influence of the automatic response and discretionary policy changes by the concerned tax authorities. The estimates of these two measures explain that if these are greater than 1, it demonstrates that system is efficient and has the ability to increase the tax collection or growth in tax revenues induced by change in national income, and resulting in reduction in the deficit ratio, vice versa. The greater the elasticity and buoyancy, the more flexible and efficient tax system is to be considered

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<sup>1</sup> Tax elasticity is a tool, which assesses the effectiveness of a tax system, which estimates the variation of a quantity (percent) caused by variation of another quantity (percent), while tax buoyancy is a measure which is used to estimate the responsiveness of a tax system to changes in its national income— it shows the extent to which tax revenues may increase or decrease due to changes in country's national income (Suppanavar & Pujari, 2024; Ashraf & Sarwar, 2016).

(e.g., Suppanavar & Pujari, 2024; Ashraf & Sarwar, 2016; Belinga, et al. 2014; Cotton, 2012; Skeete, et al. 2003).

## 2. FRAMEWORK OF THE STUDY

Keeping in view the specified objectives of the underlying research, the framework of paper selection for this review paper is designed as follows.

First, to review of all published studies covering discussion related to Pakistan's tax policy and system, all research papers and reports are selected by taking into account following steps.

- First, I have explored papers published in W-category or higher category *journals*.
- Second, papers published in X-category *journals*.
- Third, papers published Y-category *journals*.
- Fourth, working papers, published reports by international organisations such as IMF, WB, and ADB etc.
- Fifth, working papers, published reports by local public or private organisations such as PIDE, FBR, and SDPI, etc.

Second, to reveal the contribution of local researchers regarding Pakistan's tax policy, I have reviewed all published research papers by presenting the summary of studies in a table. Third, to gather empirical evidence pertaining to the effectiveness and flexibility of Pakistan's tax policy, I have employed two vastly used measures by the researchers and international organisations: (i) Tax Elasticity, and (ii) Tax Buoyancy. A detailed discussion on the methodology of these two approaches and findings obtained from the reviewed studies are presented through descriptive and tabulation form. For empirical analysis, this review paper only focuses on overall tax system and disaggregation of the tax system into heads such as income tax, sale tax, custom duties, and excise duties, while other taxes such as agriculture tax etc. are not included in the analysis to avoid any complexity.

## 3. EFFECTIVENESS OF PAKISTAN TAX SYSTEM: RESULTS FROM REVIEWED STUDIES

This section is furnished with the results and discussion derived from the review of literature. In addition, methodologies employed by the reviewed studies are also discussed. The results are classified into discussing overall taxes and tax heads such as income tax, sales tax, custom, and excise duties. The detailed description is laid down as follows.

Before moving to hatch discussion on the key findings of the reviewed research papers and published reports, I need to explain tax elasticity and buoyancy more. The tax buoyancy could change in short and long run—in short-term, the buoyancy is associated with function of fiscal policy stabilisation, while in long-run, the buoyancy is a vital tool to assess the influence of economic growth on fiscal sustainability. It implies that if the growth in tax revenues is greater than the GDP or national income, it refers that concerned tax system is deemed as a good automatic stabiliser. Likewise, if a buoyancy is greater than one which demonstrates that higher growth would lead to improvement in fiscal balance by dint of the revenue side of the budget in short-run, vice versa. Unlike this, a long-run tax buoyancy smaller than unity would have adverse effects on country's fiscal balance and would tend to decrease the deficit ratio (Belinga et al., 2014). Hence,

estimates of elasticity and tax buoyancy greater than unity are showcasing that concerned tax system is efficient and flexible.

To best of my knowledge, I have explored a number of studies which comprise of Pakistan's tax related work, but only seven (7) studies are found out of 50 reviewed papers which have documented the Pakistan's tax system effectiveness and flexibility through tax elasticity and buoyancy. Out of these seven, five studies have been conducted by the Pakistan Institute of Development Economics (PIDE), Islamabad or published in PDR, while one study has been conducted by the IMF, to best of my knowledge.

Table 1

<i>Tax Elasticity and Buoyancy of Overall Taxes, and Income &amp; Sales Taxes</i>							
Reviewed Research Papers	Income Tax		Sales Tax		Overall Tax		Years (Data Used)
	Elasticity	Buoyancy	Elasticity	Buoyancy	Elasticity	Buoyancy	
Choudhry (1962)	3.81	(4.32)	3.70	(5.6)	4.98	(5.1)	1949-960
Khan (1973)	1.02	(1.04)	1.35	(1.20)	0.98	(0.28)	1960-972
Gillani (1986)	1.48	(1.42)	1.22	(1.17)	1.36	(1.18)	1972-983
Akbar & Ahmad (1997)	0.94	(1.09)	0.80	(1.07)	1.01	(1.26)	1972-990
Mukarram (2001)	1.13	(1.61)	0.64	(1.00)	0.99	(1.52)	1981-001
Bilquees (2004)	1.21	(1.23)	0.96	(0.88)	1.49	(1.41)	1974-003
IMF (2017)	0.95	(1.02)	1.20	(1.25)	1.37	(1.46)	1960-015
Reviewed Research Papers	Custom Duties		Excise Duties		Years (Data sed)		
	Elasticity	Buoyancy	Elasticity	Buoyancy			
Khan (1973)	0.77	(1.69)	2.28	(2.81)		1960-1972	
Gillani (1986)	1.19	(1.21)	1.16	(1.13)		1972-1983	
Akbar & Ahmad (1997)	0.69	(1.06)	0.66	(0.89)		1972-1990	
Mukarram (2001)	0.33	(0.51)	0.47	(0.76)		1981-2001	
Bilquees (2004)	0.43	(1.19)	0.43	0.48		1974-2003	

*Note:*

Table is formulated by the reviewer based on available published studies pertaining to the tax elasticity and buoyancy measures to explore the effectiveness and flexibility of Pakistan's system. The estimates are measured by using different methodologies by different studies. This Table summarises that overall, the effectiveness and flexibility of Pakistan's tax system have been deteriorating and shrinking as the elasticities and buoyancy estimates are declining over the years (as the estimates of reviewed researches are showing).

The first study conducted by Choudhry (1962) has investigated the effectiveness and flexibility of Pakistan's tax system. By using the data from 1949 to 1960, he estimated overall tax elasticity and buoyancy through simple formula of elasticity and buoyancy without any regression analysis. The findings of his study showcased that elasticity and buoyancy estimates were pretty high, which revolved around 5 at overall taxes, and between 3 to 5 for income and sales taxes (see Table 1). He concluded that elasticities were declining from 1950 to 1960 if looked into annual estimates, although still the estimates were high enough to demonstrate the higher flexibility of the system. After that, another notable study regarding this issue was conducted by Khan (1973) who estimated tax elasticity and buoyancy by using data from 1960 to 1972. The findings of the study highlighted that after 1960, the estimates of the elasticity and buoyancy were tending to decline—the overall taxes were less than one, while income and sales taxes were just greater than one or approaching to unity specifically income tax. Merging the findings of these studies, the results are quite evident that Pakistan tax system was tending to shrinking of effectiveness and system was moving towards inflexibility, which implies that system's automatic stabilising characteristics was shrinking and dwindling from 1949 to 1972 (see Table 1). The decrease in efficiency occurred at the same time as a period of

political instability, economic challenges, and the secession of East Pakistan. These factors put a strain on the tax system's ability to adapt and effectively respond to GDP growth.

