



UNVEILING THE SECRETS OF FREELANCING SUCCESS: COMPARATIVE STUDY OF EGYPT AND INDIA

WP No. 236

April 2024

This working paper is developed by the Egyptian Center for Economic Studies as part of its groundbreaking work that leverages the power of AI to reveal unprecedented insights into Egypt's labor market. It is authored by Ahmed Dawoud, Economist and Head of Data Analytics Unit at ECES.

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Abstract

This paper examines the freelancing landscape in Egypt, contrasting it with India's established market to identify strategies for Egypt's growth in this sector. It articulates the potential of freelancing to mitigate unemployment, generate foreign currency, enhance job decentralization and support economic diversification. Findings reveal that while Egyptian freelancers match their Indian counterparts in job execution, they face challenges in securing freelance opportunities, stemming from a notable mismatch between their skillset and market demands. The analysis also notes a trend towards part-time freelancing in Egypt, influenced by freelancers' hesitancy to commit full-time without guaranteed income, contrasting with the more intensive engagement by Indian freelancers. Additionally, the paper identifies significant room for improvement in communication, self-marketing, and crafting compelling proposals to attract and retain clients.

ملخص

تناقش الورقة العمل الحر في مصر بالمقارنة مع الهند، بغية الوقوف على الاستراتيجيات اللازمة لنمو هذا القطاع في مصر، مبينة قدرة هذا النوع من العمل على خفض البطالة، وتوفير العملة الصعبة، وتعزيز لامركزية فرص العمل والتنوع الاقتصادي. وتشير نتائج الدراسة إلى أنه برغم تساوي العاملين في المجال الحر في مصر مع نظرائهم في الهند من حيث تنفيذ مهام العمل؛ إلا أنهم يواجهون تحديات في الحصول على فرص عمل في هذا المجال نتيجة عدم توافق ملحوظ بين المهارات التي يتمتعون بها والطلب في السوق. ووفقا لنتائج التحليل البحثي، هناك اتجاه نحو العمل الحر بدوام جزئي في مصر نظرا لتردد العاملين في هذا المجال في الالتزام بدوام كامل دون دخل مضمون، وذلك خلافا لنظرائهم في الهند والذين ينخرطون في العمل الحر بكثافة. وتلقي الورقة الضوء على سبل التحسن في مجالات التواصل وتسويق الذات، ووضع عروض لجذب العملاء والاحتفاظ بهم.

Keywords: Gig Economy, Freelance Labor Market, Remote Work, Web Development, Artificial Intelligence, Egypt, India, Digital Platforms, Job Decentralization, Talent Retention, Gender Equality in Workforce.

كلمات البحث الرئيسية: الاقتصاد التشاركي، سوق العمل الحر، العمل عن بُعد، تطوير الويب، الذكاء الاصطناعي، مصر، الهند، المنصات الرقمية، لامركزية الوظائف، الاحتفاظ بالمواهب، المساواة بين الجنسين في سوق العمل.

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GLOSSARY

Term	Definition
Freelance	A work arrangement where individuals offer their services to clients or organizations on a project basis, without long-term employment contracts.
Freelancer	An individual who provides services to clients on a freelance basis, often as an independent contractor.
Traditional Employment	Conventional employment arrangement where individuals work for a specific employer at a designated physical location, typically under long-term contracts.
Remote Work	Work arrangement where individuals perform their job duties from a location outside the traditional workplace, often utilizing technology and communication tools.
Web Development	The process of creating and maintaining websites, including tasks such as web design, coding, and programming.
Gig Economy	Refers to a labor market characterized by the prevalence of short-term, flexible, and temporary work arrangements, often facilitated through online platforms.
Platform Economy	Describes the economic system in which goods or services are exchanged through digital platforms, connecting buyers and sellers or service providers.
Upwork	One of the leading online freelance platforms connecting clients with freelancers from various fields, including web development.
Remote Collaboration	The act of working together on projects or tasks with colleagues or clients in a virtual environment, using communication and collaboration tools.
Escrow Services	A financial arrangement where a third party holds funds on behalf of transacting parties until agreed-upon conditions are met.
Rating System	A system that allows clients and freelancers to provide feedback and rate their experiences with each other on platforms, helping establish reputation and trust.
Dispute Resolution	The process of resolving conflicts or disputes that may arise between clients and freelancers, often facilitated through mediation or arbitration.
Service Fee	The fee charged by freelance platforms to either clients or freelancers for using their services or accessing their network.
Work-Life Balance	The equilibrium between work responsibilities and personal life, aiming to achieve a harmonious integration of professional and personal commitments.
Skillset	The combination of skills, knowledge, and abilities possessed by an individual, often relevant to their professional expertise.

1. INTRODUCTION

In the rapidly evolving digital world, freelancing has emerged as a key employment trend, offering vast global opportunities for individuals to utilize and enhance their skills. This model of work, characterized by its flexibility and reach, allows professionals to engage in projects across borders, leveraging technology and connectivity. Despite its growth, the freelance sector in Egypt remains underexplored, lacking detailed analysis and understanding. This lack of comprehensive insight is a significant barrier to the development of effective policies and support structures that could bolster the freelancing community.

To address this gap, our research adopts innovative methodologies to gather new and relevant data, aiming to deepen the understanding of the freelance market in Egypt, with a particular emphasis on the field of web development. By examining and comparing the Egyptian market with India's more established freelance economy, the study identifies key areas where Egypt can improve and grow. This comparative analysis is intended to uncover strategic opportunities that could significantly enhance and strengthen Egypt's freelancing ecosystem, making it more robust and competitive in the global arena.

Structured in four main sections, the paper first underscores the importance of studying freelancing in Egypt, then explicates the freelance labor market and its distinction from traditional employment. It provides a thorough evaluation of global freelancing platforms, delineates the research scope, and elucidates our innovative data collection approach. The section concludes by revisiting common misconceptions about the global freelance market in light of fresh evidence.

The subsequent section scrutinizes the factors that underpin success in freelancing, offering an in-depth comparative analysis of Egyptian and Indian freelancers. The comparison spans initial market entry, demographic impacts, work quality, remuneration rates, and self-marketing tactics.

The concluding section synthesizes the research's core discoveries and offers strategic policy recommendations. It also acknowledges the study's limitations and suggests directions for future inquiry. In essence, this paper strives to enhance the understanding of online freelancing in Egypt and, by drawing parallels with India's success, aims to guide stakeholders in fostering a more competitive and flourishing freelance environment.

2. RATIONALE: WHY STUDY THE FREELANCE LABOR MARKET?

The Egyptian labor market suffers from a persistently high unemployment rate, notably among women, youth, and university graduates. As of the second quarter of 2023, the overall unemployment rate stood at 7 percent. However, the rate for women was notably higher at 17.3 percent, compared to 4.8 percent for men as evident in Figure 1. Among female university graduates, the rate was even more pronounced at 28 percent, as detailed in Figure 2.

Figure 1. Unemployment Rate in Egypt by gender (April - June 2023)

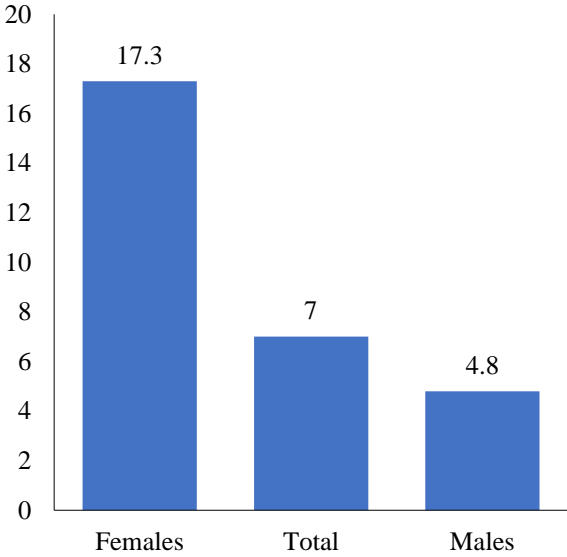
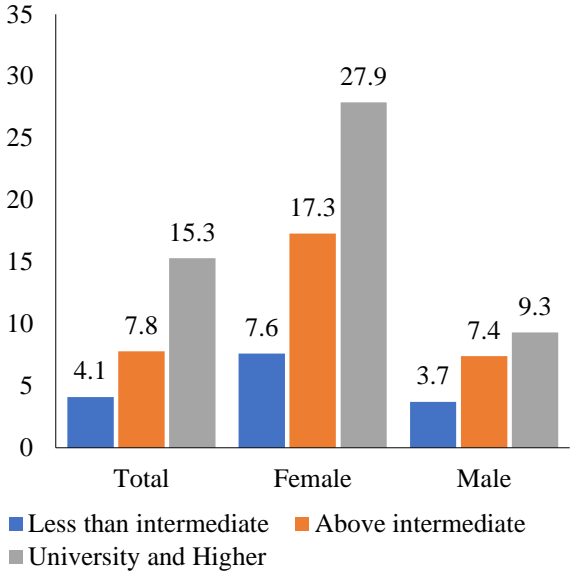


Figure 2. Unemployment Rate in Egypt by gender and education (April - June 2023)



Source: Author’s compilation based on The Labore Force Survey (April – June 2023), CAPMAS.

