

DIGITIZATION AND AUTOMATION OF ADMINISTRATIVE PROCEDURES; BUILDING SOLUTION TO ADDRESS SLUDGE IN SETTING-UP RESTAURANT BUSINESSES

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(CGP # 06-160)

5TH RASTA CONFERENCE

Wednesday, January 26 & Thursday, January 27, 2025

Roomy Signature Hotel, Islamabad

This document is unedited author's version submitted to RASTA.



RESEARCH FOR SOCIAL TRANSFORMATION & ADVANCEMENT

Competitive Grants Programme for Policy-oriented Research

Pakistan Institute of Development Economics

ABSTRACT

This study explores the regulatory challenges faced by restaurant owners in Lahore and proposes a digitized, automated and an integrated system to streamline registration and further license and approval acquisitions. The research is divided into three components.

The first component involves a situational analysis using a survey of 242 restaurants in Lahore, revealing significant hurdles such as high costs, excessive paperwork, and frequent departmental interventions. Restaurant owners reported long waiting periods and multiple trips for document submissions and approvals, often facing demands for bribes and free services from local authorities. On average, the total cost for registrations, licenses, and approvals across various departments was Rs. 309,453, including Rs. 89,606 paid to consultants or agents and Rs. 149,659 in miscellaneous expenses, such as bribes, while some of these costs recur monthly, particularly in dealings with the police. Restaurant owners typically made a total of 34 visits to various departments, incurring substantial travel costs of Rs. 92,844, resulting in a total cost of approximately Rs. 641,562 per restaurant across all zones. Additionally, the average delay for registration was 133 days, with an additional 30 days on average to obtain other certificates. However, these values varied significantly across different zones in Lahore. On the other hand, the notified charges in registration, licensing and approvals identified in the regulatory review varies significantly from the calculated costs in the study, revealing that the owners pay much higher than the notified charges. For a small to medium-sized restaurant, the total one-time charges could range between PKR 150,000 and PKR 300,000, with annual recurring costs for licenses and services being around PKR 20,000 to PKR 100,000, for all the departments, based on the size, location, and type of the restaurant.

The second component of the study reveals that the costs of regulatory burdens, or "sludge," constitute approximately 9.46% of the total cost of setting up a restaurant in Punjab, with an average sludge cost of Rs. 641,562 per establishment. Over the years, the sludge cost as a percentage of the hotel & restaurant sector's GNP in Punjab has fluctuated, accounting for 3.77% in 2020, 4.39% in 2021, and significantly dropping to 0.50% in 2022. This decline in 2022 correlates with a drastic reduction in the number of registered restaurants, attributed to a change in the registration methodology by the government, impacting sludge burden estimates. These findings highlight the substantial economic implications of regulatory burdens on new businesses and underscore the need for policy interventions to streamline compliance and support sectoral growth.

The third component focuses on developing a user-friendly web application to simplify registration by integrating the relevant departments' functions. The proposed system aims to reduce paperwork, waiting times, and physical visits by enabling online status checks, license acquisition, payment processing, one-time inspections, and grievance redressal. Built using advanced technologies, the system will integrate digital records accessible to all relevant departments, ensuring transparency and security.

The study has significant public policy implications that includes reducing bureaucratic inefficiencies and enhancing transparency in the registration process. By creating a more business-friendly environment, it supports government initiatives on digital transformation and can potentially improve Pakistan's ease-of-doing-business ranking.

PREFACE

This research aims to address the regulatory challenges faced by restaurant owners in Lahore and proposes a digitized, automated and an integrated system to streamline the registration processes. The study encompasses a comprehensive situational analysis and the development of an integrated digital system.

The motivation for this study stems from the observation that while significant effort is expended in identifying problems, little is done to solve them. Businesses in Pakistan, particularly those looking to start, face numerous challenges. It is imperative to promote a free market economy with minimal government intervention to create an ease of doing business environment. Digitizing and automating procedures with minimal human interference is the best way to achieve this. Moreover, this research emphasizes the importance of local solutions and engaging with academia, particularly in Computer Studies, to address bottlenecks identified in economic research.

I extend my sincere gratitude to the RASTA Competitive Grants Program (CGP) for funding and supporting this research project (CGP 06-160). Special thanks are due to mentors Omer Siddique and Ahmed Waqar Qasim for invaluable guidance throughout the research process.

I also appreciate the enumerators who conducted the field survey, providing key insights and going beyond expectations. My heartfelt thanks go to Muhammad Saifullah Tanvir (Lecturer, FAST-NUCES) for his unwavering support and guidance in building the software architecture.

This research would not have been possible without the collective effort and dedication of everyone involved.

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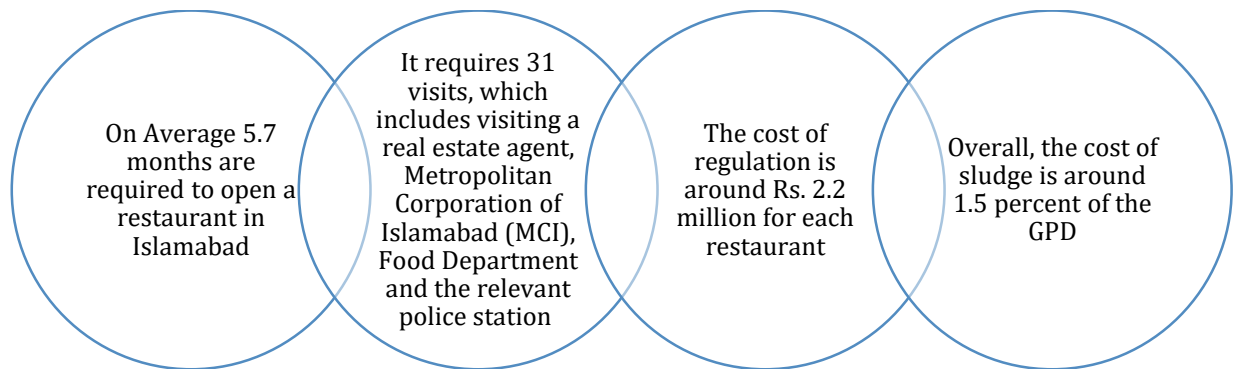
LIST OF ABBREVIATIONS

Cantt.	Cantonment Board
CPR	Certificate of Product Registration
DApp	Decentralized Application
DHA	Defense Housing Authority
DO	Designated Officer
DTS	Department of Tourist Services
ETH	Ethereum
FBO	Food Business Operator
FSO	Food Safety Officer
GNP	Gross National Product
IPFS	InterPlanetary File System
JSON	Open Standard File System
LDA	Lahore Development Authority
LLP	Limited Liability Partnership
MCI	Municipal Corporation of Islamabad
MCL	Municipal Corporation of Lahore
MEAN Stack	MongoDB, Express.js, Angular, and Node.js Stack
MERN Stack	MongoDB, Express.js, React, and Node.js Stack
NADRA	National Database & Registration Authority
NOC	No Objection Certificate
PESSI	Punjab Employees Social Security Institution
PFA	Punjab Food Authority
PKM	Police Khidmat Markaz
SECP	Securities Exchange Commission of Pakistan
SQL	Domain Specific Language
VS	Visual Studio

INTRODUCTION

The world is steering rapidly towards digitization, with major economies focusing on automation to streamline business processes. This shift eliminates unnecessary efforts for investors and businesses, allowing them to concentrate on providing quality services (Polova, 2022). In Pakistan, the process of opening a restaurant is particularly burdensome due to outdated, inefficient procedures that waste both time and money. According to PIDE's Sludge Series, it takes an average of 5.7 months to open a restaurant in Islamabad, requiring one license and four permissions through a tedious, time-consuming, and costly procedure (Haque et al., 2023).

Figure 1 Sludge in Opening a Restaurant in Islamabad, Pakistan



Source: Haque et al. (2023).

Digitizing the restaurant business, including online information access, digital payments, real-time status checks, and automation of various processes, is highly beneficial and can attract international chains, while digital technologies enhance the transparency, accountability, and efficiency of public administrations, thereby increasing citizen trust (Janssen, 2011; Polova, 2022). Utilization of digital technologies in official food safety control inspections also helps in detecting non-compliances and ensures the recording of consistent and analyzable data during inspections (Griffith, 2006; Kahneman et al., 2021; Zhe & Lee, 2014). Given the current economic landscape of Pakistan, these changes are not only inevitable but also crucial.

Traditional permit methods are time-consuming and costly, creating significant administrative burdens (Haque et al., 2011; Goldsmith & Hendrix, 2018). The study aims to centralize information online, integrate department functionalities, streamline approvals with online submissions, and implement digital payments. Features like real-time status checks and digitized documentation simplify the process, reducing operational costs and inefficiencies (Janssen, 2011; Polova, 2022). These changes can benefit business owners and enhance Pakistan's economic standing.

Despite the significant advantages of digital technologies, their adoption in the public sector remains slow and their potential underutilized, while the hesitation to adapt digital technologies in the public sector can be attributed to behavioral, practical, and economic factors (Bertot et al., 2010; El-Haddadeh et al., 2013; Maiti & Awasthi, 2020; Meijer, 2015).

The intended audience is restaurant business owners who want to register their business in Punjab, Pakistan. This report will give them a solution and explain how exactly we intend to solve the problem of unnecessary sludge they face.

The study shall propose an alternative procedure by having the whole registration, license acquisition and approvals being not only digitized but also integrated and automated across various departments and authorities.

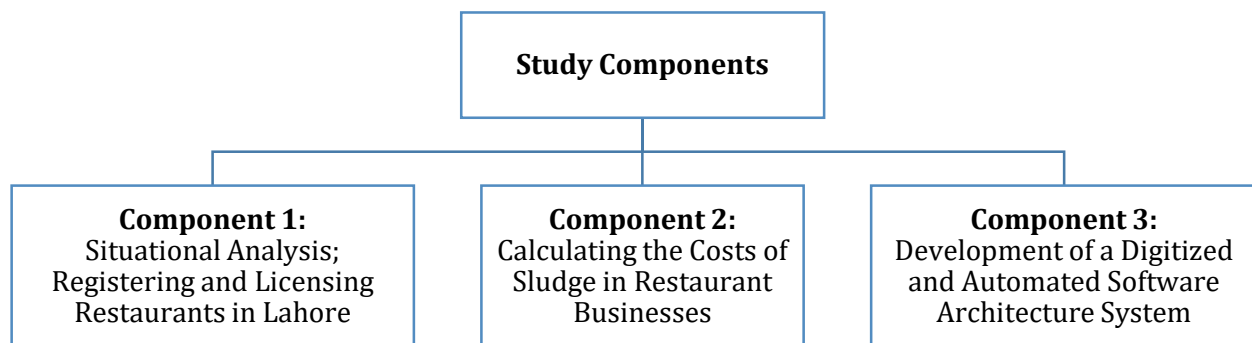
Problem Statement

Restaurant registration and licensing in Pakistan face significant challenges due to a lack of digitization and outdated regulatory frameworks, leading to excessive visits, long approval waits, and high costs for Food Business Operators. The system's administrative burdens, or "sludge," cause unnecessary delays, paperwork, and inefficiencies.

Components & Research Objectives

The study is divided into three components, with objectives categorized as follows:

Figure 2 Study Design



Component 1: Situational Analysis; Registering and Licensing Restaurants in Lahore

This component aims to investigate the regulatory challenges faced by restaurant owners in Lahore. By conducting a situational analysis, the study will gather insights on current registration processes, the perceptions of restaurant owners, and areas for improvement.

Primary Goals and Objectives

- 1) Comprehend the regulatory challenges and obstacles faced by restaurant owners during the registration process across various departments and authorities in Lahore.
- 2) Gather detailed insights on the current registration processes across various departments and authorities in Lahore, analyze perceptions of restaurant owners, and identify areas for improvement.
- 3) Gauge and estimate the total costs incurred by restaurant owners during the registration, licensing, and approval procedures across various departments and authorities in Lahore.

Component 2: Calculating the Costs of Sludge in Restaurant Businesses

The objective of this analysis is to quantify the proportion of regulatory burden—referred to as the *sludge cost*—in setting up a restaurant, expressed as a percentage of the total setup cost and later calculated as a percentage of the overall Gross National Product (GNP) share of hotels and

restaurants in services sector of Punjab, respectively. The sludge cost, in this context, refers to the extra financial and administrative burden imposed by compliance requirements that restaurateurs must fulfill to begin operations. By determining its percentage relative to total setup expenses, we aim to highlight the impact of such burdens on restaurant businesses in Punjab, Pakistan.

Primary Goals and Objectives:

- 1) To calculate the regulatory and sludge cost incurred during the setup of a restaurant in Punjab, expressed as a percentage of the total setup cost.
- 2) To calculate the regulatory and sludge cost as a proportion of the GNP contribution of the hotels and restaurants sector within the services industry of Punjab and Pakistan.

Component 3: Development of a Digitized and Automated Software Architecture System

The goal of this component is to develop a user-friendly digitized registration system (web-application) for restaurant businesses in Lahore. The system aims to simplify the registration procedure, reduce waiting periods, eliminate the need for physical visits, and provide online status checks for applications. It will integrate digital records of inspection reports accessible to all relevant departments and streamline the overall efficiency of the existing system. Key functionalities include online status checks, license acquisition, payment processing, and centralized information access from various regulatory bodies.

Primary Goals and Objectives:

- 1) Develop a process flow mechanism for the web application based on a comprehensive regulatory review to ensure compliance and efficiency.
- 2) Create an easy-to-navigate user interface (UI) and integrate all relevant departments and authorities involved in restaurant businesses into a one-window solution web application system using blockchain.
- 3) Digitize and automate restaurant registration procedures, including the acquisition of licenses, approvals, certificates, and NOCs from relevant departments and authorities. Integrate digital records of inspection reports with access for all relevant departments.
 - a. Reduce complex paperwork by implementing a one-time application process and a one-time fee payment system.
 - b. Decrease the waiting period for restaurant business owners by streamlining processes and reducing bureaucratic delays.
 - c. Eliminate the need for physical visits and waiting in queues by developing an online mechanism for tracking the status of applications.
- 4) Introduce an online grievance redressal mechanism that allows for anonymous complaints without compromising the demographic details of the business owner to other departments.
- 5) Ensure enhanced security and transparency of the registration process by leveraging blockchain technology to create immutable records and prevent tampering or corruption.
 - a. Establish a feedback loop for continuous improvement of the system based on user feedback and evolving regulatory requirements.

Relevance to Public Policy

This research on digitizing and automating administrative procedures for business setups, particularly restaurants, is crucial for public policy in Pakistan. The current system is plagued by bureaucratic inefficiencies, causing delays and increased costs (Hull, 2012). Streamlining procedures through digitization aims to reduce this burden, fostering a business-friendly environment and encouraging entrepreneurship (Haque et al., 2023). The manual system's prevalence of corrupt practices, such as bribery and delays, further underscores the need for a digital platform to enhance transparency and accountability, aligning with public policy goals of good governance (Ullah, 2012).

Addressing regulatory barriers identified in the Government's "Framework for Economic Growth," such as acquiring electricity, paying taxes, and enforcing contracts, is vital for improving productivity and ease of doing business. This research evaluates these barriers and proposes targeted policy efforts (Kularatne & Lopez-Calix, 2012). The automated system ensures compliance with regulations, improving service and safety standards, particularly in the food industry.

The study's insights can be scaled across sectors and regions, with the digitized registration system for restaurants serving as a model for broader administrative reforms. It supports national initiatives for digital transformation and aligns with policies promoting a Digital Pakistan, enhancing public service delivery and fostering an innovation-driven economy.

LITERATURE REVIEW

Digitization, automation and integration aim to streamline administrative processes, thereby reducing bureaucratic inefficiencies and associated costs (Hull, 2012). The shift from paper-based to digital systems standardizes data collection and recording, minimizing inconsistencies and errors during inspections (Kahneman et al., 2021; Labrique et al., 2013). This efficiency fosters a business-friendly environment, encouraging more entrepreneurs to enter the market (Haque et al., 2023).

Foundational theories in e-governance and public sector innovation highlight that digital technologies can enhance public value by improving service delivery, promoting transparency, and reducing corruption. Studies emphasize that platform-based governance, smart urban governance, and digital-era governance can significantly improve government efficiency, citizen satisfaction, and civic engagement by leveraging real-time data and integrating service delivery channels. The use of advanced technologies such as artificial intelligence, the Internet of Things, robotization, voice technologies, and blockchain can ensure consistency, reliability, and transparency in regulatory frameworks, ultimately creating a more formal and efficient economic environment (Cordella & Bonina, 2012; Janssen & Estevez, 2013; Meijer & Bolívar, 2016; Margetts & Dunleavy, 2013; Nestorenko, 2022).

E-governance involves the use of information and communication technologies in public administration to enhance information dissemination, improve public services, and foster citizen participation in decision-making, thereby making governments more accountable, transparent, and effective (Linhartova, 2022). Its objectives include improving governmental internal processes, better service provision, increasing transparency to prevent corruption, reinforcing political accountability, and promoting democratic activities through public engagement. It further emphasizes democratic processes, involving interactions between government institutions and citizens, enabling participants to express their interests and engage in civic activism through tools like interactive statements, online forums, and mobile services (Margolis & Moreno-Riaño, 2010).

Government procedures often entangle citizens in complex, costly, and time-consuming processes that prioritize bureaucratic needs over public service. For instance, in Chicago, Mayor Rahm Emanuel's 2011 initiative to reform the city's regulatory system revealed a burdensome and outdated permitting process, hindering business growth. The Innovation Delivery Team identified inefficiencies such as the excessive number of business licenses and prolonged startup times for new restaurants. Technological advancements like electronic permit processing and online portals can transform public sector operations, as seen in Phoenix, Arizona. Phoenix's self-certification program for professionals and the use of electronic plan reviews have significantly streamlined the permitting process. These reforms demonstrate the potential of digitizing government procedures to enhance efficiency and service delivery, signaling a need for more widespread adoption of such measures (Goldsmith & Hendrix, 2018).

Implementing digital systems enhances transparency and accountability, reducing opportunities for corruption and improving public service integrity (Ullah, 2012). Digital technologies ensure consistent assessment criteria during inspections, aligning with good governance practices. Using algorithm- and rule-based instructions in digital environments reduces human judgment variability,

achieving decision hygiene (Kahneman et al., 2021). This consistency is crucial for regulatory enforcement, ensuring fair and uniform application of laws.

Automated systems help businesses comply with necessary regulations without navigating complex bureaucratic procedures, leading to better regulation and higher service standards, particularly in sensitive sectors like food safety. The primary challenge for economic growth in Pakistan is to address the 'software' issues, which include economic governance, institutions, incentives, and human resources. These elements are seen as more critical than the 'hardware' of physical infrastructure. (Kularatne & Lopez-Calix, 2012).

Research highlights a direct link between streamlined business registration procedures and a reduction in the informal sector, emphasizing the need for efficient regulatory frameworks (Djankov et al., 2002). Lawrence Lessig's "dual presence" concept illustrates how software, while operating in virtual spaces, significantly impacts real-world behavior, akin to physical architecture's regulatory role. Software enforces consistency and fairness by applying predetermined, rule-based decisions automatically, thus minimizing human discretion and error. This automation ensures uniformity and efficiency, essential for regulatory purposes where predictability is crucial. However, it also underscores the importance of balancing this rigidity with the flexibility needed for complex, nuanced decisions. The effective design and implementation of software in regulatory frameworks can significantly enhance efficiency, transparency, and accountability while fostering a more formal economic environment (Grimmelmann, 2004).

A multi-country survey study revealed that many Competent Authorities (CAs) in EU countries use digital environments for inspections at retail establishments. This adoption standardizes data collection, reduces documentation inconsistencies, and enhances the efficiency of official controls (Grau-Noguer et al., 2023).

Information and Communication Technologies (ICTs) can mitigate corruption by fostering good governance, supporting reform initiatives, minimizing corrupt behaviors, improving government-citizen relationships, and enabling citizen tracking and monitoring of government activities (Shim & Eom, 2008). Countries across the Americas, Asia, and Europe have reported success in reducing corruption through e-government (Bhatnagar, 2003; Shim & Eom, 2008). In Fiji, e-government initiatives have positively shifted public perception of government corruption and enhanced the responsiveness of officials to citizen needs (Pathak et al., 2009).

Digital documentation decreases the time required for paperwork and reduces errors linked to manual data entry. In India, putting rural property records online has greatly increased the speed at which the records are accessed and updated, while simultaneously removing opportunities for local officials to accept bribes as had previously been rampant (Bhatnagar, 2003). Furthermore, digital environments enable the automatic generation of inspection reports, immediate sharing with Food Business Operators (FBOs), and secure data storage and access. This automation improves consistency and prevents the loss or misplacement of reports (Grau-Noguer et al., 2023). Additionally, blockchain technology will enhance the reliability and security of orders, bookings, and payments, creating a trusted digital environment, thereby fostering a more efficient and business-friendly regulatory framework (Nestorenko, 2022).

International Best Practices

The following digital portals provide valuable insights and models that align perfectly with our goal of creating a web-application for the digitization, automation, and integration of relevant authorities and departments in registering and licensing restaurants in Pakistan.

Table 1 International Best Practices

Digital Portal	Description	Key Features
<i>Ministry of Economy's eServices, UAE (MOEC, UAE, 2024)</i>	Comprehensive range of <i>eServices</i> for individuals, businesses, and government entities. Includes trademark registration, consumer protection, commercial control, auditing accounts, etc.	Regulates foreign company branches, applies for patents, handles consumer complaints, renews audit licenses, registers copyright, manages commercial agencies, issues certificates of origin and trade remedy permits, and offers trademark services. Streamlines processes, ensures regulatory compliance, and enhances the business environment.
<i>Basher, UAE's Business Registration Platform (Basher UAE, 2023)</i>	<i>Basher</i> Simplifies business establishment process, allowing investors to set up companies within 15 minutes. Connects with over 60 federal and local government entities to provide commercial license services.	<i>Basher</i> integrates blockchain for security and transparency, offering 14 key services from 18 government entities and private partners. Features include digital signatures, a one-time application, efficient procedures, global accessibility, and strong cybersecurity. No documents are needed during the application. UAE claims <i>Basher</i> can register a business in 15 minutes, compared to 4 days in the UAE's economic department and 10 days in high-income countries (MOEC, UAE, 2024).
<i>Invest-in-Dubai, Dubai's online business registration portal¹</i>	Efficient online service for business registration and trade license acquisition in Dubai. Guides users through selecting company's legal form, economic activities, partners, trade name reservation, and obtaining initial approval.	Multiple trade license types (normal, instant, trader), blockchain technology for security and transparency, clear fee structure, user-friendly interface, streamlined process ensuring quick completion, facilitates booking and amending trade names, issuing and renewing trade licenses, and amendments or cancellations.
<i>Food Safety Compliance System (FoSCoS), India²</i>	Upgraded version of Food Licensing and Registration System (FLRS) ³ , built with modern technology for pan-India platform for food safety regulatory needs.	Integrates with other FSSAI IT platforms, like FoSCoRIS ⁴ , Food Safety Connect, and others, aiming to evolve into a unified compliance platform various licenses based on turnover and nature of operations ⁵ , online filing of annual returns, integration with inspection reports,

¹ Invest-in-Dubai web application can be accessed from <https://app.invest.dubai.ae/>

² The Food Safety Compliance System (FoSCoS) can be accessed from <https://foscoss.fssai.gov.in/about-foscoss>

³ FLRS (Food Licensing and Registration system) is an online system launched by FSSAI to facilitate FBO in India to apply for License/ Registration certificate and can track their applications. 35 States/UTs have been issuing License/ Registration certificate online. Can be accessed from <https://foodregulatory.fssai.gov.in/flrs>

⁴ Food Safety Compliance through Regular Inspections and Sampling (FoSCoRIS) is a system to verify compliance of food safety and hygiene standards. <https://foodregulatory.fssai.gov.in/foscris>

⁵ Eligibility criteria are found to be diverse, based on the turnover of the business. Can be accessed from <https://foscoss.fssai.gov.in/assets/docs/KindofBusinessEligibilityLatest.pdf>

		rationalization of required documents, online declarations, clear business category segregation, streamlined process minimizing physical documentation. ⁶
<i>Provision of Food Permits, New York City</i> ⁷	Food service establishments must obtain a permit from the Department of Health and Mental Hygiene (DOHMH). Requires a Food Protection Certificate (FPC) for supervisory managers.	User-friendly design, online payment option, emphasis on food safety through qualified management, unannounced inspections, clear fee disclosure, flexible scheduling mechanism, temporary licenses with certification deadlines, simplifies permit application process, ensures convenience for business owners.
<i>Online web-application portal for food business premises; Prince Edward Island, Canada</i> ⁸	Requires a license for any site where food is prepared and/or served to the public. Quick and user-friendly application process.	Accepts multiple payment methods, detailed guidance and resources, clear cost clarification based on food service type, real-time application status tracking, issuance of printed license copy within two weeks of inspection, streamlined process reducing administrative barriers, focus on enhancing user convenience.
EduBlock (Haveri et al., 2020)	Uses blockchain technology (Ethereum) and IPFS storage to securely store and verify student documents. Addresses authenticity concerns with hashed IDs.	Performance analysis of Ethereum blockchain, proof-of-stake consensus mechanisms, secure document storage and verification, cross-referencing with blockchain hashes, model for integrating blockchain technologies, insights for enhancing website's functionality and security.
SPROOF ⁹	Issues and verifies documents on a public blockchain, ensuring security and transparency. Uses distributed hash tables (DHT) and public/private channels for document issuance and sensitive information transfer.	Prevents malicious attacks, maintains data integrity through blockchain technology and Web of Trust framework, strategies for handling data size restrictions, secure channels for document handling, relevant insights for managing and authenticating digital documents efficiently.
LEAP Platform ¹⁰ by Securities and Exchange Commission of Pakistan (SECP) ¹¹	Seamless and efficient platform for registering companies and Limited Liability Partnerships (LLPs). Simplifies registration process and ensures security.	User-friendly interface, facilitates company or Limited Liability Partnerships (LLP) incorporation, file compliance, manage business needs efficiently, streamlined process, integrated services from multiple authorities, reduces administrative burdens, saves time, enhances transparency and security, digital signature implementation, one-time application for multiple services.

