

Fostering Entrepreneurship through Freelancing ENTE EF

2024-1-PL01-KA220-HED-000248152

Global Freelancer Market Report

WP2: The rich picture of the global freelancer market

Activity 2: Data gathering and analysis

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Introduction

Over the past decade, freelancing, once considered a niche form of employment, has evolved into a central feature of the global labour market. This transformation has been driven by the unprecedented rise of digital labour platforms, which have become increasingly important for businesses seeking agile sources of talent and for individuals pursuing new avenues for earning a living. The impact of technological advancement and COVID-19 pandemic also led to the increased use of online technology. The rise of platforms was fuelled by economic growth, enabled by technology development and the growing digitalisation of business models worldwide, and facilitated by some factors, especially the change of workers' preferences and the switch on a large-scale transition to remote work during the pandemic. Digital freelancing has significantly changed the global labour market with flexible and varied employment options across all sectors. Short-term flexible jobs define the gig economy, which has expanded quickly as more people search for substitutes for conventional, full-time work (Akbar & Ghazali, 2024). The freelancer market has experienced significant growth in recent years, playing an increasingly important role in the global economy (Akbar & Ghazali, 2024; Riyono & Usman, 2022). Freelancer refers to those who are self-employed, whether they are newcomers or experienced professionals, working remotely in a part- or full-time regime as their main or supplementary job in the form of primary or supplementary work activity and directly with individual and/or organizational clients on short- and/or long-term projects, selling managerial, professional and/or technical services via general online digital labour platforms for monetary compensation. The US is projected to grow at a Compound Annual Growth Rates (CAGR) of 13.5% from 2025 to 2030, driven by the increasing willingness to pursue education, which allows people to improve their skills in high-demand fields. Europe is currently shifting from traditional professions to freelancing, particularly in the UK, where the growth of freelancer platforms is greatly aided by digital infrastructure. Furthermore, helping Germany's manufacturing sector to drive market expansion is Industry 4.0. Driven by remote work in India, China, and the Philippines,

the Asia Pacific area boasts the CAGR by 20.1% (Grand View Research, n.d.). Additionally driving the fast expansion of the freelancing industry are remote work rules' spread in Japan and the gig economy's development in China. This expansion underscores the importance of freelancing as a viable career option and its contribution to economic development.

One of the primary motivations for individuals entering the freelance market is the pursuit of flexibility and autonomy. Studies indicate that freelancers are fuelled by a desire for life fulfilment, greater work-life balance, and personal career control (Riyono & Usman, 2022). However, despite its rapid expansion, the freelance market faces several challenges such as uncertainty of project continuity, market saturation, and increased competition. The gig economy explains a market structure based on temporary contracts or freelancing instead of full-time employment. This leads to the massive growth of the number of freelancers and its platforms. It comprises the heart of the network of the economy such as Upwork, Fiverr, and Sribu.com, which ties freelancers with consumers for different kinds of assignments (Akbar & Ghazali, 2024).

Analysing trends, characteristics, and challenges in the freelance platforms market, using various data sources, is essential for comprehending market dynamics, forecasting future growth, and identifying potential obstacles. Trend analysis enables organizations and researchers to comprehend emerging opportunities, such as the increasing demand for digital competencies and the expansion of remote employment. Analysing market characteristics helps in classifying the freelance workforce, understanding freelancer motivations, and assessing economic contributions. Furthermore, recognizing challenges such as market saturation and technology disruptions enables participants to formulate strategies to enhance sustainability and competitiveness.

The scope of this report is all about collecting and making sense of information to get a clearer picture of the global freelance market. By combining both primary and secondary data, this part of the study takes a thorough approach to understanding industry trends, workforce characteristics, and market demands. Using different sources of data helps ensure that the findings are accurate and reliable, offering a well-rounded view of how freelancing is evolving and what factors are shaping it.

The research questions below were developed to frame the data gathering and analysis activities conducted in WP2/A2, aiming to explore key patterns, challenges, and opportunities within the global freelance platform economy:

1. What is the current state of the global freelance market?
2. Which professional skills are most in demand in the global freelance market?
3. How do earnings vary across different professions in the digital labour market?
4. What is the gender distribution in the global freelance market, and how do earnings compare between men and women?

The objectives outlined below define the scope and direction of the WP2/A2 activity, focusing on capturing key characteristics of the global freelancer market and laying the groundwork for subsequent comparative analysis in WP2/A3:

1. To gather and analyse data on the global freelancer market.
2. To identify the most in-demand professional skills in the global freelance market.
3. To examine the variations in earnings across different professions within the digital labour market.
4. To create a foundation for WP2-A3 (Comparison of Europe and Asia).

This section outlines the structure of the WP2/A2 report, summarizing the focus and content of each chapter to guide the reader through the flow of the study. The Introduction provides an overview of WP2/A2 within the ENTEEF project, presenting its objectives, research questions, and the significance of understanding global freelance market trends as a basis for data collection and analysis. The Methodology section outlines the structured approach to collecting and analysing secondary and primary data. It details the use of an integrative literature review and Scopus AI Search for secondary data, and the web scraping process for primary data collection from freelance platforms, ensuring data reliability through systematic cleaning and preparation. The section on The Revolution of Freelancing and the Digital Labour Economy explores the rise of freelancing, its importance in the digital economy, and the socio-cultural factors influencing freelance work across regions.

The State and Trends of the Global Freelance Market presents an analysis of the market's size, structure, geographic distribution, and the main drivers shaping post-pandemic developments. The Global Supply of Freelancing Workforce section offers insights into freelancer distribution by geography, profession, gender, and income.

The following sections focus on the demand side, examining High-Demand Skills in the Global Freelance Market and Earnings Across Professions in the Digital Labour Market, highlighting sought-after skills and income patterns across freelance professions. The analysis of Gender and Earnings in the Global Digital Workforce addresses demographic patterns, income disparities, and regional differences.

The Conclusions section synthesizes key findings to address the research questions, offering a coherent narrative of the evolution of the global freelance market. It also provides a knowledge foundation to guide the next stages of the ENTEEF project, particularly the comparative analysis in WP2/A3, supporting future recommendations for platform economy development in Europe and Asia.

1 Methodology

1.1 Collection of secondary data

This subchapter describes the approach taken to collect and analyse secondary data, which serves as the foundational layer for understanding the current state of the freelancer economy in support of the ENTEEF project. The methodology follows a systematic literature review framework to ensure a comprehensive, reliable, and multi-dimensional understanding of the topic.

The collection of secondary data aims to:

- Identify existing knowledge, gaps, and trends in the freelancer economy.
- Understand conceptual definitions and frameworks around freelancers and digital labour platforms.
- Support the formulation of primary data tools (e.g., surveys and comparative analysis).
- Provide empirical evidence for the design of MOOCs and other educational content under the ENTEEF project.

To capture a broad and balanced perspective, this study draws from both academic and grey literature sources. The inclusion of diverse data types ensures methodological rigor and contextual relevance.

These are peer-reviewed and scholarly materials that provide theoretical and empirical insights into the freelancer market:

- Scientific Journals: Articles from journals indexed in Scopus, Web of Science, and Google Scholar focusing on freelancing, gig economy, digital labour platforms, and remote work.
- Books and Monographs: Authoritative texts on digital labour, independent work models, and economic shifts in employment.
- Conference Papers and Proceedings: Emerging research and region-specific case studies presented at relevant conferences.

Grey literature adds practical, data-driven, and policy-oriented perspectives that complement academic discourse. The following sources are prioritized:

- Industry Reports:
 - Payoneer Freelancer Income Report: insights into freelancer earnings, demographics, and global trends.
 - Gigmetar (Serbia): country-level analysis of gig and freelance work.
- International Organization Reports:
 - OECD: labour force dynamics, skills mismatch, and employment trends.
 - ILO: platform economy impact on employment and worker protection.
 - Eurostat: statistical data on freelance labour across EU countries.
- Governmental and Policy Documents:
 - National-level documents relating to digital employment policies, freelancer taxation, and labour rights in partner countries (Indonesia, Poland, Romania, Serbia, Spain, Ukraine).
 - EU directives on platform work and freelancer classification.

Defining key terms central to the WP2/A2 study is essential to ensure conceptual clarity and consistency throughout the research process. In particular, the terms “freelancer,” “digital platforms,” and “gig economy” are frequently used across both academic literature and industry reports, often with varying interpretations depending on context. Providing clear definitions, supported by authoritative sources, helps establish a common understanding and aligns the terminology used in data collection and analysis. Table 1 presents the definitions of these core keywords and their corresponding references from academic and industry sources.

Keywords	Definition	Source
Freelancer [keyword typed on search column: freelancer AND definition > 368 documents found]	Freelancers can often work remotely and on their own schedule, increasing flexibility for businesses and facilitating connections between suitable tasks and available freelancers	Lee, W. K., & Cui, Y. (2024). Should gig platforms decentralize dispute resolution? <i>Manufacturing & Service Operations Management</i> , 26(2), 519-536.
Freelancer	“crowdwork” (also labelled cloud work or online freelancing). This emerges from the virtual crowdsourcing of higher-skilled tasks—for example, web mobile and software development, sales and marketing, HR, legal, social media, graphic design, copywriting and translation, and accounting.	James, A. (2024). Platform work-lives in the gig economy: Recentring work–family research. <i>Gender, Work & Organization</i> , 31(2), 513-534.
Digital platforms [specific keywords: freelancer and definition AND digital AND platforms > 2 documents found]	digital labour platforms deliberately eschew any identification as “employers”, instead positioning themselves merely as technology companies, or “intermediaries” who mediate between “self-employed independent contractors” and potential clients. No employment contracts exist for platform workers whose activities are instead bound by lengthy “platform user agreements” heavily skewed in favour of requesters and platforms.	James, A. (2024). Platform work-lives in the gig economy: Recentring work–family research. <i>Gender, Work & Organization</i> , 31(2), 513-534.

Keywords	Definition	Source
Digital platforms	Digital platforms for knowledge work are distinguished based on five boundary conditions: digitality, value network paradigm, centralized governance, contractual work, and knowledge work. Digital platforms for knowledge work support three processes: Matching, contracting, and executing.	Wagner, G., Prester, J., & Paré, G. (2021). Exploring the boundaries and processes of digital platforms for knowledge work: A review of information systems research. <i>The Journal of Strategic Information Systems</i> , 30(4), 101694.
Gig economy		

Table 1. Scopus results by keyword.

To ensure transparency, consistency, and methodological rigor in the collection and analysis of secondary data, this study applies an integrative literature review approach. Unlike systematic reviews that follow strict protocols such as PRISMA, the integrative review method allows greater flexibility in synthesizing diverse types of research findings and combining theoretical, empirical, and grey literature. For the collection of white literature, this study specifically utilized the Scopus AI Search tool. Scopus AI Search provides an advanced, AI-assisted mechanism for identifying and extracting relevant peer-reviewed publications through natural language queries and keyword-based searches. Given the rapidly expanding body of scholarly work on freelancing and digital labour platforms, using an integrative review approach enables the study to capture a broader range of insights while maintaining research quality. In this context, Scopus AI Search supports the development of a transparent and traceable search strategy, facilitating the identification of key patterns, challenges, and policy implications emerging within the global freelancer economy.

To ensure the relevance and breadth of the retrieved literature, tailored search strings were developed and applied across various academic and industry databases. These search queries were designed to reflect the terminology commonly used in scholarly and professional freelancing and digital labour discourse. A core example of a generic search string used is: ("*freelancing*" OR "*gig economy*") AND ("*digital*

platforms” OR “remote work”). This combination captures key concepts at the intersection of independent digital work and platform-mediated employment. The search strings were further adapted depending on the database’s indexing system and focus area, enabling effective retrieval from academic journals and industry white papers. To support this strategy, the following tables present a thesaurus of relevant synonyms and alternative keywords aligned with the study’s research questions. Tables 2 to 5 present the thesaurus of synonyms developed for the keywords derived from each research question (RQ1, RQ2, RQ4, and RQ5), which guided the secondary data search and ensured a comprehensive coverage of relevant terms during the literature review process.

global	freelance	market
worldwide	self-employed	advertise
international	free agent	display
all-around	non-staff	retail
universal	unaffiliated	

Table 2. Thesaurus synonyms of keywords from RQ1.

professional	skill	demand
competent	competence	appeal
experienced	dexterity	inquiry
licensed	experience	call
qualified	finesse	insistence
skillful	expertise	interest
	proficiency	need
		order

Table 3. Thesaurus synonyms of keywords from RQ2.

earning	digital	labour
accepting	computerized	activity
acquiring	automated	employment
collecting	cybernated	industry
getting	programmed	job
gathering		
inheriting		
making		

Table 4. Thesaurus synonyms of keywords from RQ3

gender	distribution
feminine	circulation
masculine	delivery
common	disposal
	dissemination
	handling

Table 5. Thesaurus synonyms of keywords from RQ4.

Table 6 summarizes the results of a preliminary Scopus search, showing the number of documents found for each keyword derived from the research questions.

Keywords	Number of documents found (2015-2025)
Global freelance market	34
Professional skill	76,715
earning	8,867
Digital labour market	2,998
Gender distribution	39,776

Table 6. Scopus search from the research question keywords.

A structured AI-assisted search was conducted using the Scopus database to explore the current state of the global freelance market. The process began by generating a tailored query plan aligned with the research objectives of WP2/A2. Leveraging Scopus's natural language processing capabilities, an initial exploratory query was posed: *"What is the current state of the global freelance market?"* This natural language input helped the system interpret the core thematic areas of interest and automatically generate relevant search suggestions.

Following this, a detailed keyword-based search string was constructed to enhance precision and retrieve more targeted results. The Boolean query included multiple sets of synonyms and related terms to ensure comprehensive coverage: *("freelance" OR "independent" OR "contractor" OR "gig") AND ("market" OR "economy" OR "industry" OR "sector") AND ("global" OR "international" OR "worldwide" OR "cross-border") AND ("platform" OR "website" OR "service" OR "application") AND ("employment" OR "work" OR "job" OR "opportunity") AND ("income" OR "earnings" OR "revenue" OR "compensation") AND ("trends" OR "dynamics" OR "challenges" OR "growth")*.

The Scopus AI engine then summarized the results from this structured search to identify key concepts, dominant research themes, and existing knowledge gaps. To visually represent these findings, the concept map generated by Scopus AI is presented in Figure 1, offering a high-level overview of how the scholarly literature clusters around key topics related to the global freelance market.

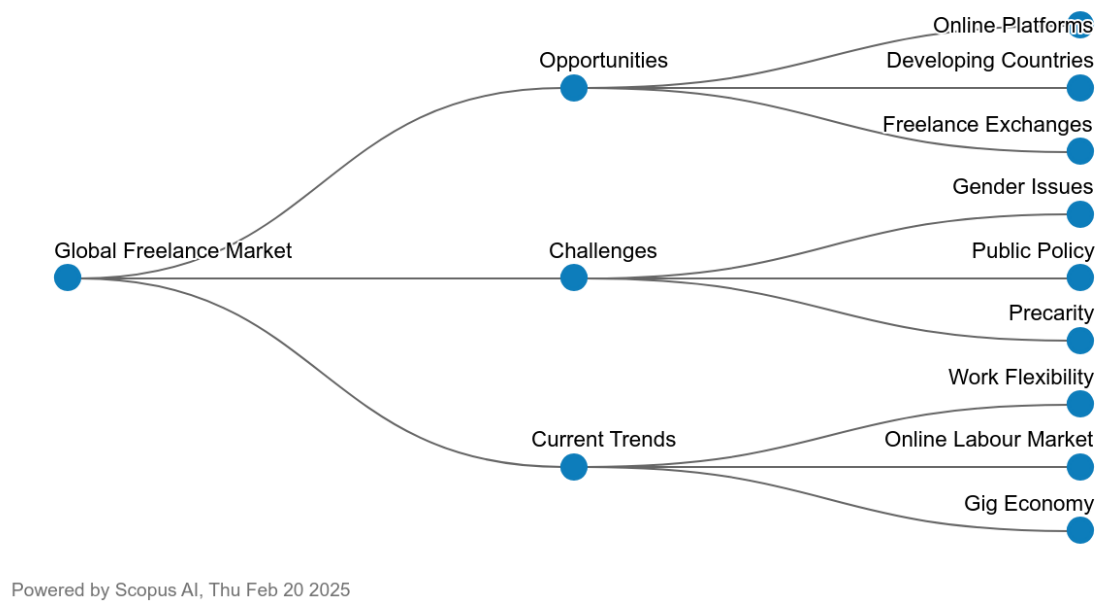


Figure 1. Scopus AI concept map.

1.2 Collection of primary data

1.2.1 Overview of the data collection processes

The collection of primary data constitutes a critical component of the methodology, aiming to provide a grounded and systematic understanding of the global freelance market. This section outlines the detailed steps taken to acquire and process a high-quality dataset that supports the ENTEEF WP2/A2 objectives, focusing particularly on capturing the supply side through freelancer profile analysis.

The first step in the primary data collection involved identifying a suitable source that could provide comprehensive and representative insights into freelancer characteristics. For this purpose, a dataset of 10,000 freelancer profiles was gathered from UpWork, one of the world's largest and most widely used online freelancing platforms. UpWork was chosen based on its broad global reach, significant market share, and accessibility in participating countries, including Indonesia, Poland, Romania, Serbia, Spain, and Ukraine. The platform's open visibility of freelancer profiles, which include demographic information, skills, hourly rates, experience levels, and performance metrics, made it an appropriate source for structured data collection.

To ensure that the sample was representative of platform dynamics, the freelancer profiles were selected using UpWork's native sorting mechanism. This method reflects the platform's internal ranking system and prioritizes profiles with higher visibility and relevance to client searches. As a result, the dataset aligns closely with real-world patterns of freelancer exposure and engagement within the digital labour economy.

The data collection process was conducted between January 20 and January 27, 2025, using automated web scraping techniques. Web scraping is a computational method that enables the extraction of structured information from web interfaces. It is particularly useful for acquiring large volumes of data that would be impractical to collect manually. Through this approach, content designed for user display was programmatically captured and stored for further processing. Web scraping serves as an efficient alternative to manual data copying by enabling mass and systematic data collection in standardized formats, which is especially critical for supporting rigorous quantitative analyses (Ahmed et al., 2023).

To facilitate the scraping process, a custom web scraper was developed using Python. The decision to build a custom tool rather than rely on commercial scraping software was based on the need for greater flexibility and control. The scraper was specifically tailored to UpWork's page structure and account configurations. It addressed technical challenges such as pagination, dynamically loaded content, and anti-scraping mechanisms by incorporating features like user-agent rotation and request delay management. Regulatory considerations, including respect for platform terms of service and ethical crawling practices, were also embedded into the tool's design.

The resulting dataset consists primarily of two components. The first is a freelancer profile database containing anonymized data points such as country of origin, hourly rates, skill sets, job success scores, total jobs completed, total earnings (where available), and years of experience. The second component, which will be compiled in a later phase, is a job or task database containing postings that include project titles, required skills, budget structures, client information, and geographic focus.

Once the raw data were collected, a detailed data cleaning and pre-processing phase was carried out. This included the removal of duplicate entries, handling of

missing values, standardization of country and skill naming conventions, and normalization of income data. Where certain demographic indicators, such as gender, were not directly available, inference methods were used to estimate values based on available metadata.

To further enhance the analysis and extract deeper insights from the dataset, a dedicated Python script was also developed to integrate the ChatGPT API. This script allowed for the application of advanced natural language processing techniques in various stages of data processing. Specifically, the model was used to assist with gender detection, skill set categorization, job offer classification, and interpretation of historical employment patterns. By leveraging the contextual understanding capabilities of ChatGPT, the team was able to improve the accuracy of data labelling and extract thematic patterns that would be difficult to classify using traditional rule-based methods. This hybrid approach of rule-based and AI-supported processing contributed significantly to the analytical depth and reliability of the dataset.

Furthermore, all pre-processed data were converted into structured formats suitable for analysis, including CSV and Excel files, and securely stored using encryption protocols that comply with institutional data governance standards.

Ethical considerations were integrated throughout the data collection process. Only publicly available information was accessed, and all personally identifiable information was excluded from the dataset. Freelancer profiles were anonymized, and no usernames, images, or personal contact details were collected or retained. Access to the full dataset was restricted to designated members of the research team, and strict measures were taken to protect confidentiality. All procedures adhered to data protection laws and standards, including the General Data Protection Regulation (GDPR), ensuring legal and ethical compliance.

The overall methodology was designed to achieve a balance between data quality, research efficiency, and ethical responsibility. The resulting dataset offers a reliable, diverse, and global perspective on digital freelance labour, supporting future stages of analysis and cross-regional comparisons. It provides an empirical foundation for deeper insight into the freelance economy and serves the broader goals of the ENTEEF

project, particularly in fostering entrepreneurship through evidence-based training and policy support.

1.2.2 Overview of the data set

The selected freelance platform for data collection demonstrates a substantial global footprint, hosting professionals from diverse industries and backgrounds. Based on the extracted data, freelancers originate from over 50 countries, supporting the study's goal of analysing cross-regional trends in the global digital labour market. The dataset comprises various attributes, including demographics, skill sets, income levels, success rates, and work history, providing a comprehensive view of the freelance workforce. Preliminary analysis highlights that freelancers engage in a wide range of professional domains, with key categories including Design & Creative (32.5%), Sales & Marketing (26.0%), and Coding & Web Development (24.8%), reflecting strong demand for creative, marketing, and technical expertise. Other significant skill areas include Customer Service & Admin (7.5%), Accounting & Consulting (5.2%), and Data Science & Analytics (3.2%), while 0.3% of talents have an undetected skillset. These classifications are based on Upwork Demand Skills in 2024, highlighting key areas where freelancers are actively engaged.

The distribution of expertise further underscores the demand for specialized digital skills. For instance, within Data Science & Analytics, common skill sets include Machine Learning, Data Visualization, and Predictive Modelling, whereas in Design & Creative, prevalent skills encompass Graphic Design, Logo Creation, and 2D Animation. This classification of freelancers according to competencies enables a granular assessment of market trends and labour supply. Additionally, employment history data extracted from freelancer profiles reveals past work experiences, including previous job titles and employment durations. While some freelancers have no recorded employment history, others report specialized roles such as “Senior Zoho CRM Consultant” or “Web Researcher / Data Team Lead”, providing insights into career pathways and transitions from traditional employment to freelance digital work.

The dataset also includes demographic information, particularly regarding gender distribution, which reveals a significant imbalance. 74.7% of freelancers are male,

while 17.6% are female, and 7.6% are classified as "Undetermined", which may include individuals who did not specify their gender. The dominance of male freelancers suggests that certain fields on the platform may attract more men, particularly IT and technical fields such as Data Science & Analytics, whereas female freelancers are more represented in administrative support and legal consulting roles. Since the dataset lacked direct gender information, LLM-powered detection was used to identify gender based on the relationship between names and geographical locations. This demographic data is crucial for examining gender disparities in digital employment and assessing potential barriers to entry in high-demand sectors.

Another critical dimension of the dataset is geographic distribution, which shows that freelancers come from a diverse range of countries, with a significant concentration in certain regions. Pakistan has the highest representation, accounting for 36.8% of the total talents, followed by India (21.3%) and the United States (9.9%). Other notable contributors include Bangladesh (8.1%), Nigeria (3.9%), and Ukraine (3.5%), indicating a strong presence of freelancers from South Asia, North America, and Africa. Additionally, smaller portions of freelancers are from countries such as the Philippines (1.8%), United Kingdom (1.6%), Egypt (1.1%), Canada (0.7%), United Arab Emirates (0.6%), and Poland (0.4%), among others. This distribution suggests that UpWork attracts freelancers from both developing and developed economies, with South Asia emerging as a dominant hub for online talent.

Finally, freelancer earnings vary significantly by skill set, experience, and geographic region. The dataset includes hourly rate information (e.g., "\$10/hr, \$20/hr, \$50/hr"), enabling a comparative analysis of wage disparities across professions and locations. Additionally, freelancer success rates, represented as Job Success Percentages (e.g., 68%, 94%, 100%), provide insights into factors contributing to sustained engagement and career longevity in the gig economy. These aspects help assess the economic potential of freelancing, wage gaps between regions, and the likelihood of long-term success in specific skill domains.

2 The Revolution of Freelancing and Digital Labour Economy

2.1 Background

The freelance and digital labour economy has undergone a significant transformation, particularly in the wake of the COVID-19 pandemic. The global crisis accelerated the shift toward freelancing, as widespread layoffs and business closures prompted many individuals to seek alternative income through gig-based work (Ranasinghe et al., 2022; Razak et al., 2024). Central to this shift is the role of digital platforms, which serve as intermediaries that connect service providers with clients, enabling various forms of gig work such as freelancing, crowdsourcing, and location-based services (Tsvetkova, 2023). These platforms have not only broadened access to employment opportunities but also introduced new work modalities that transcend traditional geographic and institutional boundaries. At the same time, digital transformation is reshaping the structure of the labour market by reducing demand for routine and manual tasks while generating increased demand for professions centred around digital competencies and emerging technologies (Sandri et al., 2022; Urbaniec, 2022).

2.2 Understanding the meaning of freelancing in the digital economy

“Freelancing” refers to a specific form of self-employment in which individuals offer specialized services - such as graphic design, writing, or coding - through project-based collaborations without long-term commitments. Freelancers typically enjoy autonomy over their pricing, work schedules, and customer selection, although they often miss out on traditional employment benefits such as healthcare, retirement plans, or paid leave (Huđek et al., 2020; Liberto, 2022).

Building on freelancing, the **“on-demand economy”** emerges as an economic model primarily driven by consumer convenience, leveraging digital platforms to instantly connect users with various services. Platforms like Uber exemplify this economy by providing immediate access to transportation services. Rather than focusing on traditional employment structures, this model prioritizes rapidly fulfilling consumer demands through digital technologies (Banik, 2019; Charlton, 2025; Forbes Human Resources Council, 2025).

Closely related to freelancing and the on-demand economy is the concept of **“independent contractors”**. This term represents a legal classification rather than a specific business or employment model. Independent contractors are self-employed individuals who operate under contracts that specify the scope and nature of their work but explicitly exclude them from employee status. Consequently, these individuals handle their own taxes, insurance, and benefits (a common scenario for freelancers and gig economy participants alike). For example, consultants hired for temporary, specialized tasks typically fall into this category (Dokko et al., 2025; Kadek et al., 2024).

Further expanding these ideas, the **“gig economy”** comprises a labour market characterized predominantly by short-term, flexible employment arrangements known as *“gigs.”* This economy includes a wide range of roles from highly skilled positions like consulting or programming to less specialized tasks such as delivery or ride-sharing. Digital platforms have significantly accelerated the gig economy's growth, efficiently connecting service providers with consumers (Investopedia, 2024; Kelly, 2024). For instance, a driver offering rides via a ride-sharing platform is a typical gig worker. **“Gig work”** specifically describes the individual tasks performed within this broader economy. While gig work provides notable flexibility in terms of scheduling and workload, it often lacks the stability and traditional employment benefits.

A particular subset within the gig economy is **“platform work”**, where tasks are mediated directly through digital platforms such as Uber, Upwork, or Fiverr. Platform workers perform services either at specific locations - like ride-sharing and food delivery - or remotely, involving freelancing, data entry, or digital design (Garin et al.,

2020). These platforms typically function as intermediaries, matching service providers with customers and earning revenue by charging fees or commissions.

Lastly, encompassing all these categories is the **"platform economy"**, a broad economic framework driven by digital platforms acting as intermediaries between producers (such as service providers or sellers) and consumers. The platform economy extends beyond labour transactions, integrating diverse sectors including e-commerce, financial technology (fintech), and social media services. Companies like Amazon, Airbnb, and Upwork exemplify this expansive model, facilitating numerous exchanges within a digitally interconnected marketplace (Charlton, 2024).

Integrating all these previously discussed concepts creates the comprehensive umbrella of **"digital economy"**, representing the broadest category. It covers the economic activities enabled or enhanced by digital technologies, data utilization, and online platforms, offering an extensive comparative context for understanding the various nuanced subcategories discussed.

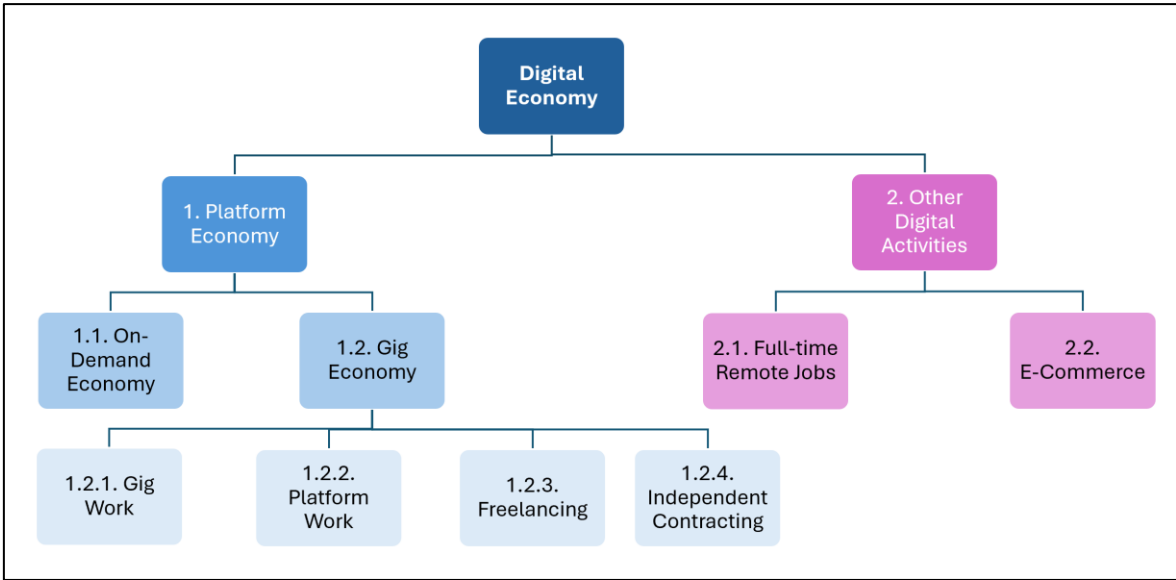


Figure 2. Visual representation of the hierarchy and relationships of the concepts.

Source: based on insights from Banik (2019), Charlton (2024, 2025), Forbes Human Resources Council (2025), Dokko et al. (2025), Kadek et al. (2024), Investopedia (2024), Kelly (2024), and Garin et al. (2020).

Within this broad domain, the platform economy emerges as a major subset, consisting of business transactions and labour exchanges mediated by digital platforms such as Amazon, Uber, Airbnb, and Upwork. Unlike the platform economy, the digital economy also includes non-platform-based digital activities, such as cloud computing, artificial intelligence-driven automation, and digital marketing (Banik, 2019). Similarly, the on-demand economy operates within the digital economy, leveraging digital platforms primarily to deliver instant services directly to consumers. However, the broader digital economy is not limited to immediate transactions, but also covers a wide range of digital transactions, including software sales, online education, and cloud-based services. While the gig economy forms a part of the digital economy, it is important to note that not all jobs within the digital economy are considered gig work. Roles such as full-time remote employment or permanent positions within tech companies, although digitally based, differ significantly from the flexible, task-based structure defining gig roles. To clarify the distinctions among these overlapping concepts, Table 7 provides a comparative analysis of freelancing and related terms within the broader digital economy.

Aspect	Digital economy	Freelancing	Gig work	Gig economy	Independent contracting	On-demand economy	Platform economy	Platform work
Short-term, flexible work	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Self-employed status	Yes/No	Yes	Yes/No	Yes/No	Yes	Yes/No	Yes/No	Yes/No
Task-based compensation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reliance on digital platforms	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes	Yes	Yes
Emphasis on individual autonomy	Yes/No	Yes	Yes/No	Yes/No	Yes	No	Yes/No	Yes
Scope of activity	broadest	narrow	narrow	moderate	narrow	moderate	broad	moderate

Table 7. Comparative analysis of freelancing and related terms.

Source: based on Banik (2019).

