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Report of Policy Lab on
**Bridging Gaps in Implementation
of Industrial & Economic Development
Strategies in Pakistan**

پاکستان میں اقتصادی اور صنعتی ترقی
کے عمل میں حائل رکاوٹوں کا خاتمہ

**Policy Analysis &
Recommendations- Part-4 of 11**

Bridging Gaps in IT Export and Freelancing Policies and Implementation Strategies in Pakistan

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Bridging Gaps in IT Export and Freelancing Policies and Implementation Strategies in Pakistan

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PREFACE

Public policy design, implementation, and evaluation are intricate processes that require a holistic approach to address the multi-faceted challenges of governance, economic development, and industrial transformation. The interplay of theoretical understanding, political economy dynamics, stakeholder engagement, and evidence-based decision-making is essential for crafting impactful policies. The concept of the Policy Lab emerges as a vital tool to address these complexities. Globally, renowned universities and government entities, particularly in the EU and North America, have adopted Policy Labs as platforms for analyzing public policies, their implementation mechanisms, and resultant impacts.

Policy Labs aim to bridge the critical gaps in communication, collaboration, and coordination among academia, policy practitioners, and stakeholders. They serve as incubators for innovative ideas, allowing for rigorous pre-policy analysis, mid-term critical reviews, and post-policy evaluations. By simulating real-world challenges in a controlled environment, Policy Labs foster evidence-based policy-making processes that are both practical and adaptable to dynamic socio-economic contexts.

The National School of Public Policy (NSPP) in Pakistan, through its Policy Simulation Exercises (PSE) at its training units such as the National Institute of Management (NIM), has embraced the concept of Policy Labs. These exercises are designed to mimic the global trends of Policy Labs, creating a focused research environment where government officers from diverse academic and professional backgrounds engage with ground realities. The outcomes of these simulations offer actionable insights and policy recommendations for government entities, enhancing their operational effectiveness and societal impact.

In January 2025, NIPA, Peshawar organized a comprehensive Policy Lab designed and supervised by Dr. Muqeem Islam Soharwardy, Chief Instructor, NIPA Peshawar, addressing 11 critical dimensions of policy design, implementation, and facilitation to support economic and industrial development in Pakistan. These dimensions included:

1. Bridging Gaps in Industrial Policy Design and Facilitation at the National Level
2. Bridging Gaps in SEZ Policies and Implementation: A Case Study of Rashakai SEZ
3. Bridging Gaps in TVET Policies and Practices: Evaluating Their Impact on Employment and Industry in Pakistan
4. Bridging Gaps in IT Export and Freelancing Policies: Analyzing Economic Impacts on Pakistan
5. Bridging Gaps in Automobiles and Transportation Industry Policies: A Critical Evaluation for Industrial Development in Pakistan
6. Bridging Gaps in Labour Policies, Regulations, and Welfare Practices: Implications for Industrial Development and Social Protection in Pakistan
7. Bridging Gaps in Mechanized Agriculture and Smart Agricultural Techniques: Exploring Their Potential for Industrial Development in Pakistan
8. Bridging Gaps in Policies for High-Tech and Innovative Industries: Lessons from China's Reverse Engineering Strategies for Pakistan
9. Bridging Gaps in the Textile Sector of Pakistan: A Critical Analysis and Way Forward

10. Bridging Gaps in Policies and Practices for the Export Sector of Pakistan: An Evaluation for Enhanced Global Competitiveness
11. Bridging Gaps in Energy, POL, Gas/LNG Policies and Strategies: Supporting Industrial Development in Pakistan

The Policy Lab highlighted the urgent need to address fragmentation in policy design and implementation, emphasizing the critical role of integrated planning, stakeholder collaboration, and the use of advanced tools like Input-Output Models. For example, the session on high-tech industries demonstrated how Pakistan could benefit from reverse engineering strategies, as successfully implemented by China, to develop its industrial base. Similarly, the focus on SEZ policies and Rashakai SEZ showcased the potential of targeted interventions to optimize economic zones for industrial growth.

This initiative underscores the importance of fostering collaboration between academia and policy practitioners. Universities in Pakistan are encouraged to establish Policy Labs to complement government efforts and contribute to evidence-based policy research. Such partnerships can pave the way for a prosperous and industrially developed Pakistan, where robust policies drive sustainable economic growth and social progress.

The lessons drawn from these exercises are not only relevant for Pakistan but also hold universal applicability for nations seeking to bridge gaps in policy design, implementation, and facilitation. The NSPP's Policy Simulation Exercise sets a precedent for how structured, collaborative efforts can generate innovative solutions to complex developmental challenges, making it a cornerstone for future policy reforms.

This report in your hands addresses only the first topic: Bridging Gaps in IT Export and Freelancing Policies: Analyzing Economic Impacts on Pakistan. The remaining topics have been analyzed and documented in separate reports, crafted individually to provide in-depth insights and actionable recommendations specific to each area.

It is hoped that this document will serve as a significant milestone in the design, implementation, and facilitation of policies, paving the way for broader economic and industrial transformation in Pakistan, انشاءالله .

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Executive Summary

In recent years, Pakistan's information technology (IT) sector has emerged as a significant contributor to the national economy, bolstered by progressive policies and innovative practices aimed at fostering IT exports and freelancing. These initiatives align with global trends, where digital trade and freelancing platforms have become instrumental in driving economic growth and employment opportunities (World Bank, 2022). This document explores the key policies, institutional frameworks, and practices shaping the IT exports and freelancing landscape in Pakistan, with a focus on their economic implications.

The Government of Pakistan has introduced several policy measures to support the IT sector. The Digital Pakistan Policy 2018 serves as a cornerstone, providing a strategic framework for enhancing the IT ecosystem through tax incentives, infrastructure development, and capacity building (Ministry of Information Technology and Telecommunication [MoITT], 2018). Similarly, the establishment of technology parks and incubators under the auspices of public-private partnerships has played a pivotal role in nurturing startups and attracting foreign investment (Pakistan Software Export Board [PSEB], 2023). These initiatives aim to increase IT exports and strengthen the freelancing economy, which is increasingly recognized as a global trendsetter in digital work.

Freelancing, as a subset of the IT sector, has seen exponential growth in Pakistan, driven by platforms like Upwork, Fiverr, and Freelancer. According to the Global Gig Economy Index, Pakistan ranks among the top five freelancing markets globally (Payoneer, 2022). This growth has been facilitated by initiatives such as the eRozgar Program and the DigiSkills Training Program, which equip individuals with the skills needed to compete in the global freelancing market. Additionally, the Pakistan Freelancers' Policy 2021 introduced measures to streamline payments for freelancers, reduce transaction costs, and enhance digital payment systems (State Bank of Pakistan [SBP], 2021).

Despite these advances, challenges remain in the form of limited infrastructure, policy inconsistencies, and the lack of a robust legal framework. Infrastructure gaps, particularly in rural areas, restrict access to high-speed internet, a critical enabler for IT exports and freelancing (Ali, 2020). Moreover, inconsistencies in tax policies and the absence of clear guidelines for freelancing income have created barriers for IT professionals. Addressing these challenges is crucial for realizing the sector's full potential.

This policy paper provides a comprehensive analysis of the policies and practices influencing the growth of IT exports and freelancing in Pakistan. It explores the economic impact, compares global benchmarks, and offers actionable recommendations for enhancing Pakistan's position in the global digital economy.

The economic impacts of IT exports and freelancing on Pakistan are manifold. In 2022, the IT sector contributed approximately $3.5 billion in export revenue, representing a year-on-

year growth of 17% (SBP, 2023). This revenue supports job creation, skill development, and technology transfer, fostering economic resilience in a volatile global market. Moreover, freelancing offers an inclusive employment model, empowering women and youth to participate in economic activities from remote locations (Ali & Khan, 2021). However, to sustain this growth trajectory, Pakistan must adopt international best practices. For instance, India and Bangladesh have successfully implemented policies focusing on digital inclusion, enhanced broadband penetration, and incentivizing IT education (World Bank, 2022). Learning from these models, Pakistan can refine its policies to address structural and systemic barriers.

In conclusion, while Pakistan's policies and practices have laid a solid foundation for IT exports and freelancing, strategic interventions are needed to maximize their economic benefits. Strengthening institutional frameworks, expanding infrastructure, and aligning with global best practices will enable Pakistan to leverage its IT sector as a driver of sustainable economic growth. This policy paper provides a comprehensive analysis of the policies and practices influencing the growth of IT exports and freelancing in Pakistan. It explores the economic impact, compares global benchmarks, and offers actionable recommendations for enhancing Pakistan's position in the global digital economy.

Macro-Level Recommendations

1. Policy Integration and Regulatory Reforms

- Establish a comprehensive digital trade policy covering data protection, intellectual property rights (IPR), and taxation.
- Develop clear and simplified tax guidelines tailored for freelancers and IT exports.
- Strengthen enforcement mechanisms for IPR to protect freelancers and IT firms from exploitation.

2. Infrastructure Development

- Expand broadband connectivity, particularly in underserved rural areas.
- Encourage renewable energy solutions for uninterrupted IT operations.
- Modernize the national grid to ensure a stable power supply for tech hubs.

3. Financial Incentives and Investment

- Establish venture capital and innovation funds for tech startups.
- Provide tax incentives and subsidies for both foreign and local IT investors.
- Facilitate partnerships between IT professionals and financial institutions to improve access to business loans.

4. Education and Skill Development

- Collaborate with global tech firms to reform curricula in universities and vocational institutes.
- Promote industry-recognized certifications in AI, cybersecurity, cloud computing, and data analytics.
- Launch youth and gender-focused digital skill training programs.

5. Global Market Integration

- Strengthen trade agreements to enhance IT export opportunities.
- Facilitate partnerships with global freelancing platforms for better market access.
- Promote Pakistan's IT talent through international marketing campaigns.

Micro-Level Recommendations

6.1 Digital Infrastructure and Connectivity

- Increase investments in broadband expansion to ensure nationwide high-speed internet access.
- Partner with telecom companies to improve network reliability and affordability.

6.2 Freelancer Support Programs

- Expand training programs in digital marketing, financial management, and negotiation skills.
- Collaborate with international freelancing platforms to develop tailored training modules.
- Advocate for the introduction of PayPal and other global payment solutions in Pakistan.

6.3 Education and Talent Development

- Modernize curricula to focus on practical, industry-driven skills.
- Promote continuous learning through government-backed online platforms.
- Establish mentorship and coaching programs for freelancers and tech startups.

6.4 Simplification of Taxation Policies

- Develop a dedicated tax framework for freelancers and IT exporters.
- Provide tax exemptions or reductions for IT-related income.
- Launch awareness campaigns to educate freelancers on tax compliance.

6.5 Women and Minority Inclusion

- Design dedicated platforms and mentorship programs for women freelancers.
- Introduce flexible work policies to encourage female participation in the tech industry.
- Offer scholarships and financial support for women pursuing STEM education.

6.6 Cybersecurity and Data Protection

- Implement robust data protection laws aligned with global standards.
- Provide affordable cybersecurity tools and training for freelancers and IT businesses.
- Conduct national cybersecurity awareness campaigns to improve digital safety.

6.7 Promoting Innovation and Startups

- Increase venture capital investment through government-backed incentives.
- Develop and fund more incubators and accelerators for tech startups.
- Reduce bureaucratic hurdles for startups seeking funding and market entry.

Contents

Introduction

The IT and freelancing sectors are critical for Pakistan's economic growth. As of January 2025, Pakistan's Information Technology (IT) and freelancing sectors have emerged as significant contributors to both the national and global digital economies.

Information Technology Industry in Pakistan

Pakistan's IT industry has experienced substantial growth, with the government targeting the Information and Communication Technology (ICT) sector to reach a size of $20 billion by 2025, in line with Pakistan Vision 2025 and the Digital Policy of Pakistan 2018 (Board of Investment, 2025)[1]. The industry comprises over 12,000 IT companies, contributing approximately $2.1 billion in export revenue and $1.2 billion in domestic revenue (P@SHA, 2025)[2]. Notably, the software market in Pakistan is projected to achieve a revenue of $1,045 million in 2025, with enterprise software being a significant segment (Statista, 2025)[3].