⁶ [HowtoapplyforLicense_registrationcertificate.pdf \(fssai.gov.in\)](https://www.fssai.gov.in/HowtoapplyforLicense_registrationcertificate.pdf)

⁷ <https://nyc-business.nyc.gov/nycbusiness/description/food-service-establishment-permit>

⁸ Prince Edward Island, Canada; We-application to operate a Food Premises available at <https://services.princeedwardisland.ca/en/service/application-operate-food-premise#/service/GenericWebformSubmission/GenericWebformGenerateTransactionID>

⁹ SPROOF: A platform for issuing and verifying documents in a public blockchain." Available: <https://www.scitepress.org/Papers/2019/72456/72456.pdf>

¹⁰ eZfile Can be accessed from <https://leap.secp.gov.pk/#/profile/dashboard/overview>

¹¹ Can be accessed from <https://eservices.secp.gov.pk/eServices/>

REGULATORY REVIEW

In this section, the study comprehensively reviewed regulations and policies governing restaurant registration and operations in Lahore. It analyzed laws of various regulatory bodies, identifying key requirements, penalties, and constraints faced by restaurant owners.

Department of Tourist Services (DTS)

The Department of Tourist Services was established in 1976 as an attached department of Federal Ministry of Tourism, to cater for different requirements of tourism industry and to ensure quality of services provided by hotels, restaurants and travel agents. It does so through implementation of the following three Acts formulated to regulate and control certain aspects of the tourism industry in the Country as (i) The Travel Agencies Act, 1976 and Rules 1977, (ii) The Hotels and Restaurants Act, 1976 and Rules 1977 (iii) The Tourist Guides Act 1976 and Rules 1996.

Table 2 Processes, Requirements & Fees for Restaurant Registration/Licensing by DTS¹²

Process	Documents Required	Fee	Frequency
<i>Registration</i>	Prescribed Application form duly filled in (Download Prescribed Application Form) ¹³	PKR 1,600 - PKR 20,000 depending on air-conditioning status and seating capacity and city ¹⁴	One-time
	Building Map		
	Rules of Establishment		
	Medical Fitness Certificate of Staff		
	Qualification and Experience Certificates of GM, Manager and other Staff		
<i>Grant of License</i>	Building Map	PKR 1,600 - PKR 10,000 depending on air-conditioning status and seating capacity and city	Annual
	Rules of Establishment		
	Medical Fitness Certificate of Staff		
	Qualification and Experience Certificates of GM, Manager and other Staff		
<i>License Renewal</i>	Paid Challan in respect of renewal fee and original license along with request letter before expiry date of license	PKR 1,600 - PKR 10,000 depending on air-conditioning status	Annual
<i>Spot Checking of Services</i>	Conducted to ensure compliance with parameters and benchmarks provided in the Act and rules.	N/A	Random
<i>Imposition of Fines and Penalties</i>	Upon defaulters based on spot-check findings.	Varies based on violation	As needed

¹² This summary represents only the registering and licensing processes of the restaurants, while the department also deals with the registration and licenses of the Hotels and Travel Agencies respectively. The details can be accessed from <https://tourism.punjab.gov.pk/services#restaurant-registration>

¹³ Application form can be accessed from <https://tourism.punjab.gov.pk/system/files/Form%20G%20%28Restaurants%29%206.pdf>

¹⁴ Refer to Schedule III under Rule 8(2) in Pakistan Hotels and Restaurants Rules 1977

Pakistan Hotels and Restaurants Act 1976

The Pakistan Hotels and Restaurants Act, 1976, (Act No. LXXXI of 1976) regulates the standards of service and amenities for tourists in hotels and restaurants. In case of Punjab and other provinces, the application for registration would be submitted to the Controller appointed by the Federal Government for the purposes of this Act. The application would be processed and approved by the Controller or the designated authority. The owner must apply to the Controller within two months of the Act becoming applicable to the restaurant. The application should include a request for registration and determination of fair rates. The Controller or an authorized officer may inspect the premises and call for any necessary information, plans, or data. They may also conduct tests on articles, appliances, or foodstuffs at the cost of the owner.

Table 3 Pakistan Hotels and Restaurants Act 1976

Section	Statement
5(1)	The owner of every hotel and restaurant shall apply to the Controller for registration of his hotel or restaurant and for determination of fair rates.
5(2)(a)	No hotel or restaurant shall be registered unless it conforms to the prescribed standard of health, hygiene, and comfort.
5(3)	The Controller may inspect the premises of a hotel or restaurant at any time.
5(2)(a)	The Controller may allow provisional registration of a hotel or restaurant under certain conditions.
7(1)	Every owner shall obtain a license from the Controller after registration of his hotel or restaurant.
7(2)	No owner shall carry on his business without first obtaining a license.
7(3)	A license shall remain in force for one year and may be renewed annually.
8(1)	The Controller may refuse to register a hotel or restaurant if it does not conform to the minimum prescribed criteria.
8(2)	The registration and license of a hotel or restaurant may be canceled or suspended if certain conditions are violated.
9	Upon transfer or assignment of a registered restaurant, the new owner shall report to the Controller and obtain a fresh license.
10(1)	The Controller may fix fair rates for services provided in a hotel.
10(5)	The Controller may revise fair rates from time to time.
13	Fair rates and rules of the establishment shall be displayed in a hotel.
25(1)	Any person aggrieved by an order under this Act may prefer an appeal to the Deputy Controller, Controller, or prescribed appellate authority.
25(2)	The Federal Government may, on its own motion or on application, pass orders in relation to appeals.

Pakistan Hotels and Restaurants Rules 1977

The Pakistan Hotels and Restaurants Rules, 1977, regulate hotels and restaurants in Pakistan. The rules establish a committee to advise the Federal Government on classification, fair rates, and related matters. They also set procedures for registration and licensing, and standards for health, hygiene, and comfort.

Table 4 Pakistan Hotels and Restaurants Rules 1977

Regulatory Aspect	Existing Rule
<i>Application Form</i>	Form G for restaurant registration to be submitted in hard copy original file and can be downloaded.
<i>Submission</i>	Submitting the form physically to the Controller.
<i>Payment</i>	Payment of registration and license fees as specified in Schedule III and IV to be deposited in a scheduled bank.
<i>Processing Time</i>	Controller makes inquiries and conducts inspections, directs the owner to deposit fees, and submit bank receipt Swithin fifteen days.
<i>Documentation</i>	Certificate of medical fitness in Form I required from a registered medical practitioner
<i>Registration License</i>	Controller grants a registration certificate in Form L for a restaurant and issues a license in Form N.
<i>Compliance</i>	If the hotel or restaurant does not conform to the standard, the Controller may refuse registration.
<i>Renewal of Licenses</i>	Owner may apply for license renewal at least fifteen days before expiry, failing which the license stands cancelled.
<i>Appeals and Revisions</i>	Any person aggrieved by an order passed by the Controller may appeal to the Joint Secretary, Tourism Division, Islamabad.

The process of registering a restaurant in Pakistan, as outlined in the Hotels and Restaurants Act 1976, involves a detailed application process with specific requirements and documentation. The process of registration is found to be bureaucratic and as per the rules, the documents are required to be furnished to the Controller office and later the approval is made by the Controller.¹⁵ This process is traditional and requires physical submission of documents to government authorities. The approval process may also involve multiple visits and approvals from various departments. The application form can be downloaded, filled manually and has to be submitted to the Controller office along with the prescribed Challan Form (Form G- Rule 7, Hotels and Restaurants Act 1976).

The Punjab Food Authority

The Punjab Food Authority (PFA) is a government agency in Punjab, Pakistan, established under the Punjab Food Authority Act 2011 to oversee food safety and hygiene across the province. Operational since July 2012 in Lahore, it enforces food quality standards through a team of qualified Food Safety Officers and is supervised at the district level by a Deputy Director of Operations. Additionally, PFA offers an online portal for food business operators to conveniently obtain licenses and register their products.¹⁶

Punjab Food Authority Act 2011

The Punjab Food Authority Act, enacted in 2011, establishes the Punjab Food Authority (PFA) with the mandate to regulate and monitor the food business to ensure the provision of safe food. The Act

¹⁵ According to Hotels and Restaurants Act 1976 2(c), means a Controller appointed under Section 3 and includes a Deputy Controller and an Assistant Controller and such other person as may be authorized by the Federal Government by notification in the official Gazette to perform all or any of the functions of the Controller

¹⁶ PFA online portal can be accessed from <https://cell.pfa.gop.pk/>

empowers the PFA to formulate standards, procedures, and guidelines related to food, including licensing, recall procedures, and enforcement systems.

Table 5 Punjab Food Authority Act 2011

Section	Statement
7(2)(d)	Specify licensing, prohibition orders, recall procedures, improvement notices or prosecution.
7(2)(k)	Levy fee for registration, licensing, and other services.
12(1)	The Food Authority may, by notification, appoint Food Safety Officers for such areas as it may assign to them.
13(1)(c)	Enter or seal any premises where he believes any food is prepared, preserved, packaged, stored, conveyed, distributed or sold, examine any such food and...
15(1)	A person shall not use any place for food business except under the prescribed registration or license.
16(1)	If a Food Safety Officer has reasons to believe that any food operator has failed to comply with any provisions of this Act, the rules or the regulations...
18(1)	If the Food Safety Officer is satisfied that the health risk condition exists with respect to any food business, he may, after serving a notice on the food operator and for reasons to be recorded in writing, restrain him from carrying on the food business...

The Food Authority (Product Registration & Display of PFA Logo) Regulations, 2017

The Food Authority (Product Registration & Display of PFA Logo) Regulations, 2017 were enacted under the Punjab Food Authority Act, 2011. Food Business Operators (FBOs) must register all food products with the Food Authority, obtain a Certificate of Product Registration (CPR), and display the PFA logo. The CPR, issued within three weeks if standards are met, requires an application, a non-refundable fee, and product details. Non-compliant products can prompt reviews, and CPRs may be revoked for violations. Use of the PFA logo, obtained for a marking fee, is mandatory, ensuring adherence to food safety, quality, and hygiene standards.

Table 6 The Food Authority (Product Registration & Display of PFA Logo) Regulations, 2017

Section	Statement
6	Certificate of Product Registration (CPR) shall be issued once the Food Authority is satisfied that the product conforms to the food safety, quality, and other standards as laid down in the rules or regulations.
8	Every Food Business Operator shall submit an application for CPR on the prescribed format; supported with the followings: ...
10	Upon receipt of application for Product Registration, Competent Authority may issue the Certificate of Product Registration within three-week time, if the product conforms to the food safety and quality. After issuance of CPR the sampling of the products may be carried out periodically for the purpose of analysis.
15	If the CPR is issued for the food product, the usage of logo of the Punjab Food Authority (PFA) on food product may be provided to Food Business Operators on the payment of marking fee as prescribed by the Competent Authority.

Metropolitan Corporation of Lahore (MCL)

Metropolitan Corporations serve as essential governing bodies responsible for ensuring the smooth functioning of urban areas. The metropolitan corporation is a Local government body functioning under the Punjab Local Government Act 2022 (Act XIII of 2022). The Municipal Corporation oversees

infrastructure, public utilities, and law enforcement, playing a key role in restaurant registration, operation, and compliance. It enforces regulations on hygiene, waste management, zoning, and public safety to safeguard public health. Under the Punjab Local Government Act 2019, Lahore's district falls under the Metropolitan Corporation Lahore (MCL).

Punjab Local Government Act 2022

The table below summarizes key sections and sub-sections of the Punjab Local Government Act 2022 (XIII of 2022) that are relevant and applicable to restaurant registration, operation, and compliance through a metropolitan corporation.

Table 7 Functions of MCL Prescribed under Punjab Local Government Act 2013

Section	Function and Applicability to Restaurants
<i>30(1)(a)</i>	Enforce municipal laws, rules, and by-laws: Restaurants must comply with food safety regulations, hygiene standards, and local by-laws.
<i>30(1)(b)</i>	Approve and collect taxes, fees, and rents: Restaurants are required to pay local taxes, licensing fees, and other applicable charges.
<i>30(1)(d)</i>	Prepare budgets and development plans: Affects property tax assessment and allocation of municipal resources for commercial areas.
<i>30(1)(f)</i>	Prosecute violators of municipal laws: Ensures compliance with food safety, zoning, and waste management standards; legal action for violations.
<i>30(1)(h)</i>	Maintain public records and provide access to information: Facilitates transparency in restaurant registrations and permits.
<i>30(1)(j)</i>	Create awareness about health and social issues: Municipal campaigns on food safety and hygiene benefit restaurants by fostering compliance and customer trust.
<i>30(1)(k-l)</i>	Prepare and enforce zoning and land-use plans; control land use for commercial markets: Regulates restaurant locations, ensuring compliance with zoning policies.
<i>30(1)(m)</i>	Exercise building control: Ensures restaurants meet structural and safety standards during construction and renovations.
<i>30(1)(o)(i-iv)</i>	Provide water supply, sewage, sanitation, and waste disposal services: Essential utilities like clean water, drainage, and waste management impact operations.
<i>30(1)(p)</i>	Manage traffic planning and public transport: Facilitates customer access and parking for restaurants in commercial areas.
<i>30(1)(q)</i>	Provide firefighting services: Restaurants must meet fire safety standards and benefit from quick emergency responses.
<i>30(1)(r)</i>	Assist in disaster relief: Offers support during health emergencies or natural calamities affecting restaurant operations.
<i>30(1)(t-u)</i>	Manage and lease municipal properties: Regulates public spaces leased to restaurants and ensures adherence to leasing rules.
<i>30(1)(v)</i>	Establish incubation centers for small businesses: Supports small-scale restaurant startups with municipal resources.
<i>30(3)</i>	Develop an Economic Development Strategy: Promotes restaurant growth, attracts investment, and fosters local economic development.

Applicable Taxes and Fees for a Restaurant Business

The following table compiles relevant taxes and fees from the *Fourth Schedule* of the Punjab Local Government Act 2022 that apply to the registration, operation, and functioning of a restaurant within a Metropolitan Corporation or other local government domains.

Table 8 Taxes and Fees Applicable to Restaurant Businesses

Category	Applicable Taxes and Fees
<i>Property and Land</i>	- Tax on urban immovable property
	- Tax on transfer of immovable property
	- Fee for change of land use of a land or building
<i>Utility Services</i>	- Water use charges/fee
	- Drainage rate
	- Conservancy rate
<i>Licensing and Permits</i>	- Fee for licenses, sanctions, and permits
	- Fee for approval of building plans, erection, and re-erection of buildings
	- Fee for compounding of offences and violations governing its functioning
<i>Advertising</i>	- Fee for regulation of advertisements through signs, banners, billboards, or electronic display systems (LED/SMD)
<i>Parking and Facilities</i>	- Toll fee on roads, bridges, and ferries maintained by local governments
	- Parking fee
<i>Other Services</i>	- Fee for specific services rendered by the office of the local government or any of its authority, agency, or company
	- Fee on installation of Base Transceiver Station/Tower
	- Any other tax or fee or levy authorized by the Government

Below is a compilation of fines from the *Eighth Schedule* of the Punjab Local Government Act 2022 (Act XIII of 2022) that apply to restaurants for their operation and functioning:

Table 9 List of Offenses and Fines under MCL, Applicable to Restaurant Businesses

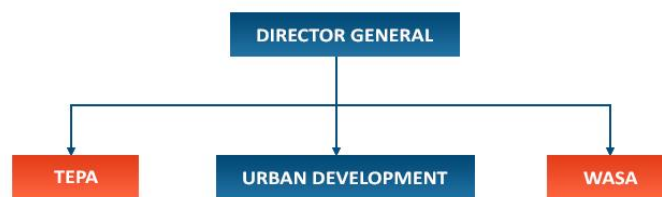
Sr. No.	Offence	Fine Amount
1	Fixing of wooden khokhas or temporary shops/extension on footpaths or beyond the street line.	Rs. 4,000
4	Slaughtering animals for sale of meat at a place other than designated by local government.	Rs. 4,000
5	Allowing sink, sewer, cesspool, or offensive matter to flow into unauthorized areas.	Rs. 5,000 (commercial concerns)
19	Throwing or placing refuse, litter, or garbage in unauthorized areas.	Rs. 1,000
20	Failure to provide for proper disposal of litter or garbage inside/outside a shop.	Rs. 1,000
21	Failure to maintain clean premises of shop area up to the adjoining public street or road.	Rs. 2,000
24	Failure to maintain or clean latrines, drains, cesspools, or other refuse receptacles.	Rs. 3,000 (commercial concerns)
26	Damaging or polluting the physical environment, endangering public health.	Rs. 4,000 (public premises)
29	Failure to repair leaks in water pipes or fittings, causing water pools and mosquito breeding.	Rs. 2,000
30	Failure to maintain water troughs/pipes in good condition for receiving or carrying sullage.	Rs. 2,000
32	Unauthorized advertisement on public or private buildings.	Rs. 10,000
33	Displaying obscene advertisements.	Rs. 20,000

34	Loud music, horns, or drums in violation of local prohibitions near hospitals or schools.	Rs. 5,000
35	Loud shouting or abusive language causing public distress.	Rs. 2,000
42	Contravention of any prohibition or direction issued by the local government.	Rs. 1,000

Chapter VIII of the PLGA 2022 grants Metropolitan Corporations administrative and financial oversight of municipal services delivered by entities like Parks and Horticulture Authorities, Development Authorities, WASA, TEPA, and Waste Management Companies. They can approve policies, taxes, and fees, ensuring coordinated service delivery.

Lahore Development Authority (LDA)

The Lahore Development Authority was created under the Lahore Development Authority Act 1975 duly approved by Punjab Legislative Assembly. Previously it was Lahore Improvement Trust. LDA functions as a regulatory body for land-use, infrastructure and other urban development affairs, having a diverse range of functionalities. Formally, there are 3 wings in Lahore Development Authority as;



Restaurant registration with the LDA begins with submitting a written application confirming the property's commercial designation. The LDA forwards the application to departments like Town Planning, EPA, TEPA, and WASA for No Objection Certificates (NOCs). Restaurant owners provide required documents, pay fees, and undergo inspections to ensure compliance. Once inspections are complete, NOCs are issued, enabling the LDA to grant the Completion Certificate and Commercialization Certificate (CC).

For commercialization approval, the several documents are mandatory. Here is a compiled table listing the required documents for each certificate:

Table 10 List of Documents Required for Commercialization Certificates and Building Plans

Certificate	Required Documents
<i>Commercial Completion Certificate</i>	<ul style="list-style-type: none"> - Application to DIRECTOR TOWN PLANNING signed by all Owners - BR-15 Form signed by all Owners - ID Card copies of all Owners - Approved building plan copy
<i>Approval of Building Plans (LDA Scheme)</i>	<ul style="list-style-type: none"> - Copy of CNIC (Attested Copy) - Possession Letter (Issued by LDA) - Transfer/Allotment Letter (Issued by LDA) - Sub-Division/Amalgamation Letter (If applicable) - Forms A & B - Affidavit on Rs 100/- Stamp paper - Basement Affidavit on Rs 100/- Stamp paper (if applicable)

	<ul style="list-style-type: none"> - Undertaking for Damages on Rs.1000/- Stamp paper - Building Plans (03 Ammonia Prints and 01 Cloth Mounted Copy) - Valid NOC and building period from LDA - In case of frame structure: Vetted Structure Drawings and Certificate from Structural Engineer on LDA Panel
<i>Completion Certificate</i>	<ul style="list-style-type: none"> - Application to DIRECTOR TOWN PLANNING signed by all Owners - BR-15 Form signed by all Owners - ID Card copies of all Owners - Approved building plan copy - Original LESCO bill with connection date - Ownership documents - PT-1 Form - Civil Defence Certificate - For buildings above 48': - FBR Certificate - 6-A Form - Evacuation plan drawing vetted by Civil Defence Authority - NOC from TEPA

Source: Lahore Development Authority.

The processing fee for commercialization approval is generally calculated using the formula:

$$DC \text{ Rate} \times 20\% \times \text{Area (Sq. Ft.)}$$

The challan generated from this calculation can be paid through pay order or directly at the bank. Upon submission of all required documents and payment, the applicant receives the Commercialization Certificate, complete with necessary stamps to confirm approval.

Traffic Engineering & Transport Planning Agency (TEPA)

The Traffic Engineering and Planning Agency (TEPA), functioning under the Lahore Development Authority (LDA), plays a vital role in regulating land utilization for parking in commercial, industrial, public, and apartment buildings. TEPA was created in accordance of Section-7(2)(xvi) of the Punjab Development of Cites Act, 1976 (Act XIX of 1976). It ensures that sufficient parking facilities are available, fostering better traffic management and customer convenience. The Chief Engineer of TEPA oversees these processes, including issuing the essential No Objection Certificate (NOC) required for using spaces for parking as part of any commercial activity.

To execute a parking agreement, particularly for E-Khidmat cases (an online facilitation platform), applicants must follow a comprehensive checklist and submit the necessary documents. This process ensures compliance with TEPA's standards, aiding in urban planning and reducing congestion. Below is the detailed checklist for executing a parking agreement for buildings with less than five stories or plot areas smaller than four kanals.

Table 11 Checklist for Execution of Parking Agreement (E-Khidmat Cases), TEPA

Required Document	Details
<i>Application Addressed to Chief Engineer TEPA</i>	A formal application for the execution of a parking agreement.
<i>Ownership Documents</i>	Copy of the ownership documents of the property.
<i>Commercialization Letter</i>	Issued by the concerned department or authority, if applicable.

<i>Copy of CNIC</i>	Attested copies of the CNIC of the owner(s).
<i>Power of Attorney</i>	Original Power of Attorney and attested copy of the CNIC of the authorized representative (if applicable).
<i>Architectural Drawings</i>	Three sets of drawings (Plotter Size), signed and stamped by the owner(s) and architect.
<i>Parking Agreement on Stamp Paper</i>	Minimum Rs. 3000/- value, including signatures and thumb impressions of the owner(s), authorized representative, and witness as per the provided format.
<i>Attested CNIC of Witness</i>	Attested copies of CNICs of witnesses signing the parking agreement.
<i>Affidavit on Rs. 300 Stamp Paper</i>	To be provided by the owner(s) and/or authorized representative, as per the provided format.
<i>Contact Details</i>	For correspondence and site visit.
<i>Copy of E-Khidmat Slip</i>	Proof of submission via the E-Khidmat portal.
<i>Fee for Processing and Execution (NOC)</i>	Rs. 100,000/- for all types of buildings.

Environmental Protection Authority (EPA)

The Environmental Protection Authority (EPA) is a vital regulatory body under the Government of Punjab, formulated under the Punjab Environmental Protection Act, 1997 (as amended up to 2017). Its mandate is to oversee and ensure environmentally responsible practices across diverse industries, including the hospitality sector. For restaurants, compliance with environmental regulations is a critical step toward lawful operation, safeguarding public health and environmental sustainability.

EPA conducts an Initial Environmental Examination (IEE) for restaurants and other businesses. This process evaluates potential environmental impacts before approving the functioning and operation of establishments. This ensures that businesses align with Punjab’s environmental standards, thereby fostering a sustainable ecosystem.

The process of obtaining a No Objection Certificate (NOC) from the Environmental Protection Department (EPD) is a structured approach to ensure that businesses, including restaurants, comply with environmental regulations before commencing operations. It begins with the submission of essential documents, including proof of land ownership, a detailed business budget, and an approved map from the Lahore Development Authority (LDA). Following this, the Punjab Environmental Protection Agency (EPA) conducts a site visit and performs an Initial Environmental Examination (IEE) to evaluate the environmental impact of the proposed establishment. Upon satisfactory clearance of the IEE, the EPA issues the NOC, allowing the business to operate legally. The issuance of the NOC involves a processing fee of PKR 15,000. Once the NOC is obtained, the business can commence operations, with EPD intervening during the operational phase only if complaints or violations are reported.

Punjab Environmental Protection (Administrative Penalty and Compounding of Offences) Rules, 2020

Under the Punjab Environmental Protection (Administrative Penalty and Compounding of Offences) Rules, 2020, non-compliance with Section 12 of the Act—pertaining to the failure to conduct an IEE or obtain an NOC results in penalties.

Penalty Computation Formula (Base Penalty for Non-compliance)¹⁷

For contraventions lasting less than a year:

$$\text{Base Penalty} = [\text{Minimum Penalty}] + \left(\frac{Y \times D}{365}\right)$$

For contraventions over multiple years:

$$\text{Base Penalty} = [\text{Minimum Penalty}] + \left(\frac{Y \times D}{365}\right) + (\text{Yearly Hazard Factors}) + \left(\frac{Y' \times D'}{365}\right)$$

Restaurants are classified under Hazard Level 2, with a Minimum Penalty of PKR 40,000.¹⁸

Labour and Human Resource Department Punjab

The Labour & Human Resource Department Punjab, established under the Punjab Government Rules of Business, 1974, is dedicated to promoting the welfare and protecting the rights of the province's labour force.

Punjab Domestic Workers Act, 2019

The Punjab Domestic Workers Act, 2019, primarily governs domestic workers but contains provisions indirectly applicable to restaurant businesses employing workers, especially regarding labor rights, wages, and working conditions. Below is a table summarizing the relevant sections and sub-sections:

Table 12 Punjab Domestic Workers Act, 2019 Relevant laws

Section	Provision
3	Prohibition on employment of children under 15 and restrictions on work for those under 18
4(1)	Prohibition of bonded or forced labor
4(2)	Non-discrimination in employment, wages, and benefits
5(1)	Issuance of an employment letter specifying terms, wages, and nature of work
5(5-6)	Working hours limited to 8 hours/day or 48 hours/week; overtime compensation required
6	Entitlement to weekly holidays, sick leave, and festival holidays
7	Wages during leave or holidays
8	Minimum wage requirement
9	Maternity benefits for female workers
11	Annual medical examination and vaccination
12	Notice of accidents leading to death or injury
13	Termination notice or compensation
18	Timely wage payments
19	Prohibition of wages below the minimum rate
21	Employer registration
25-27	Dispute resolution and appellate mechanisms
35-36	Powers of labor inspectors

¹⁷ Penalty components in the formula include: Hazard Factor, indicating project risk level; Duration of Contravention, the total non-compliance period; Base Fine, derived from tables in the Rules; D, days of contravention in the initial year; D', days in the final year; Y, value from Table 3 (Schedule II) for the initial year; and Y', value from Table 3 for the resolution year.