2.3 Emerging trends associated to freelancing

To further explore emerging trends associated with freelancing and related concepts, an advanced literature search was conducted using the Scopus database. The

search strategy included titles, abstracts, and keywords with the following query: *"freelancing" OR "freelance" OR "on demand economy" OR "independent contractor" OR "gig economy" OR "gig work" OR "platform work" OR "platform economy" AND "digital economy"*. The scope was refined to include only peer reviewed documents in order to gain a more robust database. This resulted into a total of 188 documents. The curated corpus aimed to identify valuable insights into recent developments, evolving dynamics, and scholarly discussions surrounding freelancing within the broader context of freelancing in the digital economy.

Figure 3 shows that the first document that appeared in Scopus database written on the investigated subject dates back to 2012. The second one appeared only in 2016, and afterwards papers began to be written constantly and on an annual basis, continuing an increasing trend, especially once the pandemic took place (the event contributed significantly to the development of the platform economy, and hence, the interest on writing on the topic increased).

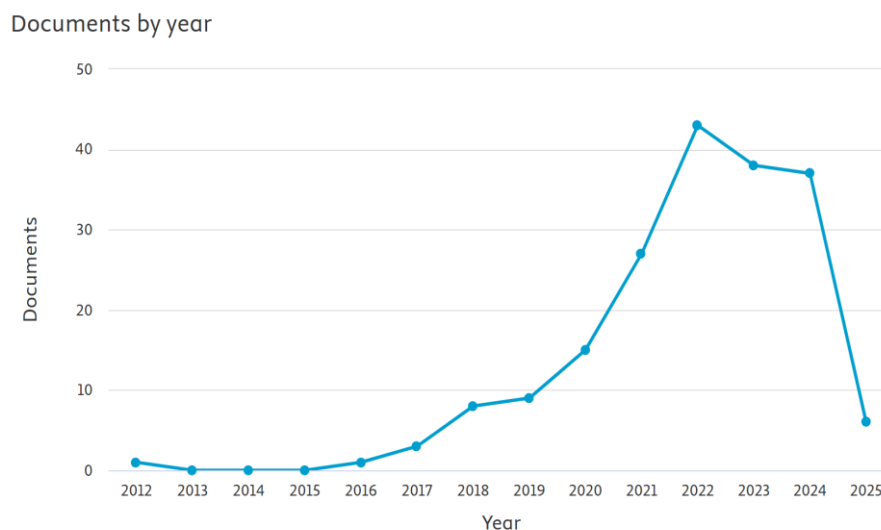


Figure 3. Documents (by year) written on the subject.

Source: Scopus Analyze tool according to own query search.

The sources where most papers were published include “Lecture Notes In Networks And Systems (8 papers), ACM International Conference Proceeding Series (6

papers), New Media And Society (5 papers), Sustainability Switzerland (4 papers) and International Journal Of Comparative Labour Law And Industrial Relations (3 papers).

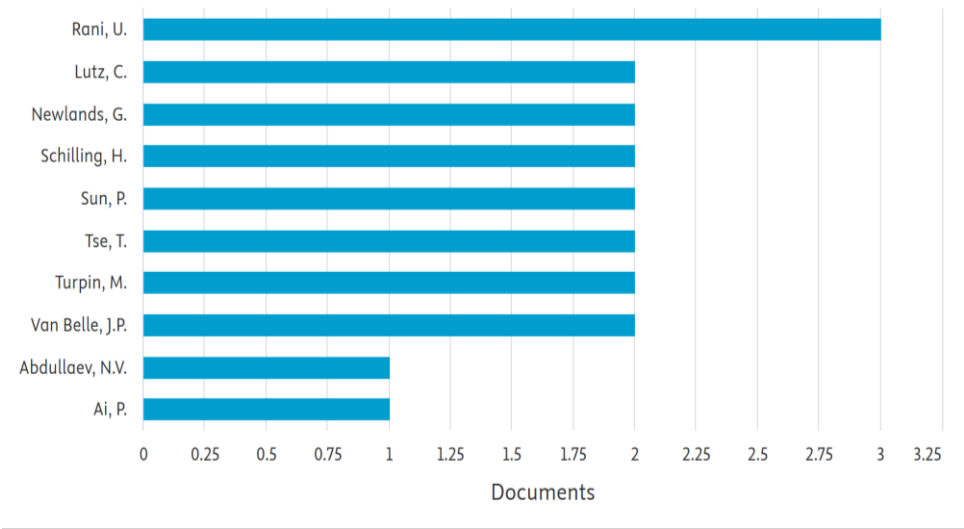


Figure 4. Documents by author.

Source: Scopus Analyze tool according to own query search.

The author who has contributed the most to the analysed topic is Rani, with three key publications: *“Platform Work in Developing Economies: Can Digitalisation Drive Structural Transformation?”* (Cook & Rani, 2024), *“Platform Work and the COVID-19 Pandemic”* (Rani & Dhir, 2020), and *“On-Demand Digital Economy: Can Experience Ensure Work and Income Security for Microtask Workers?”* (Rani & Furrer, 2019). As illustrated in Figure 4, these contributions align with the broader distribution of research outputs across major publication venues, such as Lecture Notes in Networks and Systems (8 papers), ACM International Conference Proceeding Series (6 papers), New Media and Society (5 papers), Sustainability Switzerland (4 papers), and the International Journal of Comparative Labour Law and Industrial Relations (3 papers).

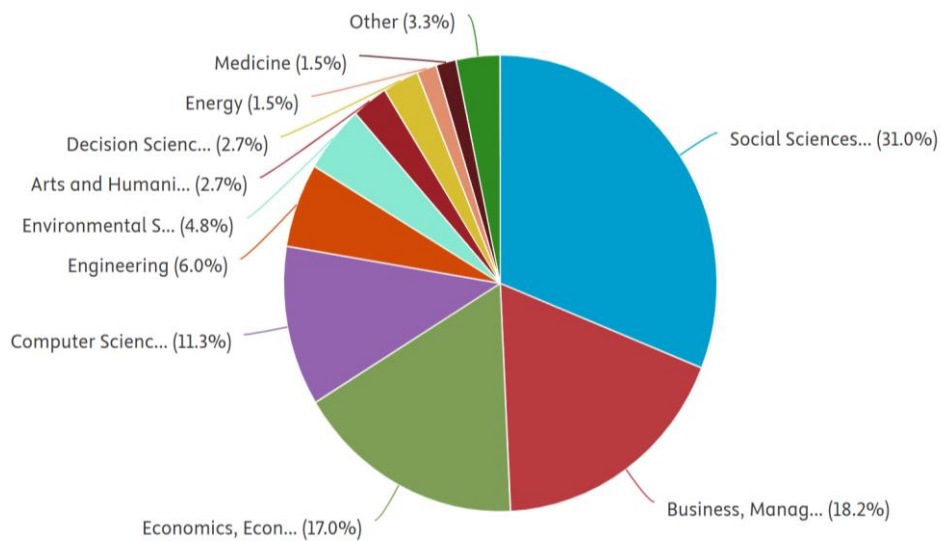


Figure 5. Documents by subject area.

Source: Scopus Analyze tool according to own query search.

As shown in Figure 5, the subject area distribution reveals that Social Sciences dominate the field, accounting for 104 documents (31% of the total), followed by Business, Management, and Accounting with 18.2%, and Economics, Econometrics, and Finance with 17%. In terms of publication type, articles represent the majority, comprising 67% of the documents, while book chapters account for 11.7%. Regarding geographic origin, China leads with 27 documents published on the investigated topic, followed by the Russian Federation with 23, and both the United Kingdom and the United States with 20 documents each. These distributions reflect the multidisciplinary and global nature of research on freelancing, the platform economy, and digital labour markets, highlighting significant academic interest across various disciplines and regions.

A co-occurrence analysis using VOSviewer (van Eck and Waltman, 2018) was conducted to visually represent and interpret emerging research themes within the collected documents. The resulting visualization, shown in Figure 6, presents the keywords co-occurrence map, highlighting major thematic clusters and illustrating how key concepts in the literature are interconnected.

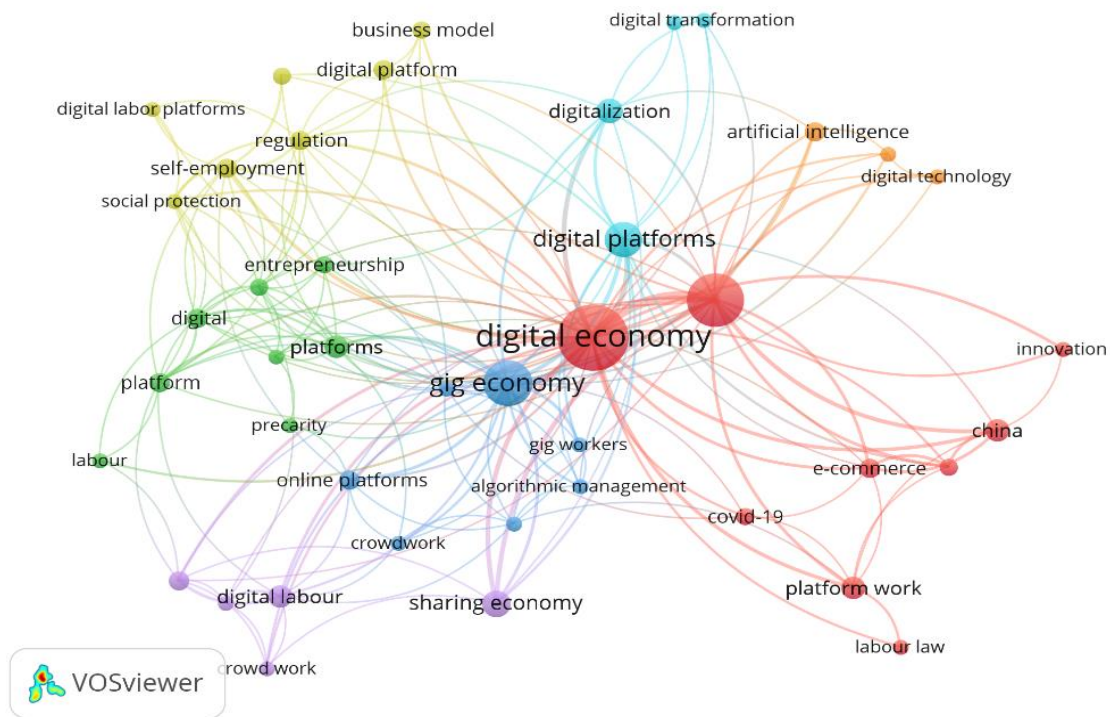


Figure 6. Keywords co-occurrence map.

Source: Own processing via VOSviewer.

The analysis identified seven distinct clusters:

- **Cluster 1 (Red)** highlights themes of e-commerce, innovation, and platform work, reflecting how digital platforms have reshaped commercial and labor landscapes, particularly considering global events such as the COVID-19 pandemic.
- **Cluster 2 (Green)** emphasizes entrepreneurship, labour, precarity, and self-employment, highlighting discussions surrounding employment conditions and the entrepreneurial opportunities and challenges arising from platform-mediated economies.
- **Cluster 3 (Dark blue)** focuses on gig economy-related aspects, notably algorithmic management, crowdwork, employment conditions, gig workers, online platforms, and working conditions, pointing to the evolving nature of labour management and its implications for gig workers.

- **Cluster 4** (Yellow) concentrates on business models, regulation, self-employment, and social protection, underscoring the significance of policy and regulatory frameworks in shaping sustainable digital labour practices.
- **Cluster 5** (Purple) discusses crowd work, digital capitalism, digital labour, gig work, and the sharing economy, reflecting important perspectives on the socio-economic impacts of platform-driven work environments.
- **Cluster 6** (Light blue) includes digital platforms, digital transformation, digitalization, and technological change, highlighting the role of technology as a transformative driver within economic structures and labour processes.
- **Cluster 7** (Orange) focuses on artificial intelligence, digital technology, and social media, representing technological advancements as key factors influencing labour markets and broader economic dynamics.

Overall, the findings underscore the complex interplay between technological innovation, labour market transformations, regulatory frameworks, and socio-economic outcomes within the context of freelancing and related digital economy concepts.

2.4 The revolution of freelancing

The global labour market is undergoing a significant transformation, driven by the rapid expansion of freelancing and the emergence of the digital labour economy. This evolution is fundamentally altering the nature of work, reshaping business operations, and redefining economic structures. Propelled by technological innovation and evolving social norms, the transition toward freelance and platform-based work arrangements represents a paradigm shift in contemporary employment. A comprehensive analysis of this phenomenon—examining its growth trajectory, economic implications, inherent challenges, and relevant policy considerations—is essential to understanding its far-reaching impact on workers, enterprises, and economies worldwide.

The earliest work in the field, represented by Razin (1989) and O'Farrell and Pickles (1989), provided a fundamental understanding of entrepreneurship and self-

employment. They explored geographical and spatial dimensions, confirming that location significantly impacts entrepreneurial activity, with the highest rates in metropolitan areas and certain types of smaller towns. The researchers also examined industry specifics, finding that different industries exhibit distinctive patterns of self-employment, with retail and construction often serving as entry points in less developed regions.

Socio-demographic factors such as educational attainment (especially secondary education), marital status and family background were key determinants of entrepreneurial activity. Razin's work (1989) uniquely highlighted the ethnic dimensions, showing how self-employment provides upward mobility for certain ethnic groups that face barriers to traditional employment. By analysing career trajectories, O'Farrell and Pickles (1989) demonstrated that self-employed individuals have lower unemployment risks than employees and identified clear transition patterns between different forms of employment.

The evolution of research and current relevance is reflected in the sharp increase in publications after 2010, especially after 2019. Academic interest has evolved from fundamental research to studying contemporary aspects of freelancing and self-employment. There has been a multidisciplinary expansion with a strong presence of research in the social sciences, business, and economics, and growing interest from environmental sciences, medicine, and computer science, reflecting a broadening understanding of the impact of independent forms of work on various aspects of society.

The surge in publications coinciding with the pandemic reflects the increased focus on digital transformation, including digital skills, remote work opportunities and platform mediation in labour relations, which have become central to the period. The consistently high publication rates through 2024 may indicate a continued research interest in financial resilience, particularly how financial literacy and entrepreneurial skills affect the sustainability of independent forms of work in times of economic uncertainty.

Although early research in 1989 predates current discussions of digital literacy and platform work, it established a fundamental framework on the spatial, demographic

and sectoral influences on self-employment that continues to inform contemporary research.

This evolution demonstrates how the academic understanding of freelancing and self-employment has transformed from a relatively niche area of geographical and demographic study to a central issue in many disciplines as independent forms of work organisation have become increasingly common in the global economy.

The global freelance economy has witnessed substantial growth, primarily catalysed by the digitalization of economic activities and the proliferation of platform-based business models. The COVID-19 pandemic served as a major inflection point, accelerating the adoption of remote work and flexible employment arrangements (Krutylin, 2024), thereby significantly expanding the freelance labour market (Lyman & Demianova, 2020). The increase in online freelancing is observable on a global scale, with notable concentrations in software development and information technology, particularly in regions such as the Indian subcontinent (Stephany et al., 2021). As a result, freelancing has become a pervasive and rapidly evolving mode of employment across both developed and developing economies.

In the United States, freelancing has gained remarkable traction, emerging as a viable and increasingly preferred career path. As of 2023, approximately 38% of the American workforce—equivalent to 64 million individuals—engaged in freelance work, representing a year-over-year increase of four million workers (Upwork Impact Report, 2023). This upward trend extends globally: in 2023, 71% of freelancers reported engaging exclusively in independent work, compared to 64% in the previous year (Fiverr Freelance Economic Impact Report, 2024). These statistics underscore the growing relevance of freelancing as a dominant form of labour in the digital economy.

State policy frameworks play a pivotal role in influencing the income dynamics of freelancers. In Kazakhstan, for instance, government regulation—particularly in areas such as education policy and labour experience—has been shown to significantly affect freelancers' earnings. Empirical evidence suggests that adherence to a standardized eight-hour workday optimizes income, thereby challenging prevailing assumptions that longer working hours necessarily yield greater financial returns (Abdreissova & Baitenizov, 2023). These findings underscore the critical importance of policy

intervention in establishing conducive working conditions that promote economic stability and well-being for freelance professionals.

The freelance market is characterized by distinct regional dynamics. North America and Europe dominate in terms of freelance service consumption, driven by the high demand for specialized skills in technology, marketing, and consulting. On the supply side, regions like Asia-Pacific—particularly India—and Eastern Europe—notably Ukraine—have emerged as top suppliers of tech freelancers. Emerging markets, such as the Western Balkans, are also gaining traction, thanks to targeted government support and the expansion of digital platforms (Payoneer, 2024).

Freelancing is particularly attractive to younger cohorts, with generational preferences shaping workforce participation patterns. A notable 52% of Generation Z professionals and 44% of Millennials have adopted freelance work, drawn by the prospect of flexible scheduling, greater autonomy, and the opportunity to pursue personally meaningful projects (Upwork Impact Report, 2023). This generational shift reflects broader cultural transformations, wherein traditional full-time employment is increasingly perceived as outdated. Instead, freelancing is embraced as a modern alternative that aligns with contemporary values of work-life integration and individual agency.

A complementary dimension in understanding freelancing's global dynamics lies in the comparative analysis of data drawn from leading platforms and regional contexts. Insights from Upwork, Fiverr, and Payoneer illustrate the scale and complexity of freelance labour markets across geographies. In the United States alone, 64 million individuals—representing 38% of the national workforce—were engaged in freelancing in 2023 (Upwork Impact Report, 2023). Payoneer's global survey, encompassing over 2,000 freelancers across 122 countries, further demonstrates the expansion of the freelance model beyond traditional markets, with growing traction in regions such as Asia and Eastern Europe (Payoneer, 2023). Generational preferences are mirrored in these trends, as 52% of Generation Z and 44% of Millennials reported participating in freelance work, with 60% of Gen Z freelancers experiencing earnings growth (Fiverr Freelance Economic Impact Report, 2024). Notably, 70% of freelancers globally indicated that their freelance income exceeded earnings from comparable

local employment, with hourly rates averaging \$23 worldwide and peaking at \$56 in North America. These patterns highlight the regional disparities and structural conditions that shape freelance opportunities and underscore the significance of access to high-demand markets.

Beyond its social and cultural resonance, freelancing contributes substantially to the global economy. In 2023 alone, freelancers collectively generated \$3.8 billion through platforms such as Upwork (Upwork Impact Report, 2023). This illustrates the significant economic footprint of the freelance sector, which currently constitutes 4.1% of the United States labour force and contributes approximately 1.1% to the national gross domestic product (Fiverr Freelance Economic Impact Report, 2024). These statistics highlight the critical role of independent work in national economic development.

The economic concentration of freelance activity is particularly evident in urban centres. The 30 largest metropolitan areas in the United States account for 57% of all independent professionals and 63% of freelance-generated revenue. This urban dominance can be attributed to the availability of higher-paying opportunities and access to diverse and international client bases (Fiverr Freelance Economic Impact Report, 2024). Cities, therefore, function as strategic hubs that facilitate the clustering of freelance talent and digital labour services.

Technological innovation—particularly the advent of artificial intelligence (AI)—has proven transformative for the freelance workforce. In 2023, approximately 40% of freelancers reported integrating AI tools into their professional practices, resulting in an average time savings of 8.1 hours per week. Major platforms such as Upwork and Fiverr have incorporated AI-powered functionalities to enhance user productivity, streamline workflows, and facilitate more efficient communication between clients and freelancers. These advancements not only elevate operational efficiency but also enable freelancers to allocate greater focus to complex, creative, and strategic tasks, thereby enhancing the overall value of their work.

The widespread adoption of AI and digital technologies underscores the adaptability and innovation capacity of the freelance labour force. Freelancers demonstrate a high degree of technological responsiveness, quickly adopting new tools

to maintain competitiveness in an evolving market. This agility constitutes a central factor in the sustained growth and resilience of the freelance economy, positioning freelancers at the forefront of digital transformation.

Concurrently, freelancing is evolving in tandem with the structural characteristics of digital platforms that mediate global labour markets. The operational models of these platforms significantly shape freelancers' career trajectories, often giving rise to phenomena such as platform lock-in, which may hinder career mobility and limit opportunities for advancement (Gussek & Wiesche, 2024). Furthermore, the broader entrepreneurial ecosystem—including cultural expectations and the extent of governmental support—exerts a meaningful influence on freelancers' job satisfaction and long-term career fulfillment (Huđek, Tominc, & Širec, 2021). These factors contribute to a complex and dynamic environment in which freelancers must continuously navigate technological, institutional, and social variables.

The gig economy, underpinned by narratives of flexible accumulation and neoliberal economic logic, continues to shape the structure and identity of freelance work (Popiel, 2017). Freelancers are typically characterized by high levels of autonomy and flexibility, allowing for individualized control over workload, client selection, and scheduling. However, these advantages are tempered by persistent vulnerabilities, including employment precarity, limited access to social protections, and constrained career progression (Lymar & Demianova, 2020).

The freelance workforce is markedly heterogeneous, encompassing a diverse range of working arrangements. Some individuals engage exclusively in freelance activities, while others adopt hybrid models that combine freelance work with traditional employment. Additionally, a subset of freelancers pursue entrepreneurial endeavours, thereby blurring the boundaries between self-employment and business ownership (Shevchuk, Strebkov, & Bögenhold, 2022). Notably, regions such as Ukraine have emerged as significant suppliers of freelance services within Europe, boasting a high concentration of skilled professionals (Krutylin, 2024).

Freelancers often possess high levels of education and specialized skills, particularly in fields like software development, digital marketing, and consulting. However, the freelance workforce is not monolithic; it includes individuals working in

pure freelance roles, hybrid arrangements (combining freelancing with traditional employment), and entrepreneurial ventures.

The global demand for freelance services remains uneven, with a disproportionate concentration in specific markets. The United States represents the largest consumer of freelance labour, a pattern shaped by corporate demand for cost-effective, flexible, and specialized services (Krutylin, 2024). This trend reflects broader strategic imperatives among firms, including the pursuit of global talent pools and the desire to minimize fixed labour costs. However, clients frequently encounter challenges related to quality assurance, project oversight, and the complexities of managing remote, distributed teams (Seifried et al., 2023).

Cultural and institutional contexts also play a pivotal role in shaping freelance labour markets. Factors such as national attitudes toward entrepreneurship, the extent of digital infrastructure, and the presence of state-sponsored programs supporting self-employment significantly influence both the supply and quality of freelance labour (Huđek, Tominc, & Širec, 2021). These contextual variables contribute to the variability in freelancing experiences and outcomes across different countries and regions.

Generation Z has emerged as a particularly influential cohort within the freelance economy. In 2023, 60% of Gen Z freelancers reported increased earnings, compared to 43% of the overall independent workforce (Fiverr Freelance Economic Impact Report, 2024). This generational group demonstrates a pronounced preference for autonomy, flexibility, and work arrangements that align with personal values and professional aspirations. Their engagement with freelancing reflects a broader shift in labour market preferences away from hierarchical corporate structures toward decentralized, self-directed forms of work.

High levels of job satisfaction further reinforce the appeal of freelancing. Approximately 75% of freelancers report deriving fulfilment from their independent work, in contrast to only 47% of individuals in permanent employment (Fiverr Freelance Economic Impact Report, 2024). This disparity is attributable to greater control over one's schedule, the ability to pursue passion-driven projects, and improved work-life balance. Such findings challenge conventional assumptions

regarding the superiority of traditional employment and underscore the motivational drivers behind the freelance movement.

While autonomy is frequently cited as a core advantage of freelancing, it is important to critically assess whether this autonomy reflects genuine empowerment or a redistribution of responsibility in an increasingly precarious labour market. Freelancers often operate without the institutional safeguards afforded to traditional employees—such as healthcare, unemployment insurance, or retirement benefits—placing the burden of economic risk squarely on the individual. The necessity to maintain competitiveness, secure ongoing projects, and continuously upgrade skills may transform perceived flexibility into a form of self-imposed pressure. Moreover, platform-based work arrangements, though offering broad access to global opportunities, frequently incorporate rating systems and algorithmic oversight that can subtly constrain decision-making and career mobility. These dynamics suggest that autonomy in freelancing may be shaped as much by structural vulnerabilities as by personal choice, raising important questions about sustainability, well-being, and the long-term implications of independent work.

Nevertheless, the freelance economy is not without its challenges. Market saturation and heightened competition have emerged as pressing concerns, as a growing number of individuals enter the sector. To remain competitive, freelancers must invest in continuous upskilling and specialization. In 2023, 65% of freelancers engaged in skill development initiatives, highlighting the critical importance of lifelong learning in sustaining employability within the digital economy (Upwork Impact Report, 2023).

The heterogeneity of the freelance workforce poses additional difficulties for platform providers. Diverse backgrounds, varying motivations, and distinct career goals among freelancers make it difficult to design a unified value proposition. Younger freelancers may prioritize flexibility and personal fulfilment, whereas others may focus on financial compensation or access to benefits. Attracting and retaining talent, therefore, requires nuanced and differentiated approaches. Effective onboarding and continuous training are essential for ensuring high engagement and productivity. Lengthy or overly complex onboarding processes may deter freelancers from fully

integrating into platform ecosystems, thereby resulting in lost opportunities for both the worker and the platform (Mastercard, 2019).

A critical challenge within the freelance labour market is the pervasive sense of workplace insecurity. Freelancers often operate without the structural protections afforded to traditional employees, including health benefits, paid leave, unemployment insurance, and retirement plans. This insecurity is further exacerbated by macroeconomic pressures such as inflation and rising living costs. In response, 55% of freelancers reported taking on additional projects, while 32% expanded their services into international markets in pursuit of more lucrative opportunities.

Gender-based income disparities also persist within the freelance economy. According to the 2023 Payoneer Freelancer Insights Report, female freelancers earned an average of \$22 per hour, compared to \$24 per hour for their male counterparts. Although this pay gap has narrowed in recent years, it remains a manifestation of broader systemic inequalities present across both traditional and digital labour markets. Addressing this disparity is essential to ensuring a more equitable and inclusive freelance workforce.

The continued expansion of the digital labour economy necessitates corresponding adjustments in public policy. Traditional workforce development frameworks—such as the Workforce Innovation and Opportunity Act (WIOA)—are often ill-equipped to address the unique needs of gig workers, who typically fall outside of conventional employment classifications (The Public Workforce Development System and Gig Workers, 2024). Policy recommendations include integrating gig worker representation into workforce development boards, enhancing data collection mechanisms to capture freelance labour contributions, fostering partnerships between government employment centres and community-based organizations, and revising performance metrics to reflect the realities of non-traditional work arrangements. Such reforms aim to construct a more responsive and supportive ecosystem that empowers freelancers to thrive in a rapidly evolving digital economy. Ensuring equitable access to training, protections, and support infrastructure is vital for fostering long-term economic inclusion and resilience.

Looking ahead, the future of freelancing appears both promising and uncertain. A majority of freelancers—56%—express optimism about the potential for significant business growth in the coming years. This outlook is buoyed by increased corporate reliance on flexible labour models, which are seen as adaptable solutions to both economic volatility and ongoing technological disruption. However, the freelance economy must navigate several enduring challenges, including intensified competition, persistent skill gaps, and the lack of standardized protections. To remain viable, freelancers must continuously differentiate themselves through niche expertise, strategic innovation, and robust client engagement.

In conclusion, the rise of freelancing and the digital labour economy signifies a fundamental transformation in the structure of global work. Fuelled by technological advancement, shifting worker preferences, and evolving market demands, freelancing offers unprecedented opportunities for autonomy, flexibility, and economic participation. Nonetheless, it is also characterized by significant structural vulnerabilities, including insecurity, inequality, and a lack of institutional support. Addressing these issues through targeted policy interventions, inclusive institutional frameworks, and continuous investment in skills development is imperative. Such measures will ensure that the freelance economy remains a sustainable and equitable pillar of the 21st-century labour market. The future of work is already unfolding—and freelancing stands at its vanguard, redefining careers, industries, and economic landscapes on a global scale.

2.5 Why freelancing is becoming more important

Freelancing is gaining importance as both a preferred work model and a necessary means of income generation in today's evolving labour market. One of the primary drivers is the flexibility and autonomy it offers, allowing individuals to structure their work around personal responsibilities and lifestyle preferences (Tsvetkova, 2023; van der Zwan et al., 2020). This flexibility is especially valuable in an era where remote work is increasingly normalized. For many, freelancing also serves as a financial necessity—an accessible option to supplement income in response to rising living costs

and economic uncertainty (Krishnamoorthy et al., 2016; Mukherjee & Tomar, 2024). Beyond financial and logistical benefits, freelancers often report higher levels of job and leisure satisfaction compared to traditional employees, even while facing inherent risks such as income instability and lack of long-term job security (van der Zwan et al., 2020). These factors collectively underscore why freelancing is not only growing but also reshaping perceptions of meaningful and sustainable work.

Freelancing has emerged as a transformative force in the global labour market, reshaping traditional employment models and offering new opportunities for both workers and employers. This shift is driven by a confluence of technological innovation, shifting generational preferences, structural economic changes, and pursuit of autonomy and flexibility in work. The rise of freelancing is not merely a trend but a structural change in the labour market, supported by empirical evidence from industry reports and academic research. This section provides a comprehensive analysis of the factors contributing to the growing importance of freelancing, integrating insights from platform reports and scholarly studies (Figure 17).

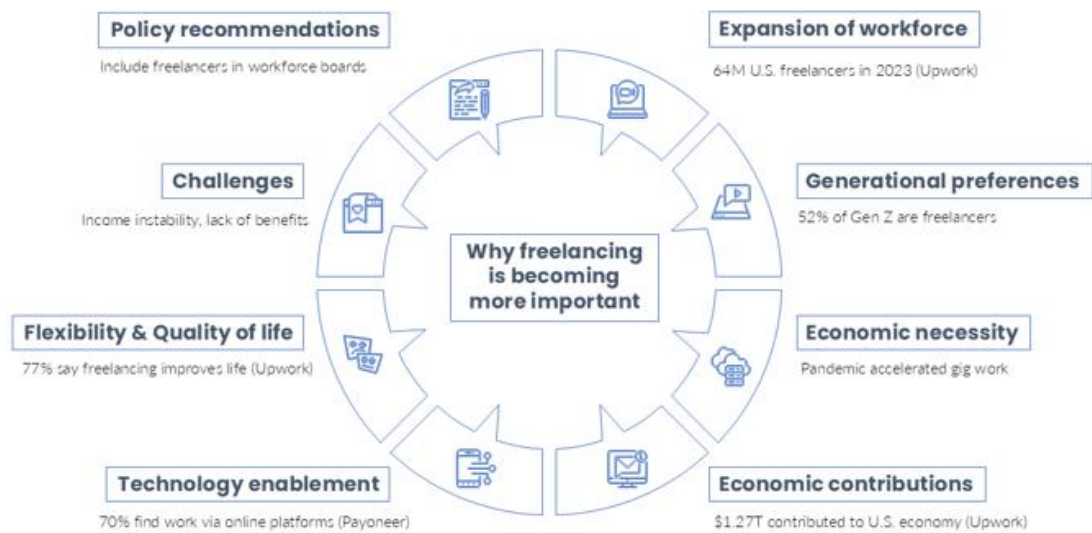


Figure 7. Why is freelancing becoming more important.

According to the Upwork 2023 Impact Report, 64 million Americans engaged in freelance work in 2023, representing 38% of the U.S. workforce, an increase of four

million from the previous year. Since 2014, the freelance workforce has grown steadily by approximately one million people per year (Upwork, 2023). Fiverr's (2024) report further indicates that freelancers now make up 4.1% of the national labour force and contribute 1.1% of the U.S. GDP. This expansion is not isolated to the U.S.; globalization and digital platforms have enabled freelancers to serve clients across borders, marking freelancing as a transnational labour trend (Fiverr, 2024). Academic research has supported this empirical growth. Donina et al. (2022) emphasize the alignment between freelancing and broader trends in labour market outsourcing, noting its particular appeal to younger workers seeking professional autonomy. Similarly, Stephany et al. (2021) note the rise of online labour markets as a new global metric for remote work, reflecting the freelance economy's scale and global reach.

This generational dimension is central to the appeal of freelancing. The Upwork 2023 Impact Report highlights that 52% of Gen Z and 44% of Millennials in the U.S. are active freelancers, with Gen Z, in particular, reporting higher income growth compared to other cohorts (Upwork, 2023). Fiverr's (2024) findings echo this trend, reporting that 60% of Gen Z freelancers experienced increased earnings in 2023. These findings align with academic analyses that emphasize generational preference for autonomy, purpose, and non-traditional career paths. Zwan et al. (2019) found that freelancers report higher subjective well-being, while Grimov (2016) emphasizes that freelancing offers women, young adults, and retirees unique opportunities to balance personal and professional lives.