Gillani (1986) estimated the tax elasticity and buoyancy by using data from 1972-1983. The findings were suggestive of a modest improvement in certain areas, with the Income tax elasticity increasing to 1.48 and buoyancy to 1.42. Nevertheless, the tax system as a whole continued to exhibit a low elasticity (1.22) and buoyancy (1.17), suggesting persistent inefficiencies. Despite the growth in GDP during this period, there were difficulties in efficiently capturing this growth in the tax system, possibly due to administrative challenges and policy distortions. The declining trend persisted throughout the 1980s and 1990s, as demonstrated by the studies conducted by Akbar & Ahmad (1997) and Mukarram (2001). During the period of 1972-1990 (Akbar & Ahmed, 1997), there was a decrease in Income Tax elasticity to 0.94 and buoyancy to 1.09. Additionally, the overall tax elasticity dropped to 0.80 and buoyancy to 1.07. Mukarram (2001) further revealed a decline, as the overall tax elasticity decreased to 0.64 and buoyancy remained at 1.00. These figures suggested that the tax system had shown a lack of effectiveness in keeping up with GDP growth. This could be attributed to various factors including policy distortions, inadequate enforcement, and an excessive reliance on discretionary tax measures instead of focusing on systemic efficiency. The another study conducted by Bilquees (2004) updated the data from 1974–2003, she found that despite a slight improvement in Income tax elasticity to 1.21, while the tax elasticity of sales tax was 0.96 with 0.88 tax buoyancy, indicating significant inefficiencies in the tax system. IMF (2016) estimated the tax elasticity and buoyancy by using data from 1960 to 2015, and employing the regression analysis. The findings revealed that tax elasticity for overall tax revenues was estimated 1.20 with 1.25 buoyancy, while income tax elasticity and buoyancy was less than one (see table 01). The study concluded that Pakistan's tax system was estimated as inefficient and inflexible because both tax elasticity and buoyancy were declining over the last four decades. Several factors that contribute to such results were unleashed by IMF (2016), which included limited tax base, generous tax concessions and exemptions, weak and fragmented tax administration, and structural economic challenges.

Table 2

*Tax Elasticities Computed by FBR*

	Tax to Base	Tax Base to Total Income	Tax to Total Income
Federal Direct Taxes	1.15	0.77	0.88
Custom Duty (with Imports only)	0.84	0.77	0.65
Custom Duty (with total trade)	0.90	0.49	0.44
Federal Excised Duty	0.77	0.24	0.18
Sales Tax	0.27	1.20	0.32

Apart from the published research work, the published reports of FBR has also showing that elasticity of all taxes are declining and demonstrating that our tax structure is ineffective and inflexible. Table 2 demonstrates that tax elasticities for all heads are declining and less than unity.

The above-discussed results can be concluded as follows: first, overall the estimates of elasticity and buoyancy are decreasing over the last six decades, which implies that our system is failed to generate enough revenues to fulfill the needs of the

nation and achieving a sustainable growth and economic development, second, in early 25 years of the country since it came into being in 1947, when the East and West Pakistan was combined, the tax system was relatively more flexible and efficient but after 1960, the declining trend of elasticities and tax buoyancy demonstrated that tax system started becoming more ineffective and inflexible, third, the results from 1949 to 2015 can be divided into short run and long run findings. The short run is 1949 to 1960, while long run comprises the duration of 1960 to 2015. As I have discussed earlier that the estimates of tax elasticity and buoyancy can vary short-run to long-run.

The overall findings of the all reviewed research papers are demonstrating that in short-run, the estimates of elasticity and buoyancy were greater than unity for overall taxes and tax heads, which implies that during 1949 to 1960, Pakistan tax system was quite effective and flexible that had the ability to work as automatic stabiliser and economic growth brought about positive and beneficial impacts on fiscal balances. Nonetheless, the picture changed dramatically in long-run, the all estimates went declining and characteristics of the system to work automatic stabilisers turned into opposite side, and economic growth stopped catering the positive impacts on fiscal balances and country's economy went depending on external source of financing such as IMF, WB, and ADB etc. Due to system's inability to respond positively and lowering resilience power, the country drowned into the vicious trap of debt and unsustainable economic growth. Finally, the variation in estimates could be due to change in methodologies adopted by these reviewed studies. Nonetheless, these slight variations in some estimates do not change the trend of falling estimates of the tax elasticity and buoyancy. The debate on methodological differences among the reviewed studies is summarised in Table 3.

Table 3

<i>Methodologies Used by Reviewed Studies to Compute Elasticity and Buoyancy</i>	
Reviewed Research Papers	Methodology
Choudhry (1962)	Chain Base Method
Khan (1973)	Dummy Variable Technique (Developed Log-linear Function)
Jeetun (1978)	Prest Methodology (1962)
Gillani (1986)	Divisia Index Method (DIM) and Proportional Adjustment Method (PAM)
Akbar & Ahmad (1997)	Prest Methodology (1962)
Mukarram (2001)	Chain Indexing Techniques (1962)
Bilquees (2004)	Vector Auto-Regressive (VAR)
IMF (2017)	OLS and 2SLS Techniques

Chaudhary (1962) had used Chain-Base Method for the yearly estimates of elasticity while to estimate elasticity from 1949 to 1960, he used 1949 as base year. While, the similar sort of the methodology was employed by Mukarram (2001) who also used chain base method of calculating elasticities. Unlike these two studies, Khan (1973) examined the effects of discretionary changes by employing the dummy variable technique to capture the impacts of discretionary changes. Akbar and Ahmad (1973) employed the Prest Methodology (1962) to assess the tax elasticity and calculate the buoyancy of the current expenditure component. They also derived splice functions for revenue and expenditure.

On contrary, the study conducted by Gillani (1986) examined the short and long-term elasticity and buoyancy coefficients using the Divisia Index Method (DIM) and Proportional Adjustment Method (PAM) to isolate the impacts of discretionary changes on aggregate tax revenues. The DIM utilises the time series data and considered helpful when a reliable information on discretionary changes are barely available. The PAM is considered the effective method when the information on discretionary changes are available. The reason to use these two methods was to analyse the sensitivity analysis to maintain the reliability of findings. Likewise, Bilquees (2004) and IMF (2017) used regression-based analysis to compute the estimates of the elasticity and tax buoyancy.

#### **4. CONTRIBUTIONS AND GAPS BY LOCAL RESEARCHERS/ORGANISATIONS**

This section provides us a comprehensive picture to learn how much local researchers are contributing in literature related to tax reforms, and it will also help to unleash what are the research gaps which local researchers should need to work on.

##### **4.1. Contributions in Literature Regarding Pakistan's Tax Policy**

This section is furnished to identify the work done by the local researchers related to Pakistan's tax policy or highlighting the problems attached with country's tax system. To best of my knowledge, I have reviewed fifty published research papers which are published local researchers. The summary of the findings and issues they discussed is outlined as follows.

- The prominent work related tax is done by the PIDE, Islamabad. From 1962 to 1990, I found that PIDE had been doing seminal work on Pakistan's tax policy (e.g.; Chaudhary, 1962; Rab, 1962; Lewis & Qureshi, 1964; Radhu, 1965; Azhar & Sharif, 1974; Naqvi, 1975; Kazi, 1984). The brief review of these studies is presented in Table 04 (See Appendix). The second phase of the PIDE publication regarding tax policy is from 2019 to 2024, and these studies maintain focus on highlighting issues and challenges associated with tax policy. The following issues were discussed in all those papers published by PIDE.
  - Analysing the tax structure of the country.
  - Tax incidence of indirect taxes.
  - Tax reform proposals by identifying the key challenges and issues associated with Pakistan's tax policy.
- During last decade, notable work has been done by Dr. Khalid Mahmood from PIDE. It contains some published and unpublished works (e.g., Mahmood, 2005; Mahmood, 2014; Mahmood, et al. 2018; Mahmood, 2021; Mahmood & Iqbal, 2020; Mahmood & Faraz, 2022). These studies reveal following findings.
  - Our tax structure is regressive, ineffective, and inflexible.
  - Exemptions from all tax heads are rising over the years.
  - The distribution is inequitable and unfair.
  - The cost of compliance is high.
  - Fake invoices and corruption in tax system high.
  - The FBR's digitalisation is badly needed.
- The research from local academia is focusing on impacts of taxes using regression based modelling but they fail to work on tax reforms, tax policy, and

research which meets the local needs. In addition, the most of publish research work is published in local journals (e.g., Azeem, et al. 2013; Iqbal, et al. 2019; Rehman, et al. 2020; Butt, et al. 2021). The brief review of these studies is presented in Table 4 (see Appendix).

