

**CRITICAL APPRAISAL OF LEGAL-INSTITUTIONAL  
STRUCTURE OF REVENUE COURTS IN PAKISTAN:  
MINIMIZING SLUDGE IN AGRICULTURAL  
PROPERTY CASES**

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## **ABSTRACT**

This study was undertaken to analyse the revenue court system of Pakistan which is arguably a neglected segment of the country's justice system. As opposed to the civil courts, which deal with civil disputes involving (mostly urban) property; the revenue courts, although the term is a misnomer, deal with rural and agricultural property related cases.

Using Cass R. Sunstein's concept of "sludge", the research focussed on the economic impact of the debilitating legal and institutional structure of these courts at the individual as well as the collective levels. At the former level, the focus was on the economic costs of litigation on the individual litigant such as the direct expenses like court fees, indirect costs such as traveling, and finally, the psychological costs on him due to stress and strain of prolonged litigation. On the macro level, the collective costs of the sludge in revenue courts were calculated to ascertain how much of a drag it is on the national Gross Domestic Product (GDP). This entailed quantifying all those issues that makes it difficult for litigants, possessing agricultural property, to achieve their desired outcome of an early adjudication and secure property rights.

"Sludge" is basically any excessive friction that makes it harder for the people to do what they want to do. In Economic terms, Sludge was calculated by way of measuring avoidable costs that the litigants had to endure. The current study has built upon the pioneering study on sludge audits in Pakistan undertaken by Pakistan Institute of Development Economics (PIDE) by Haque et al. (2022) by focussing on sludge audit of another sector, i.e., the revenue courts.

The study found out that if a person gets involved in a litigation related to agricultural property, it may cost up to four fifths of their annual income in litigation-related costs at least in the year the case was instituted. The value of disputed land held up in litigation comes to nearly one fifth of the rural GDP. Much of this sludge is avoidable through smart governance such as digitization initiatives.

Deriving from best practices across Asia, the study concludes with making recommendations for sludge minimization in revenue case adjudication by proposing integrated solutions through enhanced digitization and simplified procedures, incentivization of judicial work for administrative officers and institution of mandatory training for officers working in the subordinate judiciary.

## **PREFACE**

This seminal study on sludge audit of revenue (i.e. agricultural) courts in Pakistan was made possible by a generous research grant by RASTA program of Pakistan Institute of Development Economics (PIDE). Applying for the research grant itself was indeed a thrilling experience. Competing with nearly 200 or so research proposals from across the country through a multi-stage shortlisting process was both gruelling and challenging. However, making it to the final list of Awardees was a great satisfaction and professional achievement for all of the team members.

We started the research with a lot of enthusiasm but found the research process, especially the field surveys, much more difficult than we could have imagined. Making the questionnaires easy enough to be understood by (mostly semi-literate) litigants, but comprehensive enough to be of relevance and utility to the research team, was itself a feat to be accomplished. The logistic and social issues in conducting surveys from futile research trips due to unexpected lawyer strikes, to reluctance of litigants in responding to personal questions such as monthly income, to the discipline issues of the enumerators hired to conduct surveys, were serious, though not insurmountable hurdles. However, we were able to go through the roller coaster by a mix of team spirit, resilience, and fortitude.

We would like to extend our profound gratitude to the Vice Chancellor PIDE University Dr. Nadeem Ul Haque, Project Director, RASTA Dr. Faheem Jehangir Khan, the two mentors of our team, Dr Zafar ul Hassan and Dr. Ahmed Waqar Qasim, along with all the RAC Members of the RASTA CGP Award (Round 4.0) for their support and guidance. We would be failing if we do not mention Dr Sajid Khan and Nazim Maqbool for always being available for us. We are also indebted to the RASTA programme for providing access to their published reports/books of the CGP and DDR awarded projects as a resource guide to support the research in this study.

We also gratefully acknowledge the support we got from the incumbent Senior Members Board of Revenue, Punjab and Khyber Pakhtunkhwa (Nabeel Javed and Ikramullah Khan) and their immediate predecessor SMBRs, Babar Hayat Tarar and Zakir Afridi, respectively; MBRs Mohammad Khan Ranjha and Tariq Qureshi, and the Director General, Punjab Land Records Authority, Saira Omar for taking time out for sharing their insights with us in response to our questionnaires. In addition, we want to register our appreciation for Imran Hamed Shaikh and Dr Samman Abbas, Deputy Commissioner and the Additional Deputy Commissioners of Faisalabad, respectively and Ms Zoha Shakir, ADCR of Toba Tek Singh who were particularly helpful in facilitating our survey teams in conducting their work .

We are happy to have contributed to an area where not much research had been done before. We hope and trust that our endeavour will go a long way in transforming the revenue court system in Pakistan.

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## LIST OF ABBREVIATIONS

AC	Assistant Collector/Assistant Commissioner
ADCR	Additional Deputy Commissioner Revenue
AMIS	Agriculture Marketing Information Service
ARC	<i>Arazi</i> (i.e. Land) Record Center
BoR	Board of Revenue
CCLA	Chief Commissioner of Land Administration [in India]
CPC	Civil Procedure Code [1908]
DC	District Collector/ Deputy Commissioner
DILRMP	Digital India Land Records Modernization Programme
GDP	Gross Domestic Product
KPK/KPk	Khyber Pakhtunkhwa
MBR	Member Board of Revenue
NIPP	National Institute of Public Policy
PAS	Pakistan Administrative Service
PI	Principal Investigator
PIDE	Pakistan Institute of Development Economics
PLRA	Punjab Land Records Authority [in Pakistan]
PMS	Provincial Management Service
PPC	Pakistan Penal Code
RASTA	Research for Social Transformation and Advancement
RCCMS	Revenue Court Case Monitoring System [in Karnataka, India]
RCMS	Revenue Case Management System [by BoR, Punjab, Pakistan]
RTC	Rights, Tenancy and Crops
RO	Revenue Officer
SMBR	Senior Member Board of Revenue
USAID	United States Agency for International Development
WPLRA	West Pakistan Land Revenue Act

## INTRODUCTION

### ***1.1 Background and context of the study***

Land is probably the most expensive and most important asset for the people, especially in the rural areas of Pakistan. This is depicted by the fact that not only 60%-70% of the civil litigation in the country pertains to landed property but also 40%-50% of criminal litigation is invariably due to land related matters (Siddique, 2020). The latter fact was further substantiated by our interviews with various police officers in the Central Police Office as well as in the field formations.<sup>1</sup> A former senior police officer in Sargodha stated that, in the rural areas, around 90 percent of the murder and violent crimes could be attributed to land and water disputes. These agricultural land and irrigation water disputes are the preserve of Revenue Courts in Pakistan. It is a sad fact that it ordinarily takes decades to get a ruling on a property case. A testament to this fact is that in 2018, the Supreme Court of Pakistan announced its verdict in a property dispute case that was instituted a century back circa 1920. (The News, 2018)

Revenue Courts, though the name may be a misnomer, are—in simple terms—specialized courts specifically dealing with disputes and issues pertaining to agricultural land matters, as opposed to civil courts which deal with disputes involving urban property, family matter or monetary issues. The Revenue Courts have been defined in section 5(2) of the Code of Civil Procedure (1908) as “[a] *Court having jurisdiction under any local law to entertain suits or other proceedings relating to the rent, revenue or profits of land used for agricultural purposes.*” These courts and their procedures are governed by the West Pakistan Land Revenue Act, 1967 that excludes from their jurisdiction on any dispute arising out of a land “which is occupied as the site of a town or village [because that] will not be deemed as agricultural land”.

In short, the Revenue Courts have exclusive jurisdiction on matters of mutation, partition, inheritance, delimitation, eviction, and cases pertaining to produce of agricultural land. These courts are presided upon by civil servants from administrative services, unlike the civil courts which are manned by members of judicial cadre. Starting from Tehsildar to Assistant Collector, the route in a revenue court goes up to the Commissioner and then to the Board of Revenue. Collectively, these officers are known as Revenue Officers (ROs) under Section 7 of the West Pakistan Land Revenue Act, 1967.<sup>2</sup>

Property related cases in Pakistan, both urban and rural, take decades to resolve. Lack of understanding of law and procedures, both by revenue and civil courts, the lawyers, and litigants alike, are often a reason behind inordinate delays in property related cases. Ineffectual processes are another contributing factor to what the contemporary literature refers to as *sludge*. Coined by Cass R. Sunstein in his book, *sludge* has been explained as all those factors that act as impediments to rightful gains and even constitutional rights. He says that sludge is pervasive because it is found

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<sup>1</sup> Calculating the number of violent crimes committed as a result of agricultural property is difficult and time taking. Although the data of FIRs has been digitized in Punjab, however, it is not segregated on the basis of *wajh e anaad* (i.e. cause of enmity). Rather the data can be fetched and segregated on the basis of geographical location (like Districts or Subdivisions) or on the sections of law applied, like Section 302 of Pakistan Penal Code for murder. As to why the murder was committed, one had to go through the whole text of FIR to find the *wajh e anaad* (cause of enmity). On the basis of samples, the team was able to establish that not less than half of all violent crimes in Punjab had been committed due to disputes related to agricultural property and water.

<sup>2</sup> It is precisely due to the above-named 1967 Act that governs these courts that they are called Land Revenue Courts, or simply, Revenue Courts. In other words, these Revenue Officers are deemed Revenue Courts, when they exercise their judicial functions under the Act. It might have been expedient to change their nomenclature to “Agricultural Courts” which they actually are.

everywhere- be it a private entity or a public institute or courts. The officers, lawyers, doctors, etc. all seemed to be imposing sludge in one manner or another. Hence, at some point people give up on their desired outcome due to the various hurdles they face (Sunstein, 2021).

*Sludge* also entails cost known as “sludge cost” that can be in the form of economic cost, i.e., the actual cost plus the opportunity cost (cost of the next best alternative forgone), the social cost (for example, loss of reputation) or even the psychological cost (due to mental distress caused by lack of final adjudication). In other words, *sludge cost* becomes a menace that needs to be confronted. He further states that this menace needs to be reduced and that can be done through a **sludge audit** i.e., by measuring “how much Sludge is out there” (Sunstein, 2021, p. 95) and then to have an environment that is conducive to getting things done (**sludge reduction**). A pioneering study on sludge audits in Pakistan was undertaken by Pakistan Institute of Development Economics (PIDE) by (Haque, 2022) that formed the foundation on which the present project has been built upon.

Applying the concept of sludge on Revenue Courts, the present study undertook a sludge audit to examine how the litigants of Revenue Courts become unable to achieve the desired outcomes, namely, secure property rights attainment and early adjudication.<sup>3</sup> The present study, commissioned by RASTA PIDE came up with calculations of the sludge costs on (a) individual incomes, and (b) on national GDP. The study also explored the value of disputed property, locked in litigation, as a fraction of national GDP of Pakistan. The results were alarming, to put it mildly!

The very fact that cases usually get dragged for decades encourages frivolous litigation. The erring party has every incentive to use these institutional and legal lacunas to its advantage, and thus, to the disadvantage of the aggrieved party. More often than not, both parties might not be able to use their land to productive use due to it being a subject of litigation. Not only will they face issues in the marketability of their land (tertiary sector) but would also not be able to produce agricultural output (primary sector). Such an effect on primary and tertiary sector might inhibit productivity thereby resulting in a loss of GDP and economic growth for the country.

It goes without saying that prolonged litigation also becomes a burden as much on state resources as on individual ones. The Revenue Officers are engaged in so many judicial duties that their administrative functions get affected. So poor service delivery becomes a common refrain against the government departments. Poor governance has its own toll on economic sustainability of a country.

Such negative correlation between judicial delays and economic growth has been established by various studies. Amirapu (2021) has explained this by stating that court delays lead to an inevitable trust deficit due to which businesses lose their confidence and hence are reluctant to invest. By taking the case study of India, he has established how delayed justice has led to growth denied due to specific industries not being able to have their contracts enforced. (Amirapu, 2021) Similarly, Kapopoulos (2021) have studies the nexus between the judicial complexities on growth in European context. They have shown that such inefficiencies in dispute resolution have inhibited economic growth in some member countries of the European Union as compared to others.

## ***1.2 Purpose and scope of the study***

In a developing country like Pakistan, productivity and efficiency are the major growth catalysts. Land Administration needs a coherent strategy to ensure that the rights of owners, tenants or transferees of agricultural land are not encroached upon. In spite of the pervasive inefficiencies in the Revenue Courts system, it was surprising that no previous study, at least to the knowledge of the

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<sup>3</sup> The two “desired outcomes” have come from the findings of an earlier study, commissioned by the National Institute of Public Policy (NIPP), Lahore, by a member of the present research team. (Ashfaq, 2021) That study had concluded that the litigants are unable to achieve either outcome due to the factors outlined in Section 4.4 of this report below.

present authors, has been done to reliably calculate the extent of the rights of litigants being violated, or to measure the state resources being wasted due to these inefficiencies, or to find out the negative impact of these judicial inefficiencies on the overall productivity of the economy.

By following the approach undertaken in PIDE Sludge Audits, Vol. 1 by (Haque, 2022), this pioneering study discerned how sludge in the Revenue Courts led to potential loss of agricultural output underlining potential estimated loss of GDP for the country. It also calculated monetary and opportunity costs (both in terms of time and money) that a litigant incurs during his case. The study also tried to put forward an integrated solution based on contextual appraisal through identifying areas of improvement in the steps involved in the litigation process.

Field survey teams were sent to revenue courts to collect data with the following fundamental research aims in view:

- 1) To catalogue and quantify sludge in Revenue Courts.
- 2) To identify any pecuniary and non-pecuniary sludge costs on litigants.
- 3) To identify at which point sludge can be reduced and what role digitization can play in sludge reduction.
- 4) To evaluate the impact of sludge in revenue courts by measuring the cost of sludge in terms of GDP, thereby, highlighting the potential for improved efficiency.
- 5) To recommend an integrated policy reform or to suggest changes in the existing law.

*Research Questions:* The study devised four research questions and focussed on them to arrive at purposeful conclusions: First, what is the extent of sludge in the revenue courts? Second, to what extent digitization has impacted sludge or mitigated other negative externalities such as speed money? Third, how does sludge in Revenue Courts hinders GDP growth in Pakistan and how can sludge identification lead to speedy adjudication and thereby improved GDP? And four, what are the policy reforms and suggestions that can be recommended while taking into account the socio-political and bureaucratic realities of Pakistan?

### **1.3 Relevance to public policy**

According to the Pakistan Economic Survey (Ministry of Finance, 2023), agriculture contributed to about 22.9% of the GDP but employed nearly 37.4% of the labour force. However, if the courts that are specialized to cater to disputes pertaining to agricultural land matters are inundated with sludge costs, then this potentially means that these lands are not able to contribute their full potential to the overall GDP of the country.

Hence, this study aims at bridging a policy gap existing in the current institutional and legal framework of revenue courts by assessing the impact of sludge within these courts on agricultural property rights attainment as well as its impact on service delivery of Revenue Officers. The study also calculated the cumulative effect of sludge costs in revenue courts on the GDP. Most importantly, the study made comparisons with four Asian nations whose GDP per capita is higher than that of Pakistan. The system of land revenue administration in those countries was analysed, best practices identified and policy lessons for Pakistan derived. This study, hence, provides a road map for policy makers to improve their service delivery mechanism within existing legal framework. It thus analyses where sludge can be effectively reduced, thereby reducing the economic cost of litigation for the litigants.

Last but not the least, the present paper also highlights that it is not all doom and gloom in Pakistan's land revenue administration. To the contrary, many outstanding civil servants have made meaningful contribution to the reform and improvement of rural land administration. The imperative need is to

have a political will to stand behind those laudable initiatives.

## **LITERATURE REVIEW**

There is a paucity of literature with respect to the reforms that can be undertaken to improve the performance of Revenue Courts. As compared to what has been written and published on civil and criminal courts, both by academics and the practitioners of law, the research on Revenue Courts system of Pakistan is conspicuous by its dearth, nay, near-absence. Hence, this paper has sought to fill this existing gap in legal literature.

For the sake of clarity, this section one literature review has been divided into two parts – research and studies done on Revenue Courts in Pakistan and international policy discourse on land administration and land revenue matters.

### ***2.1 Literature Review specifically in Pakistan's context***

A report by the Committee established by the Government of Pakistan on land revenue reforms, way back in the 1970s, titled 'Report on the Committee on Revitalization of Revenue Administration' lamented that revenue courts machinery in Pakistan is in shambles with revenue officers being overworked (Government of Pakistan, July 1978). It also considered taking revenue adjudication away from the revenue officers, however, despite laying down the pitfalls of revenue officers adjudicating, the committee recommended to maintain the status quo, not the least because the civil courts were equally over-worked and the civil judges had no training in land revenue administration.

A more recent and independent study by Ali and Nasir (2010) elaborated upon the complexities of Land Administration System as a whole and stated that the participants in the study said that their issues had been compounded due to uncooperative revenue staff. The revenue staff on the other hand complained of work overload. Both the clients and the revenue staff of the study agreed that clients lacked procedural knowledge with respect to appeals etc. However, the study focused on land administration system and the adoption of technology as the need of the year and did not focus on the dispute resolution forum i.e., the Revenue Courts.

A Report by USAID (2016) further added that the parallel court structure for land dispute adjudication has exacerbated the plight of the litigants. Khuhro (2021) claimed that even though Civil Courts have their set of inefficiencies, their efficacy in timely disposal of cases as compared to Revenue Courts is still better. He also stated that the concurrent jurisdiction of civil courts and revenue courts on land dispute matters is a source of problem for the litigants.

Faraz and Qasim (2021) explain that sludge raises transaction costs of individuals leading to lower productivity in the economy owing to resource wastage in the form of time and money spent on achieving outcomes. They use a difference-in-difference model to show that digitization and partial removal of unnecessary documents decreases time and opportunity costs in different sectors of the economy. However, as noted above, the pioneering study on the topic of sludge audit in Pakistan has been undertaken by PIDE wherein (Haque, 2022) provide an in-depth sludge audit of activities in different sectors like the real estate and the health sector and then calculate sludge cost as a percentage of GDP. Our present study, adds the sludge audit of rural courts system to the available knowledge on *sludge* in state structures of Pakistan.

### ***2.2 Literature Review on Land Revenue Adjudication in General***

Ubink & Quan (2008) by analysing the Land Management System of Ghana laid emphasis on effective monitoring system over those directly responsible for allocating use and rights over lands. He stated that new reform initiatives integrating traditional and modern aspects in land management will be

futile in the absence of effective monitoring mechanism. Global Land Tool Network (2013) has produced a manual to deal with land conflicts. It states that formal adjudication should always be the last resort and *special land courts can take the role of arbitration* [emphasis added]. The manual also states that the linkages and hierarchies between different land dispute resolution forums impact the outcome of the case. In case there is a formal and specialized land tribunal in a country, appeal to the High Court should always be the last resort. This is also applicable in the context of Pakistan where apart from writ jurisdiction, which is invoked by High Courts to take cognizance of matters decided in BoR, there is also a serious problem at the lower rungs of courts hierarchy, where both civil and revenue courts either exercise concurrent jurisdiction or refuse to exercise jurisdiction at all, referring the matter to a parallel court. This is something that the present report deals with in Section 4 below.

Herman et al (2017) in their analysis of dualism of authority between general courts and administrative courts in Indonesia have stated that such dualistic approach is an issue for the litigants for it leads to legal uncertainty and disrupts public justice. The dualistic approach, according to the study, is attributed to lack of legislative clarity. The study further goes on to state that an ideal model is needed to resolve land disputes. The models proposed by him are of alternative dispute resolution in the form of mediation and complete separation of general courts and administrative courts on land revenue matters. (Mequanent, 2016) has laid an emphasis on thinking about out of the box solutions grounded in contextual appraisal rather than 'one size fits all' solution to resolve land disputes in Ethiopia.

## **METHODOLOGY**

In this study, a three-tier approach was formulated that entailed (i) conducting a sludge audit of the revenue courts of Pakistan through surveys of the litigants; (ii) conducting specific interviews of officials regarding the functioning of the Revenue Courts and the impact of digitization on the revenue court system, and (iii) proposing fresh legal reforms or supporting existing ones to help simplify the procedures.

Due to financial and human resource constraints as well as time limitations, the study identified two provinces, Punjab and Khyber Pakhtunkhwa, for conducting field research. In each province, two districts were identified: Kasur and Toba Tek Singh in Punjab; and Mardan and Dera Ismail Khan in Khyber Pakhtunkhwa. The districts were selected based on their proximity or connectivity with the provincial metropolis of Lahore and Peshawar, respectively, as well as the quantum of revenue cases pending in their courts.

Prior to the full survey, a pilot survey for around two months was conducted in Lahore. Based on the lessons learnt from the pilot study, two districts each were identified in the two provinces. Then, using a survey administered via SurveyCTO in the districts of Punjab and manual (paper-based) surveys in Khyber Pakhtunkhwa, this study quantified sludge faced by litigants of Revenue Courts. That was measured in terms of time lost or wasted due to documentation, travel cost and opportunity costs for attending the hearings, and finally the monetary and psychological costs incurred due to litigation as a whole.

The study used a mixed method approach where both quantitative and qualitative data was collected, collated, and analysed. A survey was developed for the litigants asking them about the nature of their cases in revenue courts, the duration since the case was first instituted, the direct costs they had to pay from official stamp duties to under-the-table speed money (if any), as well as qualitative questions such as the stress caused at each step which was then used for our analysis.

Moreover, the survey also analysed the impact of digitization on the costs incurred by litigants and

any sludge reduction achieved. The results of this study are expected to be a source of input for policy makers in terms of enhancing agricultural property rights attainment and in improving the functioning of revenue courts by minimizing sludge, the cumulative impact of which will be lower economic costs borne by citizens of Pakistan in efforts to secure property titles.

### ***3.1 Data Sources & Sample Locations***

The data for the study were collected from multiple sources namely via surveys of the litigants of the Revenue courts and via interviews of the Revenue Officers (RO's) and other relevant officials. The sample size of the study consisted of the revenue courts of selected districts from both Punjab and the KPK. It should be noted that there are three tiers of revenue courts in each tehsil (the courts of Naib Tehsildar, the court of Tehsildar, and that of the Assistant Commissioner). The three officers are also known as the Assistant Collector Grade III, Grade II and Grade I respectively. Then there is one district level revenue court of the Deputy Commissioner, who under the Land Revenue Act 1967 is the District Collector. The appellate authority against the decision of the Collector is the Commissioner who sits at the Divisional level. Usually, the DCs delegate their judicial work to the Additional Deputy Commissioner Revenue (ADCR) while the Additional Commissioners get tasked to entertain appeals on behalf of the Commissioner who is busy in the administrative work. The overall supervision of the revenue courts and the powers of revision rest with the Board of Revenue (BoR) of each province, headed by the Senior Member Board of Revenue (SMBR).

### ***3.2 Sludge Identification Approach***

Following the sludge identification approach adopted by Dr Nadeem ul Haque and his team, (Haque, 2022) the present study viewed sludge cost in terms of time wasted (hours and days) in unnecessary tasks during the litigation process and the costs involved in executing it. Thus, the sludge cost was measured in terms of monetary costs, opportunity costs and psychological costs incurred by the litigants.

Opportunity costs was calculated in terms of revenue foregone because the process was delayed. Thus, any income that could have been received from the disputed land in question had the issue been resolved quicker was measured. This could have been investment income foregone, rental income foregone, agricultural produce income foregone or proceeds from sale of land foregone. For the purposes of this study, we calculated agricultural produce income foregone since our respondents identified growing crops for sale as one of the main uses for the disputed land. A person's time-cost was also measured in terms of wages foregone for the time that was wasted in attempts to solve the administrative issues with regards to the legal dispute, for example, personal visits to revenue officers. Any monetary costs that were spent on these avoidable steps were also included in our calculations.

Litigants were also asked to identify any stress or stigma that they would have endured during the litigation process. This was from a scale of 1 to 5 ranging from low to severe and allowed us to identify the psychological costs involved. Stress across all steps involved in the litigation process were identified and then multiplied by the total process time of each step following the model developed by the Pakistan Institute of Development Economics in their above-referred earlier study. This was used to make a percent representation of the stress distribution.

### ***3.3 Evaluating the impact of Land Record Digitization***

A special focus has been placed on the Arazi Record Centers (ARC)—the innovation of the Government of Punjab, through the Punjab Land Records Authority (PLRA)—established at Tehsil level in all 151 subdivisions of Punjab. Based on responses by surveyed litigants, we evaluated whether the ARCs, as the digitized land record centers, have resulted in reduced time spent and reduced monetary cost for the litigant during the document gathering process for their cases. We are

distinguishing between the time and money spent during document collection done by the *Patwari*, who does it manually, with those by the Arazi Record Center, where the same is supposed to be done digitally. Our survey also includes a section asking litigants about the effects of digitization. This is done by comparing time taken to get documents before the development of the ARC's.

It is pertinent to mention that questions on corruption were added as well, to see if the litigants had to incur any additional costs like speed money for their litigation process and, if so, whether digitization was able to help in this regard.

### ***3.4 Cataloguing Steps in a Revenue Court Case***

The steps a litigant may incur during his case have been catalogued under seven main headings and they are mentioned below. These are not in any particular order as a litigant could go through some of these steps at different points in their case and sometimes multiple times.

**Step 1:** Gathering Information Phase

**Step 2:** Hiring the Lawyer

**Step 3:** Document Gathering

**Step 4:** Document Correction (if applicable)

**Step 5:** Hearings (includes questions on both scheduled hearings and delayed hearings as well as case filing duration)

**Step 6:** Meetings with Revenue Officers and other personnel related to the Revenue Court System namely the Patwari, Girdawar Qanungo, Naib Tehsildar, Tehsildar, Deputy Commissioner (DC), Assistant Commissioner (AC), Additional Deputy Commissioner Revenue (ADCR), Commissioner and finally the Board of Revenue (BoR of each province).

**Step 7:** Clerk costs or money spent on revenue personnel (for gratification)

### ***3.5 Calculating Sludge as a Percentage of GDP***

Once we had all the costs, we also calculated sludge cost as a percentage of GDP as in Haque et al. (2022). This included identifying (i) average cost of sludge in litigation surrounding agricultural land disputes (ii) average secured property rights attained via the Revenue Courts (iii) number of cases in Revenue Courts in the identified districts. We also looked at sludge as a percentage of the Agricultural GDP and looked at value of disputed property as a percentage of real estate activities' GDP.

Calculation sludge in revenue courts of a province with agricultural GDP, our nearest estimation of the "rural GDP" of a province or district, was made because the present study was only concerned with the rural/ agricultural property and the disputes ending up in the Revenue (meaning "agricultural") courts. Taking it as a fraction of total GDP (urban plus rural) of a province would not have made any academic sense and could have led to distorted or skewed results.

### ***3.6 Interviews of the Revenue Officers and PLRA high-ups***

The PI/ co-PIs conducted interviews of all the officials in the revenue hierarchy to holistically gauge the effects of digitization and to highlight areas of improvement. These concerned officials include Patwaris, Girdawar, Naib Tehsildar, Tehsildar, and even some Assistant Commissioners at the field level. We also had the opportunity to interview some present and past Senior Members Board of



Revenue (SMBR's) in both Punjab and KPk, at least two Members Board of Revenue, and at least one Registrar BoR and one Secretary BoR during the course of this research.<sup>4</sup>

A special focus was also given to digitization during the interviews. Revenue courts of Pakistan have undergone digitization at different points in time and while an impact evaluation is not possible owing to lack of pre-digitization data on sludge in the revenue courts, we have still been able to look at the current digitization effects on sludge via our audit and highlight areas of improvement. For this purpose, we asked pointed questions to various Revenue Officers in the revenue hierarchy to see both the positive and negative effects of digitization on disposal of the case and thereby, suggest areas of improvement. These interviews were also essential to analyse if and how a dispute resolution mechanism along the lines of Pakistan Information Commission (that has majorly eliminated unnecessary processes through online portal and digitization) can be introduced.

The research team led by the PI spent a whole day in the Head Office of Punjab Land Records Authority (PLRA) where the Director General, and her team of officers spent time with us to give us presentations, share with us data and statistics, and give us a round of facilities available for citizens. In short, we have been able, by and large, to catalogue steps involved in the litigation process and will highlight where steps can be eliminated, digitized, reduced, or improved, to speed up the adjudication process.