¹⁸ See Schedule II (j)(ii) Commercial Buildings, Restaurants, Marriage Halls. of the Punjab Environmental Protection (Administrative Penalty and Compounding of Offences) Rules, 2020.

Punjab Occupational Safety and Health Act, 2019

The Punjab Occupational Safety and Health Act, 2019, establishes regulations to ensure safe working conditions and promote health at workplaces, including restaurants. Below is a summary of applicable sections and sub-sections relevant to the functioning, operation, and employment practices of restaurant businesses:

Table 13 Punjab Occupational Safety and Health Act, 2019 Key Provisions

Section	Provision and Relevance to Restaurants
3(1)(a-n)	Employers must ensure safety, health, hazard control, training, and emergency measures to provide a safe, clean environment with adequate safety and training for employees.
4(a-e)	Employees must follow safety protocols and report hazardous conditions to ensure personal and workplace safety.
8(a-t)	Restaurants must comply with guidelines for structural safety, ventilation, hygiene, fire safety, and emergency preparedness.
9(a-b)	Establishments must have a documented safety policy, approved by the Chief Inspector, addressing workplace hazards.
10(a-b)	Restaurants with over five employees must elect safety representatives and appoint a competent safety officer.
11(1-2)	Hygiene cards and regular medical exams are required to prevent disease outbreaks among employees.
12	Sites, buildings, and alterations must be registered and approved before operation.
13(1-7)	Restaurants must record accidents and notify authorities within 24 hours for severe incidents.
15(a-k)	The Occupational Safety and Health Council oversees inspections, complaints, and advisory services to ensure compliance.
24(1-2)	Key safety information and emergency contact details must be prominently displayed in English and Urdu.
25	Safety-related records and documents must be preserved for at least five years for inspection purposes.
19(1-8)	Violations may result in fines up to Rs. 100,000, depending on severity and recurrence.
28	Restaurants must transition to compliance with the Act within one year of its enforcement.

Punjab Police (Local Police)

The Punjab Police, functioning under the Government of Punjab, is entrusted with ensuring public safety, maintaining law and order, and supporting government authorities in the enforcement of regulations.

Police Order, 2002

The Police Order, 2002, serves as the foundational document outlining the duties, powers, and responsibilities of the police. It empowers them to protect life and property, enforce laws, assist in emergencies, and support regulatory bodies in executing their mandates, ensuring smooth governance and public welfare. Below is a table summarizing the applicable sections and their relevance:

Table 14 The Police Order, 2002 Key Provisions

Section	Provision and Relevance to Restaurants
4(a-b, d)	Police must protect life, property, and liberty, preserve public peace, and prevent offences, ensuring public safety and law compliance in restaurant operations.
4(l, n)	Police can inspect restaurants for compliance with municipal, health, and labor regulations and enforce relevant laws.
4(o)	Facilitates collaboration with agencies like labor welfare and municipal authorities to ensure safety and order in restaurants.
5	Police can enforce regulations during emergencies affecting restaurant operations, such as health crises or labor disputes.
34	Police assist municipal bodies, labor departments, and health authorities in enforcing regulations on restaurants.
119	Police can issue directives for restaurants to comply with public safety or emergency protocols.
120	Enables police to mandate actions, such as temporary closures for health or safety violations.
124	Police can address disturbances or non-compliance at restaurants classified as public entertainment venues.
126	Allows police to search restaurants if there are credible concerns about illegal activities, such as storage of illicit materials.
127-128	Additional police can be deployed to maintain order during large events or disturbances involving restaurant premises.

Provision of Police Character Certificate

The Punjab Police, through PKM, has simplified obtaining Police Character Certificates and registering employees. Citizens can apply for certificates at any PKM center in Punjab with basic documents, a fee of Rs. 350, and a three-day processing time. Employee registration, required for hiring domestic workers, is free and takes 15–20 minutes. These initiatives improve convenience and enhance police record-keeping and community safety.

Defence Housing Authority (DHA)

DHA Lahore, is a regulated residential and commercial area in Lahore, with its own administrative framework. It operates with limited external government involvement. The rules and regulations for business establishment, registration, and operation in DHA Lahore differ according to the DHA's Construction & Development Regulations, 2014. The specific regulations for restaurant businesses are compiled in a table.

Table 15 General Regulations for Restaurant Establishment and Operation in DHA

Rule/Regulation	Description
General Requirements for Restaurant Establishment and Operation	
<i>Definition (26)</i>	Defines restaurants as part of commercial buildings.
<i>Building Plan (Section 15)</i>	Approval of building plans and drawings by the DHA Building Control Branch, signed by a registered architect.
<i>Construction Approval (13)</i>	Approval required for construction, additions, alterations, or renovations.
<i>Use of Land (14)</i>	Land use must match the approved purpose specified in the allotment letter.

<i>Completion Certificate (45)</i>	Completion certificate issued after inspection ensures construction matches approved plans.
Specific Construction Guidelines	
<i>Covered Areas (24b)</i>	Allows 100% covered area for ground floor commercial buildings, with mezzanine covering 70%.
<i>Clear Spaces (22)</i>	Minimum clear spaces and setbacks required for specific plot sizes.
<i>Basement Use (35a)</i>	Basements in commercial buildings may be used for parking or other approved purposes.
<i>Height Restrictions (23)</i>	Maximum permissible height for commercial buildings varies based on the plot size and location in DHA phases.
<i>Grease Trap (35j)</i>	Layout must include a grease trap and proper sewerage management.
Operational Requirements	
<i>Safety Features (35t)</i>	Commercial buildings must install fire alarms, fire extinguishers, and safety systems.
<i>Gas Cylinder Placement (35t-3)</i>	Gas cylinders must be placed on the rooftop and sourced from OGRA-approved vendors.
<i>CCTV Installation (35t-2)</i>	Mandatory CCTV cameras with at least two weeks of recording covering inside and outside premises.
Approval and Inspection	
<i>Drawing Scrutiny (16)</i>	DHA scrutinizes drawings for conformity within 30 days.
<i>Inspection (19)</i>	DHA officials can inspect premises during construction or operation without notice.
<i>Stage Verification (18)</i>	Construction must be verified by DHA at key stages, including layout, roof pouring, and final completion.
Penalties and Offenses	
Offense	Penalty/Fine
<i>Demolition without Permission (13c-ii)</i>	Rs. 300,000 fine for unauthorized demolition.
<i>Construction Violations (43)</i>	Violations may result in fines, demolition, or restoration costs imposed by DHA.
<i>Unauthorized Sewerage Connection (12c)</i>	Fine as prescribed by DHA.
<i>Unauthorized Ramp Construction (35m)</i>	Ramps not permitted in commercial buildings; violators are fined.

Moreover, there are several steps to obtain a completion certificate, alternative to the commercialization completion certificate as issued by LDA. Following are the details of the certificate acquisition along with the procedure to obtain the certificate.

Table 16 Instructions for Obtaining a Completion Certificate in DHA

Service	Timeline	Charges	Delivery
<i>Completion Certificate</i>	21 working days (subject to no violations)	Rs. 7,000	Certificate will be delivered to the applicant's address.
Procedure			
Step	Description		
1	Fill out the Building Completion Performa (downloadable from DHA E-Services Portal).		
2	Submit an application addressed to the Director Building Control on plain paper.		
3	Attach the following documents:		
	- 2 identical colored photographs (6" x 4" size) of the front elevation of the house/building.		
	- For corner plots: 2 additional side elevation photographs (6" x 4" size).		

	- 2 sets of approved drawings (Ammonia Prints).
	- Original paid challan for Completion Certificate fee.
	- Photocopy of paid challan for Late Completion Charges (if applicable).
	- Photocopy of paid challan for Water & Sewerage Connection.
	- Photocopy of DHA Sewerage Opening Letter or last paid water & sewerage bill (if in Phase VIII).
	- Photocopy of paid challan for Sewer Tempering Charges (if applicable).
	- Photocopy of CNIC of the owner or DHA Special Power of Attorney Holder.
4	If changes or deviations from the approved drawings exist, submit revised drawings for regularization.
5	DHA field staff will inspect the property to confirm adherence to approved drawings and check for violations.
6	If no violations are found, the Completion Certificate will be issued. If violations exist, observations will be communicated.
7	Failure to obtain the certificate within the prescribed time will result in a fine as per DHA regulations.
8	Transfer of property (even via HIBA) will not be processed without a Completion Certificate.
9	Completion Certificate can also be applied for via the DHA E-Services Portal.

Summarizing Relevance of Authorities

While the primary focus of restaurant registration and licensing involves ensuring that the restaurant operates legally and safely, several functions of the various authorities are compiled which can be integrated using single digital platform. Here is how each function relates to the registration, licensing and functioning of restaurants:

Table 17 Relevance of Integration of Various Departments

Function	Relevance to Restaurant Registration/Licensing/Approval and Operation
DEPARTMENT OF TOURIST SERVICES (DTS)	
<i>Registration of restaurants</i>	(Directly relevant) Initial registration of restaurants is handled by DTS.
<i>Licensing of restaurants</i>	(Directly relevant) Annual licensing is managed by DTS.
<i>Spot checking and quality assurance</i>	(Directly relevant) Ensures that registered restaurants maintain quality standards.
<i>Imposition of fines and penalties</i>	(Directly relevant) DTS ensures compliance through enforcement actions.
<i>Classification of Restaurants</i>	(Indirectly relevant) Helps in categorizing restaurants based on quality and services provided.
PUNJAB FOOD AUTHORITY (PFA)	
<i>Food product quality and safety</i>	(Directly relevant) Restaurants must comply with food safety regulations and obtain food safety certificates.
<i>Inspections</i>	(Directly relevant) PFA inspections ensure compliance with food safety standards, critical for licensing.
<i>Issuance of food safety certificates</i>	(Directly relevant) Required for restaurant operations and part of the licensing process.
METROPOLITAN CORPORATION OF LAHORE (MCL)	
<i>Approval of building plans</i>	(Indirectly relevant) Necessary for ensuring the restaurant building complies with safety and zoning regulations.
<i>Change of land use</i>	(Indirectly relevant) Ensures the land is zoned for restaurant use.

<i>Issuance of licenses, sanctions, and permits</i>	(Directly relevant) Required for legal operation of the restaurant.
<i>Tax on advertisements and billboards</i>	(Indirectly relevant) Relevant for restaurants that use advertisements.
LAHORE DEVELOPMENT AUTHORITY (LDA)	
<i>Commercialization Approval</i>	(Directly relevant) Ensures the land is commercially approved for restaurant use.
<i>Issuance Of Completion Certificate</i>	(Directly relevant) Confirms that the restaurant building complies with approved construction plans and is ready for operation.
<i>Building Plan Approval</i>	(Directly relevant) Ensures that the building layout adheres to municipal regulations.
TRAFFIC ENGINEERING AND PLANNING AGENCY (TEPA)	
<i>Parking Facility Compliance</i>	(Directly relevant) TEPA ensures the availability of adequate parking spaces as per zoning requirements.
<i>Noc For Traffic and Parking Impact</i>	(Directly relevant) Ensures restaurants do not contribute to congestion and meet urban planning standards.
<i>Urban Traffic Management</i>	(Indirectly relevant) Helps regulate traffic flow around commercial areas with heavy restaurant activity.
ENVIRONMENTAL PROTECTION AUTHORITY (EPA)	
<i>Environmental Impact Assessment (IEE)</i>	(Directly relevant) Ensures restaurants meet environmental standards and obtain the necessary NOC before operation.
<i>Waste Management Compliance</i>	(Directly relevant) Restaurants must adhere to waste disposal regulations.
<i>Issuance Of Environmental Clearance</i>	(Directly relevant) NOC from EPA is mandatory for restaurant operations.
LABOUR AND HUMAN RESOURCE DEPARTMENT	
<i>Worker Registration</i>	(Directly relevant) Employers must register restaurant employees to comply with labor laws.
<i>Minimum Wage Enforcement</i>	(Directly relevant) Restaurants must pay workers according to legal wage standards.
<i>Workplace Safety Standards</i>	(Directly relevant) Restaurants must adhere to safety requirements for employees as mandated by labor laws.
<i>Maternity Benefits and Leave Policies</i>	(Indirectly relevant) Applicable if the restaurant employs female staff.
<i>Site Approval</i>	(Indirectly relevant) Ensures workplace design complies with safety standards.
<i>Safety Inspections</i>	(Directly relevant) Ensures that the restaurant premises meet safety, hygiene, and emergency preparedness requirements.
<i>Reporting And Record-Keeping</i>	(Directly relevant) Restaurants must maintain safety records for inspections and regulatory compliance.
PUNJAB POLICE (LOCAL POLICE)	
<i>Inspections And Compliance Support</i>	(Indirectly relevant) Police assist regulatory bodies during inspections or enforcement of laws.
<i>Employee Registration</i>	(Directly relevant) Mandatory for hiring and verifying non-local or domestic workers.
<i>Issuance Of Character Certificates</i>	(Directly relevant) Required for background checks of restaurant employees.
DEFENCE HOUSING AUTHORITY (DHA)	
<i>Approval Of Building Plans</i>	(Directly relevant) Necessary for restaurants operating in DHA to ensure compliance with structural and zoning regulations.

<i>Completion Certificate Issuance</i>	(Directly relevant) Confirms construction and operational readiness in DHA.
<i>Safety And Operational Requirements</i>	(Indirectly relevant) Includes fire safety, waste management, and CCTV installation for restaurants.

Compiling Identified Registration, License and Approval Costs

This information compiled in table below provides a comprehensive breakdown of the costs and fees involved in registering, licensing, and obtaining necessary approvals (NOCs) for a restaurant in Lahore, formulated based on an in-depth regulatory review of key departments and authorities governing the hospitality sector. Drawing from the processes outlined in regulations by various authorities, the table categorizes these costs by department and purpose, specifying their frequency and variability based on factors such as location, restaurant size, and compliance requirements.

Table 18 Summary of Registration, Licensing, and Approval Costs for Restaurant Establishment

Department	Process	Fees (PKR)	Frequency
<i>(DTS)</i>	Registration	1,600 - 20,000 (varies by status)	One-time
	Grant of License	1,600 - 10,000 (varies by status)	Annual
	License Renewal	1,600 - 10,000	Annual
<i>(PFA)</i>	License Issuance	5,000 - 15,000 (depending on size)	Annual
<i>(MCL)</i>	Land Use Conversion Approval	Varies (based on area & use)	One-time
	Building Plan Approval	20,000 - 50,000	One-time
	Advertisement Permissions	10,000 - 50,000	Annual
	Waste Management Fee	2,000 - 5,000	Monthly
<i>(LDA)</i>	Commercialization Certificate	Calculated on property valuation	One-time
	Completion Certificate	7,000	One-time
<i>(EPA)</i>	IEE and NOC Issuance	15,000	One-time
<i>(TEPA)</i>	Parking NOC	100,000	One-time
<i>Labour Department</i>	Employee Registration	1,500 to 3,000 per employee	One-time
	Inspection Compliance	Varies	As needed
<i>Punjab Police</i>	Character Certificate	350	One-time
Estimated Total Cost:	The total cost will vary significantly depending on the restaurant's size, location, and services. For a small to medium-sized restaurant, the total one-time costs could range between PKR 150,000 and PKR 300,000 , with annual recurring costs for licenses and services being around PKR 20,000 to PKR 100,000 .		

METHODOLOGY

Component 1: Situational Analysis; Registering and Licensing Restaurants in Lahore

This section of the study explains methodology designed to conduct survey of restaurants in Lahore.

Survey Design and Data Collection

A stratified random sampling methodology was employed to ensure proportional representation of single-branch, multi-branch, and multinational restaurants in Lahore, based on the Punjab Development Statistics Report 2023 (P&D Board, Punjab, 2023). From a population of 650 registered restaurants, a statistically reliable sample of 242 was drawn. Face-to-face interviews with restaurant owners were conducted using digital forms on tablets or smartphones, ensuring accurate data entry, reducing transcription errors, and enabling real-time validation. Enumerators underwent a one-day training to align with survey objectives and ethical considerations. Data were analyzed using SPSS and STATA, following rigorous cleaning and validation processes to identify trends and challenges faced by restaurant owners.

Sampling Methodology

According to Punjab Development Statistics Report 2023, the number of restaurants registered in Lahore District in year 2022 are given as shown in table below. The total number of restaurants registered represents the population size.

Table 19 Number of Registered Restaurants in Lahore, 2022

District	Restaurants (Single Branch)	Restaurants (Multiple Branches)	Restaurants (Multinational)	Total
Lahore	522	109	19	650

To determine the sample size for the number of restaurants (single branch, multiple branches, and multinational) across the selected sites in Lahore, we use a stratified random sampling methodology. Following is the formula used for the calculation of sample size:

$$n = \frac{N \cdot z^2 \cdot p \cdot (1 - p)}{E^2 \cdot (N - 1) + z^2 \cdot p \cdot (1 - p)}$$

n = Sample size

N = Population size (650)

z = z-value (i.e. 1.96 for 95% confidence level)

p = estimated proportion (i.e. 0.5 for maximum variability)

E = margin of error (i.e. 5% or 0.05)

Thus, the sample size $n = 242$ restaurants in Lahore district

Table 20 Population and Sample Size Allocation

Category	Population Size	Sample Size
Single Branch	522	194
Multiple Branches	109	41
Multinational	19	7
Total	650	242

The sampling method ensures proportional representation of restaurant categories while reducing bias and increasing precision by accounting for variability within each stratum. Restaurants were selected based on their concentration, as identified through Google Maps, online sources, and personal observations.¹⁹ Screenshots illustrating these locations are provided in ANNEXURE II. The survey focused on areas with a high density of restaurants, including historic zones, capturing a diverse spectrum of dining establishments across Lahore.

Table 21 Sample Size Allocation by Zones in Lahore

Zone Number	Zone Location	Estimated no. of Restaurants	Population Proportion	Sample Size
1	MM Alam Road, Gulberg III	35	0.1094	26
2	Main Boulevard, Gulberg	25	0.0781	19
3	DHA Phase 1	15	0.0469	11
4	Johar Town	25	0.0781	19
5	Model Town	15	0.0469	11
6	Cantonment Board	15	0.0469	12
7	Jail Road, Shadman	21	0.0656	15
8	Iqbal Town	18	0.0563	14
9	Mall Road	15	0.0469	11
10	Anarkali Old Food Street	13	0.0406	10
11	Wahdat Road	15	0.0469	11
12	Lahore Fort, New Food Street	9	0.0281	7
13	DHA Phase 3	19	0.0594	14
14	Bahria Town	19	0.0594	14
15	Shalamar Link Road, and Mughalpura, GT Road	10	0.0313	8
16	Samnabad	18	0.0563	14
17	Township/Faisal Town	11	0.0344	9
18	Mozang	9	0.0281	7
19	Wapda Town	13	0.0406	10
	TOTAL	320	1	242

Enumerators Selection and Sample Allocation Plan

Eight enumerators were selected based on specific criteria to ensure efficient and high-quality data collection. Candidates were required to have at least an undergraduate degree, preferably in social sciences, to align with the survey's objectives. A balanced gender representation was prioritized, and all enumerators were residents of Lahore to leverage their familiarity with local cultural and regional contexts. Each enumerator was assigned specific zones, enabling a focused and streamlined approach. The survey spanned five days, with flexible eight-hour daily shifts, ensuring sufficient time for meaningful engagement with restaurant owners in their respective areas.

¹⁹ Number of restaurants selected at zones are based on observations from Google Maps (to capture concentration), and other websites which includes <https://guidegrab.pk/rs/lahore>, <https://www.citysearch.pk/lahore/eat-and-drink/restaurants> and from listed restaurants on Punjab Food Authority website <https://starrating.pfa.gov.pk/StarRating/List?city=15&rating=0>

Table 22 Assigned No. of Samples per Enumerator and Allocation of Zones

Enumerator	Zones Assigned	Total Restaurants
1	Zone 1 (MM Alam Road, Gulberg III) Zone 3 (DHA Phase 1)	(26 + 11) = 37
2	Zone 2 (Main Boulevard, Gulberg) Zone 13 (DHA Phase 3)	(19 + 14) = 33
3	Zone 5 (Model Town) Zone 14 (Bahria Town)	(11 + 14) = 25
4	Zone 7 (Jail Road, Shadman) Zone 8 (Iqbal Town)	(15 + 14) = 29
5	Zone 9 (Mall Road) Zone 10 (Anarkali Old Food Street) Zone 11 (Wahdat Road)	(11 + 10 + 11) = 32
6	Zone 4 (Johar Town) Zone 19 (Wapda Town)	(19 + 10) = 29
7	Zone 15 (Shalamar Link Road, Mughalpura, GT Road) Zone 6 (Cantonment Board) Zone 12 (Lahore Fort, New Food Street)	(8 + 12 + 7) = 27
8	Zone 17 (Township) Zone 16 (Samnabad) Zone 18 (Mozang)	(9 + 14 + 7) = 30

Subsequently, the names of the owners, names of the restaurants, and contact information shall be kept confidential and shall not be disclosed in any component of the study or anywhere else. A finalized version of the complete questionnaire has been attached in ANNEXURE II, respectively.

Component 2: Calculating the Costs of Sludge in Restaurant Businesses

To quantify the sludge cost as a percentage of both the total setup cost and the GNP share of restaurants in Punjab, the study adopted a multi-step approach. First, data on restaurant setup costs were gathered through a survey of local restaurateurs, who provided input on their total setup expenses. Using a predetermined value of sludge, derived from regulatory burden estimates from component 1, the proportion of sludge in total setup costs was calculated. This step aimed to capture the direct financial impact of compliance requirements on new restaurant businesses in the region.

Next, to calculate the sludge cost as a percentage of the GNP, the study utilized official GNP figures for the services sector, including hotels and restaurants, from multiple Punjab Development Statistics Reports. Since specific GNP data for restaurants alone was unavailable, the restaurant sector's GNP was estimated based on the proportion of registered restaurants to total registered establishments. Sludge costs were then aggregated across all registered restaurants for the years 2020, 2021, and 2022, and compared to the restaurant GNP for each year. This method allowed the study to quantify the economic burden of regulatory costs on the sector and assess its implications for the broader economy of Punjab.

Component 3: Development of a Digitized and Automated Software Architecture System

This component focuses on developing a user-friendly, secure, and compliant web application to streamline restaurant business registration. Built with the MERN stack (ReactJS, ExpressJS, NodeJS, and MongoDB), the platform offers intuitive navigation, real-time application tracking, and step-by-

step guidance. Key features include blockchain/IPFS integration for data integrity and transparency, decentralized cloud storage for secure document handling, and an online payment gateway for efficient transactions. The system enables a one-time application linked to all relevant departments, digitizing regulatory processes and replacing manual paperwork. A centralized grievance redressal system and feedback loop address user concerns and support continuous improvement. By reducing physical visits, minimizing delays, and enhancing user experience, the application modernizes the restaurant registration process while ensuring regulatory compliance.

COMPONENT 1: SURVEY-BASED RESULTS OF SITUATIONAL ANALYSIS

Key Insights from Field Visits by Enumerators

The survey of Lahore's restaurants highlighted critical challenges faced by owners in navigating the administrative and regulatory landscape. While owners and staff were cooperative, they expressed apprehension about discussing licensing and registration costs due to fear of departmental repercussions. Bribery and unwarranted fines by regulatory bodies like the Punjab Food Authority and Punjab Police were frequently reported. Licensing costs varied depending on factors such as registration timing, location, seating capacity, ambiance, and cuisine. Some owners admitted using influential contacts or offering bribes to expedite the registration process, reflecting systemic corruption.

Corruption was pervasive, with the Punjab Food Authority and Punjab Police often cited for bribes, unwarranted disturbances, and unjustified fines. Challenges included demands from local police for bribes, free meals, drinks, or cash to allow restaurants to operate past 11 pm. In Samnabad, owners reported navigating tens of departments for licensing, leading to complaints of blackmail and extortion. This complex process caused confusion for new restaurant owners regarding timelines and required approvals. Desi restaurant owners were vocal about their grievances, while those offering continental cuisine were hesitant, fearing departmental negligence.

Specific incidents included daily demands for free food by police, excessive payments to departments, and simplified regulations for restaurants owned by influential individuals. One owner likened regulatory bodies to "snakes," while another noted that financial capacity could eliminate obstacles. Some expressed frustration, questioning the survey's purpose. In Samnabad, owners highlighted high license fees and normalized bribery, including providing free meals to police for "protection." In Mozang, traffic police compounded challenges by demanding bribes, while Township saw widespread non-compliance with zoning laws as commercial activities thrived in residential areas. A recurring theme was restaurant owners' apprehension about participation, driven by fear of administrative repercussions. High licensing costs, bribery demands, and local authority pressures hindered ease of doing business, stifling small enterprise growth.

Descriptive Analysis

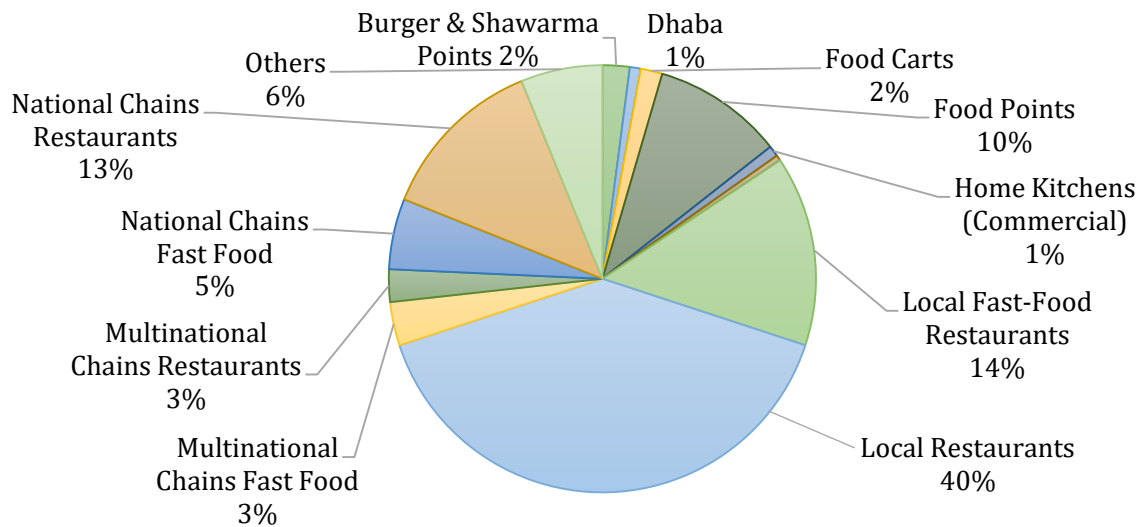
After analyzing and cleaning the collected data, the following descriptive analysis has been compiled as the preliminary findings of the research.

