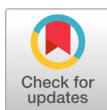



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Implementation of Citizen Participatory Audit: Establishing a Framework from Existing Structures

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Abstract

Citizen Participatory Auditing (CPA) incorporates the participation of general public within the accountability domain of the country under the umbrella of the Supreme Audit Institution (SAI). The implementation of Citizen Participatory Audit in the accountability mechanisms has just recently been accelerated in the policy matters of several democracies. While the initiation of this concept is still at an emerging stage, the implementation mechanisms are widely diversified and in need of amalgamative consideration. Therefore, this paper creates a methodological framework for the implementation of the nascent Citizen Participatory Audit initiative in Pakistan that has gained traction under the Auditor General of Pakistan. The initiation of CPA is explored in this paper under the context of Pakistan's Public Sector Auditing while making ground for the establishment of a framework for effective implementation of Community Participation. The paper analyzes the current arrangement of Citizen Participation in Audit to explore the creation of a framework that utilizes the current structures that would aid in design of an effective community-influenced auditing framework. The established framework follows a traditional Input, Process and Output configuration that incorporates the structures and entities at the Input-Output level and the procedures and evaluations for audit in the Process category. The paper cements a broader implementation of the Framework that can be adjusted to various levels of the government. The replication of the CPA Framework can be adjusted and modeled around various democracies' public sector accountability institutions due to the similarities of its domain.

Keywords: government audit, citizen participatory audit, community engagement, public sector, supreme audit institution

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Introduction

The Supreme Audit Institution (SAI) of a country is primarily responsible for implementing accountability mechanisms that lead to enforcement through government interventions. The safeguarding of public assets is a duty that is inherited by SAIs through constitutional charter of a nation. Therefore, the role of public sector audit is of prime importance in the democratic culture of any society. The implementation of public participation within the accountability mechanism breeds more refined forms of democratic norms that help nurture the answerability of expenses that are devoted to development, operations and functioning of the country as a whole (Natan-Krup & Mizrahi, [2024](#)). Public participation in audit is a nascent subject that is yet to be institutionalized and implemented across various countries. However, in the recent decade, the traction of public participation under the name of Community Based Auditing (CBA) has taken a new turn in the accountability process (Tattersall, [2016](#)). The current mechanisms, globally, demonstrate a government centered and a government-oriented auditing framework that integrates directions from one entity to its sub-entities in the auditing process with no regulation of public input (Masood & Afzal, [2016](#)). Therefore, the accountability process lacks transparency and participation of public within the decision making domain.

This paper focuses on the public-centric accountability mechanism in Pakistan that is derived from newly motivated auditing principles of various governments. The public centered approach introduces opinions and feedbacks from the general public as well as other functioning entities to aid in the accountability process. The participation of public in the accountability process not only improves transparency and inclusiveness but also aids in the decision making of the government, leading to increased public approvals. Transparency, Communication and Inclusiveness are primary factors that are directly affected by the accountability process (Afridi & Bilal, [2020](#)). The introduction of CPA within the accountability mechanisms of a SAI of any country would lead to an increased efficiency in utilization of public resources by improving the auditing process (Berthin, [2011](#)). The increased rate of public participation would be aided with the help of an inclusive framework that can be initiated and implemented in the auditing process of any SAI. The objective of this paper is the creation of a framework that utilizes existing structures, which are

common amongst various democratic nations in functionality. This framework incorporates Citizen Participation at all levels in the accountability institution. The lack of Citizen Participation in Accountability Mechanism is correlated with decline in growth of democratic values. This lack leads to the absence of transparency, inclusivity, public trust and governance impact. This exclusion hinders meaningful reforms as it does not incorporate grassroots involvement detaching public and government with common reality.

The research that this paper presents is centered around the accountability mechanism in Pakistan and uses its existing structures to create a framework that can be easily replicated when implemented to other developing or developed countries. An introduction to CPA and its current status in Pakistan and other countries is also pondered upon in this research. The models of three countries are critically reviewed along with various other literatures to create a comprehensive model for Pakistan. The paper identifies structures that are active within the government functioning in Pakistan and incorporates them to the new pre-auditing planning and information gathering phase. The input section of the framework includes recommendations of public from various mediums or structures and feeds them to the process section. The process section sorts, filters and conducts a regression analysis of the auditing variables used by the Auditor General's Office for audit decisions. The output section provides a detailed insight on the audit conducted to be shared with the relevant shareholders which includes the public. The feasibility of this framework is evident with its flexibility of adjusting in various environments, especially in the developing structures, such as in Pakistan. The model also fills the gaps that were highlighted within other models and their implementation. The paper also identifies relevant literatures that were reviewed and utilized for the creation of the CPA framework. The public participation in the audit mechanism not only improves the governance processes but also develops sound decision-making by incorporating the main stakeholder to its procedure.

Literature Review

An examination of extensive literature was done to understand the CPA process and its implementation in Pakistan's Public Sector Auditing techniques. Initially, the current CPA progress in Pakistan was researched to understand gaps and provide a way forward for the creation of a mechanism of CPA, on which some democracies have worked.

Furthermore, CPA Models of three pioneering countries were analyzed for this paper to create a comprehensive model for Pakistan. Usman's ([2023](#)) research was crucial in understanding and evaluating the CPA experience in Pakistan. It described a current mechanism that is under practice in the SAI of Pakistan. The research pointed on the weaknesses that are prevailing in the CPA processes and how its nascent form has been deficient in many factors for proper implementation. A Citizen Portal, which lacks mechanisms for inputs and evaluation technicalities, is currently being used to provide auditing requests for the SAI Pakistan. Furthermore, the paper, solidly points out the deficiencies in the CPA process as it fails to empower the citizens and does not give weight to their opinions in the audit process effectively (Usman, [2023](#)).

SAI Philippines' ([2022](#)) report on CPA in the audit mechanisms created the experiential phenomena of Citizen-Auditors. The report helped in understanding how the role of citizens can influence the accountability process and how the information can be collected and utilized effectively. The process, however, was limited to a confined data collection mechanism and singular stakeholder participation and not taking into account digital mediums, which this paper incorporates. However, the research presented by Kim ([2014](#)) on the CPA Model for South Korea described a different picture. His report was analyzed to understand the prevailing model in South Korea which categorized the audits into two separate mandates. The SAI Korean report was studied to understand their working of opinion gathering, analysis and output. The singular input mechanism, along with strict eligibility mechanism and lack of digital mediums for data collection and processing, was primarily the major gap in their model, which is the model this paper fills (Kim, [2014](#)). Their model was also institutionalized and its formal mechanism was studied for this paper as well.