Government initiatives have played a crucial role in fostering this growth. Incentives such as zero income tax on IT exports until June 2025, 100% equity allowed for foreign investors, and full repatriation of profits have created a conducive environment for investment and expansion (Ministry of IT & Telecom, 2025)[4]. Additionally, collaborations with global tech companies have further bolstered the sector. For instance, Allied Corporation, an Adelaide-based PC maker, entered a $200 million deal with Google to manufacture over 500,000 Chromebooks for Pakistan's education system by 2025, aiming to enhance classroom technology and digital enterprises (The Advertiser, 2024).

Freelancing Industry in Pakistan

The freelancing industry in Pakistan has witnessed remarkable expansion, positioning the country among the top freelancing nations globally. According to the World Bank, 42% of Pakistani freelancers are engaged in software development, representing 10% of the global freelancers (Modern Diplomacy, 2024)[5]. The government's National Freelance Facilitation

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[1] https://invest.gov.pk/it-ites
[2] https://www.pasha.org.pk/industry-overview
[3] https://www.statista.com/outlook/tmo/software/pakistan
[4] https://moitt.gov.pk/SiteImage/Misc/files/Pakistan%27s%20IT%20Industry%20ReportPrinter.pdf
[5] https://moderndiplomacy.eu/2024/05/07/the-flip-side-of-freelancing-industry-of-pakistan/

Policy aims to train 1 million freelancers in the coming years, reflecting a commitment to further developing this sector ([Being Guru, 2024](#))[6].

Despite its growth, the freelancing industry faces challenges, including digital infrastructure limitations and energy shortages. To address these issues, the government has initiated programs like the Prime Minister Laptop Scheme and introduced financing options such as Kistpay and Qistbazaar to facilitate access to necessary tools for freelancers ([Pakistan Today, 2024](#))[7].

Situational Analysis

Pakistan has emerged as the fourth largest freelancing market globally, recognized for its competitive rates and high-quality work. The country has become a preferred destination for outsourcing in various fields such as app development, software engineering, and creative industries (World Bank, 2023). The government has introduced the National Freelance Facilitation Policy, which aims to train 1 million freelancers by 2027, with a focus on advanced technical and soft skills (Ministry of IT and Telecommunication [MoITT], 2023).

Infrastructure improvements, such as the establishment of freelancer co-working spaces and the facilitation of payment platforms like Payoneer, have played a pivotal role in supporting freelancing growth (Ali et al., 2023). Moreover, government-backed initiatives like DigiSkills.pk have trained over 2.5 million individuals in freelancing and digital skills since their inception, significantly contributing to the workforce (DigiSkills, 2023).

Universities and private institutions have also integrated freelancing courses into their curriculums, ensuring that students are equipped with relevant skills for the gig economy. Pakistani freelancers have achieved notable success, securing major international clients and contributing to large-scale projects. Additionally, individual freelancers have gained global recognition for their accomplishments, mentoring others and building a thriving community (Rehman & Shah, 2023).

Current Landscape of IT Exports and Freelancing in Pakistan

Pakistan's burgeoning IT and freelancing sectors significantly contribute to the global digital economy by providing cost-effective and skilled labor. The country's young and talented workforce, with over 25,000 IT graduates entering the job market annually, positions Pakistan as a favorable destination for IT outsourcing ([GENTEC, 2024](#)). Furthermore, the expansion

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[6](#) https://www.beingguru.com/how-to-start-freelancing-in-pakistan-2025
[7](#) https://www.pakistantoday.com.pk/2024/08/21/overview-of-freelancing-industry-of-pakistan/

of freelancing is boosting Pakistan's economic growth, with the country now ranking fourth in terms of freelancing activity (Eurasia Review, 2024). The IT and freelancing industry contribute significantly to Pakistan's economy in several ways:

i. **Employment Generation**: Both IT sector and freelancing community have created millions of job opportunities, especially for young individuals. The IT sector alone employs over 300,000 professionals, while freelancing provides income to a large portion of the workforce (Khan, 2023).

ii. **Foreign Exchange Earnings**: The exports from the IT sector and the remittances earned by freelancers play a vital role in boosting the country's foreign exchange reserves. The increasing demand for IT services and digital solutions has the potential to further augment these earnings.

iii. **Human Capital Development**: The growth of the IT sector has led to the development of a highly skilled workforce in Pakistan. Educational institutions and online platforms have played a key role in training individuals in relevant technical skills, such as software development, data analysis, and cybersecurity.

iv. **Boost to Entrepreneurship**: The rise of freelancing and IT startups has fostered an entrepreneurial ecosystem, encouraging young professionals to create their own businesses. This has led to the creation of small and medium-sized enterprises (SMEs), which further contribute to job creation and innovation.

As of January 2025, Pakistan's Information Technology (IT) exports and freelancing sectors have demonstrated significant growth, contributing notably to the national economy. In the fiscal year 2023-2024, Pakistan's IT exports reached $3.223 billion, marking a 24% increase compared to the previous fiscal year (Source: Pakistan Today)[8]. This upward trend continued into the subsequent fiscal year, with IT services exports totaling $286.395 million in July 2024, reflecting a 33.84% increase from July 2023 (Source: WAM)[9]. By September 2024, monthly

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[8] https://www.pakistantoday.com.pk/2024/08/21/overview-of-freelancing-industry-of-pakistan/
[9] https://www.wam.ae/en/article/144snbi-pakistans-services-exports-surge-3384-2864-million

IT exports had risen to $292 million, a 42% year-on-year increase, marking the 12th consecutive month of growth (Source: Profit by Pakistan Today)[10].

5.2 Freelancing Sector

Pakistan's freelancing industry has also experienced substantial expansion. As of May 2024, the country had approximately 2.37 million active freelancers, with 0.55 million working full-time, each having completed at least 10 projects and earned over $1,000 (Source: Modern Diplomacy)[11]. In the fiscal year 2023-2024 (July-March), Pakistani freelancers contributed $350.15 million in foreign exchange earnings (Source: ProPakistani)[12]. The freelancing sector has become a vital component of Pakistan's economy, fostering digital entrepreneurship and diversifying economic activities. With over 1.5 million freelancers, the country has witnessed a surge in digital entrepreneurship, reshaping traditional employment paradigms (Source: The Express Tribune)[12].

5.3 Statistical and growth trends analysis of IT exports

Pakistan's Information Technology (IT) sector has demonstrated significant growth in recent periods. In the fiscal year 2023-2024, IT exports reached $3.2 billion, marking a 24% increase from the previous year's $2.59 billion (Source: Dawn)[13]. In July 2024 alone,

IT services exports totaled $286.395 million, reflecting a 33.84% rise compared to July 2023 (Source: WAM)[14]. By December 2024, monthly IT exports achieved a record $348 million, up by 15% year-on-year and 12% month-on-month (Source: Arab News)[16].

Pakistan's IT exports predominantly include software development, IT-enabled services (ITES), and call center services. Software development and outsourcing are the leading contributors, driven by demand from markets such as the United States, the European Union, and the Middle East. Pakistan ranks among the top outsourcing destinations globally due to its competitive pricing and a skilled labor force (Ahmad et al., 2022). IT services form a significant part of the services export segment, making IT a critical sector in the country's economy.

[10] https://profit.pakistantoday.com.pk/2024/10/21/pakistans-it-exports-surge-42-yoy-marking12th-consecutive-month-of-growth/
[11] https://moderndiplomacy.eu/2024/05/07/the-flip-side-of-freelancing-industry-of-pakistan/
[12] https://propakistani.pk/2024/06/11/heres-how-much-pakistani-freelancers-earned-duringfy24/
[12] https://tribune.com.pk/story/2492783/freelancing-providing-digital-lifeline-for-pakistanseconomy
[13] https://www.dawn.com/news/1876833
[14] https://www.wam.ae/en/article/144snbi-pakistans-services-exports-surge-3384-2864-million
[16] https://www.arabnews.com/node/2586784/pakistan

The government has introduced several policies to support the IT sector, including a zeroincome tax policy for IT and ITES exports until 2025 (Pakistan Software Export Board [PSEB], 2023). Additional measures include allowing 100% foreign equity ownership, profit repatriation, and initiatives such as PSEB's programs for company registrations and certifications (PSEB, 2023). Over 25,000 IT graduates enter the workforce annually, meeting the growing demand for skilled labor in IT exports (Ahmed, 2023).

Freelancers also contribute significantly, with Pakistan ranking 4th globally in freelancing activities (World Bank, 2023). Pakistani IT companies are increasingly adopting cuttingedge technologies such as artificial intelligence, blockchain, and cloud computing, which enhance their global competitiveness (Ali et al., 2023). Furthermore, exporters are diversifying their market base by expanding into non-traditional markets like Southeast Asia, Africa, and the Middle East, reducing dependency on Western clients (Jamal & Rehman, 2023).

Pakistan's freelancing sector generated $350.15 million in foreign exchange earnings during the fiscal year 2023-2024 (July-March). Freelancing accounts for a significant portion of the $3.5 billion IT exports, directly contributing to Pakistan's GDP growth.

Pakistan ranks among the top five countries in freelancing by volume, with the sector's economic activities playing a key role in diversifying the economy beyond traditional

industries like agriculture and textiles. Freelancers support micro and small businesses globally, offering cost-effective solutions that enhance their scalability and performance. The freelancing sector has fueled digital entrepreneurship in Pakistan, encouraging the establishment of small IT firms and startups that contribute to job creation and economic activity. As of 2024, Pakistan has approximately 2.37 million freelancers, of which 0.55 million work full-time, having completed at least 10 projects and earned over $1,000. Freelancers represent a diverse range of professionals, with a significant portion under the age of 30, reflecting the youth-dominated demographic of Pakistan. Women are increasingly joining the freelancing workforce, especially in fields like content writing, graphic design, and digital marketing, where flexible working conditions are beneficial. Initiatives by the government and private organizations to train women in digital skills have further increased their participation.

The majority of Pakistani freelancers specialize in software development, graphic design, and digital marketing. Other popular areas include virtual assistance, e-commerce management, and video editing. Online platforms like Upwork, Fiverr, and Freelancer serve as the primary marketplaces for these professionals.

5.4   Government Interventions: DigiSkills, STZs, and Tax Incentives etc.

The Government of Pakistan is exerting efforts to implement multiple strategic initiatives to foster growth in the IT and freelancing sectors. Key initiatives includes DigiSkills program, establishment of Special Technology Zones (STZs), and tax incentives have played pivotal roles in shaping the IT and Freelancing industry.

5.4.1   DigiSkills.pk: Transforming Digital Learning in Pakistan

DigiSkills.pk, a government-sponsored platform launched by the Ministry of Information Technology and Telecommunication (MoITT), is dedicated to equipping individuals with digital and freelancing skills. As one of the largest digital skills training programs in the region, it has successfully trained over 2.5 million individuals since its inception. The platform offers free online courses across various high-demand domains such as freelancing, digital marketing, graphic design, e-commerce, and more (DigiSkills, 2023).

This initiative has played a crucial role in empowering a new generation of freelancers, particularly those from remote and underserved areas, enabling them to participate in the global digital economy. Additionally, DigiSkills.pk has fostered the rise of digital entrepreneurship in Pakistan. Many trainees have achieved sustainable income streams through popular freelancing platforms like Upwork, Fiverr, and Freelancer. By focusing on accessibility and skill development, DigiSkills has significantly contributed to Pakistan's growing IT exports and freelancing success (Rehman & Shah, 2023).

5.4.2   Special Technology Zones (STZs): Infrastructure for Innovation

The Government of Pakistan established the Special Technology Zones Authority (STZA) to create Special Technology Zones (STZs) with the aim of fostering innovation and attracting foreign investment in the tech sector. These zones feature state-of-the-art infrastructure, including IT parks and innovation hubs, as well as simplified business registration processes for tech companies. Enhanced connectivity and access to global markets have made these zones attractive to investors and entrepreneurs (STZA, 2023).

The STZs have successfully attracted billions of dollars in foreign direct investment (FDI). For example, the Islamabad Technology Park, inaugurated in 2024, houses over 50 tech companies, offering a conducive business environment for startups and SMEs to scale operations. The STZs have also promoted collaboration between academia and industry, leading to advancements in research and development (R&D). By supporting innovation and entrepreneurship, STZA has become a critical driver of growth in Pakistan's technology sector (Ali & Khan, 2024).