- Some work on tax incidence and welfare analysis of indirect taxes has been conducted local researchers (e.g.; Jeetun, 1978; Malik & Saqib, 1985; SPDC, 2004; Refaat, 2008; Wahid & Wallice, 2008; Jamal & Javed, 2013; Ara & Ahmed, 2022; Ara, 2023). The brief review of these studies is presented in Table 04 (see Appendix). The brief discussion on the findings of these studies is suggested as follows.
  - Refaat (2008) has suggested that the distribution of GST has changed from progressive (in 1990-91) to proportional during 2001-02.
  - Jamal & Javed (2013) have explored a proportional pattern attached with progressiveness at the upper income group during 2010-11.
  - Ara (2023), SPDC (2004) & Malik & Saqib (1989) have found the regressive tax burden of GST during the respective years of data used by the studies (2018-19, 2001-02, and 1978-79 respectively).
- Apart from the researchers living in Pakistan, some other Pakistani researchers (working/studying abroad) and researchers of IMF have done work on Pakistan's tax system and policy (e.g., Waseem, 2023; Waseem, 2018; IMF 2017; Ahmed & Stern, 1986; Ahmed & Stern, 1990; Cnossen, 1974).
  - The potential of capacity tax in Pakistan is measured by IMF working paper (Cnossen, 1974).
  - Ahmed & Stern (1986, 1990) have worked on highlighting issues and challenges attached with Pakistan's tax policy.
  - Waseem (2023) has revealed the framework of fake invoices and over-claimed refunds by major exporting firms. He showed that due to fake invoices around 40 percent loss of potential tax revenues was being faced by FBR.

#### **4.2. Research Gaps: Need to Work on Pakistan's Tax Reform by Local Researchers**

In previous section, I have explained the research contributions pertaining to the Pakistan's tax policy by local researchers and organisations. This section maintains focus on highlighting research gaps which are significantly required to do in order to bring reforms in tax policy. These are outlined as follows.

- We need to work on administration reforms: digitisation, trainings, and structural changes. Indian literature is full of these types of the studies, we can learn by reviewing their studies and evidences from other countries which reformed their administration.
- A detailed study is required to guide the country how to move on VAT from GST.
- A study is required to analyse counterfactual analysis if zero-rated status is abolished—its impacts on export competitiveness, and export values. Moreover, another study is required which should conduct analysis on export-performance based incentives to the industries.

- Guide the concerned authorities through a comprehensive research, how to digitised the whole economic and tax system.

## 5 CONCLUSION

The underlying piece of research maintains focus on two objectives: (i) evaluating the Pakistan's tax system whether it is effective and flexible through a comprehensive literature review, and (ii) to reveal the contributions and research gaps by local researchers and organisations. The underlying research has reviewed more than 50 research papers related to Pakistan tax policy and found only few papers which have analysed Pakistan's tax system and its effectiveness and flexibility. The findings of those reviewed researches are showing following outcomes.

First, overall the estimates of elasticity and buoyancy are decreasing over the last six decades, which implies that our system is failed to generate enough revenues to fulfill the needs of the nation and achieving a sustainable growth and economic development. Second, the results from 1949 to 2015 can be divided into short run and long run findings. The overall findings of the all reviewed research papers are demonstrating that in short-run, the estimates of elasticity and buoyancy were greater than unity for overall taxes and tax heads. Nonetheless, in long-run, the all estimates went declining and characteristics of the system to work automatic stabilisers failed to work. Due to system's inability to respond positively and lowering resilience power, the country drowned into the vicious trap of debt and unsustainable economic growth.

Moreover, I have explored the contributions of the local researchers regarding Pakistan's tax policy. The findings of the review suggest that PIDE has contributed more in tax reforms. Its contribution can be viewed in two phases: (i) 1962 to 1990, and (ii) from 2019 to 2024. During these phases, the PIDE has focused on effectiveness of tax system, welfare analysis of tax incidence of GST, and highlighting the issues and challenges attached with Pakistan's tax policy and relevant reforms. Our academia is not found working enough on tax policy and tax reforms. They just have worked on impacts of taxes on economic growth, and regression based analysis which more focus on econometric rather than the content related to taxes. Nonetheless, few researchers have done work on tax policy such as compliance cost, fake invoices, and issues of tax reforms. I have designed a table which contains the historical information of reviewed studies (see Table 04 in Appendix) Our researchers need to work on local demand based issues related to tax policy and reforms as Indian researchers have contributed in their economy.

## REFERENCES

- Ahmad, E.&Stern, N. (1986). Tax reform in Pakistan overview and effective tax rates for 1975–76. *The Pakistan Development Review*, 25(1).
- Ahmad, E., & Stern, N. (1986). Tax reform for Pakistan: Overview and effective taxes for 1975–76. *The Pakistan Development Review*, 43–72.
- Ahmad, E., Ahmad, E., & Stern, N. (1991). The theory and practice of tax reform in developing countries. Cambridge University Press.
- Ahmad, F., Ali, M., Arshad, M. U., & Shah, S. Z. A. (2011). Corporate tax rate as a determinant of systematic risk: Evidence from Pakistani cement sector. *African Journal of Business Management*, 5(33), 12762.
- Ahmad, S., & Ahmad, N. (2018). Indirect taxes and economic growth: An empirical analysis of Pakistan. *Pakistan Journal of Applied Economics*, 28(1), 65–81.

- Ara, I. & Ahmed, Q.M. (2022). Differential impact of taxation on food items. *Lahore Journal of Economics*, 27(1).
- Azeem, M. M., Saqi, M., Mushtaq, K., & Samie, A. (2013). An empirical analysis of tax rate and economic growth linkages of Pakistan. *Pakistan Journal of Life and Social Sciences*, 11(1), 14–18.
- Bahl, R. W., & Martinez-Vazquez, J. (2008). The determinants of revenue performance.
- Bhatti, A., Batool, Z., & Naqvi, H. (2015). Impact of tax and transfers on income inequality and budget deficit: A CGE analysis for Pakistan. Available at SSRN 2702750.
- Bilquees, F. (2004). Elasticity and buoyancy of the tax system in Pakistan. *The Pakistan Development Review*, 73–93.
- Butt, M. N., Malik, Q. A., Waheed, A., & Tabassum, A. H. (2021). Tax planning, financial constraints and investment management: empirical evidence from Pakistan. *The Journal of Asian Finance, Economics and Business*, 8(12), 129–139.
- Chaudhry, M. G., & Khan, M. A. (1999). The theory and practice of agricultural income tax in Pakistan and a viable solution with comments. *The Pakistan Development Review*, 757–768.
- Chowdhury, A. N. (1962). The predictability and the flexibility of tax revenues in Pakistan. *The Pakistan Development Review*, 2(2), 189–214.
- Cyan, M., Koumpias, A., & Martinez-Vazquez, J. (2016). The effects of media campaigns on individual attitudes towards tax compliance; quasi-experimental evidence from survey data in Pakistan. *Andrew Young School of Policy Studies Research Paper Series*, (16–17).
- Ghaus, A., & Pasha, H. A. (1988). Buoyancy of provincial tax revenues in Pakistan. *Pakistan Economic and Social Review*, 127–149.
- Gillani, S. F. (1986). Elasticity and buoyancy of federal taxes in Pakistan. *The Pakistan Development Review*, 163–174.
- Hussain, I., & Rana, S. (2009). Income tax revenue as an indicator of regional development in Pakistan.
- Iffat Ara. (2023). Estimating the distributional burden of general sales tax in Pakistan. *The Pakistan Development Review*, 62(3), pp.395–408. <https://doi.org/10.30541/v62i3pp.395-408>
- Ihtsham ul Haq Padda, & Akram, N. (2009). The impact of tax policies on economic growth: Evidence from South-Asian economies. *The Pakistan Development Review*, 961–971.
- Iqbal, Y. M. J., Fatima, H., & Tariq, Y. (2019). Critical factors of underground economy and tax evasion: Evidence from Pakistan. *UCP Management Review (UCPMR)*, 3(1), 41–56.
- Irfan, M. (1974). Shifting and incidence of indirect taxes on tobacco and petroleum products in Pakistan. *The Pakistan Development Review*, 13(1), 66–87.
- Jamal, H. & Javed, S. (2013). Incidence of general sales tax in Pakistan: Latest estimates. *Pakistan Journal of Applied Economics*, 23(2).
- Jeetun, A. (1978). Incidence of taxes in Pakistan. Applied Economics Research Centre (AERC), University of Karachi. *Research Report No.10*.
- Kamal, A. (2019). Tax evasion in Pakistan: Determinants and requisite policy interventions. European online *Journal of Natural and Social Sciences: Proceedings*, 8(1 (s)), pp–185.
- Khalid, M. Ali, Syed Hamza Ali, & Satti, Ahsan ul Haq (2018) Measuring the ex-ante tax elasticity using marginal tax rates for Pakistan, paper presented at one day