The Australian Model of CPA was studied for guidance so that it could be followed while implementing the Pakistani Model. It was done due to its uniqueness and pioneering nature. The Australian model was formally initiated through governmental organizations and publicized through a proper mechanism for input. These organizations' approach was studied for implementation and lessons learned. However, they only focused on the performance audits and also lacked a proper processing mechanism which this paper provides (Favre, [2022](#)). Nevertheless, this paper also utilizes a Toolbox resource based on Community Based Auditing. The toolbox

contains guidelines on how different tools can be used in creating a community based auditing structure (Tattersall & Eastman, [2009](#)). The toolbox helped refine and guide the creation of the framework for the Pakistani Model based on quantitative and qualitative methodologies. A UNDP Report by Berthin ([2011](#)) focuses on the concept of Social Audit, which demonstrates the mechanisms and motivations behind citizen participation in accountability. Although the mechanism for audit has not been targeted in the report but it does identify areas of public involvement in accountability. The report was studied to understand how SAIs can engage the citizens for accountability and what incentives and risks would be involved. The report shaped the model presented in this paper by demonstrating which risk areas to avoid and which areas to work on (Berthin, [2011](#)).

Maguire's ([2019](#)) report presented an overview of citizen engagement in political processes in Pakistan. This report was reviewed to understand which segments of the population remain unapproached for accountability processes and would need to be reached for effective participation. The report highlights barriers to citizen engagement and the structural and political influences, which this paper circumvents through a broader implementation with digital tools. The analysis in the reports helped identify relevant stakeholders in the accountability process and the existing structures that can be utilized. Furthermore, to fully understand the district management reach and role in collecting information for opinions, a Social Audit report was analyzed for the study. Cockcroft et al. ([2002](#)) gave a comprehensive insight into district reach and how the structures are formed in Pakistan.

Further literature was also reviewed for this research to get a comprehensive view of the auditing mechanisms as well as the current developments of SAIs. The development and rising role of SAIs have been changing at a rapid pace as noted by Baimyrzaeva and Kose's ([2014](#)) research. They dived into the changing dynamics of SAI and how they are making way for citizens' participation in governance and audits. The literatures reviewed on the existing models of CPA in various SAIs shows commonality of positive initiative but it does not follow into further development into the concept. There are major differences in many models with various gaps but the model, presented in this paper for the Pakistan SAI, tends to fill those gaps and overcome the limitations posed. The

auditing mechanisms and the structures were studied thoroughly for this report and these pointed out various opportunities for effective implementation (Department of the Auditor General of Pakistan [AGP], [2012](#)). The issues pertaining to public sector auditors in Pakistan was also taken into account when creating the framework (Afridi & Khan, [2024](#)).

The paper also dives into the theory of participatory governance for implementing its essence throughout the research. The participation of the public as a material and active participant in the accountability processes through guiding the directions of public sector audit is a prime example of participatory governance. This leads to inclusion, transparency, and a creation of a shared decision making space which this paper emphasizes. The literature of participatory governance theory has highlighted the relevance of the citizen integration in governance processes. Furthermore, the principles of digital governance were also applied in the research as they relate to the use of digital means to enhance accountability and transparency practices (Hacker & Dijk, [2000](#)). In this paper, the use of digital means is consistently applied using various platforms by integrating it into a medium for the framework implementation.

Methodology

The paper presents a combination of quantitative and qualitative approaches with various literatures reviewed for comprehension. Document Analysis and Case Study was conducted to understand past initiatives of the CPA Models and lessons to be learned for current model. The CPA Models of other countries and their comprehensive reports and results were studied. However, the paper, primarily, incorporates and uses Participative Governance and Grounded Theory (GT) for building a model. Therefore, engagement tools are effectively analyzed and implemented in the Process section of the model which includes public consultations and advisory boards. The model utilizes the data collection, sampling and comparisons for effective creation of a framework. This paper incorporates a Design Science Research (DSR) methodology to create a framework that would address the problem/request for further evaluation, critical analysis and decision-making. In case of quantitative methodology, the paper used regression modelling, statistical analysis and simulation modeling for implementing the model. STATA and R is used for the modeling and analysis of the results. A co-relation analysis is also done that compares past auditing history and other requested audits, evidently, fueling the equation

that is derived. Finally, a field testing of the model is done in the Public Works Office of Pakistan to validate and refine the research of this paper. Therefore, a Triangulation Method was used to provide a robust framework that emphasizes total citizen participation through multi-varied domains.

Citizen Participatory Audit

The foundation of the Citizen Participation in Audit is derived from inherent principles of democracy. The term Citizen Participation and its influence on public policy evolved regardless of general consensus and externalities (Mize, [1972](#)). In a democratic society, it is the masses that define the destination and the role of the executive to achieve that goal or target. In other words, ends are democratically defined and means are operationally applied (Kweit & Kweit, [2007](#)). Citizen Participation derives its roots from the models and practices first recorded in Ancient Greece and England but the Citizen Participation in Government activities was first institutionalized in the United States in the 1960s. The Korean Case of Citizen Empowerment was also initiated in the 1980s with rapid involvements of the people in state decisions (Kim, [2014](#)). They incorporated a system of feedback that directed through local body councils. However, the concept of citizen participation in audit was first put forward in 2012 in Copenhagen when experts and governments from Africa, Asia and Europe came together to discuss a common innovative agenda (The Danish Institute of Human Rights [DIHR], [2012](#)). The case of Philippines in citizen participation for enhancement of good governance has been formalized into their policy making and state operations. The citizens' involvement in formulating policies, proposing solutions and audits and trainings, led to increased public participation and creation of a Philippian framework for Audit Engagement. The development of citizen participation in Audit can be credited to the progressing movements of public participation in state affairs which are being globally institutionalized. This paper studies and evaluates existing frameworks of Philippines, South Korea and Australia to develop a model that would incorporate all parameters of audits while filling the gap observed in other models, into an amalgamated and tailored form for Pakistan.