5.4.3   Tax Incentives: Boosting IT and Freelancing Growth

The Government of Pakistan has implemented a zero-income tax policy on IT exports, effective until June 2025, to stimulate growth in the sector. This policy, coupled with exemptions on import duties for IT-related equipment, has significantly reduced costs for IT exporters and enhanced their competitiveness in the global market (Ministry of IT and Telecommunication [MoITT], 2023).

Freelancers earning up to $12,000 annually are also exempt from income tax, providing a favorable environment for newcomers entering the market. Simplified processes for opening foreign currency accounts have further eased access to earnings from global freelancing platforms such as Upwork and Fiverr, empowering freelancers to participate in the global digital economy (Rehman & Shah, 2023).

These initiatives have not only increased the competitiveness of Pakistan's IT exports but have also encouraged both local and foreign investors to establish operations in Pakistan. This has bolstered economic activity, created jobs, and positioned Pakistan as a prominent player in the global IT landscape (Ali & Khan, 2023).

5.5   Special Investment Facilitation Council (SIFC) - News Report (Oct, 2024)[15]

According to the report on IT sector, Pakistan's Information Technology (IT) exports maintained their growth as they fetched $292 million in September 2024, up 42% from the same month of last year and higher than the last 12-month average of $280 million. Salient features / statistics of the report are highlighted as follows:

- It is the 12th consecutive month of year-on-year (YoY) growth in IT exports, beginning October 2023.
- According to the State Bank of Pakistan (SBP), IT exports for the first quarter (July September) of the current fiscal year grew 34% from the same period of last year, to stand at $877 million.
- The growth came in the backdrop of a widening client base of exporters globally, especially in the Gulf Cooperation Council (GCC) region, relaxation in the permissible retention limit from 35% to 50% in the Exporters' Specialized Foreign Currency

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[15] 17
https://www.sifc.gov.pk/news/451

Accounts and stability of the Pakistani rupee, which was an encouragement for IT exporters to bring back a higher proportion of their profits to Pakistan.

- According to a survey of the Pakistan Software Houses Association (P@SHA), 62% of IT companies are maintaining specialized foreign currency accounts.

- Local IT companies are active in engaging with global clients as recently leading firms attended the London Tech Week 2024, Collision Canada 2024 and Black Hat, USA.

- A major development in financial year 2024-25 was the SBP adding a new category of Equity Investment Abroad, specifically for export-oriented IT companies.

- IT exporters can now acquire interest (shareholding) in entities overseas by utilizing up to 50% proceeds from their specialized foreign currency accounts. This will further boost the confidence of IT exporters and prompt them to remit proceeds to Pakistan.

- Slow internet in Pakistan, is continued to hurt the productivity of IT companies. Yet, IT companies managed to make extra efforts to fetch foreign exchange for the country.

- Monthly IT exports should go up to $300-350 million in the coming months to achieve real growth on the back of efforts put-in by the government and IT companies in the last few months.

- IT companies are optimistic about expanding their businesses in collaboration with foreign and local firms in traditional and non-traditional markets.

- Net IT exports (exports minus imports) reached $255 million, an increase of 56% Year over Year (YoY) in September 2024. This number is also higher than the last 12-month average of $245 million.

- It is estimated that the IT sector will continue its growth trajectory and momentum with likely increase of 10-15% in financial year 2024-25 to a total of $3.5-3.7 billion.

- Pakistan's IT exports increased owing to initiatives for the ease of doing business, adding that steps are underway for giving a further boost to IT exports.

In this regard, IT companies should enhance their penetration and then offer multiple services to their clients, including financial services and enterprise solutions, automation and AI adoption through joint ventures and collaborations. Once IT companies stabilize their foothold, export receipts would augment gradually.

5.6   International Projects of NADRA

In Pakistan, National Database & Registration Authority (NADRA) has been bookmarked as an expert enterprise solution provider, all around the world. Following are the International Projects implemented by NADRA Pakistan[16]:

    i. **Re-admission Case Management System (Republic of Turkiye)**: NADRA has developed an Electronic Readmission Case Management System for Turkiye; ii. **Somalia National Identification System**: NADRA is collaborating with the Government of Somalia to build a state-of-the-art national data and registration system;

iii. **Election Management System Fiji**: Fiji Elections Office (FEO) awarded the "Election Management System" to NADRA through International Bid; iv. **Electronic Passport System Kenya**: After the successful upgrade of manual to machine readable passports, Kenya Government issued ePassport;

    v. **National Driver's License System Bangladesh**: NADRA provides regular consultancy services and enhancements to Bangladeshi Licensing systems.

    vi. **Re-admission Case Management System (EU)**: NADRA developed an Electronic Platform for Readmission of persons residing in (European Union) EU; vii. **National Identity System Nigeria**: NADRA has developed and implemented complete backend system;

    viii. **Civil Registration System Sudan**: Civil Registration and Vital Statistics (CRVS) was designed for registration and tracking of vital events of the citizens;

    ix. **Passport Issuance & Control System Kenya**: NADRA enabled Kenya with the issuance of machine-readable passport.

5.7   Key Stakeholders:

Major Stakeholders relating to the IT and Freelancing Industry of Pakistan are as follows:

    i. Ministry of IT & Telecom ii. PSEB (Pakistan Software Export Board)

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[16] https://www.nadra.gov.pk/international-projects

    iii.   Ministry of Commerce

    iv.   FBR (Federal Board of Revenue)

    v.   SBP (State Bank of Pakistan) vi.   Higher Education Commission (HEC) vii.   Pakistan Telecommunication Authority (PTA) viii.   Private Sector (Tech Firms, Freelancers, Banks, Training Providers) ix.   Ministry of Law

    x.   International Organizations (Trade bodies, Certification Bodies, Freelance Platforms)

5.8   Leading Software Houses (Companies)

It has been widely agreed that following are 10 leading software houses (companies) in Pakistan (as of January 2025):

1. Systems Limited, Lahore, Pakistan
2. 10Pearls, Karachi, Pakistan
3. NetSol Technologies, Lahore, Pakistan
4. TRG TECH (Ibex/Afiniti), Karachi, Pakistan
5. Arbisoft, Lahore, Pakistan
6. Tkxel, Lahore, Pakistan
7. Confiz Limited, Lahore, Pakistan
8. Venture Dive, Karachi, Pakistan
9. Arpatech, Karachi, Pakistan
10. Cubix, Karachi, Pakistan.

These companies have been recognized for their contributions to Pakistan's software industry, offering a range of services from software development to digital transformation solutions.

5.9   Future Prospects

Pakistan's IT exports and freelancing industry hold immense potential for future growth. The global demand for IT services, particularly in emerging technologies such as artificial intelligence (AI), machine learning, blockchain, and cloud computing, presents an opportunity for Pakistani professionals to establish themselves as global leaders in these fields.

Similarly, the freelancing industry is expected to continue its upward trajectory as more companies embrace remote work and digital transformation.

6. Legal, Institutional Policy and Regulatory Framework Analysis

Pakistan's IT and freelancing industry are governed by a combination of legal, institutional, and regulatory frameworks designed to foster growth while addressing challenges related to digital entrepreneurship, data security, and taxation. This analysis reviews the key legal and regulatory structures affecting these sectors in Pakistan.

6.1   National Information Technology (IT) Policy of 2018

The National IT Policy (2018) was established to increase Pakistan's global share in IT exports and focus on technology development, research, and innovation. The policy aims for zero income tax on IT exports until 2025, providing a major incentive for the IT export sector.

6.2   Cybercrime Law - Prevention of Electronic Crimes Act (PECA) 2016

PECA governs cybercrimes and aims to combat illegal digital activities such as hacking, fraud, and online harassment. It is a key legal framework regulating cybersecurity and digital crimes. While it designed to protect individuals and businesses, the act has also been criticized for overreach in areas like online speech and data protection, raising concerns about potential censorship and privacy violations.

6.3   Intellectual Property Laws

The Intellectual Property Laws (Copyright Ordinance 1962, Patents Ordinance 2000) provide protection for software, digital content, and IT innovations, helping Pakistan align with international standards for intellectual property rights (IPR). However, enforcement remains weak, and piracy in the software sector continues to be an issue.

6.4   Data Protection Laws

Pakistan currently lacks comprehensive data protection legislation. However, the Data Protection Bill (drafted in 2022) aims to align with global standards such as the General Data

Protection Regulation (GDPR), focusing on protecting consumer data and regulating data breaches.

6.5   Freelancing Regulation

The Freelancing Policy focuses on creating an enabling environment for digital workers and establishing better access to foreign clients. Freelancers are primarily governed by self-employment contracts on platforms like Upwork, Fiverr, and Freelancer, rather than a specific regulatory framework. However, freelancers in Pakistan face challenges related to tax documentation and payment systems, where foreign earnings are often subject to stringent banking regulations.

6.6   Taxation and Compliance Regulations

Freelancers in Pakistan are subject to the Income Tax Ordinance 2001. However, those earning below $12,000 annually are exempt from income tax, which helps ease entry into freelancing. The government has also introduced simplified procedures for freelancers to open foreign currency accounts, easing remittances from clients. Despite these provisions, many freelancers face challenges regarding tax filing and foreign currency repatriation due to regulatory complexities and lack of awareness about tax obligations.

6.7   Social Security for Freelancers

Pakistan has yet to establish a formal social security system for freelancers, leaving them vulnerable to risks such as illness, job instability, and retirement savings. There are calls to create dedicated policies and benefits for the growing freelance workforce to ensure long-term financial security and stability.

6.8   Regulatory Framework Challenges

There are several challenges being faced by IT Industry, key challenges includes issues in Infrastructure and Internet Connectivity, Taxation Complexities, Cybersecurity and Data Protection, Regulatory Overreach and Censorship, Payment Issues and Platforms.

6.8.1   Infrastructure and Internet Connectivity

Pakistan faces issues with reliable internet access, especially in rural areas, which impacts both IT businesses and freelancers. Frequent power outages and slow internet speeds hinder the productivity of digital workers.

6.8.2   Taxation Complexities

Freelancers often face difficulties navigating Pakistan's complex tax system, which lacks clarity regarding how foreign income should be reported. Although the government has made efforts to simplify the process, there is still a significant knowledge gap among freelancers regarding their tax liabilities and payment procedures.

6.8.3   Cybersecurity and Data Protection

While the PECA 2016 regulates cybercrimes, Pakistan's data protection laws remain inadequate. This affects businesses and freelancers working in sectors requiring high levels of data security, such as healthcare, finance, and e-commerce. The absence of a comprehensive data protection bill limits consumer trust in digital platforms and transactions.

6.8.4   Regulatory Overreach and Censorship

The PECA law has been criticized for broad provisions related to online speech and data privacy, particularly in the case of internet shutdowns and the blocking of websites. These actions can disrupt both the IT and freelancing industry, particularly those reliant on global communication and platforms.

6.8.5   Payment Issues and Platforms

Freelancers in Pakistan face payment challenges due to difficulties in accessing international payment gateways and the fluctuating value of the Pakistani rupee. Issues with PayPal and the lack of efficient cross-border payment solutions continue to limit opportunities for Pakistani freelancers.

6.9   Institutional Analysis with respect to Government Initiatives

The Government of Pakistan is taking several initiatives to promote IT Industry. These initiatives includes; DigiSkills Program, Special Technology Zones (STZs), Tax Incentives for IT and Freelancers, National Freelance Facilitation Policy.

6.9.1   DigiSkills Program

DigiSkills.pk offers free online courses to train individuals in digital skills, including freelancing, software development, digital marketing, and graphic design. This initiative supports the IT and freelancing sectors by upskilling the workforce and enhancing employability on global platforms.

6.9.2   Special Technology Zones (STZs)

The government has established STZs, which are designed to provide favorable business environments, including tax exemptions, infrastructure support, and improved connectivity, to attract IT businesses and startups. The development of these zones is expected to stimulate innovation and enhance the export capabilities of the IT sector.