These statistics underscore the economy’s consistent struggle to generate sustainable, high-quality jobs. Predominantly, job creation is confined to low-productivity sectors like construction, offering short-term, project-based employment that is often unsuitable for women. In this context, freelancing emerges as a feasible option, providing flexible, skill-based opportunities that are accessible to talented and educated youth. Its meritocratic nature inherently promotes gender equality, offering a viable pathway for women’s participation in the workforce. In addition, freelance work provides several other advantages, including:

- **Mitigating Brain Drain While Developing World-Class Expertise:** Freelancing offers an alternative pathway for youth to earn higher income and acquire advanced skills

without leaving Egypt, thereby retaining local talent while creating a workforce with international expertise.

- **Generating Foreign Currency:** Freelancers working with international clients contribute to Egypt's foreign exchange reserves by earning in foreign currencies. For context, India garners annual freelance revenues of at least \$37 billion, potentially up to \$130 billion. In contrast, while specific data on Egypt's freelance income is scarce, its contribution is expected to be modest, considering that the total annual Egyptian exports do not exceed \$32 billion.
- **Alleviating Pressure on the Egypt's Capital:** Promoting remote freelancing opportunities can reduce the need for job-related relocation to urban centers like Cairo and Giza. This can help distribute economic opportunities more equitably across the country, easing the strain on densely populated areas.

In conclusion, Freelancing offers a solution to the persistent issue of job creation in low-productivity sectors, providing flexible, skill-based opportunities. It plays a key role in retaining local talent, generating foreign currency, and alleviating urban pressure, thereby contributing to a more equitable and diverse economic landscape. Understanding and harnessing this sector is essential for Egypt's economic development and for offering equitable work opportunities to its key demographics.

3. RESEARCH CONTRIBUTION, SCOPE, AND FOCUS

Despite its potential, a notable lack of research and comprehensive data on freelance work in Egypt exists. This gap hampers the development of targeted policies and interventions to maximize the benefits of freelance work for Egyptian youth and the overall economy. **This research significantly contributes by collecting previously unavailable data in Egypt.** It provides valuable insights into both the demand side (freelance opportunities available in the global market) and the supply side (by conducting a comparative performance analysis of Egyptians and Indians). This analysis, focusing on India as a leading force in the global freelance market, aims to identify success factors and inform Egyptian policy development for performance improvement.

Given resource limitations and the vast landscape of freelance specializations, this research focuses exclusively on the web development industry. This choice is driven by two key factors:

- 1) The immense popularity of web development as an entry point for Egyptian graduates, regardless of their formal field of study, often facilitated by online self-study resources.
- 2) Egypt's strong IT talent pool, with approximately 45,000 graduates annually (6% of all graduates) and government initiatives providing them with practical skills through online courses, scholarships, and specialized training programs.

After a meticulous examination of all major freelance platforms, we chose Upwork as our primary data source for two main reasons:

1. **Recognized Web Development Platform:** As we narrowed the scope of our research to web development, Upwork emerged as a primary data source. According to Harvard University, Upwork is acknowledged as a leading platform in this field.
2. **Superior Data Accessibility:** Upwork provides comprehensive data, such as hourly wages, earned income, competition severity, and necessary skills, which are not as easily accessible on other sites.

While regulating freelance work and addressing work rights are important considerations, they are beyond the scope of this research. Nevertheless, our research establishes a crucial foundation for addressing these issues, as measurement and observation is essential for effective regulation.

4. INNOVATIVE METHODOLOGY: THE MAIN CHALLENGE OF DATA COLLECTION, AND HOW WE OVERCAME IT

Traditional survey methods are ill-suited for capturing the dynamic nature of the evolving freelance market. Job postings occur frequently and often close within minutes, making traditional surveys outdated and ineffective. To address this challenge, we used the Python programming language to develop a web scraping system capable of collecting thousands of job posts efficiently and instantly in real time.

During the first quarter of 2023 (January-March), we successfully gathered detailed data on 40,000 job posts during the first quarter of 2023. The data included information about job requirements, necessary skills, experience levels, and the demographics of clients who posted these jobs. Additionally, we collected comprehensive data on freelancers from India (19,000) and Egypt (1,800), all specializing in web development on Upwork. This data encompassed various aspects such as seniority level, skills, ratings, hourly rates, completed job count, and number of previous clients, among others.

5. A BRIEF OVERVIEW AND KEY CHARACTERISTICS OF THE FREELANCE MARKET

5.1. Taxonomy of the Freelance Labor Market

5.1.1 What is freelancing?

Freelancing refers to a work arrangement where individuals (freelancers) offer their services to clients on a contract basis, without being tied to a single employer through a long-term contract or employee benefits. They are self-employed and responsible for managing their own workload, income, and taxes (De Stefano et al, 2021).

5.1.2 How is it different from regular work arrangements?

Freelance work differs from regular work arrangements namely on-site, and remote employment on key aspects like work structure, control, benefits, and income stability. Freelancing offers the most flexibility and income potential but requires self-reliance and managing finances. On-site employment provides the most stability and benefits but involves less control over work. Remote employment combines benefits and stability with flexibility, similar to on-site but without commuting. **A defining characteristic of the freelance market, in contrast to traditional employment, is its fast-paced and competitive environment where job postings are published frequently and often filled within minutes.** Table 1 summarize the key differences between all 3 types of employment.

Table 1: The key differences between freelance, on-site employment, and remote employment

Criteria	Freelance	On-site Work	Remote Work
Work Arrangement	Project-based, self-employed	Traditional employee, works for a company or organization from work place	Highly skilled employee, works for a company or organization, remotely
Work Hours	Flexible, can work from home or anywhere in the world	Mainly Full Time: Set, typically 9am-5pm.	Can be full time or part time, with more flexibility than on site work
Growth Opportunities	Can have more opportunities to grow their business and earn more money	May have fewer opportunities for growth, depending on the company	Can have more opportunities to grow their business and earn more money
Rates	Sets own rates, can charge more for in-demand skills	Paid a set salary or hourly wage	Paid a set salary or hourly wage
Taxes	Responsible for paying own taxes, including self-employment tax	Taxes are withheld from paycheck	Taxes are withheld from paycheck
Marketing	Responsible for finding own work, which can involve networking, cold pitching, and building a strong online presence	Work is found by employer, which may involve applying for jobs, interviewing, and submitting resumes	Work is found by employer, which may involve applying for jobs, interviewing, and submitting resumes
Personal Satisfaction	High, enjoys freedom and independence, has the opportunity to learn new skills and take on new challenges	Lower, may feel less control over work life, may have to deal with micromanagement and bureaucracy	High, enjoys flexibility and work-life balance, has the opportunity to learn new skills and take on new challenges
Job Security	Lower, may have to go through periods of unemployment when they are between projects	Higher, typically have a steady income and benefits	Higher, typically have a steady income and benefits
Benefits	May not have access to benefits such as health insurance, paid time off, or retirement plans	Typically have access to benefits such as health insurance, paid time off, and retirement plans	Typically have access to benefits such as health insurance, paid time off, and retirement plans

Source: Author's compilation based on various datasets.

5.1.3 Prominent freelancing platforms globally, and how they work?

Since its inception in 2009, the freelance market has witnessed remarkable growth, both in profitability and global investment. Initiated with a modest 80 companies and an investment value of \$180 million, the industry experienced a significant expansion by 2014, tripling the number of companies to 190 and boosting the investment value to \$600 million. This upward trajectory culminated in a peak in 2019, with 330 operating companies and a staggering investment value of \$1.9 billion. This exponential increase reflects the growing recognition of

freelance platforms as lucrative opportunities and underscores their enduring potential in the digital economy (Growth market reports, 2023)

These platforms serve as online marketplaces connecting freelancers with clients, streamlining the process of hiring talent for specific projects or tasks. Freelancers create profiles to showcase their skills and experience, while clients post job listings with their requirements. These platforms enable real-time and efficient matching, with features for quick hiring. A key feature is the escrow agreement system, safeguarding both parties. Clients deposit funds into an escrow account, released to the freelancer only after successful project completion and client approval. This ensures freelancers get paid and clients receive satisfactory work. Additionally, these platforms often provide tools for time tracking, messaging, and project management, aiding smooth collaboration and communication between freelancers and clients (Zhu et al, 2015).