Freelancing has also emerged as a response to broader economic challenges. The COVID-19 pandemic catalysed an increase in freelance participation, as individuals sought alternative income sources amid layoffs and labour market volatility. For example, gig worker Tyree reportedly increased his Uber Eats hours to meet daily expenses, reflecting the economic pressures that drive many into freelance work (Public Workforce Development System, 2024). Academic research has validated these findings. Khan et al. (2022) argued that freelancing has become a necessary adjustment to unstable economic conditions, especially during crises. Thus, the shift toward self-employment and flexible work structures is a response to economic necessity, as it is a lifestyle choice.

Freelancers make substantial economic contributions, both in terms of individual earnings and overall economic impact. In 2023, freelancers on Upwork alone earned \$3.8 billion, contributing to the dynamic gig economy (Upwork, 2023). Despite economic uncertainties such as inflation and layoffs, freelancers have demonstrated resilience, with 43% reporting increased revenue in 2023 and 55% expecting further growth in 2024 (Fiverr, 2024). These statistics demonstrate freelancers' resilience and adaptability. Marín-Sanchiz et al. (2021) note that in fields such as journalism, freelancing allows professionals to navigate shrinking budgets while maintaining income. Academic sources corroborate that freelancing offers strategic financial flexibility during uncertain times. This financial stability has positioned freelancing as a viable career option even in unpredictable economic times. However, academic research highlights the precarious nature of freelance work, with income instability and a lack of job security being significant challenges (Sutherland et al., 2019; Mai, 2020). These challenges underscore the need for policies to support freelancers in achieving long-term financial stability.

Technology, particularly artificial intelligence (AI), is a key enabler of a freelance economy. Digital platforms lower entry barriers, provide access to global markets, and streamline administrative processes. According to Fiverr (2024), 40% of freelancers use AI tools to boost efficiency, saving an average of 8.1 hours per week (Fiverr, 2024). Additionally, 70% of freelancers find most of their work through online marketplaces, highlighting the importance of digital platforms in transforming how freelancers acquire clients and secure work (Payoneer, 2023). The integration of technology has not only streamlined workflows, but also enables freelancers to stay competitive in a rapidly evolving market. Academic research further emphasizes the role of technology in freelancing, noting that digital platforms have lowered entry barriers for individuals seeking to work independently (Stephany et al., 2021). Donina et al. (2022) emphasize that digital labour platforms are central to the emergence of global online labour markets, and technological developments have enabled new forms of labour interaction and trade. However, reliance on technology also requires freelancers to continuously adapt and develop new skills to remain competitive and face new responsibilities, such as managing client relations, marketing, and finance, which

require digital literacy and platform-specific knowledge (Sutherland et al., 2019; Blaising et al., 2021).

Freelancing is widely valued because of its flexibility. According to the Upwork 2023 Impact Report, 77% of freelancers agree that freelancing increases their overall quality of life, allowing them to create schedules that suit their needs and achieve a better work-life balance (Upwork, 2023). The shift towards remote work, accelerated by the COVID-19 pandemic, has further enhanced the appeal of freelancing, enabling businesses to tap into a global talent pool and hire freelancers from diverse backgrounds (Payoneer, 2023). Fiverr (2024) reported that 71% of freelancers worked exclusively in freelance roles in 2023, up from 64% in 2022. This trend aligns with workers' pursuit of autonomy, career satisfaction, and lifestyle. This flexibility is particularly valuable for companies that need to adapt quickly to changing project requirements without the long-term commitments associated with permanent hires. Academic research supports this finding, noting that freelancing offers a unique opportunity for individuals to balance work and personal life, particularly for those with caregiving responsibilities or other personal obligations (Zwan et al., 2019). Grimov (2016) and Zwan et al. (2019) highlight freelancing's role in providing work-life balance and facilitating labour market inclusion for diverse populations. Moreover, remote work, accelerated by the pandemic, empowered businesses to access international talent while offering workers more geographic and temporal freedom (Payoneer, 2023).

Despite its many advantages, freelancing is not without challenges. Income instability is a significant issue, with many freelancers facing unpredictable earnings that make financial planning difficult (Public Workforce Development System and Gig Workers, 2024). Additionally, freelancers often lack access to benefits such as healthcare, retirement plans, and professional development opportunities, which are typically available to traditional employees (Sutherland et al., 2019; Mai, 2020). This lack of support can hinder long-term career growth and financial stability. Furthermore, existing public workforce development systems have struggled to accommodate the specific needs of gig workers, often failing to provide adequate resources and support (Public Workforce Development System and Gig Workers,

2024). Academic research highlights the precarious nature of freelance work, with freelancers often facing challenges in skill verification and commitment perception from potential employers, which can affect their prospects for full-time employment (Sutherland et al., 2019; Mai, 2020). Freelancers must also continuously update their skills to remain competitive. Blaising et al. (2021) note that platform workers must strategically manage their careers, often without institutional support. Additionally, public workforce systems have not yet adapted to freelance labour, often excluding gig workers from policy discussions and service design (Public Workforce Development System, 2024).

To better support this segment of the workforce, policymakers must develop inclusive strategies. The Public Workforce Development System (2024) recommends incorporating freelance perspectives into workforce boards, improving data collection, and forming partnerships with local organizations. Updating performance metrics to account for non-traditional work will also help reflect freelancers' real contributions and needs.

Such measures align with the findings of academic scholars who call for institutional reform to address the precariousness and exclusion experienced by many freelancers (Mai, 2020; Sutherland et al., 2019). A more adaptive and inclusive policy framework is essential for enabling freelancers to thrive in a changing labour landscape.

Recent work by Campo et al. (2024) demonstrates that language structures influence entrepreneurial decisions. Their study in Switzerland shows that speakers of languages where future tense marking is optional (a weak reference to the future tense) are more likely to become self-employed because they perceive future rewards as closer. This suggests that cognitive structures embedded in language influence economic behaviour.

Awaworyi Churchill et al. (2024) present groundbreaking findings on how weather shocks affect entrepreneurship. They find that extreme weather events negatively affect the probability of self-employment. This research area is becoming increasingly important due to the intensification of climate change, highlighting how environmental stressors create barriers to entrepreneurship.

Li and Song (2024) identify a counterintuitive pattern, which they describe as 'downward geographical mobility and upward social mobility', in which highly educated women return to smaller cities and remote areas to pursue entrepreneurial opportunities. This reveals complex motivations that go beyond economic factors, including family ties and quality of life.

Vader et al. (2024) explore how people with visual impairments navigate self-employment. They find that while self-employment offers flexibility to meet adaptation needs, there are significant barriers to the accessibility of digital tools. This highlights an important intersection between disability and entrepreneurship research.

Atkins and Burrage (2025) examine racial inequalities in tech employment and entrepreneurship, finding that white workers are overrepresented in tech entrepreneurship, while black, Latino and Asian workers are underrepresented. Their findings suggest that STEM education attainment gaps explain only a tiny part of these disparities.

A recent study by Adjei-Mantey and Kunawotor (2024) from Ghana challenges the assumption of self-employment as a poverty reduction mechanism. They find that self-employed individuals are more likely to be poor than those in paid employment, although non-agricultural self-employment and entrepreneurship by opportunity (as opposed to entrepreneurship by necessity) are viable pathways out of poverty.

Vacchiano et al. (2025) demonstrate how personal networks significantly influence young people's self-employment orientation. Interestingly, their study shows that potential entrepreneurs with contacts at a disadvantage in the labour market (lower education, foreign origin) are more likely to engage in self-employment, suggesting that entrepreneurship can function as a coping strategy for vulnerable populations.

A significant trend in recent publications is the use of intersectional frameworks. Studies increasingly recognise that intersecting social categories, including gender, race, immigration status, disability, and socioeconomic background, shape entrepreneurial experiences and outcomes.

For example, Mindes and Lewin (2024) use an intersectional approach to study Latin American women's entrepreneurship, finding that the intersection of

disadvantaged statuses exacerbates barriers to economic prosperity. Similarly, Martinez Dy et al. (2024) apply racial capitalism and intersectional feminism to understand patterns of self-employment in the British labour market.

The growing importance of freelancing is underpinned by a complex interplay of economic, technological, and social forces. Freelancing is not only a flexible work arrangement—it is also a dynamic, resilient, and economically significant sector. As evidenced by both industry reports and scholarly research, freelancing addresses modern workers' needs for autonomy, adaptability, and opportunity. However, to ensure the long-term sustainability of the freelance economy, policymakers must recognize and address its inherent challenges. With thoughtful policy interventions and continued platform innovation, freelancing will remain a vital component of the global labour market.

2.6 Socio-Cultural influences on freelancing

Socio-cultural factors play a significant role in shaping the experiences and outcomes of freelancers across different regions. In the global online labour market, structural power dynamics often favour freelancers from the Global North, who are more likely to benefit from the symbolic legitimization of certain cultural norms and professional practices (Demirel et al., 2021). This imbalance can disadvantage freelancers from the Global South, who may face biases in client perceptions and reduced visibility on major platforms. Gender inequality is another persistent issue within the gig economy. Women are frequently underrepresented in high-demand STEM-related freelance work and often experience a gender pay gap. However, research shows that this disparity can be significantly reduced when accounting for differences in STEM skill levels (Petroff & Fierro, 2023). Moreover, cultural adaptation is a critical success factor for freelancers. Professionals must navigate the socio-cultural nuances of their local and international markets, adjusting their communication styles, work practices, and expectations accordingly—factors that can strongly influence both performance and job satisfaction (Shaikh et al., 2024).

The phenomenon of freelancing is experiencing significant growth on a global scale, which can be attributed to the sense of freedom and independence it provides paired with the rise of various digital platforms that have emerged in recent years. These innovative platforms serve as vital conduits that effectively connect a diverse array of professionals and clients who are situated in different geographical locations, thereby facilitating a more globalized workforce. But freelancing is as much a socio-cultural phenomenon as it is a digital or economic one.

At its core, the decision to freelance is shaped by the culture a person lives in. Culture influences what people believe is possible, desirable, or respectable in a career. Edward Burnett Tylor defined culture, in 1871, as being “that complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society” apud (Samovar et al., 2011). Some major characteristics of culture refer to the fact that culture is transmitted intergenerationally and, thus, learned, it is symbolic and dynamic, and most of the time, ethnocentric (Baltador L & Budac C, 2014). Moreover, social values around work-life balance, autonomy, risk, and success play a huge role in who chooses to freelance and how they navigate that path. Freelancing may seem like a secure and freeing option in nations with robust social safety nets and progressive labour regulations. It may be a dangerous alternative to standard employment in areas without those safeguards. Freelance patterns are also influenced by community conventions, gender roles, and generational expectations. In one society, a woman may use freelancing to gain freedom while raising a family, while in another, she can encounter shame or obstacles for deviating from the norm.

Understanding freelancing through a socio-cultural lens allows us to see the bigger picture—not just who freelances, but why, how, and what it means in different parts of the world. It's a window into evolving values, identities, and systems. And it reminds us that work is never just about money or tools—it's about people, beliefs, and belonging.

2.6.1 Societal norms and their impact on freelancing

Societal norms, that is, unwritten rules and expectations that guide behaviour within a given society, play a critical role in shaping individual career choices, including the decision to pursue freelancing. These norms influence how work is perceived, what constitutes a legitimate or prestigious profession, and who is socially permitted or encouraged to engage in non-traditional forms of employment. Alternatively, in Confucius' words, *“human beings are drawn close to one another by their common nature, but habits and customs keep them apart.”* Even if working life and business are more and more global, the cultural background affects the behaviour, relationship to others, and the environment (Baltador et al., 2013). This is why many areas still illustrate differences in norms and how they shape freelancing across different social and geographic contexts. The identified factors do not provide an exhaustive approach, as culture is a very complex concept. These cultural and societal influences are further illustrated in Figure 8, which presents a cultural framework outlining the societal norms that shape freelancing behaviours across different regions and social contexts.

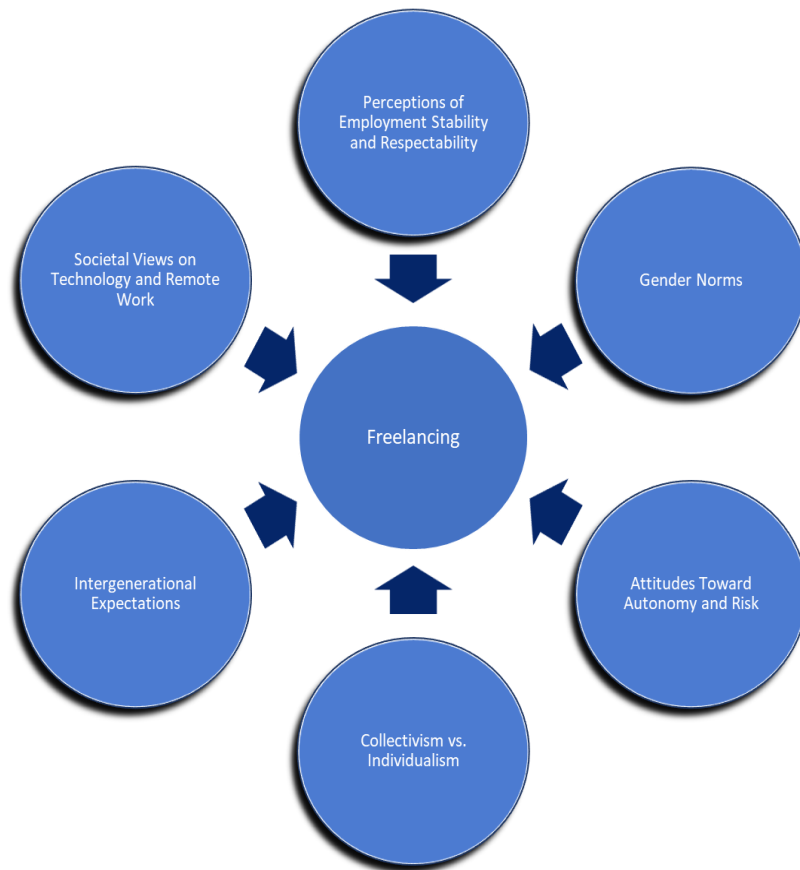


Figure 8. Societal norms influencing freelancing: A cultural framework.

Source: based on Hudek, Tominc, and Širec (2021).

2.6.2 Perceptions of employment stability and respectability

In many societies, full-time employment, particularly within established institutions such as corporations, government agencies, or universities, is closely associated with social stability, financial security, and personal respectability and maturity (Beck, 2014). These positions often come with benefits like pensions, healthcare, and clear career advancement paths, reinforcing the idea that traditional employment is the most responsible or prestigious career choice.

Freelancing, in contrast, is often perceived as informal, unstable, or temporary (Gandini, 2016). This distinction is especially pronounced in cultures with strong expectations around linear career progression. For instance, in Japan and South Korea, long-term corporate employment is often seen as the ideal career model (Allison, 2013), making freelancing appear less socially acceptable.

2.6.3 Gender norms

Gendered expectations around caregiving, domestic roles, and professional aspirations shape who is encouraged or discouraged from freelancing. The flexibility of freelance work is often marketed as ideal for women balancing work and family life. In societies where women's labour participation is culturally limited, freelance work may remain invisible or undervalued (Kelan, 2008). According to a 2024 study commended by the European Commission, one of the most important reason why women work part-time, and are much more likely to work part-time compared to men, is because they are largely carrying out, and are considered responsible for, childcare and care for elderly or disabled relatives. Women remain underrepresented in the labour market. In 2021, 67.7% of women were in employment, whereas men's employment stood at 78.5% (Gender Statistics, 2024). Another reason is education and training. Geert Hofstede defines culture as being the "collective programming of the mind" which differentiate people from different groups. The model provides scales from 0 to 100 for 76 countries for each of the six dimension, and each country has a position on each scale or index, relative to other countries (De Mooij & Hofstede, 2002). One such dimension is Masculinity vs Femininity. A high score (masculine) on this dimension indicates that the society will be driven by competition, achievement and success, with success being defined by the winner / best in field – a value system that starts in school and continues throughout organizational behavior. A low score (feminine) on the dimension means that the dominant values in society are caring for others and quality of life. A feminine society is one where quality of life is the sign of success and standing out from the crowd is not admirable.

2.6.4 Attitudes toward autonomy and risk

Cultural norms around risk and independence greatly affect the appeal and acceptance of freelancing. According to Hofstede's model, societies differ in their tolerance for uncertainty or the extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these. In low uncertainty-avoidance cultures like the United States and Sweden, freelancing is more often embraced as a viable and even

aspirational path. In contrast, high uncertainty-avoidance cultures such as Portugal or Japan may view freelancing as too precarious or socially deviant (Hofstede, 2003). Romania scores 90 on this dimension and thus has a very high preference for avoiding uncertainty. Countries exhibiting high uncertainty avoidance maintain rigid codes of belief and behaviour and are intolerant of unorthodox behaviour and ideas. In these cultures there is an emotional need for rules (even if the rules never seem to work), people have an inner urge to be busy, innovation may be resisted, security is an important element in individual motivation

2.6.5 Collectivism vs. individualism

Freelancing's emphasis on personal branding, self-promotion, and independent work aligns more easily with individualistic societies (Markus & Kitayama, 1991). In collectivist cultures, where group loyalty and interdependence are central values, freelancing may be seen as self-serving or isolating. This perception can reduce institutional and familial support for those choosing freelance careers. For example, in some societies, being your own boss is seen as a bold, admirable move—evidence of self-reliance and ambition. In others, it may be viewed as unstable or even irresponsible, especially if it deviates from traditional career paths like medicine, law, or government work.

2.6.6 Societal views on technology and remote work

The social legitimacy of online work varies across cultures. In digitally advanced societies, freelancing—particularly remote or platform-based work—is often normalized and integrated into broader economic structures (De Stefano, 2015). However, in regions where digital work is perceived as secondary to physical labour or face-to-face interaction, freelancing may lack credibility or social recognition (Wood et al., 2019). Societal views on technology and remote work have evolved significantly in recent years, particularly accelerated by the global pandemic. Initially met with scepticism, remote work is now widely accepted as a viable and often preferable mode of employment, thanks to advances in communication and collaboration tools. Many view technology as a liberating force that offers flexibility, improved work-life balance,

and access to a broader talent pool. However, concerns remain about digital burnout, social isolation, and the erosion of boundaries between personal and professional life. As remote work becomes more normalized, society continues to adapt, seeking a balance between technological convenience and human connection.

2.6.7 Intergenerational expectations

Family and generational expectations can shape individual choices around freelancing. In many cultures, particularly those emphasizing filial duty or family prestige, career decisions are influenced by parental input and community values. Freelancing, especially in creative or digital fields, may conflict with traditional notions of “successful” careers, creating internal tensions and social pushback. Intergenerational expectations regarding freelancing reflect differing attitudes shaped by cultural, economic, and technological contexts. Older generations, such as Baby Boomers and Gen X, often value stability, long-term employment, and traditional career paths, viewing freelancing as uncertain or lacking in security and benefits. In contrast, younger generations—particularly Millennials and Gen Z—are more likely to embrace freelancing for its flexibility, autonomy, and alignment with their desire for meaningful and self-directed work (Upwork Annual Report, 2019). These younger workers prioritize work-life balance and personal growth, often leveraging technology to manage multiple income streams and side gigs.

3 State and Trends of The Global Freelance Market

3.1 Size and structure of the freelancer market

The market for online employment has witnessed exponential growth in the past decade, underpinned by rapid technological advancements and increased global connectivity. As Ovsyannikova (2017) highlights, the size of the global online employment market significantly expanded from USD 1.6 billion in 2013 to a substantial USD 46 billion by 2020 (Ovsyannikova, 2017). This tremendous surge indicates a paradigm shift in employment patterns globally, with both businesses and individuals increasingly turning towards digital platforms to fulfil their labour and professional needs. Such remarkable market growth underscores the increasing economic importance of freelancing as a mainstream employment strategy, offering scalable and flexible workforce solutions.

Further analysis of the freelance workforce provides insight into its significant yet complex structure. Kässi et al. (2021) estimate that globally, there are approximately 163 million freelancer profiles registered across various online labour platforms (Kässi et al., 2021). However, despite the substantial volume of registrations, active participation appears considerably lower, with only around 14 million freelancers obtaining at least one project through these platforms. Even fewer, about 3.3 million freelancers, have achieved substantial engagement—defined by the completion of at least ten projects or earning a minimum of \$1,000. This disparity highlights a critical structural characteristic of the freelance market, pointing toward a high level of market saturation and intense competition for active and lucrative job opportunities.

Regional analysis, particularly in emerging markets, reveals similar growth dynamics. For instance, the freelance economy in Ukraine experienced remarkable expansion, with registrations on freelance platforms reaching nearly 190,000

individuals from 2011 to 2016 (Frolova et al., 2018). This growth reflects broader global trends where emerging economies leverage freelancing as a means to access international employment opportunities, supplement incomes, or develop professional portfolios. The significant increase in registrations in countries such as Ukraine exemplifies the growing recognition of freelancing as an economically viable and attractive employment option beyond traditional job markets.

To systematically capture and monitor this dynamic market, analytical tools such as the Online Labour Index (OLI) have been developed. The OLI effectively tracks projects and tasks posted across major online labour platforms, providing critical insights into global freelancer activity, including revenue contributions and employment trends (Stephany et al., 2021). The maturation of the online freelancing sector is evidenced by such advanced tracking mechanisms, illustrating increased transparency, sophistication, and strategic orientation within the industry. These analytical tools facilitate deeper comprehension of freelancer engagement patterns and enable stakeholders, from freelancers to policymakers, to make informed decisions based on reliable, real-time market data.

Moreover, freelancers themselves are segmented according to diverse criteria, often focusing on skills, experience levels, and technological proficiency. Jeong et al. (2011), for example, illustrated how consumer acceptance toward technology, along with general lifestyle and value systems, could effectively segment the telecommunication service market—a method equally applicable to the freelancing context (Jeong et al., 2011). Skill-based segmentation in freelancing commonly includes categories such as IT and software development, creative services (writing, design, multimedia), digital marketing, and consultancy. This structured categorization enables platforms and employers to efficiently identify and match talent to specific projects, enhancing the overall effectiveness of the freelancing ecosystem. Understanding these market segments is crucial in assessing demand trends, pricing structures, and the strategic positioning of freelance workers in the digital economy.

3.2 Key development and growth trends in the freelancer economy

3.2.1 Post-pandemic acceleration

The COVID-19 pandemic has substantially reshaped global employment trends, significantly accelerating the growth of the freelancer economy. According to Jones and Manhique (2025), the pandemic acted as a structural breakpoint, resulting in a notable increase in the number of tasks demanded per worker on digital platforms (Jones & Manhique, 2025). Interestingly, despite the surge in demand, the growth in freelancer registrations (supply side) has remained relatively stable. This dynamic indicates that existing freelancers intensified their platform usage, responding rapidly to increased client demand during the pandemic period.

Sector-specific impacts highlight the extent of this acceleration. For example, the digital food delivery industry witnessed exponential growth, driven largely by consumers' increased preference for flexible, on-demand services (Singh et al., 2024). The pandemic period thus underscored the critical role gig workers played in sustaining essential services, especially food, healthcare supplies, and logistics. However, this surge in demand also exposed vulnerabilities in gig employment, as many platform-based workers lacked adequate protection against health risks and economic shocks (Rani & Dhir, 2020). Such vulnerabilities have prompted urgent discussions on improving social safety nets and regulatory frameworks to support gig workers in crises.

Furthermore, the shift toward remote work triggered by the pandemic significantly favoured high-skilled professionals. Dynkin and Telegina (2020) found remote working conditions particularly suitable and efficient for skilled workers in finance, legal services, consulting, and education sectors (Dynkin & Telegina, 2020). The adaptability and productivity of these professions under remote work conditions have influenced many companies to adopt freelancing as a long-term employment strategy, further driving market growth. As a result, remote work and freelancing arrangements are increasingly perceived as viable, even preferable, alternatives to traditional employment models.

3.2.2 Rise of platform-based work

The rapid expansion of platform-based work represents a critical transformation within the global freelancer economy. Over the past decade, digital labour platforms have grown exponentially, witnessing a five-fold increase in their market presence. This unprecedented growth has catalysed a significant global expansion of gig work, fundamentally altering traditional labour market structures and creating new forms of employment relationships across multiple sectors (Jones & Manhique, 2025). The scalability and global reach offered by these platforms have provided unparalleled opportunities for both employers seeking specialized talent and freelancers aiming to access broader, often international, markets.

A key characteristic of these digital platforms is their role in creating multi-sided marketplaces. Such marketplaces seamlessly connect service providers, freelancers, and clients, enabling efficient exchanges of labour, skills, and financial compensation (Himani Srihita et al., 2025; Rani & Dhir, 2020). Unlike traditional employment structures, platform-based employment offers flexible, short-term, or task-oriented engagements that appeal to both businesses and individuals who prefer less rigid employment arrangements. As a result, platforms support diverse professions ranging from technology, consulting, and creative fields, to everyday gig-based roles such as food delivery, transportation, and home services.

The growing prominence of platform-based employment is reflected in its increasing share within national workforces. As of 2020, approximately 10.1% of the U.S. workforce was engaged in platform-based freelance or gig-related work (Scully-Russ & Torracco, 2020). This substantial portion reflects the broader shift towards gig and freelance models, illustrating not only the acceptance of freelance work but also its integration as a critical component of national economies. The United States serves as a notable example of how significant platform-based employment has become, setting a precedent that many other nations are likely to follow as digital platforms continue to mature and expand globally.

Technological advancements have been instrumental in facilitating the rise of digital platforms. Innovations such as advanced algorithm-based matching systems, digital payment gateways, real-time communication tools, and enhanced cybersecurity

measures have made freelance engagements more efficient, secure, and attractive for both workers and clients (Mukherjee & Tomar, 2024; Yousef, 2024). Furthermore, these technological innovations have lowered barriers to entry, enabling even individuals from remote or economically disadvantaged regions to access job opportunities previously unavailable to them.

Simultaneously, societal shifts towards prioritizing flexibility, autonomy, and personalized career paths have significantly fuelled the adoption of platform-based employment models (Mukherjee & Tomar, 2024; Yousef, 2024). Younger generations of workers, in particular, place a premium on autonomy and the ability to manage work-life balance effectively, preferences which align closely with the flexible nature of gig and freelance work. This societal trend is reinforcing and perpetuating platform-based employment, driving sustained market growth as workers actively seek alternative arrangements to traditional full-time employment.

In conclusion, the rise of platform-based work is a multifaceted phenomenon driven by robust technological progress, societal changes, and economic imperatives. These factors collectively contribute to the sustained growth and acceptance of freelancing as a legitimate and critical component of modern labour markets. Moving forward, as these digital labour platforms continue to evolve, their role in shaping future employment trends is likely to expand even further, underscoring the need for continued research and policy adaptation in response to these dynamic changes.

3.2.3 Geography of freelancing

The distribution of freelance work is not uniform across the globe, as evident from both historical analyses and contemporary studies. Instead, specific regions, such as the Indian subcontinent, Russia, and several post-socialist economies, exhibit a higher concentration of freelancers (Stephany et al., 2021). Researchers have noted that the expansion of digital labour platforms has significantly influenced global employment patterns, reshaping conventional job markets and fostering freelance work in diverse geographical areas (Dunn et al., 2021; Adiratna & Wulansari, 2021). These developments align with the growing adoption of digital technologies, which provide

alternative employment opportunities, particularly in regions undergoing industrial shifts or economic transitions.

Examining regional trends further, the Balkan Peninsula and Ukraine have become notable centres for freelance activity. Studies highlight that these areas benefit from cost-effective service offerings and a steady increase in project availability, largely driven by digital marketplaces that facilitate international collaboration (Rexhepi et al., 2024). Such trends emphasize the necessity of analysing regional economic behaviours that diverge from global standards. The resilience and flexibility of these markets are often shaped by historical, economic, and regulatory factors, making localized studies essential for understanding freelance industry dynamics.

Indonesia presents another compelling case for analysing freelance market trends. Despite the informal sector's significant role in national employment, freelancers in Indonesia encounter distinct challenges. Research applying the UTAUT (Unified Theory of Acceptance and Use of Technology) framework suggests that variables such as perceived usefulness, ease of use, and security perception play a critical role in influencing freelance service adoption (Süß & Becker, 2013). Moreover, investigations have identified obstacles hindering the widespread use of freelance platforms, indicating that while potential for growth is evident, infrastructural and awareness limitations need to be addressed to maximize benefits (Dunumadalawa et al., 2024). Consequently, there exists an opportunity for policymakers and industry stakeholders to enhance digital literacy and platform accessibility, fostering greater participation in the freelance economy.

Comparatively, the Sibiu region in Romania, as part of Eastern Europe's post-socialist economic landscape, shares commonalities with other countries in the region but remains underexplored in academic discourse. Studies on freelance practices in locations such as Croatia suggest that economic conditions, societal attitudes, and digital infrastructure significantly impact market development (Gupta et al., 2020). Although direct research on the Sibiu region is limited, similarities with neighbouring economies suggest that parallel trends may be influencing the local freelance market. Future investigations should thus focus on Sibiu to better understand how regional factors drive freelance growth and pricing competitiveness.

3.2.4 Freelancer concentration by country and region

The global freelance economy has experienced considerable growth across various regions, driven by technological innovation, the demand for flexibility, and the expanding reach of digital platforms. In Asia, India stands out as a dominant force, particularly in the technology sector. The country's gig workforce is projected to grow from 7 million in 2021 to 23.5 million by 2030, propelled by rising demand in industries such as e-commerce, transportation, and fintech (Staffing Industry Analysts, 2024). Eastern Europe shows similar dynamism—Ukraine's freelance market grew substantially in 2021, with a 22% increase in total project volume, particularly in programming, design, and content creation (Payoneer, 2024).

In North America, the digital creator job market has surged dramatically, with the number of roles growing from 200,000 in 2020 to 1.5 million in 2024, a more than sevenfold increase. This expansion is linked to the proliferation of tools enabling easier content creation and monetization, allowing broader participation in the digital economy (Axios, 2025). In Europe, the gig economy is transforming how businesses operate and how individuals engage with work, providing unprecedented flexibility while introducing new challenges related to regulation and worker protections (Park University, 2024).

Globally, the freelance platforms market is expected to expand at a compound annual growth rate (CAGR) of 17.7% from 2025 to 2030, reaching an estimated value of USD 14.39 billion by 2030 (Grand View Research, 2024). The COVID-19 pandemic accelerated this shift, with 80% of hiring managers reporting an increased reliance on freelancers in web, mobile, and software development (Upwork, 2024). Freelance platforms offer low entry barriers and support flexible work arrangements, appealing to both employers and freelancers. These conditions are expected to sustain the sector's growth, with the overall freelance market projected to surpass USD 500 billion globally by 2025 (ClientManager, 2024).

An analysis of Upwork's database reveals comparable trends in countries such as the United States, the United Kingdom, Australia, and Canada, where freelancers are primarily engaged in software development, technology services, and creative fields. These patterns support existing research that highlights the role of digital platforms in

enabling flexible, project-based work for professionals in economically advanced regions (Huđek et al., 2020). As freelancing continues to grow, particularly in tech and creative sectors, it reflects a broader shift toward digital work models and an increasing reliance on online platforms to access global employment opportunities (Sekuloska, 2022).

3.2.5 Key drivers of the freelancer economy

The growth of the freelancer economy is largely driven by three interrelated factors: technological integration, economic flexibility, and globalization. The widespread adoption of ICT and digital platforms has enabled remote work and seamless cross-border collaboration, making it possible for professionals to engage in freelance projects regardless of location (Ovsyannikova, 2017; Stephany et al., 2021). At the same time, freelancers provide businesses with the agility to respond to changing market demands by offering specialized skills without the need for long-term employment contracts (Alexander, 2011; Krasavina, 2019). Globalization has further amplified this trend by facilitating access to international job markets, allowing workers to compete globally and contribute to a more dynamic and interconnected workforce (Beerepoot & Lambregts, 2015).