## **SYSTEM OF LAND REVENUE ADMINISTRATION AND ADJUDICATION IN PAKISTAN**

The system of governance and administration in South Asia dating back at least to the first half of the nineteenth century is based on the division between urban and rural areas. The local government, the judicial streams, the policing mechanism, the development paradigm and the taxation system, to name a few, have this clear urban-rural distinction. The idea is that rural society is so different from urban settlements that one-size-fit-both policies may not work. For instance, urban development paradigm incorporates traffic management, white collar crime, high rise architecture, city housing, and so on as its essential pillars. They do not have any linkage with the features of rural development which would concern itself with the needs of agro-economy such as seeds and fertilizers, poultry farming, capacity building for rural traits, agro-based cottage industry such as pottery, community management of villages through village councils etc. Hence, local government system in urban areas like the office of Mayors, the municipal corporations and the town councils have little in common with the rural-based District Councils in Pakistan. Little wonder that the judicial streams for urban and rural civil disputes are distinct and separate.

The disputes of urban properties including houses, shops, flats and plots are in nature of civil disputes, cognizable by the hierarchy of civil judges, senior civil judges, Additional & District Judges, as per the jurisdiction assigned by the law to each of those courts. The applicable law is the Code of Civil Procedure 1908. All these civil courts are under the administrative and supervisory control of the High Court in each province.

On the other hand, the agriculture or agricultural land related disputes, which are basically disputes of the rural areas of the country, are cognizable by the courts of the Tehsildar, the Assistant Commissioner, and the Deputy Commissioner with the appellate authority for the preceding resting with the divisional Commissioners. These courts are called "land revenue courts" or simply "revenue

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<sup>4</sup> These interviews were important for the research team in understanding the social dynamics of the litigations at the land revenue courts. The interviewee ROs narrated several incidents in which the parties concerned declines efforts at reconciliation because contesting the case was a considered a matter of family honor. Thus, many a times, the families end up spending more money on litigation over the life cycle of the case, which may be lengthier than a human life span, than the value of the landed property under dispute.

courts”; competence of each level in this hierarchy is defined by the applicable law i.e. West Pakistan Land Revenue Court 1967. The revenue courts across each province are under the overall administrative and supervisory control of the Board of Revenue (BoR) of that province.

In this respect, the Chief Justice (CJ) of a High Court and the Senior Member Board of Revenue (SMBR) of each province hold co-equal status with respect to their judicial role. However, certain powers like the Writ Jurisdiction under Article 199 of the constitution are available to the High Courts, but not to the Boards of Revenue. This has complicated the legal landscape of Pakistan, much to the detriment of the ordinary litigants, even their next generation, who pay the price for systemic gridlocks impeding the dispensation of justice. Inefficiency in the twin court systems is a drag on the national economy, so Pakistan ends up being poorer than it would have been, had it had security of land titles. In other words, a clear delineation of judicial functions between civil and revenue courts, and an expeditious disposal mechanism might well have placed Pakistan amongst the upper middle-income countries.<sup>5</sup>

It is not to say that Pakistan’s weaker economic indicators vis-à-vis these four countries is only due to lack of security of titles in the former case. However, there is enough literature available around to show that secure property rights and efficient judicial systems are significant contributing factors to higher GDP. Before moving in following sub section 4.3 on the causes of *sludge* in the revenue courts later in this Section, we need to explain the difference between the civil courts and revenue courts in 4.1. Since the latter are run by administrative civil servants, we need to clarify when does a revenue officer act as a revenue court in 4.2.

#### **4.1 Difference between civil and revenue court systems**

The basic difference between civil and revenue courts is that the former are “Courts of evidence” while the latter are “Courts of documents”. Since a land revenue officer is a custodian of the state land as well as that of land records under private ownership, the framer of the law had quick and cheap disposal of agricultural land matters in mind, while designating revenue officers as *ex officio* revenue courts. Let’s assume there is a dispute in the title of land, say, the name of one of the siblings was left out, whether deliberately or inadvertently, from the list of heirs of a deceased parent. All that the Revenue Officer has to do is to call for the *shajra e nasb* (i.e. family tree)—which is one of the statutory documents that the revenue official called *Patwari* is custodian of in respect of his *Mauza* (revenue circle)—and order the record to be corrected. Insofar as the correction of name was a disputed fact, the order of the Revenue Officer is a judicial, not an administrative order. This is what is meant by “court of documents”. And such services were expected to cost the applicant or litigant nothing but a nominal court fee.

Now let’s presume that the document (*shajra e nasb* in our above example) itself becomes disputed. Like it transpires that the deceased had had a secret marriage in town that was never declared or disclosed in his village in the lifetime. Obviously, the offspring from that wedlock are not likely to have been registered in *shajra e nasb* so the question of correction on the basis of record does not arise. The newly discovered spouse or children of the deceased come up with claims to be registered in *shajra e nasb* as fresh heirs, and that is challenged by the known heirs who dispute the very fact that they had any existing siblings outside their village. In this case, the whole issue would become a matter for the civil court—which is a “court of evidence”—to decide. Both sides would submit their evidence before in the civil court for adjudication. It is only when the list of heirs is settled by the civil court that the revenue court would take up the matters of inheritance or partition, as the case may be.

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<sup>5</sup> Comparison with land ownership system in four Asian nations in section 5 of this Report illustrates the point.

Here one has to underline a caveat: there is no bar whatsoever in a revenue court ordering production of evidence, or, for that matter, a civil court asking to see a document. However, the loop hole is the section 142 of the Land Revenue Act 1967 which permits the Revenue Court to refer the matter of a title to the civil court and stay its own judicial proceedings, pending such determination by the civil court. Although, the law does not force the revenue court to do so, merely gives it an option of doing; the overworked revenue courts invoke this provision to refer the matter to civil courts which may take another few years to decide the question. In some cases, a civil court independently entertains applications for determination of titles due to lack of awareness of law, which they cannot do so on their own, without a reference from the revenue court. Thus, the inter-referral ping pong continues to the disadvantage of the citizens.<sup>6</sup>

#### **4.2 Difference between Revenue Officers and Revenue Courts**

As noted, the revenue courts are manned by the district administration whom the law has entrusted judicial and quasi-judicial powers in specific circumstances. Otherwise, an order made by the revenue officer on the basis of undisputed clear-cut facts is an administrative order. However, when more than one parties to a matter are at variance in their viewpoint, the determination of facts becomes a judicial function.

An obvious example would be “partition” that is one of the matters that the revenue officers/revenue courts deal the most. Once a person dies, it is understood that his/ her heirs get property according to the shares apportioned in the Quran and *Shariah* law, which in turn is enshrined in the country’s Family Law. But the dispute is likely to arise when each of the sibling would like his parcel in the inherited land closer to metalled road (due to higher price) or closer to water course (due to higher productivity). The principle of justice would dictate that each heir gets a *Vanda* (parcel of land) which has an equal amount of high-value and low-value parts of the inherited estate.

Ordinarily, it should not take the *Patwari* more than a week to determine, according to a senior member of the Board of Revenue.<sup>7</sup> However, it takes more than two years on average at the level of *Patwari*. Then it takes another year for the Revenue Officer not below the rank of Assistant Collector to approve the partition by making it part of his award. If the *partition* is disputed by one or more amongst the heirs, then it becomes judicial proceeding that may take decades for a final settlement. That duration usually outlasts the lives of the heirs/ original claimants, continuing on to the next generation.

Had the partition been settled amicably amongst family members, called “*khangi taqseem*”, the order based thereupon would have been a mere administrative order made by the civil servant in his capacity as a Revenue Officer. However, the moment, partition becomes contested, it becomes a judicial matter for him. In fact, most of the issues pertaining to *Partition* and *Ejectment*, and over half of *Mutation*, become judicial matters, wherein the Revenue Officer has to exercise his/her judicial functions, as revenue court, to determine the Award. As if the preceding was not complicated enough, each type of dispute has a different forum. For example, anyone aggrieved by a determination made by a *Patwari*, can agitate in the court of Tehsildar. However, the initial forum of agitating against the assessment made by *Lambardar* (village headman) is the court of the Collector i.e. Deputy Commissioner of the district concerned.

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<sup>6</sup> Another pertinent example is that the revenue courts likewise avoid settling the cases of *Istaqrar e Haq* (declaration of rights) on the transfer of land through verbal agreements that are the norm in rural areas. Though entitled to all powers of a civil court, the revenue officers leave the evaluation of evidence in such cases to the civil courts to avoid having to oversee time consuming cross examinations of witnesses in their courts.

<sup>7</sup> Interview with Mohammad Khan Ranjha, Member, Board of Revenue (MBR-Colonies), Government of Punjab, dated 26<sup>th</sup> July 2023.

While better part of the training curriculum of the PAS and PMS officers, who act as Revenue Officers in the field, is tilted towards the study of law, more than nine tenth of their workload as district executive officers pertains to routine administrative matters. Their professional interface with the law deals mostly with their law-enforcement duties rather than adjudication functions. Thus, their professional experience in legal arena is overshadowed by that of administrative domain.

Another side effect of the overburdened executive is to delegate the revenue functions to junior level revenue officials such as *Patwari* (BS-5), *Girdawar* (BS-9), *Qanungo* (BS-11), *Naib Tehsildar* (BS-14) and *Tehsildar* (BS-16). Most of the junior level revenue officials have little formal education, usually Matriculation (Grade 10) or equivalent, and no formal training at the time of joining service whatsoever. The study conducted by NIPP on Revenue Courts also concluded that these junior most revenue officials often find themselves in a conundrum when they are presented with difficult questions of law and facts. (Ashfaq, 2021). This inability to comprehend the legal nuances and procedures is often misused by the parties' lawyers to their advantage.

Although the controlling officers, ie the Deputy Commissioners and Assistant Commissioners come from the top most merit in annual civil services competitive examinations called the CSS, and are adequately trained in revenue laws at the Civil Services Academy, their primary job of administration keeps them so preoccupied that they seldom find time to properly supervise subordinate revenue courts of Tehsildars and below, who are even unable to interpret the stay orders of the civil courts.<sup>8</sup>

#### **4.3 Reasons for delay in case disposal at the revenue courts**

Since most of the sludge costs are accrued owing to these delays, we need to explore the causes of prolonged litigation. Based on expert interviews, field visits, litigant surveys, the study concluded that there are multiple reasons for that

First and foremost is that revenue courts are not full-time courts. The revenue officers are basically administrative officers who wear a twin hat of acting as a judicial officer in certain situations. In fact, the Commissioners, Deputy Commissioners and the Assistant Commissioners are so over burdened with administrative duties from price control, Ramadan bazars, Laptop distribution, law enforcement, traffic management, development projects, postings & transfers, sports galas and so many other things, that their functions as Revenue Courts are relegated to a lower priority. Moreover, there no weightage for revenue court case disposal in the annual performance evaluation reports (PERs) of the revenue officers. It means there is little or no career incentive in quick disposal of the cases.

Most of the times, the litigants have to wait whole day till the evening waiting for DC or the AC to return from his/her field duties and hurriedly, if at all, hear their cases. This results in the high opportunity cost of meeting the revenue officers, time cost of waiting for them and the stress cost of the repeated adjournment of hearings calculated elsewhere in the present report, all of which contribute to Sludge.

The second challenge is the abysmal state of affairs in the legal education system of Pakistan. Unlike the CSS officers, there is no comparable or equivalent legal training paradigm for the lower rungs of civil judiciary at each level of career growth.<sup>9</sup> Lack of regular classes in many law colleges, lax

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<sup>8</sup> For example, a stay order is usually on one party to stop them from acting in an adverse manner towards another and, not on the proceedings of the Revenue Officers. However, the Revenue Officers by incorrectly interpreting the stay order, become reluctant to proceed further.

<sup>9</sup> Judicial trainings at the induction level have lately been introduced in most provinces but they last from a few weeks to a few months in various provinces, compared to almost two-year long trainings for PAS officers across the spectrum. But then, very few members of the superior judiciary were ever inducted as civil judges.

attendance requirements and issues with quality of examination process, the quality of law practitioners, ie lawyers, and the civil judiciary leaves a lot to be desired. While there is absolute bar on a Civil Judge to take cognizance of matters exclusively within the domain of the revenue courts, under section 172 of the Land Revenue Act 1967, the civil courts continue to interfere in the matters of revenue courts by admitting complaints on questions which, by law, were to be settled exclusively by the revenue courts, thereby delaying the final disposal of cases by years.

In fact, High Courts often entertain appeals against Orders of the respective Board of Revenues under the Writ Jurisdiction although, qua Courts, the High Courts and BoRs have co-equal status. Appeal against a final order by either forum can only be filed before the Supreme Court through CPLAs, and not to each other. Although many a times, the High Courts after taking cognizance of a BoR-decided case remand it back to the BoR concerned for adjudication, but mere opening up of two parallel forums causes delays.

The third problem is over-accountability of civil officers and under-accountability of lower judiciary. Although the Civil Servants Act 1973 gives indemnity to all public officers for acts done in good faith in exercise of their duties, the threat of NAB, FIA and other agencies, to harass officers for their past judgments in land revenue matters acts as a disincentive to make any decision at all. It may be underlined that the judiciary is immune from NAB cognizance under the NAB Ordinance. On the other hand, there is no external check on the civil judiciary, either from executive or from the legislative communities, to overstep their powers and interfere in the lawful jurisdiction of the other channel of courts, such as revenue courts, so unscrupulous lawyers end up forcing the civil courts to act contrary to the law with impunity. The sufferer from the violation of the law is none other than the ordinary citizen of Pakistan.

The fourth delaying cause is that many of the civil cases, and many more revenue cases, end up becoming criminal cases due to introduction of criminal element in the dispute like, threats of violence, wilful damage to each other's property. forgery of deeds or documents, and most seriously, physical brawls causing injuries or even murders. Such cases need evaluation of evidence under Qanoon e Shahadat Order 1984. These matters perforce get referred to regular judiciary such as to judicial magistrates. While the Revenue Courts are slow in passing judgments, the regular judiciary is slower than them. Hence, the litigants end up paying the price for justice delayed.

The fifth and final issue causing delay in adjudication is resource constraints in the BoRs and their subordinate revenue court formations. Gone are the days when land revenue used to be the major source of revenue for the state. From a high of 85% of all state revenues in 1908, the figure was slightly below one percent of the state revenues in 2022. It means that the primary focus of the Government of Pakistan is towards the Federal Board of Revenue (FBR) which collects income and wealth taxes, excise duties and custom levies that form the bulk of federal government revenues. On their part, the provincial governments look towards the provincial revenue authorities such as the Punjab Revenue Authority (PRA) and the Directorate General of Excise and Taxation (E&T) that collects the Service taxes, professional taxes and all other provincial taxes, for lion's share of provincial income.

This leaves the Boards of Revenue (BoR) of each province, collecting the meagre agricultural and irrigation water related levies, with the least government focus and attention. Unlike the FBR, the PRA and the E&T, the BoRs are not merely (agricultural) taxation bodies but are also the custodians of state lands, state interests, protectors of property rights and stand at the apex of a (revenue) court system in the province. And unlike the high courts, the BoRs have a lot of executive functions too. In spite of these multifarious functions, the BoRs do not get sufficient budget allocation from the

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The higher judiciary comes mostly from selection amongst the lawyers. At the higher level judicial induction the concept of formal training in academies is completely alien.

governments. Their officers get almost a third of remunerations than their counterparts in regular judiciary or half that of their peers in other taxation bodies. Thus, BoRs remain financially handicapped in improving their capacity, attracting capable human resource or reforming their processes.

#### **4.4 Causes of Sludge in Revenue Courts**

Although the delay in adjudication is a cause in itself for the sludge, the NIPP study sheds more light on other related causes. These can also be seen as examples of sludge in Revenue Courts according to Sunstein's definition as they hinder the litigants from achieving the preferred outcomes. (Ashfaq, 2021) A brief overview of those factors is also in order:

*(a) Excessive paperwork and extensive procedures in revenue case matters:* For a simple partition case in Revenue Courts there are numerous documents that need to be obtained by the parties. These documents include *Fard-Patwar, Fard Sarkar, Khasra Gardwari, Naqsh e Alif, Aks Shajra, Jamabandi, Shajra Nasb*, etc. Some of these documents have also been identified in the PIDE Sludge Series on Agriculture Credit as major sources of sludge (Haque, 2022). The survey results of the present study, discussed in section 6 of this report, also validate that finding that excessive documentation has significant sludge costs for the litigants.

The utility of these documents in resolving a disputed land case cannot be undermined. However, the above-mentioned PIDE study on Agriculture credit as well as the NIPP Study revealed that obtaining such documents is a major challenge for the litigants, as most of the time *Patwaris*—as the junior level revenue officials are known—do not give the requisite documents unless they are given speed money.

*(b) Long route of appeal:* The study also found that there are multiple appeal and review forums in Revenue Courts. Depending on the nature of dispute and the court of first instance, the appeal route may go through the Assistant Collector, the Collector or the Commissioner. The Board of Revenue can be approached for Revision against the decisions in appellate jurisdiction by the Commissioners, which is, by law, the ultimate forum on revenue matters against which no appeal lies.

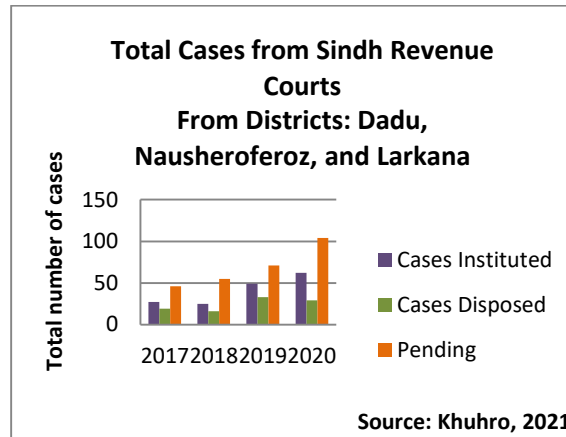
Unscrupulous lawyers contest the final decisions of the Board of Revenue in the High Court in the form of writ jurisdiction. The High Courts either remand back the case to the Board of Revenue for deciding afresh, or if they decide it themselves, the aggrieved party has an option to go to the Supreme Court through the Constitutional Petition for Leave to Appeal (CPLA). In either case, the final adjudication may be delayed by years or even decades.

*(c) Parallel Court Structure:* As discussed above, even though the law clearly delineates the powers of Revenue Officers and Revenue Courts to oust civil courts jurisdiction in revenue court matters but there are loopholes that compromise the effectiveness of the exclusion provisions. One such example is section 141(2) of West Pakistan Land Revenue Act, 1967 that gives the power to civil courts to adjudicate upon the question of title. The lawyers exploit the loophole by converting a simple case of mutation or eviction by challenging the very title of the property. This makes the case, to the extent of question of title, a civil matter. This has led to dualism and parallel court structure.

To further compound the problem, the national level problems of tussles between the executive, the judiciary and the legislature are more pronounced at the unit level such as Districts and Tehsils. Due to this friction between the district level judiciary (civil judges and district judges) and the executive (Deputy Commissioners and the Commissioners), the former may pronounce such legal interpretations to revenue laws that the powers of Revenue Officers are undermined. One such example is the recent judgement by the Peshawar High Court, which questioned the rationale of the Revenue Courts as an infringement to Article 175 of the Constitution (Ali Azim Afridi vs Federation of Pakistan, 2019).

Hence, the study concluded that the above-mentioned issues in the Revenue Courts might be the contributory factors to protracted litigation and insecure property rights (Ashfaq, 2021). The graph below shows sample cases from three districts of Sindh, for four years. The cases instituted in revenue courts have increased about 129 % while the number of pending cases has increased to 126%. As compared to pending and instituted cases, the increase in disposed cases was only 52% pointing towards delayed litigation:

Figure 1 Total Cases from Revenue Courts in Sindh



## COMPARATIVE ANALYSIS OF LAND MANAGEMENT SYSTEM IN ASIA

While analysing the rural and agricultural land management system of Pakistan, and the recent innovations introduced in it, the authors found it worthwhile to compare it with other regional systems. As the land management systems in the developed Western world are totally different from ours, comparison with those regions was not deemed to be purposeful in the context of Pakistan. Hence, we took all four international comparisons from within Asia, two from developing economies and two from the developed ones. From the developing nations, Indian and Bangladeshi revenue court system parallels that of Pakistan as the former inherited its legal foundations from British India while the latter system has its roots in Pakistani legal ecosystem. In fact, when the British era Land Revenue Act of 1887 was replaced by Pakistan’s own Act of 1967, Bangladesh used to be our province of East Pakistan. Amongst the two developed nations, we found the systems of Singapore and South Korea as of particular relevance to this study.

### 5.1 India: Revenue Courts and effects of digitization

The Report by the Committee of State Agrarian Relations titled ‘*The Unfinished Task in Land Reforms*,’ observed that owing to an inefficient land management system, land revenue courts in India are flooded with litigation; “Presently the Revenue Courts are choked. Thousands of cases pertaining to land issues are pending in revenue courts...In Hyderabad 8,000-10,000 cases are pending in CCLA and the revenue courts. With passing time, the number of cases is only increasing” (Government of India, 2009, pp. 176-177).

The primary reason for this litigation has been linked to a lack of time allocated by revenue officers (ROs) to adjudicating on revenue cases owing to their excessive engagement on other administrative tasks, followed by a lack of proper training of ROs on dispute resolution (Government of India, 2009). The scenario is so similar to that of Pakistan that if the word *India* is replaced with *Pakistan*, it would very well appear to be a comment on Pakistani revenue courts system. In order to reduce the burden on revenue courts, some states of India including Kerala, Andhra Pradesh, Tamil Nadu, Karnataka, Gujarat and Maharashtra have adopted the model of land tribunals for disposing of land ceiling cases

in contrast to remaining Indian states where normal legal route is followed (Government of India, 2009).

Singh, Keswani, & Chaturvedi (2019) have also highlighted the lack of dispute resolution by revenue courts and showcased that by adopting e-governance modules some states of India have become relatively more efficient in disposal of revenue cases. One of the major hurdles faced by litigants in revenue courts of India is a lack of database of revenue court cases; “Unlike the National Judicial Data Grid that gives real and exact details about the number of inclined and pending cases from the level of District Courts to Supreme Court, there is no such base for revenue cases” (Singh, Keswani, & Chaturvedi, 2019, p. 876).

This makes it difficult for the litigant to follow his or her case and it becomes a waiting game for them. Second, owing to high number of cases and lack of resolution there are delays in obtaining a hearing date which bears a high economic cost for farmers if their source of income is derived from the agricultural land under dispute. In order to resolve these issues, the operations of revenue courts in Indian states of Uttar Pradesh, Himachal Pradesh and Karnataka have introduced online court management systems (Singh, Keswani, & Chaturvedi, 2019). Their e-governance initiatives include RCMS (Revenue Case Management System) in Madhya Pradesh and RCCMS of Karnataka, ‘Digital Land’ model in Uttar Pradesh (UP), Digitization Revenue court system in Haryana and Punjab, VAAD of UP, , Digital India Land Records Modernization Programme (DILRMP) in Himachal Pradesh and Maharashtra (Singh, Keswani, & Chaturvedi, 2019). A comparison with the Government of Punjab in Pakistan that, through its BoR, has taken the lead in introducing Revenue Court Case Management System is in order here which has eased the tracking of cases in real time. Its comparison with a similar system in Karnataka, India, is in order:

*Karnataka-Bhoomi Project of Digitization of Land Records:* The Bhoomi project launched in 2001 in the Indian state of Karnataka is hailed as a success story in computerizing land records. It computerized around 20 million manual land records of all 177 *talukas* (Subdivisions) of Karnataka to ensure more transparency and less reliance on ROs, specifically *patwaris*, in obtaining a computerized record of rights tenancy and crops (RTC) by farmers (CommonFloor.com, 2012). The RTC obtained under Bhoomi allows farmers to obtain bank loans as well; “Electronic integration of *Bhoomi* with Banks was started in 2012...[that are used] to raise request for creating or removing charge and also calculating liability on farmers availing farm credit” (PricewaterhouseCoopers, 2014). Moreover, the facility of e-kiosks has been enabled in each main taluka wherein the data of each villager is kept in the form of ownership of land holding etc. These e-kiosks allow access to RTC and mutations as well. (Singh, Mishra, & Ganguly, 2016)

In a similar vein, the Punjab province of Pakistan adopted the e-governance model land record management through the creation of 151 Arazi Record Centres (ARC’s), one at the level of each *Tehsil* (Subdivision). Although e-kiosks have not been established by the Punjab Land Record Authority, however, a simpler solution of making the land records downloadable on your smartphone through a simple and freely accessible Mobile App has made it easy for the citizens to get their documents like ownership deed (*Fard*) or Mutation (*Intiqal*) through a click.

## **5.2 Bangladesh: Introducing Online hearings in Land Revenue Courts**

Following the spirit of the Digital Bangladesh election manifesto of 2008, Bangladesh has begun an online hearing system from 2021 to promote greater transparency, reduce hurdles in the shape of unnecessary hearing delays, and to build a people-oriented land revenue management system (Tech Observer Desk, 2021).

All 61 districts of Bangladesh have been enabled with the online hearing system in the quasi-judicial courts conducted by the revenue officers, namely, Assistant Commissioner (Land), Additional Deputy



Commissioner (Revenue) and Additional Divisional Commissioner (Revenue). The Settlement (i.e. land survey) related court is conducted by Assistant Settlement Officer and Settlement Officer. The appellate court for all the above is administered by Land Appeal Board—almost similar to what is named as Board of Revenue in each province of Pakistan. The online hearing module entertains revenue court cases of mutation, settlement, record correction and objections as well as for appeals. However, the data was not available to ascertain the proportion of cases being heard through e-hearing system. (Tech Observer Desk, 2021).

Like Bangladesh, the Board of Revenue Punjab in Pakistan has also showcased the introduction of tele-hearing of cases from far away districts, however, the data made available to this research time showed less than 60 cases out of over 113,000 cases that had used digital technology for distant hearing. This figure is far from impressive.

### **5.3 Singapore: Property Disputes in Courts of Law**

Singapore being a former British colony follows a common law jurisdiction. Being a high-income state with Asian traditions, Singapore is unique in its judicial developments pertaining to property rights. Yip (2021) identifies that owing to different family dynamics, the decisions of Singaporean and English courts vary on beneficial ownership cases of family property;

“The English landmark cases are based on the *unmarried* cohabitants paradigm...the legal rules that have emerged from these cases are aimed at, whether successfully or not, ensuring a fair division of the family home upon the breakdown of these relationships. In contrast, the Singapore seminal judgments go on determining beneficial ownership rights where [usually] the cohabitants were legally *married* or are underlain by disputes due to vertical family relationships like contests between children over their parents’ property” (Yip, 2021, p. 475)

Unlike Pakistan, the concept of revenue courts is alien to Singapore owing to less than 1% of total land being in agricultural use and three quarters of the island nation’s land being owned by the Government (Diehl, et al., 2020). The state-owned land is leased out by the Urban Redevelopment Authority (URA) under the Government Land Sales Programme on a term of 20 years for commercial or residential development; acquiring it on an individual level is highly unlikely (Vaerhn, Lim, Yew, & Allen & Gledhill LLP, 2021). Thus, owing to greater urbanization property disputes in Singapore are predominantly in urban areas unlike in South Asia.

### **5.4 South Korea: Korean Land Information System**

The Korean Land Information System, or KLIS, was established keeping in mind a three-pronged objective of cadastral administration, land use and property rights. Its success in South Korea can be seen by the rise in efficiency of the civil administration apparatus. Owing to KLIS the common man was able to access land related documents at the relevant offices or they could use e-kiosks to do the same. It reduced the burden on civil services and led to a more informed usage of land as citizens now had access to up to the date information on the state of the land, its zoning, restrictions and publicly announced land prices (Korean Finance Ministry, 2014)

The objective of computerizing land registers was to build a system of property ownership, have uniform land prices and mitigate price fluctuation due to speculative practises in the real estate sector. (Korean Finance Ministry, 2014, p. 46) Thus, South Korea’s KLIS is a step in the future of cadastral mapping and geo spatial canvassing both of which are documented to improve land management systems by adopting a scientific approach. “With the systematic land administration system...it is possible to collect data promptly and accurately and comprehensively...across the country. Therefore, land policies are made in a prompt and streamlined manner with national land developed and managed more efficiently” (Korean Finance Ministry, 2014, p. 68) The digitization of land records has lessened the potential for disputes and eased out the burden of the Courts.