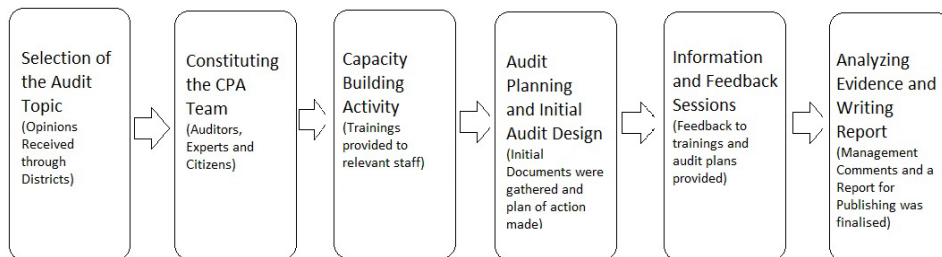
Philippines CPA Model

Learning from the Philippines' CPA model experience, their framework included an offshoot mechanism that complemented regular audits by

adding to the audit plans as opinions collected from the district bodies. It does not include its separate framework or mechanism for prioritizing or communicating outputs. However, their incorporation of the Citizen Opinion is a mandatory segment to the audit framework which combines nationwide geographic input and includes opinions in not just audits, but its planning and solution recommendations as well. Their concept of Citizen-Auditors, analyzed for this paper, has created a new form of accountability process that formalizes the citizen involvement. This framework that the Philippines created has demonstrated higher efficiency through increased labor, shorter audits, informed public, increased trainings and faster implementation of Audit Reports (SAI Philippines, [2022](#)).

Figure 1

CPA Model for SAI Philippines (SAI Philippines, [2022](#))



SAI Philippines has identified ways for sustainability of CPA in their audits through their annual incorporation and a legal umbrella. Citizens haven shown to be active members of SAI through their rising recommendations and in many cases, well-constructed solutions for good governance. This shift from a spectator mindset to participative auditing mechanism has been demonstrated through their fixed model. The demonstration of Citizen-Auditors was demonstrated through their annual progress of reporting 44 Citizen-Auditors auditing the primary and secondary schools (SAI Philippines, [2022](#)). Nevertheless, the Philippines case recommends full participation of public in auditing process, which the model presented in this paper does not enforce. The model that is currently active has not yet been formally adopted by the SAI but its partial usage for CPA is noteworthy and has been studied for this paper. Their CPA model is explained in Fig. 1 and it demonstrates a workflow process which incorporates “selection of topics” with opinions of public and further integrate the Citizen-Auditors in the process, backing their involvement with trainings. Their model, however, fails to use complete digital mediums,

create a comprehensive evaluation mechanism and not involving more stakeholders to inputs. However, its pioneering in Citizen-Auditors has been studied in this paper's model, alongside the feedback mechanism which is critical to audit planning.

South Korean CPA Model

The Korean society has since the 1980s demonstrated commitment to public participation and empowerment. Through public participation in governance, they have created a flow process, particularly, for the citizen participatory audits. The SAI of Republic of Korea incorporates two separate models, with two streams of audit, as presented and compared in Fig. 2, further categorizing the audits. The Planned Audits include audits that are planned and initiated by the SAI of Korea and are a part of mandatory Annual audits. Moreover, the Requested Audit is a separate stream that includes all citizen requested audits that are conducted parallel to mandatory audits. The Audit Request for Public Interest (APRI) program is a unified input mechanism that has a defined framework for input, which filters and categorizes the recommendations at the initiation level. Their categorization and input diversity was adopted for the CPA Model presented in this paper (Kim, [2014](#)).

Table 1

Comparisons between Audit Types in Republic of Korea (Kim, [2014](#))

Initiated by	Planned Audit	Requested Audit
	BAI	Requesters
Audit Scope	Broad/Complicated	Specific/narrow/less complicated
Size of audit team	Over 10 auditors	1-2 auditors
Duration of field works	Over 2 weeks	2-5 days

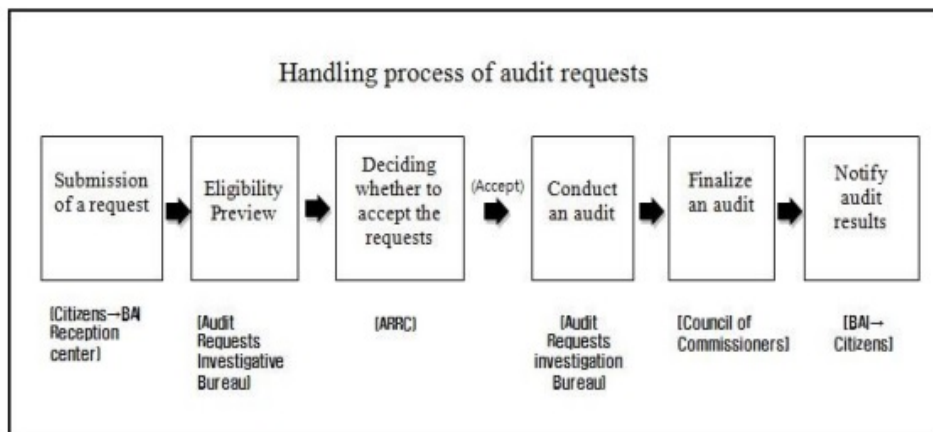
The South Korean Framework includes a workflow model with an evaluation component at each stage. The framework initiates with a submission of audit request form in the Civil Petition and Complaints Centre (CPCR). This is a unified center for processing of all complaints that includes formal procedures and documentation. The model presented in this paper, however, does not endorse the centralization due to difficulty in process and accessibility. The second stage includes an Audit Request Review Committee (ARRC) that reviews the audit request and either

accepts or rejects it. If the audit is accepted, the committee sends the audit for the planning and conducting to the relevant audit office. The model has been successful in its pursuit for accountability and transparency, but it lacks owing to its limitation in access, lack of digital tools and comprehensive evaluation mechanism. Only a single medium has been used for audit requests and it makes the procedure complicated through extensive documentation. Furthermore, no sound preview mechanism has been provided that defines the grounds on which the audit is accepted or rejected, apart from citizen eligibility. The model does institutionalize the CPA process, which was not present in the Philippines model (Kim, [2014](#)).