4 Global Supply of Freelancing Workforce: Insights into Spatial, Professional, Gender and Income Domains from the Online Labour Platform

4.1 Freelancing from the spatial perspective: What global digital labour reveal to us?

Work has been traditionally observed as the most inflexible factor of production which is strongly geographically bounded (Graham, Hjorth & Lehdonvirta, 2017). However, the rapid development of the technology and disruptive influences it produces is changing every part of our lives (Rani et al., 2021). Technology is starting to undermine world of work dramatically. With other words, when technological changes enabled the rise of global labour platforms, it has, still partially, changed historical fact that work stays the spatially bound factor of production.

Nevertheless, this change has many facets, and it has been seen differently from various parts of the world. While the developed countries of the Global North have seen it as a cause of precarious work and as a generally poor working environment, the countries of Global South saw more opportunities than threats (Berg & Rani, 2021). The case for the later consists in fewer work opportunities on conventional labour market in developing countries. In these countries platforms are widening job offer, creating more diverse and attractive job offers for the young people, preventing, among other things, the “brain drain”. Beyond “hybrid geographies” the global labour platforms are creating, countries of Global South may benefit from digital nomads

(Petroff, 2022). Moreover, digital labour platforms are often more desirable alternative for skilled people in less developed countries, even from the offshore centres of foreign companies, since platform job offers usually provide better return to labour and skills in these countries (Lehdonvirta et al., 2019). In the same time, while creating threats for domestic workers on the Global North, digital labour platforms has been observed as an instrument for further expansion of offshoring/nearshoring services that stimulates reconfiguration of global division of labour by extending global value chains in the evolutionary process of global labour market formation (Leung, D'Cruz & Noronha, 2021). Since that, right from the beginning, issues related to freelancing and platform work were not only multidimensional, where different aspects of economics, policy and technology crossover and come together, then it was as well phenomena with different pros and cons for different parts of the world and different countries.

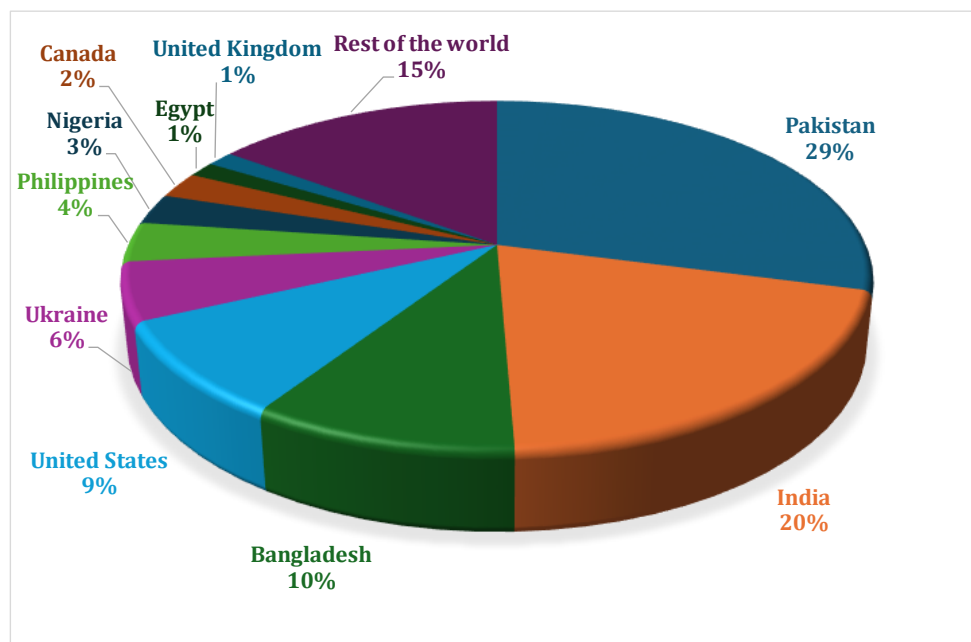


Figure 9. Top 10 countries by the number of freelancers worldwide.

In our sample, we obtained data on top performing freelancers from 118 countries around the globe¹. These data represent the global supply of freelancer workforce. However, this supply is markedly uneven, where there are few countries dominating the supply, and a lot of other participating in the global market, but with small contribution to the stock of labour at the global digital labour platforms. More precise, freelancers from two countries, i.e. India and Pakistan, represent almost half of the entire population of freelancers in our sample – 49.4%. This unequal geographical distribution of workforce is even more visible, if expand our observation to the 10 biggest countries. It corresponds the fact that only ten countries in sample are having a share in the global supply of freelancer workforce of more than 1%. In sum, freelancers from 10 countries (out of 118) represent 85.1% of global workforce, as Figure 9 shows.

Skewed geographical distribution of workforce is only one of several other important insights that we may draw from Figure 9. An important aspect refers to the fact that the supply side of the digital labour market is indeed global. Almost all the populated continents are represented and the majority of the countries in the world. Additionally, it appears that the size of the population is the primary driver of the labour supply on the global digital labour platforms. On one side, the biggest countries on each continent are the places from which the labour force comes the most. This is not surprising, since many other studies found that exactly India, Pakistan and Bangladesh are the main suppliers of freelancers globally, bearing in mind their size, but as well availability of workforce with strong English language knowledge and technical skills (Stephany et al., 2021). However, there are some notable exemptions, like China and Russia. While freelancers from China are present, but not numerous (only 23 freelancers in the sample are coming from this country), the absence of freelancers from Russia is caused by sanctions introduced by Western countries to entities and individuals from this country. An important reason for relatively low

¹ Originally, we collected data on the first 10,000 freelancers with top rated status globally relying on the Upwork's algorithm for ranking. After cleaning the data, we base our analysis on the 9,107 profiles of freelancers. Thereby, freelancers earn top rated status by building reputation on Upwork including proved history of success with multiple clients, delivered high quality of work and completed jobs on time (Upwork, 2025).

presence of freelancers, not only in our sample², coming from China could be the attractiveness of other domestic or regional platforms which are the preferable choice for Chinese freelancers, the domestic regulation restricting or impeding an access to global digital labour platforms or simply the availability and higher payoff of finding employment by enterprises in China³. This could be mostly explained by the fact that there are very developed digital labour markets within these countries, where most workers offer their services. Further, the global digital labour market attracts workers from developed countries as well as developing countries. Looking only at the top 10 countries in our sample (Figure 9), there are some of the most advanced market economies (United States, Canada and United Kingdom), but as well a diverse group of developing countries with numerous challenges regarding economic, social and political development and stability. An interesting insight about the global character of the labour supply reveals the last segment in the Figure 10. Namely, labour supply from all the other countries in the sample (108) counts for 14.9%. Although it means that (only) 15 workers out of 100 are coming from these countries, the fact that these countries are numerous reflects in an indirect way the global character of digital labour market. Furthermore, the share of these countries is still considerable and important for the functioning of the global digital labour market. Finally, the number of countries whose workforce is represented in a sample, despite the skewed distribution of the freelancer's population, reflects the inclusive character of the global digital labour market. However, it is important to note that in our sample, there are 90 countries with a population of less than 30 freelancers, making any kind of interference on the country level, at least for these countries, implausible.

² We found no other study or global report in which the greater presence of freelancers from China is registered (see, for example, the database of OLI of OII: The Online Labour Index (2025). Online Labour Supply. <http://onlinelabourobservatory.org/oli-supply/>).

³ One of the explanations could be a very high pay od Chinese workers. For example, Graham, Hjorth & Lehdonvirta (2017) found that the Chinese workers are requesting the median hourly pay which places them between 90th and 100th percentile (they demand between 20.1 and 100 US\$ per hour) which is far more from other workers, for example, from India who request median hourly pay between 10th and 25th percentile (requesting between 5.1 and 9.9 US\$ per hour).

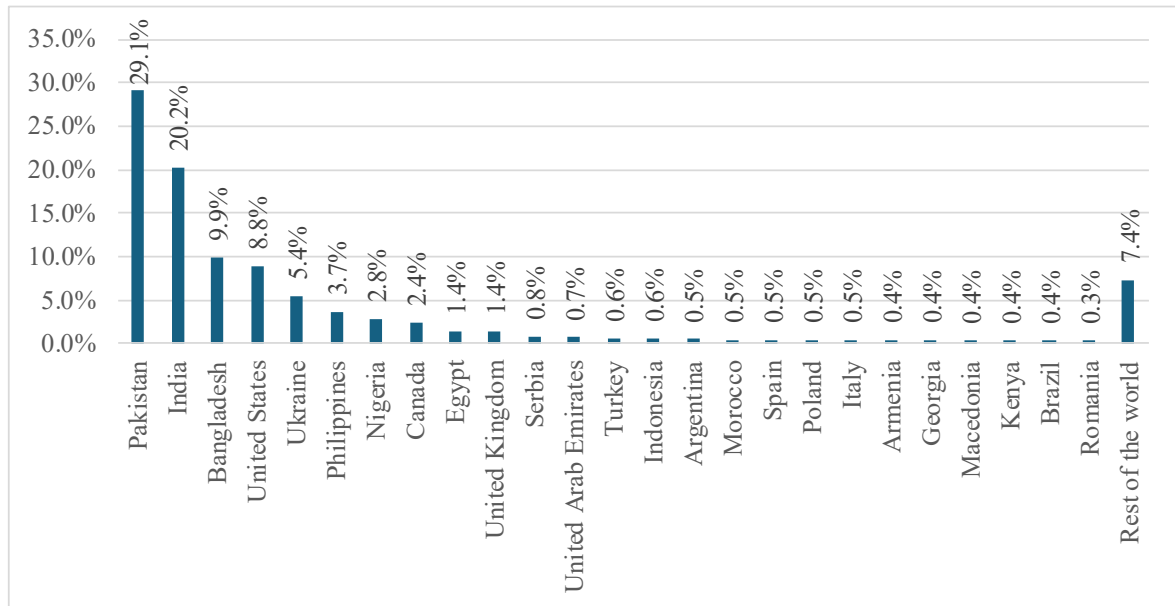


Figure 10. Top 10 countries according to the number of freelancers worldwide.

If we broaden our sample size to the top 25 countries, we could reach an additional understanding of the economic geography of the global digital labour market supply. Deeper insights, presented in the Figure 10, reveal a bit more complex picture of the spatial dimension of the global digital labour market. First, it is obvious that the group of countries is very heterogeneous in many important aspects: from population size, level of economic development, market sophistication, to educational and overall innovation performance, confirming the inclusiveness of the digital labour market and its relevance for individuals in every corner in the world. Second, the majority of (additional) countries come from Europe, emphasizing the importance of the European market for the global supply of the workforce. It is especially interesting, since the majority (80%) of digital labour platforms operating in Europe, are developed after 2010 (Fabo, Karanovic & Dukova, 2017)⁴. It means, that the freelancing in most of the European countries recorded strong growth only with a lag to the rest of the world, which became especially strong after 2016 (De Groen et al., 2021). Third, differences between contribution of different countries to the global freelancer workforce become

⁴ Data from our sample confirm this fact. Namely, from top performing freelancers, there are only three cases (of 78 globally) who started their career in 2007, 2008 and 2009 from Europe. They come from Lithuania (2007), Netherlands (2009) and United Kingdom (2009).

smaller if follow descending order according to the size of population. Namely, the difference of the share of the 11th country in the sample (Serbia, with a share of freelancers in a global population of 0.8%) and 25th country (Romania, with a share of freelancers in a global population of 0.3%) is much smaller than the difference between the shares of 1st (Pakistan, with a share of freelancers in a global population of 29.1%) and 10th country (United Kingdom, with a share of freelancers in a global population of 1.4%).

High degree of concentration at the global digital labour market when it comes to supply of workforce has potentially long-term and structural consequences for the way the global digital market functions, but as well for the countries from which the freelancers are mostly coming. With other worlds, unexpected disturbances at the global digital labour market can tangibly impose important costs for the domestic market the freelancers are coming from. Opposite holds as well. Countries which are having the biggest share of the global freelancer population may exert a strong influence on the global digital labour market. This aspect is especially relevant in case of huge external shocks, such are wars, profound global economic crises or pandemic(s). Such events may exacerbate a chain reaction causing instability in the supply of the workforce on the global digital labour market, but impose relatively big costs for the countries in which the freelancers are especially numerous⁵.

Figure 11 shows very dynamic development of the digital labour market over time. It started just before the global financial crisis in 2008, speeding up, with a bit of fluctuation, until the present day⁶. However, the main characteristic is a very strong growth rate of the market over time – the average annual growth rate of the market in the observed period was 40.8%. There is no other conventional labour market or its

⁵ Negative developments on the global digital labour market have much smaller potential to cause more serious instabilities in some national economy, even in a case of top destinations such are Pakistan or India. The main reason is the fact that freelancers are constituting only a small portion of the labour force within the country, not exceeding few percentage points. For example, in Serbia, as one of the countries with a very active and numerous, in relative terms, population of freelancers, has the share of freelancers of only 2.5% in overall employment (Čolović, Anšelković & Jakobi, 2021).

⁶ Since we are observing the top performing freelancers (at the global level), downward slope of curve in the Figure 3 after year 2020 points out to hardship to obtain the top freelancer status for the newcomers who compete with already recognized freelancers at the global scale. Moreover, this fact potentially reflects the time one needs to develop his career as a top freelancer globally.

labour market niche which experienced such strong growth over almost a decade and a half. It reflects, additionally, the relatively immature character of the global digital labour market, since the majority of top-rated workers started their freelancing career in the last five years. If we exclude the year 2024 – since a freelancer needs time to develop his career on the platform, in five subsequent years (2019-2023) more than half of the freelancers started to work on the global platform (58.3%). This fact points out as well to fact that the market is flexible and efficient in a sense that performance counts, not simply the time a person spent as a freelancer. There is no better evidence for this than the fact that the majority of the top workers are representing the newcomers – people active on platform in the last five years.

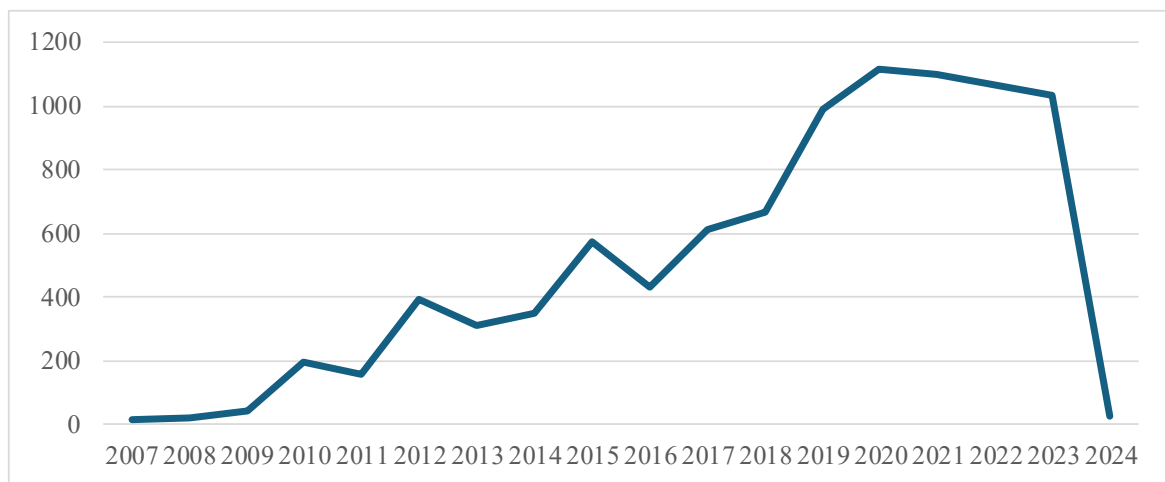


Figure 11. Market entrance of freelancers over time (2007-2024).

Although the digital labour market immature is, a freelancer needs time to take part in a cohort of the most successful freelancers. On the other hand, the digital labour market offers opportunities for individuals to develop their skills and establish themselves on the market more quickly than it is the case for any other profession in the conventional labour market. It is possible to reach the cohort of the most successful workers even within the one-year timeframe. It is highly insightful that the digital labour market started to be inclusive right from the beginning. Looking at the data from the first year in our sample (2007), previous claim is confirmed by the fact that more workers are coming from developing than from developed countries – 75% from

developing, such as India, Pakistan, Philippines or Sri Lanka, contrary to 25% from developed countries, including the biggest markets such as the USA or Canada. Moreover, over time the digital labour market has been attracting freelancers equally from developed and developing countries, making work opportunities equally available for everyone, independently of where they are coming from.

One more important aspect refers to inclusive character of digital labour market (within the countries). Namely, contrary to the findings of some other studies (Anđelković et al., 2024a), our sample results point, on average, that there is a low level of the concentration of freelancers in capital cities. If we look at the data for the 10 biggest suppliers of the workforce (Figure 9), the average ratio of “capitalisation” is 11.1%. There are, however, considerable differences between countries. Two developing countries are the important exemptions – Egypt and Bangladesh. In both countries, the majority of highly successful freelancers are located in capital cities. The majority of freelancers are coming from Dhaka (44.3%) and Cairo (39.4%). While there may be many possible explanations for this, one of the most relevant refers to the fact that in less developed countries better-developed infrastructure, availability of public services and proximity of educational institutions are determining factors for a high concentration of the freelancer workforce in capital cities.

The constraints of our insights are determined by several factors and they refer to all other parts of the analysis in the text. One of them refers to the fact that our sample, although representative, is still far away from the size of the population at the chosen platform. Upwork statistics reveal that there are more than 18 million active freelancers (Demandsage, 2025). Combining this fact with the fact that we relied in our sampling on the algorithm of the platform for collecting the data about freelancers (since they encompass the best performing freelancers), our results may not represent precisely the whole supply of the labour force globally. It especially refers to the new workers on the platform as well as those with weaker work performance. However, this is in line with the goal of the project – the design of MOOCs and data on relevant skills, earning possibilities and overall market insights, which should prepare new entrants into the market in the most effective way.

4.2 How equal is the global digital platform economy? Gender perspective

The rise of platform work brought a belief that the gender biased outcomes on traditional labour markets will be overcome. An introduction of “blind” algorithms that do not recognize gender and other (disadvantaging) social dimensions of workers will secure the fair access and equal opportunities on the labour market. It was expected that meritocracy will be the only criteria that counts. As it was the case with many other expectations regarding new technologies, although the digital labour platforms are having potential to advance social justice (Sasaki, 2021), this promise was not translated into the reality of digital labour platforms. It appeared that the digital labour platforms are more the virtual mirrors reflecting the social reality and inequalities arising from unequal access to education and work in real economy coupled with other cultural constraints stemming from different societal roles women and men are having in the society. This reality is further reflected in Figure 12, which illustrates gender participation rates across digital labour platforms.

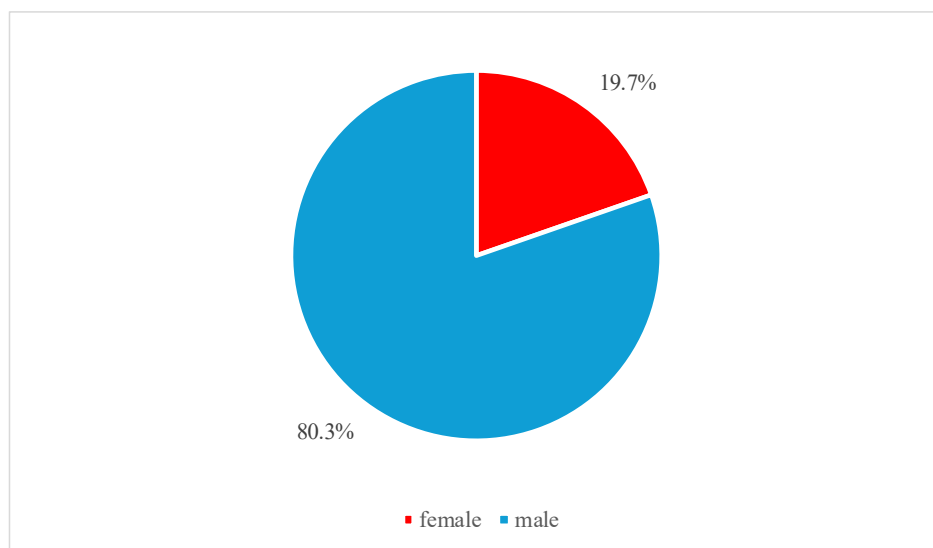


Figure 12. Gender participation in digital labour platform.

Although many gender aspects in platform economy stay still unrevealed, two aspects find confirmation in all the studies. First, although there are different

projections about women participation in online labour markets globally, but all suggest that the range goes between 30% and 40%. For example, Stephany et al. (2021) suggest that women participation is 39% in the work force globally, while other studies, such as these of Payoneer (2023) point to a bit lower share – 36%. Second thing is that there are big differences between the regions, reflecting exactly different cultural, educational and generally social conditions in different societies. For example, in the already mentioned study of Payoneer (2023) the most equal region is North America, where the 50% of the workforce are women, followed by Latin America with a share of 43%, while African and Asian countries are having the lowest share of women participation – 24% and 25%, respectively. When it comes to Europe, there are huge differences within the continent. While in south and eastern European countries the share of women is, on average, even higher than in Latin America (43%), in the rest of the European countries the average share of women is comparable to levels in Asia and Africa – 27% of freelancer workforce are women.

In our sample, every fifth freelancer is woman. This low level of women participation, beside two previously mentioned facts from the literature, can be explained additionally by the design of our study and three resulting aspects. First, in our sample dominate the countries from Asia, where the share of women is one of the lowest in the world. Secondly, we encompass the best freelancers on the world, where there is potentially an even more unequal distribution by gender. In other words, men not only tend to be more engaged as freelancers, but the best men tend to be even larger majority within the cohort of best workers. Thirdly, the best performing women in some countries tend to have, on average, lower performance then “very good” performing men, positioning women in “blind” algorithmic ranking lower than men at the global level. Additional aspect, outside of the impact of study design, refers to the “very nature of algorithm”. Concretely, one, maybe even more important reason compared to already mentioned, could consist in the way the algorithm of the platform shows the best freelancers on the global level: machines tend to reproduce the same gender biased pattern as humans (Athreya, 2021), making of platforms the mechanisms for reinforcing and exacerbating identity-based stereotypes (Munoz et al., 2024).

However, the other aspect that characterises the distribution of workforce according to gender, i.e., big differences between the countries, is completely in accordance with the findings of other studies (see, for example, Anđelković et al., 2024). Spatial analysis of gender differences in the top 10 countries where freelancers are coming, shows a great variety in women representation in the population of freelancers within individual countries. Namely, Egypt and Pakistan are the most unequal countries, where the women share is 9.4% and 12.3%, respectively. On the other hand, the most equal gender distribution is to be found in the Philippines and Nigeria, where women represent almost 1/3 of the whole population of freelancers. Similar results are obtained, when we look into the top 25 list of countries, i.e. countries with sufficiently large number of freelancers in the sample. Two notable exemptions from the rule are Spain and Italy. Moreover, Spain is the only country with the freelancer population where the women outnumber men. There are 51.2% of female freelancers, while in Italy women comprise 40.5% of population. Although our finding may deviate, even considerably, from the population means, they, however, reflect the finding of all other studies which stress that there are big differences between the countries/geographical regions and that the digital labour markets are, with some exceptions, biased in favour of male professionals.

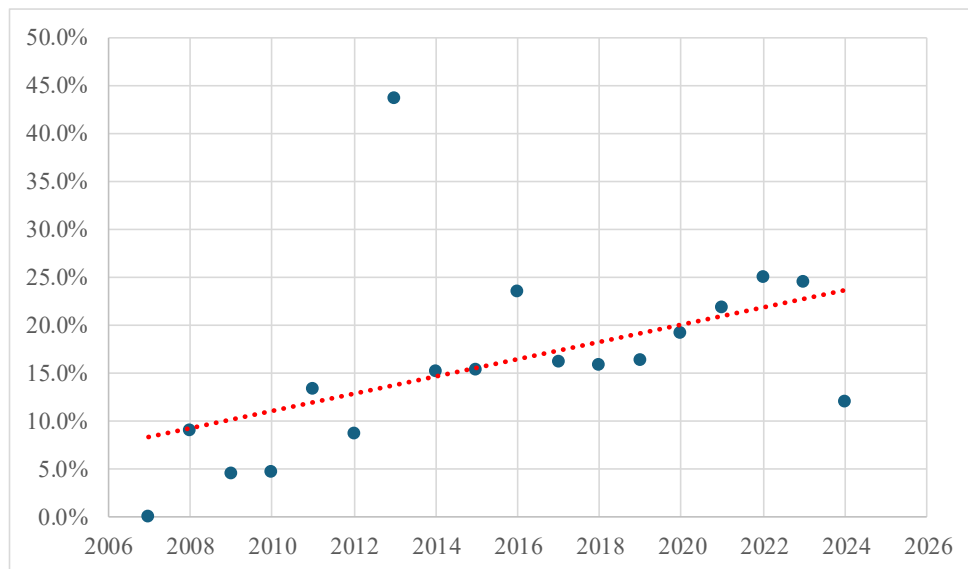


Figure 13. Female participation over time (2007-2024).

Despite the very high growth rate of female population over time – 58,3%, their share with pronounced fluctuations continues to rise over time (Figure 13). In the first several years freelancing was not very attractive for women freelancers, since their share lied on the very low level – less than 10% up to 2010. Obviously, after confirming its relevance, as a valuable source of income and a plausible mechanism ensuring career development, digital labour market started to attract more and more female workers. Rising trend is present all over the period, with noticeable peak in 2013, when the women constituted 43,6% of all best performing workers (i.e. freelancers started to work in this year). One of the explanations is that the information about possibilities platform work offers spread within the female population with appropriate skills, and it incentivized them to try developing their freelancer career. However, after that, growth continued, but oscillating around the “long-term” trajectory. Relatively sharp fall in the last year observed, possibly reflects an another important fact. Namely, since just the 12% of those who started in 2024 (and succeeded to position themselves as top global workers) are women, means that women, on average, need more time to be ranked as global talents, i.e. top rated workers. Some of the explanations for that refer to fact that women tend more frequently to choose platform work as a supplementary source of income (Enriquez, 2020) or because of the hardships in balancing private and professional life (Dunn, Munoz & Sawyer, 2021), which prevents them to achieve the level of excellence which guarantees the status of global talent.

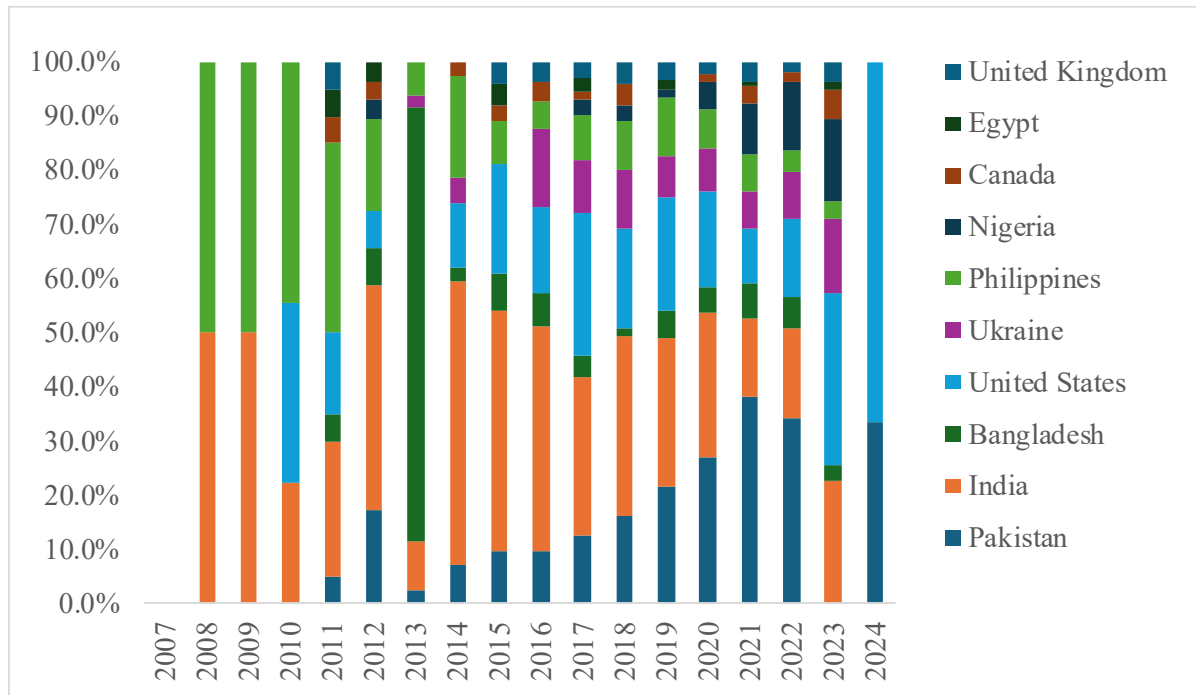


Figure 14. Female participation over time (2007-2024).

From geographical point of view, the rise of female freelancing followed almost the same pattern in all countries, interdependent of their size or level of development. Figure 14 confirms the previous claims referring to that women started participating later in the digital labour markets, that there are steady growth rates of women on these market over time and that they need more time to achieve “global excellence” than it is the case with male freelancers on digital labour platforms. Regarding the last claim, our data show that there are only two countries, the United States (66.7%) and Pakistan (33.3%), from which women freelancers started their freelancer career in 2024. It may reflect the fact that global talents are to be found in technologically and economically highly advanced countries or in countries with an abundance of resources. Contrary to high women concentration when it comes to locations they are coming in 2024, the male freelancers are coming from 12 countries. However, the top destinations in this case follow the same patterns as by women. From the United States are coming almost 18.2%, the same share as from Pakistan and India together. Moreover, almost half of male gig workers is coming from advanced market economies (45.5%), while the new region of South-east Europe arises as an important part of the world in supply of freelancer services. 22.7% of workforce comes from this region and,

moreover, from only two countries in this region, i.e. Ukraine and Romania. It confirms, especially in a case of Ukraine⁷, that this country is one of the most important markets when it comes to freelancer services.

4.3 Structure of global online labour market by professions: What are the most popular professions among freelancers?

Variety and high degree of diversity of skills is required for an online platform work and development of freelancer career. Essential prerequisites regarding the skills refer to ability to work through the platform, i.e., uploading the profile, searching and bidding for jobs and (at least partially) conducting the work online (Eurofond, 2025), beside the requirements regarding the (mainly English) language knowledge⁸. Beside these essential skills that are actually prerequisites for making freelancer career, huge variety of different skills arises in the realm of online labour market, which may be seen at the Figure 8. Interesting is that a lot of these skills are to be found in traditional labour market as well, and that only small portion of them are exclusively related to the online web-based work (Lenaerts, 2023). Another important link with the offline world is formal education, since the success on online labour market is determined by wide range of skills and individual dispositions developed through the formal education and vocational training (Cedefop, 2020).

We have identified in our sample 5,734 different skills among top performing freelancers. However, there are only four skills which have frequency more than 1000, i.e., they appear on more than 1,000 freelancer profiles: WordPress, Graphic Design, Data Entry, and Adobe Photoshop. An aspect that especially emphasized the diversity

⁷ According to the number of tasks executed on the platforms and revenues generated, Ukraine took the 1st place in Europe and 4th in world in terms of work on digital labour platforms in the period 2014-2017 (Aleksynska, Bastrakova & Kharchenko, 2018).

⁸ It is not necessary to possess advanced level of English language knowledge, since there are popular non-English platforms, especially Spanish and Russian language platforms. However, work opportunities for those freelancers with proficient English language knowledge are more abundant, because from 283 online web-based platforms (ILO, 2021), the most popular/biggest labour market places globally are those on English language, such as Freelancer, Upwork or Fiverr, where more than 22 million people are active (Lenaerts, 2023).

labour platforms such as Upwork⁹ (Newlands & Lutz, 2024). These classifications aren't, however, static, i.e. they are changing as the circumstances on the demand side of the market are changing, usually initiated by technological change¹⁰. However, from the reasons of (research and scientific) relevance and convenience for graphical illustrations we choose the methodology developed by the Oxford Internet Institute (OII) (Stephany *et al.*, 2021), i.e. we use Online Labour Index (OLI) in order to access different occupations of freelancers at the online labour market. Since there is no standardized international classification system for classifying digital services¹¹, it additionally justifies our approach. Moreover, even this classification is based on Upwork (Kässi & Lehdonvirta, 2018). According to Online Labour Index (OLI) of the OII, freelancers are taking one of the six occupations: professional services, administrative services and data entry, multimedia and creative services, marketing and sales, software development and writing and translation¹².