Table 2 provides a comprehensive overview of the major platform categories, highlighting their unique features and functionalities to empower Egyptian youth to make informed decisions within the dynamic freelance marketplace.

Table 2. An overview of the major freelance platforms

Category	Platform	Business Model	Description
General Marketplaces	Upwork	Project-based fees (5%-20%)	Connects freelancers with clients across various industries.
	Fiverr	Fixed-price service fees (20%)	Features pre-defined gigs offered by freelancers at fixed rates.
	Freelancer	Project-based fees varying on project value and membership level.	Global platform with a focus on long-term projects and established professionals.
Microtask Platforms	Amazon Mechanical Turk	Payment per completed HIT (small, individual tasks).	Ideal for short bursts of work and earning small amounts.
	Clickworker	Payment varies based on task complexity.	Provides microtasks and crowdsourcing opportunities.
	Microworkers	Payment per completed task.	Offers microtasks in various categories.
Creative Platforms	Behance	Free basic plan, premium plans with additional features.	Portfolio platform for showcasing creative work and connecting with clients.
	Dribbble	Free basic plan, premium plans with additional exposure and features.	Community platform for designers and creatives to share work and find inspiration.

	99designs	Clients pay a pre-determined prize for the winning design submission.	Design contest platform where clients post projects and receive submissions.
Skill-Specific Platforms	Toptal	Exclusive platform for top freelance professionals.	Rigorous screening process ensures high-quality talent.
	Guru	Fees vary based on project complexity and service type.	Freelancing platform for legal services.
	Unbabel	Fees vary based on language pair and project volume.	Platform for translation and localization services.

Source: Author's compilation based on each platform's website.

5.2 The Main Characteristics of the Global Freelance Labor Market

5.2.1 Demand boom for freelancers especially after COVID-19

The COVID-19 pandemic has significantly accelerated the trend towards freelance employment due to its inherent flexibility and access to a diverse skill pool beyond the limitations of traditional labor markets. Notably, prominent freelance platforms such as Upwork and Freelancer saw a dramatic rise in registered clients and freelancers. In June 2020, registered clients increased by 50% compared to June 2019, while the number of freelancers grew by 25% during the same period.

Across various sectors, the demand for freelancers has witnessed a steady increase. In the third quarter of 2022, sales experienced an 18% increase in demand, while the software development sector was the fastest-growing, seeing an exceptional surge of 80%. Additionally, the average hourly wage for freelancers has experienced a notable increase, rising from \$21 in 2019 to \$28 in 2021, reflecting a substantial growth rate of 30% compared to a modest 10% increase observed between 2018 and 2019.

5.2.2 Revising common beliefs about the freelance market in light of ECES's new data

Our data offers a deeper understanding of the unique aspects of the global freelance market. While certain findings align with what was anticipated, others are surprisingly at odds with prevailing notions about the nature of freelance work, suggesting a need to revise our current understanding. Although our research is focused solely on web development, we believe that these insights can be applicable across various freelance specializations. Below are the major conclusions drawn from our data:

1. In line with common belief: Intensity of competition in the freelance web development domain

The web development industry exhibited a high level of competitiveness. Figure 3 shows that 25% of freelance jobs attracted between 10 and 20 applicants on average, while a significant 47% received more than 20 applicants. Clients typically review these applications and conduct interviews to select the most suitable freelancer.

In nearly half of the job postings (48%), clients interviewed between 2 to 5 freelancers. Moreover, in a third of the jobs, more than 5 candidates were interviewed at the same time as indicated in Figure 4, underscoring the intense competition in the market where selection is purely merit-based.

Figure 3. Distribution of freelance jobs by the intensity of competition

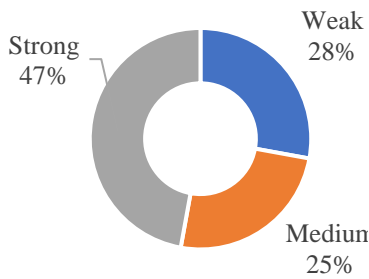


Figure 4. Freelance Job Interviews: Distribution by Number of Participants

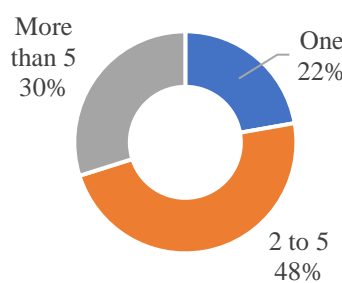
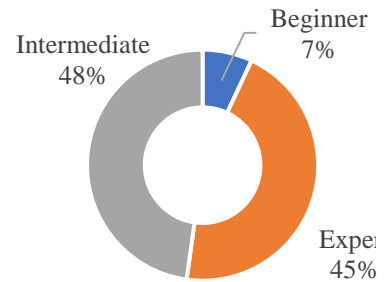


Figure 5. Distribution of freelance jobs by the required experience



Source: Author's compilation based on ECES's freelance dataset.

Given this competitive landscape, clients tend to favor freelancers with substantial expertise. Only 7% of job postings were aimed at beginners, with the rest largely divided between intermediate and expert level freelancers as reflected in Figure 5. This creates a significant barrier for newcomers, as they have a minimal chance of landing a job even if they have previous traditional work experience.

2. Contrary to common belief, there is a reasonable level of job stability and security

Contrary to popular belief, freelance work offers a reasonable level of job stability, as evidenced by the diversity in project durations and contract types offered by clients. Our data reveal several insights in this regard. Firstly, Figure 6 shows that 15% of jobs span 3 to 6 months, indicating a significant portion of medium-term projects. Furthermore, 29% of jobs are

long-term, extending beyond 6 months, challenging the notion that freelance work is inherently unstable and demonstrating potential for continuity and consistent income.

Additionally, a considerable 32% of freelance jobs mentioned the potential for hiring a freelancer full-time, contingent upon satisfactory performance as demonstrated in Figure 7. This suggests that freelance roles can be a stepping stone to secure, permanent positions.

Figure 6. Distribution of jobs by duration

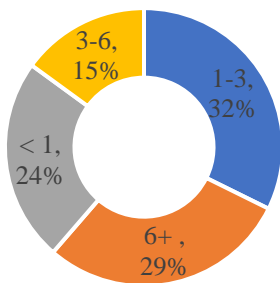


Figure 7. Distribution of jobs by type of contract

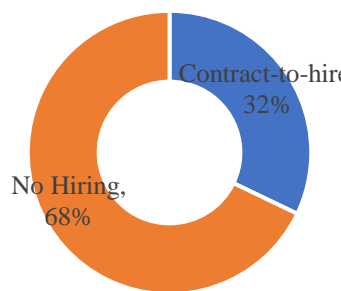
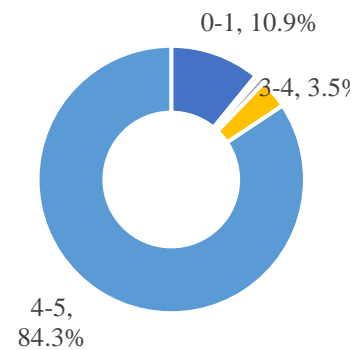


Figure 8. Distribution of clients by rating



Source: Author’s compilation based on ECES’s freelance dataset.

Security is further reinforced by escrow measures, which foster a positive and committed relationship between clients and freelancers. Notably, our Figure 8 indicates that 84% of clients who posted web development jobs on the platform were rated between 4 to 5 stars by freelancers, reflecting a high level of freelancer satisfaction.

3. **Freelance Work is Far from Uniform:** There exists extreme diversity in the type, value, and scale of opportunities available.

The freelance job market in web development is characterized by a considerable diversity of job types, payment structures, and project valuations. Fixed-price projects, which require freelancers to complete specific tasks within predetermined timeframes for a set fee, make up nearly half of the market at 47% as shown in Figure 9. The remainder, 53%, are based on an hourly rate, with compensation tied to the number of hours worked and the rate agreed upon with the client.