international conference emerging issues in the economy of Pakistan: Challenges and opportunities organised by: School of economics, Quaid-i-Azam University, Islamabad.

- Khan, A., & Aslam, M. (1992). Determinants of income tax base in Pakistan: A policy review with comments. *The Pakistan Development Review*, 31(4), 1123–1142.
- Lewis, S. R. (1964). Aspects of fiscal policy and resource mobilisation in Pakistan. *The Pakistan Development Review*, 4(2), 261–282.
- Mahmood, K. (2005) Tax incidence analysis for Pakistan, Unpublished section work at PIDE.
- Mahmood, K. (2014) does fiscal policy matter? A case of Pakistan. Department of Economics, Pakistan Institute of Economics (PIDE). (PhD Economics Thesis).
- Mahmood, K. (2021). Tax policy design and reform options. PIDE P & R, Vol.2 Issue 6.
- Mahmood, K. and Faraz, N. (2022). A critical appraisal of tax expenditures in Pakistan. *PIDE Knowledge Brief No. 50:2022*.
- Mahmood, K. & Iqbal, N. (2020). Tax policies for growth. *PIDE (Blogs)*
- Malik, M. H., & Saqib, N.(1985). Tax incidence by income classes in Pakistan. *The Pakistan Development Review*,28(1).
- Malik, M. H., & Ali, M. S. (1985). Who bears the burden of federal taxes in Pakistan? with comments. *The Pakistan Development Review*, 24(3/4), 497–509.
- Malik, M. H., & Ali, M. S. (1985). Who bears the burden of federal taxes in Pakistan? with comments. *The Pakistan Development Review*, 24(3/4), 497–509.
- Mughal, M. M. (2012). Reasons of tax avoidance and tax evasion: Reflections from Pakistan. *Journal of Economics and Behavioral Studies*, 4(4), 217–222.
- Naqvi, B. F. (1975). Shifting indirect taxes: A further study. *The Pakistan Development Review*, 14(2), 174–184.
- Pasha, A. G. (2010). Can Pakistan get out of the low tax-to-GDP trap? *Lahore Journal of Economics*, 15.
- Pasha, H. A. (1995). Political economy of tax reforms: the Pakistan experience. *Pakistan Journal of Applied Economics*, 11(1 & 2), 129–154.
- Rab, A. (1962). Pakistan taxation enquiry committee report. *The Pakistan Development Review*, Vol. 2, No. 2 (Summer 1962), pp. 278-290
- Radhu, G. M. (1965). The relation of indirect tax changes to price changes in Pakistan. *The Pakistan Development Review*, 5(1), 54–63.
- Rasheed, F. (2006). An analysis of tax buoyancy rates in Pakistan.
- Raza, S. H., & Naqvi, S. M. A. (2016). Impact of tax evasion on total tax in Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 6(11), 730–739.
- Refaqat, S. (2008). Social incidence of indirect taxation in Pakistan– (1990–2001), Thesis submitted for the degree of Doctor of Philosophy, University of Bath, UK.
- Rehman, Z. U., Khan, M. A., & Tariq, M. (2020). Indirect taxation and economic growth relationship: Empirical evidence from Asian countries. *Pakistan Journal of Humanities & Social Sciences Research*, 3(1), 131–144.
- Sadiq, M., Mohamad, S., & Chong, G. K. W. (2019). Political influences and effective tax rates: Evidence from Pakistan. *Dilemas Contemporáneos: Educación, Política y Valore*, 6(Special).
- Sarwar, M. N. (2023). An evaluation of different tax reform proposals in Pakistan using CGE model. *The Pakistan Development Review*, 62(3), .309–330. <https://doi.org/10.30541/v62i3pp.309-330>

- Shaikh, S. A. A. (2012). Estimating the federal direct tax buoyancy for Pakistan in Post-1973 Era. *Global Management Journal for Academic & Corporate Studies (GMJACS)*, Forthcoming.
- SPDC (2004). Social development in Pakistan. Annual Review Karachi: Social Policy and Development Centre.
- Subhani, M. I. (2010). Impact of fiscal policy on the economy of Pakistan.
- Wahid, U. & Wallace, S. (2008). Incidence of taxes in Pakistan: Primer and estimates. *Working Paper 08–13*. International Studies Programme, Andrew Young School of Policy Studies.
- Waseem, M. (2018). Taxes, informality and income shifting: Evidence from a recent Pakistani tax reform. *Journal of Public Economics*, 157, 41–77.
- Waseem, M. (2023). Overclaimed refunds, undeclared sales, and invoice mills: Nature and extent of noncompliance in a value-added tax. *Journal of Public Economics*, 218, 104783.
- Yasmin, B., & Rauf, H. (2004). Measuring the underground economy and its impact on the Economy of Pakistan. *The Lahore Journal of Economics*, 9(2), 93–106.

**Appendix Table 04. Historical Literature Summary Regarding Pakistan's Tax System**

Authors	Objectives	Data	Methodology	Findings
Chowdhury (1962)	To analyse flexibility of Pakistan's tax structure	1948–1958	Flexibility is measured through Elasticity: Tax yields to national income	<ul style="list-style-type: none"> <li>(i) The elasticity of custom duty has been more elastic in the past, but it has been declining over time. The value was 39.1 during the period of 1949-51, but it gradually decreased and reached 10.5 in 1958.</li> <li>(ii) Similarly, the central excised duty has shown a consistent upward trend, with an elasticity of 14.1 in 1950 and reaching 18.7 in 1958.</li> <li>(iii) The corporate tax showed a high level of responsiveness, while the income tax exhibited a declining trend and remained relatively stable in 1958. However, the sales tax continued to fluctuate throughout the entire duration of the study.</li> <li>(iv) In general, Pakistan's tax structure demonstrated flexibility and the ability to collect revenue in a responsive manner. It was observed that expanding the tax base would lead to increased revenues, while raising tax rates alone would not have the same effect. However, with the incorporation of tax administration and exemptions, the overall elasticity of the tax revenues became less responsive to changes. Demonstrated that implementing changes in tax administration would enhance the adaptability of Pakistan's tax system.</li> </ul>
Rab (1962)	To review the publically available "Pakistan Taxation Enquiry	1948–1958	Thematic Analysis	<p>The study highlighted following salient features and findings of the report:</p> <ul style="list-style-type: none"> <li>(i) The tax to GDP ratio in Pakistan was significantly low, estimated at 7.5 percent.</li> <li>(ii) The growth rates in tax revenues were lower compared to the growth rate in government expenditures.</li> </ul>