6.9.3   Tax Incentives for IT and Freelancers

Pakistan offers zero-income tax for IT exports and a tax exemption for freelancers earning up to $12,000 annually to encourage growth in the IT sector. These incentives are aimed at promoting foreign exchange earnings and increasing the participation of Pakistanis in the global digital economy.

6.9.4   National Freelance Facilitation Policy

The government is working on a freelance facilitation policy, which aims to create a more supportive legal environment for freelancers, including better access to financial services, skill development programs, and a legal framework for protecting freelance contracts.

6.10   Findings - Weaknesses in Current State

 Broadly, some weaknesses have been observed in the system while observing the current state of affairs, key points are enumerated as under:

i.   **Complex Tax System**: The freelancing community and small IT businesses in Pakistan face challenges in understanding the country's complex tax structure. There are no clear guidelines on how to tax freelancers or how the GST (General Sales Tax) applies to them.

ii.   **Limited IP Protection**: Intellectual property rights are not as robust as in other competitive countries, which can deter global clients from trusting freelancers or businesses in Pakistan with sensitive data or proprietary projects.

iii.   **Lack of Legal Protections for Freelancers**: Freelancers do not have the same legal protections as full-time employees, which impacts job security and dispute resolution.

Contrary to the fact and in order to support the IT industry export growth, a desirability of clear and supportive tax framework is deemed to caters the needs of freelancers and the IT industry. In addition, stronger laws and policies and their effective implementation are also need of the time for protection of Intellectual Property (IP) and digital rights to safeguard the work of freelancers and businesses. Moreover, robust legal support systems is proposed to be developed to enable freelancers to resolve disputes with clients effectively on the analogy of Labour and HR Services Laws of employment.

7. Institutional and Stakeholders' Analysis of IT and Freelancing Industry of Pakistan

The Information Technology (IT) and freelancing sectors in Pakistan are vital components of the country's economy, contributing significantly to employment, innovation, and foreign exchange reserves. Institutional analysis helps understand the structures, policies, and organizations shaping this industry. This article explores the institutional framework, key stakeholders, and challenges affecting the IT and freelancing sectors in Pakistan. Several

institutions and regulatory bodies play a critical role in the development and regulation of Pakistan's IT and freelancing industry:

i. **Pakistan Software Export Board (PSEB):** The PSEB is the primary government body promoting Pakistan's IT exports. It provides support in areas such as infrastructure development, capacity building, and international market access. The PSEB collaborates with industry stakeholders to establish IT parks and export zones to enhance competitiveness (PSEB, 2023).

ii. **Ministry of Information Technology and Telecommunication (MoITT):** The MoITT is responsible for formulating policies to foster growth in the IT sector. Initiatives such as the Digital Pakistan Vision aim to improve connectivity, promote digital literacy, and encourage technology-driven entrepreneurship (MoITT, 2023). iii. **Higher Education Commission (HEC):** The HEC plays a crucial role in developing a skilled IT workforce by introducing specialized degree programs, funding research, and facilitating collaboration between academia and industry. Its initiatives include the establishment of technology incubators and funding for tech startups (HEC, 2022).

iv. **State Bank of Pakistan (SBP):** The SBP facilitates foreign remittance channels for freelancers and IT exporters. Recent policies, such as reduced transaction costs and streamlined banking processes, have improved the ease of conducting international transactions (SBP, 2022).

v. **Freelancing Platforms and Private Sector:** Freelancing platforms like Fiverr, Upwork, and Freelancer.com act as intermediaries, connecting Pakistani freelancers to global markets. Private sector IT firms and training institutes also contribute to workforce development and global outreach.

Despite significant progress, the IT and freelancing industry in Pakistan is facing several institutional and structural challenges including:

i. **Policy Implementation Gaps:** While policies such as tax incentives exist, inconsistent implementation and bureaucratic hurdles often impede growth. For instance, delays in IT park construction and lack of regulatory clarity discourage investment (Ahmed & Khan, 2022).

ii.   **Skills Mismatch:** A disparity exists between the skills provided by educational institutions and those demanded by global markets. This gap limits the employability of IT graduates and freelancers (Ali, 2023).

iii.   **Digital Infrastructure:** Limited access to reliable internet and electricity in rural areas restricts the growth of freelancing opportunities. Enhanced infrastructure investment is essential to bridge this gap.

iv.   **Global Competition and Branding:** Pakistani IT firms and freelancers face stiff competition from countries like India, the Philippines, and Bangladesh. Additionally, insufficient branding and marketing hinder the global visibility of Pakistani talent (Shah, 2023).

Likewise, challenges, there exists a vast growth potential and a room for opportunities which includes:

i.   **Government Incentives:** Expanding tax holidays, reducing regulatory barriers, and offering low-cost loans to IT firms and freelancers could accelerate growth in the sector.

ii.   **Skill Development:** Public-private partnerships to enhance technical skills and soft skills training for freelancers would improve their global competitiveness.

iii. **Global Outreach:** Promoting Pakistani IT services and freelancing talent through international trade fairs, partnerships, and certifications could boost visibility and trust.

iv.   **Women's Inclusion:** Encouraging female participation in freelancing and IT through mentorship programs, funding opportunities, and safe working environments can unlock untapped potential.

8. Comparative Analysis with Global Entities

Pakistan's IT and freelancing industry has shown substantial growth in recent years. However, when compared to global leaders like India, Malaysia Bangladesh, Philippines and Vietnam, there are both strengths and challenges that define Pakistan's position in the global landscape. A table depicts comparative analysis of IT exports, workforce, infrastructure, and freelancing across the selected countries is detailed below:

Country	IT Exports (2023)	IT Contribution to GDP	Annual IT Graduates	Freelancing Market Rank	Freelancing Earnings (2023)	Top Skills	Infrastructure	Ease of Doing Business Rank (2023)
India	$245 billion	~8%	1.5 million	1st	$3.5 billion	Software engineering, AI, data science	IT parks, SEZs, global data centers	63rd
Malaysia	$16 billion	~7%	~50,000	18th	$500 million	E-commerce, digital marketing	High-speed internet, ecommerce platforms	12th
Bangladesh	$1.6 billion	~1%	~40,000	8th	$400 million	Graphic design, data entry, virtual assistance	Hi-Tech parks, startup incubation	168th
Philippines	$29 billion	~7.5%	~75,000	6th	$1 billion	Customer service, BPO, content writing	BPO centers, SEZs	95th

Vietnam	$14 billion	~5%	~60,000	10th	$600 million	Blockchain, hardware engineering	Innovation hubs, SEZs	70th
Pakistan	**$3.223 billion**	~1.5%	~25,000	4th	$1.5 billion	**Freelancing, digital marketing, graphic design**	**Developing IT parks, coworking spaces**	108th

A comparative analysis to highlight weaknesses and areas of improvement for Pakistan's IT and freelancing sectors in tabulated format is as follows:

Weaknesses of Pakistan's IT & Freelancing Industry	Strengths of Global IT Industries[17]
1. Limited Infrastructure and Technological Hubs: Pakistan lacks adequate IT parks, tech hubs, and innovation centers, which hinders the scalability and growth of IT firms and freelancers.	**India**: Well-established IT hubs like Bengaluru, Hyderabad, and Chennai foster collaboration, R&D, and the growth of tech startups.
2. Slow Digital Transformation: Despite some progress, Pakistan is still catching up with the adoption of emerging technologies like Artificial Intelligence (AI), Blockchain, and Internet of Things (IoT).	**Malaysia**: The government has been focusing on digital transformation, with a strong push toward AI, IoT, and cloud computing.
3. Limited Government Policies for Freelancers: Pakistan does not have comprehensive frameworks or strong incentives for freelancers, limiting their growth potential.	**Bangladesh**: The government has launched initiatives to train and support freelancers, including offering access to digital platforms.

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[17] Retrieved from following weblinks detailed in references:
https://meity.gov.in, https://www.mdec.org.my, https://www.ictd.gov.bd, https://www.neda.gov.ph, https://mic.gov.vn, https://www.oipa.org, https://www.dea.gov.vn

4. Limited Availability of Funding for IT Startups: While there are some programs, access to venture capital and angel investors for IT startups in Pakistan remains insufficient.	**Philippines**: Strong government-backed incubators and accelerators provide ample funding and resources for IT startups.
5. Skills Gap in Emerging Technologies: Although there is an increasing number of IT graduates, Pakistan's workforce lacks expertise in high-demand fields like AI, cybersecurity, and blockchain.	**Vietnam**: Vietnam has a growing pool of talent with strong expertise in AI, machine learning, and cloud computing.
6. Limited Access to Global Platforms for Freelancers: Pakistan's freelancers face challenges with limited access to international payment systems and platforms.	**India**: India's freelancers enjoy access to global platforms like Upwork, Freelancer, and Fiverr, with smoother payment systems.
7. Lack of Robust Quality Standards for IT Services: Pakistan does not have as strong international quality certifications as other leading IT outsourcing destinations.	**Malaysia**: Malaysia's IT industry is recognized for international quality standards and certifications, enhancing global trust.

Weaknesses of Pakistan's IT & Freelancing Industry	Strengths of Global IT Industries[19]
8. Inadequate Support Systems for Freelancers: Pakistan lacks a structured support system to help freelancers connect with clients or protect their legal interests.	**Philippines**: The Philippines provides a strong freelance ecosystem, with better community support and a favorable regulatory environment.
9. Insufficient Technological Research and Development (R&D): Pakistan's investment in R&D remains low, which affects innovation and the country's ability to produce cutting-edge technology.	**India**: India leads in innovation and R&D, producing worldclass IT solutions and driving technological advancement.

10. Poor Internet Connectivity in Rural Areas: While urban centers have relatively good internet connectivity, rural areas face challenges with slow internet speeds.	Vietnam: Vietnam has strong national broadband infrastructure, with widespread internet connectivity, including in rural areas.

8.1   Mitigation Strategies for Pakistan's IT & Freelancing Industry Weaknesses

Government support should prioritize the creation of IT parks, incubators, and tech hubs, especially in rural regions. Publicprivate partnerships can help boost infrastructure. Pakistan's educational institutions should invest in advanced curriculum and training programs for AI, blockchain, and cybersecurity. Collaboration with global tech companies for knowledge transfer would be essential. The government could introduce freelancer-friendly policies, such as tax incentives, access to international payment systems, and creation of dedicated freelance forums. Establish more venture capital funds and angel investors targeting IT and technology startups to foster innovation and entrepreneurship. Pakistan needs more comprehensive initiatives, like DigiSkills.pk, to offer training in emerging technologies and bridge the skills gap. Pakistan should work with financial institutions to ensure better access to global payment systems for freelancers and IT companies. Introduction of international certifications and industry standards (like ISO, CMMI) for IT services to raise Pakistan's profile in global markets. Create structured platforms and legal support systems that allow freelancers to operate more efficiently and safeguard their rights. Increase government and private sector funding for technological R&D to spur innovation and improve Pakistan's technological output. Investing in broadband infrastructure in rural areas to bridge the digital divide, enabling more freelancers to access global markets will also trigger an economic boom to accelerate export of IT Industry.

9. SWOT Analysis

Strengths

i. **Young, Skilled Workforce:** Pakistan has a large, young population with over 60% under the age of 30, providing a dynamic and adaptable workforce. Many young professionals are trained in IT and digital skills, contributing to a growing number of tech entrepreneurs and freelancers.

ii. **Low Labor Costs:** One of Pakistan's key competitive advantages is its relatively low labor cost compared to global players, especially India and the Philippines, making it an attractive destination for outsourcing and freelancing.

iii. **Government Support:** The government's initiatives, such as DigiSkills, Special Technology Zones (STZs), and tax exemptions for IT exports, support the growth of both the IT and freelancing sectors.

iv. **Growing Freelance Market:** Pakistan ranks among the top five freelancing countries globally. With a large pool of skilled freelancers, it generates substantial foreign exchange and serves clients from across the globe.