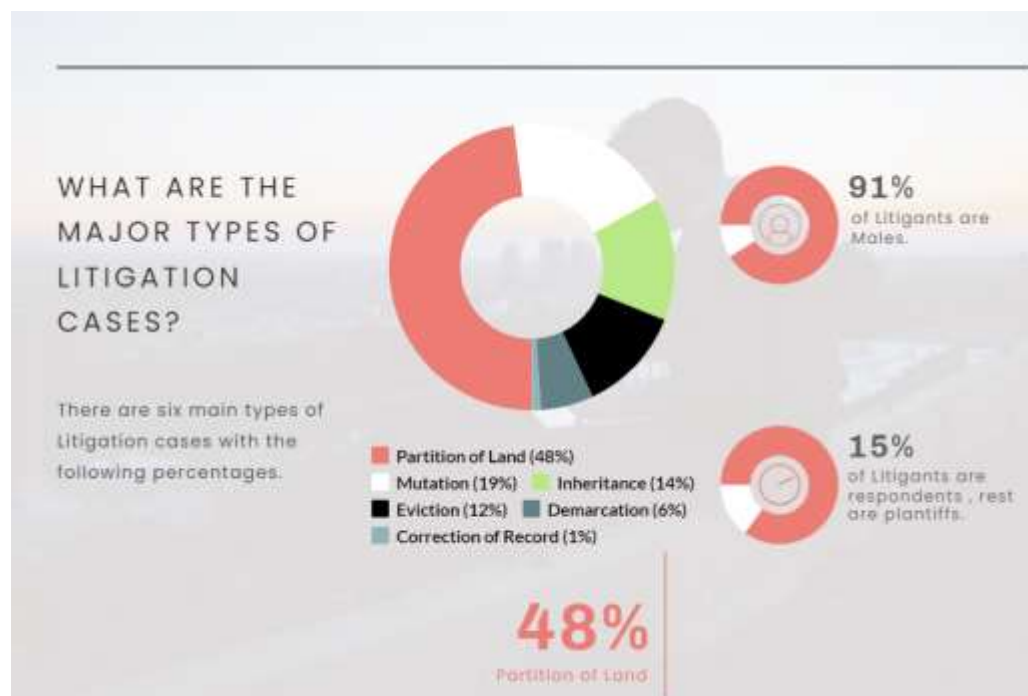
## FINDINGS & DISCUSSIONS

### 6.1 Summary Statistics

Tables 1 & 30 in the appendix give an overview of our summary statistics for Punjab and KPK respectively. It has to be underscored that when our survey teams used to visit the courts, there was a general overall reluctance on part of most litigants to answer our questionnaire. On average, less than a fourth of litigants present in the premises would show willingness to respond to our surveys, many of them reluctantly. Hence, our sample size was smaller than we would have liked. However, it is good enough to draw some general conclusions.

For Punjab, we can see in Table 1 that the land revenue cases mainly fall in six categories. The bulk of our cases pertain to partition of land (48%), followed by mutation (19%), inheritance (14%), eviction (12%), demarcation (6%) and correction of record (1%). The average litigant belonged to lower middle class with reported average monthly income of Rs. 38,000 although quite a few outlier cases with income as high as Rs. 6 million per annum or as low as dependence on State dole-outs such as Benazir Income Support Program were also found. Litigants were largely male (91%) and usually semi-literate with the average years of formal education being 6.7 years. Five sixth of the litigants (almost 85%) found in the courts were plaintiffs and only around 15% were respondents. That highlights the fact that the person being wronged has to knock on the doors of the court while the respondent can easily use delaying tactics by not showing up in the Courts of law.

Figure 2 Major Types of Litigation Cases



While the prescribed period for disposal of a case in the revenue court is six months, according to the instructions of the Board of Revenue, Punjab, the cases in our survey were lingering on for 4.64 years on average in Punjab. There is high variance in these figures as seen by the high standard deviation but that is to be expected since about 12.2% of our respondents have cases over 10 years old with the maximum being 50 years old. On the other extreme, some people questioned had filed the case that very day when they were contacted by our field surveyors in court premises. Since we had no

way of guesstimating from those surveys how long the case instituted that day would last till the formal disposal, it was thus well-nigh impossible to calculate the total time duration of a revenue case from institution of the case till its final disposal.<sup>10</sup> In other words, 4.64 years is the average period since the filing of the case. For KPK, this figure is 6.29 years (Table 30). The total duration till case disposal can last many decades.

Given that in Punjab, the disputed land size is about 45.8 kanals on average with claimed valued being Rs. 15 million on average [comparative figures for KPK are 49.7 kanals per case and Rs. 17.6 million on average, respectively (Table 31)], it makes perfect economic sense for the litigants to carry on pursuing the litigation throughout their lifetime, given their own economic status. They hope for some light at the end of the tunnel in the hope that, if not they themselves, their progeny will reap the benefits if they win the title of the property in question. Over these decades, they bear enormous direct costs (stamp fees, lawyer fees, unavoidable bribes) and indirect costs (opportunity costs, time cost, income forgone, stress costs etc) which we are discussing in subsequent sections below.

### **6.2 Sludge during Gathering Information**

One of the first steps a litigant goes through in their revenue court case is that of gathering information. We see that on average a person will spend about 2.38 months gathering information about their case in Punjab. Based on our ideal figures (Table 12), a person should not have to spend more than 7 days in this phase so anything in excess of this is an indication of sludge. Removing these 7 days from this, we get sludge to be on average 2.14 months or 65 days approximately for Punjab (Table 9) and 4.73 months on average for KPK (Table 24). Upon asking the litigants, we found that about 57% of people stated their top activity in this phase was that of gathering documents and out of this 57%, 38.8% of them stated that they spent their time trying to get a copy of the title deed, known as *Fard*, for the property in dispute.

### **6.3 Sludge during Document Collection**

Tables 2A – 2E show summary statistics for Punjab regarding documents that litigants may need during their case. For KPK, Tables 17A – 17E show these figures. These have not been adjusted against our ideal figures from Table 12 but rather show an overall picture of the time document collection can take for a litigant. Table 2E shows that a litigant may on average spend about 8 months just gathering documents. Removing some of our very old cases does bring this down to about 4 months of time on average but that is still well beyond our ideal estimations where a document should not take over 15 days to collect. Adjusted figures in Table 3A, show that for Punjab all documents even after accounting for this 15-day margin, take about 7 months more on average with obtaining of settlement record, called *Jamabandi*, incurring the least amount of sludge at 1.4 months. Adjusted figures (Table 18A) for KPK, however, show that for KPK sludge in document collection is 2.48 months.

Regarding sludge<sup>11</sup> in terms of rupees for document collection, Table 3B gives an overview of the monetary and opportunity costs incurred in Punjab. These have been adjusted for inflation using World Bank Consumer Price Index (CPI) data for the years 1960 – 2022 (The World Bank, 2022). CPI data for 2023 was taken from the Pakistan Bureau of Statistics (2023) press release since our last survey was conducted in March 2023.<sup>12</sup> Opportunity cost was calculated by multiplying the total number of visits with the travel and wait time of each visit and the hourly income of the respondent. Overall, for Punjab, one-time opportunity cost at the documentation stage comes out to be on average about Rs. 22,008. Sludge in monetary cost due to document collection is about Rs 34,223. Total sludge

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<sup>10</sup> All litigants surveyed have cases which are currently on-going in the Revenue Courts.

<sup>11</sup> The negative figures in the sludge tables are due to people that fell below our ideals from Table 12.

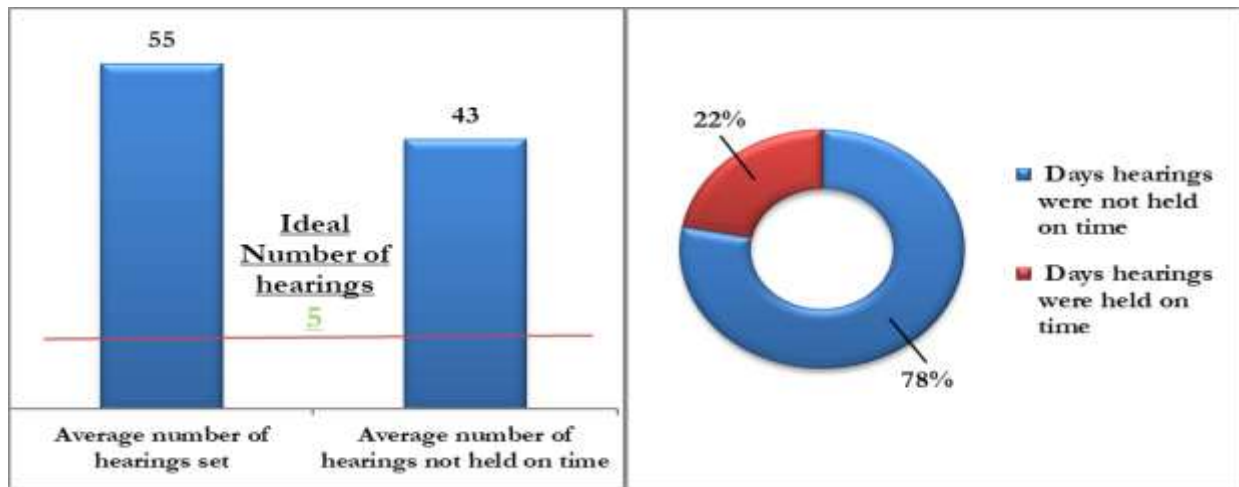
<sup>12</sup> All monetary figures in our findings have been adjusted for inflation and are in 2023 prices.

a litigant may incur on average during the documentation stage comes out to be around Rs. 44,581 on average.<sup>13</sup> In comparison, for KPK, overall sludge from document collection is Rs. 113,087 (Table 18B). This is much higher than the Punjab figures as it seems litigants in KPK incur much higher monetary costs when collecting documents. These document collection cost occur before the formal institution of the case in the revenue court.

#### 6.4 Sludge cost of Court Hearings

With regards to hearings, Table 4 shows adjusted figures for sludge in Punjab. Unlike document collection which is a singular task, hearings and adjournments can happen all year round, therefore, we calculated a yearly figure for sludge due to hearings which comes out to be about Rs. 71,195. Furthermore, litigants waste about 23.3 hours a month on average due to hearings and incur an opportunity cost of about Rs. 4,657 per month on travel to the courts on the dates of hearing. Hearings set above our ideal figure of 5 for the entire case, are 50 on average. Out of these 50 hearings, they are heard about 7 times on the date they were set, so on average one has to be disappointed 43 times when the hearing does not take place due to the Revenue Officer being on leave, being away from the office, lawyer’s strikes and other such issues. Moreover, after adjustment for 30 days ideal time period, it takes about 43 days more on average for the first hearing to even be set.

Figure 3 Average number of hearings set vs hearings held



For KPK, Table 19 gives adjusted figures for sludge incurred during hearings and adjournments. Here, hearings are set about 50 times on average as well, after adjustment for the ideal figure of 5 hearings, but heard only 6 times on average. The first hearing takes about 101 days to even be set, even after adjusting for the 30-day ideal figure. Lastly, yearly sludge in KPK due to hearings is about Rs. 67,863 on average.

#### 6.5 Sludge cost of meeting the Revenue Officer (RO)

Ideally a litigant would only have to meet a RO once but as can be seen in Table 5A this is not the case. For Punjab, even after adjustment, people meet RO’s at least 16 times a year with the most meetings on average being with the DC/ADCR. Average waiting time in the office for these meetings comes out to be 2.86 hours, this after the deduction of the 2-hour ideal waiting time means a litigant is spending 5 hours a day waiting on all RO meetings. This coupled with an average travel time of about 6 hours for all RO meetings means we get a sludge figure for total time wasted on RO meetings to be around 258 hours on average in the past year (Table 5D). Sludge in terms of monetary cost in the past year

<sup>13</sup> The number of people incurring opportunity costs vs monetary costs is lower (see Table 3B) hence the total sludge figure from document collection is lower.

is about Rs. 53,328 with an opportunity cost of about Rs. 21,583 a year (Table 5E). Total yearly sludge<sup>14</sup> is about Rs. 58,000<sup>15</sup> (Table 5G) for Punjab.

In comparison, for KPK, total yearly sludge is about Rs. 170,000 (Table 20G) owing mostly due to the fact that litigants met the RO's about 35 times on average in the past year (Table 20A) which is more than double the meetings in Punjab, thus, spending 935.15 hours (Table 20D) on meeting RO's in the past year.

### **6.6 Sludge costs reflected in Other Expenses**

Table 6 and Table 21 highlight typical expenses a litigant may go through during their cases for the two provinces, respectively. We do not consider stamp duty/government fee to be in the sludge category, but it has still been documented. On a per year basis a litigant can end up spending about Rs. 144,000 in expenses in Punjab and Rs. 111,000 in expenses in KPK. We categorize these expenses as sludge. These figures include money spent on lawyers, revenue court staff (speed money) and food but the bulk of it, unexpectedly, is lawyer fees.

### **6.7 Sludge comparison of Document Collection from Arazi Record Center vs Patwari**

We wanted to make a distinction between document collection from the Patwari versus document collection from the Arazi Record Centers. Tables 7 and 8 show the sludge associated with each in Punjab. A thing to note, we applied more strict ideals on the Arazi Record Center with regards to document collection time. We believe since the Arazi Record Centers are digitized, they should not take more than a day to give the litigant their document. In comparison, the Patwari is afforded 15 days. Thus, total time taken (after adjustment for ideal time) to collect documents from Patwari is about 16-17 days on average and about 30 days on average for the Arazi Record Center in Punjab. If the Arazi Record Center is given the same time ideal as the patwari (15 days), then this average comes out to be 16. This means they are roughly the same in terms of time taken. Total opportunity cost, however, is lower in the Arazi Record Center (Rs. 14,191 vs Rs. 18,122 on average).

When asked which people thought was more accessible, the Patwar Center or the Arazi Record Center, 62% of litigants said they thought the Arazi Record Center was more accessible with 26.4% being neutral (in Punjab). There is also a sizable difference in the amount of money which is being spent on the Patwari (Rs. 20,124 on average) versus the Arazi Record Center (Rs. 5,463 on average). There is, therefore, merit to the idea of phasing out the role of the Patwari. We also asked our respondents, how long it took on average to get documents before the development of the Arazi Record Centers and that came out to be about 18 days on average (Table 8) for Punjab.

For KPK, Tables 22 & 23 highlight our findings. Money spent on the Patwari is still higher in KPK (Rs. 10,883 vs Rs. 2,344). Time spent to get documents from the Arazi Record Centers is also lower than that of the Patwari. After adjustment of the 15-day ideal, the Patwari in KPK takes 5.7 days to give the documents. In comparison, the Arazi Record Centers take about 9 days on average, after adjusting for the one day ideal. This means that if the Patwari was afforded one day and not 15 days, sludge in document collection from the Patwari would be 19.7 or 20 days on average. This is 11 days above the Arazi Record Centers document provision time.

### **6.8 Overall Findings from Each Step**

Tables 9 & 10 show figures for overall sludge in the various steps involved in the litigation process in Punjab while Tables 24 & 25 show overall sludge figures for KPK. It clearly shows that there is room to make improvements in each step, particularly in the document collection process. Time taken to

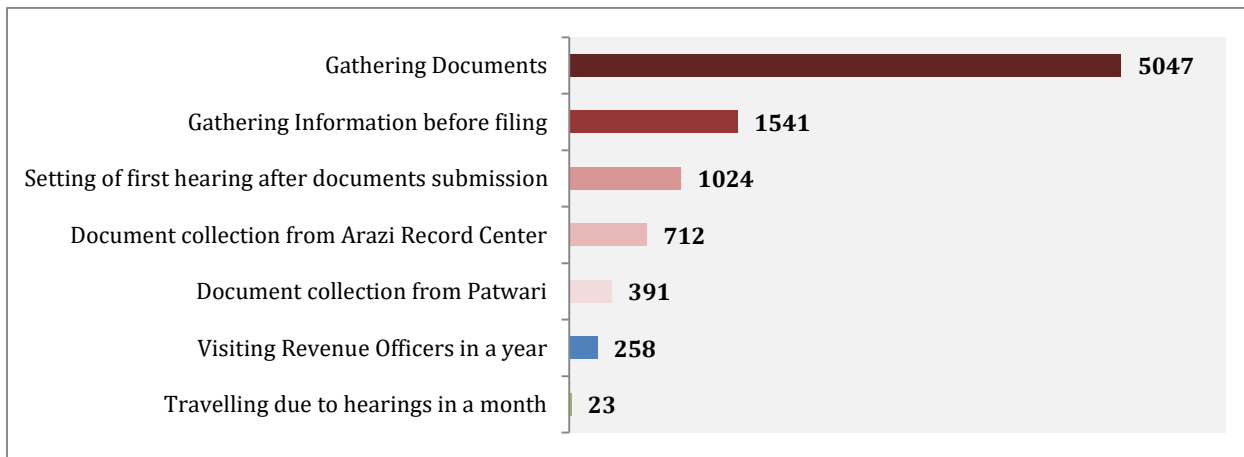
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<sup>14</sup> Assuming past year figure apply for the entire case period.

<sup>15</sup> n=130 for total opportunity cost when meeting RO's while n=194 for total monetary cost from meeting RO. This is why the sum of their means is lower.

get your first hearing should be reduced as well. Currently it is at 43 days above our ideal figure for Punjab and 101 days above in KPK. Significant reforms are required in this area considering hearings end up costing the litigant almost Rs. 71,196 per year in Punjab & Rs. 67,963 in KPK. Table 11 shows that litigants find the hearing process to be amongst the most stressful in Punjab and second most stressful step in KPK (Table 28).

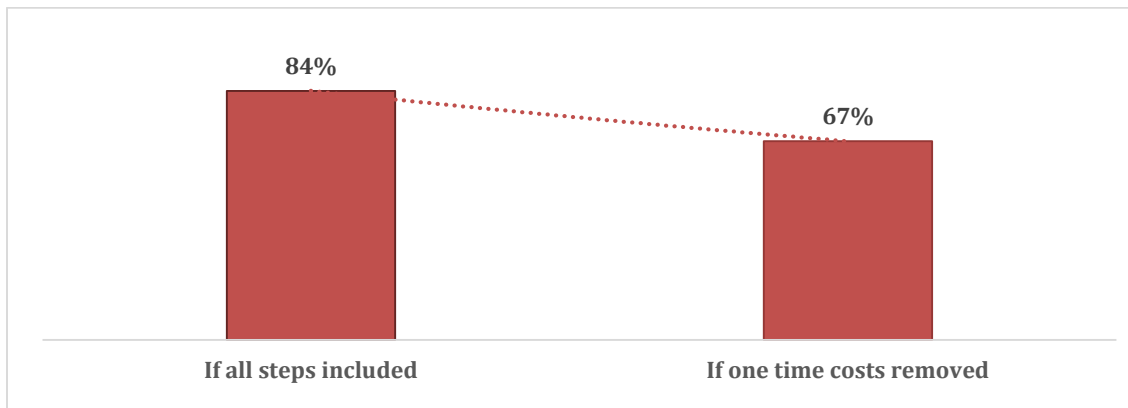
Figure 4 Sludge in hours at each step in Punjab



The Arazi Record Centers need to improve upon document provision time since the purpose of digitization was to remove long waits for document collection. This will help reduce sludge in time during this process as well as reduce the reliance upon the Patwari who, as seen in Table 11 & Table 28 (for Punjab and KPK, respectively), is more stressful for the litigant than going to the Arazi Record Center (3.54 vs 2.86 on a Likert Scale in Punjab and 3 vs 2.21 on a Likert Scale in KPK).

On a per year basis, sludge after excluding the one-time costs of document collection & gathering information, is about Rs. 198,498. Including these one-time costs increases the figure to Rs. 250,487 for Punjab (Table 13). For KPK, these figures are higher with yearly sludge being on average Rs. 306,834 for all steps and Rs. 263,067 if we exclude the one-time costs (Table 26). We also looked at sludge as a percentage of people's income and it turns out that if a person has to go through all steps in a year, it takes up about 84% of their income in Punjab and about 79% of their income in KPK, which is clearly untenable (Tables 13 & 26). If we remove the one-time costs, this percentage falls to 67% in Punjab & 66 % in KPK, which though lower is still a figure that needs to be addressed and lowered.

Figure 5 Sludge as a percentage of income in Punjab



The tables A1 & A2 below show an overview of these findings for sludge terms of time and money spent on each step in Punjab:

<i>Table A1: Sludge in Terms of Time Taken for Punjab</i>							
No.	Step	Description	Average Number of Visits	Average Travel Time per visit (2 way) (hours)	Average Wait Time per visit (hours)	Average Agency/ Collection Time (hours)	Average Total Sludge Time (months)
1	<b>Gathering Information</b>	Sludge in Time taken to gather information					<b>2.14</b>
2	<b>Document Collection</b>	Sludge in Collection of Fard Malkiat	3.66	9.29	2.77	1733.63	2.44
		Sludge in Collection of Jamabandi	4.98	5.86	2.69	999.6	1.41
		Sludge in Collection of Khasra Girdwari	5.78	3.89	1.09	4715.77	6.38
		Sludge in Collection of Shajra Nasb	6.15	3.76	0.94	5199.41	7.13
		Sludge in Collection of all Documents	10.61	12.65	4.01	4994.03	<b>7.01</b>
3	<b>Document Collection from Patwari</b>	Sludge in Document Collection from Patwari	6.68	3.49	2.08	430.21	0.54
4	<b>Document Collection from Arazi Record Center</b>	Sludge in Document Collection from Arazi Record Center	6.36	5.18	1.58	660.48	0.99
5	<b>Hearings</b>	Sludge in Hearings in a Month	2.17	7.72			<b>0.03</b>
6	<b>RO Meetings</b>	Visits to Patwari in the past year	6.68	2.96	2.03		0.056
		Visits to Girdawar Qanungo in the past year	5.78	1.64	0.13		0.022
		Visits to Naib Tehsildar in the past year	10.06	2.09	1.69		0.068
		Visits to Tehsildar in the past year	7.61	3.43	1.49		0.046
		Visits to AC in the past year	12.18	5.54	0.73		0.102
		Visits to DC/ADCR in the past year	12.57	3.73	1.85		0.133
		Visits to All Revenue Officers in the past year	16.02	6.16	2.86		<b>0.36</b>

7	<b>Overall Total Sludge Per Year</b>						<b>9.4</b>
<p><i>Average Total Sludge Time is calculated by summing up travel time, wait time &amp; agency/collection time per respondent and then taking an average over its observations. It is not a sum of the individual averages of its components as there are respondents who may not have incurred one or two of the components. This means that the number observations for the Average Total Sludge Time column are different from its components number of observations.</i></p>							



**Table A2: Sludge in terms of Rupees for Punjab**

No.	Step	Description	Average Monetary Cost	Average Travel Cost per visit	Average Opportunity Cost	Average Total Sludge Cost
1	<b>Gathering Information</b>	Total Sludge in Rupees			81099.26	<b>81099.26</b>
2	<b>Document Collection</b>	Cost Borne by litigant for Jamabandi	18822.26		8891.88	
		Cost Borne by litigant for Fard Malkiat	17969.37		8973.11	
		Cost Borne by litigant for Khasra Girdawari	22294.36		9324.1	
		Cost Borne by litigant for Shajra Nasb	25419.69		12273.33	
		Total Cost borne by litigant for all Documents	34222.98		22007.5	<b>44581.32</b>
3a	<b>Document Collection from Patwari</b>	Sludge in Money Spent on Patwari for Document Collection			18121.82	
3b	<b>Document Collection from Arazi Record Center</b>	Sludge in Money Spent on Arazi Record Center for Document Collection		3559.76	14191.39	
4	<b>Hearings</b>	Cost borne by litigant due to hearings per year		1634.86	55879.85	<b>71195.91</b>
5	<b>RO Meetings</b>	Money spent on the Patwari in a year	20123.61		6456.08	
		Money spent on the Girdawar Qanungo in the past year	7007.81		3135.85	
		Money spent on the Naib Tehsildar in the past year	21104.53		9402.05	
		Money spent on the Tehsildar in the past year	12865.63		5646.83	
		Money spent on the AC in the past year	21921.15		19507.78	
		Money spent on the DC/ADCR in the past year	69164.43		18529.28	
		Money spent on all Revenue Officers in the past year	53327.68		21583.11	<b>58000</b>
6	<b>Expenses</b>	Lawyer fees, Revenue Court Staff and Food per year	144000			<b>144000</b>
7	<b>Overall Total Sludge Per Year</b>					<b>250486.96</b>

## **6.9 Opportunity Cost of Land under Dispute**

We also looked at the potential foregone agricultural output which could have been produced had the land not been in dispute. In our survey for Punjab, we asked litigants how they planned to use the land if it had not been in dispute and found three main answers, i.e. 12.59% of people said they wanted to build a house for their personal use; 69.58% said they would grow agricultural crops for their personal use and 35.66% said they would grow agricultural crops for sale.<sup>16</sup> We calculate opportunity cost of land from agricultural income foregone on this 35.66% of people for Punjab.

Sugarcane is a main agricultural crop in our locations under survey in Punjab (Kasur & Toba Tek Singh) as seen in the data reported by the Crop Reporting Service of the Punjab Government (Crop Reporting Service, 2020; Crop Reporting Service, 2021; Crop Reporting Service, 2023a) . We, therefore, assume that had the land not been under dispute our litigants would have used the land to produce sugar cane in Punjab. For KPK, we assume a rice-wheat rotation as these two crops are often grown together in KPK as seen in the 28-year historical data published by the Federal Bureau of Statistics (Federal Bureau of Statistics, 2009) and the crop statistics published by the Crop Reporting Service for KPK (Directorate General Crop Reporting Service, 2023).

Sugar cane is a yearly crop (takes a year to sow and harvest) so we will be calculating total yearly output foregone. We assume that total output per acre will equal the average output per acre per location as reported by the Crop Reporting Service of Punjab (Crop Reporting Service, 2021; Crop Reporting Service, 2023a). For rice & wheat for KPK, we take average output per acre from Agriculture Marketing Information Service (AMIS) (Agriculture Marketing Information Service, 2022a; Agriculture Marketing Information Service, 2022b).

We then convert this foregone output to a monetary value by using the minimum support price (MSP) (for sugarcane & wheat) which is announced by the Punjab government every year. Data for the minimum support price for wheat & sugarcane is taken from AMIS (2023a) , AMIS (2023b) & from the Crop Reporting Service (2023b). For rice, we use indicative price, the data for which is taken from the Crop Reporting Service (2023b). Lastly, we also account for cost of production of all crops, the data for which has also been taken from the Crop Reporting Service (2023b). Lastly, we assumed that the rice grown in KPK was basmati rice.

Table 14 shows the total output of sugar cane lost on average (by location) and the monetary value associated with this lost output. We found that on average total sugar cane production lost due to the case is about 22,113 maunds<sup>17</sup> which in monetary terms is about Rs. 7.67million on average. In order to calculate potential profit that could have been earned from sale of sugar cane we use cost of production data<sup>18</sup> and find that potential profit could have been about Rs. 2.09 million on average.

The longer a case goes on the more agricultural income is forgone, thus, we also calculated yearly production lost which comes out to be about 4,703 maunds per case with a monetary sale value of about 16.2 lakh rupees. Yearly profit from sale of sugarcane is about 4.6 lakh rupees on average.

For KPK, Table 27 shows the total output loss of rice & wheat is 7,564.24 maunds on average which in monetary terms is Rs. 2.1662 million. Average rice and wheat production lost is about 435.4 maunds per year and average yearly profit lost due to land disputes in KPK is about Rs. 319,000.

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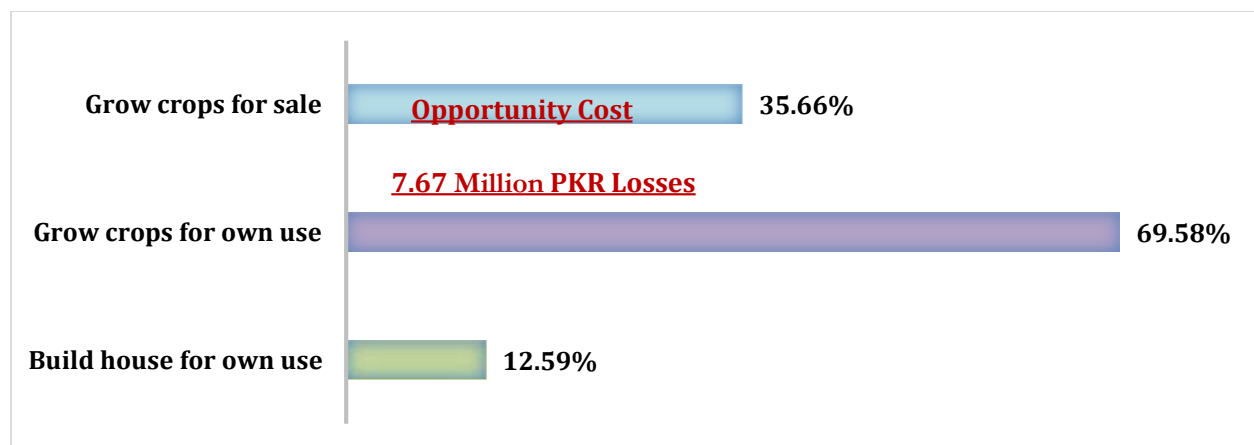
<sup>16</sup> Respondents were allowed to give multiple reasons which is why the percentages do not sum to a 100.