Of the fixed-price projects, 31.9% are valued at under \$22, typically involving small and quick tasks. In contrast, 8.6% are valued at over \$1000, indicative of larger and more complex

projects that often lead to prolonged collaboration and stable client-freelancer relationships. The majority of projects fall between these two financial poles, reflecting the wide spectrum of project scales in the industry as demonstrated in Figure 10. Meanwhile, Figure 11 highlights the fact that hourly-based jobs are evenly categorized into 5 groups, with a total range between \$1 to \$100 per hour.

This nuanced breakdown underscores the breadth of opportunities available to freelancers, from short-term, low-value tasks to long-term, high-value collaborations, and a varied range of hourly compensation that caters to freelancers with different skill levels and preferences.

Figure 9. Distribution of jobs payment option

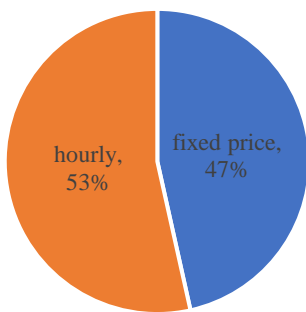


Figure 10. Distribution of jobs by project value

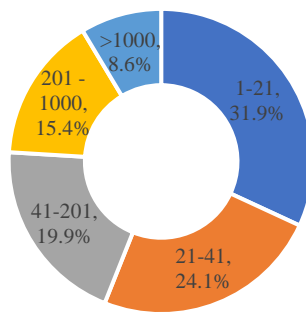
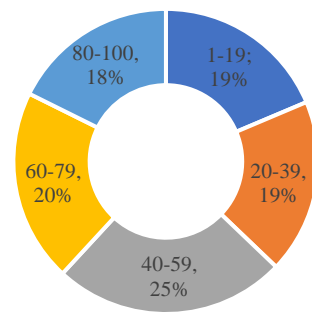


Figure 11. Distribution of jobs by average hour rate in \$

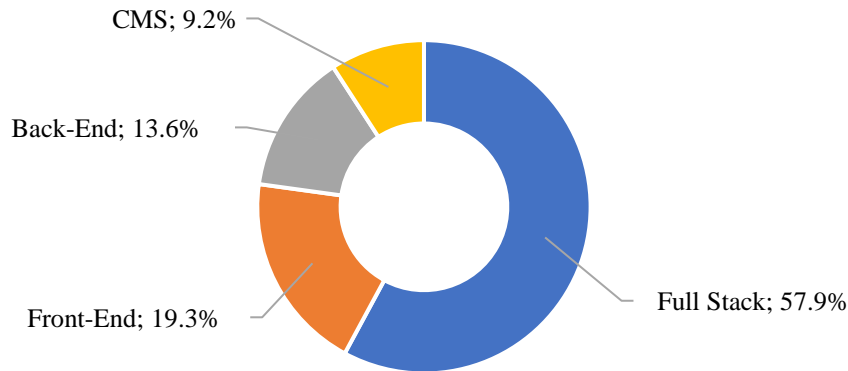


Source: Author’s compilation based on ECES’s freelance dataset.

4. The importance of possessing well-rounded skill sets as opposed to narrow, micro-specialized abilities.

According to Figure 12, A significant majority of freelance job postings—58%—explicitly seek full stack web developers. This highlights a high demand for professionals with dual expertise in front-end and back-end web development. The favored status of full stack developers stems from their versatility and comprehensive skill set, enabling them to oversee the entire development cycle of a website or web application.

Figure 12. Distribution of demand by specialization



Source: Author's compilation based on ECES's freelance dataset.

In contrast, 19.3% of job postings are specifically tailored for front-end developers, experts in crafting the user interface and visual aspects of websites. Back-end developers, who focus on server-side programming and database management, are in demand for 13.6% of the postings. The remaining 9.2% of positions are aimed at CMS developers, tasked with the design and upkeep of content management systems.

Understanding how job postings are distributed among the various specializations in web development can offer freelancers valuable insights into prevailing industry trends, aiding them in making informed decisions about skill enhancement and career development. However, a pivotal question remains: Are Egyptian freelancers adequately equipped to meet the demand for these specialized skills? This question will be addressed in the following section, which examines the supply side of the market in greater detail.

6. UNCOVERING SUCCESS FACTORS: A DETAILED COMPARATIVE STUDY OF EGYPTIAN AND INDIAN FREELANCERS

This section starts with a brief overview of Egyptian freelancers in the web development industry, focusing on their numbers, specializations, and geographic distribution. It then proceeds to conduct a detailed analysis of the performance of both Egyptian and Indian freelancers, comparing how they measure up against each other. This comparative study will

help us evaluate their relative performance, identify key success factors, and uncover traits essential for becoming a highly successful freelancer.

6.1 A Brief Overview of the Performance of Egyptian Freelancers

6.1.1 Key performance indicators

Table 3 shows that during the first quarter of 2023, there have been 1,790 Egyptians actively engaged freelancers on Upwork, specializing in four main areas: front end, back end, full stack, and CMS development. These freelancers have collectively worked a total of 492,170 hours since they have joined the platform, averaging 275 work hours per freelancer.

The data we collected also revealed that Egyptian freelancers have achieved a remarkable total income of \$10,637,011, with an average earning of approximately \$6,000 per freelancer. While a more detailed analysis of earnings distribution will be explored later in the study, these figures highlight the earning potential available to Egyptian freelancers in the web development industry.

In addition, Egyptians achieved a remarkable 95.4% success rate in freelancing, indicating the majority of tasks are completed successfully. This highlights the professionalism, competence, and expertise of Egyptian freelancers in delivering satisfactory results to clients.

Table 3. General statistics about Egyptian freelancers in the web development industry

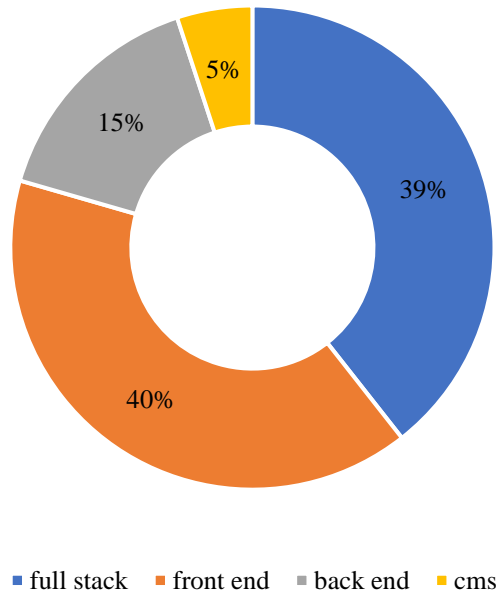
Total number of freelancers	Total number of jobs	Total number of hours	Total Achieved income (\$)	Success Rate
1,790	13,752	492,170	10,637,011	%95.4

Source: Author's compilation based on ECES data.

6.1.2 Specializations distribution

Among the 1,790 Egyptian freelancers in web development, 39% specialize in full-stack, 40% in front-end, 15% in back-end, and 5% in CMS development. This data shows a significant focus on full-stack and front-end specializations as clearly illustrated in Figure 13.

Figure 13. Distribution of freelancers across specializations



Source: Author's compilation based on ECES's freelance dataset.

This distribution raises questions about market demand: Are these areas more sought after than others? To answer this, upcoming sections will analyze market trends and demands, comparing specializations' popularity with client and industry needs.

6.1.3 Geographic distribution

Figure 13 conveys the geographical distribution of Egyptian freelancers specializing in web development across various Egyptian governorates. Cairo leads with 41.6%, followed by Alexandria (15.5%), Giza (11.7%), Dakahlia (3.7%), and Gharbia (3.6%).

Despite Cairo's high freelancer concentration, it only represents around 10% of Egypt's total population, implying that factors other than demographics drive its youth towards freelance work. For example, Giza has a similar population size but only 11.7% of freelancers. This may indicate a higher awareness or willingness to pursue freelance opportunities in Cairo compared to other governorates. Alternatively, it could be that Cairo offers greater access to freelance resources, training, etc.

Interestingly, when considering average income per freelancer, Port Said tops the list with \$16,342 followed by Gharbia (\$14,092), while Cairo ranks seventh at \$9,715 as outlined in

Figure 15. This suggests that governorates with fewer freelancers, like those in Lower and Upper Egypt, might be more successful in income generation. In fact, Cairo records a 95.8% success rate, whereas Sohag and Bani-Suef reach near-perfect rates of 99.5% and 100%, respectively.

These findings underscore a significant contrast between the traditional labor market. Unlike traditional jobs, freelancers aren't constrained to relocate to the capital for success; they can thrive in any region as long as they possess requisite talent. These findings also show the presence of exceptionally talented individuals in areas outside the capital, who could greatly benefit from heightened awareness, enhanced training, and improved access to freelance resources.