The South Korean Model's singular workflow model influences the model presented in this paper and cements an amalgamation of the procedures of model along with required innovations of digital nature. The model presented in this paper adopts a transparent procedural mechanism that shortlists and characterizes the audits which is not present in the Korean Model. The Korean Model also highlights eligibilities of citizen-auditors presenting their input to the accountability model and categorizes the requested audit scope into four categories. The diverse nature of input entities was also adopted from their model but the eligibility of 300+ citizens was discarded owing to the narrowing of the scope. Nevertheless, the model does present a sound framework mechanism and can be expanded to incorporate more entities and usage of digital mediums.

Figure 2

South Korean CPA Model (Kim, [2014](#))

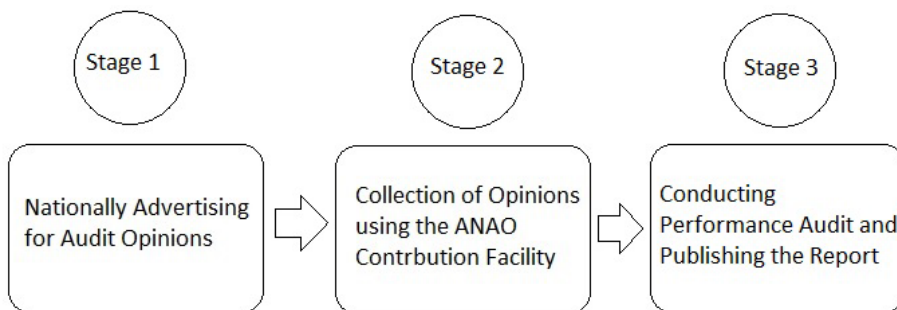


Australian CPA Model

The model for CPA by the Australian National Audit Office (ANAO) focuses solely on performance audits and not the compliance or regularity when integrating public opinions. The Australian model includes external opinions through experts for thorough analysis of the public views collected from constituencies. The audit requests are floated using publishing mediums and the opinions are collected through a web-based facility. Their model does incorporate a digital medium of a unified nature which works well in accordance to the Australian Society. The ANAO has solely focused on performance audits and may disregard an opinion on the basis of financial comprehension abilities of citizens. The audit reports are publicized on all media platforms which promotes the principle of transparency and right of information. The use of digital mediums for input and output of their mechanism influences the model presented in this paper. However, the limitation of their model owing to the singular nature of audit and lack of processing capabilities greatly effects the framework study. The requested performance audits have greatly improved efficiency in managing and implementing projects and institutions, especially in the districts. The novelty in their work is that the citizens can present the input at any stage of the audit process and this promotes the democratic principles of participation and transparency (Favre, [2022](#)).

Figure 3

Australian 3-Step CPA Model (Favre, [2022](#))



The three models studied for this paper use their unique components and combine them with new research to create a more comprehensive model that integrates all segments of the democratic system. The model presented in this paper also bridges the gaps not addressed by other models and creates

a more flexible model that incorporates digital tools with ease and could be amended for usage in other democracies.

Table 2
Comparative Analysis of CPA Models

Characteristic	Philippines Model	South Korean Model	Australian Model	Proposed Pakistan Model
Input	District Inputs only	Citizen Request through Compliant Centre	Inputs through Digital News Advertisements	Inputs through Media, District, Mobile Application and Ministries.
Process	Covers all kinds of audits under Normal Audit Procedures.	Citizen requested Audits run parallel to Normal Audits.	Audits apart from Performance do not apply citizen participation.	Covers all kinds of audits under Normal Audit Procedures.
Output	Print Medium	Print and Digital Medium	Print and Digital Medium	Print and Digital Medium
Limitation	Limited Inputs and lack of digital tools.	Citizen proposed audits are limited in scope.	Performance Audits only.	Volume of requests and recommendations.
Digital Tools	Partially Applied	Applied	Applied	Applied
Quantitative Tools	Not Applied	Partially Applied	Not applied.	Applied.

CPA and Digital Medium

There are different forms of public involvement and each method defines various ways through which information can be gathered. These tools have hardly been utilized in the models described above. The broader and standard use of these models are not formally recognized among any of the models studied and this paper seeks to incorporate digital tools in the model based on previous learnings from existing models. Dassen and Laven's (2024) report presents cases for using digital tools in CPA and how it strengthened the accountability process. The report strongly supports filling the gap of government function and public participation and presents 60 cases of effective use of digital tools for CPA. The model presented in

this paper relies on the creating an interaction between stakeholders and the government which Dassen and Laven's ([2024](#)) research supports backed by evidence.

A collaborative process using digital tools is greatly needed in Pakistan which would develop strong accountability process in democratic principles. Apart from contributing to the accountability process, the digital tools can greatly help in increasing the reputation of SAI and increase the reach of the accountability mechanisms. These tools can greatly help in identification of critical areas of financial mismanagement and potential cases of fraud and corruption (Dassen & Laven, [2024](#)). Implementing digital tools in audit have started to gain capability of traction across the world and through recognizing mediums for utilization in the CPA model, the accountability process and public participation can be greatly improved. However, such tools are lacking in practice in Pakistan for audit. Pakistan's current Public Sector Auditing is limited to single digital web-based portal which limits the reach of accountability and narrows down the target audience.

Benefits of CPA

Cogan and Sharpe (1986, as cited in Molokwane & Lukamba, [2018](#)) research identifies five major benefits of public participation in the policy planning stages. These include transparency of information, public support for decisions, conflict avoidance, good will and trust between SAI and public. This was among the first researches that initiated the idea that public participation in government processes and policy making can lead to an effective governance. There is a massive gap, leading to governance issues, derived from lack of transparency and public participation in democratic process that lead to further deterioration of government structures in Pakistan (Afridi & Bilal, [2021](#)). This gap can be effectively filled using CPA intensive audits using the digital tools provided in the framework. Furthermore, CPA empowers any SAI to conduct more audits as digital tools lead to reduced timeframe for audits. SAI Philippines case is evidence that such initiative led to faster implementation of audits and reduced timeframe for the auditors on audit (SAI Philippines, [2022](#)).