<sup>17</sup> 1 maund = 40 kg

<sup>18</sup> Cost of production data is only from 2001 onwards but this does not affect our calculations much as only one case started before 2001. There is another case which started in 1971 but we removed it from the land opportunity cost calculations since we could not find historical data on agricultural outputs that was older than 1981. As such profit figures are, therefore, from cases which started from 2001 onwards.

Owing to lack of data availability, the monetary values of opportunity cost of rice & wheat for KPK has been calculated for the years 2001-2021 only.

Figure 6 Usage if land was not disputed In Punjab



### 6.10 Sludge as a Percentage of Gross Domestic Product (GDP)

Lastly, we calculated sludge as a percentage of GDP. To do so, we first calculated the average sludge incurred by a litigant per year. This includes sludge incurred from each step a litigant may go through during a case, namely,

- (1) the gathering information step (one-time cost),
- (2) the document collection step (one-time cost),
- (3) the hearings or adjournment step,
- (4) the expenses (lawyer fees or speed money) step,
- (5) the RO meetings step and,
- (6) the potential profit lost due to agricultural income foregone.

Adding all these together shows that the average cost of sludge per litigant per year is about Rs. 7.1 lakhs (Table 15) for Punjab and Rs. 6.26 lakhs for KPK (Table 29). We also calculated a sludge figure to account for years where the litigant did not incur the one-time costs associated with the document collection step and the gathering information step. This average sludge figure (only includes step (3) – (6)), comes out to be about Rs. 6.58 lakhs per year for Punjab and Rs. 5.82 lakhs per year for KPK.

To scale this figure up for comparison with overall GDP we assume that these two figures represent the average sludge any litigant in any district of Punjab may face per year. Thus, to measure the yearly sludge cost in Punjab, we collected information about the total number of revenue court cases in Punjab from the Punjab Board of Revenue. We multiplied this average yearly sludge figure with the number of cases that have been in the revenue court system for more than 12 months from 1<sup>st</sup> January 2022 – 31<sup>st</sup> December 2022 (a total of 65396 cases for the year ended 2022). If litigants went through all the steps in a year, then the total yearly sludge in Punjab is Rs. 46437.68 million for 2022. If they only go through the yearly steps (excluding one-time costs), then total yearly sludge for Punjab is Rs. 43037.55 million for 2022. As a percentage of GDP this comes out to be about 0.092% and .085% respectively (Table 15) which means that regardless of whether the litigants go through the one-time

costs or not, the impact of delaying timely adjudication of agricultural land cases is approximately 0.1% of GDP per year.<sup>19</sup>

However, since our study deals with agricultural land, we thought looking at sludge as a percentage of agricultural GDP would be more accurate. Agriculture, Forestry & Fishing has a sectoral share of GDP of 22.91% for 2022-23 while crops have a share of 7.72% of GDP (Pakistan Bureau of Statistics, 2022b). We use this to calculate sludge as a percentage of Agriculture, Forestry & Fishing which come out to be 0.4% per year (if you go through all steps) and 0.37% (if you exclude one-time costs). If we look at it through only crop GDP of Pakistan, then the percentages are 1.19 and 1.1 respectively. As our data is from Punjab, we also calculated this percentage in terms of Punjab's Agricultural GDP. The estimated share of Punjab in national GDP was 54.2 percent in 2017-18 (Planning and Development Board, 2023).<sup>20</sup> Using this we calculate an estimate sludge as a percentage of Punjab's Agricultural GDP which comes out to be 0.741% (if we go through all steps in a year) and 0.687% (if we go through only the yearly steps).

Similarly, for KPK, we also calculate sludge as a percentage of KPK's agricultural GDP (Table 29) which is 0.57% (all-steps) and 0.53% (excluding one-time steps). Sludge as a percentage of crop GDP for KPK is 3.77% (all-steps) and 3.51% (excluding one-time steps). Data for KPK's agricultural and crop GDP etc. has been taken from the GDP 2021-22 estimates report published by the Bureau of Statistics Khyber Pakhtunkhwa (2021). Table A3 below summarizes the findings for Punjab.

*Table A3 Sludge as a Percentage of Agricultural GDP for Punjab*

<b>Steps in a Revenue Court Case</b>	<b>Total Number of Cases in Punjab (12 months or more)</b>	<b>Cost of Sludge (million rupees) for 2022</b>	<b>Percentage of Crops GDP of Pakistan for 2022</b>	<b>Percentage of Agriculture, Forestry &amp; Fishing GDP of Pakistan for 2022</b>	<b>Percentage of Punjab's Agricultural GDP for 2022</b>
<b>All steps: Steps (1) - (6)</b>	65,396	46,437.68	1.19	0.4	0.741
<b>Excluding one-time cost: Steps (3) - (6)</b>	65396	43,037.55	1.1	0.37	0.687

We also look at the value of the disputed territory as a percentage of GDP in a similar manner. We assume that the average value of disputed territory in Punjab for all revenue court cases is about Rs. 150.22 lakhs (Table 1). Total number of cases in the revenue courts of Punjab which have existed for 12 months of more are 65,396 as mentioned earlier, thus, the value of disputed territory as a percentage of Pakistan's GDP comes out to be 1.95% and 3.59% of Punjab's total GDP, which means 15.68%, or nearly one-sixth, of Punjab's rural (i.e. agricultural GDP). If we use real estate activities in GDP, which is also taken from the Pakistan Bureau of Statistics (2022b) National Tables, we see that disputed territory's value as a percentage of real estate GDP for Punjab is 33.85% which is quite high.

<sup>19</sup> When we added in the agricultural income foregone, we only considered the direct effect of sugarcane production on the litigant (profit foregone) but there are bound to be indirect impacts of increased sugarcane production in the economy as well especially on sugar production and its exports. This could also potentially impact GDP.

<sup>20</sup> More recent figures are not available.

Table A4 below summarizes these findings for Punjab.

*Table A4 Value of Disputed Territory as a Percentage of GDP for Punjab*

<b>Total Number of Cases in Punjab (12 months or more)</b>	<b>Value of Disputed Territory in lakh rupees</b>	<b>Percentage of Real Estate Activities GDP</b>	<b>Percentage of Punjab total GDP 2022</b>	<b>Percentage of Punjab Agricultural GDP 2022</b>
65,396	150.22	33.85	3.59	15.68%

The data for GDP 2022-23 was taken from Pakistan Bureau of Statistics National Accounts tables (Pakistan Bureau of Statistics, 2022a; Pakistan Bureau of Statistics, 2022b). Table 16 in Annexures lists the districts of Punjab used.

Overall, for KPK and Punjab, Table A5 below and Table 32 in the appendix show sludge as a percentage of GDP as well as the value of disputed territory as a percentage of Real Estate Activities GDP per year. Sludge as a percentage of Crop GDP is 1.4% (all steps) and 1.3% (exclude one-time steps) while disputed territory as a percentage of Real Estate Activities GDP is 47.5%.

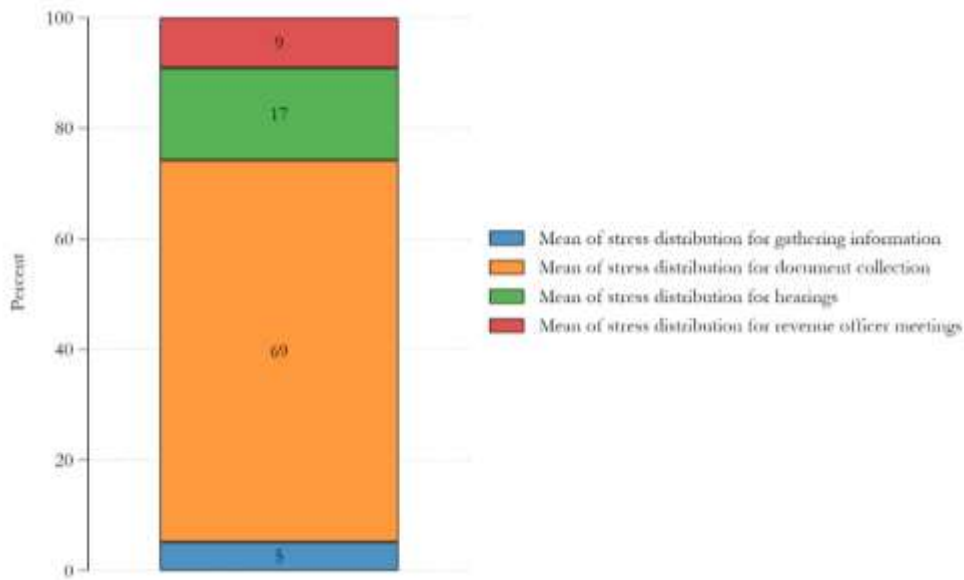
*Table A5 Sludge as a Percentage of GDP for KPK and Punjab*

<b>Steps in a Revenue Court Case</b>	<b>Total Number of Cases in Punjab &amp; KPK (12 months or more)</b>	<b>Cost of Sludge (million rupees) for 2022</b>	<b>Percentage of Crops GDP of Pakistan for 2022</b>	<b>Percentage of Agriculture, Forestry &amp; Fishing GDP of Pakistan for 2022</b>	<b>Value of disputed territory in Punjab &amp; KPK as a percentage of Real Estate Activities GDP per year</b>
<b>All steps: Steps (1) - (6)</b>	78,248	54,482.76	1.4	0.47	47.5
<b>Excluding one-time cost: Steps (3) - (6)</b>	78,248	50,520.16	1.3	0.44	47.5

### **6.11 Stress Distribution**

In Figures 7 & 8 below, we have calculated the stress distribution for Punjab following the methodology of Haque et al. (2022) i.e., by multiplying the total process time by the stress level (represented in percentage form). We consider the gathering information phase and the document collection phase to be a one-time activity which the litigant will go through during the beginning of their case. As such, Figure 7 represents the stress distribution for the beginning phase (first year) of the case. It shows that the document collection process is the most stressful process for litigant, taking up 69% of the stress distribution. This is to be expected since the document collection phase takes up the most time out of these steps (almost 7 months of sludge).

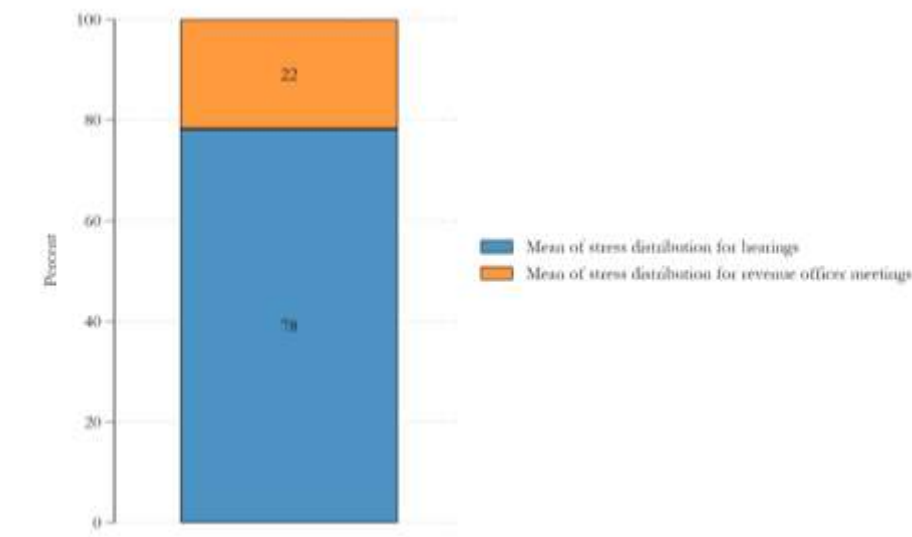
*Figure 7 Yearly Stress Distribution including one time activity*



In comparison, for KPK, figure 9 in the appendix shows that the gathering information phase is the most stressful for the respondent (45%) followed by the document collection phase (33%) which can be attributed to the fact that people spend more time in the gathering information phase in KPK than in Punjab.

We, then, remove these two activities from the distribution to see what stress in a year wherein the litigant is simply engaged in hearings and meetings with the RO's would look like. This is shown in Figure 8 for Punjab and in Figure 10 for KPK (appendix). In this case, we see that hearings take up 78% of the stress distribution for Punjab. This is understandable since the hearings phase costs the litigant the second most (annually) in terms of sludge (almost Rs. 71,000). Table 4 shows that hearings are only held on average about 7 times out of the 50 times they have been set for a date. So not only are they costing a lot, but such high number of adjournments are bound to cause stress. Hearings also take up 83% of the stress distribution for the litigant in KPK as well (Figure 10).

Figure 8 Yearly Stress Distribution excluding onetime activity



## **CONCLUSIONS**

There are many important conclusions to be drawn from this study about the slow delivery of justice and the economic fallout arising therefrom. Fundamentally, there is a serious crisis regarding the security of property titles in Pakistan. Since our study was focussed on revenue court system, the scope of our analysis is restricted to rural and agricultural property only. This is not to say that the titles of urban property, whose disputes are dealt with by civil courts, gives any better picture. Given that urban property is much more expensive than the rural property, the study about the economic impact of delayed justice may give more startling figures.

Our analysis about sludge costs of agricultural property disputes is a whopping Rs. 46,438 million for just over 65,000 litigations in revenue courts in Punjab alone. These are the avoidable costs that should not have occurred in the first place, had the land revenue management were an efficient system in the country. Since our average litigant was from rural—and mostly poor background—this sludge cost could on average consume 84% of his income in the first year and up to two thirds of his annual income in the subsequent years. The cases may last twenty years or more, and can be carried on by the next generation. In some cases, the total costs to the parties involved over the lifetime of a case, exceeds the value of disputed property.

The average stated value of disputed property in land revenue cases is circa Rs. 15 and 17 million, in Punjab and KPK, while the average annual income of the plaintiffs is in the vicinity of half a million rupees in both the provinces. Meaning thereby that a litigant fights for a property whose worth is thirty years of his income. In other words, the value of disputed property exceeds total lifetime income of his productive life. Even if a case lasts, or is likely to last, 15-20 years it makes perfect economic sense for him to fight the legal battles tooth and nail in the hopes of winning the title of the land one day. That is, even if the value of property remains stagnant in those decades, which is an implausible scenario, given Pakistan's explosive population growth rate.

The sludge cost of agricultural property disputes for Punjab alone is nearly four percent of its agricultural (i.e. rural) GDP. The price of disputed land under litigation in the revenue courts comes to about 3.59% of the total GDP of Punjab. Given that only 22.91% of the GDP of the province comes from the rural areas, as agricultural GDP, the value of disputed property calculated as a fraction of the rural economy comes to nearly one fifth [i.e. 15.68%] of the total economic output from the villages. And this is without taking into account the economic costs of violence and crime that the land disputes beget.

It makes strong moral, legal and economic sense for a state to ensure that (a) property titles are secure; (b) any disputes arising out of land are settled expeditiously; and (c) proper legal and technical infrastructure is in place to achieve the preceding two ends.

## **POLICY RECOMMENDATIONS**

Sunstein (2021) defines sludge reduction as anything that simplifies it for the people to attain their desired task. It can be through changes in policy design or simplification of procedures or any change at implementation level. It is pertinent to note here that Sunstein explicitly states that “worst kind of sludge might not be paperwork at all” (Sunstein, 2021, p. 98). Applying this concept at the issue at hand, this study tried to find ways to reduce sludge in the Revenue Courts as elaborated in the Recommendations below. Moreover, these recommendations are also informed by the lessons that were derived from the international best practices that we discussed in Section 5 above.

The Study has found out that the most time consuming (usually around 7-8 months) and stressful process in land revenue litigation is the initial process of document collection. Hence, it entails the

highest sludge costs. In fact, certain documents may be required by the Court in subsequent hearings, leading the litigants to go to the revenue officials for obtaining those documents. Hence, digitization of all land revenue documents is the most important policy intervention that the government can undertake. The province of Punjab has taken the lead: in the seventeen years since the digitization process was launched in 2006, the government has been able to digitize 91% of rural land records.

This is a step in the right direction, completely in line with international best practices outlined earlier in this study. The political will, financial backing and administrative attention of the Government is recommended to zero in on the target of cent percent digitization of land record. The Punjab model of Pakistan can easily be replicated in other three provinces and the Azad state of Jammu and Kashmir (AJK) at the earliest with a time bound target for completion of digitization by the year 2030.

The litigants surveyed during our study overwhelmingly agreed that it costs much less money and significantly low level of stress in getting a document from the digital services, called Arazi Record Centers (ARCs) in Punjab, than from the revenue officials called *Patwaris*. Yet, there was a general lack of awareness about the digital services that were available. Less than one percent of the people confirmed knowledge of the existence of the PLRA App through which some, though not all, of the documents could be downloaded on their smart phones, dispensing with the need of visiting the Arazi Record Centers. Hence, our second recommendation is to make the digital services wide publicity through sustained electronic, print and social media campaigns.

The third recommendation that comes out of this study is about a longer, at least a year-long, pre service training for lower judiciary and then regular in-service trainings for the civil judges at each level of career progression, on the pattern of the same type of trainings for the officers of the central superior services. The proper training of lower judiciary coupled with a strong institutionalized reward-and-punishment system against errant behaviour, such as taking cognizance of the cases falling in the jurisdiction of another stream of courts, is also a required legal reform.

The fourth recommendation is about time-line for disposal of a case. The promotion and career progression of the revenue and administration officers should also depend on benchmarking related to the case disposal in land revenue matters. The guidelines issued by the Board of Revenue, Punjab, about the disposal of cases within six months can only be complied with, if every Divisional Commissioner must ensure that a certain number of the Additional Commissioners and Additional Deputy Commissioners under his command, are spared full time from administrative work, to concentrate on court work only.

Our final recommendation revolves round the incentivization of disposal of land revenue cases by the revenue officers. The percentage of cases disposed of, should be reflected in the annual Performance Evaluation Reports (PERs) of the civil officers. Quick disposal should be rewarded by out of turn progression, while lack of interest in their judicial functions or poor draftmanship in the judgments needs to be reprimanded.

One can hope that the recommendations of this study will go a long way in influencing the policy makers in reforming the revenue court and civil courts systems. The security of land titles, digitization of land records and expeditious disposal of land revenue cases, within six months at the most, are the essential requirements for a progressive and prosperous Pakistan.



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## APPENDICES

### PUNJAB TABLES

**Table 1: Summary Statistics - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Male	286	.91	.28	0	1
Age	276	48.45	13.81	20	90
Monthly Income in Rupees	192	38036.47	45516.5	0	500000
Years of Formal Education	285	6.7	4.89	0	18
Litigant is a Plaintiff	286	.85	.36	0	1
Years since case was filed	283	4.64	7.23	.01	50
Land Size of Disputed Territory in Kanals	283	45.77	66.8	.15	436
Total Disputed Territory Value in Lakh Rupees	275	150.22	291.97	0	2500
Land Use: To grow agricultural crops for sale	286	.36	.48	0	1
Land Use: To grow agricultural crops for personal use	286	.7	.46	0	1
Land Use: I would use it to build a house or houses for my personal use	286	.13	.33	0	1
Case Type: Demarcation	286	.06	.24	0	1
Case Type: Partition	286	.48	.5	0	1
Case Type: Mutation	286	.19	.39	0	1
Case Type: Inheritance	286	.14	.35	0	1
Case Type: Eviction	286	.12	.32	0	1
Case Type: Correction of Record	286	.01	.08	0	1
Months taken to gather information before filing case	244	2.38	3.23	0	15

**Table 2A: Document Collection Summary Statistics: Visits - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Visits to office for Jamabandi	102	5.98	15.33	0	120
Total Visits to office for Fard Malkiat	137	4.66	9.21	0	100
Total Visits to office for Khasra Girdawari	88	6.78	12.86	1	100
Total Visits to office for Shajra Nasb	52	7.15	15.26	1	100
Total Visits to offices get all documents	177	12.86	33.88	0	402

**Table 2B: Document Collection Summary Statistics: Agency Time - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Time taken in months to collect Jamabandi	113	1.89	10.2	0	96
Time taken in months to collect Fard Malkiat	182	2.91	12.92	0	120
Time taken in months to collect Khasra Girdawari	90	7.05	37.41	0	300
Time Taken in months to collect Shajra Nasb	58	7.72	34.99	0	240
Total Time Taken in months to collect all	233	7.91	47.48	0	540

documents

**Table 2C: Document Collection Summary Statistics: Wait Time - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Waiting Time (hours) in office for Jamabandi	95	4.69	6.81	0	24
Waiting Time (hours) in office for Fard Malkiat	160	4.77	6.61	0	24
Waiting Time (hours) in office for Khasra Girdawari	86	3.09	3.96	0	24
Waiting Time (hours) in office for Shajra Nasb	54	2.94	1.98	.5	12
Total Waiting Time (hours) in office for all documents	212	7.92	9.7	0	48

**Table 2D: Document Collection Summary Statistics: Travel Time - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Time taken (hours) to travel to office for Jamabandi	96	5.86	12.2	0	72
Time taken (hours) to travel to office for Fard Malkiat	153	9.29	23.59	0	240
Time taken (hours) to travel to office for Khasra Girdawari	85	3.89	8.47	0	48
Time Taken (hours) for office visit for Shajra Nasb	53	3.76	9.94	.25	72
Total Travel Time (hours) to visit office for documents (2 way)	202	12.65	24.74	0	246

**Table 2E: Document Collection Summary Statistics: Total Time: Wait Time + Travel Time + Agency Time - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Time (months) spent by litigant on gathering documents	233	7.99	47.57	0	540
Total Time (months) for Jamabandi (agency time + wait time + travel time)	114	1.91	10.19	0	96.42
Total Time (months) for Fard Malkiat (agency time + wait time + travel time)	182	2.94	12.93	0	120
Total Time (months) for Khasra Girdawari (agency time + wait time + travel time)	93	6.88	36.84	0	300
Total Time (months) for Shajra Nasb (agency time + wait time + travel time)	59	7.63	34.75	.01	240

**Table 3A: Document Collection Sludge in terms of time - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Sludge (months) for Fard Malkiat	182	2.44	12.93	-.5	119.5
Total Sludge (months) for Jamabandi	114	1.41	10.19	-.5	95.92
Total Sludge (months) for Khasra Girdawari	93	6.38	36.84	-.5	299.5
Total Sludge (months) for Shajra Nasb	59	7.13	34.75	-.49	239.5
Total Sludge (months) when gathering	233	7.01	47.51	-1.86	539

documents

**Table 3B: Document Collection Sludge in terms of Rupees - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Opportunity (Rs.) cost borne by litigant for Jamabandi	76	8891.88	29572.73	-625	231250
Total Opportunity (Rs.) cost borne by litigant for Fard Malkiat	99	8973.11	32365.11	-1666.67	309375
Total Opportunity (Rs.) cost borne by litigant for Khasra Girdawari	72	9324.1	24785.12	-109.38	159062.5
Total Opportunity (Rs.) cost borne by litigant for Shajra Nasb	45	12273.33	44684.21	-312.5	270312.5
Total Money Spent on Jamabandi	92	18822.26	54369.84	-500	309159.13
Total Money Spent on Fard Malkiat	165	17969.37	82414.61	-500	928477.38
Total Money Spent on Khasra Girdawri	71	22294.36	75331.65	-500	578781.69
Total Money (Rs.) Spent on Shajra Nasb	36	25419.69	48079.42	-500	185295.47
Total Opportunity Cost (Rs.) for litigant due to document collection	128	22007.5	78529.38	-1666.67	810937.5
Total Monetary Cost (Rs.) spent on documents	216	34222.98	139302.4	-1000	1700625.1
Total Sludge (Rs.) from document collection	229	44581.32	166232.16	-1000	1860625.1

**Table 4: Sludge in Hearings - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Travel time (hours) to court per visit (2 way)	253	7.72	9.71	0	72
Average Travel Cost (Rs.) per visit to court or office	227	1634.86	1752.47	0	12000
Sludge in total cost (Rs.) of travelling to court/offices	181	88966.44	203688.82	-10000	1494000
Sludge in number of days taken to set first hearing after submitting case document submission	233	42.65	266.69	-30	3570
Opportunity cost (Rs) of travelling per month due to hearings or office visits	147	4656.65	16190.86	-750	135000
Sludge in total number of times hearings set for the case	193	49.96	87	-4	495
Sludge in total number of times hearings were held on the date they were set	197	7.28	23.04	-5	203
Sludge in total number of visits to court or offices due to this case	201	64.44	120.81	-2	898
Sludge in total time (hours) spent travelling due to hearings over the entire case	192	624.54	1661.04	-6	11952
Sludge in total time spent (hours) travelling due to hearings in a month	192	23.34	79.48	-10.14	816

Total opportunity cost (Rs.) for the litigant due to hearings or office visits	147	123562.55	325582.71	-937.5	2988000
Yearly Sludge (Rs.) incurred due to hearings	196	71195.91	191745.44	-	1728000
Total Sludge (Rs.) incurred due to hearings	196	174829.7	399999.64	-10937.5	3984000

**Table 5A: Revenue Officers: Sludge in Visits - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of Revenue Officers met in the past year	262	1.74	1.37	0	6
Visits to Patwari in the past year	109	6.68	11.81	-1	99
Visits to Girdawar Qanungo in the past year	60	5.78	13.26	-1	99
Visits to Naib Tehsildar in the past year	36	10.06	16.32	-1	99
Visits to Tehsildar in the past year	64	7.61	12.55	-1	99
Visits to AC in the past year	17	12.18	14.22	1	59
Visits to DC/ADCR in the past year	87	12.57	11.04	-1	79
Visits to Commissioner in the past year	2	7	2.83	5	9
Visits to BoR in the past year	0	.	.	.	.
Total visits to Revenue Officers in the past year	201	16.02	35.14	-4	412

**Table 5B: Revenue Officers Sludge in Waiting Time - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Wait time (hours) in office when visiting Patwari in the past year	126	2.03	5.26	-2	22
Wait time (hours) in office when visiting Girdawar Qanungo in the past year	62	.13	1.57	-2	4
Wait time (hours) in office when visiting Naib Tehsildar in the past year	39	1.69	2.97	-	18
Wait time (hours) in office when visiting Tehsildar in the past year	65	1.49	2.98	-2	22
Wait time (hours) in office when visiting AC in the past year	22	.73	2.11	-	6
Wait time (hours) in office when visiting DC/ADCR	105	1.85	2.49	-2	18
Wait time (hours) in office when visiting Commissioner in the past year	3	1.67	1.53	0	3
Wait time (hours) in office when visiting BoR in the past year	0	.	.	.	.
Total waiting time (hours) in the past year to meet Revenue Officers	218	2.86	5.26	-6	22

**Table 5C: Revenue Officers: Travel Time - Punjab**

Variable	Std.
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	Obs	Mean	Dev.	Min	Max
Travel time (hours) to visit Patwari in the past year (2 way)	123	2.96	4.29	0	24
Travel time (hours) to visit Girdawar Qanungo in the past year (2 way)	62	1.64	1.33	0	8
Travel time (hours) to visit Naib Tehsildar in the past year (2 way)	38	2.09	1.26	.08	6
Travel time (hours) to visit Tehsildar in the past year (2 way)	65	3.43	6.48	0	48
Travel time (hours) to visit AC in the past year (2 way)	22	5.54	10.15	0	40
Travel time (hours) to visit DC/ADCR (2 way)	100	3.73	5.96	0	45
Travel time (hours) to visit Commissioner in the past year (2 way)	3	3.67	.58	3	4
Travel time (hours) to visit BoR in the past year (2 way)	0	.	.	.	.
Total travelling time (hours) in the past year to meet Revenue Officers (2 way)	207	6.16	7.53	0	48

**Table 5D: Revenue Officers Sludge in Total Time - Wait Time & Travel Time - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Sludge (hours) spent per visit to Patwari in the past year	128	4.84	8.37	-2	46
Total Sludge (hours) spent per visit to Girdawar Qanungo in the past year	63	1.74	2.43	-2	9
Total Sludge (hours) spent per visit to Naib Tehsildar in the past year	41	3.54	3.23	-1	18.08
Total Sludge (hours) spent per visit to Tehsildar in the past year	69	4.63	6.89	-2	48
Total Sludge (hours) spent per visit to AC in the past year	24	5.74	10.5	-1.83	40
Total Sludge (hours) spent per visit to DC/ADCR in the past year	108	5.25	6.33	-2	46
Total Sludge (hours) spent per visit to Commissioner in the past year	3	5.33	1.53	4	7
Total Sludge (hours) spent per visit to BoR in the past year	0	.	.	.	.
Sludge in Total time (hours) spent visiting Revenue Officers in the past year	174	257.75	816.99	-48	9476
Sludge in Total time (hours) spent visiting Revenue Officers over entire case	174	1616.72	5781.33	-448	43152