Weaknesses

i. **Infrastructure Challenges:** Poor internet connectivity, power outages, and lack of reliable infrastructure in some regions hinder the growth of the IT and freelancing sectors, especially in rural areas where digital access is limited. ii. **Regulatory and Taxation Issues:** Complex tax regulations and lack of a clear framework for freelancers make it difficult for individuals to comply with tax laws. Also, the regulatory environment for IT startups and freelancers can be restrictive due to bureaucratic hurdles.

iii. **Limited Access to Global Payment Systems:** Pakistan still faces challenges related to access to international payment gateways like PayPal. While platforms like Payoneer exist, they still don't offer the same ease of use or flexibility, limiting opportunities for freelancers.

iv. **Intellectual Property Protection:** While Pakistan has intellectual property laws, enforcement remains weak. This can discourage investment in tech innovation and lead to concerns over software piracy, especially for IT firms.

Opportunities

i.   **Increasing Global Demand for IT Services:** With global digital transformation, there is rising demand for software development, cybersecurity, AI, and other tech services. Pakistan can capitalize on this growing demand, particularly in the U.S. and European markets, where there is a shortage of tech talent.

ii. **Government Policies and Incentives:** Continued government initiatives, such as the National Freelance Facilitation Policy, tax incentives, and STZs, provide an excellent foundation for growth. These policies can boost international trade, especially in IT exports and freelancing.

iii. **Growth of Remote Work:** The global shift towards remote work post-COVID19 creates ample opportunities for Pakistani freelancers and IT professionals to tap into a broader range of international clients.

iv. **Digital Skills Development Programs:** Initiatives like DigiSkills and Google's Digital Skills Program are positioning Pakistan's workforce to become more competitive in global digital markets, providing opportunities for youth and women to access the freelancing market.

Threats

i.   **Competition from Other Low-Cost Countries:** Pakistan faces stiff competition from other low-cost freelancing hubs like India, the Philippines, and Bangladesh. While Pakistan is a leading player in global freelancing, these countries have larger, more established markets with better infrastructure.

ii. **Cybersecurity Concerns:** The lack of robust cybersecurity measures makes both the IT sector and freelancing industry vulnerable to cyber-attacks, data theft, and fraud, which could harm the reputation of freelancers and IT companies in Pakistan.

iii. **Regulatory Overreach and Censorship:** Legal frameworks like PECA 2016 could result in excessive censorship or regulation of online activities, leading to restrictions on freelancing platforms or IT services. Moreover, Pakistan's general political instability can create uncertainty for businesses.

iv. **Brain Drain:** Many highly skilled tech professionals and freelancers are leaving Pakistan for better opportunities in Western countries, leading to a potential shortage of talent and investment within the local tech ecosystem.

10. EETH Analysis

The EETH (Enhance Strength, Eliminate Weakness, Take Advantage of Opportunities, and Hedge Against Threats) Analysis provides a strategic approach to improving the performance of Pakistan's IT and freelancing industry by enhancing strengths, addressing weaknesses, seizing opportunities, and protecting against threats. Below is a breakdown of how Pakistan can leverage this framework to boost the growth of its IT and freelancing sectors inferred from the research:

1. Enhance Strengths

i. *Action Plan for Young, Skilled Workforce*

- **Focus on continuous skill development**: As Pakistan's workforce is young and tech-savvy, it is crucial to invest in continuous education and skill development programs that provide certifications in emerging fields such as Artificial Intelligence (AI), blockchain, data science, and cybersecurity. These programs can be aligned with global industry standards to improve the employability of IT professionals and freelancers.

- **Collaborations with global tech giants**: Develop partnerships with international companies for internships, training programs, and apprenticeships to provide practical exposure and ensure that the workforce remains competitive.

ii.   Action Plan for Low Labor Costs

- **Leverage cost advantages in outsourcing**: Pakistan can further strengthen its position as a competitive outsourcing hub by promoting its labor cost advantage, especially in areas like software development, mobile app development, and digital marketing.

- **Incentivize startups**: Provide special incentives to startups that hire a large number of tech professionals or freelancers, helping create job opportunities while keeping operational costs low.

iii.   Action Plan for Government Support (DigiSkills, STZs, Tax Exemptions)

- **Expand government initiatives**: Increase funding for government-backed programs like DigiSkills and STZs. In particular, provide tax breaks and other incentives to IT businesses and freelancers who register in these zones, to encourage more international business partnerships.

- **Promote local and international partnerships**: Encourage public-private collaborations to scale these government initiatives, ensuring their sustainability and growth.

2. Eliminate Weaknesses

i.   Action Plan for Infrastructure Challenges (Internet Connectivity, Power Supply)

- **Upgrade infrastructure**: The government and private sector should invest in improving broadband internet connectivity across the country, especially in rural and underdeveloped areas. Enhanced internet access will enable IT businesses and freelancers to work seamlessly and effectively.

  Increase investment in renewable energy: To address power outages, invest in solar energy projects and other renewable resources to ensure a stable power supply for digital workers and IT companies.

ii.   Action Plan for Taxation and Regulatory Challenges

- **Simplify tax procedures**: Introduce a simplified taxation framework specifically for freelancers and small IT businesses, possibly through the creation of a dedicated

- freelancing tax policy. The government should also offer better clarity about tax liabilities for freelancers earning international income.
  - **Streamline regulatory frameworks**: Revise and modernize regulations to foster innovation while balancing the need for consumer protection. For instance, simplify registration processes for freelancers and provide a dedicated regulatory body that handles freelancing-related complaints and issues.

iii.   *Action Plan for Limited Access to Global Payment Systems*

- **Facilitate international payments**: Work with financial institutions and international payment providers to introduce systems like PayPal, Stripe, or TransferWise that facilitate smoother cross-border transactions for Pakistani freelancers and IT businesses.
- **Develop domestic solutions**: In the absence of major global payment systems, encourage the development of local payment solutions tailored to the needs of freelancers, including lower transaction fees and real-time processing.

iv.   *Action Plan for Weak Intellectual Property Protection*

- **Strengthen Intellectual Property Rights (IPR) laws**: The government should increase efforts to enforce intellectual property rights. This can include stricter penalties for violations, increased public awareness campaigns about the importance of IP, and better mechanisms for dispute resolution in the tech sector.

  Global IP collaborations: Collaborate with international organizations like WIPO (World Intellectual Property Organization) to create a framework that protects digital products, software, and designs.

3. Take Advantage of Opportunities

i.   *Action Plan for Increasing Global Demand for IT Services*

- **Target global markets**: Position Pakistan as a high-quality, cost-effective outsourcing destination, targeting countries with growing demand for IT services, especially in sectors like fintech, e-commerce, and cloud computing.
- **Develop niche expertise**: Pakistan should develop expertise in emerging areas such as artificial intelligence, blockchain, 5G, and cybersecurity, allowing the country to position itself as a leader in these high-demand technologies.

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ii. *Action Plan for Growth of Remote Work*

- **Enhance freelancing platforms**: Create more opportunities for Pakistani freelancers by building local freelancing platforms tailored to specific industries like software development, content creation, and digital marketing. Encourage collaboration with global freelancing platforms to expand market reach.

- **Establish remote work hubs**: Pakistan can develop remote work hubs in urban centers where freelancers can find better infrastructure and networking opportunities. These hubs can attract international clients and offer a collaborative environment for freelancers.

iii. *Action Plan for Government Policies and Incentives*

- **Enhance digital skills training**: Programs like DigiSkills have been effective in empowering the youth. The government should continue to scale these initiatives, particularly for marginalized groups, to ensure inclusivity and economic participation.

  Offer new incentives for innovation: Pakistan can offer additional tax relief and financial support to innovative tech startups that introduce new products or services into the global market.

iv. *Action Plan for Digital Skills Development Programs*

- **Promote global certifications**: Partner with global organizations to provide certification programs in fields like cloud computing, data science, and digital marketing, ensuring Pakistani workers are globally competitive.

- **Increase public-private partnerships**: Strengthen collaborations between the private tech sector, universities, and government agencies to bridge the skills gap and ensure that education programs are aligned with industry needs.

4. Hedge Against Threats

i. *Action Plan for Competition from Other Low-Cost Countries*

- **Focus on quality and niche markets**: Pakistan should focus not only on low costs but also on offering high-quality services and specialized skills that can differentiate the country from competitors. For example, Pakistan can specialize in high-demand tech areas like cloud computing or AI development.

- **Promote Pakistan's tech ecosystem**: Through national campaigns and digital marketing, Pakistan can showcase success stories from its tech and freelancing

- industry, enhancing its image as a reliable, innovative partner for outsourcing and freelancing.

ii.   *Action Plan for Cybersecurity Concerns*

- **Improve cybersecurity measures**: Strengthen national cybersecurity infrastructure by establishing dedicated agencies to address cyber threats and ensure that both IT firms and freelancers comply with data security standards.

   Educate workers and clients: Conduct training programs for freelancers and IT firms on best practices in cyber hygiene, data encryption, and online fraud prevention to minimize risks and enhance trust in the Pakistani digital workforce. **iii. Action Plan for Regulatory Overreach and Censorship**

- **Advocate for balanced regulation**: Work with policymakers to ensure that laws like PECA 2016 do not stifle freedom of expression or limit access to global platforms. Encourage a collaborative dialogue between the government, digital businesses, and civil society to ensure regulations protect citizens while fostering innovation.

- **Develop a supportive legal environment**: Advocate for a legal framework that supports digital entrepreneurship, including freelancer rights, contract enforcement, and dispute resolution.

iv.   *Action Plan for Brain Drain*

- **Encourage tech entrepreneurship**: Create policies that incentivize tech professionals to stay in Pakistan, such as funding opportunities for startups, incubators, and co-working spaces that provide support for young tech entrepreneurs.

- **Offer competitive salaries and benefits**: Develop initiatives aimed at increasing salaries and creating a more attractive working environment for IT professionals to prevent the outflow of talent.

11. Blavatnik School of Government's Oxford Index of Public Administration (OIPA) framework Analysis

The Blavatnik School of Government, part of the University of Oxford, offers a comprehensive approach to public policy analysis. While they may not have a specific index focused on the IT and freelancing industry in Pakistan, their broader framework for public

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policy analysis can be applied to assess the IT and freelancing industry in Pakistan with respect to government regulation, economic development, education, infrastructure,

and international competitiveness. Therefore, outcomes of the Oxford Index of Public Administration (OIPA) framework analysis of Pakistan's IT and freelancing sectors is described as follows:

11.1   Policy Design and Effectiveness

The policies surrounding the IT and freelancing industry in Pakistan are often fragmented and lack comprehensive long-term strategies. Various initiatives like **DigiSkills** and **Special Technology Zones (STZs)** have been launched to support IT growth and freelancing, but there is no cohesive, national-level framework to integrate these efforts effectively.

Policy Gaps:

- **Taxation Framework**: There is no clear, simplified tax structure for freelancers. While freelancers contribute to the economy, the taxation policies remain convoluted, which may discourage new freelancers from entering the sector.

- **Support for Innovation**: The policies focusing on innovation within the IT and freelancing sectors are still underdeveloped. There is a need for a more **targeted approach** to support R&D, technology adoption, and entrepreneurship.

Effectiveness Analysis:

- **DigiSkills** aims to provide training to millions of Pakistanis to improve their digital skills, but the effectiveness of the program is constrained by the lack of strong monitoring systems and integration with global platforms.

- **STZs** offer infrastructure and tax incentives for IT businesses, but these zones are not yet fully realized and have not been able to create an attractive environment for all sectors of the industry, especially in rural areas.

11.2   Regulatory and Legal Framework

Challenges includes:

- **Limited Legal Framework**: Pakistan's current **regulatory environment** lacks the necessary frameworks for global freelancing platforms to operate smoothly.

  For example, **PayPal** is unavailable in Pakistan, which affects freelancers' ability to receive international payments easily.

- **Intellectual Property Rights**: The IT sector also faces challenges in **IP protection**, with existing laws being inadequate to prevent the exploitation of software and digital content.
- **Cybersecurity**: As the IT and freelancing sectors grow, there are increasing concerns about **data privacy and cybersecurity**. Pakistan's cybersecurity laws and regulations have not kept pace with the rapid growth in digital services.

Policy Recommendations:

- **Policy Integration**: A stronger, integrated **regulatory framework** that includes global digital trade, **data protection**, and **intellectual property** could support the growth of Pakistan's IT and freelancing industry.
- **Incentive Programs**: Further **government support** for the protection of freelancers' intellectual property and easier tax compliance systems could significantly improve the overall working environment.