One more dimension of noticeable inequality on digital labour market is identifiable – in the domain of unequal distribution of different professions (Figure 16). The majority of freelancers occupies two professions, i.e. creative and multimedia services

⁹ Upwork recognizes 10 different professions: Development & IT, AI Services, Design & Creative, Sales & Marketing, Writing & Translation, Admin & Customer Support, Finance & Accounting, HR & Training; Legal; Engineering & Architecture. However, every occupation entails its own “three of occupations”, i.e. further could be disaggregated into “niche occupations”. For example, within writing and translation one could identify Content Writers, Translators, Editors, Ghostwriters, Copywriters, Proofreaders, Creative Writers, Grant Writers. It is important to notice that although there is high degree of specialization on lower levels of aggregation, the specialized individuals from one profession in majority of cases poses skills and knowledge from other domains of writing and translation profession or even from the other professions.

¹⁰ Maybe the most authentic evidence is to be found in current classification made by Upwork. Namely, recent breakthroughs in technology development are causing the rise of completely new occupations, which is visible in a new profession within Upwork classification, i.e. AI services. This occupation was non-existent just a few years ago. Now there are not only this profession in general, but a range of specializations arising within it: from building a custom chatbot, over fine-tune writing to developing new AI models (Upwork, 2024). Moreover, beside rise of new professions, disruptive technologies, such as AI, are transforming many types of work contents, independently whether AI label or some other technology label is visible or not in the title of profession (Poutanen & Kovalainen, 2023).

¹¹ International Labour Organization distinguishes between different level of “digital intensity” within traditional sectors and ISIC codes (International Standard Industrial Classification of All Economic Activities), but doesn't offer classification of digital occupations. For more on this aspect see: ILO (2023). Digital Employment Diagnostic Guidelines. International Labour Office.

¹² The meaning for all occupations are straight forward, except for professional services. To professional services occupation belong very heterogeneous group of freelancers offering services in number of areas such as consulting, training, project management, or legal services. Freelancers within this occupation are usually having good knowledge of local institutions and are having higher degrees of formal education. For detailed description of all occupations see: Kässi, O., & Lehdonvirta, V. (2018). Online labour index: Measuring the online gig economy for policy and research. *Technological forecasting and social change*, 137, 241-248.

and software development. Six out of ten freelancers are coming from one of these two professions. Not only that this finding is in line with other research in this area (see, for example, Gigmetar (2024); OII (2024)), but the very nature of services the people from these two professions are providing corresponds to the needs of business and demand for services they create (Kalinić, 2024). If we add sales and marketing profession to these two professions, almost 4/5 of the freelancers in sample are in on one of these three occupations. It is not surprising since the processes of digitalisation brought changes in business models employed by companies. These models are based on a very broad implementation and continuous upgrade of application of information and communication technologies across business processes and changing approach to marketing and sales (targeting the networks and different online content providers). As a consequence, supply-side of the labour market, in our sample as well, reflects exactly these changing patterns in business practices and governance.

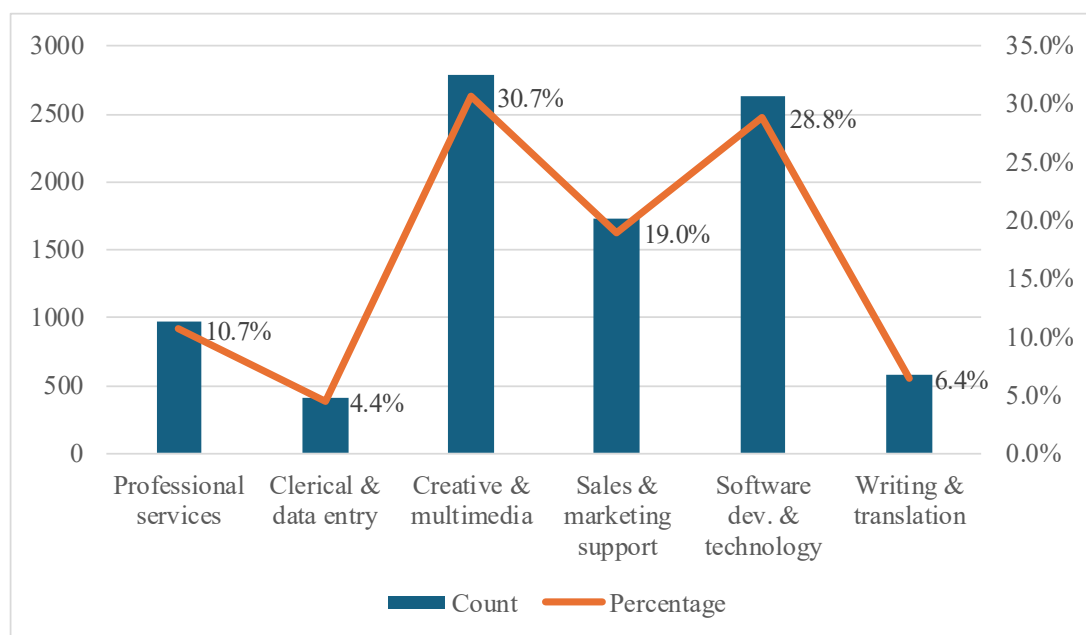


Figure 16. Structure of the global market by professions.

Relatively low levels of individuals occupying professions of clerical service and data entry and writing and translation may be explained by several factors. Some of these factors are universal, while the others are profession's specific. The main

common reason behind relatively small presence of workers in these professions is demand for these services. Second common reason refers to the influence of AI based applications and technology, which dramatically reshapes business practises and dictates demand for the skills freelancers should have. For example, the lunch of ChatGPT in November 2022 has caused subsequent reduction in demand for workers in “text-related professions” (Liu *et al.*, 2023)¹³, what would best correspond to our profession of writing and translation¹⁴. Specific, still very important, factor in the domain of writing and translation is different character of platform from which we obtained data. Namely, the platform we were collecting data from is general purpose online labour platform, where everyone may offer and demand a huge diversity of digital services. Contrary, there are specialized online labour platforms, and an important part within this type of platforms are language platforms. So, majority of freelancers in the occupation Writing and Translation are offering their services on specialised language platforms. There is more intense competition, but there is also much diverse demand for their services, attracting (probably) the majority of them to be active exactly there, not on platforms like Freelancer or Upwork. There is another reason why the share of people active in providing professional services is small in our sample. Namely, there are simply less people with relatively high levels of education and an expertise in local institutions that could offer these services in every country for global clients. Additionally, which could be observed as a primary reason, there are less demand for these services, i.e. job postings of companies refer only to small portion of overall tasks in this profession.

¹³ Liu *et al.* (2023) have identified an impact in the domain of programming, although it was much smaller and different compared to those effects in the domain of writing related tasks. Namely, not only that contraction in demand for programming tasks was of smaller size, but the diversity of jobs in this field considerably increased. Moreover, freelancers previously active in text-related tasks had higher probability in holding their job(s) in the online labour market if they successfully navigated their skill transitions from text to programming.

¹⁴ It is highly interesting that the reduction if demand in clerical and data entry services is not usually identified in empirical research. Contrary, because of “reinstatement effect” where the rapid development of new AI tools creates strong additional demand for clerical and data entry services (Ostoj, 2024). While automatization may cause reduction in demand in clerical and data entry services, opposite force is created by the development of AI algorithms and its applications that require more data and human work.

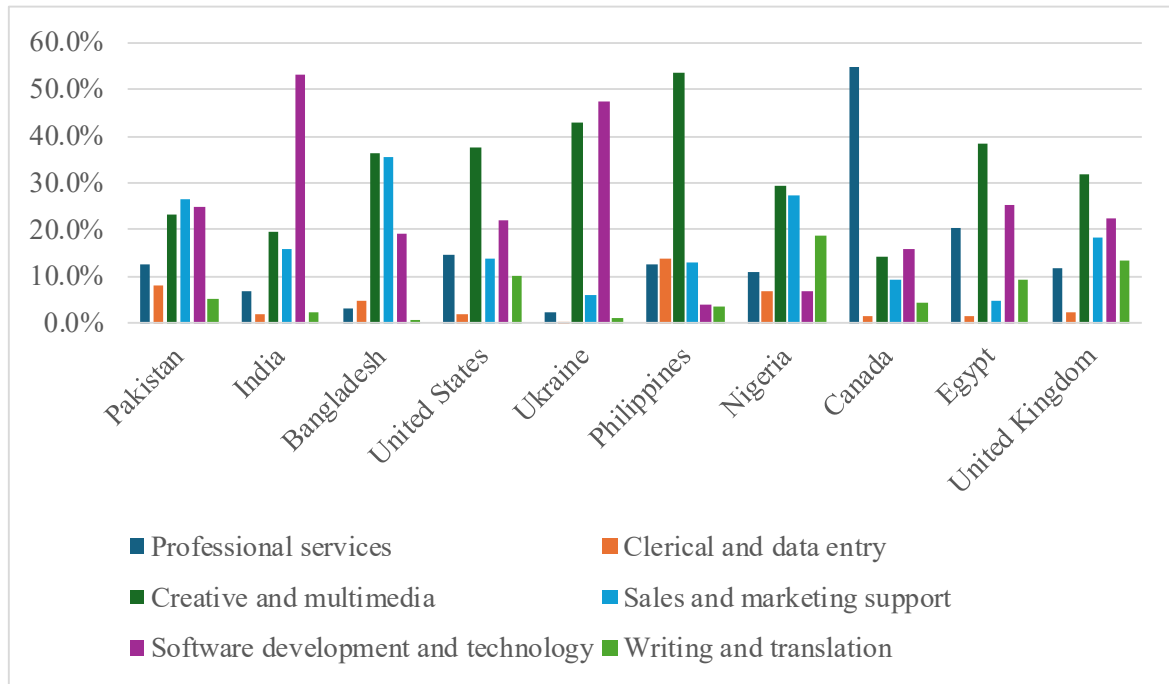


Figure 17. Market structure of profession across the top 10 countries.

Adding a spatial dimension to the analysis of professions in the top 10 countries in our sample, considerable differences between them are visible. We may, even, identify different structures of markets and the degree of specialisation in some professions if we observe market structures in top 10 destinations the freelancers are coming from. Closer look into the data presented on the Figure 17, reveals two group of countries. One group are those countries with more balanced structure of professions. To this group belong Pakistan, and to later extent Nigeria. The range in Pakistan, between the most and the least represented profession, is between 5.2% (in Writing and translation) and 26.3% (in Sales and marketing). Similar, in Nigeria range goes between 7% (in Clerical and data entry services and Software development and technology) up to 29.2% (in Creative services and multimedia). Contrary to these two countries, Canada, Philippines and India are showing very unbalanced structure of the market. In all three countries there are professions in which more than half of freelancers are concentrated: Professional services in Canada (54.8%), Creative and multimedia services in Philippines (53.4%) and in India freelancers in Software development and technology (53.3%). Additionally, in several countries there are high domination of two professions. Most prominent example is Ukraine. According to the

level of concentration in two professions, this country has the most unbalanced structure within top 10 countries, where the Creative and multimedia and Software development and technology professions together account for more than 90% of all population. Similar results, although far less pronounced, can be noticed in Bangladesh where Creative and multimedia services and Sales and marketing comprise 71,7% of market structure. Contrary to differences, one noticeable similarity is the fact that in 6 out of 10 countries Creative and multimedia is the most represented occupation, although with considerable variation within the national structures of (supply-side) national digital labour markets. Different patterns of specialisation may signal newcomers in different countries where their long-term specialisation and professional orientation in digital online-labour markets should be aligned and where they could find alternative forms of support, i.e., “peer-based support networks” (Majcen, 2024), which would help them in their professional aspirations. This is true, especially under the assumption of “boundaryless careers”, i.e. where the key concepts are flexibility, networking, marketable skills and continuous learning (Rodrigues & Guest, 2010), determining career success across organisational boundaries.

The structure of the market by professions on the country level is important from at least two reasons. Firstly, highly unbalanced structure of the market in favour in one or two professions is, generally, less resilient in a case of strong external shocks. These shocks could come from the market (rapid technological shifts), state (new regulation) and/or society (in a case of, for example, severe health, climate or security events). For example, beside already mentioned influence of the introduction of ChatGPT in 2022 on Writing and translation profession, regulation imposed by Chinese government, as it was the case in 2021 when they introduced strict regulation on out-of-school training, reducing job opportunities for the freelancers (Liu *et al.*, 2024). While there are mixed effects of technological shifts – destroying, but creating as well, jobs, squeezing effects of regulation generally prevail, especially in shorter time spans. Generally, in a case of noticeable shifts, but as well as in a case of more gradual market changes in mid-term, it is preferred that freelancers are having more diverse set of skills, enabling them to adopt more efficiently to changing market demand and business environment through up-skilling and re-skilling.

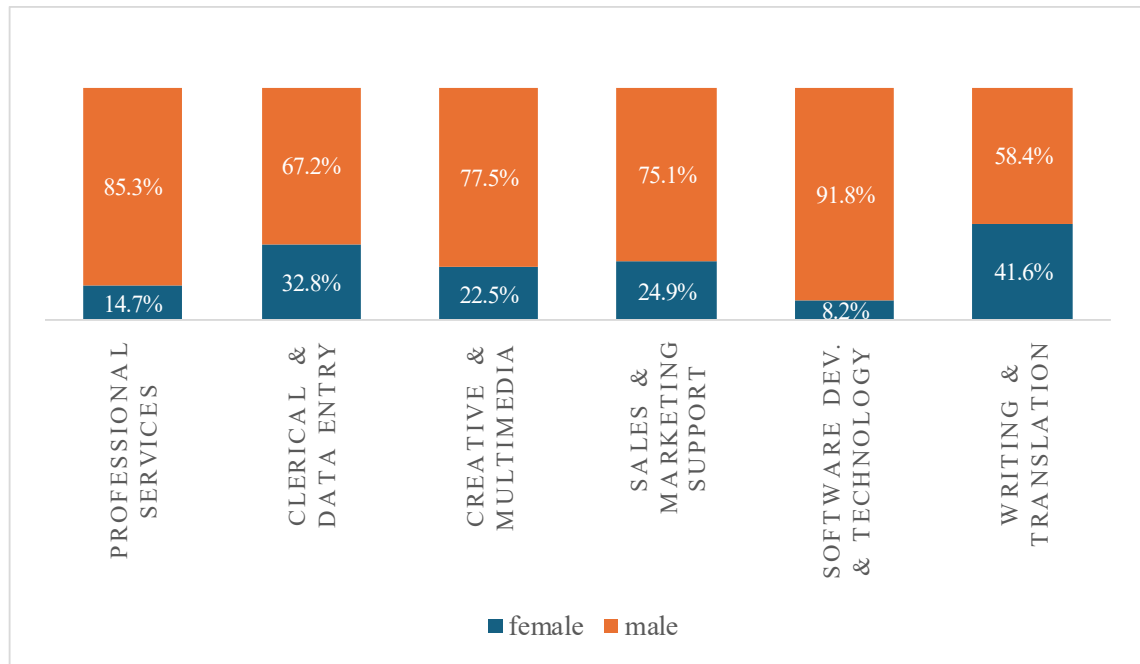


Figure 18. Gender structure by professions.

Globally, gender inequalities are present in every profession, i.e. male freelancers are outnumbering the female ones in every single profession. But, as Figure 18 shows, the gender gap is not equal over all professions. It is the most pronounced in the Software development and technology, where only 8 of every 100 top rated freelancers are working, while the gender equality is highest in Writing and translation, where the women comprise more than 40% of overall population. Latter is, however, more numerically important, while it witnesses an another important disadvantage: being to more numerous in Writing and translation, women are more exposed to external shocks and present in labour niche that contracts more intensively under the influence of technological change, especially LLM models, like ChatGPT and advanced AI services.

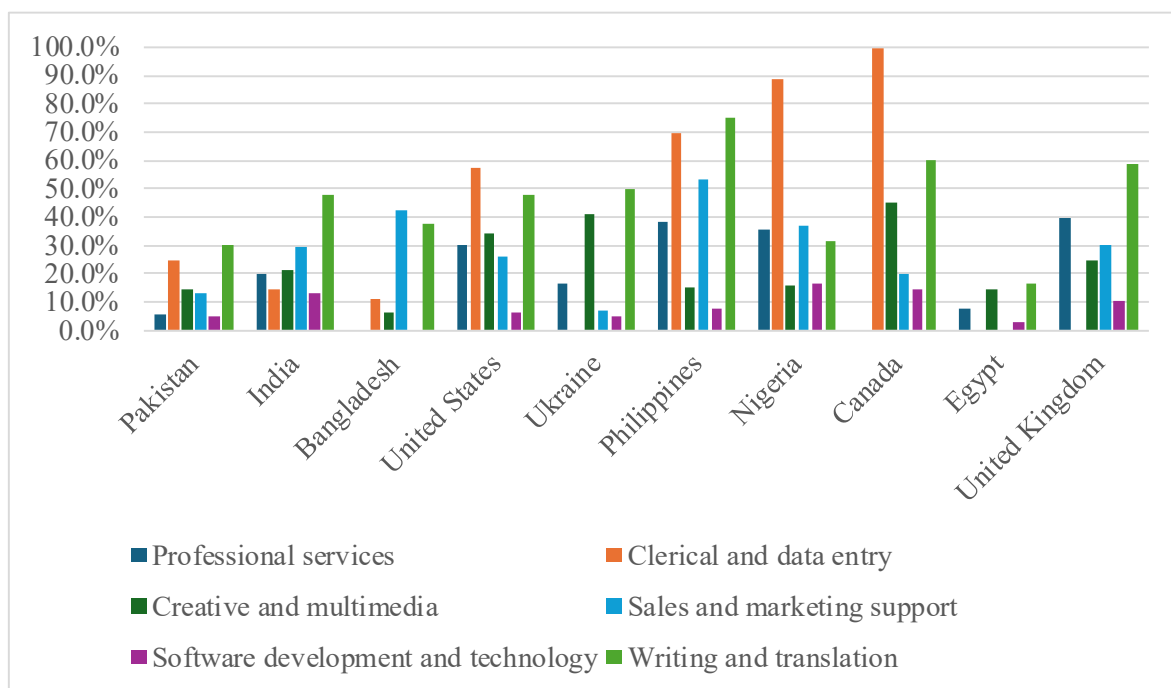


Figure 19. Gender structure by professions across top 10 countries (percentage of female freelancers in national sample across occupations).

As shown in Figure 19, which presents the gender structure by profession across the top 10 countries, an additional important insight can be obtained when differentiating between occupations requiring advanced skills, such as software development and technology, and those requiring less complex knowledge, such as clerical work and data entry. One of the main implications is, beside the fact that the women are underrepresented in all occupations, that they constitute greater number within the professions which are less sophisticated and in which there is less embedded knowledge. In that sense, not only that they are more exposed to external shocks which could arise on the market (regulations, economic crisis, big technology leaps), but they have less opportunities to develop their career since the market niches where they are more concentrated do not usually offer such possibilities. Moreover, if the initial skill set is lower, the foundations for reskilling and upskilling are weaker. It makes long-term prospects for women freelancers less attractive. It further may fasten lower attractiveness of digital labour market for women, cementing already present inequalities in gender structure we identified. In combination with other obstacles women facing, coming from different societal (especially family) roles they have to

differentiated (unfavourable) access to education, the long terms prospects for integrating more women on the digital labour market are rather poor. This however doesn't mean that the digital labour platforms are not contributing to gender equality. Namely, making some jobs available for women worldwide, that would not be available otherwise, they are already inclusive and contribute to gender equality. However, only with simultaneous measures in offline world and technology design (of algorithms) more (long-term) equality is achievable.

Introducing the spatial dimension in the analysis and integrating it with different professions and gender (on the example of top 10 locations for freelancers), data suggest that there are some notable, although not numerous examples, where women represent the dominant part of the workforce or constitute equal part of the population (Figure 19). They are constituting the majority of workforce within Clerical and data entry profession in Philippines (69.6%), Nigeria (88.9%) or they are the only represents in this occupation from Canada. The drawback in case of Canada is a very small number of them (only three freelancers). A tiny majority of women in Sales and marketing occupation is to be seen in Philippines (53.5%), where the only profession where they are dominating (Philippines: 75%; Canada: 60%; and United Kingdom 58.8%) or are (almost) equal part of workforce (Ukraine: 50%; United States: 48.1%; India: 47.8%) in the most (top 10 countries) is Writing and translation. Exceptions in the least gender equal profession, i.e., in Software development and technology, are non-existent across countries. There are, still, some "more important" women participation rates – in Nigeria (16.7%) and Canada (14.3%), and, to smaller range, in India (13%) and United Kingdom (10.7%). These numbers, however, doesn't change the overall impression that women are especially underrepresented in occupations related to the software development. Moreover, these findings correspond to findings of similar studies (Anđelković *et al.*, 2024; Frluckaj *et al.*, 2022), additionally underlining the need for a complex mixture of measures in order to achieve higher gender equality at the digital labour market.

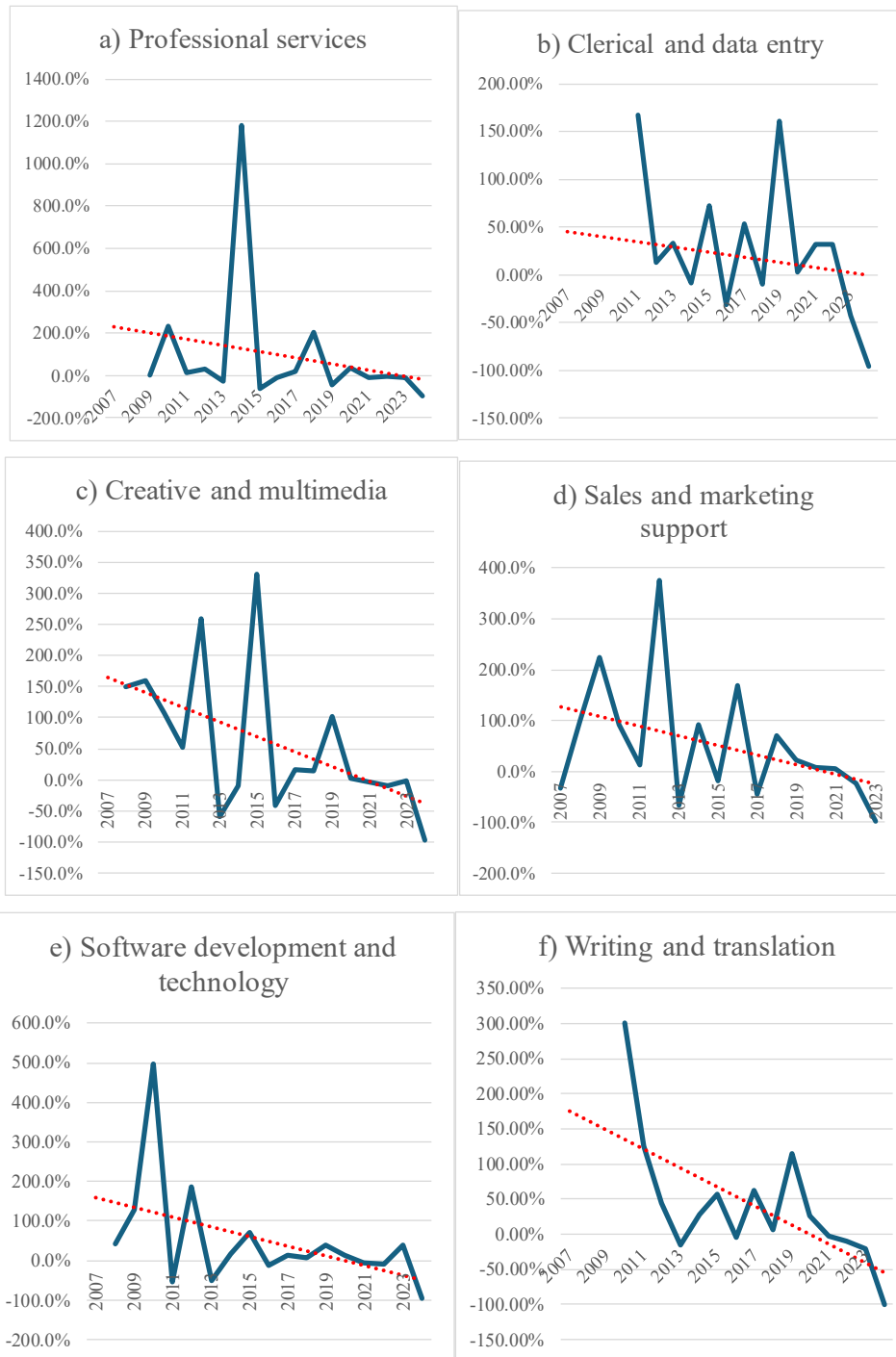


Figure 20. Growth rates of number of freelancers over time by professions (2007-2023¹⁵).

¹⁵ We observed the relative annual change (percentage change) in the number of freelancers over the period 2007-2023, although we have data for the year 2024. The reason why the observations for 2024 are excluded

Additional look at the Figure 20 reveals that the women tend to occupy more frequently Writing and translation and to some extent Clerical and data entry services. There is one notable exception in Sales and marketing – Philippines with women participation of 53.3%. Further, analysis confirms, on the top 10 country level in our sample, that women are heavily underrepresented in two additional professions, besides Software development and technology, i.e., in Professional services and Creative and multimedia. All these professions with IT knowledge intensive occupations are simply a reflection of existing inequalities in the “offline” world¹⁶ that are being reproduced in online world, making a lot of visible and invisible barriers for women freelancers and their career development in these three professions. Second important insight refers to fact that there are notable country specific differences that could stimulate greater participation of women, or importantly exacerbate and limit women integration in the digital labour market. In that sense, local institutional settings are playing a pivotal role in shaping the possibilities of women.

Some very insightful aspects could be obtained if we look into the development of different professions over time by gender (Figure 20). From the historic point of view, it is obvious that several professions, especially Clerical and data entry, Writing and translation and, to laser extent, Professional services emerged a bit later on the market. One of the reasons consists in the fact that process of digitalisation and corresponding business model changes by traditional businesses were not impacting all the sectors equally. After the infrastructural setup within the enterprises, the demand for these services were created and it created the reaction on the supply side (of labour market) where new freelancers in these occupations started to take part. By other words, changes in real business environment and technological capacity of firms enabled the

lies in the fact that there are only few observations over every profession and as we stated before, to be in the top performing freelancers, our data suggest that one need to be active and top perform over the longer period of time, where 1 year is for the majority of people not enough. Even if we observe the year before 2024, the negative growth rates imply potential hardships related to the inclination of freelancers to obtain top rated status.

¹⁶ For example, the main cause is „tiny pipeline” for computer science professions, since low enrolment rates in STEM disciplines. Main explanations for these figures relate to stereotypes – STEM fields are “masculine” which discourages women to enroll, lack of role models (women are underrepresented in leadership positions in technology sector), unconscious bias (in hiring, promotion and grant funding) and work-life balance imbalance – stemming from demanding requirements in STEM fields where women may opt out or chose to work part-time sacrificing their career advancement (Piloto, 2023).

rise of new digital professions, beside “core professions” for which demand already existed in the time of emergence of digital labour platforms. Downward trends in all professions suggest that the time is an inevitable factor which is determining the career path of freelancers, i.e., the status of the freelancer who is globally recognized as a talent requires, on average, rich experience which, in turn, requires a considerable amount of time, independently of profession. For example, average experience on platform in our sample is 6.5 years. Although there are no huge differences across professions, they are present. For example, the least demanding to reach top status are Writing and translation and Clerical and data entry, where freelancers are having on average 5.6 years of experience. On the other side, the most demanding is Software development and technology where average experience on platform is 7.2 years. General conclusion is that reaching top performing status globally requires time, this time is a function of the complexity of the domain/sector in which freelancers are offering their services.

If we observe the maximum growth rates over professions, we may determine when the platform was attracting the (best) freelancers for most. The “golden era” of platform, as our data show, was between 2010 and 2012, when almost all of the professions experienced historically high growth rates. Here, however, we may see while some professions experienced several relatively big and comparably strong growth leaps – Data entry and clerical services (2012 and 2019), Creative and multimedia services (2012, 2012 and 2015, to lesser extent also in 2020) and Sales and marketing support (2010, 2012 and 2016). It suggests potentially that it was easier for a freelancer to reach the status of a top performing freelancer if he offers the services in these occupations. However, the reason for that may be in the fact that already established workers were leaving the market more frequently, opening up opportunity for the greater number of new workers to reach easier the status of the top performing worker. Although our data suggest that the newcomers are experiencing pronounced hardship in reaching the top performing status in the area of software development, this is only partially true. Namely, while this conclusion may hold for a longer period of time, in a shorter period of time, for example in two years, the freelancers in this profession may have been having greater possibility to reach the status of top

performing worker. The evidence for that is the fact that this is the only profession in which the positive growth rate was recorded in the year 2023.

4.4 Paying for services: Who earns what?

The inclusiveness of global labour market is defined by an open access for everyone for any part of the world who has adequate skill set demanded. Not less important are the incentives for people to engage in freelancer career. After a years of double-digit growth, freelancing become multibillion industry, enabling near-instant matching of workers and employers worldwide (Hornuf & Vrankar, 2022). There are, as with any other phenomena, strong pros^{17,18} and not weaker cons^{19,20,21} that are determining desirability of stepping in the freelancer career path. Independently of serious

¹⁷ The main arguments for choosing to be freelancer is increased work autonomy (Duggan *et al.*, 2022; Kuek *et al.*, 2015) and flexibility (in employment relationship, in the scheduling the work and in place where the work is accomplished) the freelancer profession guarantees for individual in comparison with traditional employment relationship (Spreitzer, Cameron & Garrett, 2017). Even those central arguments could be questioned and are contextually dependent. For example, Lehdonvirta (2018) suggest that flexibility of freelancers is dependent on the availability of „gigs” (jobs) and dependency of worker on income from the „gigs”.

¹⁸ On individual level, freelance platforms could be observed as mechanisms offering unique opportunities for career development over a longer period of time including career exploration and transition, entrepreneurial training and reputation, and skills transfer (Blaising *et al.*, 2021).

¹⁹ Different aspects of precarity of freelancer work belongs to main critiques of employment on the digital labour markets. They refer to their legal status, providing them with less protection than employees, operating in an environment without organizational support in work operations, exposing them to greater uncertainty over the longer period of time (Sutherland *et al.*, 2020) or dependency on platform architecture influencing their capacity in portfolio building and setting the prices for their services (Pulignano, Muszyński & Tapia, 2025). Precary nature of freelancing is partially relativized by increasing instability in traditional work relations recorded in last few decades, despite considerable differences between different parts of the world (Rodrigues & Guest, 2010), although instability remains significantly higher in the platform work.

²⁰ At the individual level, freelancers face with strong (global) competition caused by oversupply of labour (much lower than demand for their services is), insecurity, discrimination, isolation, overwork, opacity and biased intermediaries “complication the flow of information from clients to workers” (Graham *et al.*, 2018)

²¹ Even platforms tried to resolve for precariousness, to some extent, which arise on the market. For example, Upwork introduced in 2014 minimum wage per hour of 3 US\$ (this measure, however, perfectly corresponds to their business model, since they are taking a “provision” on transactions between freelancers and companies). Still, a little progress has been done, since the market reaction was in growing number of postings for a fixed amount which, calculated on hourly basis, enabled bypassing the Upwork’s regulation (Beerepoot & Lambregts, 2017).

challenges related to being freelancer, constantly growing number of people doing freelance worldwide, suggest that pros are outweighing the cons of freelance²².

The main extrinsic factor for individuals to choose and pursue freelancer career (Buettner, 2015) is an opportunity to earn more than via traditional salaried employment or even to only earn money. This is especially true in regions and countries where there is the lack of available alternatives for high-skilled workforce and where the average wages are on a low level. Concerning the digital labour market, the global average pay per hour is increasing constantly, with rare departures from the trend (Anđelković *et al.*, 2024b). It reached 21 US\$ per hour in 2023, which is 10.5% higher than it was the case in 2021 (Payoneer, 2023). However, majority of the studies are tracking the earnings and wage development on national or regional level, although recording the similar trends (see for more: Anđelković *et al.*, 2024).