Figure 14. Distribution of freelancers across governorates

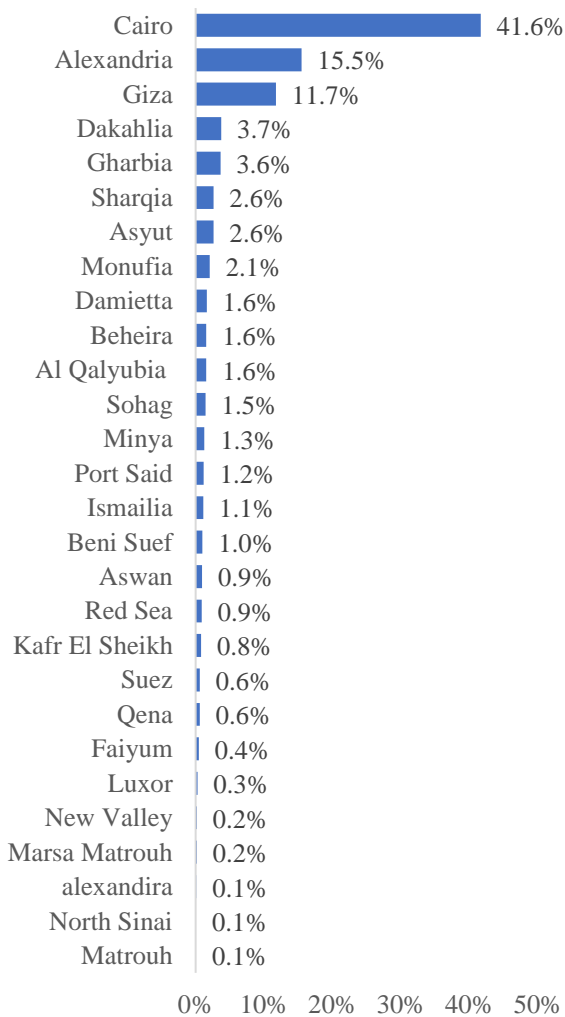
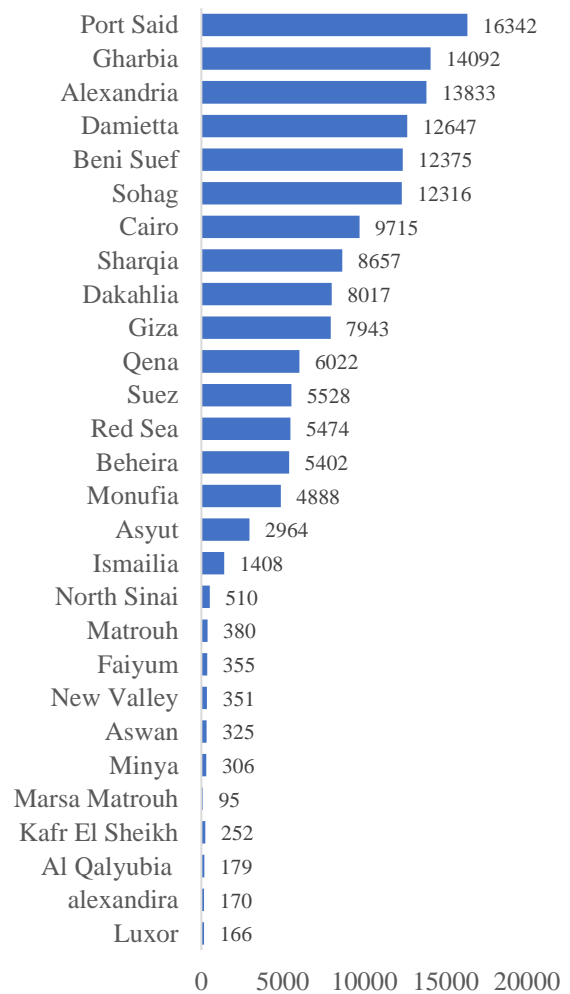


Figure 15. Average freelancer income in each governorate



Source: Author's compilation based on ECES's freelance dataset.

6.2. Detailed Comparative Analysis: Why Do Indian Freelancers Earn 44 Times More than Egyptian Freelancers?

In this section, we conduct a thorough comparison of the performance of Egyptian and Indian freelancers in web development, examining various aspects of freelance work. Our aim is to identify key factors that contribute to success in this field. Data shows that Egyptian freelancers have earned \$11 million on Upwork, compared to \$466 million by Indian freelancers, highlighting a significant income gap. This disparity leads us to explore potential reasons behind it, ultimately seeking ways to maximize Egypt's freelance revenues with its available human resources.

Four possible explanations are considered:

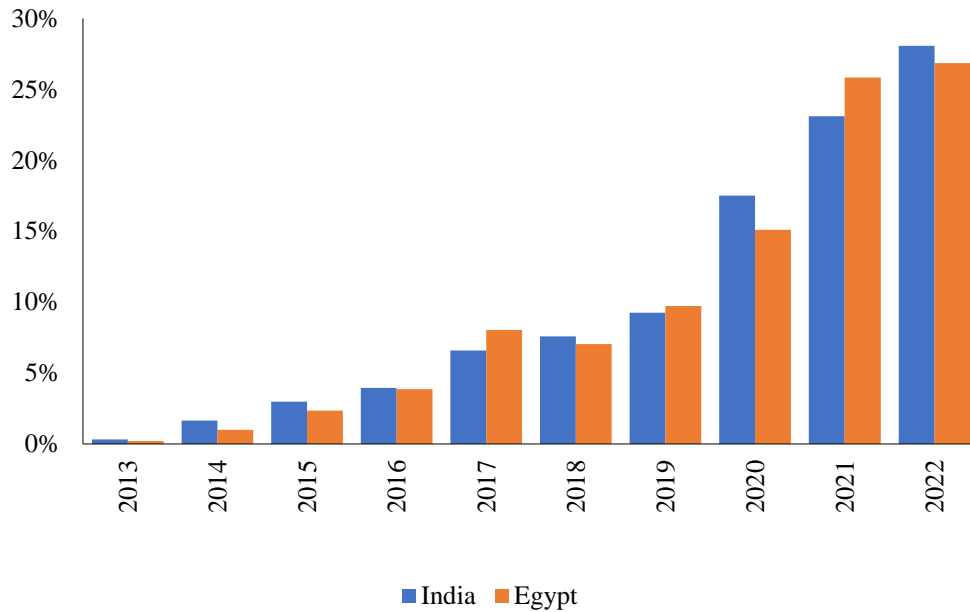
1. The early start of freelancing in India, leading to longer income accumulation.
2. India's larger population, resulting in more freelancers and consequently higher total earnings (demographic factor).
3. Higher skill levels among Indian freelancers, enabling them to charge more per hour and earn more overall.
4. Indian freelancers specializing in skills that align better with market demands, thus securing more jobs and income.

It could be a combination of these factors. Understanding which factors are most influential is crucial for developing policies or actions to enhance the performance of Egyptian freelancers. By methodically analyzing each potential reason, we aim to grasp the factors behind Indian freelancers' success and apply these insights to foster the growth and success of Egyptian freelancers.

6.2.1 Initial entry and market tenure

The data has been collected in a way that ensures fair representation of both Indian and Egyptian freelancers based on their year of joining the website. Figure 16 shows the percentage of freelancers from each country by registration year. The pattern indicates no significant difference in the time they started freelancing. Thus, the earnings disparity between Indian and Egyptian freelancers is unlikely due to differences in their freelancing start times.

Figure 16. Distribution of freelancers based on the year of joining Upwork



Source: Author's compilation based on ECES's freelance dataset.