Figure 3 Restaurant Distribution by Zone



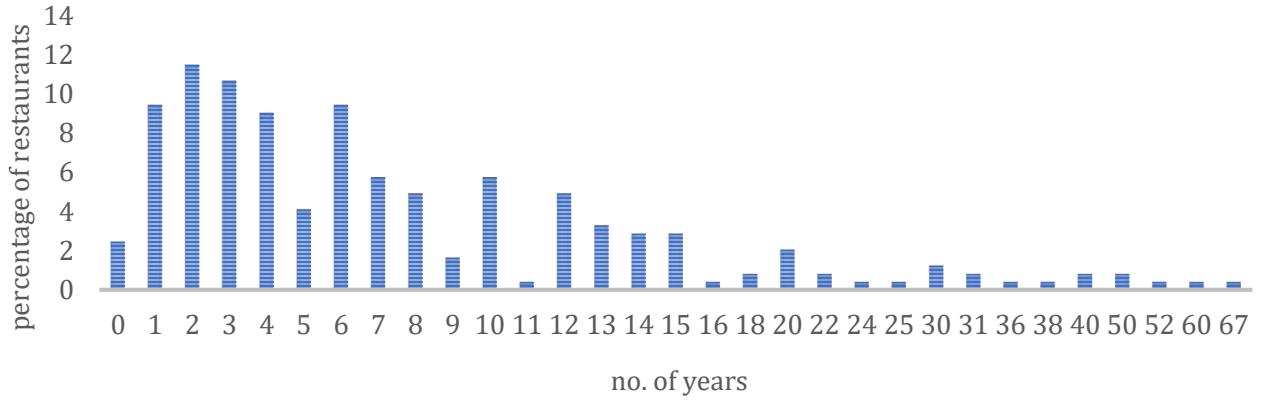
Source: Author's illustration

Figure 4 Type of Restaurants covered



Source: Author's illustration

Figure 5 Number of years in operation



Source: Author's illustration

Figure 6 Age of Owners



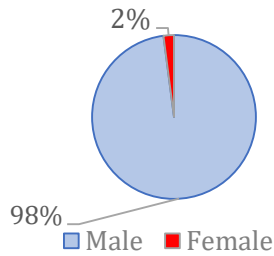
Source: Author's illustration

Figure 7 Number of Employees in Restaurant



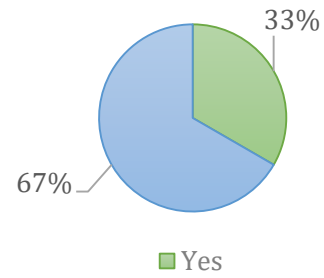
Source: Author's illustration

Figure 8 Gender of Owners



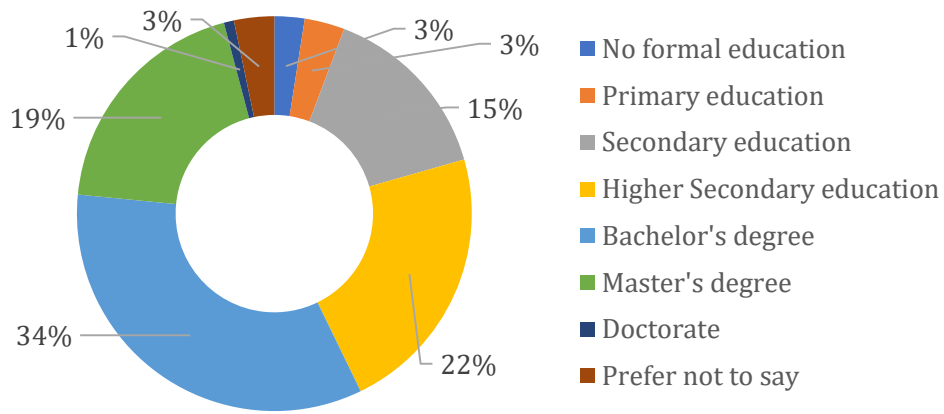
Source: Author's illustration

Figure 9 Previous Business Experience



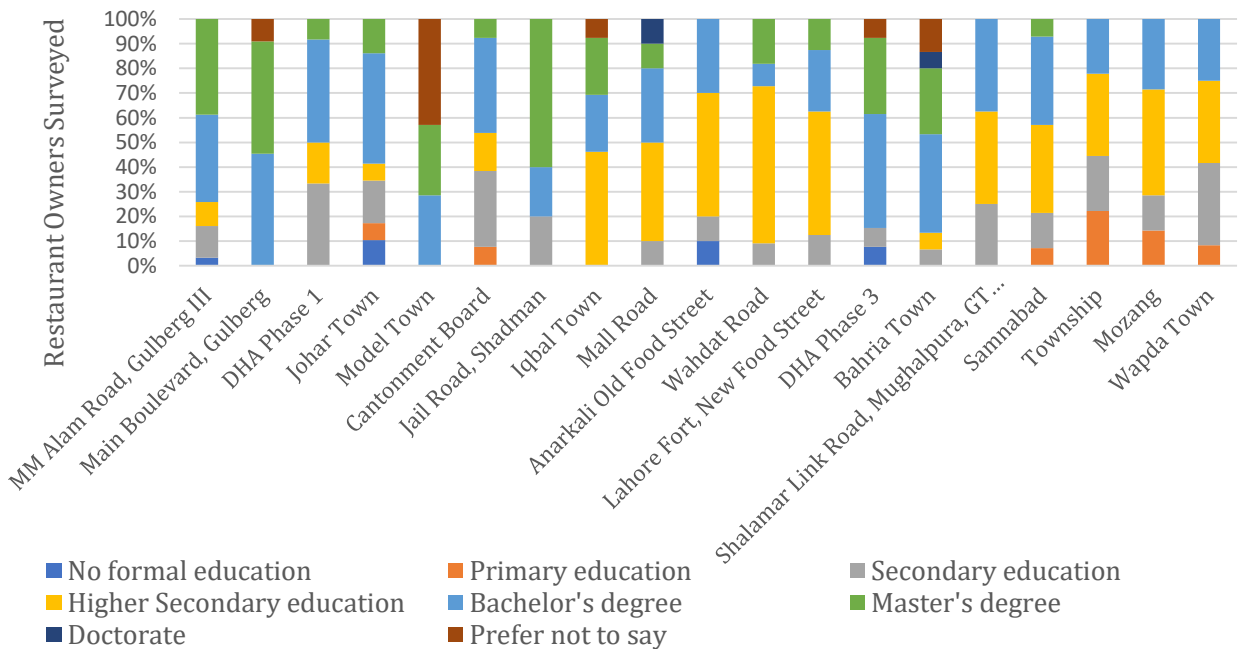
Source: Author's illustration

Figure 10 Owners' Education Level



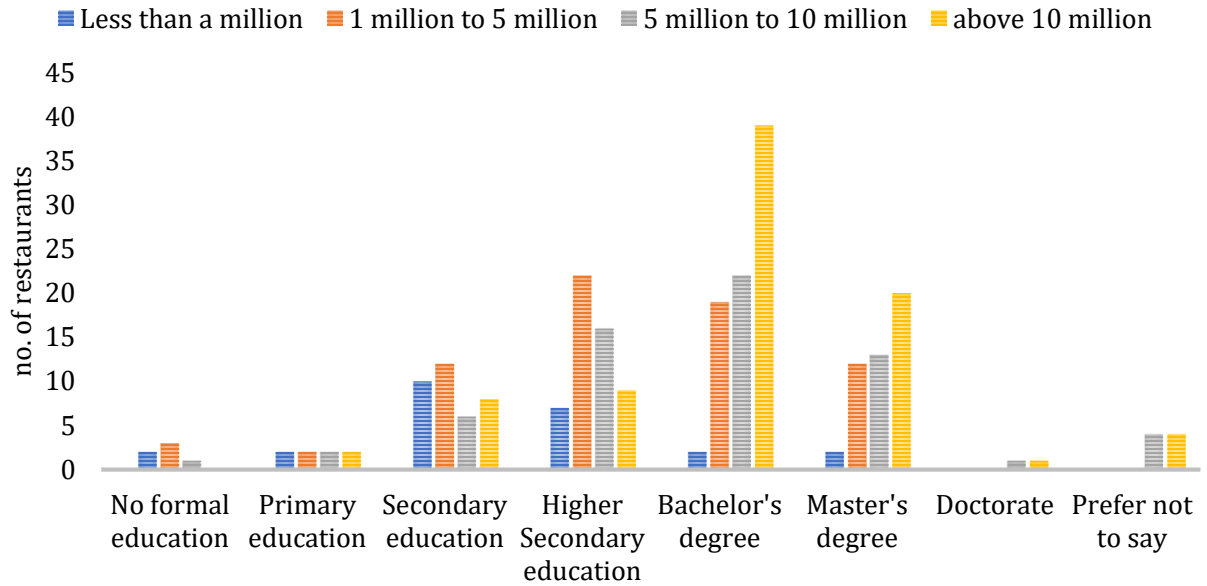
Source: Author's illustration

Figure 11 Education Level by Zone



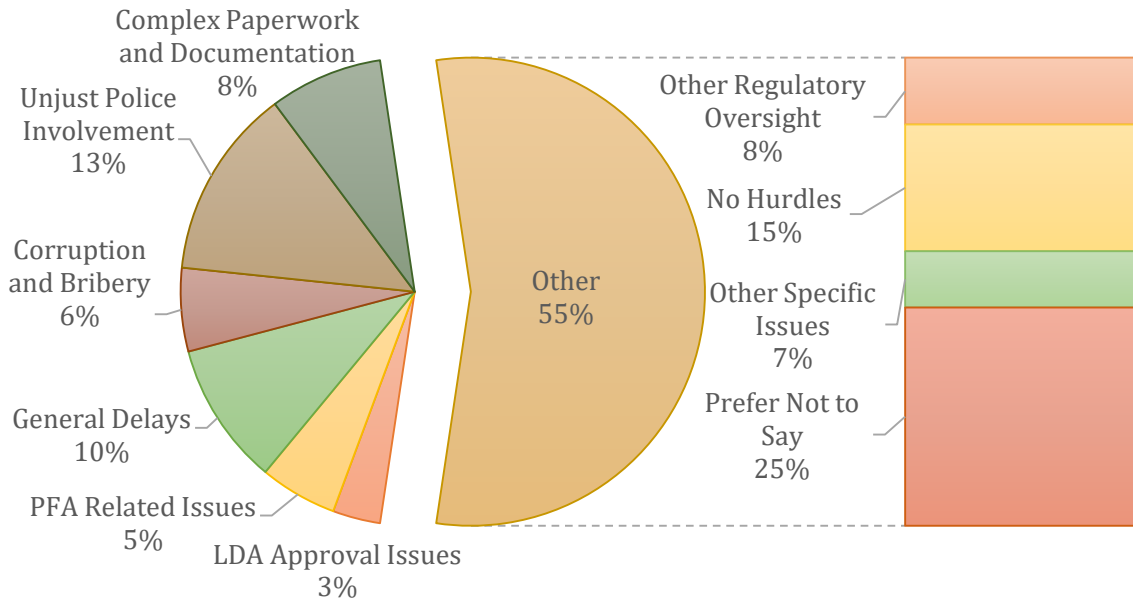
Source: Author's illustration

Figure 12 Education Level vs. Startup Costs



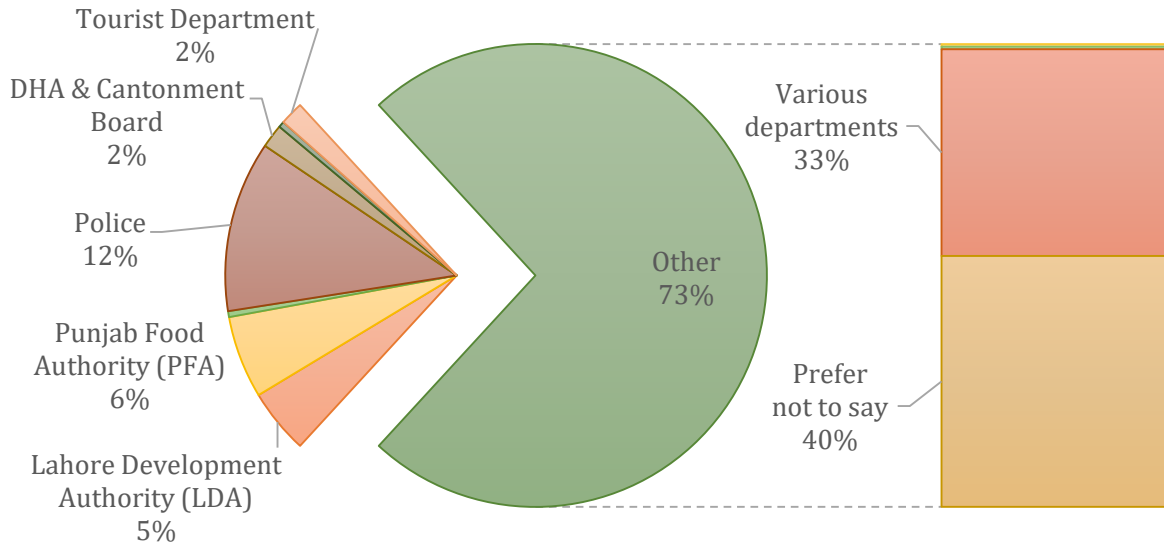
Source: Author's illustration

Figure 13 Major challenges faced by owners



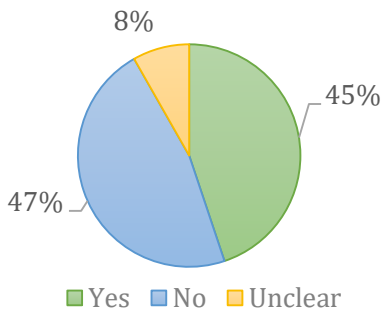
Source: Author's illustration

Figure 14 Departments causing troubles the most



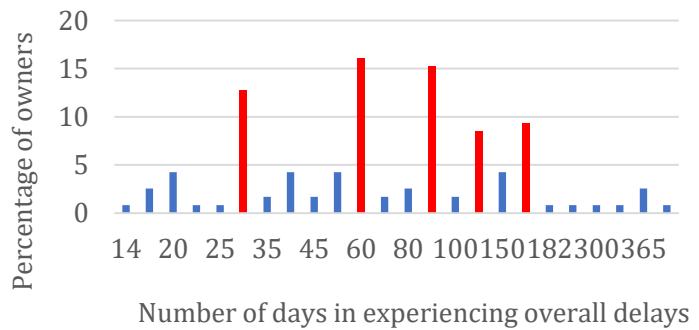
Source: Author's illustration

Figure 15 Delays in Approvals



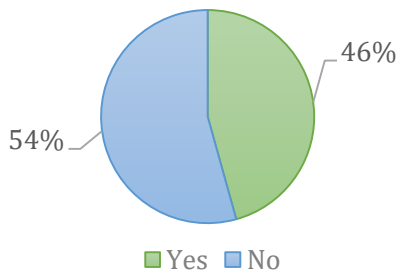
Source: Author's illustration

Figure 16 Duration of Delays



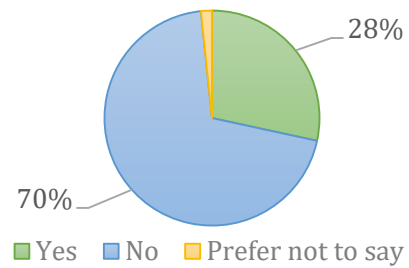
Source: Author's illustration

Figure 17 Percentage of owners who hired a legal advisor or consultant



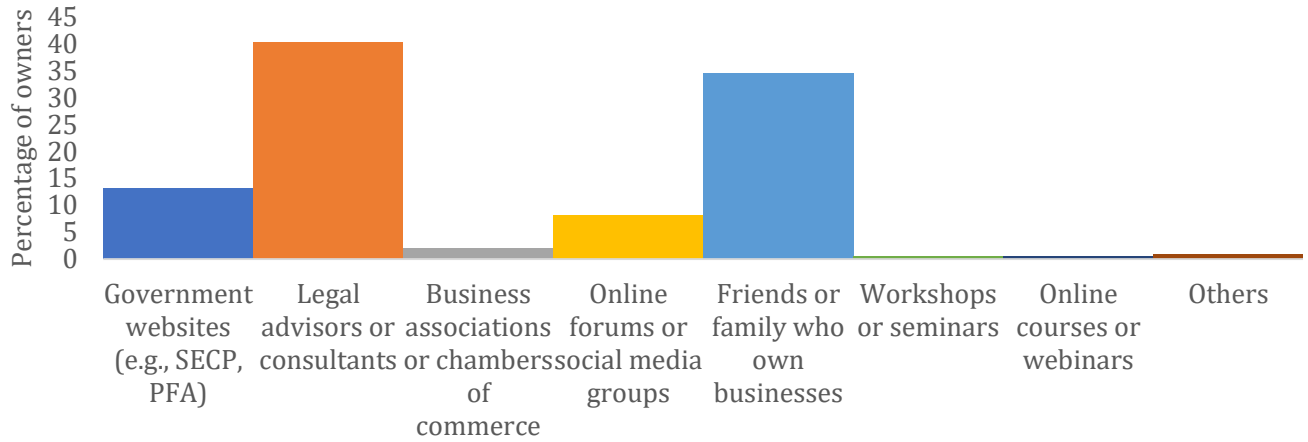
Source: Author's illustration

Figure 18 Percentage of owner who ever approached a strong reference



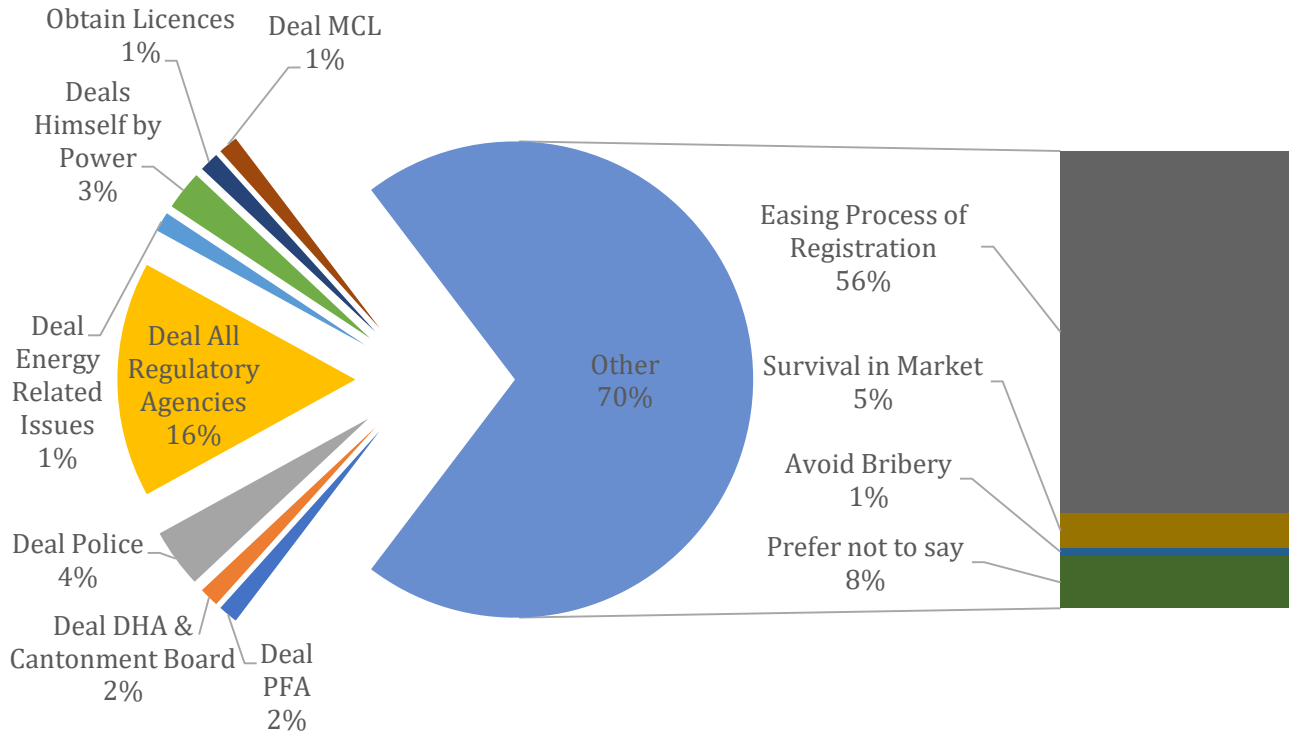
Source: Author's illustration

Figure 19 Information Sources for Registration



Source: Author's illustration

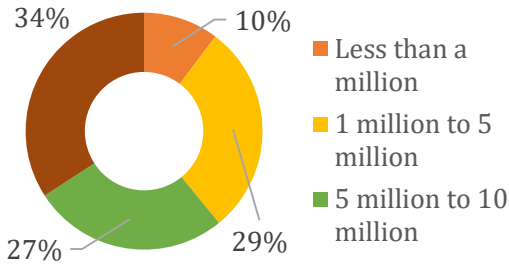
Figure 20 Reasons for approaching references



Source: Author's illustration

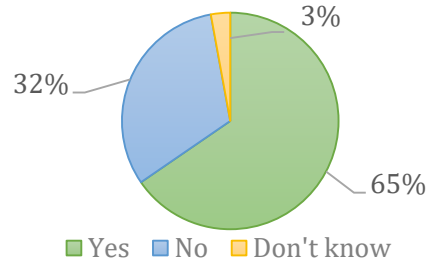
The pie chart highlights why restaurant owners sought assistance, revealing systemic complexities and burdensome regulatory compliance. Key reasons included navigating multiple regulatory agencies, managing police and Punjab Food Authority (PFA) interactions, avoiding bribery, and coping with market pressures.