In order to identify average hourly wage, we use hourly wage requested²³ by the freelancer on the platform. It could deviate from the actual price for which the freelancer is working, but it is an estimation tool often used in research (Teutloff, Stenzhorn & Kässi, 2025; Dubey *et al.*, 2017; Ivanović & Kalinić, 2020; Kässi & Lehdonvirta, 2018) and which is confirmed as a good proxy for the actual average hourly rate freelancers are working for.

²² An interesting study in Turkey suggest that the majority of people, 4/5 of them, are happy of doing freelance (Çiğdem, 2022), clearly indicating that advantages are overcoming disadvantages of being a freelancer.

²³ Hourly wage requested is public (on the profile page of freelancer listed) price for the service the freelancer is providing.

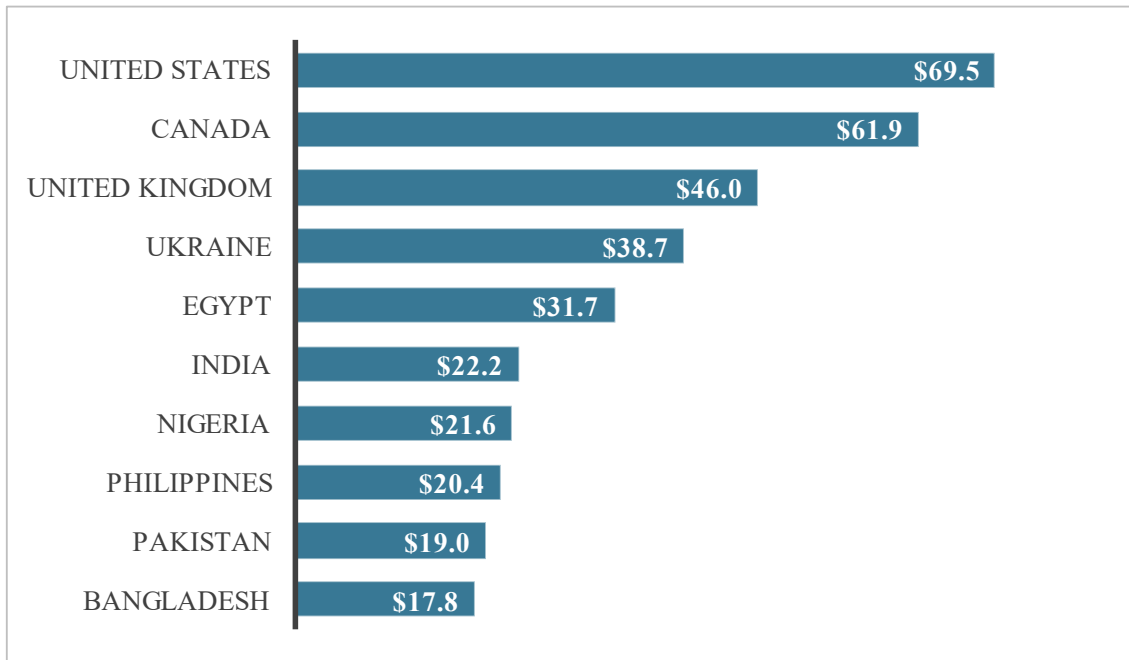


Figure 21. Average hourly wages of freelancers across top 10 countries.

The average hourly rate of top performing freelancers is 29.3 US\$, exceeding significantly the average rate already mentioned in Payoneer (2023) global report on freelancer's income of 21 US\$. There are four factors whose combined influence caused this result. First refers to fact that our data are the newest, while the data from the Payoneer's report are from 2023. However, relatively low increase of wages of freelancers over the last several years mean that only small portion of difference could be explained by time inconsistencies of the measurement. Second reason is the fact that we observe freelancers at the dominant online labour platform, while their research observes them on more digital labour platforms. Third reason is different method for estimation of hourly wages we use. Namely, our projection is based on public data provided by freelancers, while they use survey method. Forth reason, potentially, the most important, refers to the fact that we were collecting data on the best performing workers, while other studies are usually using data, independently of the method employed in research, covering newcomers, occasional workers and generally all the workers independently of their work performance on the platform.

Significant changes arise if we include spatial dimension into the analysis. Namely, there are huge differences across the countries. As Figure 21 shows, the biggest

western markets are demanding the highest wages per hour, considerably higher than the developing countries in the sample. How huge differences are, it could be illustrated by the fact that freelancers in the USA²⁴ earn, on average, 3.9 times higher hourly wage than the workers from the Bangladesh. Although the differences are considerable, they are way to lower compared with the differences in the level of development which could serve as a proxy for the differences on the conventional labour market. For example, GDP per capita (in US\$ in PPP prices) is 8.7 times higher in the USA than in Bangladesh (IMF, 2024). So, although disadvantaged regarding the wages in more developed countries, freelancers from less developed countries are probably finding work opportunities which are more attractive and better paid in freelancing. An interesting fact refers to differences within different group of countries. Namely, spread within developed countries, in our sample from United States, Canada and United Kingdom, is much higher than it is the case within the group of less developed countries. Further, one of the conclusions refers to the fact that top performing freelancers from African countries, on average, earn considerably more compared to Asian countries²⁵. Our findings are constrained by fact that we have only two African countries, not representing the whole continent, while the most representative countries from Asia are encompassed by our sample.

Gender gap in hourly wages is another important characteristic. Women, on average earn 91.3% of hourly wage of male counterparts. This result is interesting in at least two aspects. First, the gender pay gap is smaller, probably not to large extent, than in traditional labour market. This holds even if we observe some of the most gender equal traditional labour markets. For example, women earn, on average, 12% less than men in the EU (Eurostat, 2025). Second, the gender gap among top performing workers compared to overall freelancer population is considerably lower.

²⁴ High level of wages in the USA could be explained by specific character online labour market is having in this country, i.e., this market is more like an extension of the traditional labour market, than it is a global market in which freelancers from the USA are taking part. Namely, the USA is the only country where the majority of work is commissioned by domestic workers signalling that freelancers in the USA are earning higher remuneration as a result of their embeddedness in local institutional structures (Graham, Hjorth & Lehdonvirta, 2017).

²⁵ Lower wages could be result of different strategies present in different countries. For example, Philippines is specialized to serve culturally proximate countries (Graham *et al.*, 2018), which is probably one of the factors influencing the level of wage freelancers from this country could earn.

Namely, while in our sample the wage difference is 2.6 US\$, Teutloff, Stenzhorn & Kässi (2025) found wage differences reaching almost 12 US\$. This could have far-reaching consequences, pointing out that upskilling and performance improvement may be the best cure for closing the gender pay gap. This, however, should be taken with caution since other studies found almost the same gender gap, independently of performance of freelancers (see Payoneer (2023)).

Interesting results are obtained if we observe gender pay gap across the countries, in absolute and in relative terms (Figure 22). In Canada, the absolute difference in pay is especially pronounced, which is similar to the results that could be found in traditional labour market in this country, where the “glass ceiling effect” is especially pronounced in the top 0.1% income group²⁶. However, in our analysis the main reason lays in the fact that there is a very low presence of women in the best paid professions. For example, there is no women in professional services, while in software development they represent 14.3% of all freelancers in this profession. The same reasons apply for the USA, where the share of women in software development is only 6.2% and in professional services 30.5%. In the case of Bangladesh, this aspect explains in the most striking way the results: there is no women neither in professional services nor in software development occupations. It is highly interesting result that the female top performers in Egypt are earning more than male counterparts, making this country a unique example of gender inequality in opposite direction: women earn on average 4.3 US\$ or 13.6% more than men. These results are surprising since the Egypt counts as one of the top 10 countries regarding gender inequality (Hassan, 2019). This conclusion is constrained with two important aspects. One refers to fact that this refers only on top performing freelancers in this country. The second reinforces further limitation that there are only few female workers succeeded to join the club of top performing workers – there are, in our sample, only 12 female freelancers from Egypt. Still, if we put a side these limitations, results in Egypt could be understood as a showcase in favour of platform work and freelancer career choice for women: women

²⁶ One of the mechanisms potentially explaining why the gender inequality is especially high in top earning group is the fact that growing number of women pulls in more women with lower endowments of sophisticated skills, causing the greater differences in earnings between genders (Fortin, Bell & Böhm, 2017).

with competitive (and in high paid profession) human capital endowments are able to be as much as successful as men, where the recognition comes in form of monetary rewards from the market.

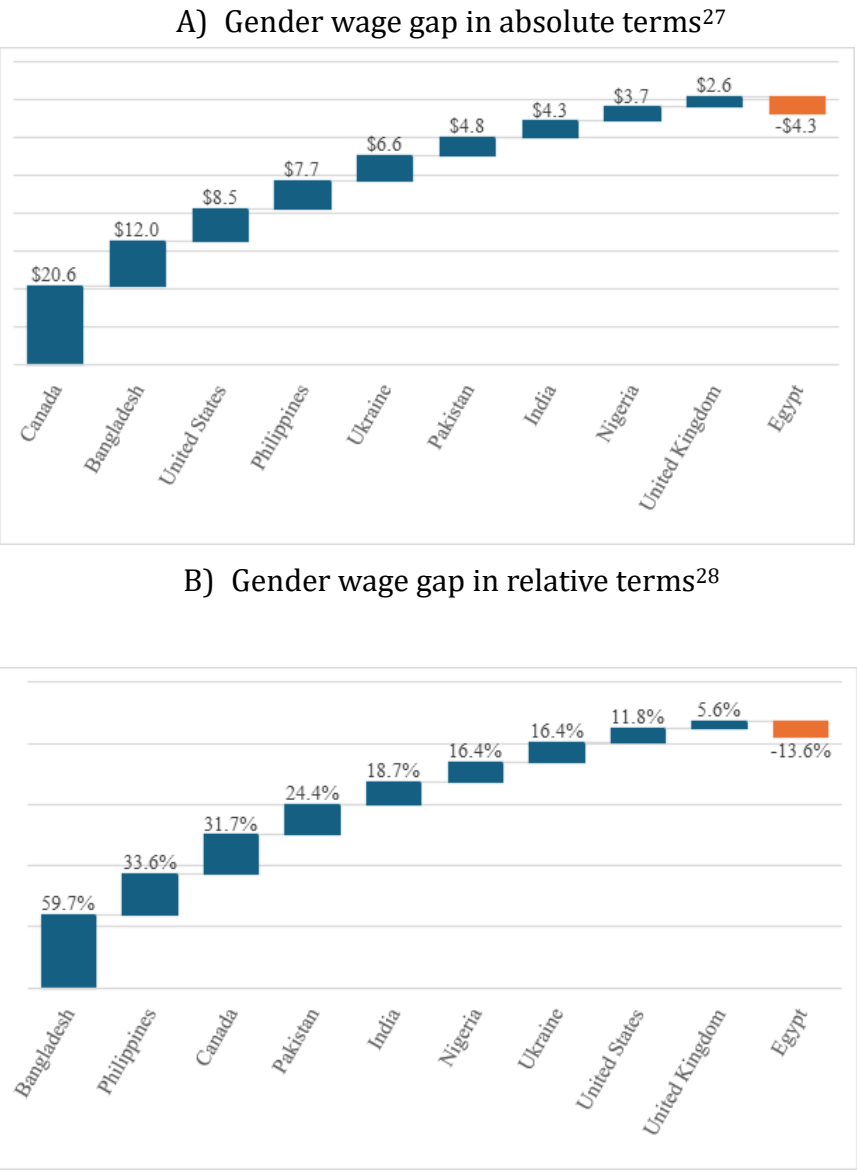


Figure 22. Gender wage gap in top 10 freelancer countries.

²⁷ Gender wage gap in absolute terms is obtained by subtracting average female wage from average male wage across countries.

²⁸ Gender wage gap in relative terms is calculated dividing average hourly wage of women by average male hourly wage.

If we observe pay gap in relative terms, especially challenging situation is in Bangladesh – women earn on average only 40.3% of the average hourly wage of men. In this country, low level of women participation in combination with their presence in lower paid professions and their overall low average level of wages per hour (8.1 US\$), makes position of women especially unfavourable in global terms.

Beside gender differences in pay, which are partially explained by their participation in professions and representation in different professions across (top 10) countries, an important aspect refers to big differences that exist in hourly wages across different occupations. As Figure 23 shows, the best paid profession is Professional services, in which freelancers earn on average 4.1 time more than in the least paid profession, i.e., Clerical and data entry services. However, results regarding the differences in hourly wages between professions obtained in our sample reflect the overall findings of different studies (Payoneer, 2023; Anđelković *et al.*, 2024; Anđelković *et al.*, 2024a).

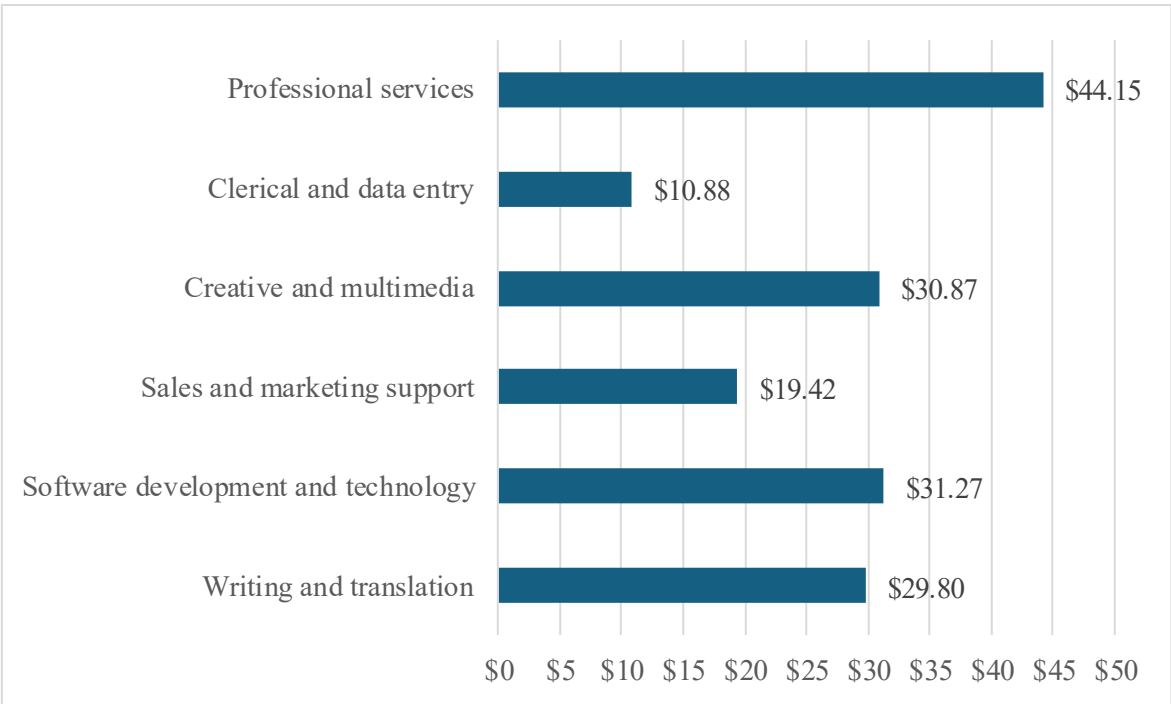


Figure 23. Hourly wages across professions.

The results are not surprising, since administrative workers, i.e., in our case freelancers in Clerical and data entry occupation, are having less sophisticated set of skills, and in consequence, have lower remuneration for their services. It could be a consequence of simultaneous influences coming from the both sides of the market: relatively low set of skills in this profession attracts more people (greater supply of freelancers) and faces smaller number of job postings (demand side for clerical and data entry workers). So, generally, workers in this profession are facing greater competition, which leads to more jobs bids weekly, lower hourly wages and lower predictability of incomes over time (Munoz, Dunn & Sawyer, 2022). Contrary to the least paid profession, the reason behind high hourly wages within the professional services could be explained, to a large extent, by highly specialized services these workers offer. The same explanation holds for the second best paid profession, i.e., Software development and technology. However, very high demand for these services - for example 43% of all job postings in 2021 required software development skills (Stephany *et al.*, 2021) - keeps hourly wages for these services on a very high level, despite the fact that in majority of countries around the globe the freelancers in Software development are the most numerous population (The Online Labour Index, 2025). Similar explanation is for Creative services and multimedia, since this occupation is the second most numerous, as creative industries are relying far more than the other industries on freelancers²⁹. Despite previously mentioned risks related to Writing and translation profession, comparably high average wages could be explained by two facts. First, an important part of freelancers is coming from countries where the wages are higher, which exacerbates an impact on global average wage per hour. Second, diversity of tasks for independent professionals is high, suggesting that better paid jobs, such are copywriter, ghost-writer or creative writers, are dominating compared to less demanding and those less paid, such are jobs of translators or proof-readers. Average wage salary for Sales and marketing support is partially surprising: the main explanation lies in fact that the majority of workers in this profession are coming from countries where the average level of wages is considerably lower.

²⁹ For example, 32% of all the workforce in creative industries is self-employed compared with 16% of workforce in the UK (Easton & Beckett, 2021).

Bringing together pay with professions and gender rounds off our analysis and brings additional insights into differences and potential relationships between structural dimensions on the online labour market. The results are presented in the Figure 24.

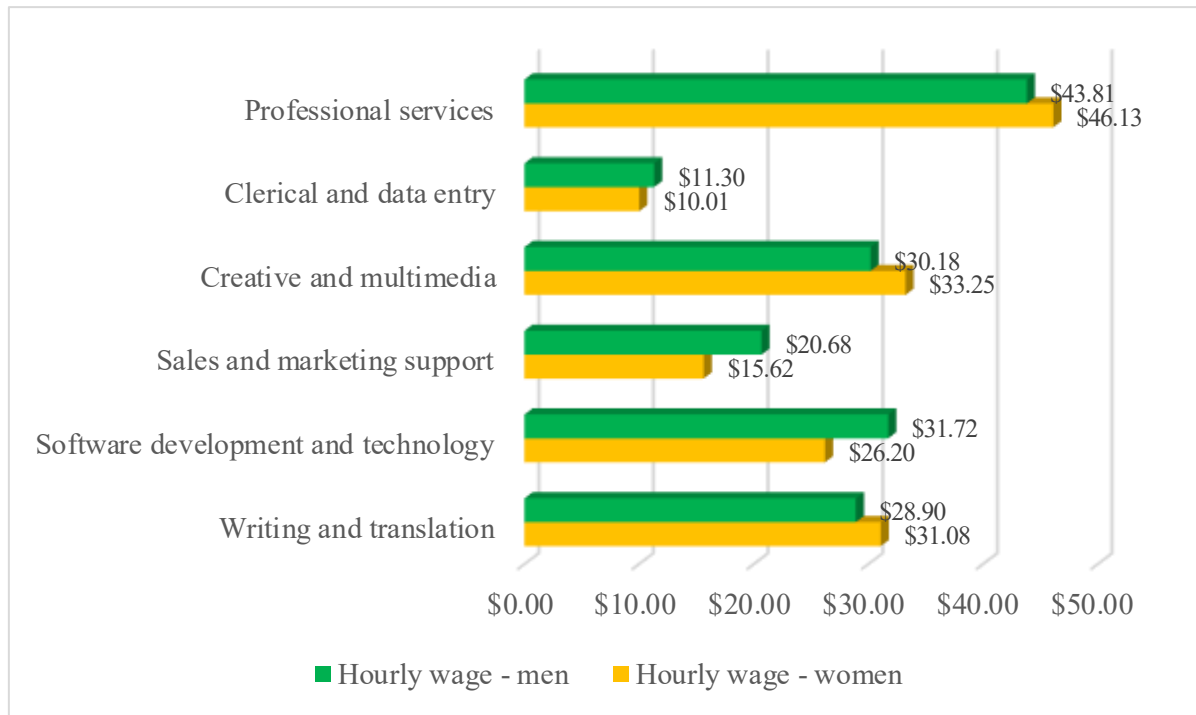


Figure 24. Hourly wages by profession and gender.

The most striking finding is more balanced picture when it comes to wage differentials between men and women across occupations. Namely, although overall inequality exists – top performing male freelancers are earning on average 9.6% higher hourly wage than women, women are earning on average more in half of the professions – Professional services (5.3%), Creative and multimedia (10.2%) and Writing and translation (7.5%). However, wage gap is much pronounced in profession in which women earn on average less, i.e., men are having 32.4% higher wage in Sales and marketing, 21.1% in Software development and technology and 12.8% in Clerical and data entry. The fact that women are on average earning more than men in half of the professions, suggest that online labour market is more inclusive than it could be the case if we observe only aggregate data. This conclusion is strengthened additionally

by the fact that their earnings are higher in (on average) more paid professions. So, although challenges regarding women participation and other drawbacks of women participation in the online labour markets still are holding, the online labour market, at least for those reaching top performing status, becomes more “blind” when it comes to rewording the work of different genders.

5 Skills in Demand: Insights from the Global Freelance Market

The evolving digital work landscape has heightened the demand for advanced and adaptable skill sets. As digital freelancing platforms expand, so does the need for digital competencies, prompting universities to equip students with relevant skills to meet the employment demands of the gig economy (Razak et al., 2024). Among these, AI and technological literacy have become particularly sought after, with industries increasingly valuing professionals capable of navigating complex digital systems—reflected in rising demand and wage premiums for AI specialists (Alekseeva et al., 2021; Saefullah et al., 2024). In parallel, the service sector is shifting toward more skill-intensive roles, reinforcing high-skilled labour's economic value and contributing to higher relative wages and increased employment in knowledge-based services (Buera & Kaboski, 2012).

We have conducted a deeper analysis of the job/task database, which was compiled using a custom Python-based web scraper from the selected freelance platform, Upwork. This database contains job postings that include information on job titles, descriptions, required skills, experience levels, payment structures, and employer details.

Here's a breakdown of the high-demand freelance skills, emphasizing their global and regional significance:

- Graphic Design is the most in-demand globally, with ~13.3% of freelance job postings mentioning it. North America leads demand, followed by Europe and Asia.
- Web Development and Web Design follow closely, with strong demand across all continents, especially in North America.
- Adobe Photoshop and WordPress round out the top five, highlighting the importance of both design tools and web content platforms.

- As a core front-end language, JavaScript remains a cornerstone of web development, with balanced demand across all major regions.
- Video editing has a strong presence in content-driven markets, especially in Europe, reflecting the growth of video in digital marketing and media.
- While often considered basic, Data Entry remains widely needed for administrative tasks.
- Adobe Illustrator is key in freelance visual design projects across all regions, being a creative essential for branding and design.
- Social media remains vital for business visibility. Demand is strongest in North America, followed by Europe, where platform-based marketing is highly prioritized.
- API Development – Globally demanded in ~3.46% of jobs, with strongest interest in North America, making it essential for developers working on integrations or back-end systems.
- Logo Design – Popular in branding projects, especially in North America, though demand drops in Europe and Asia, suggesting more regionalized or traditional branding approaches outside North America.
- Microsoft Excel – Despite being a classic tool, it holds a strong ~3.3% global presence, heavily used in North America, showing ongoing relevance in data handling, finance, and admin tasks.
- Instagram Marketing – With a notable global share, it's most valued in North America, showing that social media fluency is still a freelance asset, particularly for small businesses.
- Adobe Premiere Pro – A video editing staple with global use (~3.2%), peaking in North America and Europe, likely tied to growing video content needs.
- Python is leading programming language for automation, data science, and web back-end development. Strong demand across all regions with notable traction in Europe and Asia as well. It holds a strong 4.6% global demand.
- With the surge in digital content, Video Production is key for media, marketing, and social content creation. Demand is strongest in North America and Europe.

- Search Engine Optimization (SEO) remains critical for visibility in digital marketing. Most demand comes from North America, but it's gaining relevance globally as businesses shift online.
- Marketing Strategy has the highest demand in North America, where digital marketing ecosystems are mature.

These skills emphasize the growing intersection of tech fluency, creative tools, and platform-specific expertise in freelance work. These high-demand freelance skills show a blend of technical, creative, and operational tasks that are core to modern freelance workflows.

Table 8 presents the top 50 most high-demand freelance skills, highlighting the global and continental trends. The ranking was based on the frequency of demand for skills relative to the number of jobs posted globally. The significant regions in terms of job offers are North America, Europe, and Asia. The NA class represents jobs for which there is no information on the location of the offer. North America consistently leads in demand, though Europe and Asia show steady activity, especially in tech and creative domains.

Table 9 presents a cross-continental analysis based on Upwork job postings, based on the frequency of skill demand, relative to the total number of jobs posted in that continent. In North America and Europe, technology-driven skills dominate, with web development, graphic design, and software development consistently ranking at the top. These markets reflect a mature digital economy where demand is aligned with advanced digital services, product design, and high-value enterprise functions. While similar technical skills are present in Asia and Africa, there is also a notable emphasis on data entry and administrative support, suggesting a dual demand for both specialized and general-purpose digital labour. This may reflect differing client segments and varying maturity levels of freelance ecosystems across these regions. Interestingly, some skill categories exhibit cross-continental appeal, particularly graphic design and WordPress development, which appear among the top ranks in nearly all regions. This suggests that certain roles (particularly those associated with digital marketing, branding, and online content management) are universally in demand, regardless of the continent. At the same time, regional disparities in skills like

translation or customer service hint at language-specific needs or service outsourcing patterns tied to cultural and economic contexts.

Figure 26 shows compelling trends in freelance skill demand across North America, Asia, and Europe. In North America, the data underscores a pronounced emphasis on digital marketing, content writing, and SEO, reflecting a mature gig economy driven by e-commerce and brand-focused initiatives. This aligns with the region's well-developed online commercial infrastructure and a high demand for customer engagement through digital channels. Additionally, software development skills such as front-end development, JavaScript, and Python are consistently in high demand, highlighting the region's emphasis on technological innovation and product-driven entrepreneurship. In contrast, Asia displays a comparatively higher demand for data entry, virtual assistance, and administrative support roles, which suggests a strong engagement in support-based outsourcing services. While technical skills like web development and graphic design remain significant, the dominance of operational support roles may reflect regional labour costs and service specialization disparities. Europe's demand profile appears more balanced, with notable interest in translation, writing, and WordPress-related services, reflecting its multilingual market context and the integration of digital content across diverse cultural segments. These continental contrasts highlight the regional economic structures and strategic orientations of freelance activity, offering valuable insight for policy and workforce development initiatives.

Figures 27 through 32 illustrate the most in-demand freelance skills in six partner countries (Poland, Serbia, Romania, Spain, Ukraine, and Indonesia) based on their frequency relative to the total number of jobs posted on Upwork. A notable commonality across these countries is the high ranking of digital design and development skills, such as *Graphic Design*, *Web Development*, and *WordPress*, which consistently appear among the top-requested competencies. These trends reflect the global shift towards visually compelling content and the foundational role of web presence across business sectors. Additionally, *Data Entry* remains widely requested, indicating ongoing demand for support in routine yet essential tasks in digital operations.

Despite these similarities, regional differences in skill demands also emerge. For instance, *Translation* services appear as a key demand in Poland and Spain, suggesting a strong market for multilingual communication, possibly due to their ties with broader European or international markets. Meanwhile, *Mobile App Development* and *SEO* (Search Engine Optimization) are more prominent in the Indonesian and Romanian datasets, highlighting a growing digital entrepreneurship ecosystem in these regions. Indonesia also shows higher demand for *Social Media Marketing* and *Customer Service*, which could be attributed to the proliferation of small online businesses and customer-facing e-commerce platforms.

The variation in skill demand reflects both the maturity of local digital economies and the unique economic structures in each partner country. In Eastern European countries like Ukraine and Romania, technical skills such as *JavaScript*, *Python*, and *Web Programming* are more frequently requested, aligning with their well-established IT outsourcing sectors. In contrast, Indonesia's demand profile skews toward client interaction and marketing-related roles, perhaps indicating a freelancer base that supports micro and small enterprises.

The high-demand freelance skills ranked in Tables 10 through 12 offer a comprehensive picture of current skill requirements across continents and globally. The top 21 skills listed in Table 10 emphasize core competencies that reflect the digital transformation of work, such as *WordPress*, *Graphic Design*, *Data Entry*, *Adobe Photoshop*, and *Web Design*. These skills dominate job postings in global marketplaces and indicate the dominance of web development and visual communication as essential areas in the digital freelance economy. *WordPress* and *Web Design*, in particular, suggest high demand for professionals who can deliver customizable, user-friendly websites. Likewise, *Graphic Design* and *Adobe Photoshop* point to strong branding, content creation, and marketing needs—roles central to many digital projects across sectors.

In Table 11, which presents skills ranked 22 to 42, we observe an increasing level of specialization. Skills like *Python*, *JavaScript*, *HTML5*, and *PHP* underscore the importance of coding and software development, while others, such as *SEO*, *Social Media Marketing*, and *Google Ads* indicate the growing relevance of digital marketing

expertise. The inclusion of *Virtual Assistant*, *Customer Service*, and *Administrative Support* suggests that many companies are outsourcing not only technical tasks but also operational support functions. These skills highlight a shift in freelance platforms toward offering complete business solutions. Furthermore, skills like *eCommerce*, *Shopify*, and *WooCommerce* reflect the strong growth in online retail, particularly during and after the COVID-19 pandemic. This mix of technical, marketing, and administrative capabilities underscores the increasingly multidisciplinary nature of freelance work.

Table 12 completes the ranking by listing the remaining 20 high-demand skills, capturing a variety of niche competencies and emerging specialties. For example, *Motion Graphics* and *Video Editing* signal rising content consumption trends on platforms like YouTube, TikTok, and Instagram. Meanwhile, skills like *Figma* and *UI/UX Design* highlight the prioritization of user experience in digital product development. Interestingly, language-based roles such as *Translation* and *English Grammar* also appear, indicating the continued global demand for content localization and editing services. Other entries, such as *Bookkeeping*, *QuickBooks*, and *Financial Analysis* show that even traditionally office-based financial services are increasingly transitioning into freelance modes.

Figures 33 and 34 provide a nuanced comparison between average global demand and regional trends in Asia and Europe for the most requested freelance skills on digital platforms. In Figure 33, we observe that while certain skills, such as *Graphic Design*, *WordPress*, and *Data Entry*, show consistently high demand across all regions, distinct regional preferences are also evident. For example, in Asia, skills like *Python* and *Mobile App Development* demonstrate higher relative demand compared to the global average, reflecting the region's growing emphasis on technology-driven services and digital transformation. In contrast, Europe appears to favour skills such as *Translation*, *Customer Service*, and *Content Writing* at a higher rate, suggesting a strong demand for multilingual communication and localized customer support, likely due to the diverse linguistic and cultural landscape across European countries.

Figure 34 further highlights these variations by mapping the top-requested freelance skills against the global average demand. The graphical comparison reveals

that some skills, such as *Adobe Photoshop* and *Virtual Assistance*, maintain a relatively stable demand globally, while others fluctuate considerably based on regional economic structures and market needs. For instance, Europe demonstrates below-average demand for some tech-intensive skills such as *JavaScript* and *Web Programming*, which may be partially explained by the continent's stronger regulation and reliance on in-house development teams. Meanwhile, Asia's above-average demand for *eCommerce Development* and *SEO* reflects a broader regional trend toward digital entrepreneurship and rapid expansion of online marketplaces. These variations underline the importance of contextualizing freelance skill development strategies and policies at a regional level, taking into account specific industry dynamics, technological readiness, and economic focus in different parts of the world.