6.2.2 Demographic Influence on Talent Pool and Income

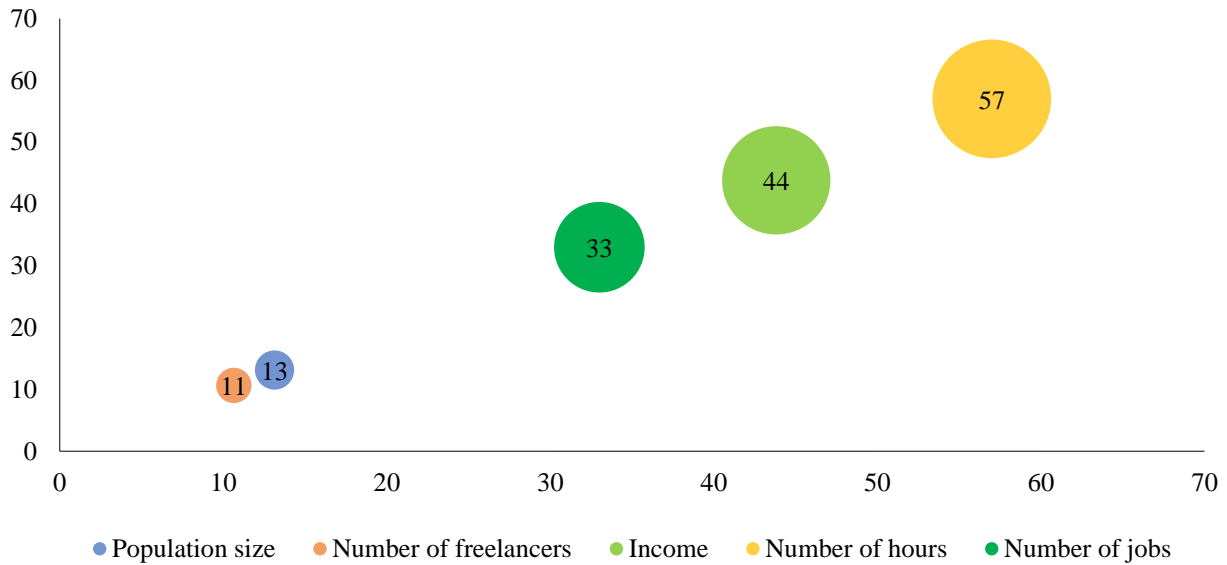
To address this, we need to look beyond just the total numbers and consider the proportional differences between the countries. Although Egypt has a smaller population, it actually has a higher proportion of freelancers relative to its population size. Specifically, when it comes to web development freelancers, Egypt has a greater per capita representation, with 17 freelancers per million people, as opposed to India's 13 per million as indicated in Table 4. This higher per capita presence of freelancers in Egypt suggests that population size alone does not account for the observed disparities in work hours and income between the two countries.

Table 4. Population size along with key freelance indicators for Egypt and India

	Population size	Number of freelancers	Freelance Income	Number of hours	Number of jobs
Egypt	108,029,423	1,790	10,637,011	13,752	492,170
India	1,419,055,569	19,054	466,090,789	451,529	27,822,533
India / Egypt	13	11	44	33	57

Source: Author's compilation based on ECES freelance dataset.

Figure 17. Relative size: India/ Egypt



Source: Author's compilation based on ECES freelance dataset.

To validate this finding, we compared the average work hours and income between Indian and Egyptian freelancers to mitigate the influence of population size. Figure 18 and 19 reveal that the average Indian freelancer works 210% more hours (2,259 hours) than his/her Egyptian counterpart (729 hours). Additionally, the income of the average Indian freelancer is approximately 254% higher at \$33,395, compared to \$9,447 for the average Egyptian freelancer.

These results indicate significant individual differences between Indian and Egyptian freelancers. They also highlight that the income gap is not just due to India having a larger pool of freelancers, as there are notable earning differences even after considering population size. This finding underscores the need to explore other factors, such as market dynamics, demand, skill levels, and work quality. These aspects are likely crucial in determining the earnings and productivity of freelancers in both countries, contributing to the observed disparities.

Figure 18. Average hours worked

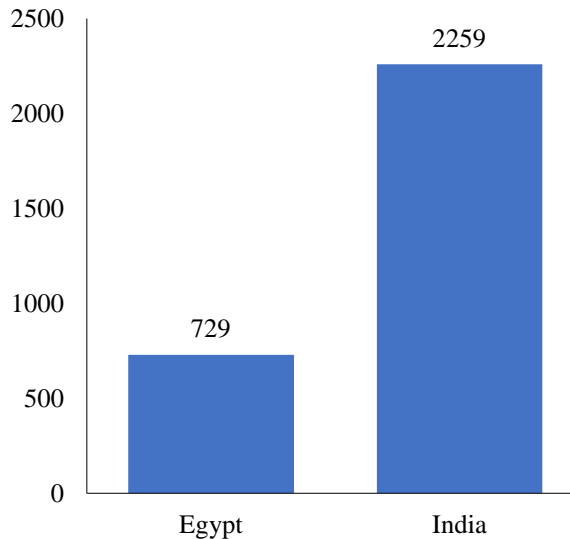
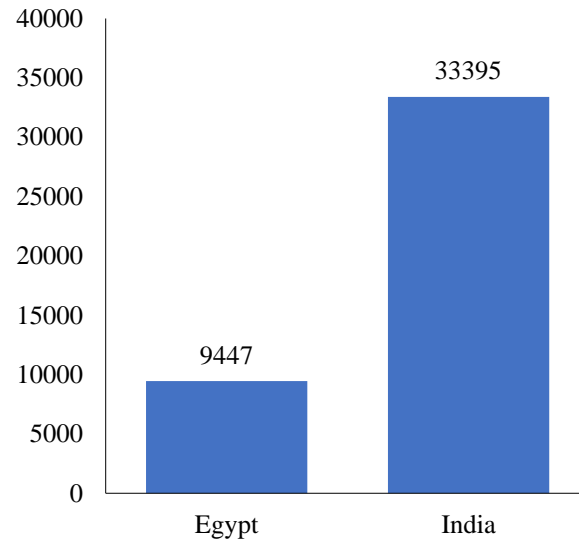


Figure 19. Average income



Source: Author's compilation based on ECES freelance dataset.

6.2.3 Work quality and hourly rates

The Figures 20 and 21 reveals that there is no notable difference in the average hourly wages or success rates between Egyptian and Indian freelancers. Across specializations such as front-end, back-end, or full-stack development, both groups earn similar average hourly wages. Additionally, Egyptian freelancers demonstrate success rates of 95% or higher once they secure a job, comparable to their Indian peers. These findings highlight the parity in financial compensation and success rates in various freelance fields between the two groups.

Therefore, we conclude that Egyptian freelancers are as successful and charge similar hourly rates as their Indian counterparts once they secure a freelance job. This indicates that the disparity between Egyptians and Indians lies not in post-job performance, but in their initial ability to obtain freelance work.

Figure 20. Average hourly rate

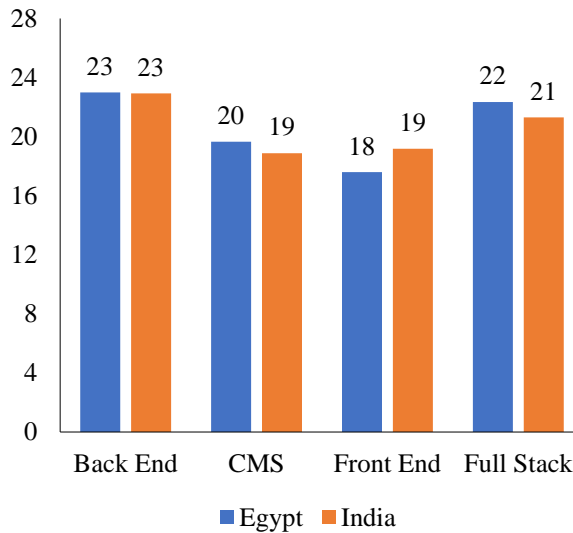
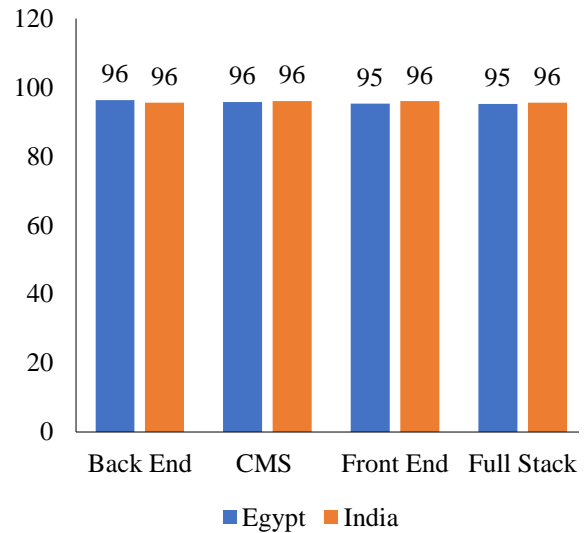


Figure 21. Success rate



Source: Author’s compilation based on ECES freelance dataset.

6.2.4 Market response and self-promotion

To address this question, we need to explore three key areas: 1) Alignment of Indian and Egyptian freelancers with market needs, 2) Their dedication to freelancing, and 3) How they market themselves to potential clients.