Figure 21 Startup Costs Distribution



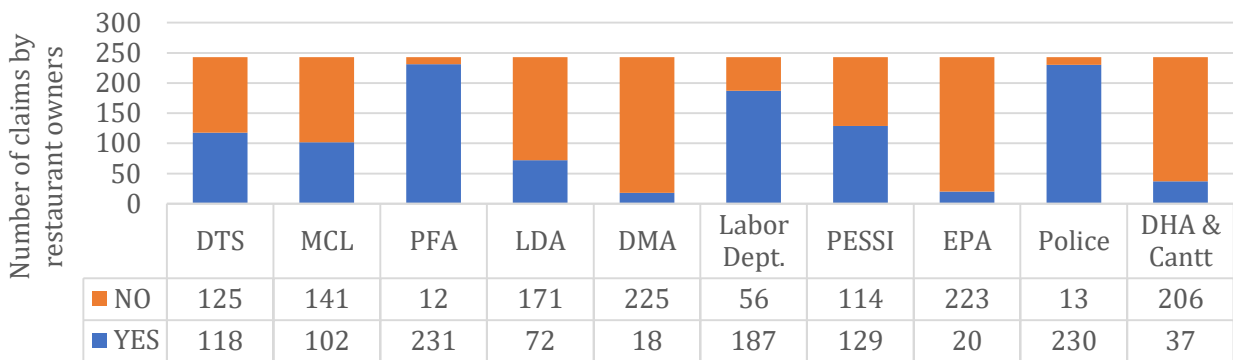
Source: Author's illustration

Figure 22 Recurring License Costs



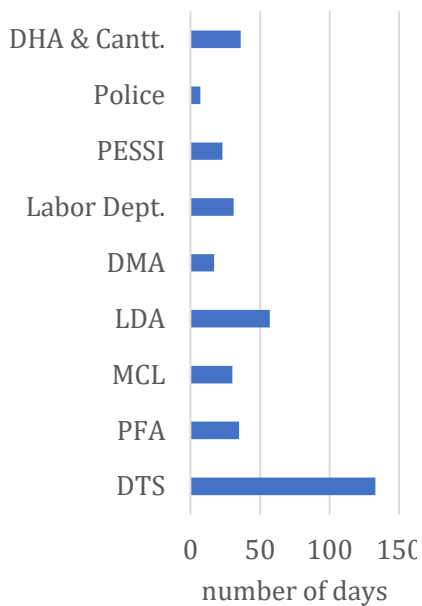
Source: Author's illustration

Figure 23 Owners claiming involvement of selected departments in businesses



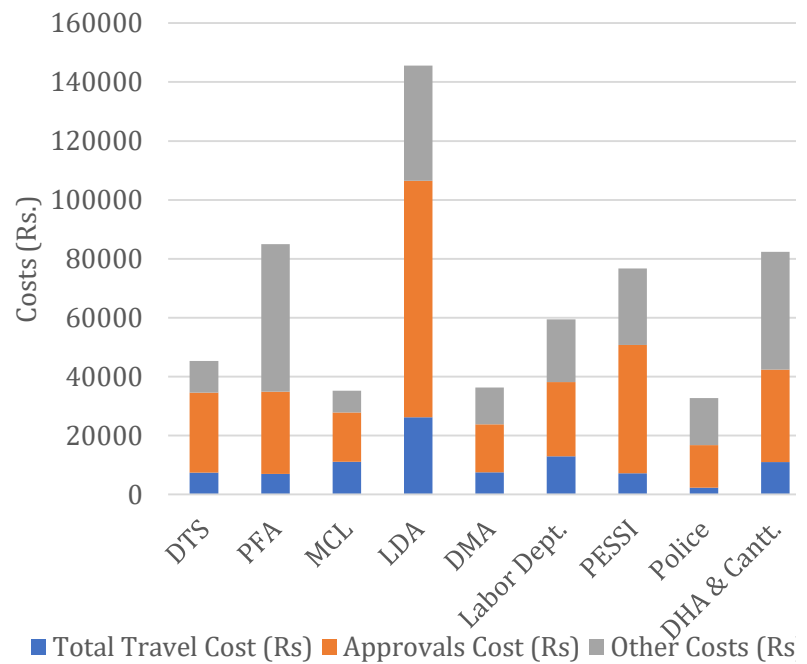
Source: Author's calculation

Figure 24 Time Taken for Approvals



Source: Author's calculation

Figure 25 Registration/License/Approval Costs by Department



Source: Author's calculation

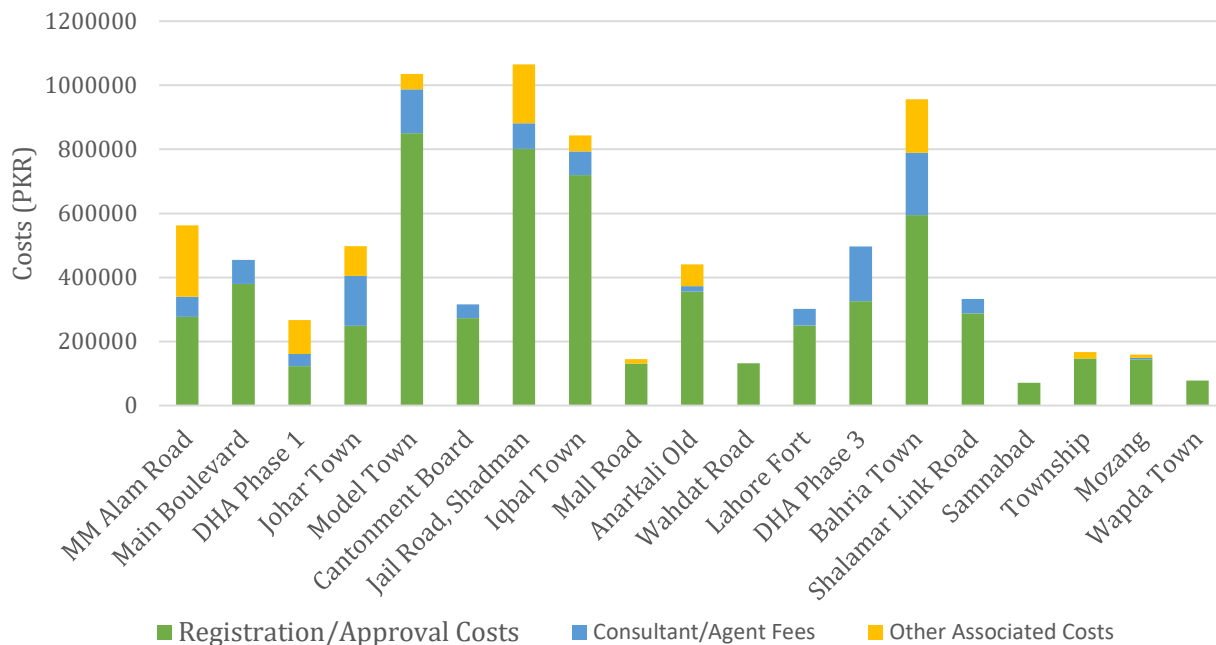
The findings reveal significant variation in the time, number of visits, travel costs, and additional expenses associated with obtaining licenses and approvals from different departments. Statistics of these figures are attached in ANNEXURE I.

Figure 26 Estimated total costs in Registration/License/Approval²⁰



Source: Author's calculations

Figure 27 Estimated Total Costs in Registration/License/Approval Across Zones²¹



Source: Author's illustration

The stacked bar graph shows that Model Town, Jail Road, Shadman, and Bahria Town have the highest total costs, primarily driven by high estimated total costs and consultancy costs, respectively. In contrast, locations like Wahdat Road, Mozang, Township, Wapda Town show significantly lower

²⁰ Total Travel Costs: Calculated as the number of visits multiplied by costs per visit for selected departments. Total Registration/Approval Costs: Average value from Q_5_2.

Consultant/Agent Fees: Average value from Q_5_4.

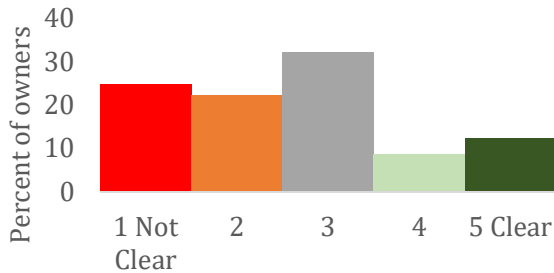
Other Associated Costs: Average value from Q_5_5 (e.g., bribes, miscellaneous expenses).

Refer to Annexure I for statistics.

²¹ The values for other associated costs have been excluded for some zones due to low observations. However, inputs were still collected as per Q_5_5. Refer to Annexure I for statistics.

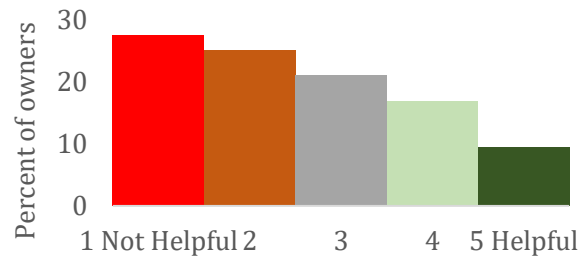
overall expenses. The combination of green, blue, and yellow bars highlights the contribution of each cost type to the total expenses across various locations. The detailed statistics for this graph are attached in Annexure I.

Figure 28 Ranking Clarity of Regulations



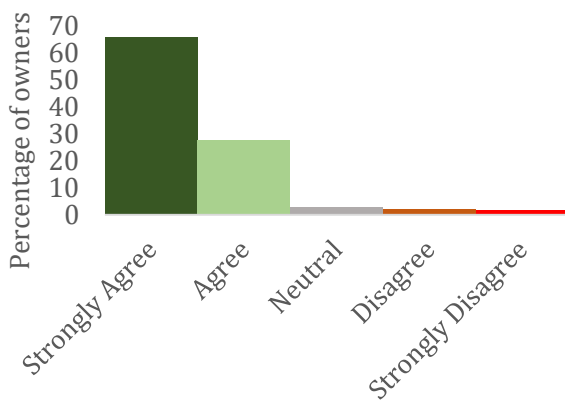
Source: Author's illustration

Figure 29 Regulation Impact on Growth



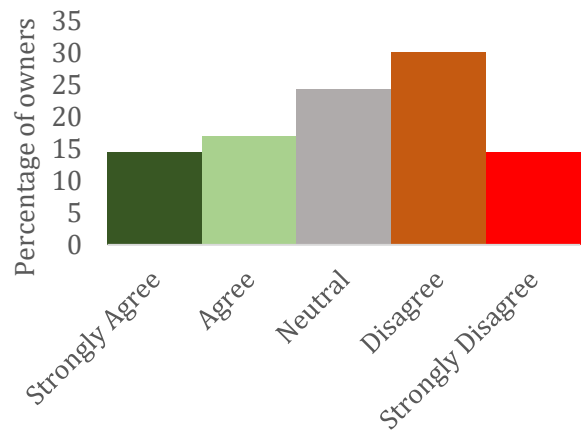
Source: Author's illustration

Figure 30 Online Registration Portal to be Useful



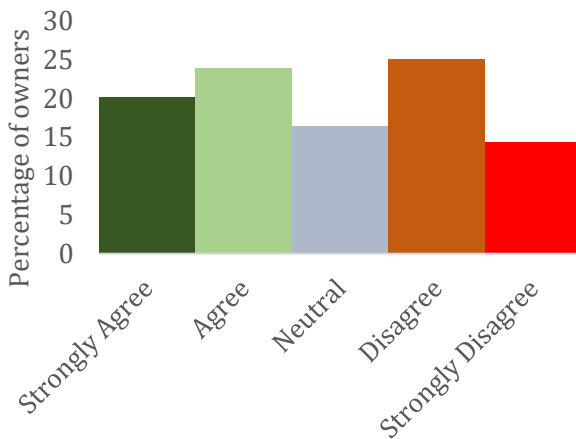
Source: Author's illustration

Figure 31 Honesty in Approvals by Officers



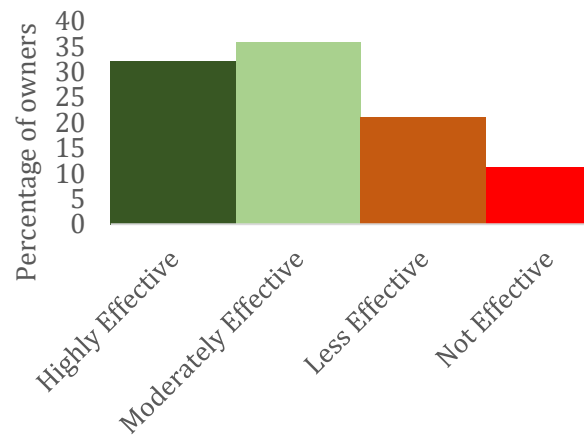
Source: Author's illustration

Figure 32 Fairness of Inspectors in Preparing Reports



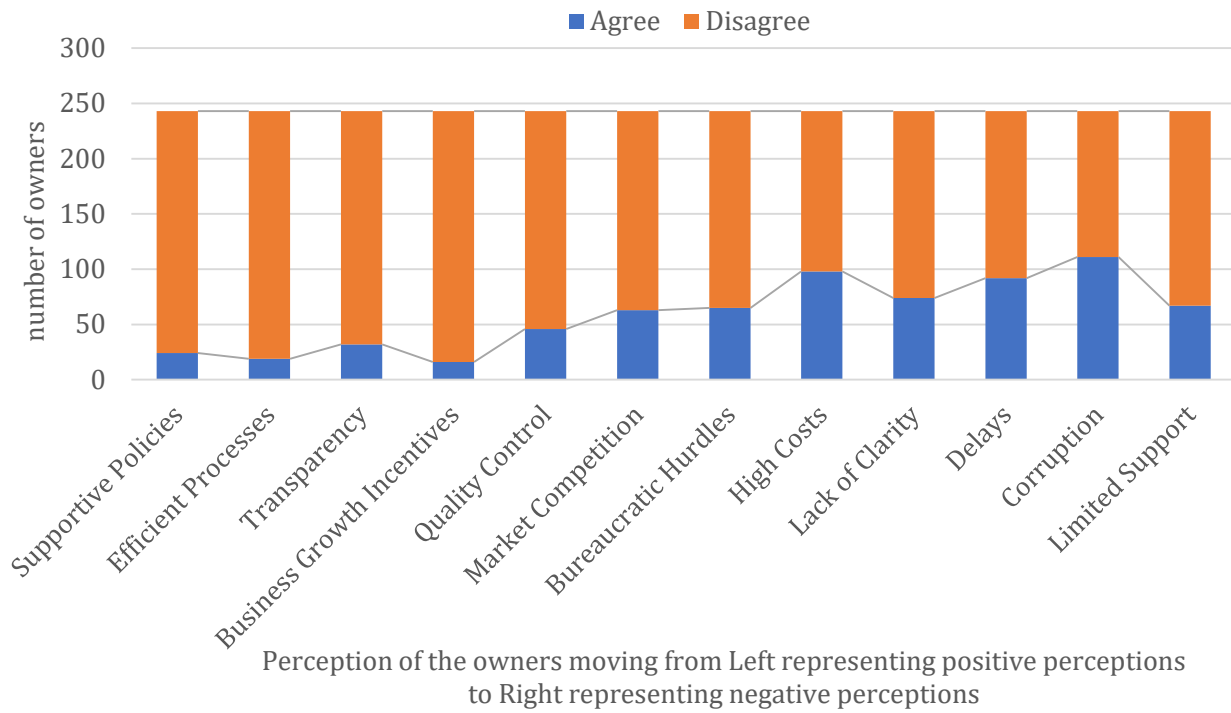
Source: Author's illustration

Figure 33 Effectiveness of Penalties in Ensuring Compliance



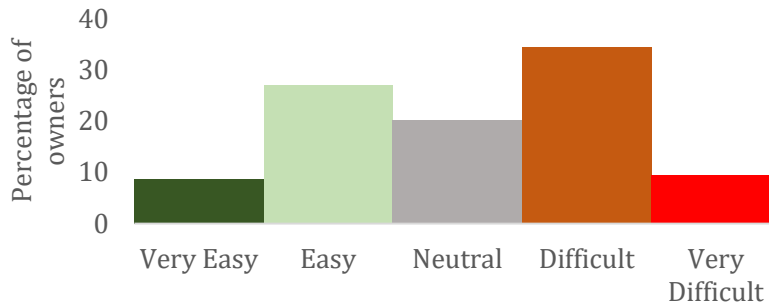
Source: Author's illustration

Figure 34 Regulatory Environment Perception²²



Source: Author's illustration

Figure 35 Perception about the overall process of registration in Lahore



Source: Author's illustration

²² Following are the description of the variables discussed.

Supportive Policies: The regulations provide clear guidelines and support for restaurant businesses.

Efficient Processes: The regulatory processes are streamlined and efficient, reducing time and costs.

Transparency: The regulations are transparent and easy to understand.

Business Growth Incentives: The regulations offer incentives for business growth and expansion.

Quality Control: The regulations ensure high standards of hygiene and food safety, enhancing customer trust.

Market Competition: The regulations create a fair and competitive market environment.

Bureaucratic Hurdles: The regulations involve excessive paperwork and bureaucratic procedures.

High Costs: The regulatory costs and fees are too high, burdening business owners.

Lack of Clarity: The regulations are unclear and inconsistent, causing confusion.

Delays: The approval and licensing processes are slow and cause delays.

Corruption: There is corruption and the need for unofficial payments to expedite processes.

Limited Support: There is insufficient support and guidance from regulatory authorities.

COMPONENT 2: CALCULATING THE COSTS OF SLUDGE IN RESTAURANT BUSINESSES

This study analyzes sludge costs through a two-step approach. First, the regulatory burden on restaurant setup is calculated as a proportion of estimated total investment in setting-up a restaurant, using data from restaurant owners to quantify the financial impact of compliance requirements on new businesses in Punjab. Second, sludge costs are evaluated as a percentage of the restaurant sector's estimated Gross National Product (GNP) in Punjab. Using official GNP data and the proportion of registered restaurants, the study aggregates sludge costs for 2020–2022 to assess the broader economic burden of regulatory compliance on Punjab's service sector.

Calculating the Proportion of Regulatory Burden (Sludge Cost) for Restaurant Setup

To estimate the sludge cost percentage for each restaurant, the study gathered data on the setup costs of various restaurants through a structured survey. The restaurants were asked to categorize their initial setup expenses into one of four predefined ranges:

1. Less than 1 million PKR
2. 1 million to 5 million PKR
3. 5 million to 10 million PKR
4. Above 10 million PKR

The average input value of 2.84, derived from restaurant responses, indicates most fell between the second and third categories. To estimate the average setup cost, linear interpolation was applied using category midpoints. This method provides a straightforward way to approximate values between ranges, improving the reliability of numerical estimates from categorical data and enabling more accurate percentage calculations (Weden et al., 2015).

The midpoint values for the four categories were estimated as follows:

- **Category 1:** Less than 1 million PKR (upper limit assumed to be 1 million PKR)
- **Category 2:** 3 million PKR (midpoint of 1 to 5 million PKR)
- **Category 3:** 7.5 million PKR (midpoint of 5 to 10 million PKR)
- **Category 4:** Above 10 million PKR (left as open-ended)

Given the average response of 2.84, which falls between Categories 2 and 3, we calculated the estimated setup cost using interpolation between these midpoints.

$$\text{Estimated Setup Cost} = 3 + (7.5 - 3) \times \frac{2.84 - 2}{3 - 2} = \mathbf{6.78 \text{ million Rs.}}$$

This yielded a value of 6.78 million PKR as the estimated average setup cost of a restaurant in Lahore.

Next, the sludge cost was calculated as a percentage of this estimated setup cost using the formula:

$$\text{Sludge Cost Percentage of total setup cost} = \left(\frac{\text{Sludge Cost}}{\text{Estimated Setup Cost}} \right) \times 100$$

Substituting the values for our study:

$$\text{Sludge Cost Percentage of total setup cost} = \left(\frac{641,562}{6,780,000} \right) \times 100 \approx \mathbf{9.46\%}$$

This result indicates that, on average, nearly 9.5% of the total setup cost for a restaurant is attributable to regulatory burdens, under the specific assumptions as discussed above.

Estimating the Sludge Cost as a Proportion of GNP for Hotels and Restaurants in Punjab and Pakistan

This section aims to calculate the total regulatory burden (sludge cost) paid by hotels & restaurants in Pakistan and assess its proportion relative to the GNP of restaurants and hotels in Punjab. Using data from the multiple Punjab Development Statistics Reports 2020-21 to 2022-23, the analysis will focus on determining the sludge cost borne by the restaurant industry as a percentage of GNP. To calculate the sludge cost as a percentage of GNP, both at the Pakistan level and Punjab level, we must address the discrepancy in the scope of GNP data (Pakistan-wide) and the restaurant data (Punjab-specific). The sludge cost per restaurant as calculated in this study is Rs. 641,562, and the calculated sludge cost percentage of the total setup cost for restaurants is 9.46%.

The Gross National Product (GNP)²³ values for hotels and restaurants under the services sector in Pakistan, as retrieved from the Punjab Development Statistics Reports, are as follows:

- **2020-21:** Rs. 726,385 million
- **2021-22:** Rs. 822,966 million
- **2022-23:** Rs. 1,180,653 million

The total number of registered hotels and restaurants in Punjab:

- **2020-21:** 23,156 hotels and restaurants (11,436 restaurants)
- **2021-22:** 30,459 hotels and restaurants (12,999 restaurants)
- **2022-23:** 4,987 hotels and restaurants (1,870 restaurants)

Given that the calculated regulatory burden (sludge) for each restaurant is Rs. 641,562, we can now estimate the total sludge cost for all registered establishments (i.e. hotels and restaurants) in Punjab as:

$$\begin{aligned} \text{Total Sludge Cost} &= \text{total no. of establishments (i.e. hotels and restaurants)} \\ &\times \text{sludge cost estimated per restaurant (i.e. 641,562)} \end{aligned}$$

With the information that Punjab contributes **54.2%** to the National Income (P&D Board, Punjab, 2022), we can assume and estimate Punjab's Gross National Product (GNP) for establishments using this percentage.

$$\text{Punjab GNP} = \text{National GNP} \times 54.2\%$$

²³ Values represent GNP at current factor cost

To assess the impact of regulatory burden on the overall economy, we can calculate the proportion of the total sludge cost in relation to the contribution of establishments in GNP Punjab as:

$$\text{Sludge as a percentage of Punjab GNP} = \left(\frac{\text{Total Sludge Cost for establishments}}{\text{Punjab GNP}} \right) \times 100$$

Since the number of establishments is only for Punjab, using Punjab-specific sludge costs as a direct percentage of National GNP (which represents all of Pakistan) could lead to an over- or under-estimation of the sludge cost at the national level. To address this, we must logically extrapolate from Punjab data to estimate the sludge cost for the entire country while ensuring consistency. Using Punjab's share of the national income (54.2%) to infer the number of establishments nationwide, the study estimates the total number of establishments in Pakistan using as:

$$\text{Estimated no. of Establishments nationwide} = \frac{\text{Number of Establishments in Punjab}}{54.2\%}$$

Thus,

$$\text{Sludge as a percentage of National GNP} = \left(\frac{\text{Total Sludge Cost for establishments}}{\text{National GNP}} \right) \times 100$$

So, the values have been used for years 2020-21, 2021-22 and 2022-23 respectively, and the results are compiled in table below.

Table 23 Total Cost of Sludge as Percentage of National and Punjab GNP

Year	National GNP (Hotels & Restaurants, Rs. million)	Punjab GNP (Hotels & Restaurants, Rs. million)	Total Hotels & Restaurants in Punjab	Total Sludge Cost in Punjab (Rs. million)	Sludge % of Punjab GNP	Sludge % of National GNP
2020-21	726,385	~ 393,676	23,156	~ 14,856	~ 3.77%	~ 2.04%
2021-22	822,966	~ 445,060	30,459	~ 19,541	~ 4.39%	~ 2.37%
2022-23	1,180,653	~ 639,993	4,987	~ 3,199	~ 0.50%	~ 0.27%

Source: Author's Calculations.

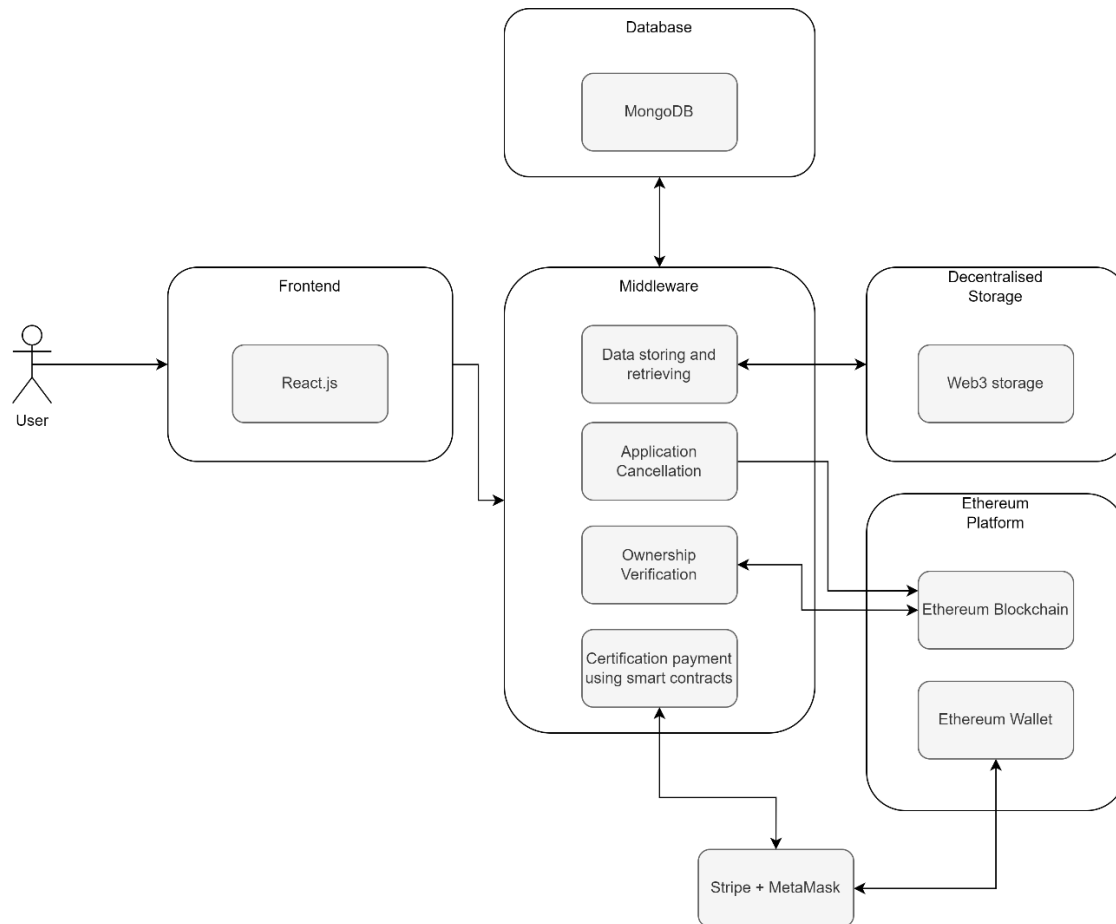
A sharp decline in registered establishments in 2022 (from 30,459 to 4,987) significantly reduced the sludge cost, likely due to stricter criteria or reclassification.

COMPONENT 3: DEVELOPMENT OF SOFTWARE ARCHITECTURE SYSTEM

An easy to understand and easy to navigate front-end has been developed. The design of the user interface will allow the user to effortlessly browse through the website. The interface will provide all necessary steps for the whole procedure and for even the small functionalities of login and sign up. MERN stack will be used to implement the front-end and the backend. Where ReactJS will be used for the front-end whereas ExpressJS and NodeJS will be implemented for the backend. Finally, for the database MongoDB will be used. Ethereum Blockchain will be implemented to ensure data integrity and immutability.

To streamline restaurant business registration, a web application will include key features such as digitized document submission, stored securely on a blockchain/IPFS-based decentralized cloud system for enhanced privacy and immutable records. Business owners can track application status online, reducing physical visits and wait times. Online payments will simplify transactions, eliminating manual cash handling. A user-friendly interface will integrate all departments, enabling a centralized, compliant process flow for licenses, approvals, and NOCs via a one-time digital application. Licenses will be electronically delivered, minimizing paperwork. An anonymous grievance redressal system will protect users' details, while continuous improvement will adapt the system to feedback and regulatory changes.

Figure 36 Software Architecture Overview

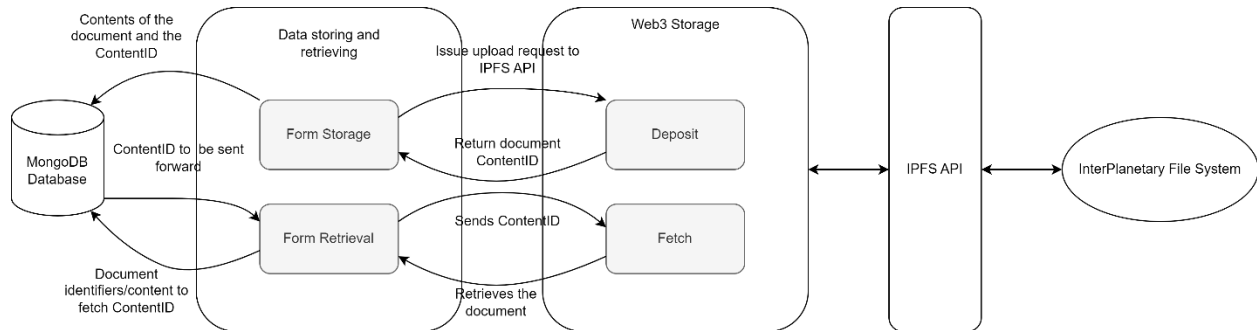


Source: Author's illustration.