Skill	North America		Europe		Asia		NA		Global	
	Demand	% In Global Jobs	Demand	% In Global Jobs	Demand	% In Global Jobs	Demand	% In Global Jobs	Demand	% In Global Jo...
Graphic Design	2,335	6.11%	1,107	2.89%	752	1.97%	412	1.08%	5,084	13.29%
Web Development	1,504	3.93%	737	1.93%	606	1.58%	294	0.77%	3,459	9.04%
Web Design	1,364	3.57%	680	1.78%	522	1.36%	313	0.82%	3,169	8.29%
Adobe Photoshop	1,212	3.17%	574	1.5%	415	1.09%	379	0.99%	2,845	7.44%
WordPress	1,167	3.05%	576	1.51%	438	1.15%	364	0.95%	2,768	7.24%
JavaScript	1,034	2.7%	614	1.61%	584	1.53%	298	0.78%	2,731	7.14%
Video Editing	1,002	2.62%	655	1.71%	349	0.91%	227	0.59%	2,447	6.4%
Data Entry	1,177	3.08%	433	1.13%	322	0.84%	283	0.74%	2,437	6.37%
Adobe Illustrator	1,028	2.69%	508	1.33%	348	0.91%	290	0.76%	2,404	6.29%
Social Media Marketing	1,091	2.85%	455	1.19%	291	0.76%	213	0.56%	2,223	5.81%
Lead Generation	1,005	2.63%	402	1.05%	306	0.8%	207	0.54%	2,068	5.41%
Content Writing	872	2.28%	476	1.24%	343	0.9%	152	0.4%	1,987	5.2%
English	665	1.74%	411	1.07%	406	1.06%	175	0.46%	1,793	4.69%
Python	685	1.79%	363	0.95%	361	0.94%	225	0.59%	1,758	4.6%
HTML	664	1.74%	373	0.98%	344	0.9%	195	0.51%	1,702	4.45%
CSS	602	1.57%	337	0.88%	334	0.87%	201	0.53%	1,580	4.13%
PHP	589	1.54%	336	0.88%	315	0.82%	184	0.48%	1,547	4.05%
Video Production	609	1.59%	388	1.01%	232	0.61%	91	0.24%	1,447	3.78%
Facebook	701	1.83%	267	0.7%	171	0.45%	97	0.25%	1,371	3.58%
Search Engine Optimization	579	1.51%	310	0.81%	205	0.54%	152	0.4%	1,352	3.54%
API	507	1.33%	320	0.84%	297	0.78%	90	0.24%	1,322	3.46%
Logo Design	541	1.41%	250	0.65%	185	0.48%	178	0.47%	1,281	3.35%
Microsoft Excel	644	1.68%	168	0.44%	157	0.41%	187	0.49%	1,265	3.31%
Instagram	620	1.62%	260	0.68%	159	0.42%	120	0.31%	1,262	3.3%
Adobe Premiere Pro	474	1.24%	322	0.84%	180	0.47%	151	0.39%	1,230	3.22%

Skill	North America		Europe		Asia		NA		Global	
	Demand	% In Global Jobs	Demand	% In Global Jobs	Demand	% In Global Jobs	Demand	% In Global Jobs	Demand	% In Global Jo...
Marketing Strategy	598	1.56%	247	0.65%	166	0.43%	83	0.22%	1,187	3.1%
Social Media Management	561	1.47%	230	0.6%	137	0.36%	157	0.41%	1,171	3.06%
Adobe After Effects	430	1.12%	285	0.75%	192	0.5%	139	0.36%	1,155	3.02%
Communications	593	1.55%	218	0.57%	181	0.47%	76	0.2%	1,150	3.01%
Shopify	456	1.19%	296	0.77%	148	0.39%	154	0.4%	1,149	3%
Administrative Support	510	1.33%	147	0.38%	142	0.37%	105	0.27%	994	2.6%
Video Post-Editing	448	1.17%	233	0.61%	134	0.35%	61	0.16%	978	2.56%
Sales	448	1.17%	186	0.49%	191	0.5%	77	0.2%	955	2.5%
Virtual Assistance	390	1.02%	186	0.49%	117	0.31%	126	0.33%	919	2.4%
Email Communication	445	1.16%	166	0.43%	113	0.3%	86	0.22%	878	2.3%
Customer Service	428	1.12%	143	0.37%	110	0.29%	98	0.26%	848	2.22%
Illustration	360	0.94%	182	0.48%	106	0.28%	90	0.24%	795	2.08%
SEO Keyword Research	346	0.9%	167	0.44%	116	0.3%	87	0.23%	785	2.05%
Google Ads	340	0.89%	166	0.43%	98	0.26%	108	0.28%	782	2.04%
3D Modeling	274	0.72%	148	0.39%	147	0.38%	137	0.36%	774	2.02%
Writing	296	0.77%	178	0.47%	154	0.4%	85	0.22%	774	2.02%
React	242	0.63%	157	0.41%	180	0.47%	130	0.34%	766	2%
Android	227	0.59%	184	0.48%	215	0.56%	59	0.15%	760	1.99%
Google Analytics	314	0.82%	152	0.4%	108	0.28%	81	0.21%	721	1.89%
iOS	232	0.61%	170	0.44%	194	0.51%			702	1.84%
Copywriting	291	0.76%	164	0.43%	106	0.28%	72	0.19%	683	1.79%
API Integration	253	0.66%	140	0.37%	122	0.32%	79	0.21%	648	1.69%
Data Scraping	286	0.75%	145	0.38%	91	0.24%	70	0.18%	643	1.68%
Email Marketing	321	0.84%	126	0.33%	63	0.16%	89	0.23%	638	1.67%
Market Research	233	0.61%	135	0.35%	140	0.37%	78	0.2%	633	1.66%

Table 8. High-demand freelance skills: global and continental trends.

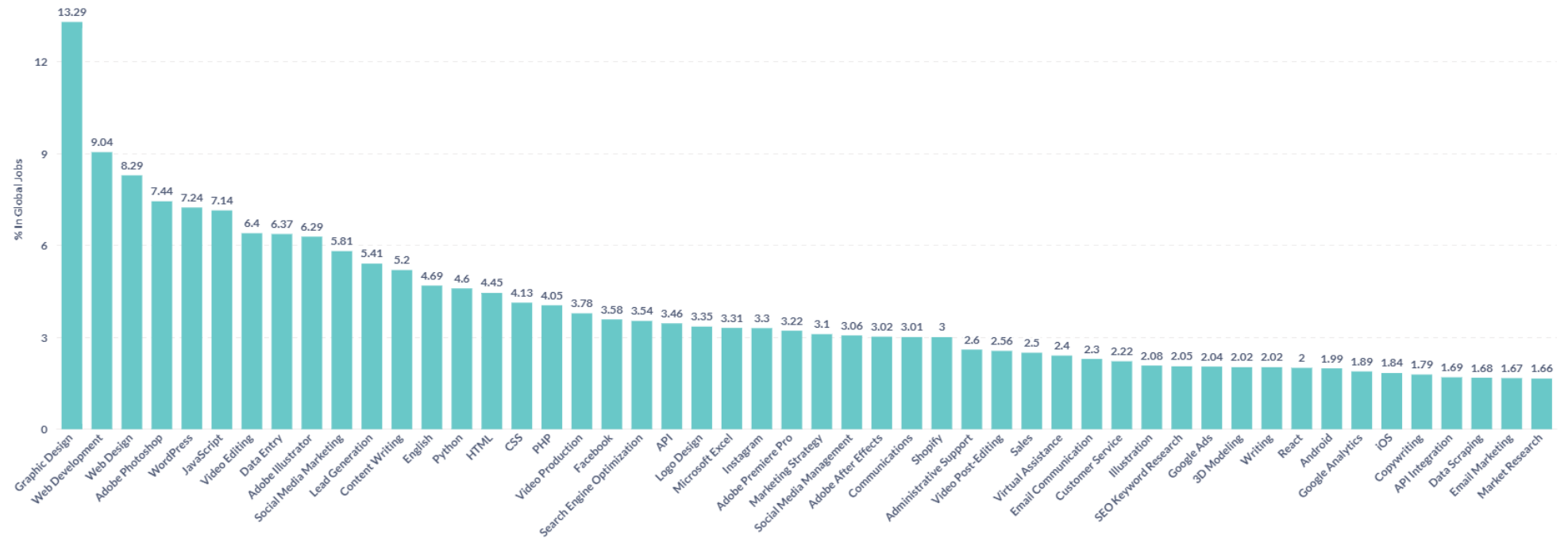


Figure 25. High-demand freelance skills: Global trends.

Skill	North America		Europe		Asia		NA	
	Demand	% In Cont. Jobs	Demand	% In Cont. Jobs	Demand	% In Cont. Jobs	Demand	% In Cont. Jobs
Graphic Design	2,335	14.52%	1,107	14.08%	752	11.75%	412	8.36%
Web Development	1,504	9.35%	737	9.38%	606	9.47%	294	5.96%
Web Design	1,364	8.48%	680	8.65%	522	8.16%	313	6.35%
Adobe Photoshop	1,212	7.54%	574	7.3%	415	6.49%	379	7.69%
WordPress	1,167	7.26%	576	7.33%	438	6.84%	364	7.38%
JavaScript	1,034	6.43%	614	7.81%	584	9.13%	298	6.04%
Video Editing	1,002	6.23%	655	8.33%	349	5.45%	227	4.6%
Data Entry	1,177	7.32%	433	5.51%	322	5.03%	283	5.74%
Adobe Illustrator	1,028	6.39%	508	6.46%	348	5.44%	290	5.88%
Social Media Marketing	1,091	6.78%	455	5.79%	291	4.55%	213	4.32%
Lead Generation	1,005	6.25%	402	5.11%	306	4.78%	207	4.2%
Content Writing	872	5.42%	476	6.06%	343	5.36%	152	3.08%
English	665	4.13%	411	5.23%	406	6.34%	175	3.55%
Python	685	4.26%	363	4.62%	361	5.64%	225	4.56%
HTML	664	4.13%	373	4.75%	344	5.38%	195	3.95%
CSS	602	3.74%	337	4.29%	334	5.22%	201	4.08%
PHP	589	3.66%	336	4.27%	315	4.92%	184	3.73%
Video Production	609	3.79%	388	4.94%	232	3.63%	91	1.85%
Facebook	701	4.36%	267	3.4%	171	2.67%	97	1.97%
Search Engine Optimization	579	3.6%	310	3.94%	205	3.2%	152	3.08%
API	507	3.15%	320	4.07%	297	4.64%	90	1.83%
Logo Design	541	3.36%	250	3.18%	185	2.89%	178	3.61%
Microsoft Excel	644	4%	168	2.14%	157	2.45%	187	3.79%
Instagram	620	3.85%	260	3.31%	159	2.48%	120	2.43%
Adobe Premiere Pro	474	2.95%	322	4.1%	180	2.81%	151	3.06%

Skill	North America		Europe		Asia		NA	
	Demand	% In Cont. Jobs	Demand	% In Cont. Jobs	Demand	% In Cont. Jobs	Demand	% In Cont. Jobs
Marketing Strategy	598	3.72%	247	3.14%	166	2.59%	83	1.68%
Social Media Management	561	3.49%	230	2.93%	137	2.14%	157	3.18%
Adobe After Effects	430	2.67%	285	3.63%	192	3%	139	2.82%
Communications	593	3.69%	218	2.77%	181	2.83%	76	1.54%
Shopify	456	2.84%	296	3.77%	148	2.31%	154	3.12%
Administrative Support	510	3.17%	147	1.87%	142	2.22%	105	2.13%
Video Post-Editing	448	2.79%	233	2.96%	134	2.09%	61	1.24%
Sales	448	2.79%	186	2.37%	191	2.98%	77	1.56%
Virtual Assistance	390	2.42%	186	2.37%	117	1.83%	126	2.56%
Email Communication	445	2.77%	166	2.11%	113	1.77%	86	1.74%
Customer Service	428	2.66%	143	1.82%	110	1.72%	98	1.99%
Illustration	360	2.24%	182	2.32%	106	1.66%	90	1.83%
SEO Keyword Research	346	2.15%	167	2.12%	116	1.81%	87	1.76%
Google Ads	340	2.11%	166	2.11%	98	1.53%	108	2.19%
3D Modeling	274	1.7%	148	1.88%	147	2.3%	137	2.78%
Writing	296	1.84%	178	2.26%	154	2.41%	85	1.72%
React	242	1.5%	157	2%	180	2.81%	130	2.64%
Android	227	1.41%	184	2.34%	215	3.36%	59	1.2%
Google Analytics	314	1.95%	152	1.93%	108	1.69%	81	1.64%
iOS	232	1.44%	170	2.16%	194	3.03%		
Copywriting	291	1.81%	164	2.09%	106	1.66%	72	1.46%
API Integration	253	1.57%	140	1.78%	122	1.91%	79	1.6%
Data Scraping	286	1.78%	145	1.84%	91	1.42%	70	1.42%
Email Marketing	321	2%	126	1.6%	63	0.98%	89	1.8%
Market Research	233	1.45%	135	1.72%	140	2.19%	78	1.58%

Table 9. High-demand freelance skills: Continental trends.

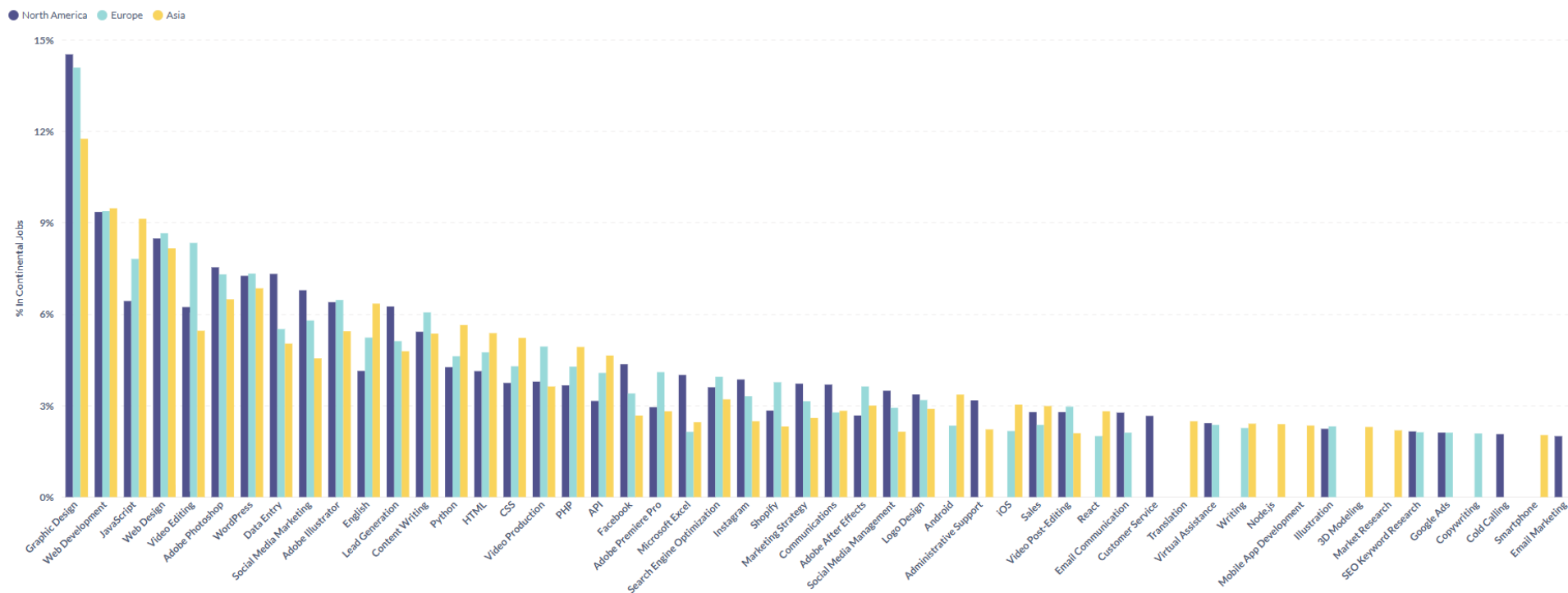


Figure 26. High-demand freelance skills: Continental trends.

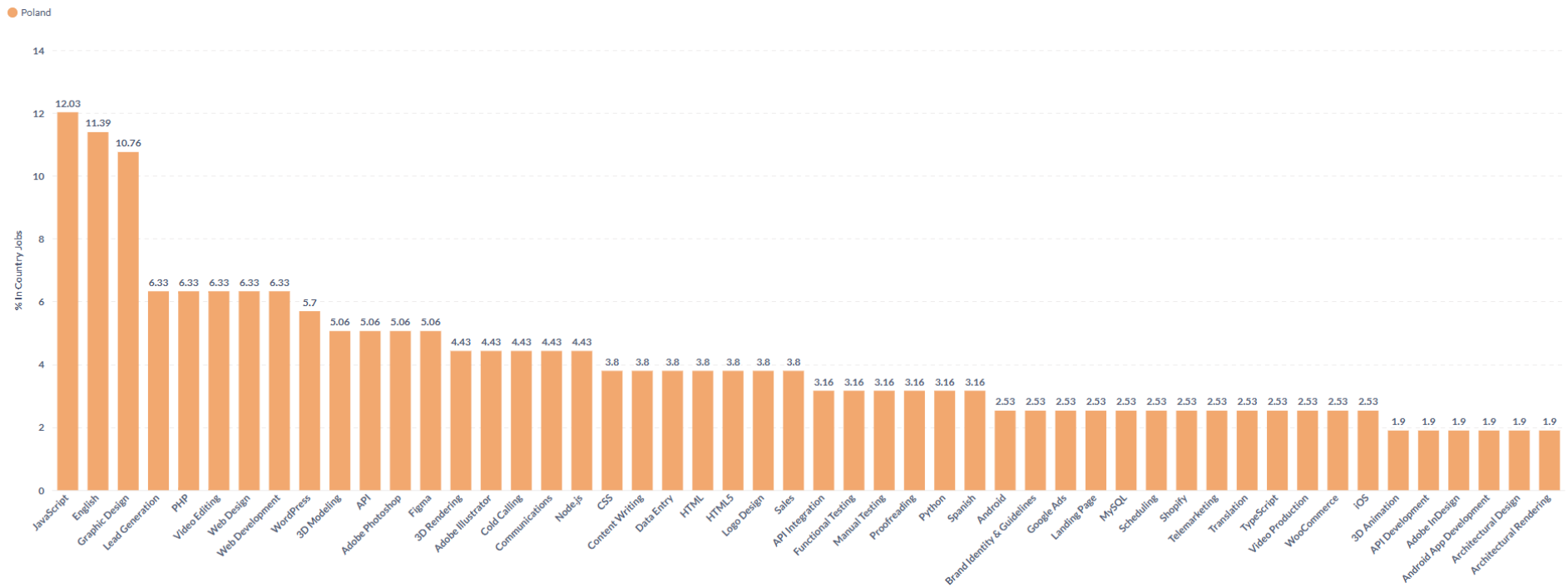


Figure 27. High-demand freelance skills: Poland.

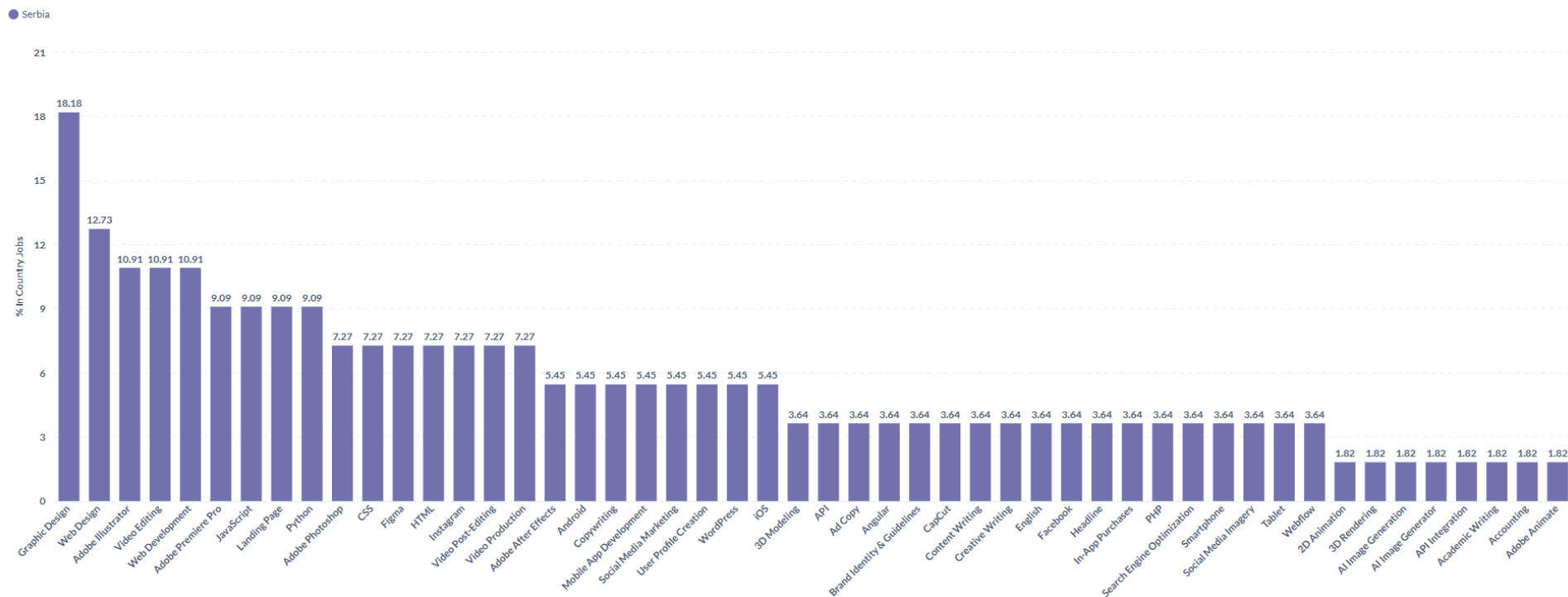


Figure 28. High-demand freelance skills: Serbia.

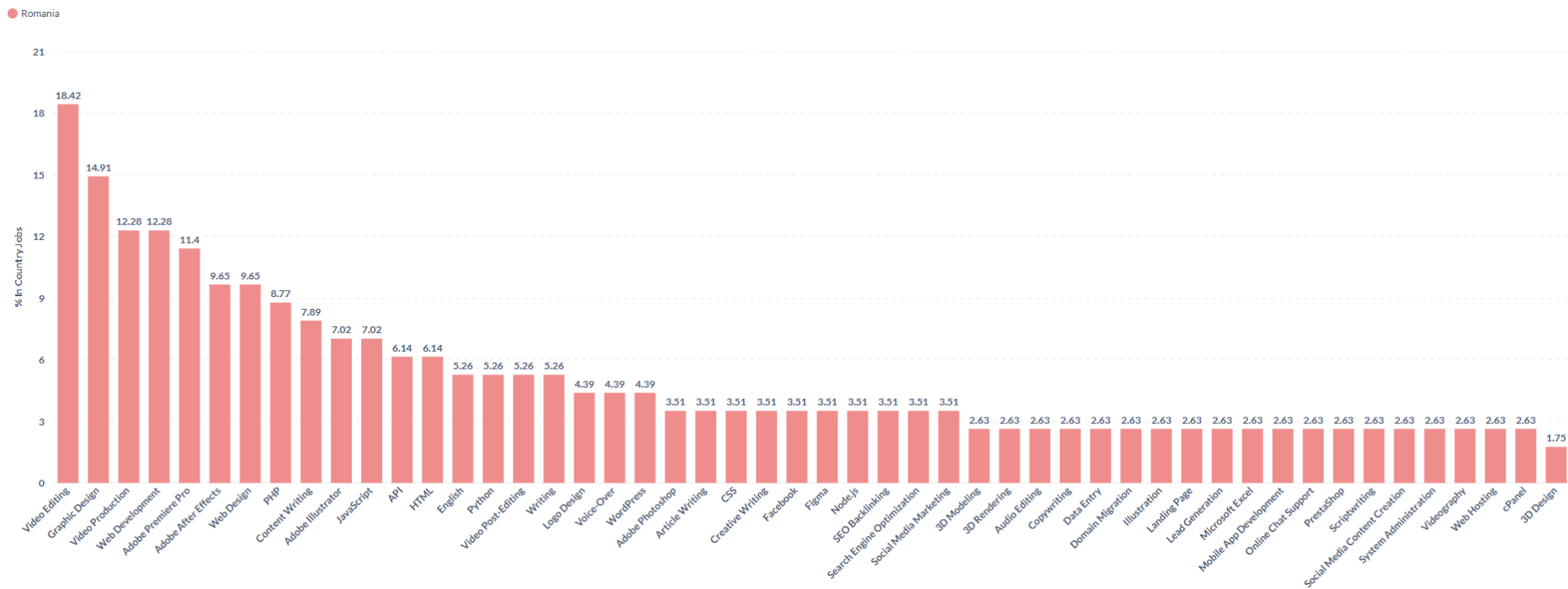


Figure 29. High-demand freelance skills: Romania.

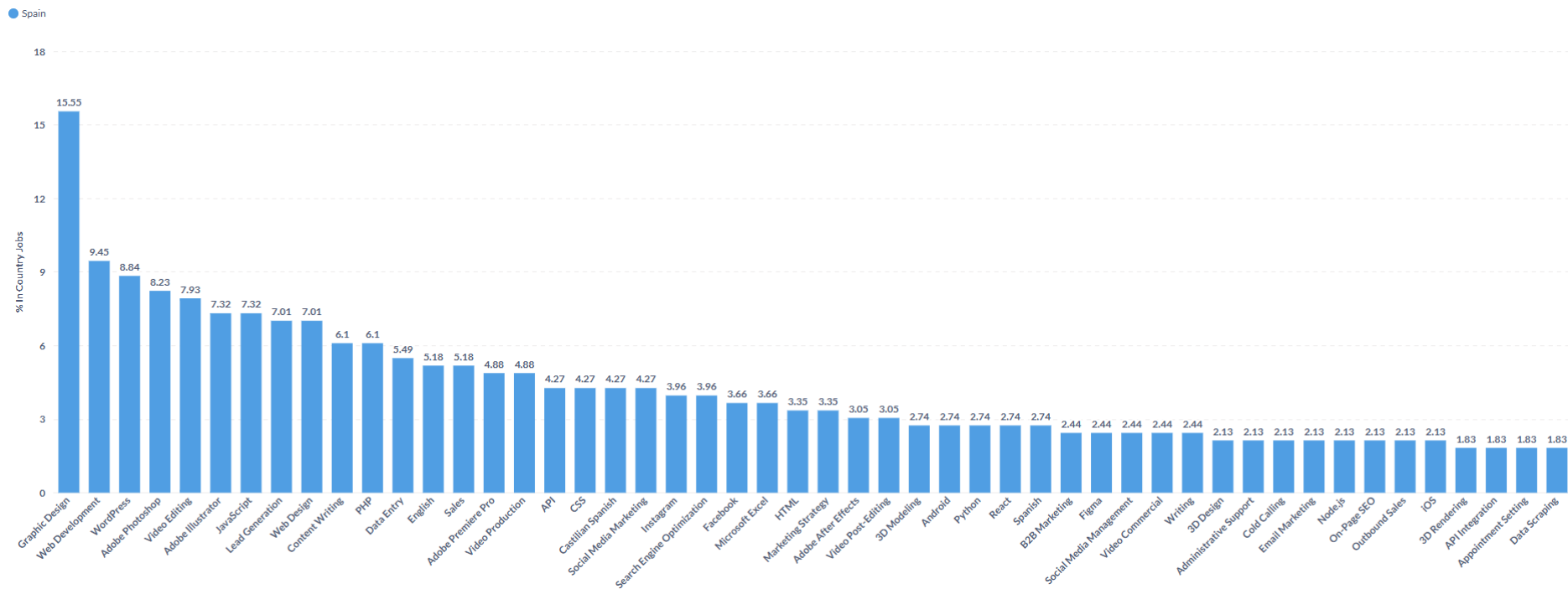


Figure 30. High-demand freelance skills: Spain.

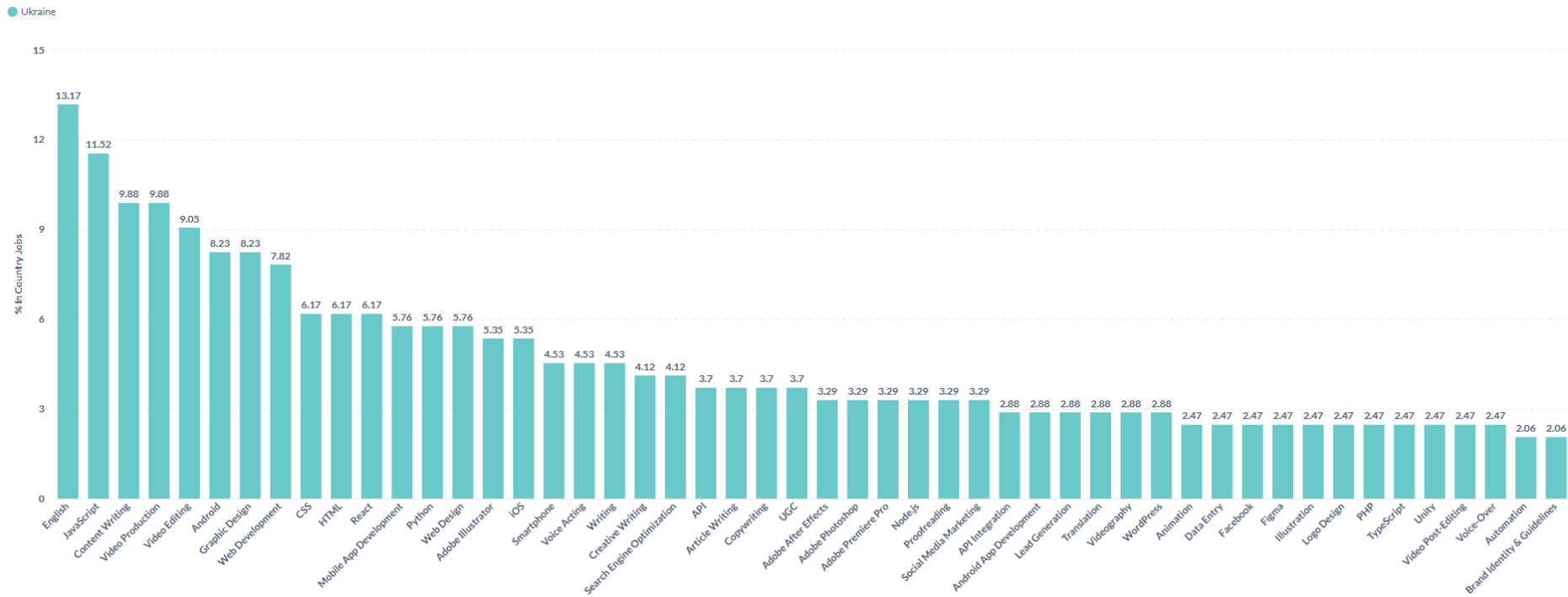


Figure 31. High-demand freelance skills: Ukraine.

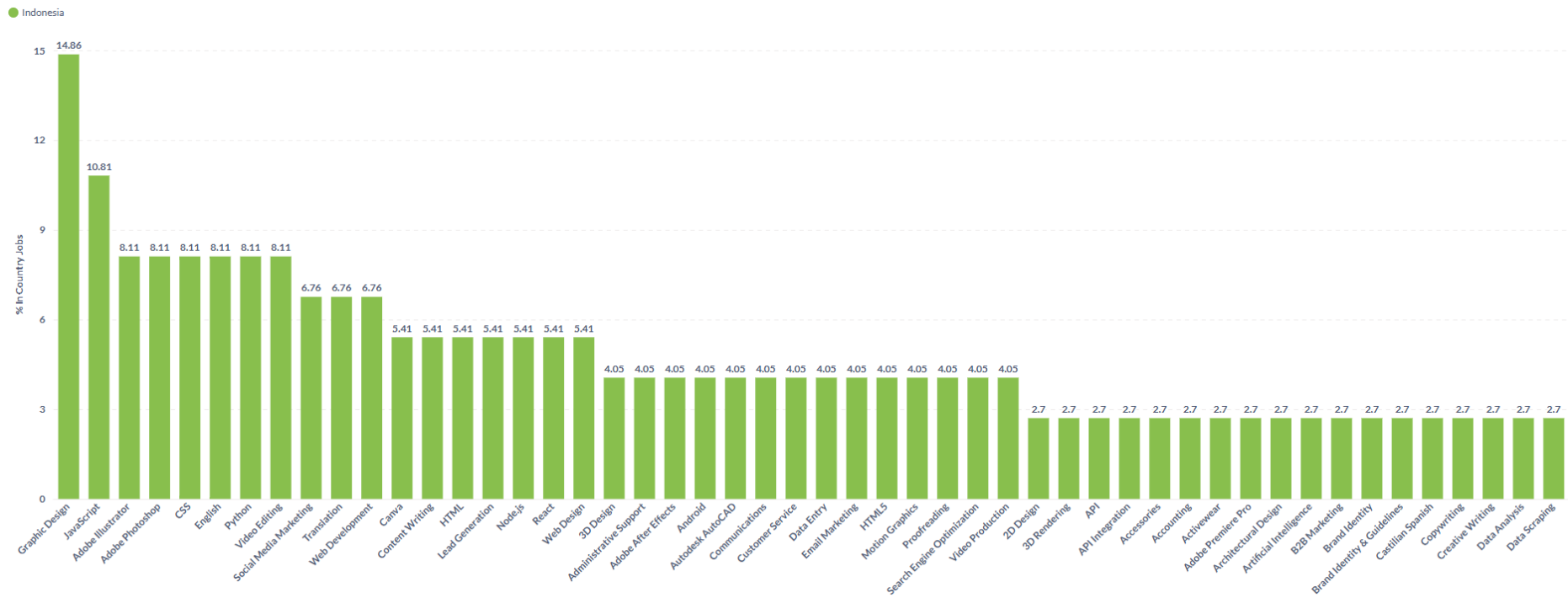


Figure 32. High-demand freelance skills: Indonesia.