1. Alignment of Indian and Egyptian freelancers with market needs

Figures 22 and 23 shed light on the specialization distribution in the web development industry in Egypt and India, as well as the corresponding global demand. They reveal that Indian developers' specializations are more in sync with market needs. In India, 49% of web developers focus on full stack development, closely matching the global demand of 58%, indicating a strong alignment between Indian developers' skills and market requirements. In contrast, only 39% of Egyptian freelancers specialize in full stack development, falling short of the global demand.

Furthermore, In India, 24% of freelancers are focused on front-end development, while in Egypt, a higher 40% specialize in this area, far exceeding the global demand of 19.3%. Both countries have an equal 15% of freelancers in back-end development. Regarding CMS development, India has a higher rate of 13%, compared to Egypt’s 5%. These figures suggest

that India's web development industry is more closely aligned with global demand than Egypt's, which is a key factor in the earnings disparity between the two countries.

Therefore, Egypt should support its front-end and back-end web developers to transition into full stack roles to better align with global market demands. This shift would ensure a balanced distribution of specializations; thus, meeting market needs more effectively.

Figure 22. Distribution of web development specializations in each country

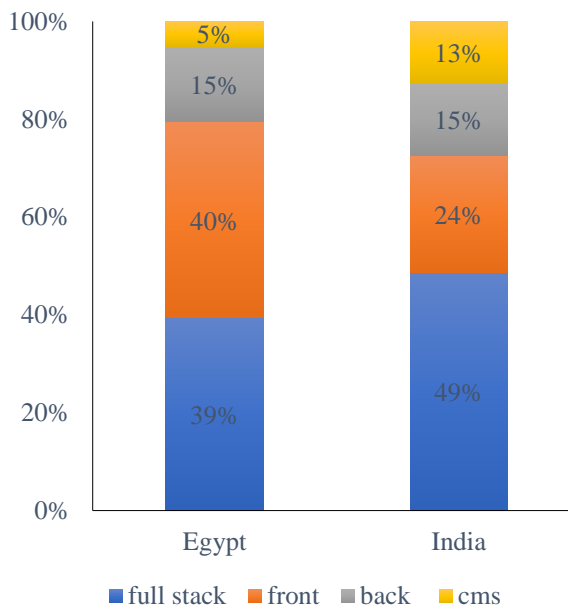
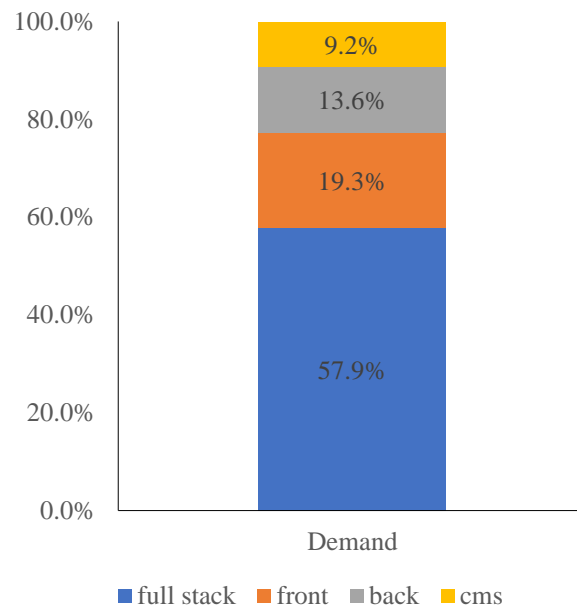


Figure 23. Distribution of the demand for web development specializations



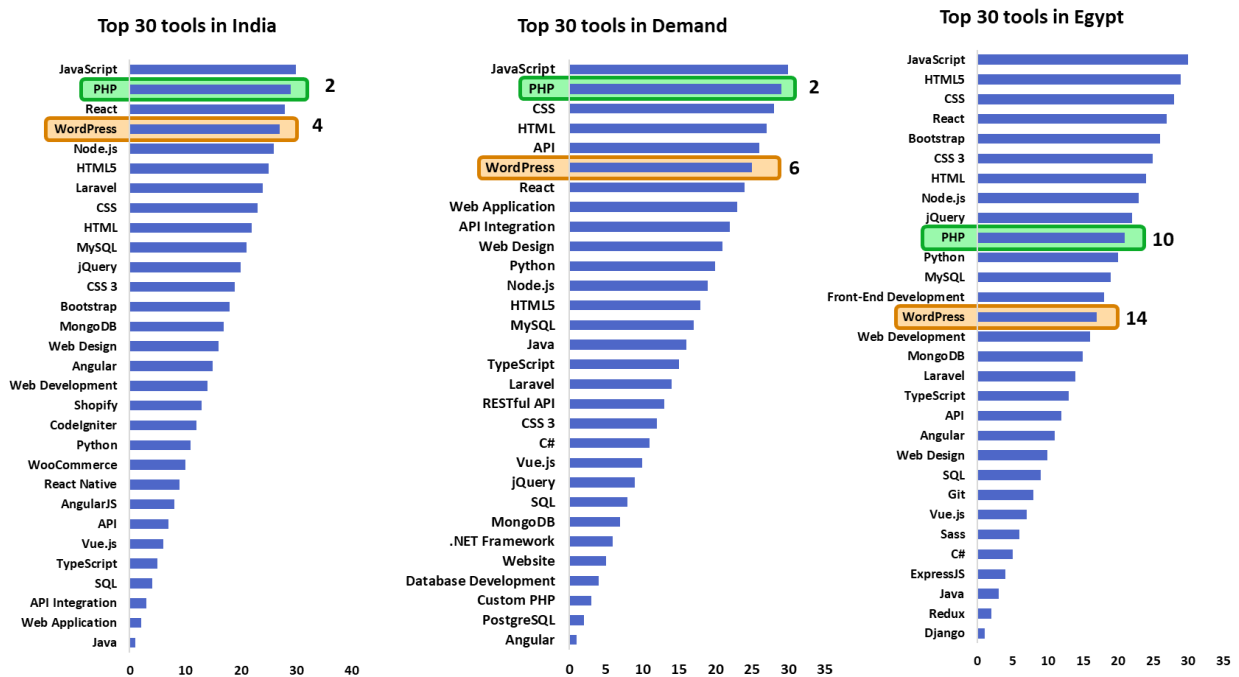
Source: Author's compilation based on ECES freelance dataset.

To reinforce our initial findings, we analyzed the top 30 tools and programming languages in demand globally and compared them with the skillsets of Egyptian and Indian freelancers. The results are in complete alignment with our initial observations. For example, PHP, globally the second most in-demand programming language, is also the second most popular among Indian freelancers. In contrast, PHP popularity ranks 10th among Egyptian developers as reflected by Figure 24.

This gap in skill distribution underscores the misalignment between the specializations of Egyptian freelancers and global market demands in the field of web development. It suggests that Egypt should prioritize enhancing skills in globally demanded programming

languages and tools, like PHP and other languages in the full stack tack in general, to better meet industry needs and increase the competitiveness of its freelancers.

Figure 24. Top 30 programming languages and tools in Egypt and India compared to global demand



Source: Author's compilation based on ECES freelance dataset.

2. Dedication to freelancing: differences in time commitment between the two nationalities

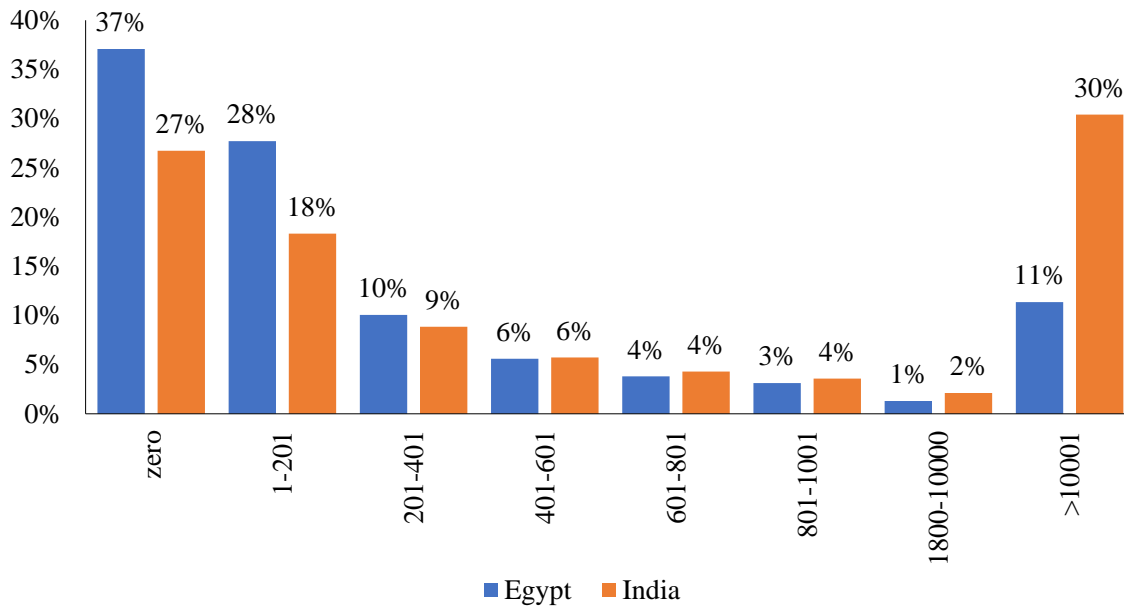
Another factor in the higher earnings of Indian freelancers is their greater time commitment to freelance work. Our data indicates that 61.2% of Indian freelancers dedicate over 30 hours per week to freelancing, compared to only 45.3% of Egyptian Freelancers. This difference in time commitment highlights varying approaches and work ethics. Indians, by investing more hours, can handle more projects, complete them efficiently, and thus earn higher incomes.