**Table 5E: Revenue Officers: Sludge in Monetary Cost - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Money spent in the past year on Patwari	99	20123.61	47840.69	-3750	362689.81
Money spent in the past year on	36	7007.81	18056.9	-2500	71487.96

Girdawar Qanungo					
Money spent in the past year on Naib Tehsildar	22	21104.53	24363.08	-1750	95733.95
Money spent in the past year on Tehsildar	33	12865.63	24516.29	-2500	96983.95
Money spent in the past year on AC	20	21921.15	67563.95	-3000	302324.84
Money spent in the past year on DC/ADCR	80	69164.43	346042.55	-2500	3029748.5
Money spent in the past year on Commissioner	2	620303.43	835440.93	29557.48	1211049.4
Money spent in the past year on BoR	0	.	.	.	.
Total Sludge (Rs.) monetary cost from meeting Revenue Officers in the past year	194	53327.68	264697.18	-7000	3289817.5

**Table 5F: Revenue Officers: Sludge in Opportunity Cost in Rupees - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Opportunity cost (Rs) for litigant when meeting Patwari in the past year	82	6456.08	19529.39	-7000	166750
Opportunity cost (Rs) for litigant when meeting Girdawar Qanungo in the past year	53	3135.85	6867.1	-4848.96	35625
Opportunity cost (Rs) for litigant when meeting Naib Tehsildar in the past year	31	9402.05	13260.73	312.5	55380.21
Opportunity cost (Rs) for litigant when meeting Tehsildar in the past year	49	5646.83	6848.4	-1731.77	37125
Opportunity cost (Rs) for litigant when meeting AC in the past year	15	19507.78	40287.07	-375	150000.02
Opportunity cost (Rs) for litigant when meeting DC/ADCR in the past year	67	18529.28	30128.94	-750	170625
Opportunity cost (Rs) for litigant when meeting Commissioner in the past year	2	3984.38	2320.19	2343.75	5625
Opportunity cost (Rs) for litigant when meeting BOR in the past year	0	.	.	.	.
Total Opportunity cost (Rs) when meeting Revenue Officers in the past year	130	21583.11	34447.33	-4050	170625

**Table 5G: Revenue Officers: Sludge in terms of Total Rupees Spent - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Opportunity cost (Lakhs) from meetings with Patwari over entire case	82	.22	.93	-1.26	7.77
Total Opportunity cost (Lakhs) from meetings with Girdawar Qanungo over entire case	53	.21	1.18	-.87	8.55
Total Opportunity cost (Lakhs) from meetings with Naib Tehsildar over entire case	31	.68	2.06	0	9.97

Total Opportunity cost (Lakhs) from meetings with Tehsildar over entire case	49	.31	.71	-.31	3.38
Total Opportunity cost (Lakhs) from meetings with AC over entire case	15	.53	.99	-.02	3
Total Opportunity cost (Lakhs) from meetings with DC/ADCR over entire case	67	2.36	9.26	-.04	71.66
Total Opportunity cost (Lakhs) from meetings with Commissioner over entire case	2	.92	1.24	.05	1.8
Total Opportunity cost (Lakhs) from meetings with BoR over entire case	0	.	.	.	.
Total Opportunity cost (Lakhs) when meeting Revenue Officers over the entire case	130	1.8	7.18	-.12	71.66
Total Sludge (Lakhs) in Monetary Cost from meeting Revenue Officers over entire	194	4.74	36.28	-.79	408.64
Yearly Total Sludge (Lakhs) from meeting Revenue Officers	227	.58	2.56	-.07	34.06
Total Sludge (Lakhs) from meeting Revenue Officers over entire case	227	5.08	34.61	-.5	413.14

**Table 5H: Revenue Officers Sludge in Total Time - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Sludge time (days) spent on Patwari in the past year	104	1.68	5.79	- 1.33	55.58
Total Sludge time (days) spent on Girdawar Qanungo in the past year	60	.65	1.75	-.92	12.38
Total Sludge time (days) spent on Naib Tehsildar in the past year	36	2.04	3.87	0	20.63
Total Sludge time (days) spent on Tehsildar in the past year	63	1.37	2.46	-.33	16.5
Total Sludge time (days) spent on AC in the past year	17	3.08	4.88	-.06	16.67
Total Sludge time (days) spent on DC/ADCR in the past year	86	4	8.59	-.13	67.08
Total Sludge time (days) spent on Commissioner in the past year	2	1.27	.32	1.04	1.5
Total Sludge time (days) spent on BoR in the past year	0	.	.	.	.
Sludge in Total time (hours) spent visiting Revenue Officers in the past year	174	257.75	816.99	-48	9476

**Table 6: Sludge in Expenses - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Expense (Rs.) on Stamp Duty/Government Fee	40	157714.18	355494.38	1453.23	1672135.5

Total Expense (Rs.) on Revenue Court Staff/Clerks	23	58890.47	61158.62	3000	186782.8
Monthly Lawyer Fee (Rs.)	192	12461.03	25247.61	0	165922.45
Total Spent (Lakhs) on Lawyer Fee	192	3.57	19.22	0	254.59
Total Expenses (Lakhs): Stamp Duty, Revenue Court Staff/Clerks & Food	63	1.26	2.93	0	16.72
Yearly Expenses (Lakhs): Stamp Duty, Revenue Court Staff/Clerks & Food	63	.49	2.05	0	16.16
Total Sludge (Lakhs) from expenses: Lawyer Fees, Revenue Court Staff & Food	202	3.48	18.76	0	254.59
Yearly Sludge (Lakhs) from expenses: Lawyer Fees, Revenue Court Staff & Food	202	1.44	2.97	0	19.91

**Table 7: Sludge in Document Collection from Patwari - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Money (Rs.) spent on Patwari in the past year	99	20123.61	47840.69	-3750	362689.81
Sludge in visits to Patwari for document collection in the past year	81	6.68	10.75	-1	86
Travel Time (hours) per visit to meet Patwari for documents (2 way)	93	3.49	6	0	48
Sludge in Wait Time (hours) per visit for document collecting purposes from Patwari	91	2.08	4.74	-2	22
Sludge in Opportunity Cost due to document collection from Patwari in the past year	68	8987.15	28600.21	-29687.5	172000
Sludge in total visits to Patwari for document collection over entire case	73	14.89	17.04	0	89
Sludge in Collection Time (hours) to get documents from Patwari after application submission	57	430.21	2688.58	-359	17784
Sludge in Total travel & wait time (hours) spent on document collection from Patwari	68	76.19	113.96	-4	534
Sludge in Total time spent (days) on document collection from Patwari over entire case	76	16.28	96.75	-14.92	741
Sludge in Total Opportunity Cost due to document collection from Patwari over entire case	61	18121.82	34146.28	-875	184375

**Table 8: Summary Statistics: Document Collection from Arazi Record Center - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Fees paid to get documents from Arazi Record Center	81	5463.02	22845.5	0	200000
Average travel cost per visit to Arazi Record	103	3559.76	5247.44	0	25000

Center (2 way)					
Sludge in Visits to Arazi Record Center for document collection purposes in the past year	96	6.36	14.54	-1	129
Sludge in Time Taken (days) to get documents from Arazi Record Center after application submission	120	27.52	190.85	-1	1799
Sludge in Time Taken (days) to get documents before Arazi Record Center existed	57	17.93	112.02	-14.96	741
Sludge in Wait Time (hours) per visit for collecting documents from Arazi Record Center	116	1.58	3.55	-2	22
Travel Time (hours) per visit to go to Arazi Record Center (2 way)	112	5.18	11.9	0	72
Sludge in Opportunity Cost (Rs.) from document collection from Arazi Record Center in the past year	76	7803.87	23299.16	-1406.25	170625
Sludge in Total Visits to Arazi Record Center for documents collection over entire case	90	15.12	26.52	0	149
Sludge in Total Wait and Travel time (hours) spent on Arazi Record Center for document collection	85	80.86	147.48	-6	695
Sludge in Total time (days) on Arazi Record Center for document collection	121	29.66	189.84	-1	1799
Sludge in Total Opportunity Cost (Rs.) from document collection from Arazi Record Center over entire case	72	14191.39	30668.66	-1687.5	170625

**Table 9: Total Sludge in Time Taken - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Sludge in time taken (months) to gather information before filing case	244	2.14	3.23	-0.23	14.77
Total Sludge (months) when gathering documents	233	7.01	47.51	-1.86	539
Sludge in number of days taken to set first hearing after submitting case documents	233	42.65	266.69	-30	3570
Sludge in total time spent (hours) travelling due to hearings in a month	192	23.34	79.48	-10.14	816
Sludge in Total time (hours) spent visiting Revenue Officers in the past year	174	257.75	816.99	-48	9476
Sludge in Total time spent (days) on document collection from Patwari over entire case	76	16.28	96.75	-14.92	741
Sludge in Total time (days) on Arazi Record Center for document collection	121	29.66	189.84	-1	1799

**Table 10: Total Sludge in Rupees - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Opportunity Cost (Rs.) of gathering information	166	81099.26	148789.12	-112500	1130000
Total Sludge (Rs.) from document collection	229	44581.32	166232.16	-1000	1860625.1
Yearly Sludge (Rs.) incurred due to hearings	196	71195.91	191745.44	-60833.33	1728000
Yearly Total Sludge (Lakhs) from meeting Revenue Officers	227	.58	2.56	-.07	34.06
Yearly Sludge (Lakhs) from expenses: Lawyer Fees, Revenue Court Staff & Food	202	1.44	2.97	0	19.91
Sludge in Total Opportunity Cost due to document collection from Patwari over entire case	61	18121.82	34146.28	-875	184375
Sludge in Total Opportunity Cost (Rs.) from document collection from Arazi Record Center over entire case	72	14191.39	30668.66	-1687.5	170625

**Table 11: Summary Statistics: Stress - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Was it easy to get your documents?	242	3.61	1.12	1	5
How satisfied are you with your documents?	255	2.09	.65	1	5
Are you stressed due to your hearings or due to your hearings being adjourned?	240	4.15	.78	1	5
How stressed are you due to this case?	279	4.09	.9	1	5
Documents/paperwork required in case: are they reasonable or just a waste of time & money?	249	2.46	1.54	1	5
How stressful was it to visit or go to the Arazi Record Center?	123	2.86	1.33	1	5
How stressful was it to meet Patwari	135	3.54	1.08	1	5
How stressful was it to meet Girdawar Qanungo	63	3.79	.92	2	5
How stressful was it to meet Naib Tehsildar	41	3.93	.88	1	5
How stressful was it to meet Tehsildar	70	3.29	1.18	1	5
How stressful was it to meet AC	24	2.58	1.02	1	4
How stressful was it to meet DC/ADCR	111	3.31	1.35	1	5
How stressful was it to meet Commissioner	3	4.33	.58	4	5
How stressful was it to meet BoR	0	.	.	.	.

Note: The higher the values the more stressed/dissatisfied a person. The Likert scale for the stress questions is as follows: 1 "No stress" 2 "A little stress" 3 "Neither stressful nor unstressful" 4 "High Stress" 5 "Extreme Stress"

**Table 12: Ideal Outcomes**

	Value
<b>Step 1: Gathering Information</b>	
Ideal Time (hours) to gather information before filing case	168
<b>Step 2: Document Collection</b>	
Ideal Time (hours) spent to get Domicile, CNIC & FIR each	168
Ideal Time (hours) spent to get Fard Malkiat, Jamabandi, Khasra Girdawri & Shajra Nasb each	360
Ideal waiting time (hours) per visit in office for documents	2
Ideal money (Rs.) spent on Domicile, CNIC, Fard Malkiat, Jamabandi, Khasra Girdawri each	500
Ideal money (Rs.) spent on FIR	0
Ideal number of visits to offices for each document	1
<b>Step 3: Hearings</b>	
Ideal Time (days) after which first hearing should be held	30
Ideal number of times hearing set	5
Ideal number of times hearings heard	5
Ideal number of visits to court by the litigant in the past year	2
Ideal total visits to court by the litigant over entire case	2
<b>Step 4: Expenses</b>	
Ideal money (Rs.) spent on lawyer fees, travel, or revenue court staff/clerks etc.	0
<b>Step 5A: Arazi Record Center: Document Collection</b>	
Ideal Time (hours) taken to get documents from Arazi Record Center after application submission	24

Ideal Time (hours) taken to get documents before Arazi Record Center existed	360
Ideal fees (Rs.) paid to Arazi Record Center clerks/staff	0
Ideal number of visits to Arazi Record Center for document collection in the past year	1
Ideal total visits to Arazi Record Center for document collection	1
Ideal wait time (hours) per visit in Arazi Record Center for document collection	2
<b>Step 5B: Patwari: Document Collection</b>	
Ideal number of visits to Patwari for document collection	1
Ideal total visits to Patwari for document collection	1
Ideal wait time (hours) per visit to Patwari for document collection	2
<b>Step 6: Revenue Officers Meetings</b>	
Ideal number of visits to Revenue Officers in the past year	1
Ideal total visits to Revenue Officers over entire case	1
Ideal money (Rs.) spent on meetings with Revenue Officers	1 day income
Ideal wait time (hours) spent waiting for Revenue Officers in their office	2

**Table 13: Sludge as a percentage of income - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Opportunity Cost (Rs.) of gathering information	166	81099.26	148789.12	-112500	1130000
Total Sludge (Rs.) from document collection	229	44581.32	166232.16	-1000	1860625.1
Yearly Sludge (Rs.) incurred due to hearings	196	71195.91	191745.44	-60833.33	1728000
Yearly Sludge (Rs) from expenses: Lawyer Fees, Revenue Court Staff & Food	202	143901.28	296516.27	0	1991069.4
Yearly Sludge (Rs.) from meeting	227	57935.56	255553.09	-6750	3405755.3



Revenue Officers					
Total Yearly Sludge (Rs) from all steps	279	250486.96	422667.16	-	3412748.3
				60833.33	
Yearly Sludge (Rs.) - excluding one-time costs	283	198494.1	383729.61	-	3405755.3
				60833.33	
Total Sludge (Rs.) from all steps over entire case so far	279	872487.47	3804809.3	-16750	41717832
Total Yearly Income (Rs.)	191	427413.81	370557.7	0	3600000
Share (%) of income: Opportunity Cost (Rs.) of gathering information	165	.19	.29	-.02	1.23
Share (%) of income: Total Sludge (Rs.) from document collection	160	.11	.35	0	3.1
Share (%) of income: Yearly Sludge (Rs.) incurred due to hearings	147	.21	.45	-.14	2.88
Share (%) of income: Yearly Sludge (Rs) from expenses: Lawyer Fees, Revenue Court Staff & Food	128	.44	1.27	0	10.56
Share (%) of income: Yearly Sludge (Rs.) from meeting Revenue Officers	164	.24	1.21	-.02	14.19
Total Sludge (%) of income - including one-time costs	189	.84	1.73	-.06	14.22
Yearly Sludge (%) of income - excluding one-time costs	189	.67	1.63	0	14.19
Monthly Income in Rupees	192	38036.47	45516.5	0	500000

**Table 14: Opportunity Cost of Disputed Territory - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Sugarcane Production in maunds lost in Kasur due to case	40	22092.82	47145.51	28.64	206782.84
Total Sugarcane Production in maunds lost in Toba Tek Singh due to case	55	22127.46	33338.36	262.5	157101.23
Total Sugarcane Production in maunds lost in Kasur & Toba Tek Singh due to case	95	22112.87	39505.37	28.64	206782.84
Total Sugarcane Output (Lakhs) lost in Kasur due to case	40	77.68	170.45	.1	772.05
Total Sugarcane Output (Lakhs) lost in Toba Tek Singh due to case	55	75.92	114.88	.95	550.24
Total Sugarcane Production (Lakhs) lost in Kasur & Toba Tek Singh due to case	95	76.66	140.13	.1	772.05
Total Sugarcane Production Cost (Lakhs) in Kasur (2001 onwards)	40	56.79	127.91	.07	570.01
Total Sugarcane Production Cost (Lakhs) in Toba Tek Singh (2001 onwards)	55	56.46	88.94	.61	436.34
Total Sugarcane Production Cost (Lakhs) in Kasur & Toba Tek Singh (2001 onwards)	95	56.6	106.45	.07	570.01
Total Profit (Lakhs) from Sugarcane in Kasur (2001 onwards)	40	20.89	43.32	.04	202.04
Total Profit (Lakhs) from Sugarcane in Toba Tek Singh (2001 onwards)	55	19.46	26.35	.34	113.91

Total Profit (Lakhs) from Sugarcane in Kasur & Toba Tek Singh (2001 onwards)	95	20.06	34.32	.04	202.04
Yearly Total Sugarcane Production in maunds lost in Kasur due to case	40	3596.05	5302.76	28.64	18418.79
Yearly Total Sugarcane Production in maunds lost in Toba Tek Singh due to case	55	5507.89	6060.99	158.25	26066.36
Yearly Total Sugarcane Production in maunds lost in Kasur & Toba Tek Singh due to case	95	4702.91	5802.62	28.64	26066.36
Yearly Total Sugarcane Output (Lakhs) lost in Kasur due to case	40	12.61	18.61	.1	64.34
Yearly Total Sugarcane Output (Lakhs) lost in Toba Tek Singh due to case	55	18.89	20.48	.53	87.34
Yearly Total Sugarcane Production (Lakhs) lost in Kasur & Toba Tek Singh due to case	95	16.24	19.86	.1	87.34
Yearly Total Profit (Lakhs) from Sugarcane in Kasur (2001 onwards)	40	3.62	5.19	.04	18.75
Yearly Total Profit (Lakhs) from Sugarcane in Toba Tek Singh (2001 onwards)	55	5.31	5.58	.14	23.12
Yearly Total Profit (Lakhs) from Sugarcane in Kasur & Toba Tek Singh (2001 onwards)	95	4.6	5.46	.04	23.12

**Table 15: Sludge as a Percentage of GDP - Punjab**

Variable	Obs	Mean	Std. Dev.	Min	Max
Average Cost of Sludge Per Litigant in a Year (all steps)	36	710099.69	0	710099.69	710099.69
Average Cost of Sludge Per Litigant in a Year (excluding one-time costs)	36	658106.81	0	658106.81	658106.81
Total Cases in Punjab that are more than 12 months old (1 Jan 2022 - 31 Dec2022)	36	65396	0	65396	65396
Cost of Sludge in million rupees in Punjab (all steps)	36	46437.68	0	46437.68	46437.68
Cost of Sludge in million rupees in Punjab (excluding one-time costs)	36	43037.551	0	43037.551	43037.551
Sludge as a percentage of GDP per year in Punjab (all steps)	36	.092	0	.092	.092
Sludge as a percentage of GDP per year in Punjab (excluding one-time costs)	36	.085	0	.085	.085
Sludge as a percentage of Pakistan's Agricultural GDP per year for Punjab (all steps)	36	.402	0	.402	.402
Sludge as a percentage of Pakistan's Agricultural GDP per year for Punjab (excluding one-time costs)	36	.372	0	.372	.372
Sludge as a percentage of Crop GDP per year for Punjab (all steps)	36	1.192	0	1.192	1.192
Sludge as a percentage of Crop GDP per year for Punjab (excluding one-time costs)	36	1.105	0	1.105	1.105
Value of disputed territory in Punjab as a	36	1.946	0	1.946	1.946

percentage of GDP per year					
Value of disputed territory in Punjab as a percentage of Real Estate Activities GDP per year	36	33.851	0	33.851	33.851
Value of disputed territory in Punjab as a percentage of Punjab GDP per year	36	3.591	0	3.591	3.591
Sludge as a percentage of Punjab's Agricultural GDP per year (all step)	36	.741	0	.741	.741
Sludge as a percentage of Punjab's Agricultural GDP per year (excluding one-time costs)	36	.687	0	.687	.687

**Table 16: List of Districts of Punjab used for GDP as a Percentage of Sludge Calculation**

1. Bahawalnagar	10. Bahawalpur	19. Mandi	28. Khanewal
2. Dera Ghazi Khan	11. Rahim Yar Khan	Bahauddin	29. Chakwal
3. Toba Tek Singh	12. Rajanpur	20. Gujrat	30. Attock
4. Gujranwala	13. Layyah	21. Sialkot	31. Rawalpindi
5. Nankana Sahib	14. Muzaffargarh	22. Narowal	32. Okara
6. Multan	15. Chiniot	23. Kasur	33. Pakpattan
7. Jehlum	16. Jhang	24. Lahore	34. Bhakkar
8. Sahiwal	17. Faisalabad	25. Sheikhpura	35. Khushab
9. Sargodha	18. Hafizabad	26. Vehari	36. Mianwali
		27. Lodhran	

**KPK TABLES**

**Table 17A: Document Collection Summary Statistics: Visits - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Visits to office for Jamabandi	9	2.11	1.27	1	4
Total Visits to office for Fard Malkiat	22	15.86	43.91	1	200
Total Visits to office for Khasra Girdawari	11	18.64	51.92	1	175
Total Visits to office for Shajra Nasb	2	3	1.41	2	4
Total Visits to offices get all documents	23	25.17	77.67	2	375

**Table 17B: Document Collection Summary Statistics: Agency Time - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Time Taken in months to collect Jamabandi (KPK)	18	2.25	5.59	.03	24
Time Taken in months to collect Fard Malkiat (KPK)	33	1.53	4.26	0	24
Time Taken in months to collect Khasra Girdawari (KPK)	17	.93	1.44	.03	5
Time Taken in months to collect Shajra Nasb (KPK)	7	.36	.45	0	1
Total Time Taken in months to collect all documents	33	3.31	8.6	0	48

**Table 17C: Document Collection Summary Statistics: Wait Time - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Waiting Time (hours) in office for Jamabandi (KPK)	15	2.4	1.76	1	6
Waiting Time (hours) in office for Fard Malkiat (KPK)	27	2.5	1.74	.08	6
Waiting Time (hours) in office for Khasra Girdawari (KPK)	15	2.52	2.01	.67	6
Waiting Time (hours) in office for Shajra Nasb (KPK)	5	3	2	1	6
Total Waiting Time (hours) in office for all documents	28	5.59	5.17	.08	24

**Table 17D: Document Collection Summary Statistics: Travel Time - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Time taken (hours) to travel to office for Jamabandi	15	1.97	1.32	0	6
Time taken (hours) to travel to office for Fard Malkiat	27	4.94	11.85	.67	60
Time taken (hours) to travel to office for Khasra Girdawari	14	2.03	1.35	.83	6
Time Taken (hours) for office visit for Shajra Nasb (KPK)	4	2.75	2.22	1	6
Total Travel Time (hours) to visit office for documents (2 way)	29	6.97	11.66	0	60

**Table 17E: Document Collection Summary Statistics: Total Time: Wait Time + Travel Time + Agency Time - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Time (months) spent by litigant on gathering documents	33	3.61	8.71	0	48
Total Time (months) for Jamabandi (agency time + wait time + travel time)	18	2.25	5.59	.04	24
Total Time (months) for Fard Malkiat (agency time + wait time + travel time)	33	1.78	4.44	0	24
Total Time (months) for Khasra Girdawari (agency time + wait time + travel time)	17	1.02	1.67	.03	6.26
Total Time (months) for Shajra Nasb (agency time + wait time + travel time)	7	.37	.45	0	1

**Table 18A : Document Collection Sludge in terms of time - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Sludge (months) for Fard Malkiat	33	1.28	4.44	-.5	23.5
Total Sludge (months) for Jamabandi	18	1.75	5.59	-.46	23.5
Total Sludge (months) for Khasra Girdawari	17	.52	1.67	-.47	5.76
Total Sludge (months) for Shajra Nasb	7	-.13	.45	-.5	.5
Total Sludge (months) when gathering documents	33	2.48	8.72	-1.81	47

**Table 18B: Document Collection Sludge in terms of Rupees**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Opportunity (Rs.) cost borne by litigant for Jamabandi	6	6473.96	14458.81	0	35937.5
Total Opportunity (Rs.) cost borne by litigant for Fard Malkiat	16	39421.22	141518.9	0	569125
Total Opportunity (Rs.) cost borne by litigant for Khasra Girdawari	8	5989.06	12511.35	0	35937.5
Total Opportunity (Rs.) cost borne by litigant for Shajra Nasb	1	450	.	450	450
Total Money (Rs.) Spent on Jamabandi	8	184677.28	421987.09	373.11	1225415.5
Total Money (Rs.) Spent on Fard Malkiat	24	25007.77	40795.02	-500	141529.52
Total Money (Rs.) Spent on Khasra Girdawari	10	30419.26	34243.75	373.11	85543.2
Total Money (Rs.) Spent on Shajra Nasb (KPK)	5	35954.86	40669.8	-500	85543.2
Total Opportunity Cost (Rs.) for litigant due to document collection	17	42232.11	138182.9	0	569125
Total Monetary Cost (Rs.) spent on documents	25	102462.86	251066.48	-500	1225415.5
Total Sludge (Rs.) from document collection	29	113086.8	260651.73	-253.78	1225415.5

**Table 19: Sludge in Hearings - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Travel time (hours) to court per visit (2 way)	30	12.02	12.13	.25	36
Average Travel Cost (Rs.) per visit to court or office	34	1989.71	3480.11	0	20000
Sludge in total cost (Rs.) of travelling to court/offices	17	191664.71	400043.52	0	1490000
Sludge (days) taken to set first hearing after submitting case documents	26	100.85	249.74	-24	1050
Opportunity cost (Rs) of travelling per month due to hearings or office visits	11	1526.43	2611.76	35.72	9114.58
Sludge in total number of times hearings set for the case	18	49.5	109.77	-3	475
Sludge in total number of times hearings were held on the date they were set	18	5.61	23.09	-5	95
Sludge in total number of visits to court or offices due to this case	17	81.76	151.23	1	598
Sludge in total time (hours) spent travelling due to hearings over entire case	15	171.37	368.76	.83	1392
Sludge in total time (hours) spent travelling due to hearings in a month	14	4.43	5.51	.29	22
Total opportunity cost (Rs.) for the litigant due to hearings or office visits	12	56656.25	129367.5	208.33	437500
Yearly Sludge (Rs.) incurred due to hearings	16	67862.86	96567.33	428.69	384848.97
Total Sludge (Rs.) incurred due to hearings	17	231657.35	401674.82	875	1490000

**Table 20A: Revenue Officers: Sludge in Visits - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Number of Revenue Officers Met in the past year (KPK)	35	2.03	2.09	0	6
Visits to Patwari in the past year (KPK)	20	15.9	23.3	-1	99
Visits to Girdawar Qanungo in the past year (KPK)	14	6.43	11.81	-1	34
Visits to Naib Tehsildar in the past year (KPK)	11	14.18	27.46	-1	89
Visits to Tehsildar in the past year (KPK)	12	10	14.85	-1	49
Visits to AC in the past year (KPK)	12	9.42	9.25	-1	29
Visits to DC/ADCR in the past year	1	1	.	1	1
Visits to Commissioner in the past year (KPK)	0	.	.	.	.
Visits to BoR in the past year (KPK)	1	2	.	2	2
Total visits to Revenue Officers in the past year	23	34.78	49.75	-5	221

**Table 20B: Revenue Officers Sludge in Waiting Time - KPK**

Variable	Std.
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	Obs	Mean	Dev.	Min	Max
Wait time (hours) in office when visiting Patwari in the past year (KPK)	16	2.41	5.54	- 1.67	22
Wait time (hours) in office when visiting Girdawar Qanungo in the past year (KPK)	10	2.23	7.12	- 1.33	22
Wait time (hours) in office when visiting Naib Tehsildar in the past year (KPK)	7	5.88	11.04	-1.5	22
Wait time (hours) in office when visiting Tehsildar in the past year (KPK)	9	-.63	.85	- 1.83	1
Wait time (hours) in office when visiting AC in the past year (KPK)	10	2.82	6.97	- 1.67	22
Wait time (hours) in office when visiting DC/ADCR in the past year	2	1	2.83	-1	3
Wait time (hours) in office when visiting Commissioner in the past year (KPK)	0	.	.	.	.
Wait time (hours) in office when visiting BoR in the past year (KPK)	1	3	.	3	3
Total waiting time (hours) to meet Revenue Officers in the past year	20	6.17	15.79	- 6.67	67