Skill ^	^ North America	^ Europe	^ Asia	^ Global	^ Avg. Demand
Graphic Design	14.52%	14.08%	11.75%	13.29%	13.41%
Web Development	9.35%	9.38%	9.47%	9.04%	9.31%
Web Design	8.48%	8.65%	8.16%	8.29%	8.39%
JavaScript	6.43%	7.81%	9.13%	7.14%	7.63%
Adobe Photoshop	7.54%	7.3%	6.49%	7.44%	7.19%
WordPress	7.26%	7.33%	6.84%	7.24%	7.17%
Video Editing	6.23%	8.33%	5.45%	6.4%	6.6%
Adobe Illustrator	6.39%	6.46%	5.44%	6.29%	6.14%
Data Entry	7.32%	5.51%	5.03%	6.37%	6.06%
Social Media Marketing	6.78%	5.79%	4.55%	5.81%	5.73%
Content Writing	5.42%	6.06%	5.36%	5.2%	5.51%
Lead Generation	6.25%	5.11%	4.78%	5.41%	5.39%
English	4.13%	5.23%	6.34%	4.69%	5.1%
Python	4.26%	4.62%	5.64%	4.6%	4.78%
HTML	4.13%	4.75%	5.38%	4.45%	4.68%
CSS	3.74%	4.29%	5.22%	4.13%	4.35%
PHP	3.66%	4.27%	4.92%	4.05%	4.23%
Video Production	3.79%	4.94%	3.63%	3.78%	4.03%
API	3.15%	4.07%	4.64%	3.46%	3.83%
Search Engine Optimization	3.6%	3.94%	3.2%	3.54%	3.57%
Facebook	4.36%	3.4%	2.67%	3.58%	3.5%

Table 10. High-demand freelance skills: A cross-continental analysis (Ranks 1-21).

Skill ^	^ North America	^ Europe	^ Asia	^ Global	^ Avg. Demand
Adobe Premiere Pro	2.95%	4.1%	2.81%	3.22%	3.27%
Instagram	3.85%	3.31%	2.48%	3.3%	3.24%
Logo Design	3.36%	3.18%	2.89%	3.35%	3.2%
Marketing Strategy	3.72%	3.14%	2.59%	3.1%	3.14%
Adobe After Effects	2.67%	3.63%	3%	3.02%	3.08%
Communications	3.69%	2.77%	2.83%	3.01%	3.07%
Shopify	2.84%	3.77%	2.31%	3%	2.98%
Microsoft Excel	4%	2.14%	2.45%	3.31%	2.98%
Social Media Management	3.49%	2.93%	2.14%	3.06%	2.9%
Sales	2.79%	2.37%	2.98%	2.5%	2.66%
Video Post-Editing	2.79%	2.96%	2.09%	2.56%	2.6%
Android	-	2.34%	3.36%	1.99%	2.56%
Translation	-	-	2.48%	-	2.48%
Administrative Support	3.17%	1.87%	2.22%	2.6%	2.46%
Mobile App Development	-	-	2.34%	-	2.34%
iOS	-	2.16%	3.03%	1.84%	2.34%
React	-	2%	2.81%	2%	2.27%
Virtual Assistance	2.42%	2.37%	1.83%	2.4%	2.26%
Email Communication	2.77%	2.11%	1.77%	2.3%	2.24%
Illustration	2.24%	2.32%	-	2.08%	2.21%
Writing	1.84%	2.26%	2.41%	2.02%	2.13%

Table 11.High-demand freelance skills: A cross-continental analysis (Ranks 22-42).

Skill ^	^ North America	^ Europe	^ Asia	^ Global	^ Avg. Demand
Customer Service	2.66%	1.82%	1.72%	2.22%	2.1%
Google Ads	2.11%	2.11%	-	2.04%	2.09%
Cold Calling	2.06%	-	-	-	2.06%
SEO Keyword Research	2.15%	2.12%	1.81%	2.05%	2.04%
Smartphone	-	-	2.03%	-	2.03%
Node.js	-	-	2.39%	1.66%	2.02%
3D Modeling	1.7%	1.88%	2.3%	2.02%	1.98%
Market Research	-	1.72%	2.19%	-	1.95%
Google Analytics	1.95%	1.93%	-	1.89%	1.92%
Figma	-	1.92%	-	-	1.92%
Copywriting	1.81%	2.09%	-	1.79%	1.89%
Artificial Intelligence	-	-	1.88%	-	1.88%
Voice Acting	-	-	1.88%	-	1.88%
Scheduling	1.87%	-	-	-	1.87%
Email Marketing	2%	-	-	1.67%	1.83%
API Integration	-	1.78%	1.91%	1.69%	1.79%
Data Scraping	1.78%	1.84%	-	1.68%	1.77%
Photo Editing	1.62%	-	-	-	1.62%
Accounting	1.59%	-	-	-	1.59%
Bookkeeping	1.58%	-	-	-	1.58%

Table 12. High-demand freelance skills: A cross-continental analysis (Ranks 43-62).

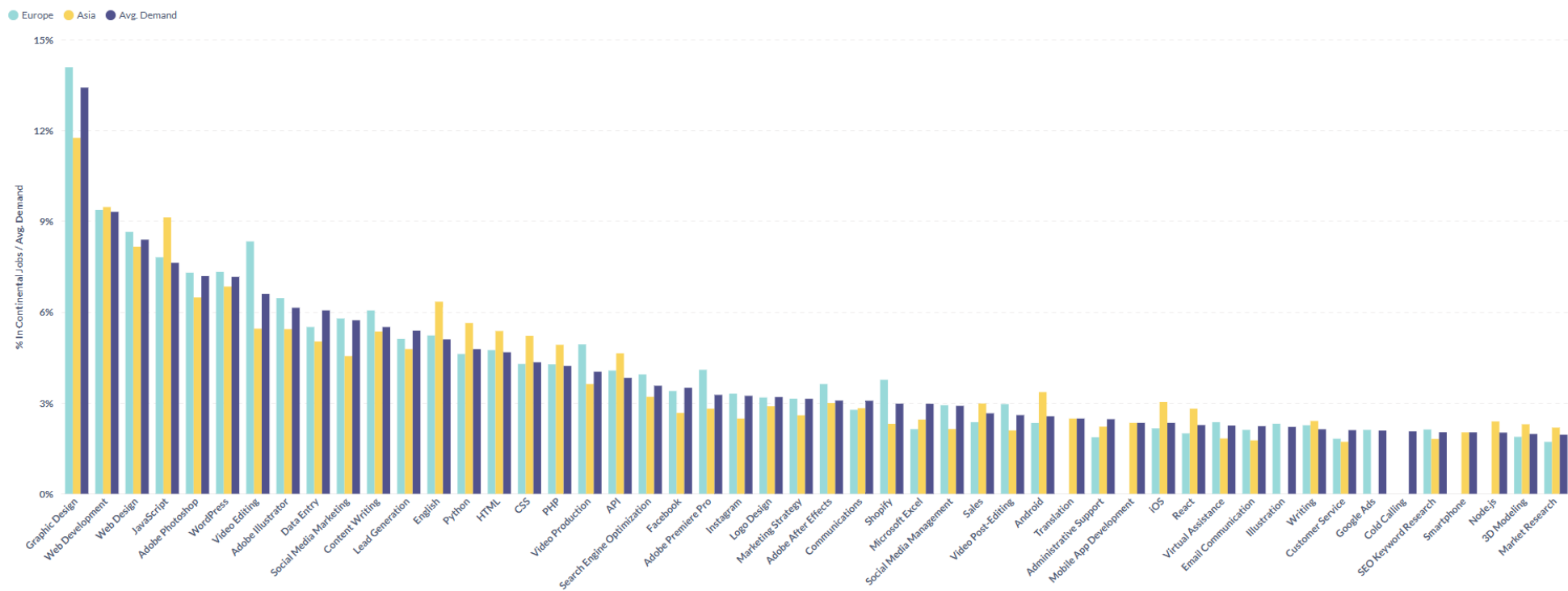


Figure 33. High-Demand Freelance Skills: Average demand vs regional trends.

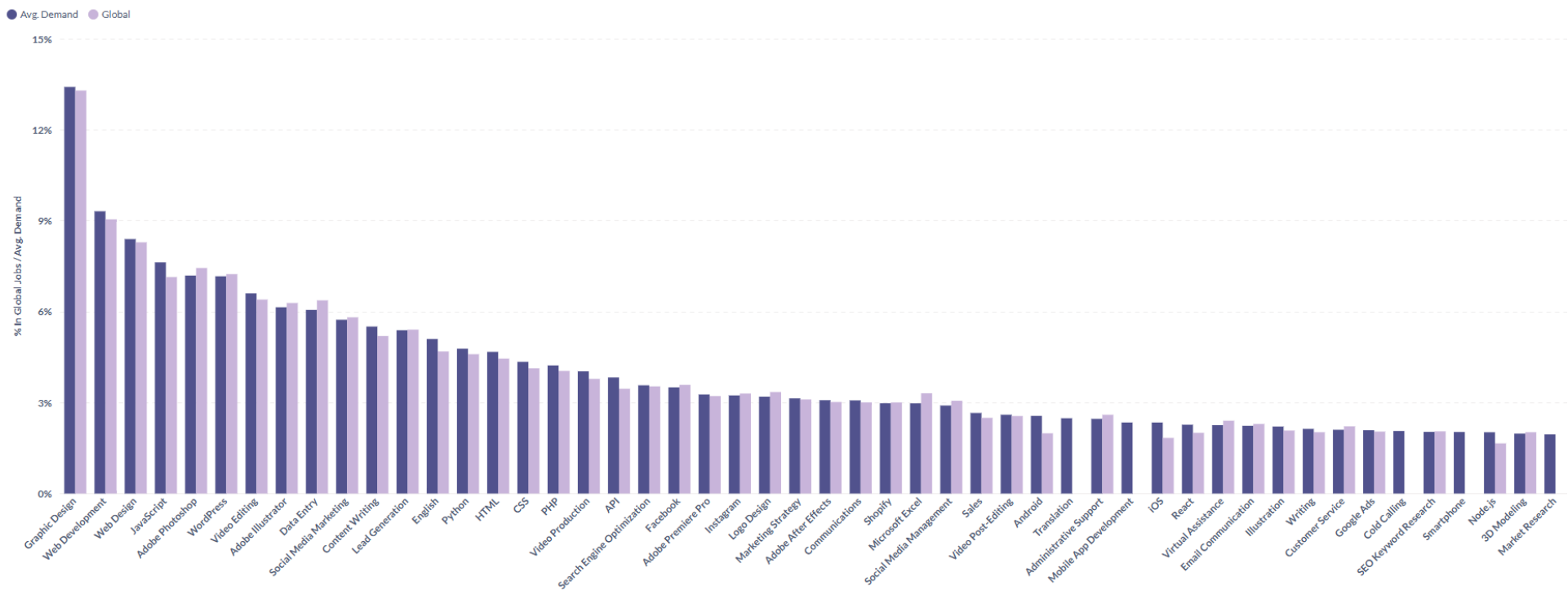


Figure 34. High-demand freelance skills: Average demand vs global trends.

6 Market-Driven Earnings Across Freelance Professions

Earnings in the digital labour market vary significantly across different professions due to several factors:

- **Digital Skills and Occupation Digitalization:** Occupations with higher levels of digitalization tend to offer higher wages. The use of computers and digital technologies is positively correlated with increased pay, although this correlation has weakened over time as basic digital skills have become more widespread (Lukyanova, 2021). However, the relationship between wages and the digital scores of occupations has strengthened, indicating that more advanced digital skills continue to command higher earnings (Lukyanova, 2021).
- **Industry and Job Type:** Earnings vary widely across different industries and job types. For instance, IT specialists often have higher earnings due to the high demand for their skills and the competitive nature of the market, where employers offer attractive salaries to retain talent (Bogatyreva et al., 2023). Conversely, blue-collar workers, especially those in low-paying jobs like housekeeping, tend to earn less, with significant gender disparities observed in these roles (Khan & Surisetti, 2023).
- **Geographic and Market Size Factors:** Jobs in larger commuting zones, which often require greater interpersonal interactions and higher computer software requirements, tend to offer higher earnings. Workers in larger markets are also more specialized, which contributes to the market size premium (Atalay et al., 2024). Additionally, regional digitalization levels can impact earnings, with higher digitalization supporting human capital and leading to wage increases .

- **Job Polarization and Skill Levels:** The phenomenon of job polarization, where middle-skill jobs are declining while high- and low-skill jobs are increasing, affects earnings distribution. High-skill jobs typically offer higher wages, while low-skill jobs offer lower wages, contributing to wage inequality.
- **Platform Work and Employment Type:** Workers on digital platforms experience varied earnings based on their employment type. Structured employment arrangements on digital platforms may lead to economic precariousness with fluctuating earnings, while self-employed workers leveraging platforms for market reach may have higher earning potential and flexibility.
- **Performance-Based Pay:** In high-wage occupations, earnings advantages vary across industries based on the prevalence of performance pay practices. Industries that reward individuals for company performance tend to have higher earnings for managerial and professional roles.
- **Skill Diversity:** Workers with diverse skills, particularly those whose skills are synergistic and fill a gap in the labour market, tend to earn higher wages compared to those with more specialized skills.

Recent studies have highlighted the growing influence of the digital economy on labour market dynamics, particularly concerning labour share, income distribution, and emerging skills demands. Wang et al. (2024) examined how digital economic development affects the labour share—the proportion of national income going to workers. Their study explored whether the digital economy could improve labour productivity, increase labour share, and reduce income inequality. This inquiry gains particular relevance amid the labour market disruptions caused by COVID-19 and the long-term decline in labour share observed globally since the 1970s.

The findings indicate that the digital economy's job creation effect surpasses its substitution effect, resulting in a net increase in labour share. This transformation is characterized by a rising share of highly educated and skilled workers, increased employment in private and individual enterprises, and a narrowing of income disparities. Interestingly, the study also found that a reduced share of female

employment, as modeled, correlates with higher labour share (Wang et al., 2024). These effects vary by sector, with technology-intensive industries experiencing greater increases in labour share compared to labour- or capital-intensive ones. Furthermore, non-state-owned enterprises demonstrated more substantial gains than state-owned firms, and technological spillovers extended benefits to other industries across the supply chain. The study employed robust methodologies, including fixed-effects and mediating effects models, using provincial-level data (2011–2017) and firm-level data (2011–2022) from China (Wang et al., 2024).

Complementing this analysis, Piroșcă et al. (2021) explored the relationship between digital skills, internet usage, and labour market outcomes across EU countries. Using data from the Digital Economy and Society Index, they found a strong correlation between digital proficiency and wages. Countries with higher digital capabilities tended to exhibit higher wage levels, underscoring significant disparities across member states. Their factor analysis identified two components: "digital proficiency and internet usage," which strongly correlated with wages, and "internet coverage," which showed weaker links. Clustering patterns revealed that some countries, despite lower wages, gained competitive advantages through reasonable digital skills (Piroșcă et al., 2021).

The study also emphasized how the COVID-19 pandemic accelerated remote work and digital service delivery, intensifying the effects of digital inequality. Approximately 37% of jobs were found to be compatible with remote work, but access to such opportunities was unevenly distributed. Individuals with digital skills and reliable internet access were more likely to sustain employment during the pandemic. The authors concluded by advocating for policies that strengthen digital education and reduce regional disparities in digital infrastructure (Piroșcă et al., 2021).

Expanding the analysis to a global scale, You et al. (2024) conducted an empirical investigation using panel data from 68 countries over 2013–2019. Their findings indicate that digital transformation generally reduces employment while increasing wages for those who remain in the labour force. Market size and industrial maturity were found to mitigate job losses and enhance wage growth. Notably, while a more skilled labour force does not significantly reduce job displacement, it does amplify the

wage benefits of digitalization. Developing countries were shown to experience more job losses, whereas developed countries benefited more from wage gains (You et al., 2024).

Recent data underscores significant wage disparities across professional domains, particularly emphasizing the financial advantages of STEM (Science, Technology, Engineering, and Mathematics) occupations. According to the U.S. Bureau of Labour Statistics (2024), the median annual wage for STEM roles was \$103,580 in 2023, more than double the median wage across all occupations, which stood at \$49,500. This wage premium is evident across various sectors, with software developers earning a median of \$115,326 in 2023 (Cialfo, 2023). Similarly, architectural and engineering managers earned \$147,400 annually, while computer and information systems managers made approximately \$119,600 (National Science Board, 2024), illustrating the lucrative nature of technological and managerial STEM positions.

In contrast, professions in education, social services, and healthcare support continue to experience significantly lower compensation despite requiring comparable educational backgrounds. For example, roles such as dietetic technicians and ophthalmic medical technicians offer median annual wages around \$30,000 (National Science Board, 2024). Beyond occupational segmentation, disparities also manifest along gender and racial lines. Women in science and engineering earned approximately 87 cents for every dollar earned by men in 2024, a gap that widens in specific disciplines (Staffing Hub, 2024). Racial disparities are also prominent; in the UK, Black STEM professionals earned, on average, £7,951 less than their White counterparts in 2023 (SRG Talent, 2023).

Watson (2025) further highlighted the shifting contours of high-paying digital work, particularly in IT-intensive sectors. In healthcare, digital transformation has created lucrative roles for professionals in cybersecurity, data science, and AI. The integration of electronic health records (EHR), telemedicine, and AI-based diagnostics has driven demand for specialists who can support this transition. In finance, the fintech revolution has heightened demand for blockchain, machine learning, and RegTech experts. Cloud computing continues to be foundational, with AWS, Azure, and Google Cloud certifications significantly boosting earning potential. Additionally, AI

and machine learning applications in areas such as NLP and robotics have become key drivers of industry growth. Cybersecurity remains a high-priority domain, offering competitive compensation for penetration testers, ethical hackers, and analysts (Watson, 2025).

Insights from Upwork (2025) offer further granularity on freelance compensation patterns. AI engineers top the freelance earning chart, with hourly rates often exceeding \$120. Blockchain specialists and DevOps engineers also command premium rates due to their technical complexity and critical roles. In software development, full-stack developers and specialists in frameworks like React.js and Node.js earn between \$70 and \$100+ per hour. UX/UI professionals and content strategists in creative sectors consistently outperform generalists. Business consultants, product managers, and data scientists have also established strong earning profiles, often exceeding \$80 per hour.

Taken together, these studies demonstrate how digital transformation, skill specialization, and platform-based work are reshaping global labour markets. Those with in-demand technical skills, digital fluency, and adaptability are increasingly positioned to secure higher wages and sustained employment, while those without access to such capabilities remain at risk of marginalization in the evolving digital economy.

7 Gender and Earnings in The Global Digital Workforce

7.1 Freelancer demographics

As part of understanding gender and earnings dynamics in the global digital workforce, the following subsections present key demographic factors that influence participation and income outcomes in the freelance economy. These factors include:

1. **Gender Distribution:** The gig economy, which includes freelance digital work, shows a persistent gender earnings gap. Women earn approximately 85% of what men earn on a monthly basis in the gig economy, although this gap is narrower compared to traditional employment sectors (Dong et al., 2024). Women are underrepresented in STEM-related tasks and tend to prioritize digital work options that allow for better management of multiple responsibilities (Petroff & Fierro, 2023; Sarker et al., 2024).
2. **Age Distribution:** The age distribution of digital workers varies, but younger workers are more likely to engage in digital employment. In China, for example, younger workers in the more developed Eastern region are more likely to be employed in digital sectors (Mi et al., 2024).
3. **Educational Background:** Higher educational attainment is a significant determinant of digital employment for both genders. Women with higher education levels tend to have better earnings, although the gender pay gap persists even among highly educated professionals (Mi et al., 2024; Petroff & Fierro, 2023; Sarker et al., 2024). In the gig economy, the gender pay gap is less pronounced when controlling for STEM skill levels (Petroff & Fierro, 2023).
4. **Geographic Distribution:** Geographic disparities exist in digital employment. Workers in more developed regions, such as Eastern China, are

more likely to be employed in digital sectors (Mi et al., 2024). In the gig economy, there is evidence of higher demand for female workers during economic shocks, such as the COVID-19 pandemic, in low-income contexts like Mozambique (Jones & Manhique, 2025).

7.2 Work models: full-time vs. part-time freelancers

The following analysis explores the differences between full-time and part-time freelancers, with particular attention to earnings disparities, occupational segregation, gender dynamics, and the impact of digital platforms on work models:

1. Earnings Disparities

- **Full-time vs. Part-time:** Full-time freelancers generally work in higher-paying occupations compared to part-time freelancers. This trend is consistent across gender groups, with full-timers earning more due to their engagement in better-paying roles (Mumford & Smith, 2009).
- **Gender Pay Gap:** There is a persistent gender earnings gap in both full-time and part-time roles. Female occupational segregation significantly contributes to the earnings gap among part-time employees but not as much among full-time workers (Mumford & Smith, 2009). Additionally, women in the gig economy earn about 85% of what men earn on a monthly basis, although the gap is narrower compared to traditional employment (Dong et al., 2024).

2. Occupational Segregation

- Women in digital labour platforms are often concentrated in more feminized tasks, leading to lower earnings and worse working conditions compared to men (Rodríguez-Modroño et al., 2022). This segregation is more pronounced in part-time roles where women are more likely to work in feminized workplaces, further contributing to the earnings gap (Mumford & Smith, 2009).

3. Work Models and Gender

- **Full-time Freelancers:** Women working full-time in digital platforms face a larger gender earnings gap due to lower rewards for their characteristics compared to men. This gap is exacerbated by the glass ceiling effect, where women receive lower returns for their skills and experience (Chzhen & Mumford, 2011).
- **Part-time Freelancers:** Part-time female freelancers often choose digital work to manage multiple responsibilities, which can limit their income potential compared to their male counterparts who are driven by higher income opportunities (Sarker et al., 2024). Part-time roles are also associated with more feminized workplaces, leading to lower earnings (Mumford & Smith, 2009).

4. Impact of Digital Platforms

- Digital platforms have provided increased career opportunities and income potential, especially for women. However, gender disparities persist due to factors such as price setting, number of stays, and guest accommodations, which favor male hosts (Davidson & Gleim, 2023). Women also exhibit a stronger preference for job flexibility and less socially interactive work environments, which can widen the gender pay gap (Dong et al., 2024).

7.3 Income structure and pay differences

The following discussion explores the various factors that shape income structures and contribute to pay differences within the global freelance economy. It examines critical aspects such as the gender pay gap, the influence of contract types on earnings, regional variations, the distribution of freelancer skills across professions, the role of digital upskilling, and the broader challenges and opportunities freelancers encounter in the evolving digital labour market.

1. Gender Pay Gap in Freelancing

- **Gender Pay Gap:** Despite the expectation that freelancing marketplaces should be gender-neutral, studies reveal a significant gender pay gap. Female freelancers tend to undervalue themselves compared to their male counterparts with similar profiles, leading to lower earnings (Dubey et al., 2017).
- **Factors Contributing to the Gap:** In the gig economy, a gender earnings gap of approximately 7% exists among rideshare drivers, attributed to factors such as experience, work location preferences, and driving speed preferences (Cook et al., 2021). Additionally, women in the gig economy earn about 85% of what men earn monthly, with the gap primarily arising from within-occupation factors rather than occupational segregation (Dong et al., 2024).

2. Hourly vs. Fixed-Price Earnings

- **Earnings Structures:** The structure of earnings (hourly vs. fixed-price) can influence the gender pay gap. For instance, in the gig economy, the flexibility and lack of fixed contracts can lead to gender-based earnings disparities due to differences in preferences and constraints (Cook et al., 2021; Dong et al., 2024).
- **Impact of Contract Types:** Women in temporary or informal jobs face larger wage penalties compared to those in permanent positions, highlighting the impact of employment type on earnings (Duman, 2023).

3. Regional Pay Disparities

- **Regional Differences:** Regional disparities significantly affect gender pay gaps. For example, in China, the digital economy has improved income competitiveness, particularly benefiting women in flexible employment modes (Lu et al., 2023). However, regional variations in gender ideologies and employment opportunities can lead to differing gender pay gaps across regions (Georgiadis & Christopoulos, 2017; Hamjediers, 2021).

- **Public vs. Private Sector:** In Germany, the gender pay gap is smaller in sectors covered by collective agreements compared to those without, suggesting regional and sectoral differences in pay equity (Grimm et al., 2016).

4. Distribution of Freelancer Skills and Professions

- **In-Demand Professions**
 - **Emerging Professions:** The digital economy has created new prestigious professions in data science and AI, which are currently male-dominated (Young et al., 2023). The demand for ICT professionals, including roles in cloud computing, engineering, and AI, remains high, but women are underrepresented in these fields (“200 Girls and Women in ICT Share Their Stories,” 2021).
 - **Freelancing Opportunities:** The gig economy offers various opportunities, particularly for women, in roles such as online education and digital content creation. However, these roles often come with challenges such as lower pay and job instability (Dong et al., 2024; Sarker et al., 2024).

5. Skill Evolution and Upskilling

- **Digital Upskilling:** Digital upskilling is crucial for staying competitive in the evolving job market. Women, in particular, benefit from digital skills, which can lead to higher wages and better job opportunities, although the impact varies by region and infrastructure development (Gomathi et al., 2023; Liu et al., 2024; Lukyanova, 2021).
- **Impact on Earnings:** Digital skills positively impact earnings, with women experiencing greater returns in certain contexts. However, the overall impact on earnings is influenced by factors such as job type, region, and existing digital infrastructure (Liu et al., 2024; Lukyanova, 2021; Valente et al., 2023).

6. Challenges and Opportunities for Freelancers

- **Challenges**

- **Gender Pay Gap:** Despite the open nature of freelancing platforms, a significant gender pay gap persists. Studies reveal that female freelancers often undervalue themselves compared to their male counterparts, leading to lower earnings for similar work (Dong et al., 2024; Dubey et al., 2017). Women in the gig economy earn approximately 85% of what men earn on a monthly basis, although this gap is narrower compared to traditional employment (Dong et al., 2024).
- **Occupational Segregation:** Women are underrepresented in high-paying STEM-related tasks and leadership roles within the digital sector ("200 Girls and Women in ICT Share Their Stories," 2021; Petroff & Fierro, 2023). This underrepresentation contributes to the overall earnings disparity between genders.
- **Work-Life Balance:** Female freelancers often face additional domestic responsibilities, which can limit their working hours and flexibility. This is particularly evident during crises like the COVID-19 pandemic, where women were more likely to reduce their working hours to manage caregiving duties (Dunn et al., 2021).
- **Platform Bias and Stereotypes:** Digital labour platforms can reinforce gender-based stereotypes and biases, affecting the valuation of female freelancers' work and their treatment on these platforms (Munoz et al., 2024).

- **Opportunities**

- **Increased Access and Flexibility:** Digital platforms provide women with opportunities to manage multiple responsibilities by offering flexible work options. This flexibility can help women balance work and personal life more effectively (Sarker et al., 2024).
- **Narrowing Gender Pay Gap:** Although a gender pay gap exists, the gig economy shows a trend towards narrowing this gap compared to traditional employment. This is partly due to the reduced impact

of occupational segregation within the gig economy (Dong et al., 2024).

- **Skill Development and Career Growth:** Freelancing allows women to develop new skills and gain experience in various fields, which can enhance their employability and career prospects. This is particularly beneficial in regions where traditional employment opportunities are limited (Faulkner et al., 2022).
- **Global Market Access:** Freelancing platforms enable women to access a global market, providing opportunities to work with clients worldwide and potentially earn higher wages than local markets might offer (Beerepoot & Lambregts, 2015; Piyumidu & Withaanarachchi, 2024).

Conclusions

This report has offered a comprehensive analysis of the global freelance market, responding directly to the research questions outlined in the introduction and supporting the next steps for the ENTEEF project. Through a combination of secondary data review and primary data collection, we have examined the size, structure, dynamics, and key issues surrounding the platform-mediated freelance economy across global regions.

First, regarding the current state of the global freelance market, the findings reveal that freelancing has evolved from a niche segment into a central feature of modern labour markets. The rise of digital platforms has enabled millions of individuals worldwide to access flexible work arrangements. Over 160 million freelancers are now registered on platforms globally (Upwork, 2024), and freelance work is particularly growing in Asia, Europe, and North America. Technological innovation, cultural shifts toward autonomy, and the COVID-19 pandemic have accelerated the transition to remote and freelance work models. The freelance economy is no longer confined to creative sectors but spans IT, marketing, consulting, education, and healthcare. Moreover, demographic shifts, particularly the increasing participation of younger generations (Gen Z and Millennials), are redefining freelancing as a mainstream career path.

Second, in addressing which professional skills are most in demand in the global freelance market, the analysis of job postings and freelancer profiles indicates that digital and technology-driven competencies dominate. High-demand areas include software development, graphic design, digital marketing, data analysis, and cybersecurity. Specialized skills such as AI development, blockchain expertise, and UX/UI design are commanding premium rates. However, non-technical skills such as content creation, online education, and virtual assistance also maintain strong demand, especially in emerging markets. Notably, successful freelancers tend to combine core technical abilities with soft skills such as communication, adaptability, and self-management.

Third, concerning how earnings vary across different professions in the digital labour market, the data show substantial disparities based on profession, geography, experience level, and gender. Occupations in software development, data science, and blockchain yield some of the highest earnings, often exceeding \$50 per hour in mature markets such as North America. Conversely, fields like data entry, customer support, and clerical work offer lower compensation. Freelancers in developed countries tend to command higher rates, while those in developing countries, although highly skilled, often compete based on lower pricing. The income structure is also influenced by whether freelancers operate full-time or part-time, with full-time freelancers typically earning higher average incomes due to better project continuity and positioning in higher-value professions.

Fourth, regarding the gender distribution in the global freelance market and earnings differences between men and women, the findings show that gender disparities persist despite the promise of digital platforms to level the playing field. Women are underrepresented in technical and high-paying freelance categories and are overrepresented in lower-paid roles like data entry, administrative support, and content writing. Gender pay gaps are evident across most sectors; women earn around 85% of what men earn on a monthly basis in the gig economy (Dong et al., 2024). The gap is less pronounced compared to traditional labour markets but remains substantial, particularly within STEM fields. Part-time female freelancers, who often prioritize flexible arrangements to balance multiple responsibilities, face additional barriers to achieving income parity. Occupational segregation and differences in platform engagement strategies further exacerbate gendered income inequalities.

Beyond answering the research questions, the report offers broader reflections on the opportunities and challenges in the freelance economy. Socio-cultural factors such as societal norms, gender roles, risk tolerance, and technology adoption significantly influence freelancing trends across regions. Freelancers from the Global South often face visibility barriers on major platforms, while freelancers in developed economies leverage stronger digital infrastructures and greater demand for advanced services.

The freelance economy's flexibility and entrepreneurial potential are widely acknowledged, but so are its vulnerabilities. Freelancers face challenges including

market saturation, income instability, limited access to social protections, and algorithmic biases on digital platforms. These structural challenges highlight the need for more inclusive public policies that recognize freelancers' contributions to the economy and address their unique needs, including access to training, career development pathways, and protections against market volatility.

Moreover, technological trends, particularly the integration of AI tools, are reshaping freelancer workflows. Freelancers increasingly rely on AI for productivity enhancements, automation of routine tasks, and even client communications. This integration highlights the growing necessity for continuous upskilling and adaptability among freelancers to remain competitive in a rapidly changing labour landscape.

This report lays a solid empirical foundation for the next activities in the ENTEEF project, particularly WP2/A3, which will focus on comparative analysis between Europe and Asia. The insights gathered here highlight critical variables that will be examined across regional contexts, including professional specialization patterns, income structures, gender dynamics, and the role of public policy in shaping freelance ecosystems.

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