System Architecture

The program's main functionalities depend on storing and retrieving form data. To apply this, the system will perform verification and smart contracts using an InterPlanetary File System (IPFS) based decentralized storage. The figure below shows a low-level diagram of how storing and retrieval is performed by the devised system. To summarize the system flow; when data storing and retrieving module is triggered, it will initiate a series of ID calls, and by using those IDs received by both the database and IPFS it will fetch or store the appropriate documents sent by the business owner.

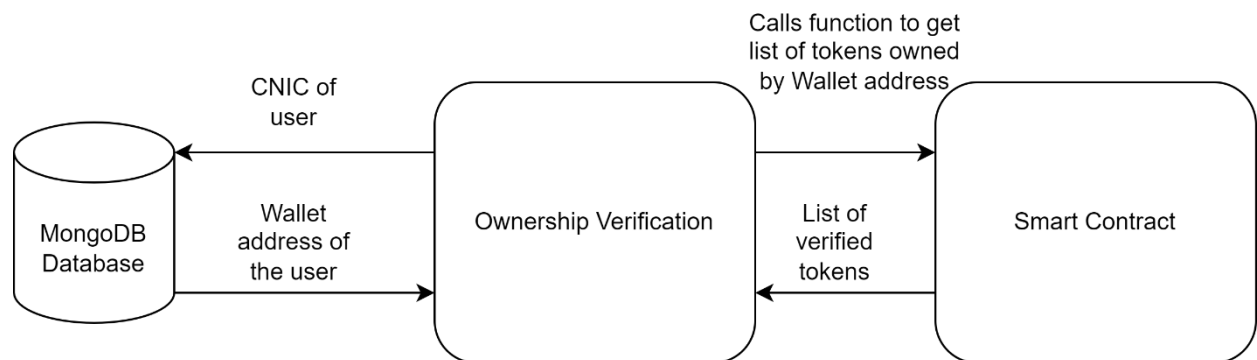
Figure 37 Low-Level Diagram of Storage and Retrieval of Data using IPFS



Source: Author's illustration.

The next module essentially shows the verification of the applicant/business owner. How the system performs it is by creating a wallet for every user and etching the certificates/files in its unique name on the blockchain. This unique wallet ID helps retrieve all the files in the business owner's possession.

Figure 38 Ownership verification



Source: Author's illustration.

Architectural Strategies

Following are the architectural strategies applied for the devised system architecture.

Usage of MERN Stack

MERN stack is a full web development stack of libraries and frameworks that handle everything from the frontend till the database in a single language, JavaScript. The stack comprises of: MongoDB, Express.js, React.js, Node.js.

To briefly explain each framework, MongoDB is a non-relational database that provides support for JSON-like storage. The data fetching speed is faster than SQL servers, so this is preferable. React.js is a component-based front end development library. It is simple to use and implement as it makes use of a virtual DOM to render elements on a browser.

+r. Express.js is what connects the frontend to the database; working together with Node.js to create RESTful APIs in the backend.

The reason we chose to use this instead of any other frameworks or languages is because a full stack can be implemented in a single language. This gets rid of the maintenance complexity and language compatibility issues. Secondly, our application focuses on blockchain and web3 technologies which is also developed in JavaScript. Using a full stack that is developed in the same language helps remove compatibility issues.

Other than the reasons above, we chose MERN over MEAN stack because Angular.js, which is part of the MEAN stack, is a much more extensive framework to work with. MEAN stack was comparatively simpler and easier to maintain.

User Interface

The user interface of this application was designed to be simplistic and easy to learn. This goes in line with our system design, which is following the rule of streamlined and straightforward code and makes the system efficient. The user won't be confused by the interface and will be able to navigate without issue. This is achieved by using React.js and CSS libraries.

External Databases and Persistence

IPFS storage is used in this system architecture. But it inherently has an issue with data persistence. To solve that issue and to effectively communicate with it, we are using Web3.Storage. Along with that, MongoDB is used to keep track of all the ContentIDs generated by IPFS and links them to the appropriate users. This ensures efficiency in file retrieval.

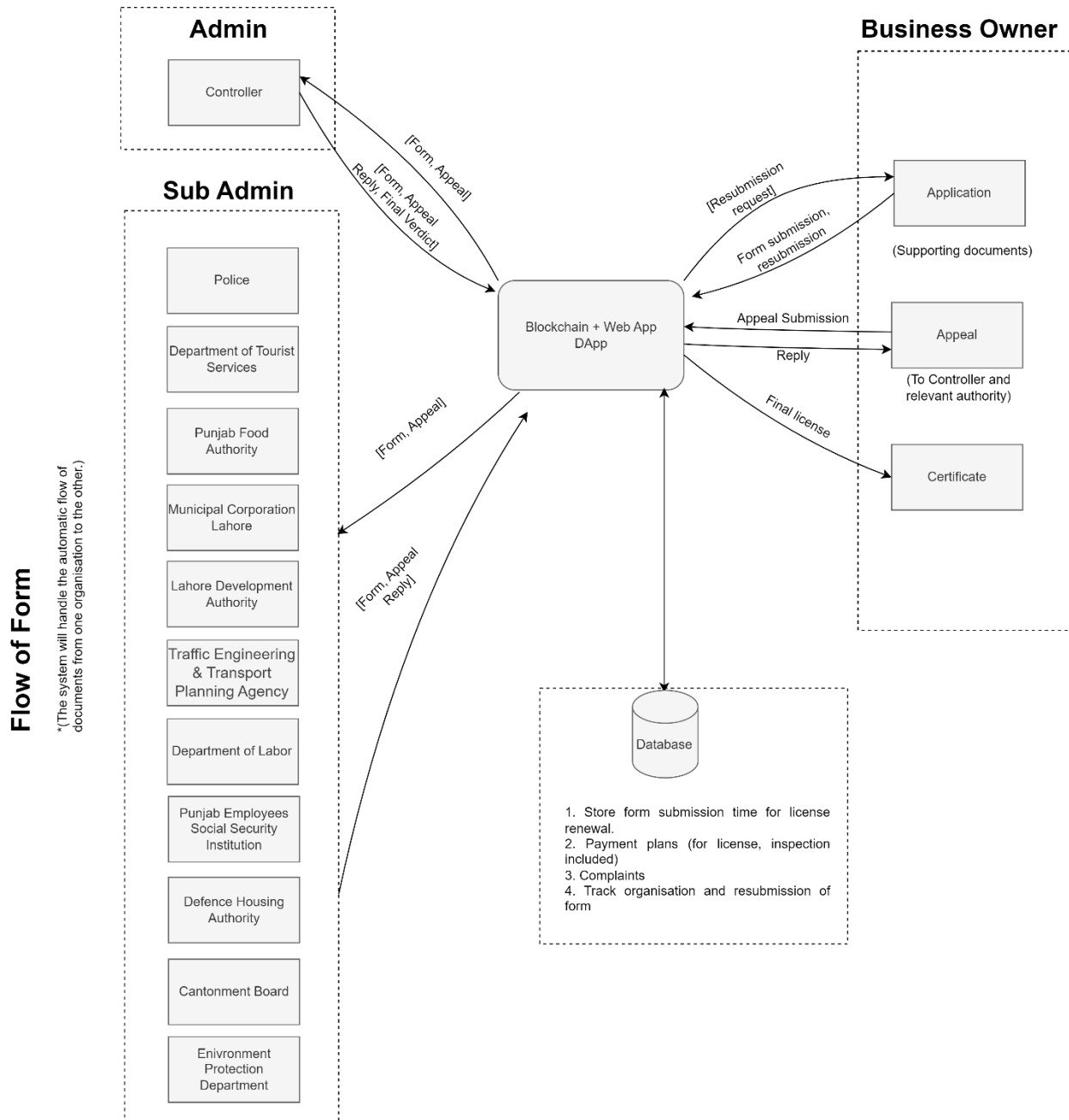
Ethereum Blockchain

Ethereum Blockchain was the earlier developed blockchain which uses ETH (Ethereum) Tokens. It uses Solidity as its language and has 930,000+ smart contracts available. The reason for using this instead of its competitors, Bitcoin and Stacks, is that it flows better with our system architecture and is developed by many developers. Hence, it has less vulnerabilities in its system.

Mapping of the Process Flows

The proposed web-application map aims to revolutionize the registration and licensing process for restaurants and food businesses in Punjab. By leveraging blockchain technology and automation, this platform streamlines the entire process, from initial application to final approval, renewal, and beyond. The system ensures transparency, accountability, and efficiency, benefiting both applicants and regulatory authorities.

Figure 39 Mapping of General Process Flows in the Web-application

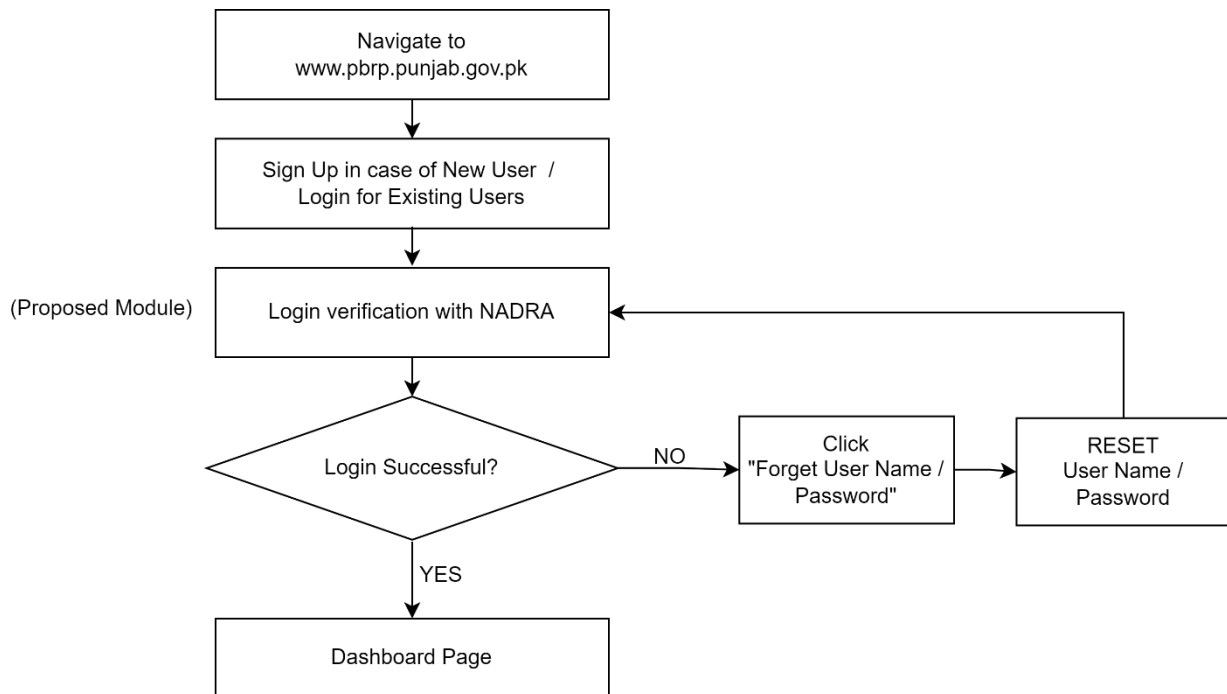


Source: Author's illustration.

The list of Admin/Sub-Admins can be dynamically added or modified, and their separate functioning will be built according to the specific procedures and regulations governing their roles. Additionally, a user-friendly dashboard will be developed for all stakeholders, including users (restaurant owners and operators), designated officers, inspectors, and administrative staff, providing them with easy access to relevant information and functionalities.

The process flow diagram illustrates the digitized and automated system for restaurant business registration, integrating a decentralized web application (DApp) on a blockchain/IPFS platform. The business owner initiates the process by submitting an application with supporting documents. The DApp routes the form through various authorities, facilitating automatic document flow between entities. If an application is rejected, the business owner can submit an appeal, which is processed by the Controller and relevant authorities. Appeals can be replied to or further appealed, ensuring a transparent review process. The system also stores form submission times for license renewals, manages payment plans, handles complaints, and tracks the organization and resubmission of forms, all recorded in a centralized database to ensure accountability and efficiency.

Figure 40 Login Verification and Sign-up Process Flow



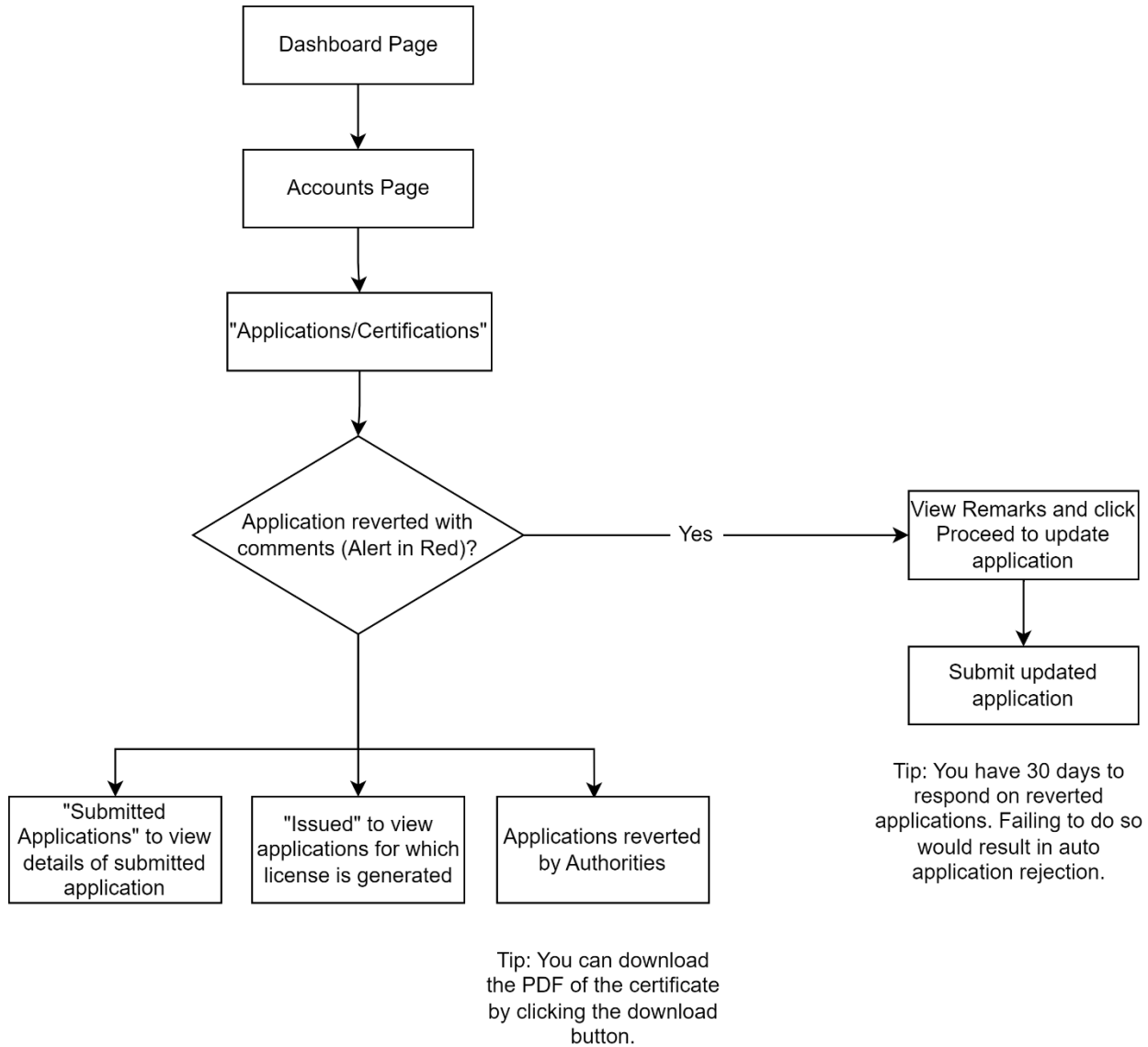
Source: Author's illustration.

In the above flowchart, the process starts with the user navigating to the proposed domain (www.pbrp.punjab.gov.pk)²⁴. New users need to sign up, and all users undergo login verification with NADRA²⁵. If login is unsuccessful, users can reset their username/password. Successful login leads to the dashboard page.

²⁴ A proposed domain name for the Web-Application; Punjab Business Registration Portal (PBRP)

²⁵ Currently this module is not introduced but has been proposed and can be added later on in development

Figure 41 Dashboard Page Process Flow Overview



Source: Author's illustration.

In the above flowchart, from the dashboard, users access the accounts page, then the "Applications/Certifications" section. If an application is reverted with comments (alert in red), users must view remarks, update, and resubmit the application. If not, users can view details of submitted applications, issued licenses, or applications reverted by authorities. Users have 30 days to respond to reverts, with auto rejection if they fail to do so.

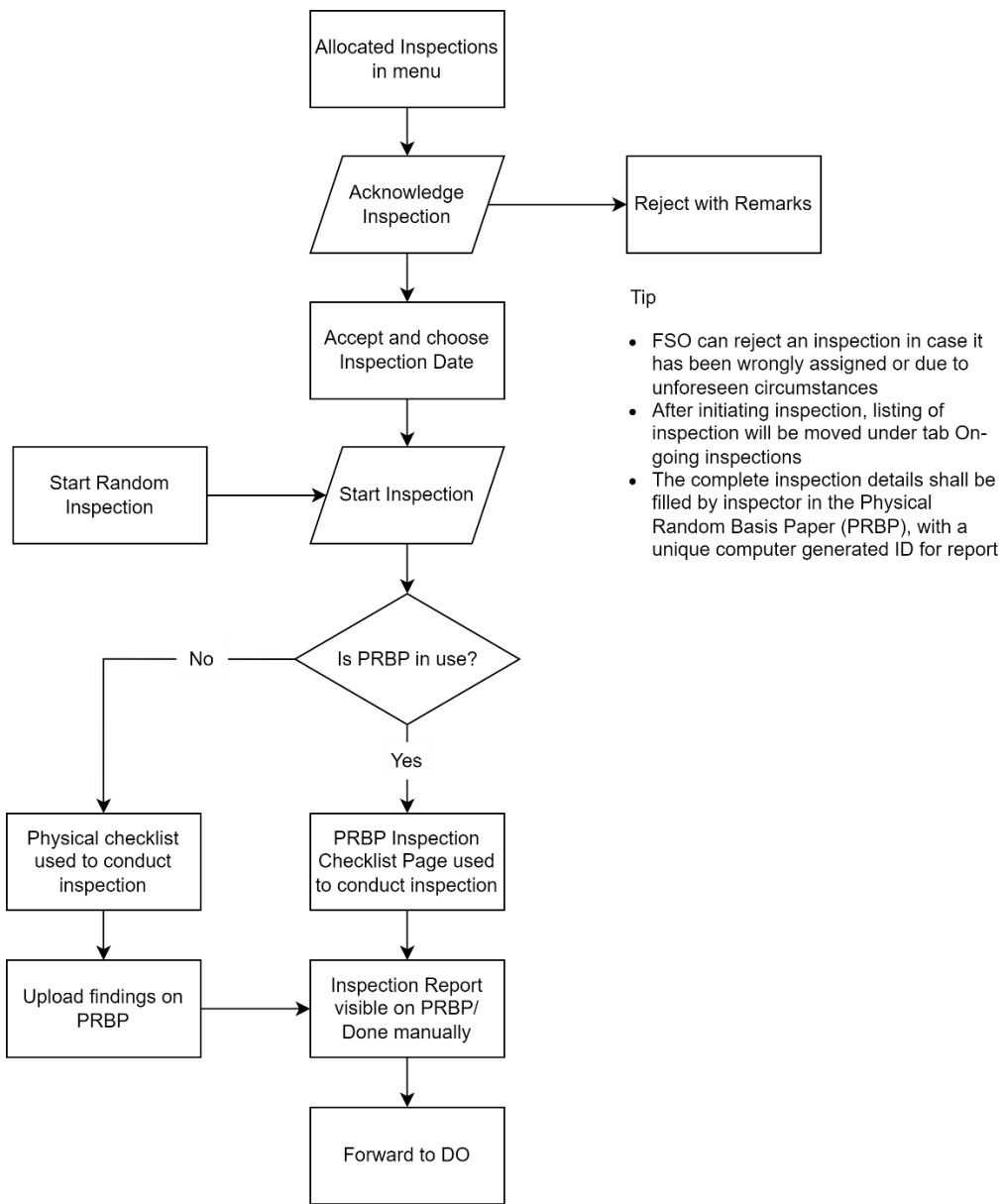
Figure 42 Process Flow for Application Processing by Designated Officers (DO)



Source: Author's illustration.

The process for obtaining a food business license starts with the Food Business Owner (FBO) submitting an application, which the Designated Officer (DO) reviews to verify jurisdiction and fee receipts. After document verification, discrepancies are sent back to the FBO for correction. If inspection is required, a Food Safety Officer (FSO) conducts it, and the DO reviews the report. Unsatisfactory reports lead to re-inspections. The application may be returned for edits or clarifications at any stage. Once all requirements are met, the license is issued, ensuring a thorough review process.

Figure 43 Process Flow for Inspections



Source: Author's illustration.

The food business licensing inspection begins with the Food Safety Officer (FSO) reviewing assigned inspections. The FSO may reject incorrect assignments with remarks or accept and schedule an inspection. Inspections can be random or scheduled, using either the PRBP²⁶ Inspection Checklist Page or a physical checklist if PRBP is unavailable. Findings are uploaded to the PRBP system, and the completed report is sent to the Designated Officer (DO) for further action, transitioning the process from physical to virtual (Grimmelmann, 2004; Wingreen et al., 2019).

²⁶ The Physical Random Basis Paper (PRBP) system ensures fair and thorough inspections using a predefined checklist. Inspectors follow this standard procedure, digitally or on paper, for consistency and transparency, maintaining a structured and unbiased approach.

Current Progress in Development

In the initial development, we were able to construct some major functionalities like Login and Sign up, application submission, cancellation and storage. The overall frontend was developed in React JS, with added libraries for styling and error handling. The user interface is focused on and kept simple. MongoDB is maintained for login, sign up and contact us.

- 1) **Submit Application:** Submission of application was implemented in React Js. and the design was jotted down in Figma. The submission form will have all required details needed from relevant authorities. Additionally, other frameworks like Ant Design were used for input validation and related functionalities.
- 2) **Cancel Application:** In this component, the user will be able to see their previous and ongoing applications and have the opportunity to cancel any one of them. The prototype was implemented in React JS, and the design was initiated in Figma. The user will carry out the action by clicking on the button provided for cancelling and upon click, an onClick function will be implemented to delete the particular application.
- 3) **Login/Sign up:** For both the Login and Signup, the frontend was developed in React Js. The design was implemented in Figma. When the user presses the login button after filling the form, relevant API call will be sent to match credentials. Similarly, for the signup module the relevant API call for signup will be initiated. Additionally, the forms for Login and Signup were created with the help of a special React library: Ant design. This made the form validation a lot easier as it checked if the format being entered by the user was correct and if all the inputs were being provided.
- 4) **SubAdmin Creation:** To handle the acceptance or rejection of the incoming forms, admins will be able to create SubAdmins to handle the work. The front end will present an option which will redirect them to a sign-up page. This page will take SubAdmin credentials and allow this new user to handle forms in their organisation.
- 5) **Delete SubAdmin:** Only Admin can do this action. Like if the subadmin is no longer working with organisation then admin can delete it from database. This is handled from frontend this action is one click away. Admin will select the delete option from the action dropdown and confirms the deletion the subadmin will be removed from the database.
- 6) **Manage SubAdmins:** Admin can see the list of all the subadmins that are currently working. Admin is also authorized to perform this action. Admin can update the account details of the subadmins in case the information given earlier was not correct.
- 7) **Accept/Reject Application:** On the admin dashboard, the admin will be able to view any submitted application with the pending status, and accept or reject accordingly. Upon acceptance, the system will allow only the next organisation to make changes. On rejection, the admin will be prompted to give a reason of rejection, the system will mark the application as cancelled.
- 8) **Track Application:** The business owner will have the facility to track their application and its current status. They will be able to view which authority has accepted their application and in case an authority has rejected the application they will be notified with reasoning.

- 9) Role based access: Middleware is applied for security. On the basis of the roles access to the portal will be given. There will be a division of Admin, Sub-Admin and Regular User and they all will have different portals and functionality on the site. Regular User will be the restaurant owner and sub-admins will be all the related authorities in the case. The Admin will be responsible for managing the sub-admins.

DISCUSSIONS AND POLICY RECOMMENDATIONS

The findings and discussions are categorized based on the components of the study as follows.

Modernizing the Pakistan Hotel and Restaurants Act, 1976 and Associated Rules

Reviewing the current Act i.e. Pakistan Hotel and Restaurants Act, 1976 (Act LXXXI of 1976) and rules (Pakistan Hotel and Restaurant Rules, 1977) made thereunder for restaurants and hotels registration reveals an urgent need for modernization. The existing rules are outdated, requiring immediate amendment to facilitate the digitization and automation of registration procedures. The current rules predominantly favor physical submissions of forms, manual downloading and submission for review, and manual challan forms for fee submission following directions from the authorities. Additionally, there is a notable absence of delegated power to provincial governments for registering hotels and restaurants, highlighting the need for a more decentralized approach.