**Table 20C: Revenue Officers: Travel Time - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Travel time (hours) spent per visit to meet Patwari in the past year (2 way) (KP)	17	4.66	7.76	.13	25.5
Travel time (hours) spent per visit to meet Girdawar Qanungo in the past year (2	11	3.58	7.3	.75	25.5
Travel time (hours) spent per visit to meet Naib Tehsildar in the past year (2 w	7	1.37	.88	.67	3.12
Travel time (hours) spent per visit to meet Tehsildar in the past year (2 way) (	11	3.51	7.33	.33	25.5
Travel time (hours) spent per visit to meet AC in the past year (2 way) (KPK)	11	1.46	.71	.83	3.05
Travel time (hours) to visit DC/ADCR in the past year (2 way)	2	1.5	.71	1	2
Travel time (hours) spent per visit to meet Commissioner in the past year (2 way	0	.	.	.	.
Travel time (hours) spent per visit to meet BoR in the past year (2 way) (KPK)	1	2	.	2	2
Total travelling time (hours) in the past year to meet Revenue Officers (2 way)	19	9.89	17.1	.13	76.5

**Table 20D: Revenue Officers Sludge in Total Time - Wait Time & Travel Time - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Sludge (hours) spent per visit to Patwari in the past year	17	6.92	9.5	-1.53	28.5

Total Sludge (hours) spent per visit to Girdawar Qanungo in the past year	11	5.62	9.43	-.58	25.5
Total Sludge (hours) spent per visit to Naib Tehsildar in the past year	8	6.35	10.05	-.67	23
Total Sludge (hours) spent per visit to Tehsildar in the past year	11	2.99	7.26	-1.5	24.5
Total Sludge (hours) spent per visit to AC in the past year	11	4.02	7.26	-.67	25.05
Total Sludge (hours) spent per visit to DC/ADCR in the past year	2	2.5	2.12	1	4
Total Sludge (hours) spent per visit to Commissioner in the past year	0	.	.	.	.
Total Sludge (hours) spent per visit to BoR in the past year	1	5	.	5	5
Sludge in Total time (hours) spent visiting Revenue Officers in the past year	17	935.15	2024.2	-150	8269.08
Sludge in Total time (hours) spent visiting Revenue Officers over entire case	16	3347.8	7541.66	-	29370
				15.33	

**Table 20E: Revenue Officers: Sludge in Monetary Cost - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Money (Rs.) spent on Patwari in the past year (KPK)	18	10882.75	15255.54	-	47741.98
Total Money (Rs.) spent on Girdawar Qanungo in the past year (KPK)	9	6274.28	8721.51	-1363.1	23120.99
Total Money (Rs.) spent on Naib Tehsildar in the past year (KPK)	7	25886.57	43676.75	-787.7	120229.94
Total Money (Rs.) spent on Tehsildar in the past year (KPK)	11	17164.95	35993.53	-5000	120479.94
Total Money (Rs.) spent on AC in the past year (KPK)	9	5399.57	8179.06	-2000	22745.99
Total Money (Rs.) spent in the past year on DC/ADCR	2	23795.99	33652.61	0	47591.98
Total Money (Rs.) spent on Commissioner in the past year (KPK)	1	0	.	0	0
Total Money (Rs.) spent on BoR in the past year (KPK)	1	0	.	0	0
Total Sludge (Rs.) monetary cost from meeting Revenue Officers in the past year	21	34217.45	49212.17	-	179594.91
				18938.5	

**Table 20F: Revenue Officers: Sludge in Opportunity Cost in Rupees - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Opportunity cost (Rs) for litigant when meeting Patwari in the past year	11	242763.45	776249.35	-3750	2582812.5
Opportunity cost (Rs) for litigant when	7	11565.77	30086.81	-	79687.5



meeting Girdawar Qanungo in the past year				1822.92	
Opportunity cost (Rs) for litigant when meeting Naib Tehsildar in the past year	4	60649.74	122739.76	-	244750
Opportunity cost (Rs) for litigant when meeting Tehsildar in the past year	5	-926.56	2037.19	-4500	416.67
Opportunity cost (Rs) for litigant when meeting AC in the past year	8	4422.53	6488.2	-	18125
Opportunity cost (Rs) for litigant when meeting DC/ADCR in the past year	1	218.75	.	218.75	218.75
Opportunity cost (Rs) for litigant when meeting Commissioner in the past year	0	.	.	.	.
Opportunity cost (Rs) for litigant when meeting BoR in the past year	1	2187.5	.	2187.5	2187.5
Total Opportunity cost (Rs) when meeting Revenue Officers in the past year	13	232854.69	733106.46	-	2662500
				9114.58	

**Table 20G: Revenue Officers: Sludge in terms of Total Rupees Spent - KPK**

Variable	Obs	Mean	Std.		Max
			Dev.	Min	
Total Opportunity cost (Lakhs) from meetings with Patwari over entire case	11	9.61	31.08	-.07	103.31
Total Opportunity cost (Lakhs) from meetings with Girdawar Qanungo over entire case	7	.46	1.2	0	3.19
Total Opportunity cost (Lakhs) from meetings with Naib Tehsildar over entire case	4	9.18	18.36	0	36.71
Total Opportunity cost (Lakhs) from meetings with Tehsildar over entire case	5	-.02	.04	-.09	.01
Total Opportunity cost (Lakhs) from meetings with AC over entire case	8	.08	.13	0	.36
Total Opportunity cost (Lakhs) from meetings with DC/ADCR over entire case	1	0	.	0	0
Total Opportunity cost (Lakhs) from meetings with Commissioner over entire case	0	.	.	.	.
Total Opportunity cost (Lakhs) from meetings with BoR over entire case	1	.01	.	.01	.01
Total Opportunity cost (Lakhs) when meeting Revenue Officers over the entire case	13	11.25	30.34	-.07	106.5
Total Sludge (Lakhs) in Monetary Cost from meeting Revenue Officers over entire	21	2.54	7.92	-3.5	32.33
Yearly Total Sludge (Lakhs) from meeting Revenue Officers	22	1.7	5.59	-.1	26.44
Total Sludge (Lakhs) from meeting Revenue Officers over entire case	22	9.07	25.3	-3.5	105.74

**Table 20H: Revenue Officers Sludge in Total Time - KPK**

Variable	Obs	Mean	Std.		Max
			Dev.	Min	

Total Sludge time (days) spent on Patwari in the past year	15	5.04	9.19	-.32	34.44
Total Sludge time (days) spent on Girdawar Qanungo in the past year	11	.55	1.35	-.4	4.39
Total Sludge time (days) spent on Naib Tehsildar in the past year	8	10.85	28.64	-.29	81.58
Total Sludge time (days) spent on Tehsildar in the past year	10	.51	2.08	-1.5	6.26
Total Sludge time (days) spent on AC in the past year	11	.7	.96	-.25	2.5
Total Sludge time (days) spent on DC/ADCR in the past year	1	.04	.	.04	.04
Total Sludge time (days) spent on Commissioner in the past year	0	.	.	.	.
Total Sludge time (days) spent on BoR in the past year	1	.42	.	.42	.42
Sludge in Total time (hours) spent visiting Revenue Officers in the past year	17	935.15	2024.2	-	8269.08
				150	

**Table 21: Sludge in Expenses - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Expense (Rs.) on Stamp Duty/Government Fee	9	120716.93	340096.55	0	1027402.3
Total Expense (Rs.) on Revenue Court Staff/Clerks	3	42684	58390.71	5256.76	109965.88
Monthly Lawyer Fee (Rs.)	29	9214.64	15720.19	0	77430.48
Total Spent (Lakhs) on Lawyer Fee	29	1.62	2.27	0	12.08
Total Expenses (Lakhs): Stamp Duty 7 Revenue Court Staff/Clerks	11	1.1	3.06	0	10.27
Yearly Expenses (Lakhs): Stamp Duty & Revenue Court Staff/Clerks	9	.2	.38	0	1.08
Total Sludge (Lakhs) from expenses: Lawyer Fees & Revenue Court Staff	30	1.61	2.28	0	12.08
Yearly Sludge (Lakhs) from expenses: Lawyer Fees & Revenue Court Staff	30	1.11	1.91	0	9.29

**Table 22: Sludge in Document Collection from Patwari - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Money (Rs.) spent on Patwari in the past year	18	10882.75	15255.54	-	47741.98
Sludge in visits to Patwari for document collection in the past year	7	12.86	17.19	18938.5	49
Travel Time (hours) per visit to meet Patwari for documents (2 way)	8	14.06	33.15	1	96
Sludge in Wait Time (hours) per visit for	7	1.29	2.21	-1	4

document collection from Patwari Sludge in Opportunity Cost due to document collection from Patwari in past year	3	7379.17	12553.77	112.5	21875
Sludge in Total Visits to Patwari for document collection over entire case	2	7.5	9.19	1	14
Sludge in Collection Time (hours) to get documents from Patwari after application submission	17	141.41	663.34	-359	1800
Sludge in Total travel & wait time (hours) spent on document collection from Patwari	2	28.5	38.89	1	56
Sludge in Total time spent (days) on document collection from Patwari	18	5.7	26.83	-14.96	75
Sludge in Total Opportunity Cost due to document collection from Patwari over entire case	1	150	.	150	150

**Table 23: Sludge in Document Collection from Arazi Record Center - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Fees paid (Rs.) to get documents from Arazi Record Center	9	2344.44	2150.06	200	6000
Average travel cost per visit to Arazi Record Center (2 way)	18	2175	2393.27	150	10000
Sludge in Visits to Arazi Record Center for document collection in the past year	12	13.83	17.39	1	59
Sludge in Time Taken (days) to get documents from Arazi Record Center after application submission	21	8.46	20.88	-.96	89
Sludge in Time Taken (days) to get documents before Arazi Record Center existed	17	5.89	27.64	-14.96	75
Sludge in Wait Time (hours) per visit on document collection from Arazi Record Center	15	2.57	5.69	-1	22
Travel Time (hours) per visit to go to Arazi Record Center (2 way)	13	3.9	6.16	1	24
Sludge in Opportunity Cost (Rs.) from document collection from Arazi Record Center in the past year	6	5001.56	10418.77	125	26250
Sludge in Total Visits to Arazi Record Center for documents collection over entire case	7	3.86	2.97	1	9
Sludge in Total Wait & Travel time (hours) spent on Arazi Record Center for documents	7	18.39	29.35	1.75	84
Sludge in Total time (days) spent on Arazi Record Center for document collection	21	8.72	20.91	-.96	89.63
Sludge in Total Opportunity Cost (Rs.) from document collection from Arazi Record Center over entire case	6	5101.56	10377.78	125	26250

**Table 24: Total Sludge in Time Taken - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Sludge in time taken (months) to gather information before filing case	29	4.73	7.68	-.1	35.77
Total Sludge (months) when gathering documents	33	2.48	8.72	-1.81	47
Sludge (days) taken to set first hearing after submitting case documents	26	100.85	249.74	-24	1050
Sludge in total time (hours) spent travelling due to hearings in a month	14	4.43	5.51	.29	22
Sludge in Total time (hours) spent visiting Revenue Officers in the past year	17	935.15	2024.2	-150	8269.08
Sludge in Total time spent (days) on document collection from Patwari over entire case	18	5.7	26.83	-	75
Sludge in Total time (days) spent on Arazi Record Center for document collection	21	8.72	20.91	-96	89.63

**Table 25: Total Sludge in Rupees - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Opportunity Cost (Rs.) of gathering information	21	238050.8	522885.08	-1000	2376666.8
Total Sludge (Rs.) from document collection	29	113086.8	260651.73	-	1225415.5
Yearly Sludge (Rs.) incurred due to hearings	16	67862.86	96567.33	428.69	384848.97
Yearly Total Sludge (Lakhs) from meeting Revenue Officers	22	1.7	5.59	-.1	26.44
Yearly Sludge (Lakhs) from expenses: Lawyer Fees & Revenue Court Staff	30	1.11	1.91	0	9.29
Sludge in Total Opportunity Cost due to document collection from Patwari over entire case	1	150	.	150	150
Sludge in Total Opportunity Cost (Rs.) from document collection from Arazi Record Center over entire case	6	5101.56	10377.78	125	26250

**Table 26: Sludge as a percentage of income for KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Opportunity Cost (Rs.) of gathering information	21	238050.8	522885.08	-1000	2376666.8
Total Sludge (Rs.) from document collection	29	113086.8	260651.73	-253.78	1225415.5
Yearly Sludge (Rs.) incurred due to hearings	16	67862.86	96567.33	428.69	384848.97
Yearly Sludge (Rs) from expenses: Lawyer Fees & Revenue Court Staff	30	110786.05	190566.3	0	929165.63
Yearly Sludge (Rs.) from meeting Revenue Officers	22	170258.07	558553.68	-10000	2643561.5
Total Yearly Sludge (Rs) from all steps	31	306834.14	540242.91	12412.48	2851491.5
Yearly Sludge (Rs.) - excluding one time costs	31	263066.6	527161.07	-10000	2803705
Total Sludge (Rs.) from all steps over entire case so far	34	1088511.8	2357191.4	13892.99	11405966
Total Yearly Income (Rs.)	24	510750	351621.25	120000	1200000
Share (%) of income: Opportunity Cost (Rs.) of gathering information	20	.42	.75	-.01	2.98
Share (%) of income: Total Sludge (Rs.) from document collection	19	.23	.68	0	2.96
Share (%) of income: Yearly Sludge (Rs.) incurred due to hearings	12	.2	.24	0	.75
Share (%) of income: Yearly Sludge (Rs) from expenses: Lawyer Fees & Revenue Court Staff	21	.4	.92	0	4.3
Share (%) of income: Yearly Sludge (Rs.) from meeting Revenue Officers	18	.22	.4	-.01	1.52
Total Sludge (%) of income - including one time costs	22	.79	1.32	.04	6.11
Yearly Sludge (%) of income - excluding one time costs	22	.66	1.17	-.01	5.27
Total Income (Rs.) earned in a month	25	60860	95878.99	10000	500000

**Table 27: Opportunity Cost of Disputed Territory in KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Rice Production in maunds lost in KPK due to case	24	4347.76	12640.88	12.38	61986.75
Total Wheat Production in maunds lost in KPK due to case	24	3216.48	9235.04	9.11	45225.25
Total Rice & Wheat Production in maunds lost in KPK due to case	24	7564.24	21875.5	21.49	107212
Total Rice Output (Lakhs) lost in KPK due to	24	130.82	329.32	.36	1584.05

case					
Total Wheat Output (Lakhs) lost in KPK due to case	24	85.8	233.69	.28	1138.4
Total Rice & Wheat Production (Lakhs) lost in KPK due to case	24	216.62	562.73	.64	2722.44
Total Rice Production Cost (Lakhs) in KPK (2001-2021)	24	102.51	257.83	.29	1240.19
Total Wheat Production Cost (Lakhs) in KPK (2001-2021)	24	57.18	139.5	.21	667.28
Total Rice & Wheat Production Cost (Lakhs) in KPK (2001-2021)	24	159.7	397.3	.5	1907.46
Yearly Total Rice Production in maunds lost in KPK due to case	24	250.63	454.14	4.13	1771.05
Yearly Total Wheat Production in maunds lost in KPK due to case	24	184.77	330.18	3.04	1292.15
Yearly Total Rice & Wheat Production in maunds lost in KPK due to case	24	435.4	784.25	7.16	3063.2
Yearly Total Rice Output (Lakhs) lost in KPK due to case	24	8	13.28	.12	47.61
Yearly Total Wheat Output (Lakhs) lost in KPK due to case	24	5.12	8.7	.09	32.53
Yearly Total Rice & Wheat Production (Lakhs) lost in KPK due to case	24	13.12	21.96	.21	77.78
Yearly Total Profit (Lakhs) from Rice in KPK (2001-2021)	24	1.71	2.85	.02	10
Yearly Total Profit (Lakhs) from Wheat in KPK (2001-2021)	24	1.48	3.01	.02	13.46
Yearly Total Profit (Lakhs) from Rice & Wheat in KPK (2001-2021)	24	3.19	5.75	.05	23.29

**Table 28: Summary Statistics: Stress - KPK**

Variable	Std.				
	Obs	Mean	Dev.	Min	Max
Was it easy to get your documents?	35	3.97	1.22	1	5
How satisfied are you with your documents?	32	1.75	1.16	1	5
Are you stressed due to your hearings or due to your hearings being adjourned?	34	3.82	1.36	1	5
How stressed are you due to this case?	32	4.03	1.26	1	5
Do you think the documentation and paperwork required in a lawsuit is reasonable	34	2.85	1.6	1	5
How stressful was it to visit or go to the Arazi record center?	14	2.21	1.48	1	5
How stressful was it to meet the Patwari?	34	3	1.69	1	5
How stressful was it to meet the Girdawar Qanungo?	28	2.89	1.37	1	5
How stressful was it to meet the Naib Tehsildar?	24	2.58	1.35	1	5
How stressful was it to meet the Tehsildar?	28	3.07	1.46	1	5
How stressful was it to meet the AC?	30	2.57	1.48	1	5
How stressful was it to meet the DC/ADCR?	14	2.43	1.79	1	5
How stressful was it to meet the Commissioner?	12	2.17	1.75	1	5
How stressful was it to meet the BoR?	12	1.92	1.38	1	4

Note: The higher the values the more stressed/dissatisfied a person. The Likert scale for the stress questions is as follows: 1 "No stress" 2 "A little stress" 3 "Neither stressful nor unstressful" 4 "High Stress" 5 "Extreme Stress"

**Table 29: Sludge as a Percentage of GDP for KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Average Cost of Sludge Per Litigant in a Year (all steps)	35	625977.5	0	625977.5	625977.5
Average Cost of Sludge Per Litigant in a Year (excluding one-time costs)	35	582210	0	582210	582210
Total Cases in KPK that are more than 12 months old (1 Jan 2022 - 31 Dec2022)	35	12852	0	12852	12852
Cost of Sludge in million rupees in KPK (all steps)	35	8045.06	0	8045.06	8045.06
Cost of Sludge in million rupees in KPK (excluding one-time costs)	35	7482.56	0	7482.56	7482.56
Sludge as a percentage of Crop GDP per year for KPK (all steps)	31	3.77	0	3.77	3.77
Sludge as a percentage of Crop GDP per year for KPK (excluding one-time costs)	31	3.51	0	3.51	3.51
Sludge as a percentage of KPK's Agricultural GDP per year (all steps)	31	.57	0	.57	.57
Sludge as a percentage of KPK's Agricultural GDP per year (excluding one-time cost)	31	.53	0	.53	.53
Value of disputed territory in KPK as a percentage of KPK Real Estate GDP per year	31	216.58	0	216.58	216.58

**Table 30: Summary Statistics - KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Male	31	1	0	1	1
Age	35	51.14	15.73	25	76
Total Income (Rs.) earned in a month	25	60860	95878.99	10000	500000
Plaintiff	32	.69	.47	0	1
Years since case was filed	31	6.29	8.08	.05	35
Land Size of Disputed Territory in Kanals	35	81.4	154.16	2	700
Total Disputed Territory Value in Lakh Rupees	28	429.29	672.89	4	2500
Case Type: Demarcation	35	0	0	0	0

Case Type: Partition	35	.71	.46	0	1
Case Type: Mutation	35	0	0	0	0
Case Type: Inheritance	35	.06	.24	0	1
Case Type: Eviction	35	.14	.36	0	1
Months taken to gather information before filing case	29	4.96	7.68	.13	36

### **OVERALL RESULTS FOR PUNJAB & KPK**

**Table 31: Sludge as a Percentage of Income for Punjab & KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Monthly Income in Rupees	217	40665.91	53914.1	0	500000
Land Size of Disputed Territory in Kanals	318	49.693	81.509	.15	700
Disputed Territory in million rupees on average	321	17.601	0	17.601	17.601
Total Cases in Punjab that are more than 12 months old (1 Jan 2022 - 31 Dec2022)	286	65396	0	65396	65396
Total Cases in KPK that are more than 12 months old (1 Jan 2022 - 31 Dec2022)	35	12852	0	12852	12852
Total Cases in KPK & Punjab older than 12 months (1 Jan 2022 - 31 Dec 2022)	321	78248	0	78248	78248
Opportunity Cost (Rs.) of gathering information	187	98724.83	226950.27	-112500	2376666.8
Total Sludge (Rs.) from document collection	258	52281.55	179963.83	-1000	1860625.1
Yearly Sludge (Rs.) incurred due to hearings	212	70944.36	186123.77	-60833.33	1728000
Yearly Sludge (Rs) from expenses: Lawyer Fees, Revenue Court Staff & Food	232	139619.14	284932.55	0	1991069.4
Yearly Sludge (Rs.) from meeting Revenue Officers	249	67859.64	294876.49	-10000	3405755.3
Total Yearly Sludge (Rs) from all steps	310	256121.68	435141.12	-60833.33	3412748.3
Yearly Sludge (Rs.) - excluding one-time costs	314	204869.1	399590.49	-60833.33	3405755.3
Total Sludge (Rs.) from all steps over entire case so far	313	895953.38	3673039.9	-16750	41717832
Share (%) of income: Opportunity Cost (Rs.) of gathering information	185	.22	.37	-.02	2.98
Share (%) of income: Total Sludge (Rs.) from document collection	179	.13	.4	0	3.1
Share (%) of income: Yearly Sludge (Rs.) incurred due to hearings	159	.21	.44	-.14	2.88
Share (%) of income: Yearly Sludge (Rs) from expenses: Lawyer Fees, Revenue Court Staff & Food	149	.43	1.22	0	10.56
Share (%) of income: Yearly Sludge (Rs.) from meeting Revenue Officers	182	.24	1.15	-.02	14.19



Total Sludge (%) of income - including one-time costs	211	.83	1.69	-.06	14.22
Yearly Sludge (%) of income - excluding one-time costs	211	.67	1.58	-.01	14.19
Average Cost of Sludge Per Litigant in a Year (all steps)	321	700927.49	26260.32	625977.5	710099.69
Average Cost of Sludge Per Litigant in a Year (excluding one-time costs)	321	649831.46	23692.62	582210	658106.81

**Table 32: Sludge as a Percentage of GDP for Punjab & KPK**

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Cases in Punjab that are more than 12 months old (1 Jan 2022 - 31 Dec2022)	286	65396	0	65396	65396
Total Cases in KPK that are more than 12 months old (1 Jan 2022 - 31 Dec2022)	35	12852	0	12852	12852
Total Cases in KPK & Punjab older than 12 months (1 Jan 2022 - 31 Dec 2022)	321	78248	0	78248	78248
Cost of Sludge in million rupees in Punjab (all steps)	286	46437.7	0	46437.7	46437.7
Cost of Sludge in million rupees in KPK (all steps)	35	8045.06	0	8045.06	8045.06
Cost of Sludge in million rupees in KPK & Punjab (all steps)	321	54482.76	0	54482.76	54482.76
Cost of Sludge in million rupees in Punjab (excluding one-time costs)	286	43037.6	0	43037.6	43037.6
Cost of Sludge in million rupees in KPK (excluding one-time costs)	35	7482.56	0	7482.56	7482.56
Cost of Sludge in million rupees in KPK & Punjab (excluding one-time costs)	321	50520.16	0	50520.16	50520.16
Sludge as a percentage of GDP per year for Punjab & KPK (all steps)	321	.11	0	.11	.11
Sludge as a percentage of GDP per year for Punjab & KPK (excluding one-time costs)	321	.1	0	.1	.1
Sludge as a percentage of Agricultural GDP per year for Punjab & KPK (all steps)	321	.47	0	.47	.47
Sludge as a percentage of Agricultural GDP per year for Punjab & KPK (excluding one-time cost)	321	.44	0	.44	.44
Sludge as a percentage of Crop GDP per year for Punjab & KPK (all steps)	321	1.4	0	1.4	1.4
Sludge as a percentage of Crop GDP per year for Punjab & KPK (excluding one-time cost)	321	1.3	0	1.3	1.3
Value of disputed territory in Punjab & KPK as a percentage of Real Estate Activities GDP per year	321	47.4562	0	47.4562	47.4562

**FIGURES FOR KPK**

Figure 9 Yearly Stress distribution including one time activity (KPk)

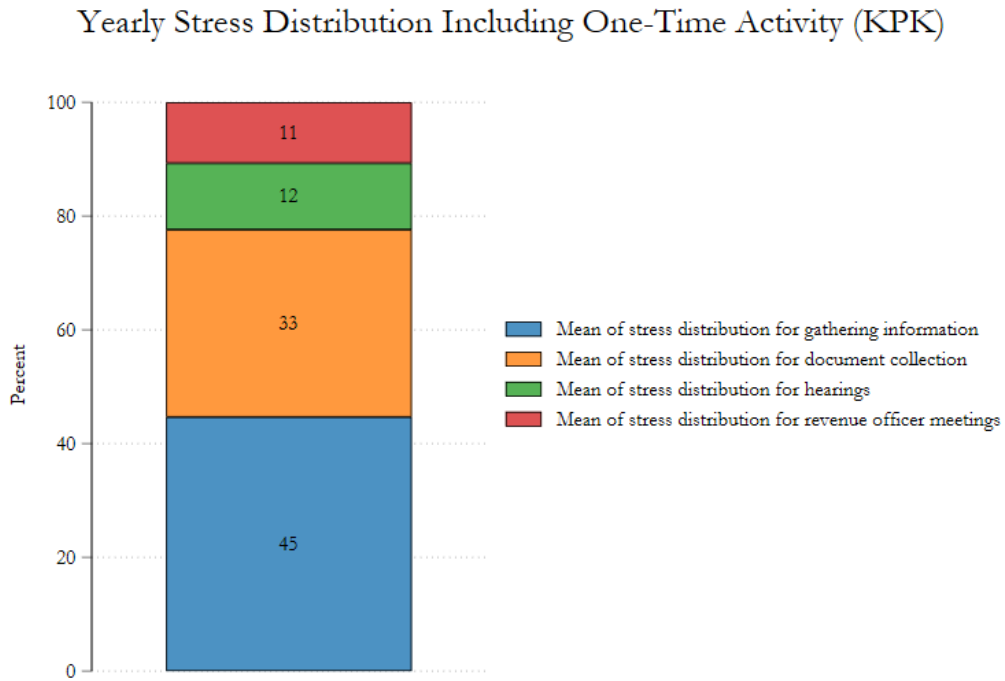
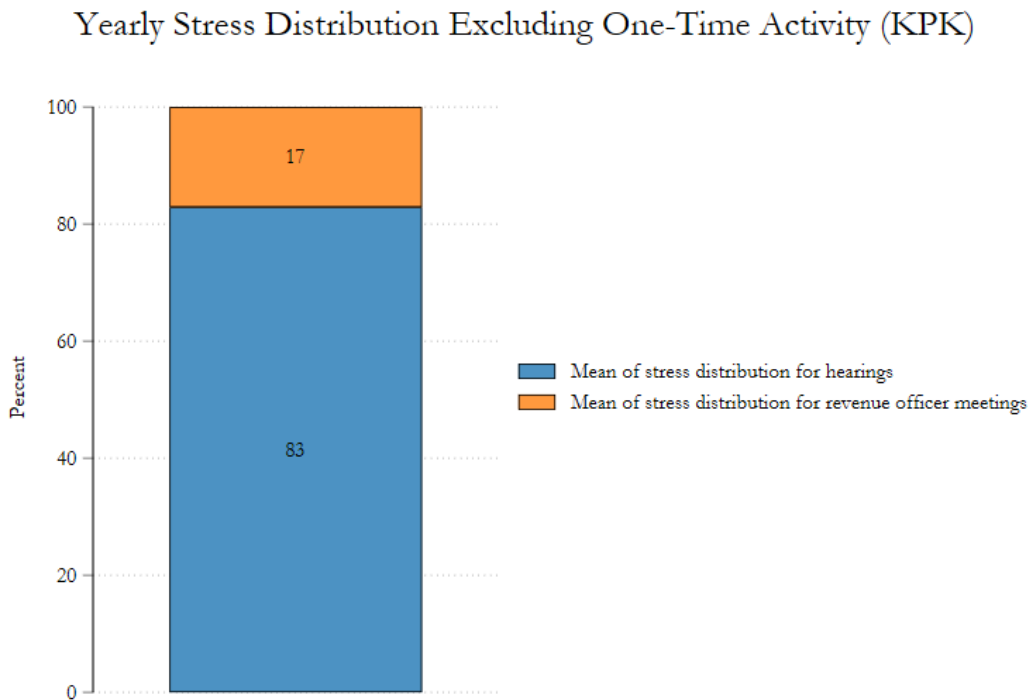