11.3 Infrastructure and Investment

Challenges includes:

- **Lack of Technological Infrastructure**: While larger cities have access to better technology infrastructure, rural areas continue to experience poor internet connectivity and power shortages, which limits the productivity of IT businesses and freelancers outside major cities.
- **Limited Investment in Startups**: The Pakistani government has not created sufficient policies to attract **venture capital** or **angel investors**. This stifles the ability of startups in IT and freelancing to scale up quickly.

Investment Recommendations:

- **Infrastructure Expansion**: Increased government investment in **broadband connectivity**, especially in rural areas, would ensure that freelancers across Pakistan have equal access to global clients.
- **VC and Innovation Funds**: By establishing dedicated **innovation and technology funds**, Pakistan could foster the growth of high-potential tech startups and enhance the global competitiveness of its IT sector.

11.4   Education and Skills Development

Challenges includes:

- **Skills Mismatch**: Despite increasing access to online learning platforms, there remains a **mismatch** between the **skills taught** in Pakistan's universities and the **demands of the global IT and freelancing markets**. Areas such as **data science**, **cloud computing**, and **blockchain** are not adequately covered in most curricula.
- **Digital Literacy**: Although the government has launched several digital literacy programs, such as **DigiSkills**, they often fail to reach the full potential of **youth and women**, who remain underrepresented in the workforce.

Policy Recommendations:

- **Curriculum Reform**: Collaboration with international tech giants and local startups can lead to **curriculum reforms** that reflect the evolving demands of the IT industry.
- **Youth and Gender-Focused Programs**: Specific initiatives that **target women and rural youth** for training in digital skills and freelancing can help create a more diverse and robust talent pool.

11.5   Global Competitiveness and International Trade

Challenges includes:

- **Global Perception**: While Pakistan has emerged as a leading country in **freelancing**, it still faces a **global perception issue** due to concerns about payment systems, regulatory issues, and the **lack of professional standards** in the freelancing ecosystem.
- **Outsourcing and BPO**: Pakistan has been losing its competitive edge in **BPO services** to countries like **India**, **Philippines**, and **Bangladesh**, which have better-established outsourcing ecosystems.

Policy Recommendations:

- **Global Market Integration**: Pakistan could significantly improve its position in the global IT and freelancing markets by facilitating partnerships with global platforms, offering better **tax incentives**, and enhancing **digital trade agreements**.

- **Marketing Pakistan as a Digital Hub**: A **national campaign** to promote Pakistan's IT and freelancing talent can help improve global perceptions, attracting foreign clients and investors.

11.6   Social and Cultural Context

Challenges includes:

- **Gender Inequality**: Women, especially in rural areas, face significant barriers to entering the IT and freelancing sectors. These include limited access to education, cultural restrictions, and lack of mentorship.
- **Cultural Attitudes toward Freelancing**: Freelancing is often seen as an unstable career path, which prevents many potential freelancers from entering the market.

Policy Recommendations:

- **Targeted Social Programs**: Programs that empower **young women** and **minority groups** to pursue freelancing careers can unlock a significant talent pool. Offering mentorship and skill development programs specifically for these groups can bridge the gender gap.
- **Public Awareness Campaigns**: Promoting the **stability and success** of freelancing careers can help shift societal views on freelancing and attract more young professionals into the industry.

11.7   Summary of Blavatnik School's Public Policy Framework Analysis

By adopting the Blavatnik School of Government's approach to public policy analysis, we can identify the structural challenges and barriers that impede the growth of Pakistan's IT and freelancing industry. To foster sustainable growth, Pakistan will need to:

- Strengthen the regulatory framework.
- Improve skills development and infrastructure.
- Attract investment and venture capital.
- Promote global integration and diversity in the workforce.

Addressing these challenges will enable Pakistan to leverage its young, tech-savvy population, positioning itself as a global leader in the digital economy.

12. GAP analysis of Pakistan's IT exports and freelancing Sector with Philippines and Vietnam with respect to OIPA

A GAP analysis of Pakistan's IT and Freelancers Sector with respect to the Philippines and Vietnam has been carried to assess the areas of improvements for Pakistan in the context of OIPA and observed as follows:

1. IT Export Performance

In FY2024, Pakistan's IT exports reached $3.2 billion, marking a 24% year-on-year growth. In addition, the SBP reports that Computer Services contributed approximately 80.5% of these exports. Whereas, Vietnam's IT exports have seen significant growth, with exports to the Philippines alone amounting to $5.11 billion in 2022 and the Philippines has a wellestablished IT-BPO industry, contributing substantially to its economy.

Gap Identified: Pakistan's IT export volume remains lower than that of Vietnam and the Philippines, indicating potential for growth.

2. Freelancing Ecosystem

Pakistan has a burgeoning freelancing community, with estimates of over 1 million freelancers contributing to the digital economy. Challenges include limited access to global payment gateways and the need for advanced skill development programs. On the other hand, both the Philippines and Vietnam have more streamlined processes, including access to global payment systems like PayPal, and government-supported training programs, enhancing their freelancers' competitiveness.

Gap Identified: Pakistan needs to improve payment infrastructure and provide targeted training to enhance freelancers' global competitiveness.

3. Infrastructure and Technology Access

Pakistan's Urban centers have relatively good internet connectivity, but rural areas face challenges in accessing high-speed broadband. The Pakistan Telecommunication Authority (PTA) is working towards expanding internet penetration, but disparities remain.

Both Vietnam and the Philippines have made significant investments in ICT infrastructure, resulting in higher internet penetration rates and more uniform access across regions.

Gap Identified: Pakistan must invest in expanding and upgrading its ICT infrastructure to ensure equitable access nationwide.

4. Legal and Regulatory Framework

In Pakistan, the Federal Board of Revenue (FBR) has introduced tax incentives for the IT sector, but complexities in tax administration and a lack of robust intellectual property protections pose challenges. Whereas, the Vietnam and the Philippines have more developed legal frameworks supporting the IT industry, including clearer tax policies and stronger intellectual property laws.

Gap Identified: Pakistan needs to simplify tax policies and strengthen legal protections to foster IT sector growth.

5. Public Administration and Governance

Efforts are being made by Pakistan to improve governance in the IT sector, but bureaucratic hurdles and policy implementation issues persist. Whereas, Vietnam and the Philippines have more efficient public administration systems supporting IT industry growth, including proactive government policies and public-private partnerships.

Gap Identified: Pakistan should streamline administrative processes and enhance governance to support the IT sector effectively.

Based on the analysis following policy actions are proposed taken by these countries can address the challenges currently faced by Pakistan in its IT exports and freelancing sectors to abridge the GAP:

Policy Actions	How It Addresses Pakistan's Challenges
1. Comprehensive Tax Incentives:	**Philippines**: Tax holidays and export promotion through PEZA. **Vietnam**: Tax incentives and SEZs like Quang Trung Software City. **For Pakistan**: Streamline tax benefits for IT exporters and freelancers. Establish more IT-specific SEZs for focused growth.
2. Workforce Development:	**Philippines**: Language proficiency and IT training integrated into education. **Vietnam**: Advanced training in AI, blockchain, IoT, and emerging tech. **For Pakistan**: Implement advanced skill development programs aligned with global demand in emerging technologies.

Policy Actions	How It Addresses Pakistan's Challenges
3. Infrastructure Development:	**Philippines**: IT parks with robust digital infrastructure. **Vietnam**: Well-developed tech zones supporting startups.
Policy Actions	**How It Addresses Pakistan's Challenges**
	For Pakistan: Expand IT parks nationwide and upgrade digital infrastructure, particularly in underserved regions.
4. Government Support for Startups:	**Philippines**: Startup Philippines initiative with grants and support. **Vietnam**: Vibrant ecosystem backed by foreign investment. **For Pakistan**: Provide venture capital funding and ease bureaucratic hurdles for tech startups.
5. Diversification of Export Markets:	**Philippines**: Serves North America, Europe, and Asia-Pacific. **Vietnam**: Targets EU, Japan, and neighboring regions. **For Pakistan**: Develop strategic partnerships in Europe, AsiaPacific, and high-value markets to reduce reliance on U.S. and Gulf countries.
6. Promotion of Emerging Technologies:	**Philippines**: Integration of AI and RPA into BPO services. **Vietnam**: Focus on AI, blockchain, and IoT with notable success stories. **For Pakistan**: Invest in R&D for AI, blockchain, IoT, and fintech to diversify IT service offerings.
7. Freelancer Ecosystem Enhancement:	**Philippines**: Financial inclusion for freelancers and integration into global platforms. **Vietnam**: Strong global presence on Upwork and Fiverr. **For Pakistan**: Ensure financial inclusion for freelancers and promote participation in global freelancing platforms.
8. Digital Branding and Marketing:	**Philippines**: Highlights global successes to attract investment. **Vietnam**: Uses case studies like Axie Infinity to demonstrate tech expertise. **For Pakistan**: Showcase IT export success stories and brand Pakistan as a quality-driven outsourcing destination.

13. GAP Analysis

A GAP Analysis of the IT and freelancing industry in Pakistan focuses on identifying the difference between the current state of the industry and the desired state. It highlights the areas

where improvements are needed to align the industry with its full potential and meet both national and global demands. Using the 80/20 Principle, the following analysis breaks down the major gaps (fault lines) in various areas affecting the growth and competitiveness of IT and Freelancing industry derived in light of inference of the various analytical tools carried in the earlier segments of this document:

13.1   Skills Gap and Workforce Development

Current State:
- **Skills Mismatch**: There is a significant gap between the skills available in the workforce and the skills required by global markets. Although Pakistan produces a large number of graduates, many lack proficiency in cutting-edge fields like data science, AI, cloud computing, and blockchain.
- **Limited Training Programs**: While initiatives like DigiSkills exist, they are often not comprehensive enough to prepare freelancers for specialized international markets.

Desired State:
- **Alignment with Global Needs**: Pakistan needs a workforce that is proficient in high-demand IT skills and capable of competing in global markets. This includes both technical skills and soft skills like communication, project management, and client relationship management and therefore, strong desire of curriculum re-alignment with 21st Century standards.
- **Widespread Access to Training**: More inclusive, well-funded, and expansive training programs that address the current industry gaps (like AI, cybersecurity, and software engineering) need to be implemented across urban and rural areas.

GAP: The lack of advanced and specialized training programs and an unaligned educational system with international job market demands is hindering growth in IT and freelancing.

13.2   Infrastructure and Technology Access

Current State:

- **Unequal Access to High-Speed Internet**: Internet speeds and accessibility are better in major cities, but rural areas still face limitations in terms of broadband connectivity. Electricity shortages also contribute to operational inefficiencies.
- **Limited Digital Tools and Platforms**: While there are some tools available for freelancers, many lack access to international payment gateways like PayPal and global job platforms that can help them reach a broader market.

Desired State:

- **Reliable and Accessible Infrastructure**: Pakistan should have nationwide high-speed internet coverage, even in rural areas, along with stable electricity supply.
- **Integration with Global Platforms**: Access to global payment systems (such as PayPal) and digital platforms that enable seamless interaction with international clients.

GAP: Infrastructure deficiencies in broadband internet and digital payment systems significantly limit the potential of freelancers and small IT businesses.

13.3   Legal, Institutional and Regulatory Framework

Current State:

- **Complex Tax System**: The freelancing community and small IT businesses in Pakistan face challenges in understanding the country's complex tax structure. There are no clear guidelines on how to tax freelancers or how the GST (General Sales Tax) applies to them.
- **Limited IP Protection**: Intellectual property rights are not as robust as in other competitive countries, which can deter global clients from trusting freelancers or businesses in Pakistan with sensitive data or proprietary projects.
- **Lack of Legal Protections for Freelancers**: Freelancers do not have the same legal protections as full-time employees, which impacts job security and dispute resolution.

Desired State:

- **Clear and Supportive Tax Framework**: A tax system that is simplified and specifically caters to freelancers and the IT industry.

- **Robust Intellectual Property Laws**: Stronger laws and policies around IP protection and digital rights to ensure freelancers and businesses can safeguard their work.
- **Freelancer Legal Protection**: Legal support systems that enable freelancers to resolve disputes with clients, along with job security provisions similar to other forms of employment.