Authors	Objectives	Data	Methodology	Findings
	Committee Report'			<ul style="list-style-type: none"> <li>(iii) The tax system lacks sufficient flexibility and equity.</li> <li>(iv) A small percentage of the population pays direct tax.</li> <li>(v) The number of exemptions in the tax system was on the rise.</li> <li>(vi) Exemptions are granted for agriculture income tax, land tax, and capital gain tax, which are necessary for implementation.</li> </ul>
Lewis & Qureshi (1964)	To check indirect taxes rate structure, revenue structure, effect on prices, and effect on resource allocation in Pakistan.	1954–1964	Summary Statistics	<ul style="list-style-type: none"> <li>• The elasticity of the central indirect taxes by commodity groups, in relation to the change in the underlying flow of goods, showed a decreasing trend.</li> <li>• There was an increase in exemptions in indirect taxes.</li> <li>• There are two fundamental alternatives to higher indirect taxes on production and imports. <ul style="list-style-type: none"> <li>○ Increased income and corporation taxes, or</li> <li>○ When evaluating the increased land taxes, it is important to consider the effects of these alternative types of taxes. It is necessary to compare their likely impact on indirect taxes, taking into account past performance as well as future revenue, price, and income distribution effects.</li> </ul> </li> </ul>
Radhu (1965)	To examines the effects of indirect taxes on prices.	1959–1964	Summary Statistics and OLS regression	<ul style="list-style-type: none"> <li>• Import “Liberalisation” has typically involved the provision of more foreign exchange for imports. This may have resulted in a shift of the vertical portion of the supply curve to the right, bringing markets for goods with a high import component of input closer to equilibrium and reducing the gap ST.</li> <li>• Taxes were not shifted forward because there was no conclusive evidence of either shifting or non-shifting. Nevertheless, the results provided some support for the hypothesis that the burden of indirect taxes had been placed on the seller in recent times.</li> </ul>

Authors	Objectives	Data	Methodology	Findings
Irfan (1974)	To assess the shifting and incidence of taxes on cigarettes and petroleum products on the basis of consumption distribution obtained from products.	1953–1972	Summary Statistics, and OLS	<ul style="list-style-type: none"> <li>• The finding contrasts with previous studies on indirect taxes in Pakistan, which suggested that producers bore the burden of the taxes. Due to the substantial contribution of excise duties on petroleum and cigarettes to total indirect tax revenues, the extent to which prices are adjusted for these products greatly influences the overall impact of indirect taxes.</li> <li>• The regression analysis revealed a significant correlation between the changes in tax rates and the changes in prices for the tobacco and petroleum products examined in the study. Regressions involving percentage change in prices and tax rates demonstrate a less strong correlation. The incidence of excise duties on cigarettes is progressive.</li> <li>• The rate paid by the top income group is 85 per cent higher than that of the bottom income group. This percentage decreases to 63 percent when the surcharge is factored in. The negative effect of the surcharge stems from a consistent charge applied to different levels. The regressive nature of the surcharge could be eliminated by implementing an advalorem system.</li> </ul>
Naqvi (1975)	To study the effect of indirect tax changes on prices, i.e. whether taxes have been shifted or not and who will bear the burden of the taxes	1960–1971	Simple regression Model	<ul style="list-style-type: none"> <li>• The burden of taxes on consumer goods in general shifted onto the consumer, while taxes on raw materials remained unchanged.</li> <li>• The taxes for six products, namely cigarettes, petroleum products, cotton fabrics, chemicals, food products, and miscellaneous products, underwent a shift. Nevertheless, there was no indication of taxes being passed on to consumers in the case of cement, jute manufactures, silk cloth, woolen cloth, cotton yarn, and hides and skins.</li> <li>• Therefore, taxes experienced changes in certain instances, while remaining unchanged in others. Nevertheless, the overall tax</li> </ul>

Authors	Objectives	Data	Methodology	Findings
				structure has resulted in a situation where consumers bear a portion of the burden through excise duties and sales taxes.
Pasha (1995)	To analyse the experience of Pakistan with tax reforms during the decade of 1990's.	1988–1993	Trend Analysis	<ul style="list-style-type: none"> <li>• Identifies the significant winners and losers for each reform and analyses the factors that contribute to their success or failure.</li> <li>• Removing tax concessions and exemptions to ensure fairness in income tax.</li> <li>• To enhance government capacity for effective implementation of every reform.</li> </ul>
Malik, et al. (1985)	To estimate incidence of the federal taxes for households in different income brackets	1978–79	Summary Statistics	<ul style="list-style-type: none"> <li>• The tax system in Pakistan has a regressive structure, mainly because it heavily relies on indirect taxes. Unfortunately, this disproportionately affects lower-income households.</li> <li>• Taxes paid by urban households are relatively higher, with some degree of progressivity seen only in the highest income brackets.</li> <li>• Direct taxes exhibit limited progressivity, particularly in urban regions, but their overall effect is minimal due to low effective rates. Import duties, which are commonly associated with luxury goods, can actually have a regressive impact as they also affect essential items, raw materials, and intermediate products.</li> <li>• In order to create a more progressive tax system, it is important to place a greater emphasis on direct taxes while reducing taxes on essential inputs and machinery.</li> </ul>
Ahmad & Stern	To evaluate the consequences of	Federal revised tax	Input –output Metrix	<ul style="list-style-type: none"> <li>• The study reveals that in Pakistan, similar to other developing nations, there is a significant disparity between actual tax rates and</li> </ul>

Authors	Objectives	Data	Methodology	Findings
(1986)	taxation policy changes in- terms of effects on government revenue, households and production.	collections for the year 1975-76		the officially stated tax rates. Recognising this disparity can be of immense value to policymakers, as it enables them to steer clear of any unintended repercussions that may arise from government policies.
Gillani (1986)	This paper focuses on computing elasticity and tax buoyancy in Pakistan to evaluate the revenue-expenditure activities of the federal government and evaluates the performance of the fiscal system on the basis of estimates of revenue productivity.	1960–1971	Divisia Index Method (DIM) & Proportional Adjustment Method (PAM)	<ul style="list-style-type: none"> <li>• The results of both methods, DIM and PAM, were consistent and yielded similar outcomes.</li> <li>• The analysis of the elasticity breakdown reveals an increase in the tax base for almost all tax categories, accompanied by favorable discretionary adjustments.</li> <li>• There is a clear indication that more focus should be placed on improving tax collection at the current rates and reducing tax evasion and exemptions, based on the low income tax elasticity with respect to GDP.</li> </ul>
Pasha (1988)	This paper analyses the buoyancy of	1972-1985	Descriptive analysis	<ul style="list-style-type: none"> <li>• A set of tax reforms has been identified to improve buoyancy. These encompass practical improvements in administration, justified enhancements in tax rates, transitioning from specific to</li> </ul>

Authors	Objectives	Data	Methodology	Findings
	provincial tax revenues during the period, 1972-73 to 1984-85.			ad valorem structure, and expanding the tax base within the constraints of current fiscal powers.
Malik & Saqib (1989)	To estimate the incidence of federal taxes, for the fiscal year 1978-79, on households belonging to different income-bracket	1978-79	Elasticity of total federal tax revenue with respect to GDP has been estimated.	<ul style="list-style-type: none"> <li>The tax system is slightly progressive for the country as a whole. In urban areas, the approach leans towards progressiveness, while in rural areas, it leans towards regressiveness. Indirect taxes, a significant contributor to the federal government's tax revenue, tend to have a slightly regressive nature.</li> </ul>
Ahmad & stern (1990)	The purpose of this paper is to show, how the appraisal of indirect taxes can take account of distortions on the production side by integrating shadow prices into the analysis of reform.		Input-Output Matrix	<ul style="list-style-type: none"> <li>This paper focuses on the importance of shadow prices and distributional values in tax reform analysis, underscoring their substantial influence on policy evaluation. It is essential to take into account all the key factors, such as consumption patterns, demand responses, effective taxes, shadow prices, and welfare weights, in order to prevent any misleading outcomes. It is crucial to consider that goods that are predominantly consumed by individuals with lower incomes, and have lower sensitivity to changes in prices and lower market values, should be given less priority for tax increases.</li> <li>The difference between market and shadow prices is crucial, and tax systems need to take these variations into consideration. Considering practical factors such as administration, evasion, and political acceptability is crucial when designing tax and price reform packages to ensure their effectiveness.</li> </ul>