Being a provincial subject and for proper working, it is recommended that the following amendments needs to be made in the Pakistan Hotel and Restaurants Act, 1976 and associated rules as proposed thereunder, namely:

1. The words 'Federal Government' wherever occurring in the Act needs to be substituted with the words Provincial Government for proper and smooth functioning and within its constitutional mandate;
2. Appointing authority for the Controller, Deputy Controller and other authorities shall be the provincial authority;
3. Rules making powers must be entrusted to the provincial government so that proper implementation can be made in order to achieve the purpose of the Act within the Province. Though Federal Government is empowered to delegate its power to the Provincial Government but the rule making power that is entrusted to the Federal Government cannot be delegated as same is the specific power;
4. Sealing power must also be provided to the provincial authorities under the Act of 1976, as the same power is in substantive in nature;
5. In addition to the rules of 1977 there must be regulation making power which shall be entrusted to the authority that is the creation of the Act;
6. Consequential amendments²⁷ pertaining to the aforesaid amendments shall also be proposed in the Act of 1976.

To address the complexities of varying provincial regulations, it is proposed that the Federation consider amending the Act of 1976 to apply uniformly across Pakistan. This can be achieved by engaging provincial governments for consensus and passing resolutions through their assemblies, creating a standardized framework that streamlines processes nationwide. A unified approach would

²⁷ Consequential amendments are necessary to accommodate the proposed main changes in the law. These include provisions for conducting registration, licensing, and related processes online, ensuring the security and privacy of data submitted through the platform, recognizing electronic records as valid for registration and licensing purposes, and allowing for the integration of the online platform with existing government systems and databases to facilitate seamless data sharing and processing.

enhance public convenience by reducing regulatory complexity, financial burdens, and bureaucratic hurdles, while providing a transparent, cost-effective, and accessible one-window solution.

If consensus is not achieved, Parliament should enact new legislation to establish a centralized mechanism for procedural simplification. This would underscore the government’s commitment to efficiency, inclusivity, and public trust. Key benefits include consistent regulations across provinces, reduced costs, improved efficiency, simplified access, and economic growth through clarity and reduced uncertainty. By implementing either strategy, the government can foster a citizen-centric administrative framework, enhance public satisfaction, and promote national cohesion through governance uniformity.

Integration of Various Departments Registration and Licensing Process

Here's a comprehensive table that outlines the integration and functioning of the various regulatory authorities and departments involved in the registration and regulation of restaurants in Punjab, Pakistan, with a focus on digitization, automation, and integration. These functionalities are based on the regulatory review conducted in the study.

Table 24 Integration of Key Players in Web-Application Portal and Proposed Functioning

Player(s)	Current Functioning	Proposed Digitized Functioning	Integration in Web-Application Portal
Federal Government	Appoints Controllers for hotel and restaurant registration.	Delegates appointment authority to Provincial Governments.	Federal Government sets overarching guidelines, with provincial-specific adaptations made through the portal.
Provincial Government	Limited delegated powers for regulation.	Full authority to appoint Controllers, Deputy Controllers, and other authorities.	Uses the web-application for monitoring and reporting.
Controller (DTS)	Inspects premises and processes physical applications for registration and licensing.	Conducts virtual inspections and processes online applications.	Reviews and approves applications submitted through the web portal.
Deputy Controller (DTS) Operations	Handles appeals and additional inspections.	Manages appeals and inspections through the web-application.	Tracks appeals and inspections digitally, ensuring transparency and timely resolutions.
Punjab Food Authority (PFA)	Regulates food safety, conducts physical inspections, and processes manual applications for CPR.	Implements online application submission, digital CPR issuance, and virtual inspections.	Integrates food safety compliance checks into the web-application, enabling synchronized reviews and automated feedback.
Food Safety Officers	Conducts physical inspections and enforces food safety standards.	Conducts virtual inspections, logs compliance digitally, and issues improvement notices through the web-application.	Accesses digital logs and reports through the web-application, ensuring up-to-date compliance records and efficient enforcement actions.

Public Analysts	Analyzes food samples and provides manual reports to the PFA.	Conducts digital analysis and uploads reports directly to the web-application.	Results are directly integrated into the web-application, ensuring timely updates and actions based on analysis.
Metropolitan / Municipal Authorities	Manages local compliance, physical inspections, and fee collection for various permits and licenses.	Uses the web-application for fee collection, virtual inspections, and compliance tracking.	Coordinates with other authorities via the web-application for streamlined licensing and compliance processes.
Environmental Protection Authority (EPA)	Processes physical applications for Initial Environmental Examination (IEE) and issues NOCs for environmental compliance.	Implements online submission of IEE applications and digital issuance of NOCs.	IEE applications, inspections, and NOC approvals are handled digitally, with tracking and notifications via the portal.
Traffic Engineering and Planning Agency (TEPA)	Reviews applications for parking agreements and traffic impact, ensuring compliance with zoning and parking requirements.	Manages parking agreements and traffic compliance checks digitally.	Parking agreements and approvals for traffic impact assessments are processed and tracked via the web-application portal.
Labour and Human Resource Department	Conducts physical inspections and ensures compliance with labor laws, including employee registration, wage enforcement, and workplace safety.	Digitizes employee registration, wage compliance checks, and workplace safety audits.	Enables restaurant owners to register workers, track inspections, and resolve disputes through a unified platform.
Labour Inspectors	Conduct physical inspections to ensure compliance with labor laws, including minimum wage and safety standards.	Logs inspection reports and findings digitally, with automated reminders for non-compliance resolution.	Inspection outcomes and recommendations are integrated into the portal, visible to both authorities and restaurant owners.
Building Control Authority (DHA/LDA)	Reviews physical applications for building plans, commercialization approvals, and completion certificates.	Implements a system for digital submission and approval of building plans and completion certificates.	Enables submission and tracking of building plans, zoning compliance, and structural approvals within the web-application.
District Public Safety Commission (DPC)	Handles complaints against police misconduct and ensures law enforcement support aligns with legal boundaries.	Digitizes complaint submissions, follow-ups, and resolutions related to law enforcement actions.	Allows restaurants to raise complaints or seek assistance through the portal, integrating police support into the workflow.
Water and Sanitation Agency (WASA)	Reviews physical applications and conducts inspections for water connections, sewerage setups, and compliance with sanitation standards.	Manages online applications for water/sewerage connections and monitors sanitation compliance digitally.	Allows restaurant owners to request connections and track sanitation compliance directly through the portal.

<i>Punjab Employees Social Security Institution (PESSI)</i>	Processes manual registrations and compliance checks related to social security coverage for employees.	Digitizes employee registrations for social security and monitors compliance through automated updates.	Restaurant owners can register employees for social security and track status through the portal.
<i>Civil Defence Department</i>	Conducts physical inspections to ensure fire safety and emergency preparedness in commercial establishments.	Digitizes fire safety certifications and compliance checks, integrating inspection results into a centralized system.	Fire safety inspections and certifications are seamlessly linked with other compliance data on the portal.
<i>Police Department</i>	Conducts background checks and physical verification of premises.	Provides digital police clearance certificates and conducts online verifications through the web-application.	Uploads verification results directly into the web-application, reducing delays and physical interactions.
<i>Food Business Operators (FBOs)</i>	Submits physical applications, follows up manually, and visits multiple offices for licenses.	Submits a one-time online application, tracks status, and receives digital licenses and certificates.	Uses the web-application to submit applications, upload documents, track progress, and receive digital feedback and approvals from all relevant authorities.
<i>Joint Secretary, Tourism Division, Islamabad</i>	Handles appeals and revisions for hotel and restaurant registrations.	Manages appeals and revisions digitally through the web-application.	Tracks and updates appeal statuses and revisions digitally, ensuring transparency and timely resolutions.
<i>Hotels and Restaurants Committee</i>	Advises on classification, fair rates, and other regulatory matters.	Provides digital advice and recommendations through the web-application.	Committee decisions and recommendations are logged and accessible through the web-application, enabling centralized and transparent advisory processes.

Source: Author's analysis based on regulatory review.

Integrated Digital Inspection System for Food Business Regulation

The proposed Integrated Digital Inspection System, outlined in Annexure III, streamlines restaurant inspections through a centralized, online platform conducting randomized checks. By unifying processes across regulatory bodies, it enhances transparency, accountability, and grievance redressal while reducing inspection costs and duplication. Shared access to inspection reports for businesses and authorities ensures timely issue resolution and consistent standards, promoting compliance and operational efficiency. This system fosters a business-friendly environment while maintaining food safety and public health standards.

Streamlining Employee Medical Fitness Certification through Digital Integration

It is recommended that the process of medical fitness certification for food business employees be streamlined by requiring a one-time submission of the Certificate of Medical Fitness, as per the template provided in ANNEXURE III, alongside the CNIC details of employees through the web

application. The portal should facilitate verification of these certificates electronically, ensuring compliance with health and safety standards while minimizing repetitive documentation. This approach would enhance operational efficiency, reduce administrative burdens, and ensure transparency in the certification process, aligning with modernized registration and licensing procedures.

Enhancing Compliance through Integration of Commercialization Completion Certificate

The inclusion of the Commercialization Completion Certificate feature in the web portal provides a dual advantage of facilitating compliance and simplifying administrative procedures for food business owners. By allowing owners to upload an existing certificate or complete additional documentation to obtain it directly through the portal, this feature ensures streamlined processing and reduces delays associated with physical submissions. As the certificate is issued by the Lahore Development Authority (LDA), integrating this process into the portal fosters transparency, eliminates redundant bureaucracy, and ensures that businesses comply with zoning and commercialization regulations.

CONCLUSION

This study identifies significant regulatory challenges faced by restaurant owners in Lahore, including high costs, excessive paperwork, frequent demands for bribes, and lengthy waiting periods. On average, the total cost for registrations, licenses, and approvals was approximately Rs. 641,562 per restaurant, while the sludge constitutes approximately 9.46% of the total cost of setting up a restaurant in Lahore. This burden disproportionately affects small and medium-sized enterprises (SMEs), limiting their ability to invest in business growth. Moreover, the sludge cost as a percentage of the hotel and restaurant sector's GNP in Punjab has been estimated as 3.77% in 2020, 4.39% in 2021, and significantly dropping to 0.50% in 2022. This decline in 2022 correlates with a drastic reduction in the number of registered restaurants, attributed to a change in the registration methodology by the government, impacting sludge burden estimates. The study highlights the systemic corruption within the regulatory framework, with numerous visits to various departments and substantial travel costs, as the actual payment the owners have been paying are substantially higher than the notified charges as highlighted in the regulatory review.

To address these challenges, the study proposes a digitized and automated system to streamline registration and license acquisition processes from various regulatory authorities. This user-friendly web application aims to reduce paperwork, waiting times, and physical visits by integrating relevant departments' functions, enabling online status checks, license acquisition, payment processing, and grievance redressal.

The proposed solution has substantial public policy implications, supporting government initiatives on digital transformation, enhancing transparency, and potentially improving Pakistan's ease-of-doing-business ranking. By creating a more business-friendly environment, the proposed system can significantly reduce bureaucratic inefficiencies and promote integrity in public services.

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ANNEXURE I

Table 25 Summary of the Costs and Visits by Restaurant Owners in Response to Relevant Selected Department Intervention and Involvement

	Obs.	Min. value	Max. value	Mean	Std. Deviation
Actual Time taken by department in issuing certificate/license (number of days)					
(DTS)	105	1	1520	133	280
(PFA)	229	1	365	35	52
(MCL)	51	3	210	30	38
(LDA)	45	1	180	57	47
(DMA)	16	2	90	17	24
(Labor Dept.)	149	0	362	31	51
(PESSI)	116	3	180	23	34
(EPA)	6	4	15	9	5
(Police)	52	1	30	7	6
(DHA & Cantt.)	22	10	90	36	25
(Others)	4	30	365	121	163
Total number of visits at department for registration processes					
(DTS)	60	1	30	4	5
(PFA)	29	1	12	3	3
(MCL)	117	1	33	4	5
(LDA)	36	1	15	6	3
(DMA)	9	1	5	2	2
(Labor Dept.)	78	1	14	3	2
(PESSI)	39	1	13	3	3
(EPA)	4	2	4	3	1
(Police)	33	1	5	2	1
(DHA & Cantt.)	19	1	15	4	3
(Others)	4	2	30	12	13
Travel cost per visit (Rs)					
(DTS)	53	300	20000	1864	3243
(PFA)	25	500	5000	2348	1446
(MCL)	112	300	30000	2789	3538
(LDA)	35	400	30000	4363	5093
(DMA)	8	1000	7000	3750	1909
(Labor Dept.)	64	300	20000	4334	4347
(PESSI)	29	11	12000	2404	2778
(EPA)	3	500	1000	733	252
(Police)	30	200	5000	1148	1092
(DHA & Cantt.)	20	500	10000	2750	2185
(Others)	4	1000	12000	4500	5066
Obtaining Approvals/Licenses/NOC/Challan/Penalty cost (Rs)					
(DTS)	106	60	400000	27180	39515
(PFA)	225	50	150000	27907	19839
(MCL)	55	2000	100000	16673	16176
(LDA)	47	3800	500000	80336	92606
(DMA)	16	2575	30000	16348	8530
(Labor Dept.)	149	2000	100000	25195	19894

(PESSI)	118	1000	400000	43605	52715
(EPA)	1	4000	4000	4000	.
(Police)	28	400	50000	14496	16266
(DHA & Cantt.)	22	14000	100000	31386	19980
(Others)	6	1000	150000	50167	52251
Other costs (including any hidden costs like bribes or miscellaneous expenses) (Rs)					
(DTS)	15	3000	30000	10667	7916
(MCL)	49	1000	60000	7396	10280
(PFA)	23	10000	150000	50000	34345
(LDA)	34	2000	500000	39088	90332
(DMA)	2	5000	20000	12500	10607
(Labor Dept.)	58	2000	150000	21293	26582
(PESSI)	18	2000	200000	25944	44781
(EPA)	8	4000	80000	25500	24991
(Police) – monthly	100	2000	100000	15970	18659
(DHA & Cantt.)	12	20000	80000	40000	18091
(Others)	8	2000	50000	22625	16044

Source: Author's Calculations.

Table 26 Summary of Total Estimated Costs Incurred across Various Departments

		Estimated total cost incurred in registrations/licenses/approvals of your business from all relevant departments (Rs.)	Estimated total fees paid to consultants or agents. (who hired consultants for business registration) (Rs.)	Other associated total costs to obtain certificates/licenses (Rs.)
Obs.	Valid	234	94	82
	Missing	11	151	163
Mean		309453	89606	149659
Mode		200000	100000	150000
Std. Deviation		467141.979	147294.031	185483.167
Minimum		10000	0	0
Maximum		4000000	1000000	1000000

Source: Author's Calculations.

Table 27 Summary of Estimated Total Costs Incurred across Various Departments by Zones²⁸

Location	Variable	Obs	Mean	Std. Dev.	Min	Max
MM Alam Road	Q5_2	29	277069	183553.8	10000	650000
	Q5_4	19	62631.58	33180	10000	120000
	Q5_5	26	223269.2	204092.8	10000	800000
Main Boulevard	Q5_2	11	379545.5	173500.1	175000	700000
	Q5_4	6	75000	46690.47	20000	150000
	Q5_5	1	10000	.	10000	10000
DHA Phase 1	Q5_2	12	123333.3	91981.55	10000	300000
	Q5_4	6	37500	10839.74	25000	50000
	Q5_5	12	105833.3	50714.59	30000	200000
Johar Town	Q5_2	27	249314.8	382208.7	12000	2000000

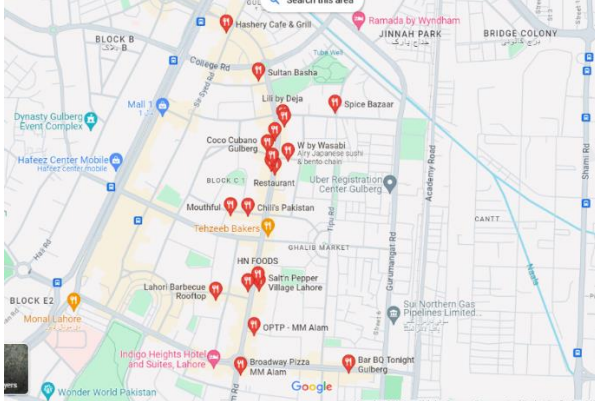
²⁸ Q_5_2 is Estimated total cost incurred in registrations/licences/approvals of your business from all relevant departments, till date (Rs.) Q_5_4 is What were the estimated total fees paid to consultants or agents? (if applicable) Q_5_5 is Other associated total costs to obtain certificates/licenses (e.g., bribes, miscellaneous expenses) (Rs.)

	Q5_4	9	155444.4	318573.8	0	1000000
	Q5_5	4	92500	80570.88	10000	200000
Model Town	Q5_2	6	850000	898331.8	100000	2000000
	Q5_4	4	137500	47871.36	100000	200000
	Q5_5	5	48000	13038.4	30000	60000
Cantonment Board	Q5_2	13	273076.9	97072.53	150000	500000
	Q5_4	5	42600	19204.17	18000	70000
	Q5_5	2	127500	102530.5	55000	200000
Jail Road, Shadman	Q5_2	9	801111.1	1240468	60000	4000000
	Q5_4	7	80000	43969.69	10000	150000
	Q5_5	7	183571.4	211161.8	0	500000
Iqbal Town	Q5_2	13	719230.8	847077.9	20000	2500000
	Q5_4	9	73888.89	55552.78	20000	200000
	Q5_5	6	49666.67	29540.93	8000	100000
Mall Road	Q5_2	10	131500	120923.5	20000	300000
	Q5_4	0				
	Q5_5	3	13666.67	7094.599	6000	20000
Anarkali Old	Q5_2	10	356000	596083.5	20000	2000000
	Q5_4	4	16500	12871.16	6000	35000
	Q5_5	5	68600	74965.33	3000	150000
Wahdat Road	Q5_2	11	132272.7	131783.2	25000	500000
	Q5_4	0				
	Q5_5	0				
Lahore Fort	Q5_2	8	250000	53452.25	200000	300000
	Q5_4	7	52142.86	9940.298	40000	70000
	Q5_5	0				
DHA Phase 3	Q5_2	13	326230.8	211765.7	41000	700000
	Q5_4	5	170000	119163.8	70000	300000
	Q5_5	1	300000	.	300000	300000
Bahria Town	Q5_2	13	594615.4	695792.3	30000	2000000
	Q5_4	9	194444.4	316587.7	20000	1000000
	Q5_5	6	166666.7	193459.7	20000	500000
Shalamar Link Road	Q5_2	8	287500	102643.6	200000	500000
	Q5_4	3	45000	22912.88	25000	70000
	Q5_5	0				
Samnabad	Q5_2	14	70714.29	42555.72	20000	150000
	Q5_4	0				
	Q5_5	2	512500	689429.1	25000	1000000
Township	Q5_2	9	146666.7	113605.7	40000	400000
	Q5_4	0				
	Q5_5	1	20000	.	20000	20000
Mozang	Q5_2	7	143571.4	175088.4	25000	500000
	Q5_4	1	5000	.	5000	5000
	Q5_5	1	10000	.	10000	10000
Wapda Town	Q5_2	11	78590.91	82199.32	18000	309300
	Q5_4	0				
	Q5_5	0				

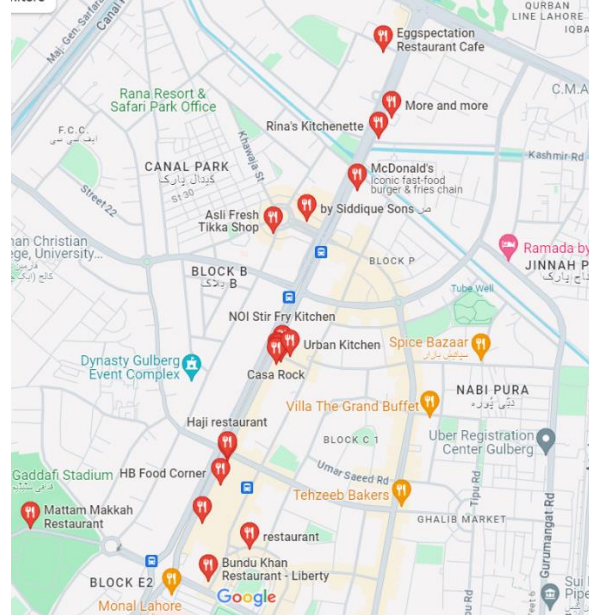
Source: Author's Calculations.

ANNEXURE II

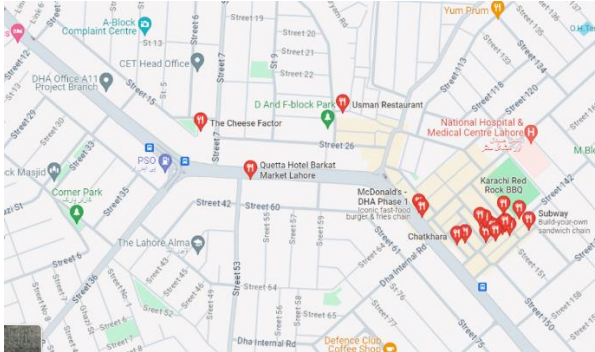
ZONE 1: MM Alam Road, Gulberg III



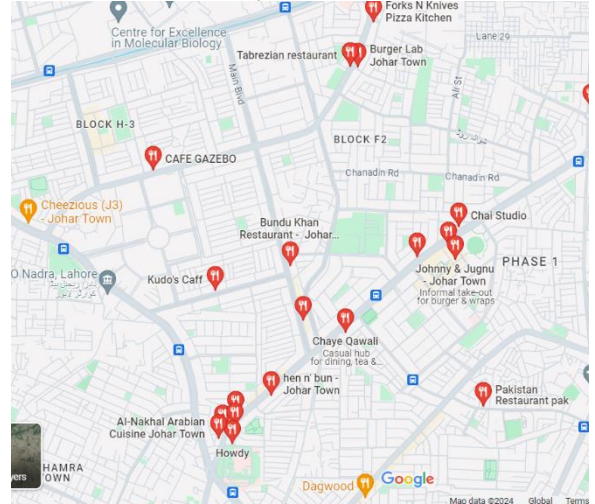
ZONE 2: Main Boulevard, Gulberg



ZONE 3: DHA Phase 1

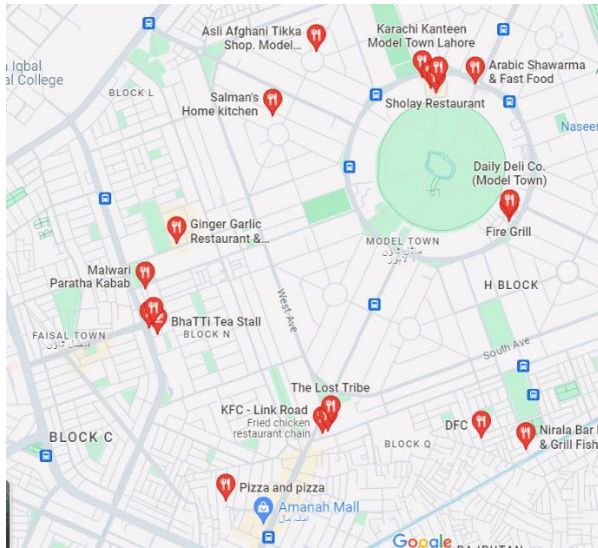


ZONE 4: JOHAR TOWN

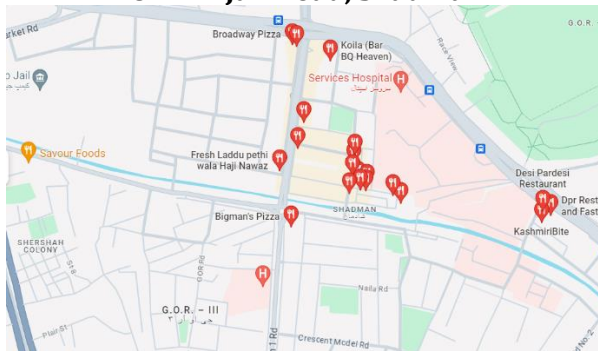


ZONE 5: Model Town

ZONE 6: Cantonment Board



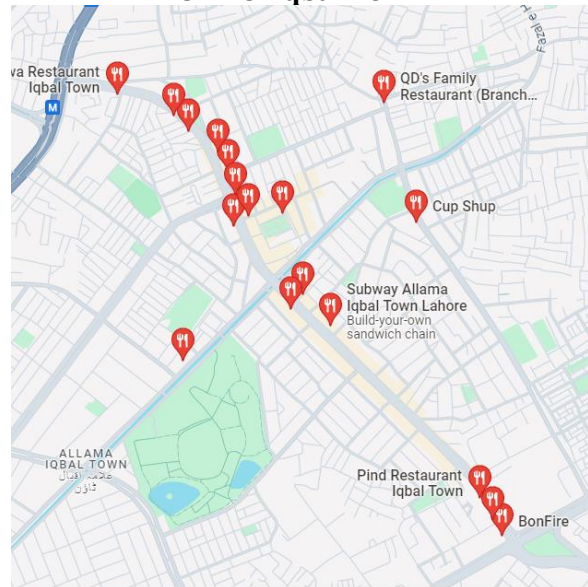
ZONE 7: Jail Road, Shadman



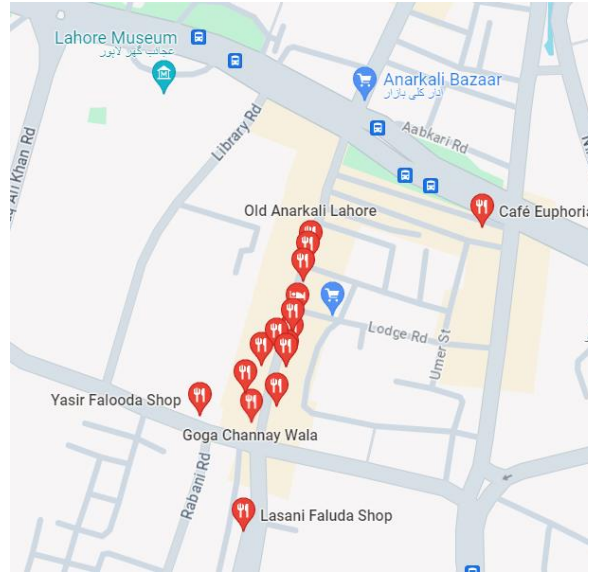
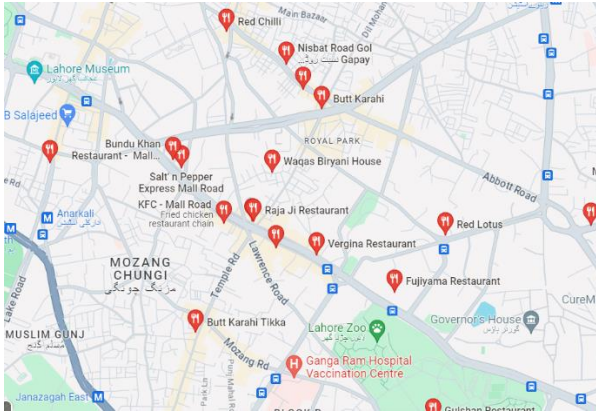
ZONE 9: Mall Road