GAP: The absence of a freelancer-friendly tax system and inadequate legal frameworks for IP protection and dispute resolution are barriers to scaling the IT and freelancing industry.

13.4   Global Market Access and Recognition

Current State:

- **Low Visibility on Global Platforms**: While Pakistan has a large number of freelancers, the country still struggles with low recognition on global freelancing platforms like Upwork and Fiverr.
- **Competition with Other Countries**: Freelancers from countries like India and the Philippines often have a higher presence on global platforms due to betterestablished ecosystems and recognition.

Desired State:

- **Global Recognition of Pakistani Talent**: Pakistan should enhance its presence on global freelancing platforms and position itself as a leading destination for tech talent.
- **Branding and Outreach Programs**: A strong global branding campaign that promotes the IT and freelancing sectors in Pakistan could attract clients from around the world.

GAP: Limited international visibility and lack of national branding efforts prevent Pakistani freelancers and IT businesses from competing effectively on the global stage.

13.5   Financial and Investment Support

Current State:

- **Limited Access to Funding**: IT startups and freelancers often face difficulties in accessing funding or investment. The lack of venture capital (VC) and angel investors means that scaling up an IT business or freelancing platform is difficult.
- **High Transaction Fees**: Available payment systems, such as Payoneer, have high transaction fees, making it less cost-effective for freelancers to operate.

Desired State:

- **Easier Access to Investment**: A more robust VC ecosystem and governmentbacked financing schemes for tech startups and freelancers.
- **Lower Transaction Costs**: The ability to use global payment systems like PayPal at lower transaction costs to ensure higher profit margins for freelancers.

GAP: The lack of financial support mechanisms and high transaction fees limit the ability of freelancers and small IT businesses to scale effectively.

13.6   Cultural and Social Barriers

Current State:

- **Gender Inequality**: Women in Pakistan face cultural and societal barriers that limit their participation in freelancing and IT. This includes challenges related to access to education, mentorship, and online networking opportunities.
- **Perceptions of Freelancing**: Freelancing is often seen as an unstable and unreliable career path in Pakistan, especially among traditional job-seekers and parents.

Desired State:

- **Inclusive Workforce**: Initiatives to empower women and minority groups by improving access to digital skills training, mentorship, and online work opportunities.
- **Social Acceptance of Freelancing**: Programs to change the perception of freelancing, highlighting its success stories and economic potential to encourage more individuals to pursue it as a viable career.

GAP: Cultural barriers around gender equality and misconceptions about freelancing continue to limit workforce participation in the sector, especially among women and marginalized communities.

13.7   Summary of Gaps in Pakistan's IT and Freelancing Sector

The GAP Analysis of Pakistan's IT and freelancing industry reveals several areas that require attention to unlock their potential:

- **Skills Development**: There is a gap in specialized skill training, particularly in emerging technologies.
- **Infrastructure**: Internet access and digital payment systems need improvement, especially in rural areas.
- **Regulatory Framework**: A lack of clear policies for freelancers, IP protection, and taxation limits industry growth.
- **Global Competitiveness**: Limited international recognition and branding hinder Pakistan's position in the global market.
- **Financial Support**: Access to capital for startups and freelancers remains constrained.
- **Cultural Barriers**: Gender inequality and societal perceptions of freelancing restrict industry participation.

By addressing these gaps through targeted policy initiatives, infrastructure development, educational reforms, and cultural shifts, Pakistan's IT and freelancing industry can achieve significant growth, benefiting from the global digital economy.

14. Conclusion

The IT and freelancing sectors in Pakistan hold immense potential for driving economic growth and enhancing global competitiveness. This industry, fueled by government initiatives such as DigiSkills, Special Technology Zones (STZs), and tax incentives, have emerged as pivotal contributors to the country's digital economy. Pakistan's IT export sector is experiencing promising growth, driven by a young, dynamic workforce and increasing global demand for digital services. Similarly, the freelancing industry has empowered a growing number of entrepreneurs, creating significant opportunities for digital innovation and skill development. With the government's active support, these sectors have the potential to position Pakistan as a key player in the global digital economy.

However, despite these promising developments, Pakistan faces significant challenges in sustaining and expanding its IT and freelancing industry. Infrastructure deficits, such as unreliable internet connectivity and inadequate power supply, hinder the efficiency of digital

operations. Furthermore, regulatory barriers, including complex taxation policies and limited payment gateway options, create obstacles for freelancers and IT businesses seeking to compete on an international scale. The absence of comprehensive data protection laws and weak cybersecurity frameworks further exacerbate the challenges, raising concerns about trust and safety in digital transactions.

To address these issues and unlock the full potential of this industry, strategic reforms and investments are imperative. Strengthening cybersecurity regulations and establishing robust data protection laws will build trust and ensure the safety of digital transactions. Simplifying tax procedures and increasing awareness campaigns for freelancers can help them navigate their obligations more effectively. Expanding international payment gateways, such as PayPal, and improving banking systems will facilitate easier crossborder transactions, enabling freelancers and IT companies to access global markets seamlessly.

Moreover, addressing infrastructure gaps is crucial for supporting sustained growth. Investments in reliable internet connectivity, advanced technology parks, and consistent energy supply will enhance operational efficiency and competitiveness. Skill development initiatives must also be prioritized to equip the workforce with cutting-edge expertise, ensuring they remain competitive in a rapidly evolving global market. Programs like DigiSkills must be expanded to reach underserved regions, fostering inclusivity and equal opportunities for all.

The global demand for skilled digital labor presents a significant opportunity for Pakistan to capitalize on its demographic advantage. With a large pool of talented and costcompetitive professionals, the country is well-positioned to attract international clients and investors. However, the rising competition from other nations and cybersecurity risks necessitate proactive measures to sustain competitiveness. By fostering innovation, improving policy implementation, and ensuring institutional reforms, Pakistan can address these challenges and secure its place as a global leader in IT and freelancing.

By the virtue of this study, it has been established that Pakistan's IT and freelancing sectors have demonstrated substantial potential for economic growth and global recognition. Government-led initiatives, combined with private sector dynamism, have laid a strong foundation for success. However, addressing key challenges such as infrastructure deficits, regulatory barriers, and cybersecurity issues is vital for long-term sustainability. By enhancing its strengths, leveraging opportunities, and implementing targeted reforms, Pakistan can

solidify its position as a major player in the digital economy, driving progress at both national and global levels.

15. Recommendations and Areas of Improvement

To enhance the growth and competitiveness of Pakistan's IT and freelancing sectors, several areas require improvement at macro and micro levels. These improvements can help to address current challenges, capitalize on emerging opportunities, and solidify Pakistan's position as a global player in the digital economy.

15.1   Recommendations and Proposals for Areas of Improvement (Macro - Level)

In line with the policy research paper and in view of 80/20 principle, following strategies are proposed for remedial intervention to catalyze the IT export growth by bringing transformation in IT and Freelancing Sector with the help of freelancers and IT professionals:

i. **Policy Integration**: A stronger, integrated **regulatory framework** that includes global digital trade, **data protection**, and **intellectual property** could support the growth of Pakistan's IT and freelancing industry.

ii. **Incentive Programs**: Further **government support** for the protection of freelancers' intellectual property and easier tax compliance systems could significantly improve the overall working environment.

iii. **Infrastructure Expansion**: Increased government investment in **broadband connectivity**, especially in rural areas, would ensure that freelancers across Pakistan have equal access to global clients.

iv. **VC and Innovation Funds**: By establishing dedicated **innovation and technology funds**, Pakistan could foster the growth of high-potential tech startups and enhance the global competitiveness of its IT sector.

v. **Curriculum Reform**: Collaboration with international tech giants and local startups can lead to **curriculum reforms** that reflect the evolving demands of the IT industry.

vi. **Youth and Gender-Focused Programs**: Specific initiatives that **target women and rural youth** for training in digital skills and freelancing can help create a more diverse and robust talent pool.

vii. **Global Market Integration**: Pakistan could significantly improve its position in the global IT and freelancing markets by facilitating partnerships with global platforms, offering better **tax incentives**, and enhancing **digital trade agreements**.

viii. *Marketing Pakistan as a Digital Hub: A national campaign to promote* Pakistan's IT and freelancing talent can help improve global perceptions, attracting foreign clients and investors.

ix. **Targeted Social Programs**: Programs that empower **young women** and **minority groups** to pursue freelancing careers can unlock a significant talent pool. Offering mentorship and skill development programs specifically for these groups can bridge the gender gap.

x. **Public Awareness Campaigns**: Promoting the **stability and success** of freelancing careers can help shift societal views on freelancing and attract more young professionals into the industry.

15.2 Recommendations and Proposals for Areas of Improvement (Micro - Level)

To enhance the growth and competitiveness of Pakistan's IT and freelancing sectors, several areas require improvement at micro level. These improvements can help to address current challenges, capitalize on emerging opportunities, and solidify Pakistan's position as a global player in the digital economy as highlighted below:

i. **Invest in broadband expansion**: The government and private sector should invest in expanding broadband internet infrastructure, especially in underdeveloped and rural areas.

ii. **Improve network reliability**: Work with telecom companies to improve network reliability and provide stable high-speed internet connections at affordable rates.

iii. **Renewable energy solutions**: Encourage the use of renewable energy (e.g., solar, wind) to provide uninterrupted power to tech hubs and freelancing spaces.

iv. **Grid modernization**: Invest in upgrading the national grid to ensure a stable power supply, especially for tech industries that depend on continuous, highperformance operations.

v. **Revamp education systems**: Modernize the curriculum at universities and technical institutes to include **hands-on experience**, **industry certifications**, and **latest technologies**.

vi. **Promote continuous learning**: Invest in **online platforms** and **governmentbacked training initiatives** (like **DigiSkills**) that offer relevant technical and soft skills training.

vii. **Focus on industry-driven certifications**: Encourage certifications in highdemand areas such as **cloud computing**, **AI**, **data analytics**, **cybersecurity**, and **web development**.

viii. **Freelancer skill workshops**: Expand programs that provide **freelancing skills** such as time management, negotiation, digital marketing, and tax management to help freelancers operate effectively.

ix. **Collaborations with freelancing platforms**: Partner with global freelancing platforms like **Upwork** and **Fiverr** to create **specialized training modules** for Pakistani freelancers.

x. **Simplify tax policies for freelancers**: Develop a clear, **freelancer-friendly tax policy** with specific guidelines for reporting income, claiming deductions, and paying taxes.

xi. **Create a dedicated freelancing tax framework**: Establish a taxation system that accounts for the unique nature of freelancing work, offering tax exemptions or reductions for IT services or exports.

xii. **Offer tax literacy programs**: Launch campaigns and workshops to increase awareness about taxes among freelancers and small IT businesses.

xiii. **Strengthen enforcement mechanisms**: Ensure better enforcement of intellectual property rights (IPR) by improving the judicial process and speeding up litigation.

xiv. **Raise awareness of IPR**: Launch awareness campaigns to educate freelancers and IT firms about the importance of **IP protection** and how to safeguard their work.

xv. **Negotiations for PayPal access**: The government should work towards bringing **PayPal** and other international payment platforms to Pakistan, allowing freelancers to access faster, safer, and more reliable payment systems. xvi. **Develop local solutions**: Encourage local fintech startups to develop affordable, international-compatible payment systems that can offer low transaction fees and cross-border transaction capabilities.

xvii. **Promote freelancing globally**: Launch **international marketing campaigns** to promote Pakistan's freelancing market and attract global clients. This can include targeting markets in the **U.S.**, **Europe**, and **Middle East**.

xviii. **Government-backed global partnerships**: Form partnerships with leading freelancing platforms to help Pakistani freelancers gain access to large-scale projects and more international clients.

xix. **Cybersecurity education**: Develop **national cybersecurity awareness programs** for IT businesses and freelancers, teaching them best practices for data protection, securing digital identities, and safeguarding sensitive client information.

xx. **Government support for cybersecurity tools**: Provide affordable access to **cybersecurity software** and tools for IT companies and freelancers to improve their digital safety.

xxi. **Develop robust data protection laws**: Introduce a **data protection framework** that aligns with global standards such as the **GDPR** to ensure the safe handling of personal and financial data in both IT and freelancing sectors.

xxii. **Encourage women in STEM (Science, Technology, Engineering, and Mathematics)**: Launch government and private sector programs that actively **encourage women to pursue careers in tech** through scholarships, mentorships, and skills training.

xxiii. **Support for women freelancers**: Create dedicated **freelancing platforms** for women that provide resources, job opportunities, and community support. xxiv. **Workplace diversity policies**: Encourage businesses to adopt **genderinclusive hiring practices** and offer flexible work environments that promote diversity and inclusivity in the tech space.

xxv. **Increase venture capital investment**: Provide government incentives, **tax breaks**, and **subsidies** for venture capitalists investing in tech startups, especially those focusing on disruptive technologies.

xxvi. **Foster incubators and accelerators**: Develop and fund more **tech incubators** and **startup accelerators** to help new companies grow, scale, and succeed in global markets.

xxvii. **Create an innovation-friendly environment**: Reduce bureaucratic hurdles and provide access to seed funding, mentorship, and networking opportunities for tech startups.