Authors	Objectives	Data	Methodology	Findings
Khan & Aslam (1992)	To review income tax base policy of Pakistan.		Thematic Analysis	<ul style="list-style-type: none"> <li>• The tax policy reform package should prioritise comprehensive and fundamental changes, with a focus on generating revenue while maintaining fairness, progressiveness, and equity.</li> <li>• Highlighting the importance of expanding the tax base is essential for reducing dependence on high tax rates.</li> <li>• Improving tax efficiency and revenue generation while safeguarding the economically disadvantaged can be achieved through the reduction of tax expenditures and the rationalisation of the rate structure.</li> <li>• Implementing these principles in a comprehensive manner will result in a stronger and fairer fiscal system.</li> </ul>
Chaudhry & Khan (1999)	The present paper attempts to provide an assessment of introducing the policy in Pakistan in the light of typical characteristics of a good tax policy if only to recommend.	1995–1998	Incidence Analysis	<ul style="list-style-type: none"> <li>• Although it would be highly desirable to rely more on direct taxes, it is not feasible to introduce a general income tax or a graduated land tax for agricultural taxation due to various practical challenges.</li> <li>• If achieving equitable taxation of agriculture is considered desirable, progression in land taxes must be pursued indirectly. In order to achieve this objective, it is recommended to implement a two-tier system of agricultural taxation. This system would consist of a proportional land tax based on the pattern of land revenue, as well as a uniform tax on the marketed surplus. When implemented correctly, the two-tier system would be fair, adaptable to changes in income and inflation, and straightforward to manage and operate, even with the current administrative structure.</li> <li>• A tax on marketed output can have a progressive impact if it is paid by the farm sector and the marketed surplus varies with farm size. A uniform rate structure may be effective in achieving this.</li> </ul>

Authors	Objectives	Data	Methodology	Findings
Yasmin & Rauf (2003)	To estimate the size of the underground economy in Pakistan through income tax evasion capturing information for an extended time period of 1974-2002 along with its impact on the economy of Pakistan.	1974–2002	Ordinary Least Square (OLS) Model	<ul style="list-style-type: none"> <li>• The findings revealed a significant surge in the underground economy, with its value skyrocketing from Rs. 12 billion in 1974 to an astounding Rs. 1085 billion in 2002.</li> <li>• The findings indicate that the presence of a substantial UGE can have negative impacts on tax revenues, GDP, and socio-economic conditions.</li> <li>• Regular tax audits and stricter penalties for tax evasion can help reduce the impact of the underground economy.</li> </ul>
Bilquees (2004)	This paper examines the elasticity and buoyancy of the tax system of Pakistan.	1975–2004	Vector Auto regressive (VAR) technique to estimate elasticity and buoyancy for this study.	<ul style="list-style-type: none"> <li>• The total tax revenue is not strongly influenced by changes in the total GDP or the non-agricultural GDP base.</li> <li>• In general, sales tax emerges as the frontrunner in terms of enhancing revenues. The income tax coefficient, which includes withholding tax, is quite high. Not considering the withholding tax results in a reduced coefficient.</li> <li>• The inclusion of sales tax for imports and manufacturing helps address the potential loss of revenue resulting from reduced tariff and excise duties. Nevertheless, the sales tax coefficient in relation to the GDP base highlights the incorporation of the service sector and utilities in the sales tax net, leading to significant consequences for those who are less fortunate.</li> <li>• The estimates of buoyancy indicate that tax changes did not result in substantial revenue increase. The limited effectiveness of income tax, when not including withholding taxes, suggests that</li> </ul>

Authors	Objectives	Data	Methodology	Findings
Vaquez (2006)	To analyse the recent performance of the tax system and to seek ways to reform it with the objectives of generating adequate revenues and enhancing efficiency and equity.	HIES (2001–2002)	OLS	<p>implementing higher withholding taxes alongside raising the taxable income limits is contradictory.</p> <ul style="list-style-type: none"> <li>The distribution of tax burdens across different income levels shows a proportional or mildly progressive pattern for the bottom 60 percent of the population. However, it becomes more progressive for the next two quintiles of the population, who have higher consumption levels. We estimate that the top 20 percent of the population, specifically the 5th quintile, would be responsible for paying 40 percent of all taxes. Nevertheless, it is worth noting that even the most economically disadvantaged groups continue to contribute a substantial portion of the overall tax burden.</li> <li>These findings suggest that the general perception may not be justified. Pakistan's tax system exhibits significant disparities in terms of horizontal equity. The unequal treatment of taxpayers with the same level of income through exemptions and similar measures, along with the existence of different opportunities for tax evasion, are the primary factors contributing to horizontal inequities.</li> </ul>
Rasheed & Farooq (2006)	This paper presents an analysis of the estimates of tax buoyancy in relation to changes in various independent	1980–2004	Co-Integration Test	<ul style="list-style-type: none"> <li>Developing countries tend to rely more on excise taxes, tariffs, and GST rather than broad-based taxes. Therefore, these countries generate significantly lower revenue as a percentage of their GDP compared to developed economies. Corruption is unfortunately prevalent in such countries. The single factor of corruption is the primary cause for the low buoyancy rates in Pakistan.</li> <li>In addition to corruption, one of the main challenges within the political system is the significant pressure that tax authorities encounter. Such pressures are designed to implement tax policies</li> </ul>

Authors	Objectives	Data	Methodology	Findings
	variables using an econometrics approach.			<p>that are favorable to the agriculture sector. A vulnerable financial sector facilitates the ease of tax evasion. It is crucial to implement tax reforms to enhance tax revenue from the financial sector, including stock markets in various countries.</p> <ul style="list-style-type: none"> <li>The elasticity method provides a clear understanding of how various economic effects contribute to the patterns of tax revenues. It is important for tax revenue optimisers to consider the buoyancy rate when formulating tax policies.</li> </ul>
Hussain & Rana (2009)	The objective of this paper is to highlight the use of income tax revenue as an indicator of regional development in Pakistan.	1992–2006	Developed a model for income tax revenue	<ul style="list-style-type: none"> <li>They create a straightforward model of income tax revenue and calculate the correlation between the growth of income tax revenue and gross regional product (GRP). According to the estimated relationship, Punjab seems to have experienced the highest growth rate among the provinces in the 1990s, while Sindh is showing the most dynamic performance in the current decade. This can be attributed to the significant growth rates observed, particularly in the large-scale manufacturing sector, which holds a significant share in Sindh's economy.</li> </ul>
Padda & Akram (2009)	This study tests whether tax policies conducted by Pakistan, India and Sri Lanka have transitory or permanent effect on their economic growth.	1973–2008	Impulse Response Function	<ul style="list-style-type: none"> <li>The tax rate changes have a temporary and unfavorable effect on the short-term economic growth in Pakistan and India. However, in Sri Lanka, there is an initial positive impact in the first year, but it is followed by a negative effect on the economy.</li> <li>The tax rates in all these countries are relatively low compared to developed countries. These countries rely heavily on bond financing and foreign debt due to their low tax rates. Based on these findings, a crucial policy implication of the study is the need to determine the optimal tax rate for budget financing. For this purpose, the government can utilize both debt and tax instruments simultaneously. As argued by Padda (2009), when faced with an</li> </ul>