CPA also enables better understanding of the social and cultural contexts under which the auditors operate. This can only be possible when citizen input to audits is welcomed and comprehended. Furthermore, CPA

in Audits ensure that root causes of the irregularities are identified since the effected stakeholders, the public, can effectively help in providing greater insights to the audits (Favre, [2022](#)). These benefits can have major impacts in the accountability process of Pakistan as the governance issues effects the processing and impact of SAI. The overall working of the SAI can be improved if the citizen participation is incorporated. This can lead to bigger audience, which in turn, leads to more efforts towards innovation and improvements. Pakistan can utilize the CPA framework to create a more inclusive environment which can lead to the building of trust and the SAI image.

Existing Structures for Framework

The framework utilizes the current functioning structures of the government for implementing CPA in the Accountability Mechanism. From the extensive review of the literature, the structures can be developed that can be utilized for having a broader influence and identification of data collection domains. The CPA Framework will have a mixture of digital and non-digital collection points that will help in properly approaching the citizens based on ease of accessibility. The structures were identified on the basis of the accessibility of the citizens.

Prime Minister Portal

The PM Portal is a National digital application that is accessible to any digital device holder through the use of the application. The PM Portal was launched in 2018 to incorporate a more refined and inclusive form of accountability process by providing easier access for the Citizens. The portal may have been effective in providing ease of access for some population but lacks in its publicity, coupled with its reach to rural areas and senior citizens, makes it difficult to provide complete inclusivity. However, for the majority of the urban population with access to internet, they can participate more effectively with ease of access. These recommendations can be forwarded with the required documentations if any, to the Department of the Auditor General of Pakistan (AGP).

Government Ministries

The Ministries in Pakistan are power centers with an oversight role and an independent complaint sections for reviews and evaluation. Ministerial complainants are, usually, backed by technical individuals or independent contractors that have recently been a part of Government contracting and

are facing issues. The use of such existing complaint sections can be beneficial for opinion gathering for audit. The complainants that have issues or would like to highlight any irregularity regarding the relevant project or office, could approach the ministry and have their recommendation noted and also forwarded to the AGP Office. These recommendations can be collected from all Sub-offices, divisions and departments under the Ministry, before being forwarded from Ministry Principal Officer. The Ministries, such as Human Rights, Finance, Commerce, Law or Defense, have an overarching role in their relevant field.

Media Channels

The Media, being recognized as the 4th Pillar of Democracy, has a vital role in not only disseminating information but also collecting information for review. A significant number of International Organizations and NGOs have collected information on current issues for evaluation. The Auditor General can use the Media Channels and Reports to collect information on current issues regarding recently implemented projects. This can save cost and time, and utilize the media for effective collection of information and it is not just spread of reports and outputs. Furthermore, there have been multiple cases where the Government has taken note of irregularities and corruption highlighted by the media. Therefore, such a critical structure can be beneficial in targeting projects that would be missed in annual evaluations.

Municipal Administration Centers and Applications

There are multiple Municipal Administration Applications and Centers in place in Pakistan for every urban city. These applications assist the residents with permits, information, licenses and fees for services (Janjua et al., [2019](#)). This application is already underutilized in many urban areas and can be seamlessly used to collect information from citizens by encouraging effective participation for audit. The applications, as well as, the centers can assist the citizen by referring it towards the audit section and forwarding the request for evaluation to the AGP. This new shift is fueled from the e-governance models adopted by Pakistan in the recent decades with the help of World Bank (Batool et al., [2021](#)). These new forms for governance can also be utilized by updating the progress of requests, as well as, spreading information for future reporting and promoting transparency. Furthermore, the complaint centers can be effectively utilized to gather audit requests as

digital tools are not readily available in many rural areas in Pakistan.

District Management Offices

Janjua et al. (2019) point out the development of district governments for monitoring performance through the local council. The use of such a facility to collect requests for audit can be effectively utilized as the performance monitoring is already in place. The creation of a new mechanism for information gathering would not be required and the existing District Management Centers can be used for effective implementation of CPA Audits. Furthermore, district administration has had a long held presence in all district through established facilities and now, have expanded through the e-government model. This e-government model has been established by all districts which uses social media platforms to report progress, spread information and gather complaints (Batool et al., 2021). Therefore, by using the mechanism and the facilities for complaints of the district managements, the locals can be approached for audit requests for operational participation of the public.

Audit Management Information System

The Audit Management Information System (AMIS) is a nascent digital audit information system under the Department of the Auditor General of Pakistan and is used for live monitoring and progress during audits. The AMIS uses the digital web based server to provide access for updating the audit progress to the AGP and the Prime Minister's Office. This eliminates the need for other time consuming ways for information provision. The AMIS can be integrated with other structures to consolidate information for review. The AMIS can be integrated with Municipal Applications, District Administration, Ministerial input and PM Portal. This integration would streamline the process and provide immediate information access for consolidating the review requests. Furthermore, other forms of audit requests received can also be added in the AMIS. The AMIS has the characteristic to calculate audit materiality, risks and sample sizes. The quantitative abilities can be enhanced to process and evaluate the audit requests as required in the Framework. Thus, the role of AMIS will be further expanded.

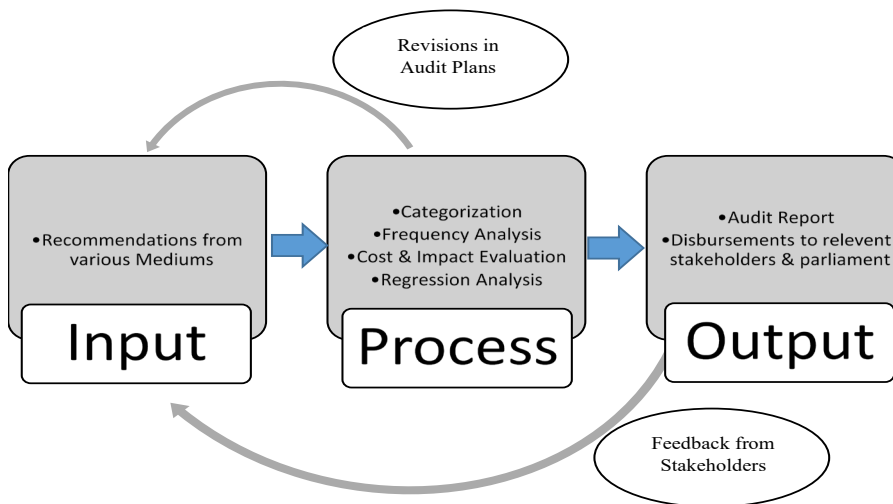
Creating the Framework

The framework of CPA, made in accordance with the structure of Pakistan, follows a three step IPO (Input-Process-Output) model. The