Improving Pakistan's IT and freelancing industry requires a multi-faceted approach that addresses infrastructure challenges, enhances education and skill development, simplifies regulations, and opens doors to global markets. By investing in these key areas, Pakistan can unlock the full potential of its IT and freelancing workforce, ensuring long-term economic growth and global competitiveness.

16. Logframe Matrix

The IT and freelancing industry in Pakistan is facing numerous challenges that hinder its growth and potential. Using the 80/20 principle, a comprehensive overview of the key issues, mitigation strategies, timelines for resolution, and the stakeholders involved, is proposed to promote IT export in the country and effective utilization of freelancer's community for economic growth:

Core Issue	Problem Description	Mitigation Strategy	Responsibility	Timeline
Internet Connectivity Issues	Frequent internet outages, slow speeds, and restrictions prevent freelancers from accessing global platforms.	Short-term: Use reliable VPNs to bypass restrictions. Medium-term: Improve ISP infrastructure. Long-term: Advocate for open internet policies.	PTA, PSEB, MoIT&T, Ministry of Interior, P@SHA, Internet Service Providers (ISPs), Freelancers, IT Associations	Short: 6 months Medium: 1-3 years Long: 5 years
Payment and Compensation Issues	Lack of accessible payment platforms (e.g., PayPal) forces freelancers to rely on costly or inefficient methods like Western Union.	Short-term: Use Payoneer and local banking solutions. Medium-term: Collaborate with international platforms (e.g., PayPal etc.). Long-term: Develop a localized payment gateway.	SBP, Financial institutions, P@SHA, Freelancers, Ministry of Finance, Payment Service Providers, Ministry of Foreign Affairs, Pakistan's Mission / Embassy's Abroad.	Short: 3 months Medium: 2 years Long: 5+ years

Legal and Regulatory Framework	Absence of standardized contracts and unclear tax obligations about freelancing and lack of awareness about local and international world	Short-term: Raise awareness about local and international laws and policies of contracts and taxes. Medium-term: Introduce standardized freelance contracts. Long-term: Create a dedicated	Ministry of Law and Justice, P@SHA, Legal professionals, PSEB, MoIT&T Freelance Associations, FBR, Local Tax Authorities	Short: 1 year Medium: 3 years Long: 6+ years
	taxation system lead to disputes and low compliance of prescribed regulatory requirements among freelancers.	legal framework for freelancers in line with international standards/ best practices.		
Infrastructure and Resource Limits	Inadequate co-working spaces, outdated tools, and inefficiencies in Software Parks and ERozgar Centers limit freelancers' access to essential resources.	Short-term: Provide access to free or affordable tools. Medium-term: Upgrade Software Parks and E-Rozgar Centers. Long-term: Expand infrastructure to underserved areas and introduce mentorship programs.	PSEB, Ministry of IT&T, Private Sector, P@SHA, Freelance Platforms	Short: 6 months Medium: 2 years Long: 5 years

Firewall Deficiencies	Government-imposed firewalls block access to critical platforms, reducing freelancers' ability to engage with international clients.	Short-term: Advocate for open internet policies. Medium-term: Monitor and minimize unnecessary restrictions. Long-term: Create governmentsupported frameworks that balance security and access to global platforms.	Ministry of Interior, Ministry of IT&T, P@SHA, PTA, PSEB, ISPs, Freelancers, IT Associations	Short: 6 months Medium: 3 years Long: 5+ years
VPN Deficiencies	VPNs used to bypass restrictions often result in slower speeds, unreliable connections, or exposure to cybersecurity risks.	Short-term: Choose reliable and secure VPNs. Medium-term: Promote government collaboration with VPN providers. Long-term: Establish stable alternatives for secure internet access.	Ministry of Interior, Ministry of IT&T, P@SHA, PTA, PSEB, ISPs, Freelancers, IT Associations	Short: 6 months Medium: 2 years Long: 4 years

Skill Development and Mismatch	Training programs and educational curricula are not aligned with freelancing market demands, leading to skill gaps among freelancers.	Short-term: Promote online certifications and freelancing courses. Medium-term: Partner with global platforms for targeted training. Long-term: Align academic curricula with freelancing trends.	Educational institutions, HEC, NAVTTC, P@SHA, MoIT&T, IT training centers, Freelance platforms, National Curriculum Council, Ministry of Federal Education and Professional Training, Provincial Education Departments.	Short: 1 year Medium: 3 years Long: 5 years
Software Parks and E-Rozgar Centers Deficiencies	Lack of modern equipment, poor management, and limited outreach reduce the effectiveness of these initiatives meant to support freelancers.	Short-term: Upgrade facilities and improve management, Promote Software Parks, E-Rozgar Centers Incubators and Freelancing Hubs Medium-term: Expand centers to rural areas. Long-term: Offer continuous professional development and tailor programs to freelancers' needs.	PSEB, Ministry of IT&T, P@SHA, Ministry of Federal Education and Professional Training, HEC, Private Sector, Freelance Platforms and Association	Short: 6 months Medium: 2 years Long: 5 years

Cybersecurity Threats	Freelancers face phishing attacks, data breaches, and identity theft due to weak cybersecurity practices.	Short-term: Conduct cybersecurity awareness campaigns. Medium-term: Implement best practices like two-factor authentication. Long-term: Advocate for stronger data protection laws and digital security measures.	IT security firms, National Intelligence Agencies, P@SHA, Freelancers, Freelance platforms, Ministry of Interior, Ministry of IT&T, PSEB, FIA, PTA, NADRA.	Short: 6 months Medium: 2 years Long: 4+ years

Social and Cultural Stigma	Freelancing is perceived as an illegitimate career, especially for women, due to societal norms.	Short-term: Launch awareness campaigns showcasing successful freelancers. Medium-term: Incorporate freelancing as a recognized career in educational curricula. Long-term: Establish national awards or certifications for outstanding freelancers to boost credibility.	Ministry of Information & Broadcasting, P@SHA, Press Information Department, Electronic and Print Media, Educational Institutions, P@SHA, NGOs, Provincial Culture & Women Empowerment Departments, Ministry of Human Rights, National Heritage and Culture Division, Federal Ombudsperson Secretariat for Protection Against Harassment (FOSPAH), Freelance Associations	Short: 1 year Medium: 3 years Long: 5+ years

Taxation and Legal Complications	Freelancers face unclear tax policies, leading to compliance issues (with foreign national companies and clients) and penalties.	Short-term: Conduct workshops on local and international tax laws and compliance filing along with their benefits. Medium-term: Simplify tax categories for freelancers. Long-term: Incentivize compliance through reduced rates or tax exemptions.	Legal professionals, Government, Freelance Associations, Tax Authorities, P@SHA	Short: 6 months Medium: 2 years Long: 5 years
Quality Assurance and Project Delivery	Freelancers often struggle with maintaining consistent	Short-term: Establish clear communication with clients, set expectations.	PSEB, MoIT&T, P@SHA, IGNITE, IT Boards, Freelancers, Software Houses, Project	Short: 6 months Medium: 1 years Long: 3 years
	quality of work, leading to client dissatisfaction	Medium-term: Introduce project management tools. Long-term: Set industry-wide standards and provide relevant training.	Management Companies, Freelance Platforms	

| Competition from Global Markets | Pakistani freelancers face intense competition from lower-cost regions, impacting rates | Short-term: Diversify service offerings to target niche markets. Medium-term: Collaborate with global freelance platforms to raise awareness of Pakistan's talent pool. Long-term: Establish a brand for quality Pakistani freelancers. | P@SHA, Ministry of Information & Broadcasting, Press Information Department, Electronic and Print Media, Educational Institutions, NGOs, Provincial Culture Departments, National Heritage and Culture Division, Freelancers and IT Associations, Ministry of Federal Education and Professional Training | Short: 6 months Medium: 1 years Long: 2 years |

Issue/ Challenge	Mitigation Strategy	Timeline	Stakeholders

| Lack of Mentorship and Training | - Partner with international tech firms for mentorship programs.
 - Focus on training in high-demand areas like AI, blockchain, and cloud computing. | Short: 6 months Medium: 2 years | National Incubation Centers (NICs), Business Incubation Centers (BICs), HEC, NAVTTC, PSEB, MoIT&T, Freelancers, Educational |

In addition to above, some other micro level adjustments can also be a catalyst to promote Growth Potential of IT and Freelancing Industry of Pakistan, as highlighted below:

			Institutions, P@SHA, NGOs, Provincial Education and IT Departments, Freelancers and IT Associations, IT Boards, Ministry of Federal Education and Professional Training

Limited Regional Outreach	- Establish satellite NICs and BICs in underserved areas. - Use virtual incubation models to expand reach.	Short: 1 year Medium: 3 years	National Incubation Centers (NICs), Business Incubation Centers (BICs), PTA, HEC, PSEB, MoIT&T, Freelancers, Educational Institutions, P@SHA, NGOs, Provincial Education and IT Departments, Freelancers and IT Associations, IT Boards, Ministry of Federal Education and Professional Training
Bureaucratic Hurdles	- Streamline fund application and approval processes with digital platforms. - Create an independent oversight body for grant distribution.	Short: 1 year Medium: 2 years	Establishment Division, HEC, MoIT&T, PSEB, P@SHA
Outdated IT Infrastructure	- Upgrade IT tools and infrastructure for NICs and BICs. - Provide cloud-based platforms for training and collaboration.	Short: 1 year Medium: 3 years	National Incubation Centers (NICs), Business Incubation Centers (BICs), PTA, HEC, PSEB, MoIT&T, Freelancers, P@SHA, NGOs, Provincial IT Departments, Freelancers and

			IT Associations, IT Boards
Lack of Scalability for Start-Ups	- Create post-incubation funding programs.	Short: 6 months Medium: 2 years	National Incubation Centers (NICs), Business Incubation Centers (BICs), PTA, HEC,
	- Encourage venture capital investments through tax incentives.		PSEB, MoIT&T, Freelancers, Educational Institutions, P@SHA, NGOs, Provincial Education and IT Departments, Freelancers and IT Associations, IT Boards, Ministry of Federal Education and Professional Training

Limited Awareness	- Launch awareness campaigns about ISF funding opportunities. - Use social media platforms to reach potential applicants.	Short: 6 months	National Incubation Centers (NICs), Business Incubation Centers (BICs), PTA, HEC, PSEB, MoIT&T, Freelancers, Educational Institutions, P@SHA, NGOs, Provincial Education and IT Departments, Freelancers and IT Associations, IT Boards, Ministry of Federal Education and Professional Training

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18. Appendix

18.1   Important Acronyms

- MoIT&T- Ministry of Information Technology and Telecom
- DPP – Digital Pakistan Policy
- NPPF – National Freelancing Facilitation Policy
- PSEB – Pakistan Software Export Board
- SBP – State Bank of Pakistan
- STZA – Special Technology Zones Authority
- ITeS – Information Technology enabled services
- PECA- Prevention of Electronic Crimes Act
- PTA – Pakistan Telecommunication Authority
- IPR – Intellectual Property Rights
- FBR – Federal Board of Revenue
- SIFC – Special Investment Facilitation Council
- OBE – Outcome Based Education
- BPO – Business Process Outsourcing
- AI – Artificial Intelligence