Authors	Objectives	Data	Methodology	Findings
Pasha (2010)	To explore how Pakistan can get out of the low tax-to-GDP trap and come close to achieving the target agreed with the IMF by 2013-14.	1990–2010		<p data-bbox="986 239 1705 606">unforeseen rise in government spending or a decline in output, it is crucial for the government to carefully assess the portion of this increase that will have a lasting impact on its expenditure. The permanent part should be funded through the implementation of taxes, as its influence gradually decreases over time. On the other hand, the transitory part should be funded through the issuance of bonds. However, bond financing should be considered as a safeguard against temporary budgetary shocks and should be paid off when better times lie ahead. By adopting this approach, these South-Asian economies can effectively reduce tax distortion by evenly distributing the necessary tax increase across different sectors.</p> <ul data-bbox="953 646 1705 1139" style="list-style-type: none"> <li>• After analysing the various factors that have influenced the tax-to-GDP ratios in Pakistan over the past twenty years, it is evident that the country has been caught in a challenging situation due to partially successful and/or inappropriate tax reforms. Emphasising the importance of timing, the paper discusses a strategy that focuses on improving tax revenues and creating a more equitable and comprehensive taxation system, even during an economic downturn.</li> <li>• The paper proposes a way forward that involves implementing a resource mobilisation strategy with three pillars: Expansion of the business the current GST covers a wide range of services and includes both exempted and zero-rated sectors.</li> <li>• Improving the administration of direct and income taxes, as well as enhancing overall efficiency, ratio of provincial tax to GDP. These measures will mark the initial stage towards helping the country overcome its low tax-to-GDP ratio. Nevertheless, the</li> </ul>

Authors	Objectives	Data	Methodology	Findings
				success of the endeavor will depend heavily on the commitment of those in power to implement necessary changes. The tax administration should implement rational tax policies and strive to increase tax revenue.
Subhani & Ali (2010)	To estimate the relationship between tax rates, inflation rate and the balance of trade in Pakistan.	1979–2009	2SLS	<ul style="list-style-type: none"> <li>The study found that there was no significant correlation between tax rates and inflation rate in Pakistan. The tax rate had a significant effect on the balance of trade.</li> </ul>
Aamir, et al. (2011)	The purpose of this study is to compare taxes in India and Pakistan under the heads of direct and indirect taxes.	1999-2000 to 2008-2009	OLS	<ul style="list-style-type: none"> <li>Based on the findings, it is evident that Pakistan relies more on indirect taxes for tax revenue, while India generates a larger portion of its tax revenue through direct taxes.</li> <li>Through a comparison of the two regression equations and the standardised betas, it becomes evident that Pakistan relies heavily on indirect taxes to generate revenue, while India takes a different approach.</li> <li>The outcomes of these two fiscal policies can vary significantly. The greater the presence of indirect taxes in a country, the wider the gap between the wealthy and the impoverished, resulting in increased exploitation of the labor class.</li> </ul>
Ahmad, et al. (2011)	The main purpose of this study is to find the influence of corporate tax rate on systematic	2004–2009 15 cement manufacturing companies	Fixed Effect Model.	<ul style="list-style-type: none"> <li>The findings indicate that the corporate tax rate does not directly influence systematic risk. However, it does have an impact on systematic risk through its association with leverage, which has a statistically significant relationship. This study revealed that leverage played a crucial role in determining systematic risk and had a positive correlation with it. On the other hand, return on</li> </ul>

Authors	Objectives	Data	Methodology	Findings
	risk with three more variables (leverage, return on assets and market value of equity) by using cement sector data of Pakistan.			<p>assets and market value of equity showed a positive relationship with systematic risk, but their influence on systematic risk was not found to be significant.</p> <ul style="list-style-type: none"> <li>This study examined the impact of corporate tax rate on systematic risk. This study also discussed the managerial and policy implications and recommendations that arose from the findings.</li> </ul>
Mughal & Akram, (2012)	This paper aims to recognize reasons/causes of tax avoidance and evasion in Pakistan	Primary data collected	Simple averages and correlations	<ul style="list-style-type: none"> <li>The results suggest that all variables related to the reasons and causes of tax avoidance and evasion in Pakistan are accurate. In addition, there is a strong and statistically significant correlation between the various factors contributing to tax avoidance and evasion in Pakistan.</li> </ul>
Shaikh & Salman (2012)	The study sets forth following important objectives: (1) To estimate the direct tax buoyancy for the 36 year period covering the data from post 1973 period for Pakistan.	FY-1974 to FY-2009	OLS	<ul style="list-style-type: none"> <li>The study highlights the improvement in various factors that have contributed to the growth. These factors include the expansion of the tax base, the diversification and deepening of the manufacturing sector, and the structural change in the economy. As a result, the size of the agriculture sector output has decreased as a proportion of GDP, while the proportion of direct tax has gradually increased in relation to total taxes. The study suggests several policy recommendations, such as expanding the tax base, lowering tax rates, and minimising tax evasion by ensuring that all sources of income are taxed and by promoting documentation through mandatory display of tax identity for significant transactions.</li> </ul>
Azeem (2013)	To analyse the long and short-run relationships	1975-2009	Johansen's Co-	<ul style="list-style-type: none"> <li>The findings revealed a detrimental impact of the tax rate on real per capita GDP, leading to negative consequences for the overall economic growth. Other explanatory variables, on the other hand,</li> </ul>

Authors	Objectives	Data	Methodology	Findings
	between tax rate and economic growth of Pakistan.		Integration Approach	demonstrated favorable impacts on real GDP per capita. To ensure continued economic growth, tax authorities must adopt significant changes in tax policy to enhance the resilience of the tax system.
Khan, et al. (2013)	To examine the impact of introducing performance pay schemes in taxation.	16000 properties Data is collected through property survey data using the GIS maps of FY-2013. Quarterly reports for each of the approximately 500 tax circles in Punjab for a total of 6 years (4 years prior to the project beginning and the 2 years the project was in place).	Generalising the Cost Function is estimated using 2SLS Method.	<ul style="list-style-type: none"> <li>• They conducted a significant field experiment on these matters, where they allocated 482 property tax units in Punjab, Pakistan into one of three performance-pay schemes or a control group. After two years, the units that were incentivised showed a significant increase in revenue compared to the control group. This resulted in a remarkable growth rate of 46 percent. The scheme that prioritised revenue saw the most success, with a significant increase in revenue by 12.8 log points (62 percent higher growth rate). Surprisingly, there was little impact on customer satisfaction and assessment accuracy compared to the other two schemes, which explicitly rewarded these dimensions as well.</li> <li>• Upon further analysis, it is evident that the increase in revenue can be attributed to a select few properties being taxed at their accurate value, which is significantly higher than their previous tax assessments. Most properties in incentivised areas actually do not pay any additional taxes, but they do report higher bribes. The findings suggest a situation where performance-based compensation gives collectors more leverage over taxpayers. As a result, taxpayers are forced to either pay higher bribes to avoid reassessment or face significantly higher taxes if the collusion is disrupted.</li> </ul>
Bhatti, et al. (2015)	The impact of tax and transfers on	The SAM 2007-08	Computable General	<ul style="list-style-type: none"> <li>• The Social Accounting Matrix (SAM) 2008 was developed by Debowicz et al (2012). Two sets of simulation exercises are</li> </ul>