model is chosen due to the nature of the task and the iterative requirement of the process. The IPO model is a visual tool which flows the information in a uniform manner and is beneficial due to comprehension, scale and commensurability with the structures in place (Ahlan, [2014](#)). The framework, as described in Fig. 4, summarizes the CPA Process and defines it as a separate mechanism in the audit process. This model is different from the South Korean on account of its diversity in input, incorporation of digital medium, specified evaluation processes and a feedback mechanism. The model also differs from the Australian model based on the nature of audit, the comprehensive reviews and variety of input mechanisms. The Philippines model has the CPA component as an offshoot of the annual audit plans and it is not separate. Furthermore, SAI Philippines conducts its audit using Citizen-Auditors which is different from the concept provided in this Model for Pakistan.

Figure 4

Proposed Framework for Citizen Participatory Audit in Pakistan



The model, presented in this paper, implements a much broader framework using digital tools and provides a comprehensive processing segment for the evaluation of the audit requests. Furthermore, a variety of stakeholders are involved in the Model for this paper owing to the increased participation. The process segment feeds the input through feedbacks from the AGP during evaluation processing and adds to a refined decision

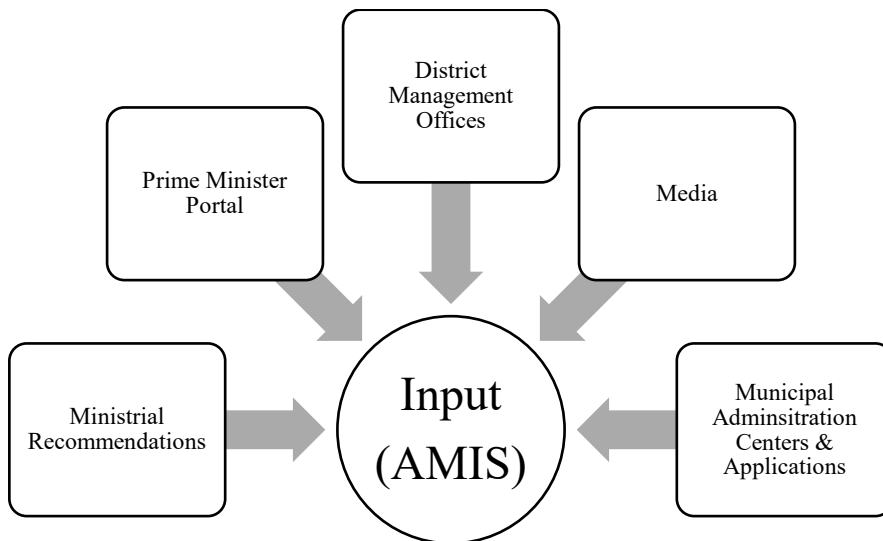
making. Whereas, the output segment feeds to the input through the feedback from stakeholders that further incorporates amendments to new proposed audits in the same area.

Input Section

The input section of the CPA Framework follows a multi-source approach that integrates views from five segments and consolidates it to feed it to the Auditor General's Office. The structures, as shown in Fig. 6 and discussed in the paper, are participation point for the CPA input mechanism. The citizen engagement is initiated through these focal points. The structures are already in use and would just need to adjust to integrate with the AMIS to create a refined accountability mechanism. The Prime Minister Portal, Municipal Administration Applications and, partially, Media, along with AGP CPA Portal, are major catalysts for digital mediums. The use of these digital means would greatly help in information collection and incorporate a wide range of audience through its reach. The input section would collect all the information and audit requests and feed to the web based AMIS portal that works under the AGP. The AMIS then stores it and processes it for further evaluation.

Figure 5

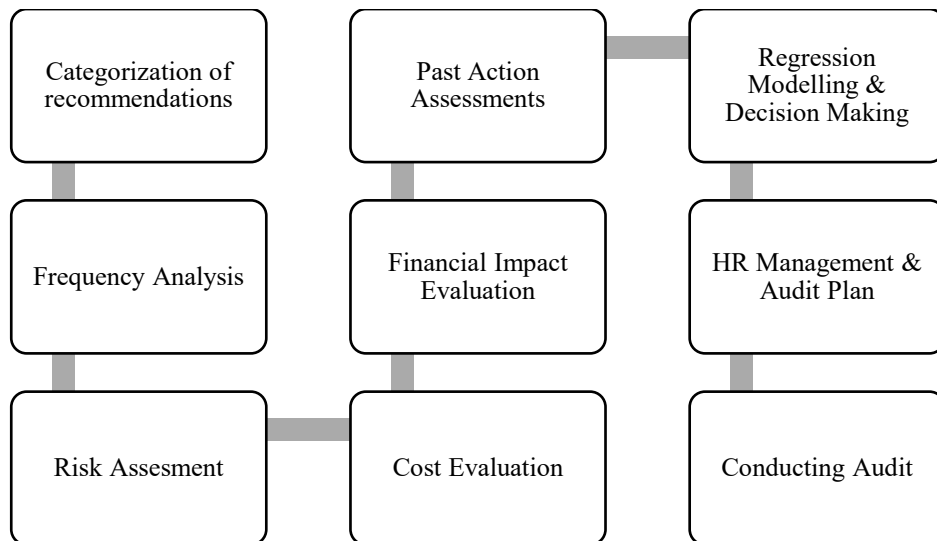
Input from Various Mediums for CPA Framework



Process Section

The processing for CPA Framework incorporates ideas from various models studied for this paper. The data collected through the literature reviewed, helped create a more comprehensive form of evaluation process which would leave lesser challenges in implementation. The process also endorses and induces different segments of various models studied. The process mechanism, as described in Fig. 7, follows a linear workflow with iterative evaluation that creates an inclusive review of the audit request. The recommendations received from various mediums are sorted according to the category of its audit. If the Audit Request generated pertains to an environmental, health or constructional nature, it will be placed in its respective sub-office based on specialized mandate. This is to keep track and effectively utilize the human resource under the AGP. As the audit offices in Pakistan, under the AGP, are decentralized based on the nature of task, sorting would help in identification of duties and management of resources.