In Egypt, freelancing is often pursued part-time, with many hesitant to fully commit until it yields sufficient income. In reality, freelance never generates sufficient income without substantial time investment, especially at the beginnings. This creates a vicious cycle where part-time freelancing leads to fewer completed jobs and lower income, preventing full reliance on freelance work and perpetuating limited availability.

This is clearly evident in the distribution of freelancers' earned income. In India, freelancers typically move faster from lower to higher income brackets than in Egypt. For

example, 37% of Egyptian freelancers report no income, compared to 27% in India. Additionally, only 11% of Egyptian freelancers earn over \$1000, versus 30% in India, indicating a quicker income progression among Indian freelancers as clearly reflected in Figure 25.

Figure 25. Distribution of freelancers by earnings



Source: Author's compilation based on ECES freelance dataset.

3. Marketing efforts: differences in the ability to attract new clients

Indian freelancers excel in marketing themselves. This has been evident in their detailed profile descriptions averaging over 1100 words, compared to around 600 words for Egyptian freelancers. Additionally, Figure 26 reports that about 6% of Indian freelancers use videos to showcase their skills, compared to 4% in Egypt. Also, 6% of Indians have at least one client review, whereas only 3% of Egyptians achieve this.

In freelancing, possessing at least one client review is crucial for building trust with future potential clients. Additionally, having a video portfolio is essential to effectively showcase a freelancer's capabilities. Figure 27 demonstrates that a video portfolio is associated with a 20% income increase for Indian freelancers and a 67% increase for Egyptians.

These trends underscore the significance of self-promotion and credibility in freelancing. Indian freelancers benefit from their focus on comprehensive profiles, videos, and client reviews, leading to greater ability to attract clients and land jobs. Egyptian freelancers could

similarly enhance their visibility and client appeal by adopting these strategies, potentially boosting their income and career prospects.

Figure 26. Distribution of freelancers per marketing efforts

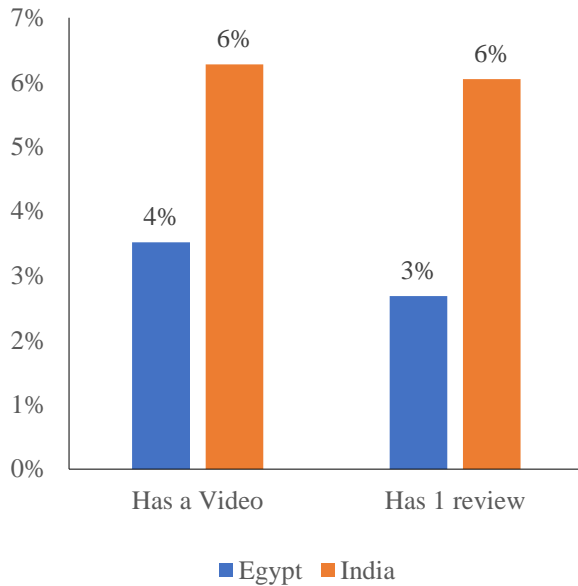
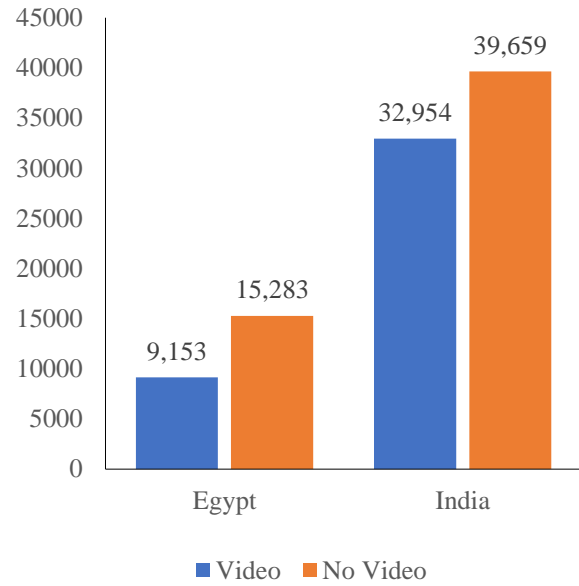


Figure 27. Average income according to video availability



Source: Author's compilation based on ECES freelance dataset.

7. CONCLUSION: MAIN FINDINGS AND POLICY RECOMMENDATIONS

In conclusion, our research highlights freelancing as a viable strategy to address Egypt's high unemployment rates, particularly women, youth, and university graduates. It showed that freelancing is not only a means for generating foreign currency but also serves as a platform for skill development, promoting gender equality, and creating a more decentralized job market.

Our findings also revealed that Egyptian freelancers, once securing a job, are as efficient and successful as their Indian counterparts. However, a gap exists in their ability to secure freelancing opportunities, primarily due to the in-alignment between their skill-set and market needs. Specifically, Egyptian freelancers mainly focus on front-end development, while market demand is more oriented towards full-stack web development. Thus, it's advisable for both front-end and back-end developers to enhance their skills to cover the entire web development lifecycle.

At the government level, the Ministries of Telecommunications and Higher Education in Egypt should revise their training programs to place greater emphasis on full-stack web development. This shift in focus is essential to align educational initiatives with current market demands and to equip future generations of professionals with the comprehensive skills required in the evolving field of web development.

Additionally, a crucial area where Egyptian freelancers lag is in marketing and client attraction. Indian freelancers take a more proactive approach, using detailed profile descriptions, video portfolios, and client reviews to effectively market their skills. Therefore, the government initiatives should extend beyond technical training to include soft skills such as creating appealing freelance profiles, effective client communication, proposal writing, and encouraging client reviews. We are aware of the Ministry of Telecommunications' efforts in providing some marketing training; however, it needs to be more comprehensive and continuous, offering sustained support throughout a freelancer's journey, rather than just a few lectures at the end of technical programs.

Finally, the commitment level of freelancers plays a significant role in their success, with Indian freelancers dedicating more hours to freelancing and achieving higher earnings, in contrast to the part-time engagement observed among many Egyptians. In Egypt, freelancers are usually hesitant to work as full-time freelancers until it yields sufficient income. In reality, freelance never generates sufficient income without substantial time investment, especially at the beginnings. This creates a vicious cycle where part-time freelancing leads to fewer completed jobs and lower income, preventing full reliance on freelance work and perpetuating limited availability.

One potential policy is offering financial incentives to freelancers who demonstrate signs of early success. This could take the form of a financial reward that diminishes with each completed project and ceases once the freelancer reaches a specific income threshold. This approach aims to support and encourage freelancers in the initial stages of their career.

8. FUTURE RESEARCH FOR A BROADER SCOPE

While this research offers robust insights into the freelance markets of Egypt and India in web development, it does have some boundaries. The analysis is primarily based on data from Upwork, which, while extensive, represents only one facet of the diverse global freelancing

landscape. Including multiple platforms in future studies could provide a more comprehensive understanding of the market.

Moreover, focusing solely on web development may not capture the full spectrum of freelancing activities. Future research could explore other sectors to understand the broader dynamics at play.

It's important to note that our quantitative approach, though rigorous, might not fully capture the complex, qualitative aspects of freelancing, such as individual motivations or socio-cultural influences. Future studies could integrate qualitative methods to delve deeper into these dimensions.

Future research directions also include examining the long-term career impacts of freelancing and the effectiveness of policy interventions aimed at supporting freelancers. This would provide valuable insights for stakeholders looking to bolster the freelance economy.

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