Figure 10 Yearly stress distribution excluding one time activity (KPk)



**A1. Paper-based survey**

Present □

بکس 1. شمار کنندہ پر کرے۔

شمار کنندہ کا نام:				شمار کنندہ کی شناخت:			
تاریخ				سروے نمبر:			
D		D		M		M	
2		0		Y		Y	
ضلع:		تحصیل:		شہر:		عدالت کا مقام:	
1- بورڈ آف ریونیو (بی او آر)		2- کمشنر		3- ٹپٹی کمشنر (ڈی سی)		4- ایڈیشنل ٹپٹی کمشنر ریونیو (ای ڈی سی آر)	
5- اسسٹنٹ کلکٹر / اسسٹنٹ کمشنر (ای سی)		6- تحصیلدار		7- نائب تحصیلدار			
وقت آغاز (24 Hour)		اختتامی وقت (24 Hour)		H		H M M	
فیلڈ مینیجر ID		فیلڈ مینیجر کے دستخط		شمار کنندہ کے دستخط			

سیکشن Q: سروے کے آخر میں پھریں۔		
Q1	کیا جواب دہندہ آپ کے سروے کے تمام سوالات پوچھنے سے پہلے جلا گیا؟	1. جی ہاں 2. نہیں
Q2	اگر Q2 کا جواب جی ہاں ہے تو جواب دہندہ نے سروے کے کس سوال تک جواب دیا؟	
Q3	سروے کو درمیان میں چھوڑنے کی وجہ؟	

شمار کنندہ: براہ کرم جواب دہندہ کے لیے درج ذیل کو پڑھیں۔	
تعارف	میرا نام _____ ہے۔ میں یہاں پاکستان انسٹی ٹیوٹ آف ڈویلپمنٹ اکنامکس (PIDE) کے ایک محقق کی جانب سے پاکستان کی ریونیو عدالتوں کے بارے میں معلومات اکٹھا کرنے کے لیے ایک سروے کرنے آیا ہوں۔ ہم خاص طور پر ریونیو عدالتی نظام کی رفتار پر توجہ دے رہے ہیں جو کے [شہر کا نام استعمال کریں] کے لوگوں کے لیے فیصلہ سازی کے مقدمات کو جلدی حل کرنے پر مدد کرے گا۔ اس سروے کا مقصد یہ معلوم کرنا ہے کہ ریونیو کورٹ کے نظام میں مدعیان کو اپنے مقدمات کے دوران کتنا وقت اور لاگت آتی ہے۔ آپ جو بھی معلومات ہمارے ساتھ شیئر کرتے ہیں وہ خفیہ ہیں اور اس کا اشتراک یا شائع نہیں کیا جائے گا۔ آپ کے نام کی جگہ، ہم ایک بے ترتیب نمبر تفویض کریں گے تاکہ آپ کی شناخت محفوظ رہے۔
رضامندی کا نوٹ	آپ کو اس سروے کو کرنے سے انکار کرنے کا حق حاصل ہے اور اگر سروے کے دوران، کسی بھی وقت، آپ اس سروے کو ختم کرنا چاہتے ہیں تو آپ کو ایسا کرنے کا بھی حق ہے۔ آپ کو یہ حق بھی حاصل ہے کہ آپ مجھ سے ان معلومات کو دوبارہ دہرائیں۔
نوٹ	اس سے پہلے کہ میں سروے شروع کروں میں اس بات کو سمجھانا چاہوں گا کہ سروے کے سوالات میں جب میں ریونیو آفیسرز کا لفظ استعمال کرتا ہوں تو میرا مطلب درج ذیل لوگ ہیں: نائب تحصیلدار، تحصیلدار، اسسٹنٹ کلکٹر (AC)، ڈسٹرکٹ کلکٹر (DC) اور کمشنر۔

سیکشن A : ذاتی معلومات									
A1	جواب دہندہ کا نام								
A2	عمر								
A3	شناختی کارڈ نمبر								
A4	موبائل نمبر								
A5	آپ کی تعلیم کیا ہے؟	[شمار کنندہ: آپشن 6 میں گریڈ یا کلاس لکھیں۔]							
	1- ناخواندہ/ کبھی سکول نہیں گیا	-4 گریجویٹ/کالج سطح (بی اے، ایم اے، ایم ایس سی وغیرہ)							
	2- میٹرک پاس یا اس کے برابر	-5 پوسٹ گریجویٹ/یونیورسٹی سطح ( پی ایچ ڈی)							
	3- ایف اے/ ایف ایس سی یا اس کے برابر	-6 دیگر/ گریڈ/ کلاس:							
A6	آپ کی ملازمت کی حیثیت کیا ہے؟	[شمار کنندہ: آپشنز کو پڑھیں اور ان سب کو منتخب کریں جو لاگو ہوں۔ ریٹائرڈ شخص کے لیے A12 بھی بوجھیں۔]							
	1- سرکاری ملازم	□-4 ذاتی کاروبار □-7 پرائیویٹ ملازمت							
	2- خاتون خانہ	□-5 طالب علم □-8 ریٹائرڈ [A12 بوجھیں]							
	3- بے روزگار	□-6 دیگر (وضاحت کریں)							
A7	آپ کی صنف کیا ہے؟	1- مرد 2- عورت 3- جواب دینے سے انکار 4- دیگر (وضاحت کریں)							
A8	ازدواجی حیثیت؟	1- کنوارا/کنواری 2- شادی شدہ 3- طلاق یافتہ 4- بیوہ/رنٹوا 5- دیگر (وضاحت کریں)							
A9	عہدہ/پیشہ؟								
A10	ادارہ/مقام								
A11	ماہانہ آمدنی	روپے							
A13	جواب دہندہ کی رہائش گاہ	علاقہ/محلہ تحصیل ضلع							

سیکشن B: ممتاز عہ زمین/ جائیداد			
B14	ممتاز عہ جائیداد کا محل وقوع	گاؤں/محلہ/وڑوس	
B15	ممتاز عہ جائیداد کا رقبہ	ایکڑ	کنال
B16	ممتاز عہ جائیداد کی اندازاً مالیت	روپے	
B17	ممتاز عہ جائیداد کا استعمال		

888=	جواب نہیں جانتے
999=	جواب دینے سے انکار
N/A=	اگر سوال جواب دہندہ پر لاگو نہیں ہوتا ہے



دستاویزات حاصل کرنا آسان تھا یا مشکل؟						
D23	1. بہت آسان	2. آسان	3. نہ آسان نہ مشکل	4. مشکل	5. بہت مشکل	
آپ نے درج بالا دستاویزات کہاں سے حاصل کیے؟ [شمار کنندہ: ان سب کو منتخب کریں جو لاگو ہوں۔]						
D24	<input type="checkbox"/> -1 پٹواری	<input type="checkbox"/> -2 تحصیلدار	<input type="checkbox"/> -3 اراضی ریکارڈ سنٹر	<input type="checkbox"/> -4 قانون گو	<input type="checkbox"/> -5 پولیس تھانہ	<input type="checkbox"/> -6 دیگر (وضاحت کریں)
D25	کیا آپ کو صحیح دستاویزات ملیں ہیں یا غلط دے دی گئیں تھیں؟				1- صحیح تھیں	2- غلطیاں تھیں
آپ اپنے دستاویزات سے کتنے مطمئن ہیں؟ [شمار کنندہ: آپشنز پڑھیں]						
D25 A	1. بالکل مطمئن	2. کچھ حد تک مطمئن	3. نہ مطمئن نہ غیر مطمئن	4. تھوڑا سا غیر مطمئن	5. بالکل غیر مطمئن	
D26	درخواست/مقدمہ دائر کرنے کے بعد کتنے عرصے میں پہلی پیشگی مقرر ہوئی؟		سال	مہینے		
D27	آج تک مقدمے کی تاریخ کتنی مرتبہ لگی؟		[888 اگر نہیں جانتے ہیں]			
D28	کتنی مرتبہ مقررہ تاریخ پر سماعت ہوئی؟		[888 اگر نہیں جانتے ہیں]			
D29	آپ کو آج تک اس مقدمہ کی وجہ سے کتنی مرتبہ عدالت/دفاتر کے چکر لگانے پڑے؟		[888 اگر نہیں جانتے ہیں]			
D30	پچھلے ایک سال میں عدالت/دفاتر کے کتنے چکر لگے؟		[888 اگر نہیں جانتے ہیں]			
D31	برعدالت/دفاتر کے چکر لگنے پر لگ بھگ خرچہ کتنا آتا ہے؟		روپے			
D32	برعدالت/دفاتر کے چکر پر کتنا وقت لگا؟		دن:	گھنٹے:	منٹ:	
کیا آپ سماعت یا سماعت میں تاخیر کی وجہ سے ذہنی پریشانی میں مبتلا ہیں؟ [شمار کنندہ: آپشنز پڑھیں]						
D32 S	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نہ زیادہ نہ کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادبیت	
آج تک اس مقدمہ میں آپکا ان ملوں میں کتنا خرچہ ہوا؟ [شمار کنندہ: آپشنز پڑھیں اور ان سب کو منتخب کریں جو لاگو ہوں۔ اگر جواب دہندہ جواب نہیں جانتا تو 888 لکھیں اور اگر خرچہ نہیں ہوا تو 0 لکھیں۔ جواب دینے سے انکار کرنے پر 999 لکھیں]						
D33	نام	لاگت (روپے)				
<input type="checkbox"/> -1	سٹامپ ڈیوٹی/سرکاری فیس	روپے				
<input type="checkbox"/> -2	نجی وکیل کی فیس	روپے				
<input type="checkbox"/> -3	سفر کی لاگت	روپے				
<input type="checkbox"/> -4	ریونیو عدالت کا عملہ/کلرک کی خدمت [D33A پوچھیں]	روپے				
<input type="checkbox"/> -5	دیگر اخراجات (وضاحت کریں):	روپے				
		کل روپے:				
D33A صرف تب پوچھیں اگر D33 آپشن 4 کا جواب دیا ہو، ورنہ D33A سوال چھوڑ دیں۔						
D33 A	آپ کو یہ معاوضات کس مقصد کے لیے فراہم کرنے پڑے؟ [شمار کنندہ: جواب دینے سے انکار کرنے پر 999 لکھیں]					
کیا آپ اس مقدمے کی وجہ سے ذہنی پریشانی میں مبتلا ہیں؟ [شمار کنندہ: آپشنز پڑھیں]						
D34	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نہ زیادہ نہ کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادبیت	

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سروے نمبر	عدالت کا مقام	عدالت کی قسم	تاریخ (دن)	D	D
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D35	اگر آپ کا واسطہ پٹواری/قانون گو اور اراضی ریکارڈ سنٹر سے پڑ چکا ہے تو کون سے دفتر میں زیادہ آسانی ہے؟ [شمار کنندہ: اگر جواب دہندہ 3 میں سے 2 پر گئے ہیں، تو دیگر میں جواب لکھیں۔ اگر صرف ایک کے پاس گئے ہیں تو N/A کا انتخاب کریں۔]					
	1- پٹواری	2- گرداور قانونگو	3- اراضی ریکارڈ سنٹر	4- میں دفتر گیا نہیں	5- N/A	6- دیگر:
D36	کیا آپ کے خیال میں محکمہ مال کی عدالت مجاز افسر مثلاً اسسٹنٹ کمشنر، تحصیلدار یا نائب تحصیلدار سے ملاقات آسانی سے ہوجاتی ہے؟					
	1- جی ہاں بہت آسانی سے	2- کبھی کبھی ملاقات ہوجاتی ہے	3- نہ آسان نہ مشکل	4- بہت مشکل سے شادونادر ہی ملاقات ہوتی ہے	5- ملاقات ناممکن	
D37	کیا آپ کے خیال میں مقدمہ میں درکار دستاویزات اور کاغذی کارروائی مناسب ہے یا صرف سائلین کے وقت اور پیسے کا ضیاع ہے؟ [شمار کنندہ: آپشنز پڑھیں]					
	1- صرف ضروری کاغذات ہی مانگے جاتے ہیں۔	2- کچھ ضروری کاغذات مانگے جاتے ہیں۔	3- مجھے معلوم نہیں/میری کوئی رائے نہیں۔	4- کچھ ضروری کارروائی سے سائلین تنگ ہوتے ہیں	5- بیشتر ضروری کارروائی غیر ضروری ہیں جس سے سائلین تنگ ہوتے ہیں	
D38	کیا آپ کے خیال میں ریونیو عدالت سے آپ کو انصاف ملے گا؟ [شمار کنندہ: آپشنز پڑھیں]					
	1- مجھے انصاف کا یقین ہے	2- مجھے انصاف کی امید ہے	3- مجھے معلوم نہیں کے انصاف ملے گا یا نہیں	4- مجھے انصاف کی امید نہیں	5- مجھے یقین ہے کہ نا انصافی ہوگی	
D39	ریونیو عدالتوں کا نظام بہتر بنانے کے لئے کوئی تجاویز ہوں تو بتائیے؟ [شمار کنندہ: مختصر طور پر ان کے تبصرے لکھیں]					

سیکشن F: ڈیجیٹائزیشن سیکشن					
F1	کیا آپ نے کبھی اراضی ریکارڈ سنٹر کا چکر لگایا ہے؟		1. جی ہاں	2. نہیں [پورا سیکشن F کو چھوڑ دیں]	
اگر اوپر F1 میں جواب نہیں ہے، تو پورا سیکشن چھوڑ دیں۔					
F2	اراضی ریکارڈ سنٹر کے چکر کی اوسطاً لاگت کتنی تھی؟		روپے:		
F6	متعلقہ درخواست جمع کروانے کے بعد آپ کو اراضی ریکارڈ سینٹر سے اپنے دستاویزات حاصل کرنے میں کتنا وقت لگا؟ [شمار کنندہ: اگر جواب دہندہ جواب نہیں جانتا تو 888 لکھیں]				
	دن	گھنٹے	منٹ		
F7	اراضی ریکارڈ سنٹر کے قیام سے پہلے آپ کے کیس سے متعلقہ دستاویزات حاصل کرنے میں کتنا وقت لگتا تھا؟ [شمار کنندہ: N/A لکھیں اگر انہوں نے آج تک صرف اراضی ریکارڈ سینٹر سے دستاویزات حاصل کی ہیں۔]				
	مہینے	دن	گھنٹے	منٹ	
F8	اراضی ریکارڈ سنٹر سے اپنے ڈیجیٹل دستاویزات حاصل کرنے کے لیے آپ نے کتنی فیس ادا کی؟ [شمار کنندہ: اگر جواب دہندہ جواب نہیں جانتے تو 888 لکھیں]				
	روپے				
F9	کیا آپ کو اراضی ریکارڈ سنٹر کے عملے/اہلکاروں کو کوئی اور رقم ادا کرنی پڑی ہے؟		1. جی ہاں	2. نہیں	3. جواب دینے سے انکار [F12 پر جائیں]

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F10	کتنی رقم ادا کی گئی؟ [شمار کنندہ: اگر جواب دہندہ جواب دینے سے انکار کرے تو 999 لکھیں اور اگر جواب نہیں جانتے تو 888 لکھیں]				
	روپے:				
F11	1. جی ہاں	2. نہیں	3. جواب دینے سے انکار کر دیا۔	4. نہیں جانتے	5. کبھی پٹواری کے پاس دستاویزات لیتے ہوئے ادا کی جاتی تھی؟
F12	کیا اراضی ریکارڈ سنٹر کے دستاویزات غلطی کے بغیر تھے؟		1- جی ہاں [F20 پر جائیں]	2- نہیں	
اگر F12 میں جواب جی ہاں دیا گیا تو F20 پر جائیں۔					
F12	درخواست جمع کرانے کے بعد غلطی کو درست کرنے میں کتنا وقت لگا؟ [شمار کنندہ: اگر جواب دہندہ جواب نہیں جانتے تو 888 لکھیں]				
A	مہینے	دن	گھنٹے	منٹ	
F13	کیا آپ کو دستاویز میں غلطی کو درست کرانے کے لیے کسی بھی مرحلے پر پٹواری کے پاس دستاویز لے کر جانا پڑا؟		1. جی ہاں	2. نہیں [F18 پر جائیں]	
F14	پٹواری کو دستاویزات درست کرنے میں کتنا وقت لگا؟ [شمار کنندہ: جواب دینے سے انکار کرنے پر 999 لکھیں اور اگر جواب نہیں جانتے تو 888 لکھیں]		دن	گھنٹے	منٹ
F15	آپ نے اپنی دستاویزات درست کرنے کے لیے پٹواری کو کتنے پیسے دیے؟ [شمار کنندہ: جواب دینے سے انکار کرنے پر 999 لکھیں اور اگر جواب نہیں جانتے تو 888 لکھیں]				
پٹواری سے تصحیح حاصل کرنے کے اس عمل کے دوران آپ کو کیا پریشانی محسوس ہوئی؟ [شمار کنندہ: آپشنز پڑھیں]					
F16	1- کوئی پریشانی نہی	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی اذیت
F18	متعلقہ اہلکار سے فرد بدر حاصل کرنے میں کتنا وقت لگا؟ [شمار کنندہ: جواب دینے سے انکار کرنے پر 999 لکھیں اور اگر جواب نہیں جانتے تو 888 لکھیں]				
F18S	ارضی ریکارڈ سنٹر سے تصحیح حاصل کرنے کے اس عمل کے دوران آپ کو کتنی پریشانی محسوس ہوئی؟ [شمار کنندہ: آپشنز کو پڑھیں۔]				
	1- کوئی پریشانی نہی	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی اذیت
F19	آپ نے اپنی دستاویزات درست کرنے کے لیے اراضی ریکارڈ سنٹر میں کتنے پیسے لگائے؟ [شمار کنندہ: جواب دینے سے انکار کرنے پر 999 لکھیں اور اگر جواب نہیں جانتے تو 888 لکھیں]				
F20	کیا آپ کے خیال میں اراضی ریکارڈ سینٹرز پٹواری سے زیادہ قابل رسائی ہے؟ [شمار کنندہ: آپشنز پڑھیں]				
	1- کافی زیادہ	2- تہوڑا زیادہ	3- نہ زیادہ نہ کم	4- تہوڑا کم	5- بالکل بھی نہیں
	[شمار کنندہ: آپشنز پڑھیں۔ اگر جواب دہندہ جواب نہیں جانتا تو 888 لکھیں اور اگر جگہ پر اس کام کے لیے نہیں گئے یا لاگو نہیں تو N/A لکھیں]				
	آپ نے کتنی بار درج ذیل کا چکر لگایا ہے:				
F21	1- پچھلے 1 سال میں کتنے چکر؟	2- مجموعی طور پر اب تک کتنے چکر کیے؟	3- سفر میں اوسطاً وقت کتنا لگا؟	4- اوسطاً انتظار کتنا کرنا پڑا؟	
			گھنٹے	منٹ	منٹ
	1- دستاویزات جمع کرنے کے لیے اراضی ریکارڈ سنٹر کے				
	2- اراضی ریکارڈ سنٹر سے دستاویزات کی تصحیح کے لیے				
	3- دستاویزات جمع کرنے کے لیے پٹواری کے				
	4- پٹواری سے دستاویزات کی تصحیح کے لیے				

جواب نہیں جانتے	= 888
جواب دینے سے انکار	= 999
اگر سوال جواب دہندہ پر لاگو نہیں ہوتا ہے	= N/A لکھیں یا خالی چھوڑ دیں



سروے نمبر		عدالت کا مقام	عدالت کی قسم	تاریخ (دن)	D	D
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F25	کیا آپ اراضی ریکارڈ سنٹرز میں کوئی بہتری تجویز کرنا چاہیں گے؟ [شمار کنندہ: تجاویز مختصراً لکھیں]
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**سیکشن G: سفر کا وقت اور لاگت**

[شمار کنندہ: آپشنز پڑھیں۔ اگر جواب دہندہ جواب نہیں جانتا تو 888 لکھیں اور اگر جگہ پر نہیں گئے یا نہیں ملے تو N/A لکھیں۔ اگر پیسے خرچ نہیں ہوئے تو 0 لکھیں۔] آپ نے کتنی بار درج ذیل کا چکر لگایا یا ملاکات کی اوران پر کتنے پیسے خرچ کیے:							
1. پٹواری	2. گرداور قانونگو	3. نائب تحصیلدار	4. تحصیلدار	5. اسسٹنٹ کلکٹر / اسسٹنٹ کمشنر (اے سی)	6. ڈپٹی کمشنر (ڈی سی) / ایڈیشنل ڈپٹی کمشنر ریونیو (اے ڈی سی آر)	7. کمشنر	8. بورڈ آف ریونیو (بی او آر)
روپے	روپے	روپے	روپے	روپے	روپے	روپے	روپے
کل روپے:	کل چکر:	کل وقت:	کل وقت:	کل وقت:	کل وقت:	کل وقت:	کل وقت:

[شمار کنندہ: آپشنز پڑھیں۔ اگر جواب دہندہ جواب جگہ پر نہیں گئے یا نہیں ملے تو خالی چھوڑ لکھیں] مندرجہ ذیل سے ملنا یا ان کا چکر لگانا آپ کے لیے کتنی پریشانی کا باعث بنا؟						
1. پٹواری	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادیت	G16
2. گرداور قانونگو	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادیت	
3. نائب تحصیلدار	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادیت	
4. تحصیلدار	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادیت	
5. اسسٹنٹ کلکٹر / اسسٹنٹ کمشنر (اے سی)	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادیت	
6. ڈپٹی کمشنر (ڈی سی) / ایڈیشنل ڈپٹی کمشنر ریونیو (اے ڈی سی آر)	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادیت	
7. اراضی ریکارڈ سنٹر	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادیت	
8. کمشنر	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادیت	
9. بورڈ آف ریونیو (بی او آر)	1- کوئی پریشانی نہیں	2- ہلکی پریشانی	3- نا زیادہ نا کم پریشانی	4- بہت پریشانی	5- انتہائی ذہنی ادیت	

888=	جواب نہیں جانتے
999=	جواب دینے سے انکار
N/A=	اگر سوال جواب دہندہ پر لاگو نہیں ہوتا ہے

## A2. SurveyCTO

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### Revenue Courts

Field	Question	Answer
date (required)	تاریخ	
enum_name (required)	ضلع کا نام	220 Muhammad Afzal 221 Zahid Liaqat 222 Fryal saba 223 Anjad 224 Nazia 225 Abdul yar 777 Others
enum_other (required)	برائے ذکر دیگر ضلع نام Question relevant when: selected( \$enum_name ) = 777	
tries (required)	پرکاشوں کی تعداد	
try1 (required)	حویلی نمبر 1 پرکاشوں کی تعداد Question relevant when: \$tries > 1	1 جہاں تک اسے جواب نہیں دیا گیا تھا۔ اس لیے کہ اس نے سہارا شروع نہیں دیا تھا۔ 2 وقت نہ پائے گئے وہاں سے جواب نہیں دیا 3 انورہ نہ پائے گئے وہاں سے جواب نہیں دیا 777 دیگر
try2 (required)	حویلی نمبر 2 پرکاشوں کی تعداد Question relevant when: \$tries > 2	1 جہاں تک اسے جواب نہیں دیا گیا تھا۔ اس لیے کہ اس نے سہارا شروع نہیں دیا تھا۔ 2 وقت نہ پائے گئے وہاں سے جواب نہیں دیا 3 انورہ نہ پائے گئے وہاں سے جواب نہیں دیا 777 دیگر
try3 (required)	حویلی نمبر 3 پرکاشوں کی تعداد Question relevant when: \$tries > 3	1 جہاں تک اسے جواب نہیں دیا گیا تھا۔ اس لیے کہ اس نے سہارا شروع نہیں دیا تھا۔ 2 وقت نہ پائے گئے وہاں سے جواب نہیں دیا 3 انورہ نہ پائے گئے وہاں سے جواب نہیں دیا 777 دیگر
try4 (required)	حویلی نمبر 4 پرکاشوں کی تعداد Question relevant when: \$tries > 4	1 جہاں تک اسے جواب نہیں دیا گیا تھا۔ اس لیے کہ اس نے سہارا شروع نہیں دیا تھا۔ 2 وقت نہ پائے گئے وہاں سے جواب نہیں دیا 3 انورہ نہ پائے گئے وہاں سے جواب نہیں دیا 777 دیگر
try5 (required)	حویلی نمبر 5 پرکاشوں کی تعداد Question relevant when: \$tries > 5	1 جہاں تک اسے جواب نہیں دیا گیا تھا۔ اس لیے کہ اس نے سہارا شروع نہیں دیا تھا۔ 2 وقت نہ پائے گئے وہاں سے جواب نہیں دیا 3 انورہ نہ پائے گئے وہاں سے جواب نہیں دیا 777 دیگر
survey_number (required)	حویلی نمبر # digit number	
court_location (required)	حالت کا نام	1 قصبہ آزاد پور 2 جڑ پورہ 3 کورٹ راجہ پور 4 قصبہ کور 5 پشاور 6 چارسدہ 7 حیدرآباد (پورٹ ٹرا)
court_type (required)	حالت کی قسم	

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Field	Question	Answer
A5 (required)	آپ کی تعلیم کتنی ہے؟	0 پہلی جماعت سے کم 1 پہلی جماعت 2 دوسری جماعت 3 تیسری جماعت 4 چوتھی جماعت 5 پانچویں جماعت 6 چھٹا درجہ 7 ساتواں درجہ 8 اسیویں گریڈ 9 نویں جماعت 10 میٹریک 11 انٹرمیڈیٹ 12 گریجویٹ / ایم بی بی ایس / ایم اے / ایم ایس 13 ایم اے / ایم ایس یا اس سے اوپر 14 پوسٹ ڈرافٹ ڈیپلومہ 15 رسمی تعلیم حاصل نہیں کی گئی لیکن پڑھنے اور لکھنے کے بارے میں جانتا ہے 16 متاثر سے کہا 17 اسکاڑ میں کبھی نہیں گیا 888 معلوم نہیں 999 جواب دینے سے انکار
A6 (required)	آپ کی ملازمت کی حیثیت کیا ہے؟ select all that apply	1 حکمران یا ملازم 2 خاتون شاہ 3 سبے روزگار 4 ذاتی کاروبار 5 طلبہ علم 6 پرائیویٹ ملازمت 7 ریٹائرڈ 777 دیگر 888 جواب نہیں جانتے 999 جواب دینے سے انکار
A6_o (required)	برادہ کروم دیگر کی وضاحت کریں Question relevant when: selected( \$(A6) , '777' )	
A12 (required)	آپ کا گریڈ کیا ہے؟ Answer should be between 1 and 22 Question relevant when: selected( \$(A6) , '7' )	
A9 (required)	آپ کی ملازمت کی حیثیت کیا ہے؟ occupation 888 = Don't know  999 = Refused Question relevant when: selected( \$(A6) , '1' ) or selected( \$(A6) , '4' ) or selected( \$(A6) , '6' ) or selected( \$(A6) , '777' )	
A10 (required)	آپ کا تیرا ملنگ کی جگہ کیا ہے؟ 888 = Don't know  999 = Refused Question relevant when: selected( \$(A6) , '1' ) or selected( \$(A6) , '4' ) or selected( \$(A6) , '6' ) or selected( \$(A6) , '777' )	
A11 (required)	آپ کی سائیکل کی ماپ کیا ہے؟ select unit of measurement Question relevant when: selected( \$(A6) , '1' ) or selected( \$(A6) , '4' ) or selected( \$(A6) , '6' ) or selected( \$(A6) , '7' ) or selected( \$(A6) , '777' )	1 گز 2 انچ 3 فٹ 4 کوئی پیمہ خرچ نہیں ہوا / کچھ نہیں 777 دیگر (انچ سے کوئی اور) 888 جواب نہیں جانتے 999 جواب دینے سے انکار
A11_c (required)	آپ کی سائیکل کی ماپ کیا ہے؟ Question relevant when: selected( \$(A11) , '1' )	
A11_l (required)	آپ کی سائیکل کی ماپ کیا ہے؟ Question relevant when: selected( \$(A11) , '2' )	
A11_a (required)	آپ کی سائیکل کی ماپ کیا ہے؟ Question relevant when: selected( \$(A11) , '3' )	
A11_o (required)	آپ کی سائیکل کی ماپ کیا ہے؟ Question relevant when: selected( \$(A11) , '777' )	
A13_v (required)	آپ کی رہائش کا علاقہ نامہ کیا ہے؟ 888 = Don't know  999 = Refused	
A13_t (required)	آپ کی رہائش کی تحصیل کیا ہے؟ 888 = Don't know  999 = Refused	
A13_d (required)	آپ کی رہائش کا ضلع کیا ہے؟	