Authors	Objectives	Data	Methodology	Findings
	income distribution.	consists of 5 major accounts, namely activities, commodities, factors of production, households and other institutional accounts.	Equilibrium Mode	conducted to examine the effects of tax and transfers on income inequality. In addition, we analyse the impact of inequality using Theil T, Theil L, Theil S, and Hoover's Indexes. Our findings indicate that implementing a combination of sales tax, income tax, and government expenditures can effectively address income inequality and reduce the economy's reliance on financial support.
Cyan, et al. (2016)	This paper examines what shapes taxpayers' attitudes towards tax compliance—otherwise known as tax morale—in Pakistan	Survey data collected in 2014 during a survey of individual taxpayers for the Federal Board of Revenue of Pakistan.	Binary Probit Regression Model	<ul style="list-style-type: none"> <li>• In Pakistan, groups with lower labor force participation rates tend to have more positive attitudes towards tax compliance. Respondents with higher levels of education tend to have higher tax morale compared to those with lower levels of education. However, individuals with very low or very high levels of education show higher tax morale compared to those with a bachelor's degree. Furthermore, metropolitan areas, being the largest population centers, are highly industrialised and serve as seats of government. As a result, they exhibit a notable level of tax morale.</li> <li>• It is evident that women exhibit a considerably stronger sense of tax morale compared to men. However, the attitudes towards tax compliance deteriorate significantly over time, with elderly males exhibiting higher tax morale compared to elderly females. From the perspective of the tax administration in Pakistan, these findings suggest that there could be significant benefits from increasing female labor force participation rates. In a broader sense, tackling</li> </ul>

Authors	Objectives	Data	Methodology	Findings
				the existing shortcomings in tax administration and addressing the unfairness caused by administrative weaknesses can significantly enhance voluntary compliance.
Raza & Naqvi (2016)	To find the long run and short relationship between Total tax and tax evasion.	1980–2014	Johansen Co-integration and error correction models	<ul style="list-style-type: none"> <li>The empirical findings indicate a significant long-term inverse correlation between total tax and tax evasion (illegal money) in Pakistan.</li> </ul>
Waseem (2017)	This paper examines firm behavior to taxation in a low enforcement and large informality setting	2006–2011	Quasi-experimental variation created by a tax reform	<ul style="list-style-type: none"> <li>The study reveals that firms that have undergone treatment experience a notable decrease in earnings, transition into informal sectors, and change their business structure in response to the tax rate hike. The significant decrease in revenue resulting from these behavioral responses is of such magnitude that by the third year following the reform, the government's revenue collection was lower than it would have been without the tax increase. It can be inferred that the new tax rate was not in line with the Laffer curve and would not have been ideal based on societal preferences. The depth of the data and the range of tax variations allow me to analyse the observed responses in terms of genuine and evasive factors, and to pinpoint the fiscal impacts of the reform on other tax bases. The reform's welfare cost experiences a significant</li> </ul>

Authors	Objectives	Data	Methodology	Findings
Kamal (2017)	To estimate of the size of the underground economy and tax evasion based on this methodology will be compared with the previous estimates.	Three periods, i.e., 1973–02, 1980–02, and 1987–02.	Regression based method	<p>increase of approximately 40 percent when considering these externalities.</p> <ul style="list-style-type: none"> <li>The underground economy experienced a significant increase of 4.21 percent until 1998, followed by a sharp decline of -28.41 percent in 1999. From 1999 to 2002, it continued to decline at a rate of -1.55 percent per year. In a similar vein, there was a notable increase in tax evasion until 1998, followed by a sharp decline of -28.14 percent in 1999. From 1999 to 2002, the decline continued at a rate of -3.19 percent per year. The rapid growth of the underground economy after 1991 surpassed the growth of the formal economy, causing significant concern. However, over the past four years, there has been a decrease in the underground economy and tax evasion, which is a promising development. This can be attributed to the relatively low level of economic activity and documentation in the economy.</li> </ul>
Ahmad, et al. (2018)	The study investigates the empirical relationship between indirect taxes and economic growth in Pakistan.	1974 to 2010	ARDL	<ul style="list-style-type: none"> <li>Indirect taxes have a notable impact on long-term economic growth, although their influence in the short term is not statistically significant. As a result of a one percent increase in indirect taxes, there would be a corresponding decrease of 1.68 percent in economic growth. The coefficient of indirect taxes in the ECM model indicates a speed of adjustment of 45 percent per year. Based on the research findings, it is crucial to reduce indirect taxes and raise direct taxes in order to enhance economic growth. At present, direct taxes contribute only 33 percent of the total tax revenue, with indirect taxes making up the remaining 63 percent. However, for economic growth to increase, this ratio should be reversed.</li> </ul>
Iqbal, et al. (2019)	To investigate the main critical	Review paper	Meta-Analysis	<ul style="list-style-type: none"> <li>The study reveals that corruption and concealment of income to evade taxes are the primary factors contributing to the</li> </ul>

Authors	Objectives	Data	Methodology	Findings
Sadiq, et al. (2019)	<p>factors of underground economy and tax evasion contributing towards the regressing economic landscape of Pakistan.</p> <p>to examine the relationship between political influences and effective tax rates</p>	<p>2009-2013</p> <p>This paper collected data from 160 firms listed on the Pakistan Stock Exchange (PSE), which consisted of 80 politically influenced and 80 non-politically influenced firms.</p>	OLS	<p>Underground Economy in Pakistan. Additionally, an uninformed labor force, deregulated fiscal policies, and a weak tax collection system also play a role.</p> <ul style="list-style-type: none"> <li>The paper concludes with recommendations for policy makers to address the issue of underground economy and tax evasion, aiming to steer Pakistan's economy towards progress.</li> <li>The findings indicate that companies with political influence tend to pay significantly lower effective taxes compared to companies without political influence.</li> <li>This study offers valuable insights for policy makers seeking to enhance transparency in transnational economies, making a significant contribution to the field of political economy theory.</li> </ul>
Rehman, et al. (2020)	To explore the consequence of indirect taxes on	1996–2018	Pools Mean Group	<ul style="list-style-type: none"> <li>This study discovered that several factors have a positive impact on long-term economic growth, including gross capital formation, political stability, labor force, inward FDI, human capital, and</li> </ul>

Authors	Objectives	Data	Methodology	Findings
	economic growth in the Asian Countries		(PMG) techniques	<p>taxes on goods and services. However, it also found that domestic credit to private investment has a negative and significant effect on economic growth. The labor force, taxes on goods and services, and political stability have a positive impact on economic growth in the short term. On the other hand, gross capital formation, human capital, inward FDI, and DCP have a limited effect on short-term economic growth. The taxes on goods and services have had a positive impact on economic growth in Bangladesh, Iran, Nepal, Turkey, Indonesia, Malaysia, Thailand, and Bhutan. However, they have had a negative effect on economic growth in Pakistan, Sri Lanka, the Philippines, and Japan.</p> <ul style="list-style-type: none"> <li>• This study found that indirect taxation has a positive impact on economic growth in Asia, which is both encouraging and significant. In addition, the impact of indirect taxes varied significantly from country to country due to their economic situations. The impact of political stability on economic growth is significant.</li> <li>• This study suggests that utilising indirect taxes can be advantageous for revenue collection, particularly in the context of political stability.</li> </ul>
Butt, et al. (2021)	The aim of this study is to provide insight into tax avoidance through planning and management, and its	Data of 2011 to 2015 for 10 manufacturing sectors	Fixed Effect Model	<ul style="list-style-type: none"> <li>• The study examined the impact of tax avoidance on firms, both as a whole and when divided into constrained and unconstrained categories. The findings revealed that firms' tax avoidance strategies are reflected in their investment decisions.</li> <li>• The study will assist policymakers in developing effective strategies for tax planning and investment decisions in both constrained and unconstrained firms. By addressing financial constraints and optimising investment decisions, policymakers can</li> </ul>

Authors	Objectives	Data	Methodology	Findings
Waseem (2023)	investment consequences in financially constrained and unconstrained firms. The study aims to find out the impacts of over-claimed refunds and fake invoices by zero rated firms on tax revenues	Data of firm level is used and taken from FBR	Difference-in-Difference (DID)	work towards maximising value. This will greatly enhance the investment in the country by offering ample growth opportunities and reducing the tax rates.  <ul style="list-style-type: none"> <li>• Fake invoices and over-claimed refunds result in a significant loss of potential tax revenues in Pakistan, amounting to 35 to 40 percent.</li> <li>• The current system of GST type VAT is ineffective in preventing the issuance of fraudulent invoices by zero-rated companies.</li> </ul>



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