Figure 6
CPA Process Mechanism



The Frequency Analysis provides the number of audit requests received for the similar project or institution in the request form. The higher the frequency, the more score of priority is allotted to the request. The use of Risk Assessment techniques is common among audits of various nature.

Thus, the inherent risk and the actualization risk is assessed that will assist in conducting the audit and the decision making related to it. The past action assessments generate past reports on the same nature of request or the same locality of audit, which helps in desk evaluation for further understanding the impact and priority of the audit request. This stage will identify past actions to save time and work-labor by planning next audits in accordance with the request. These analyses are fundamental to giving a complete picture of audit at hand and are used invariably across various audit assignments across different SAIs. The financial impact evaluation is a critical one as it puts forward the financial impacts that request might have required and how big in terms of an audit, this request, might lead to be conducted. The greater the financial impact, the higher the importance is given to the audit.

The cost impact analysis takes into account all costs associated with the audit which includes the human resource, the operational cost of the audit and potential loss of time that would be related to that audit request. These analyses, presented, are graded by a number which are all required for the regression analysis and final assessment of the audit request for prioritization. The scores are incorporated into the analysis which provides a picture of audit request based on priority. The regression equation is fundamental to auditing decision-making and includes one dependent variable Score, which acts as the output of the equation, and five independent variables: Frequency of Requests, Risk, Cost of Audit, Financial Impact and Past Audit Scores. The Risk is the product of the likelihood and impact, which is a common quantifiable scoring for risk in audit methodologies. All the values are quantifiable with available scores or values for relationship making. The regression equation, mentioned below in the paper, incorporates the assessments of the five variables to give a final score that acts as a priority rating for audit decision making.

$$\text{Score} = \beta_0 + \beta_1.Freq + \beta_2.Fin\ Impact + \beta_3.Risk - \beta_4.Cost + \beta_5.Past\ Scores + \epsilon$$

Whereas:

- β_0 is the intercept.
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ are the coefficients for the input variables.
- ϵ is the error term.

- Frequency, Risk, Past Audit Scores and Financial Impact have positive coefficients ($\beta_1, \beta_2, \beta_3, \beta_5$) because they are directly proportional to Y .
- Cost has a negative coefficient (β_4) because it is inversely proportional to Audit Score.

The equation mentioned above is an indicator of general comprehension of the relationships and to further refine it for implementation and scoring, the research computes the model into a quantifiable and testable equation. The initial step to coefficient creation was using professional judgments of several seasoned auditors of the public sector and for that reason, 30 specialised public sector auditors of Public Works Audit and Federal Audit Office were surveyed to rank the relative priority of the independent variable. The lack of past quantifiable and applied audit data in the public sector audit of Pakistan led to seeking surveys from professionals with substantial years of experience in the field owing to their role of being direct stakeholders in audit. The average scoring of the relative importance is presented in Table 2 as a summary of the survey. The highest significance, at the likert scale, was given to Frequency of Requests and Risk Score of the audit. The second most significance was given to Financial Impact of the Audit. Kelly (2012) also utilises mathematical modelling of the similar nature for internal audit of Australian Transport Company in his paper. The research, however, uses internal company priority areas as input variables to the model and not much broader inputs as used in this paper.

Table 3

Survey Implementation of Averaged Weighted Areas

Input Variables	Rated Average Importance (Scale: 1-5)	Coefficient Conversions
Frequency of requests received	5.0	0.25
Financial Impact of the proposed audit	4.0	0.20
Risk Factor of the proposed audit	5.0	0.25
Cost of Audit	3.0	0.15
Past Scores / Significance (if any)	3.0	0.15

The relative scores of the survey were quantified before creating coefficients that totalled to 1 for standard weightages. The weighted equation, presented below, puts a greater significance on Frequency and

Risk and leads to a score that is ranked for relative priority and higher concern for public participation. The log value of the Financial Impact is taken to tame the outliers so the model would not be skewed leading to irregular scoring. It is pertinent to mention that the equation would not incorporate the Financial impact variable for Performance Audits as it is out of scope due to the nature of that audit. Nevertheless, the model utilises best practices of other models, coupling it with the survey, for setting input variables to create a significant score.

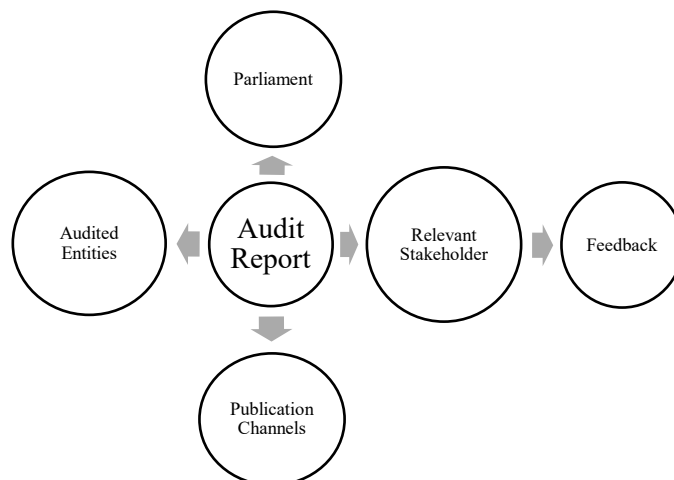
$$\text{Score} = 0.10 + 0.25 * \text{Freq} + 0.20 * \ln(\text{Fin Impact} + 1) + 0.25 * \text{Risk} - 0.15 * \text{Cost} + 0.15 * \text{Past Scores} + \epsilon$$

Output Section

The Audit Report is the cornerstone of the entire auditing mechanism. It showcases the achievement and the outcome of the Audit itself. The audit report's need to be publicized resonates with the democratic principle of transparency. After the audit was conducted, the report was then provided to the relevant requested stakeholders, as well as, published on the digital platforms and media. This activity leads to greater transparency and flow of information. Citizen participation is cemented and trust is developed with the government, further promoting good governance. The outputs, as defined in Fig. 8, is circulated for information and stored for correlation with future requests.