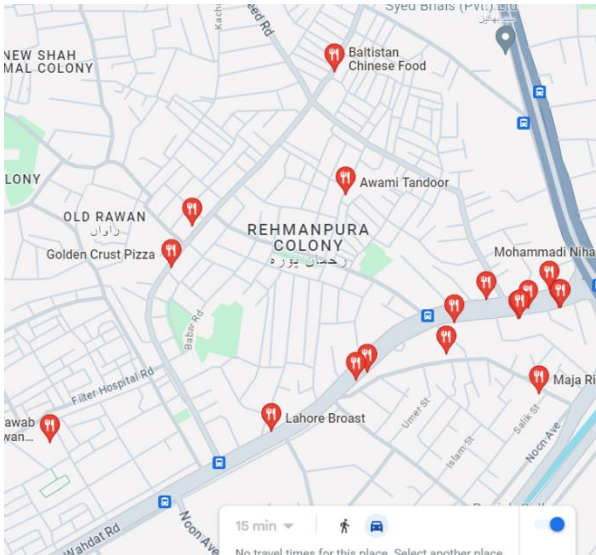
ZONE 8: Iqbal Town



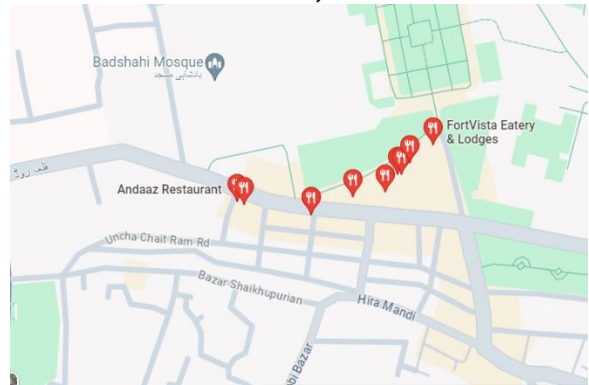
ZONE 10: Anarkali, Old Food Street



Zone 11: Wahdat Road

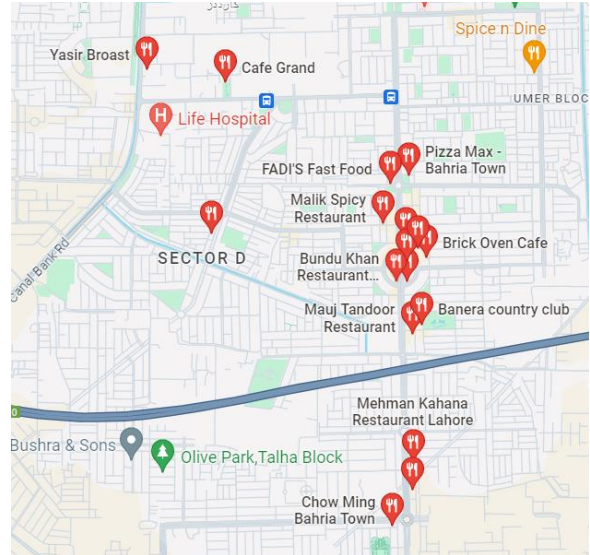
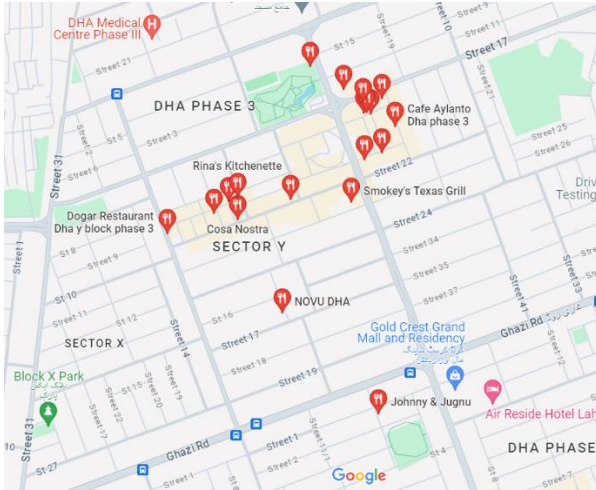


Zone 12: Lahore Fort, New Food Street

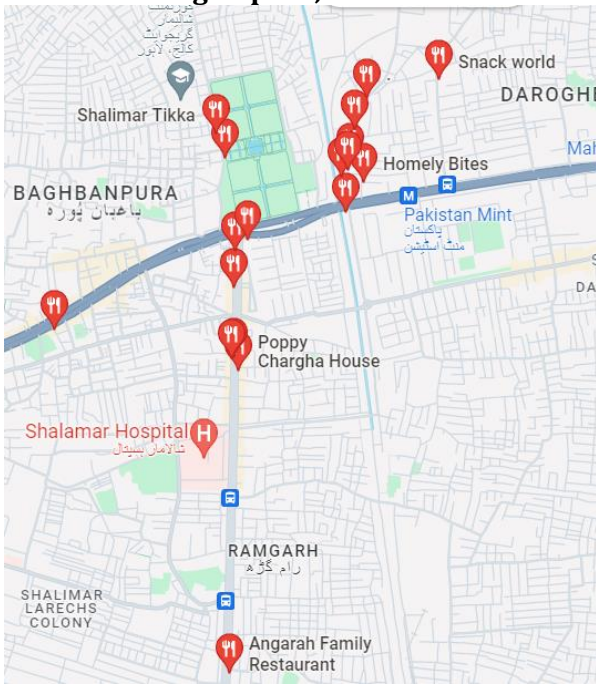


Zone 13: DHA Phase 3

ZONE 14: Bahria Town

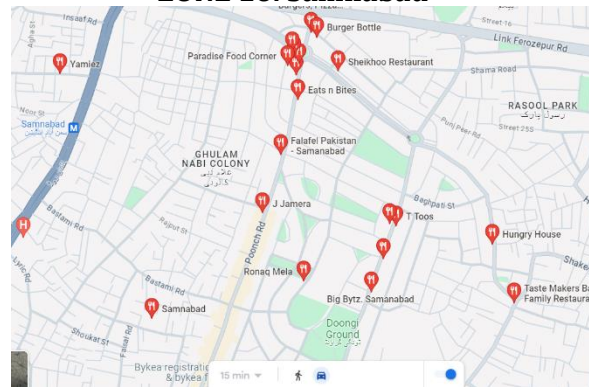


ZONE 15: Shalamar Link Road, Mughalpura, GT Road

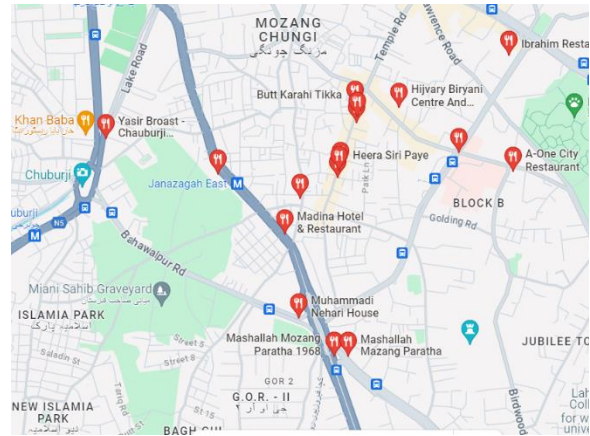
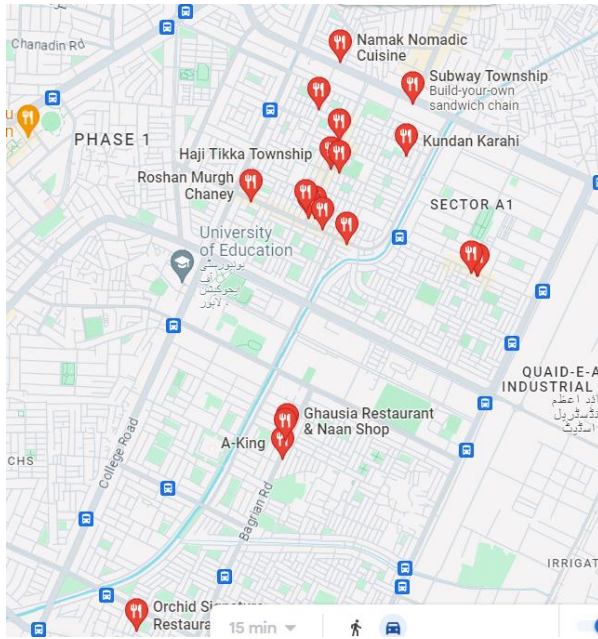


ZONE 17: Township

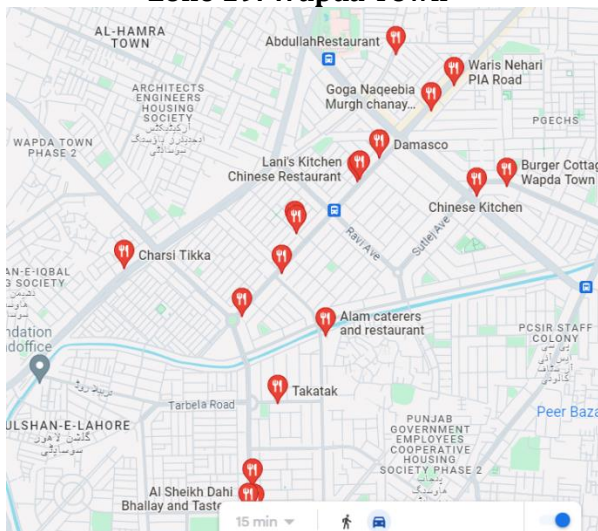
ZONE 16: Samnabad



ZONE 18: Mozang



Zone 19: Wapda Town



Digitization and Automation of Administrative Procedures; Building Solution to Address Sludge in Setting-up Restaurant Businesses

Dear Restaurant Owner,

We appreciate your willingness to participate in this survey. The purpose of this questionnaire is to gather information about the registration procedures and associated costs involved in registering a restaurant business in Lahore. Your responses will help us understand the challenges faced by restaurant owners in the registration process and identify areas for improvement. Your participation is voluntary, and all responses will be kept confidential. Thank you for your time and valuable input.

QUESTIONNAIRE		
Question	Code	Response Options
1. General Information of Restaurant		

Name of the Restaurant	Q1_1	
Location (Specified area) in Lahore	Q1_2	<ol style="list-style-type: none"> 1. MM Alam Road, Gulberg III 2. Main Boulevard, Gulberg 3. DHA Phase 1 4. Johar Town 5. Model Town 6. Cantonment Board 7. Jail Road, Shadman 8. Iqbal Town 9. Mall Road 10. Anarkali Old Food Street 11. Wahdat Road 12. Lahore Fort, New Food Street 13. DHA Phase 3 14. Bahria Town 15. Shalamar Link Road, Mughalpura, GT Road 16. Samnabad 17. Township 18. Mozang 19. Wapda Town
Type of Restaurant	Q1_3	<ol style="list-style-type: none"> 1. Burger & Shawarma Points 2. Dhaba 3. Food Carts 4. Food Points 5. Food Trucks 6. Home Kitchens (Commercial) 7. Juice Corners 8. Local Fast-Food Restaurants 9. Local Restaurants 10. Multinational Chains Fast Food 11. Multinational Chains Restaurants 12. National Chains Fast Food 13. National Chains Restaurants 14. Others
Number of Years in Operation?	Q1_4	
Number of employees in your restaurant?	Q1_5	
Have you owned or managed a business before this restaurant?	Q1_6	<p>1 = YES 2 = NO</p>
If yes, please specify the type of business.	Q1_7	
2. Demographic Details of Owner		
Name of the owner (optional)	Q2_1	

Age	Q2_2	
Gender	Q2_3	1 = Male 2 = Female 3 = Prefer not to say
Highest Level of Education	Q2_4	1 = No formal education 2 = Primary education 3 = Secondary education 4 = Higher Secondary education 5 = Bachelor's degree 6 = Master's degree 7 = Doctorate 8 = Other (please specify):
3. Challenges and Hurdles in Registration Process		
What were the major challenges or hurdles you faced during the registration process?	Q3_1	
Did you face any delays in obtaining approvals or licenses?	Q3_2	1. YES 2. NO 3. Unclear
If yes in Q3_2, what was the approximate overall duration of these delays (in days)?	Q3_3	
How would you describe the overall process of registering your restaurant in Lahore?	Q3_4	1. Very easy 2. Easy 3. Neutral 4. Difficult 5. Very difficult
Which of the following sources did you primarily rely on for information about the business registration process?	Q3_5	1= Government websites (e.g., SECP, PFA) 2 = Legal advisors or consultants 3 = Business associations or chambers of commerce 4 = Online forums or social media groups 5 = Friends or family who own businesses 6 = Workshops or seminars 7 = Online courses or webinars 8 = Other (please specify): ____ (Text input)
Did you hire a legal advisor or consultant to help with the registration process?	Q3_6	1 = YES 2 = NO
Have you ever approached a strong reference (e.g., influential contact, government official) for assistance with your business registration?	Q3_7	1 = YES 2 = NO
If yes in Q3_7, what was the reason for approaching this reference?	Q3_8	
4. Registration Procedures across Departments/Authorities		

Which departments or authorities in Lahore, under the Government of Punjab, were involved in the registration process of your restaurant?

(For each department selected, please specify the following: **Time taken** (Days), **Number of visits**, **Total Cost incurred** (Traveling, Documentation, and Fee in Rs), **Obtaining approvals/licenses** (including any hidden costs like bribes or miscellaneous expenses in Rs))

Department of Tourist Services, Punjab	Q4_1	1 = Selected 0 = Not selected
Actual Time taken by department in issuing certificate/license (days)	Q4_1_1	
Total number of visits	Q4_1_2	
Travel cost per visit (Rs)	Q4_1_3	
Obtaining approvals/licenses cost (Rs)	Q4_1_4	
Other Costs incurred (Rs)	Q4_1_5	
Municipal Corporation of Lahore (MCL)	Q4_2	1 = Selected 0 = Not selected
Actual Time taken by department in issuing certificate/license (days)	Q4_2_1	
Total number of visits	Q4_2_2	
Travel cost per visit (Rs)	Q4_2_3	
Obtaining approvals/licenses cost (Rs)	Q4_2_4	
Other Costs incurred (Rs)	Q4_2_5	
Punjab Food Authority (PFA)	Q4_3	1 = Selected 0 = Not selected
Actual Time taken by department in issuing certificate/license (days)	Q4_3_1	
Total number of visits	Q4_3_2	
Travel cost per visit (Rs)	Q4_3_3	
Obtaining approvals/licenses cost (Rs)	Q4_3_4	
Other Costs incurred (Rs)	Q4_3_5	
Lahore Development Authority (LDA)	Q4_4	1 = Selected 0 = Not selected
Actual Time taken by department in issuing certificate/license (days)	Q4_4_1	
Total number of visits	Q4_4_2	
Travel cost per visit (Rs)	Q4_4_3	
Obtaining approvals/licenses cost (Rs)	Q4_4_4	
Other Costs incurred (Rs)	Q4_4_5	
District Management Authority (DMA)	Q4_5	1 = Selected 0 = Not selected
Actual Time taken by department in issuing certificate/license (days)	Q4_5_1	
Total number of visits	Q4_5_2	
Travel cost per visit (Rs)	Q4_5_3	
Obtaining approvals/licenses cost (Rs)	Q4_5_4	
Other Costs incurred (Rs)	Q4_5_5	
Department of Labor	Q4_6	1 = Selected 0 = Not selected
Actual Time taken by department in issuing certificate/license (days)	Q4_6_1	

Total number of visits	Q4_6_2	
Travel cost per visit (Rs)	Q4_6_3	
Obtaining approvals/licenses cost (Rs)	Q4_6_4	
Other Costs incurred (Rs)	Q4_6_5	
Punjab Employees Social Security Department (PESSI)	Q4_7	1 = Selected 0 = Not selected
Actual Time taken by department in issuing certificate/license (days)	Q4_7_1	
Total number of visits	Q4_7_2	
Travel cost per visit (Rs)	Q4_7_3	
Obtaining approvals/licenses cost (Rs)	Q4_7_4	
Other Costs incurred (Rs)	Q4_7_5	
Environmental Protection Agency (EPA)	Q4_8	1 = Selected 0 = Not selected
Actual Time taken by department in issuing certificate/license (days)	Q4_8_1	
Total number of visits	Q4_8_2	
Travel cost per visit (Rs)	Q4_8_3	
Obtaining approvals/licenses cost (Rs)	Q4_8_4	
Other Costs incurred (Rs)	Q4_8_5	
Local Police	Q4_9	1 = Selected 0 = Not selected
Actual Time taken by department in issuing certificate/license (days)	Q4_9_1	
Total number of visits	Q4_9_2	
Travel cost per visit (Rs)	Q4_9_3	
Obtaining approvals/licenses cost (Rs)	Q4_9_4	
Other Costs incurred (Rs)	Q4_9_5	
Others (please specify)	Q4_10	1 = Selected 0 = Not selected
Name of Agency/Authority	Q4_10_0	
Actual Time taken by department in issuing certificate/license (days)	Q4_10_1	
Total number of visits	Q4_10_2	
Travel cost per visit (Rs)	Q4_10_3	
Obtaining approvals/licenses cost (Rs)	Q4_10_4	
Other Costs incurred (Rs)	Q4_10_5	
5. Costs (Rs)		
Estimated total cost in setting-up of the restaurant (inventory, land, building initial rent, labor etc.)	Q5_1	1 = Less than a million 2 = 1 million to 5 million 3 = 5 million to 10 million 4 = above 10 million
Estimated total cost in registering your business (Rs.)	Q5_2	
Are there any recurring costs associated with maintaining the necessary licenses and approvals?	Q5_3	1 = YES 2 = NO 3 = Don't know
What were the estimated total fees paid to consultants or agents? (if applicable)	Q5_4	

Other Associated Costs to obtain certificates/licenses (e.g., bribes, miscellaneous expenses) (Rs.)	Q5_5	
6. Perception of Regulatory Environment		
How would you rate the clarity and transparency of the regulations related to restaurant registration in Lahore?	Q6_1	RANK 1 - 5 (_____) 1= Not Clear and Transparent - 5= Clear and transparent
How would you rate the current regulations are helpful to the growth of the restaurant industry in Lahore?	Q6_2	RANK 1 - 5 (_____) 1= Not Helpful - 5= Helpful
Which of these are the most relevant perception you have about the current regulatory environment (Select all that apply)	Q6_3	1 = Supportive Policies. 2 = Efficient Processes. 3 = Transparency. 4 = Business Growth Incentives. 5 = Quality Control. 6 = Market Competition. 7 = Bureaucratic Hurdles. 8 = High Costs. 9 = Lack of Clarity. 10 = Delays. 11 = Corruption. 12 = Limited Support. 13 = Other (please specify): _____
Having an online registration portal for setting-up business would be helpful to the growth of the restaurant industry in Lahore?	Q6_4	1 = Strongly Agree 2 = Agree 3 = Neutral 4 = Disagree 5 = Strongly Disagree
The officers designated to approve/reject your applications for business related activities are honest and make justified decisions.	Q6_5	1 = Strongly Agree 2 = Agree 3 = Neutral 4 = Disagree 5 = Strongly Disagree
The inspectors visiting your restaurant are producing a fair inspection report.	Q6_6	1 = Strongly Agree 2 = Agree 3 = Neutral 4 = Disagree 5 = Strongly Disagree
How effective do you think frequent penalties are in ensuring that restaurants comply with food safety regulations?	Q6_7	1= Highly effective 2 = Moderately effective 3 = Less effective 4 = Not effective

<p>Is there anything else you would like to share about your experience with the restaurant registration process in Lahore?</p> <p>Please mention any event occurred which affected your restaurant badly.</p>	<p>Q6_8</p>	
7. Contact Information		
<p>Email</p>	<p>Q7_1</p>	
<p>Mobile Phone</p>	<p>Q7_2</p>	

Regards,
YASIR ZADA KHAN
<yasir.zada@pide.org.pk>
Principle Investigator
RASTA CGP 06-160
Pakistan Institute of Development Economics, Islamabad

Figure 44 Sample: Certificate of Medical Fitness

Certificate of Medical Fitness Template

CERTIFICATE OF MEDICAL FITNESS
(TO BE DEPOSITED AT THE TIME OF JOINING)

To be obtained only from Gazetted Government Medical officer/Medical Officer of a Government Undertaking. (Please note that in no other form this certificate will be accepted. Medical Certificates issued by private medical practitioners will not be accepted.)

Name.....
(in Block Letters)

Father's Name :

Blood group/Anemic (Blood Count)

Height : Weight

Chest:.....

Heart and Lungs :

Vision : L : R :

Colour Vision :

Hearing :

Hernia/Hydrocele/Piles :

Any other disease diagnosed in past:

Allergies, if any.....

List of prescribed medication, If any.....

1.

2.

3.

Any other Remarks :

I certify that I have carefully examined Mr./Ms.....son/daughter of Mr.
.....who has signed in my presence. He/she has no mental
and physical disease and is FIT.

Signature of the candidate


Station :

Date :

Signature of the Medical Officer
with legible seal.

Figure 45 Sample: Food Establishment Inspection Report (Random Basis)

FORM NUMBER: _____ (Computer Generated)

Risk Category:		Food Establishment Inspection Report		Page 1 of _____	
Establishment type: Permanent Temporary Mobile Other _____			Date: _____		
Establishment _____				Time In _____ AM/PM Time Out _____ AM/PM	
Address _____				LHD _____	
Town/City _____				Purpose of Inspection: Routine Pre-op	
Permit Holder _____				Reinspection Other _____	
FOODBORNE ILLNESS RISK FACTORS AND PUBLIC HEALTH INTERVENTIONS					
<i>Risk factors are important practices or procedures identified as the most prevalent contributing factors of foodborne illness or injury. Interventions are control measures to prevent foodborne illness or injury.</i>					
Mark designated compliance status (IN, OUT, N/A, N/O) for each numbered item IN=in compliance OUT=not in compliance N/A=not applicable N/O=not observed					
P=Priority item Pf=Priority foundation item C=Core item V=violation type Mark in appropriate box for COS and/or R COS=corrected on-site during inspection R=repeat violation					
IN OUT N/A N/O		Supervision		IN OUT N/A N/O	
1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Person/Alternate Person in charge present, demonstrates knowledge and performs duties		15 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Certified Food Protection Manager for Classes 2, 3, & 4		16 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
3 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Employee Health		17 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
4 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Management, food employee and conditional employee; knowledge, responsibilities and reporting		18 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
5 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Proper use of restriction and exclusion		19 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Written procedures for responding to vomiting and diarrheal events		20 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
7 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Good Hygienic Practices		21 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
8 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Proper eating, tasting, drinking, or tobacco products use		22 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
9 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		No discharge from eyes, nose, and mouth		23 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
10 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Preventing Contamination by Hands		24 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
11 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Hands clean and properly washed		25 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
12 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		No bare hand contact with RTE food or a pre-approved alternative procedure properly followed		26 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
13 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Adequate handwashing sinks, properly supplied/accessible		27 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
14 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Approved Source		28 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
15 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Food obtained from approved source		29 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
16 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Food received at proper temperature		30 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
17 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Food in good condition, safe, and unadulterated		31 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
18 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Required records available: molluscan shellfish identification, parasite destruction		32 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
19 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		GOOD RETAIL PRACTICES		33 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
20 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Good Retail Practices are preventative measures to control the addition of pathogens, chemicals, and physical objects into foods.		34 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
21 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Mark OUT if numbered item is not in compliance V=violation type Mark in appropriate box for COS and/or R COS=corrected on-site during inspection R=repeat violation		35 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
22 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		OUT N/A N/O		36 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
23 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Safe Food and Water		37 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
24 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Pasteurized eggs used where required		38 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
25 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Water and ice from approved source		39 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
26 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Variance obtained for specialized processing methods		40 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
27 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Food Temperature Control		41 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
28 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Proper cooling methods used; adequate equipment for temperature control		42 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
29 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Plant food properly cooked for hot holding		43 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
30 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Approved thawing methods used		44 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
31 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Thermometers provided and accurate		45 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
32 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Food Identification		46 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
33 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Food properly labeled; original container		47 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
34 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Prevention of Food Contamination		48 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
35 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Insects, rodents, and animals not present		49 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
36 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Contamination prevented during food preparation, storage & display		50 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
37 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Personal cleanliness		51 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
38 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Wiping cloths: properly used and stored		52 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
39 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Washing fruits and vegetables		53 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
40 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Permit Holder shall notify customers that a copy of the most recent inspection report is available.		54 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
41 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Person in Charge (Signature) _____ Date _____		55 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
42 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Person in Charge (Printed) _____		56 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
43 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Inspector (Signature) _____ Date _____		57 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
44 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Inspector (Printed) _____		58 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
45 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Violations documented		59 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
46 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Date corrections due		60 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
47 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		#		61 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
48 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Priority Item Violations		62 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
49 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Priority Foundation Item Violations		63 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
50 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Core Item Violations		64 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
51 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Risk Factor/Public Health Intervention Violations		65 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
52 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Repeat Risk Factor/Public Health Intervention Violations		66 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
53 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Good Retail Practices Violations		67 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
54 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Requires Reinspection - check box if you intend to reinspect		68 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
55 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		Appeal: The owner or operator of a food establishment aggrieved by this order to correct any inspection violation identified by the food inspector or to hold, destroy, or dispose of unsafe food, may appeal such order to the Department of Tourist Services or Local Police Authority either through a designated web application or a written submission, not later than forty-eight hours after issuance of such order.		69 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	