Field	Question	Answer
checkpoint (required)	888 = Don't know  999 = Refused گیا جواب لکھنا اب نہیں موجود ہے؟ DO NOT READ ALOUD.	1 ہاں 2 نہیں
satery > -	Discip relevant when: \${checkpoint} = 1. مستقلہ جائیداد > -	
B14_v (required)	مستقلہ جائیداد کس علاقہ/ضلع/ڈسٹرکٹ میں ہے؟ 888 = Don't know  999 = Refused	
B14_l (required)	مستقلہ جائیداد کس تحصیل میں ہے؟ 888 = Don't know  999 = Refused	
B14_d (required)	مستقلہ جائیداد کس ضلع میں ہے؟ 888 = Don't know  999 = Refused	
B15 (required)	مستقلہ جائیداد کا رقبہ کیا ہے؟ select the unit of measurement	1 انچز 2 کنال 3 برس 888 جواب جاننے 999 جواب نہیں سے انکار
B15_a (required)	انچز میں مستقلہ جائیداد کا رقبہ کیا ہے؟ Question relevant when: selected( \$[B15] , '1') and not(selected( \$[B15] , '999')) and not(selected( \$[B15] , '888'))	
B15_k (required)	کنال میں مستقلہ جائیداد کا رقبہ کیا ہے؟ Question relevant when: selected( \$[B15] , '2') and not(selected( \$[B15] , '999')) and not(selected( \$[B15] , '888'))	
B15_m (required)	برس میں مستقلہ جائیداد کا رقبہ کیا ہے؟ Question relevant when: selected( \$[B15] , '3') and not(selected( \$[B15] , '999')) and not(selected( \$[B15] , '888'))	
B16 (required)	مستقلہ جائیداد کی اندازاً قیمت کیا ہے؟ select the unit of measurement	1 گروڑ 2 لاکھ 3 تربہ 4 کروڑ پندرہ سو روپے یا اس سے زیادہ 777 تربہ (لاکھ سے کم رقم) 888 جواب جاننے 999 جواب نہیں سے انکار
B16_c (required)	مستقلہ جائیداد کی اندازاً قیمت گروڑوں میں ہے؟ Question relevant when: selected( \$[B16] , '1') and not(selected( \$[B16] , '999')) and not(selected( \$[B16] , '888')) and not(selected( \$[B16] , '4'))	
B16_l (required)	مستقلہ جائیداد کی اندازاً قیمت لاکھوں میں ہے؟ Question relevant when: selected( \$[B16] , '2') and not(selected( \$[B16] , '999')) and not(selected( \$[B16] , '888')) and not(selected( \$[B16] , '4'))	
B16_a (required)	مستقلہ جائیداد کی اندازاً قیمت برسوں میں ہے؟ Question relevant when: selected( \$[B16] , '3') and not(selected( \$[B16] , '999')) and not(selected( \$[B16] , '888')) and not(selected( \$[B16] , '4'))	
B16_o (required)	مستقلہ جائیداد کی اندازاً قیمت روپے میں کیا ہے؟ پوری رقم لکھیں۔ Question relevant when: selected( \$[B16] , '777') and not(selected( \$[B16] , '999')) and not(selected( \$[B16] , '888')) and not(selected( \$[B16] , '4'))	
B17 (required)	اب مستقلہ زمین کو کن مقصد کے لیے استعمال کریں گے؟ (ایک یا زیادہ لکھیں)۔ select all that apply	1 فروخت کے لیے زمین حاصل کرنا 2 دکان استعمال کے لیے زمین حاصل کرنا 3 مزدوری کے لیے زمین حاصل کرنا 4 گھاس کے لیے زمین حاصل کرنا 5 چمڑے جیسی مصنوعات کے لیے زمین حاصل کرنا 6 میں زمین بیچوں گا 7 میں اپنے لیے دکان استعمال کے لیے زمین حاصل کرنا یا مکان بنانے کے لیے زمین استعمال کروں گا 8 میں اسے کرائے کے لیے زمین حاصل کروں گا 9 کچھ نہ کروں گا 10 کچھ نہ کروں گا

Field	Question	Answer
		11 لئے صورت نگہ رکھیں اور چھوڑ دو 12 رہیں والی زمین 13 اجازت نامہ کے لیے استعمال کریں۔ 777 دیگر 888 جواب نہیں دیا 999 جواب دینے سے انکار
B17_o (required)	براہ کرم دیگر کی وضاحت کریں Question relevant when: selected( \$(B17) , 777)	
شلجہ کی توجیہ - > (1) <- survey		
C18 (required)	کیا آپ حاضری یا مدعا ہے؟ شعاع کد: 9999 آئیڈنٹیفیشن	1 مدعا 2 حاضری
C19 (required)	آپ کی شلجہ کی توجیہ کیا ہے؟ شعاع کد: 9999 آئیڈنٹیفیشن	1 ختمی 2 تقسیم 3 وراثت 4 انتقال 5 سے پہلے 777 دیگر
C19_o (required)	براہ کرم دیگر کی وضاحت کریں Question relevant when: selected( \$(C19) , 777)	
C20 (required)	آپ کی شلجہ کی توجیہ کیا ہے؟ شعاع کد: 9999 آئیڈنٹیفیشن	1 اجازت نامہ 2 قبضہ کے حالات 777 دیگر
C20_o (required)	براہ کرم دیگر کی وضاحت کریں Question relevant when: selected( \$(C20) , 777)	
C21 (required)	مہلہ کو داتا ہونے کا عرصہ کیا ہے؟ select the unit of measurement	1 منٹ 2 گھنٹے 3 دن 4 مہینے 5 سال 6 کوئی وقت نہیں لگا 888 جواب نہیں دیا 999 جواب دینے سے انکار
شلجہ کی توجیہ - > (1) <- survey Group relevant when: not(selected( \$(C21) , 999)) and not(selected( \$(C21) , 888)) and not(selected( \$(C21) , 9))		
C21_time (required)	میں پر کریں [time_name1] مہلہ کو داتا ہونے کا عرصہ کیا ہے؟ جواب	
C22 (required)	آپ کو اپنا کس داتا کرنے کے لیے درکار معلومات جمع کرنے میں کتنا وقت لگا؟ select the unit of measurement	1 منٹ 2 گھنٹے 3 دن 4 مہینے 5 سال 6 کوئی وقت نہیں لگا 888 جواب نہیں دیا 999 جواب دینے سے انکار
شلجہ کی توجیہ - > (1) <- survey Group relevant when: not(selected( \$(C22) , 999)) and not(selected( \$(C22) , 888)) and not(selected( \$(C22) , 9))		
C22_time (required)	میں پر کریں [timeinfo_name1] آپ کو اپنا کس داتا کرنے کے لیے درکار معلومات جمع کرنے میں کتنا وقت لگا؟ جواب	
C23	اب میں جانوں گا کہ آپ کتنے دنوں میں سرگرمیوں میں حصہ لیں گے۔ 1 سرگرمی میں حصہ لیں۔ 2 سرگرمیوں میں حصہ لیں۔ 3 سرگرمیوں میں حصہ لیں۔ 4 سرگرمیوں میں حصہ لیں۔ 5 سرگرمیوں میں حصہ لیں۔ 6 سرگرمیوں میں حصہ لیں۔ 7 سرگرمیوں میں حصہ لیں۔ 8 سرگرمیوں میں حصہ لیں۔ 9 سرگرمیوں میں حصہ لیں۔ 10 سرگرمیوں میں حصہ لیں۔ 11 سرگرمیوں میں حصہ لیں۔ 12 سرگرمیوں میں حصہ لیں۔ 13 سرگرمیوں میں حصہ لیں۔ 14 سرگرمیوں میں حصہ لیں۔ 15 سرگرمیوں میں حصہ لیں۔ 16 سرگرمیوں میں حصہ لیں۔ 17 سرگرمیوں میں حصہ لیں۔ 18 سرگرمیوں میں حصہ لیں۔ 19 سرگرمیوں میں حصہ لیں۔ 20 سرگرمیوں میں حصہ لیں۔ 21 سرگرمیوں میں حصہ لیں۔ 22 سرگرمیوں میں حصہ لیں۔ 23 سرگرمیوں میں حصہ لیں۔ 24 سرگرمیوں میں حصہ لیں۔ 25 سرگرمیوں میں حصہ لیں۔ 26 سرگرمیوں میں حصہ لیں۔ 27 سرگرمیوں میں حصہ لیں۔ 28 سرگرمیوں میں حصہ لیں۔ 29 سرگرمیوں میں حصہ لیں۔ 30 سرگرمیوں میں حصہ لیں۔ 31 سرگرمیوں میں حصہ لیں۔ 32 سرگرمیوں میں حصہ لیں۔ 33 سرگرمیوں میں حصہ لیں۔ 34 سرگرمیوں میں حصہ لیں۔ 35 سرگرمیوں میں حصہ لیں۔ 36 سرگرمیوں میں حصہ لیں۔ 37 سرگرمیوں میں حصہ لیں۔ 38 سرگرمیوں میں حصہ لیں۔ 39 سرگرمیوں میں حصہ لیں۔ 40 سرگرمیوں میں حصہ لیں۔ 41 سرگرمیوں میں حصہ لیں۔ 42 سرگرمیوں میں حصہ لیں۔ 43 سرگرمیوں میں حصہ لیں۔ 44 سرگرمیوں میں حصہ لیں۔ 45 سرگرمیوں میں حصہ لیں۔ 46 سرگرمیوں میں حصہ لیں۔ 47 سرگرمیوں میں حصہ لیں۔ 48 سرگرمیوں میں حصہ لیں۔ 49 سرگرمیوں میں حصہ لیں۔ 50 سرگرمیوں میں حصہ لیں۔ 51 سرگرمیوں میں حصہ لیں۔ 52 سرگرمیوں میں حصہ لیں۔ 53 سرگرمیوں میں حصہ لیں۔ 54 سرگرمیوں میں حصہ لیں۔ 55 سرگرمیوں میں حصہ لیں۔ 56 سرگرمیوں میں حصہ لیں۔ 57 سرگرمیوں میں حصہ لیں۔ 58 سرگرمیوں میں حصہ لیں۔ 59 سرگرمیوں میں حصہ لیں۔ 60 سرگرمیوں میں حصہ لیں۔ 61 سرگرمیوں میں حصہ لیں۔ 62 سرگرمیوں میں حصہ لیں۔ 63 سرگرمیوں میں حصہ لیں۔ 64 سرگرمیوں میں حصہ لیں۔ 65 سرگرمیوں میں حصہ لیں۔ 66 سرگرمیوں میں حصہ لیں۔ 67 سرگرمیوں میں حصہ لیں۔ 68 سرگرمیوں میں حصہ لیں۔ 69 سرگرمیوں میں حصہ لیں۔ 70 سرگرمیوں میں حصہ لیں۔ 71 سرگرمیوں میں حصہ لیں۔ 72 سرگرمیوں میں حصہ لیں۔ 73 سرگرمیوں میں حصہ لیں۔ 74 سرگرمیوں میں حصہ لیں۔ 75 سرگرمیوں میں حصہ لیں۔ 76 سرگرمیوں میں حصہ لیں۔ 77 سرگرمیوں میں حصہ لیں۔ 78 سرگرمیوں میں حصہ لیں۔ 79 سرگرمیوں میں حصہ لیں۔ 80 سرگرمیوں میں حصہ لیں۔ 81 سرگرمیوں میں حصہ لیں۔ 82 سرگرمیوں میں حصہ لیں۔ 83 سرگرمیوں میں حصہ لیں۔ 84 سرگرمیوں میں حصہ لیں۔ 85 سرگرمیوں میں حصہ لیں۔ 86 سرگرمیوں میں حصہ لیں۔ 87 سرگرمیوں میں حصہ لیں۔ 88 سرگرمیوں میں حصہ لیں۔ 89 سرگرمیوں میں حصہ لیں۔ 90 سرگرمیوں میں حصہ لیں۔ 91 سرگرمیوں میں حصہ لیں۔ 92 سرگرمیوں میں حصہ لیں۔ 93 سرگرمیوں میں حصہ لیں۔ 94 سرگرمیوں میں حصہ لیں۔ 95 سرگرمیوں میں حصہ لیں۔ 96 سرگرمیوں میں حصہ لیں۔ 97 سرگرمیوں میں حصہ لیں۔ 98 سرگرمیوں میں حصہ لیں۔ 99 سرگرمیوں میں حصہ لیں۔ 100 سرگرمیوں میں حصہ لیں۔	
C23_1 (required)	1 سرگرمی میں حصہ لیں۔ write 0 if did not spend any time on any activity   888 if don't know	
C23_2 (required)	2 سرگرمیوں میں حصہ لیں۔ write 0 if did not spend any time on any activity   888 if don't know	
C23_3 (required)	3 سرگرمیوں میں حصہ لیں۔ write 0 if did not spend any time on any activity   888 if don't know	
C24 (required)	معلومات جمع کرنے کے وقت آپ نے کیا پریشانی محسوس کی؟	1 گریں پریشانی نہیں 2 بلکہ پریشانی 3 زیادہ تا کم پریشانی 4 بہت پریشانی 5 انتہائی نہیں انتہا 888 جواب نہیں دیا 999 جواب دینے سے انکار
checkpoint2 (required)	کیا جواب پڑھنا اب بھی موجود ہے؟ DO NOT READ ALOUD	1 ہاں 2 نہیں





Field	Question	Answer
D22_5_1 (required)	حاصل کرنے کے لیے کتنی رقم خرچ کی؟ تاکہ زمین میں لکھی [doc_name1] Question relevant when: selected( \$(D22_5) , '2') and not(selected( \$(D22_5) , '999') and not(selected( \$(D22_5) , '888') and not(selected( \$(D22_5) , '4') )	
D22_5_a (required)	حاصل کرنے کے لیے کتنی رقم خرچ کی؟ جب زمین میں لکھی [doc_name1] Question relevant when: selected( \$(D22_5) , '3') and not(selected( \$(D22_5) , '999') and not(selected( \$(D22_5) , '888') and not(selected( \$(D22_5) , '4') )	
D22_5_o (required)	حاصل کرنے کے لیے کتنی رقم خرچ کرنا پوری رقم لکھی۔ [doc_name1] Question relevant when: selected( \$(D22_5) , '777') and not(selected( \$(D22_5) , '999') and not(selected( \$(D22_5) , '888') and not(selected( \$(D22_5) , '4') )	
D22_o_num (required)	اپنے کتنے اور دستاویز جمع کیے؟ write 0 if did not collect any other document =888 if don't know	
survey > - > > (1) > > (1) > > (1) تعمیر کار کتنے اور دستاویز جمع کیے؟ Group relevant when: not(selected( \$(D22_o_num) , '999') and not(selected( \$(D22_o_num) , '888') )		(Repeated group)
D22_o_1 (required)	برآمدگی دستاویز جمع کیے نام بتائی 888 = Don't know  =999 = Refused	
D22_1_o (required)	میں؟ [D22_o_1] آپ کو کتنے عرصے میں select the unit of measurement Question relevant when: not(selected( \$(D22_o_1) , '999') and not(selected( \$(D22_o_1) , '888') )	1 منٹ 2 گھنٹے 3 دن 4 مہینے 5 سال 6 گزیر وقت نہیں لگا 888 جواب نہیں جانتے 999 جواب جاننے سے انکار
survey > - > > (1) > > (1) > > (1) تعمیر کار کتنے اور دستاویز جمع کیے؟ Group relevant when: not(selected( \$(D22_1_o) , '999') and not(selected( \$(D22_1_o) , '888') and not(selected( \$(D22_1_o) , '6') )		(Repeated group)
D22_1_final_other (required)	میں پر کریں، [timeofdoc_name1_other] میں؟ [D22_o_1] کتنے عرصے میں اپنے کتنے عرصے میں سفر پر اوسطاً وقت لگتا ہے؟ [D22_o_1] آپ کو select the unit of measurement travel time includes both going and coming back Question relevant when: not(selected( \$(D22_o_1) , '999') and not(selected( \$(D22_o_1) , '888') )	1 منٹ 2 گھنٹے 3 دن 4 مہینے 5 سال 6 گزیر وقت نہیں لگا 888 جواب نہیں جانتے 999 جواب جاننے سے انکار
survey > - > > (1) > > (1) > > (1) تعمیر کار کتنے اور دستاویز جمع کیے؟ Group relevant when: not(selected( \$(D22_2_other) , '999') and not(selected( \$(D22_2_other) , '888') and not(selected( \$(D22_2_other) , '6') )		(Repeated group)
D22_2_final_other (required)	کتنے عرصے میں سفر پر اوسطاً وقت لگتا ہے؟ [D22_o_1] آپ کو میں پر کریں، [timeofcather_name1] میں؟ travel time includes both going and coming back	
D22_3_other (required)	اپنے کتنے عرصے میں سفر پر اوسطاً انتظار لگتا ہے؟ [D22_o_1] select the unit of measurement Question relevant when: not(selected( \$(D22_o_1) , '999') and not(selected( \$(D22_o_1) , '888') )	1 منٹ 2 گھنٹے 3 دن 4 مہینے 5 سال 6 گزیر وقت نہیں لگا 888 جواب نہیں جانتے 999 جواب جاننے سے انکار
survey > - > > (1) > > (1) > > (1) تعمیر کار کتنے اور دستاویز جمع کیے؟ Group relevant when: not(selected( \$(D22_3_other) , '999') and not(selected( \$(D22_3_other) , '888') and not(selected( \$(D22_3_other) , '6') )		(Repeated group)
D22_3_final_other (required)	اپنے کتنے عرصے میں سفر پر اوسطاً انتظار لگتا ہے؟ [D22_o_1] میں پر کریں، [timeofanother_name1] میں؟	
D22_4_final_other (required)	اپنے کتنے عرصے میں سفر پر اوسطاً انتظار لگتا ہے؟ [D22_o_1] آپ کو 888 = Don't know  =999 = Refused Question relevant when: not(selected( \$(D22_o_1) , '999') and not(selected( \$(D22_o_1) , '888') )	
D22_5_other (required)	حاصل کرنے کے لیے کتنی رقم خرچ کی؟ [D22_o_1] آپ کو select the unit of measurement Question relevant when: not(selected( \$(D22_o_1) , '999') and not(selected( \$(D22_o_1) , '888') )	1 کروڑ 2 لاکھ 3 عرب 4 کئی سو روپے خرچ نہیں ہوا / کچھ نہیں 777 دیگر (لاکھ سے کم رقم) 888 جواب نہیں جانتے 999 جواب جاننے سے انکار
D22_5_other_c (required)	حاصل کرنے کے لیے کتنی رقم خرچ کی؟ 1 کروڑ یا اس سے زیادہ [D22_o_1] آپ کو	



Field	Question	Answer
	Question relevant when: selected( \$(D22_5_other) , '1') and not(selected( \$(D22_5_other) , '999')) and not(selected( \$(D22_5_other) , '888')) and not(selected( \$(D22_5_other) , '4')	
D22_5_other_1 (required)	حاصل کرنے کے لیے کتنی رقم خرچ کریں؟ لاکھ روپے میں لکھیں [D22_5_1] آپ نے	
	Question relevant when: selected( \$(D22_5_other) , '2') and not(selected( \$(D22_5_other) , '999')) and not(selected( \$(D22_5_other) , '888')) and not(selected( \$(D22_5_other) , '4')	
D22_5_other_a (required)	حاصل کرنے کے لیے کتنی رقم خرچ کریں؟ سو روپے میں لکھیں [D22_5_1] آپ نے	
	Question relevant when: selected( \$(D22_5_other) , '3') and not(selected( \$(D22_5_other) , '999')) and not(selected( \$(D22_5_other) , '888')) and not(selected( \$(D22_5_other) , '4')	
D22_5_other_o (required)	حاصل کرنے کے لیے کتنی رقم خرچ کریں؟ پوری رقم لکھیں [D22_5_1] آپ نے	
	Question relevant when: selected( \$(D22_5_other) , '777') and not(selected( \$(D22_5_other) , '999')) and not(selected( \$(D22_5_other) , '888')) and not(selected( \$(D22_5_other) , '4')	
D23 (required)	استغزوات حاصل کرنا آسان تھا یا مشکل؟	1 بہت آسان 2 آسان 3 نہ آسان نہ مشکل 4 مشکل 5 بہت مشکل 888 جواب نہیں دیا 999 جواب نہیں دیا
D24 (required)	آپ نے درج ہوا استغزوات کب سے حاصل کیے؟ select all that apply	1 پانچ ماہ 2 قانون کر 3 انٹرنس ریکارڈ سٹارٹ 4 پورے 5 تعمیراتی 777 دیگر 888 جواب نہیں دیا 999 جواب نہیں دیا
D24_other (required)	یہاں پر دیگر کئی وضاحت کریں Question relevant when: selected( \$(D24) , '777')	
D25 (required)	کیا استغزوات میں غلطیاں تھیں؟	1 ہاں 2 نہیں
D25_A (required)	آپ اپنے استغزوات سے کتنے مطمئن ہیں؟	1 بالکل مطمئن 2 مطمئن 3 نہ مطمئن نہ غیر مطمئن 4 غیر مطمئن 5 بالکل غیر مطمئن 888 جواب نہیں دیا 999 جواب نہیں دیا
hearing_set (required)	کیا آپ کسی سماعت کی تاریخ مقرر ہو کر آئے؟	1 ہاں 2 نہیں
D26_unit (required)	درخواست نامہ دائر کرنے کے بعد کتنے عرصے میں پہلی سماعت مقرر ہوئی؟ select the unit of measurement Question relevant when: not(selected( \$(hearing_set) , '2')	1 منٹ 2 گھنٹے 3 دن 4 مہینے 5 سال 6 کوئی وقت نہیں لگا 888 جواب نہیں دیا 999 جواب نہیں دیا
مقدمہ دائر کرنے کی مدت اور لاگت < - (1) > - > - > survey Group relevant when: not(selected( \$(D26_unit) , '999')) and not(selected( \$(D26_unit) , '888')) and not(selected( \$(D26_unit) , '6')) and not(selected( \$(hearing_set) , '2'))		(Repeated group)
D26 (required)	درخواست نامہ دائر کرنے کے بعد کتنے عرصے میں پہلی سماعت مقرر ہوئی؟ [timehearing_name1] میں ہو کر۔	
D27 (required)	آج تک مقدمے کی تاریخ کتنی مرتبہ لکھی؟ 888 = Don't know 999 = Refused Question relevant when: not(selected( \$(hearing_set) , '2')	
D28 (required)	کتنی مرتبہ تاریخ پر سماعت ہوئی؟ 888 = Don't know 999 = Refused Write 0 if never occurred Question relevant when: not(selected( \$(hearing_set) , '2')	
D29 (required)	آپ کو آج تک اس مقدمہ کی تاریخ سے کتنی مرتبہ عدالت ہالوں کے چکر لگائے ہیں؟ 888 = Don't know 999 = Refused Write 0 if never went	
D30 (required)	پچھلے آدھ سال میں عدالت ہالوں کے کتنے چکر لکھے؟ 888 = Don't know 999 = Refused Write 0 if never went Question relevant when: not(selected( \$(D29) , '0')	



Field	Question	Answer
D33_i (required)	کتنا خرچہ ہو؟ تاکہ روپیے میں لکھیں [expenses_name] اچ تک اس مقدمہ میں اپنا Question relevant when: selected( \$(D33_unit) , '2') and not(selected( \$(D33_unit) , '999')) and not(selected( \$(D33_unit) , '888')) and not(selected( \$(D33_unit) , '4')	
D33_a (required)	کتنا خرچہ ہو؟ عرب روپیے میں لکھیں [expenses_name] اچ تک اس مقدمہ میں اپنا Question relevant when: selected( \$(D33_unit) , '3') and not(selected( \$(D33_unit) , '999')) and not(selected( \$(D33_unit) , '888')) and not(selected( \$(D33_unit) , '4')	
D33_o (required)	کتنا خرچہ ہو؟ پوری رقم لکھیں۔ [expenses_name] اچ تک اس مقدمہ میں اپنا Question relevant when: selected( \$(D33_unit) , '777') and not(selected( \$(D33_unit) , '999')) and not(selected( \$(D33_unit) , '888'))	
other_exp_num (required)	موتیے ان کے جن کا پتہ نظر کیا گیا ہے، اس کی رقم سے آپ اسے کتنے اور اخراجات جانتے ہیں؟ write 0 if incurred no other expenses  999 = refused to answer  888= don't know	
survey > - > (1) < - >	مقدمہ دائر کرنے کی مدت اور تک	(Repeated group)
Group relevant when: not(selected( \$(other_exp_num) , '999')) and not(selected( \$(other_exp_num) , '888'))		
other_exp_name (required)	کیا آپ مجھے ان اخراجات کے نام بتا سکتے ہیں؟ 999 = refused to answer  888= don't know	
D33_unit_other (required)	یہ کتنا خرچہ ہو؟ [other_exp_name] اچ تک اس مقدمہ میں اپنا select the unit of measurement Question relevant when: not(selected( \$(other_exp_name) , '999')) and not(selected( \$(other_exp_name) , '888'))	1 کروڑ 2 لاکھ 3 سو 4 کوئی پیمائش خرچ نہیں ہوا / کچھ نہیں 777 دیگر (تاکہ سے گروہ) 888 جواب نہیں جانتے 999 جواب دینے سے انکار
D33_a_o (required)	کتنا خرچہ ہو؟ عرب روپیے میں لکھیں [other_exp_name] اچ تک اس مقدمہ میں اپنا Question relevant when: selected( \$(D33_unit_other) , '3') and not(selected( \$(D33_unit_other) , '999')) and not(selected( \$(D33_unit_other) , '888')) and not(selected( \$(D33_unit_other) , '4')	
D33_c_o (required)	کتنا خرچہ ہو؟ کروڑ روپیے میں لکھیں [other_exp_name] اچ تک اس مقدمہ میں اپنا Question relevant when: selected( \$(D33_unit_other) , '1') and not(selected( \$(D33_unit_other) , '999')) and not(selected( \$(D33_unit_other) , '888')) and not(selected( \$(D33_unit_other) , '4')	
D33_l_o (required)	کتنا خرچہ ہو؟ تاکہ روپیے میں لکھیں [other_exp_name] اچ تک اس مقدمہ میں اپنا Question relevant when: selected( \$(D33_unit_other) , '2') and not(selected( \$(D33_unit_other) , '999')) and not(selected( \$(D33_unit_other) , '888')) and not(selected( \$(D33_unit_other) , '4')	
D33_o_o (required)	یہ کتنا خرچہ ہو؟ [other_exp_name] اچ تک اس مقدمہ میں اپنا پوری رقم لکھیں Question relevant when: selected( \$(D33_unit_other) , '777') and not(selected( \$(D33_unit_other) , '999')) and not(selected( \$(D33_unit_other) , '888')) and not(selected( \$(D33_unit_other) , '4')	
D33_A (required)	آپ کو ریونیو عدالت کے جڈ ایڈورک کی خدمت میں یہ معاہدات کن مقدمہ کے لیے فراہم کریں؟ 999 = refused to answer  888= don't know Question relevant when: selected( \$(D33) , '4')	
D34 (required)	کیا آپ اس مقدمے کی وجہ سے اپنی پریشانی میں مبتلا ہیں؟	1 کوئی پریشانی نہیں 2 ہلکی پریشانی 3 تا زیادہ تا کم پریشانی 4 بہت پریشانی 5 انتہائی نہیں انتہا 888 جواب نہیں جانتے 999 جواب دینے سے انکار
D35_p (required)	کیا آپ کبھی کسی پٹاری سے ملے ہیں؟	1 ہاں 2 نہیں
D35_g (required)	کیا آپ کبھی کسی گڑاؤں قانونگر سے ملے ہیں؟	1 ہاں 2 نہیں
D35_a (required)	کیا آپ کبھی اراضی ریکارڈ سٹار جانتے ہیں؟	1 ہاں 2 نہیں
D35 (required)	پٹاری، قانون گر اور اراضی ریکارڈ سٹار، ان تینوں میں کون سے نظر میں زیادہ آسانی ہے؟ Question relevant when: selected( \$(D35_p) , '1') and selected( \$(D35_g) , '1') and selected( \$(D35_a) , '1')	1 پٹاری 2 اراضی ریکارڈ سٹار 3 گڑاؤں قانون گر 4 پٹاری اور گڑاؤں میں زیادہ آسانی 5 پٹاری اور اراضی ریکارڈ سٹار میں زیادہ آسانی ہے۔ 6 اراضی ریکارڈ سٹار اور گڑاؤں میں زیادہ آسانی ہے۔ 7 کوئی نہیں 888 جواب نہیں جانتے 999 جواب دینے سے انکار

