Figure 7

Outputs of CPA Framework



Results

For testing the validity of the newly created model, a field testing of the results was done in a limited controlled environment in the office of Public Works Audit of Pakistan. The controlled testing utilized 10 audit cases by collecting inputs on a pilot bases from various sectors. These inputs for audits relating to infrastructure, health and education were incorporated and a priority list was created. An operational simulation was performed using pre-gathered data to test the accuracy of the results and Table 3 provides a test result of *Score*. This provides a clear picture for effective decision making and indicating which audit mission to actualise first. The audit integrates the audit requests into audit plans. These plans, in the next step, lead to conducting the audit based on the audit resources and cost.

Table 4

Field Testing Results of the New Model

Case No.	Frequency	Fin Impact (millions)	Cost (millions)	Risk (1-100)	Past Audit Score	Final Score
1	34	264.3	2.8	97	0	33.446
2	34	174.9	11.3	88	0	29.839
3	28	64.3	8.7	93	0	29.781
4	26	79.1	1.3	92	0	28.682
5	24	119.5	8.1	88	0	27.743
6	23	138.6	8.8	87	0	27.168
7	28	28.9	1.4	78	0	26.970
8	28	187	4.8	77	0	26.577
9	21	79.5	6.1	83	0	25.963
10	32	57	1.2	74	0	25.632

In the results, the past audit scores are not available due to the nascent implementation of this model in all audits of the office. However, after an initial analysis, the scores would automatically be used for next evaluation. Nevertheless, the results of field testing showed substantial quantifiable result and a success in its implementation on a smaller scale of Public Works Audit Office. This pilot testing utilized the weighted relationship of the model to create a score that can be broadly used across all audits in the public sector.

Challenges to Implementation of the Model

The challenges to implementation can arise owing to the slow processing nature of government mechanisms. Furthermore, politicizing

such audits may also be a threat which may lead to misuse of the feature. The audit requests originating could be of low value and would not contribute fully to the accountability process. Furthermore, according to some professional views, audit may not be compatible with a participative nature of accountability process as it has developed around a bureaucratic culture. This could lead to issues with audit implementations and could serve as an anti-thesis to the accountability goal. The initial hesitation for research in the offices were also noted. Furthermore, citizens may also lack technical knowledge and would be emotionally motivated, rather than equipped with sound decision-making capability. However, further research and educational campaigns may lead to mitigation of these risks, which are coupled with executive and political approvals. Furthermore, through field testing, it was noted that for performance audit, an amendment to the model was needed. These challenges did not pose a hazard to the overall implementation of the model, and through uniformity of implementation, the model becomes set up perfectly.

Comparison with Current Framework:

The current framework in Public Sector Audit of Pakistan does not utilize digital means nor does it use any model for prioritizing audit except professional judgements. The Director Generals of respective Audit Offices use professional judgement to include and exclude audits and sending them for approval from the Auditor General's Office. The lack of mechanisms in the accountability offices have led to non-uniformity and inefficiency in practice. The current model incorporates Media, Management Judgement and recorded Executive Recommendations as a source of audit priority areas. The lack of involvement of public and other major stakeholders raises a flag of inefficient practices. The current model uses risk factors and financial impact as prime indicators of audit importance. The output of the current framework involves an annual audit report to the Parliament only. This current framework leaves gaps in accountability mechanisms that require rectification, which this paper proposes.

Flexibility of the CPA Model:

The flexibility of the CPA Framework presented in this paper is a fundamental trait to this research. The framework can be modified by changing the inputs for the relevant SAI's needs. Since the governance system may differ, the foundational idea would remain constant that would

promote effective CPA auditing techniques. The process mechanism can be utilized in all SAI frameworks as it integrates and presents a commonality of characteristics, backed by international standards when auditing, apart from minor changes. The model can be tailored for any SAI and studied for further implementations and adaptations. The legal and government functioning of the relevant SAI might amend certain factors of the model to be implemented. Nevertheless, the model as a whole, derived from experiential models of other SAIs, presents a comprehensive framework that can be personalized and fills the gap presented by other models.

Conclusion

CPA has redefined the influence of SAI's accountability processes in the democratic system. The growth of Citizen Participation in governance has increased manifold in the recent decade and this participatory action leads to a more collaborative nature of audit, detaching from the conventional traditional model of Audits. Which is why, CPA in Audit has become a cornerstone of modern accountability procedures. CPA, being embedded through democratic norms, brings more faith and transparency to the public sector audit and governance mechanisms. The model presented in this paper makes use of various qualitative and quantitative techniques that includes characteristics of other models studied. Furthermore, the paper presents a flexible, encompassing and comprehensive model for its implementation in Pakistan. This model utilizes the existing structures and creates an evaluation mechanism that relies on various independent variables. The framework suggests tools for decision-making and a process flow that generates effective and inclusive governance. The IPO model presented is an enhanced reflection of practices adopted in various developed nations. It takes into account the public opinion as a determining factor of audits by the SAIs. The public participation leads to a more inclusive accountability mechanism. The pilot testing in this paper presents promising results as it provides a sound ranking mechanism that was adopted across the Public Works Audit Office. The quantifiable scoring of the relevant risks in these audits provide a mechanism that can be replicated across different sectors of the Government. This model provides a practical approach towards Citizen Participation in Audit. Furthermore, a Participatory Action Research (PAR) is also planned for future research that would further expand the model in other sectors and it could be run in parallel across all sector audits to analyze the effects. The framework provides a foundation

for CPA implementation in public sector accountability mechanism in Pakistan. The ease of implementation, broader inputs, comprehensive evaluation techniques and use of digital tools for data gathering, makes the model unique for implementation. Through the SAI's contribution, this model can provide a structured approach to public participation and present results that would have higher impact than the Philippines, Korean and Australian Models studied.

Author Contribution

Munim Matin Afridi: writing - original draft, conceptualization, data curation, formal analysis, visualization, investigation. **Naghma Sherin Afridi:** resources, writing - review & editing, project administration. **Shaukat Ali:** supervision, methodology, validation.

Conflict of Interest

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Data Availability Statement

Data supporting the findings of this study will be made available by the corresponding author upon request.

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