The Global Gig Economy: Pakistan's Opportunity to Become a Leader in Service Exports?

Hamna Ahmed
Theresa Thompson Chaudhry

Innovation and Technology Centre
Lahore School of Economics

Innovation and Technology Centre (ITC)

Dr. Azam Chaudhry
Professor, Dean & Head of Department (Economics)
Pro-Rector
Co-Director

Dr. Theresa Chaudhry
Professor (Economics)
Co-Director

Working Paper No. 13-2023

The Global Gig Economy: Pakistan's Opportunity to Become a Leader in Service Exports?

Hamna Ahmed ⓘD
Department of Economics,
Lahore School of Economics, Pakistan.
Email ID: hamnaa@gmail.com
ORCID ID: 0000-0003-0361-6911

Theresa Thompson Chaudhry ⓘD
Department of Economics,
Lahore School of Economics, Pakistan.
Email ID: theresa@lahoreschool.edu.pk
ORCID ID: 0000-0002-3248-8018

Abstract: *Freelancers in Pakistan earned around $400 million in both FY21 and FY22, accounting for about 15% of the $2.6 Billion in ICT exports. To learn more about the landscape of freelancing in Pakistan, we scraped the data on Pakistan-based freelancers from the sites Guru.com and Freelancer.com. The most commonly advertised skill on freelancing is in programming, web and app development, followed by design, research/ writing, photography, and marketing. Nearly three-quarters of the workers listed have earned money through the site. Men charge around $2.40 more per hour than women and have larger total earnings, even though they have completed fewer transactions. Women have the highest repeat hire rate as compared to both men and firms. Performance outcomes are almost indistinguishable along the dimensions of average rating, percentage of jobs completed, jobs completed on time, and jobs completed on budget. Out of 85,314 freelancers advertising their services on the site Guru.com, only 1,100 (1.3 percent) had ever completed a transaction. The majority of freelancers are based in Punjab, Sindh, and Islamabad, but there are also a handful of extremely active workers in the Northern Areas and AJK. More than two-thirds with profiles on the site are men and women make up another 15 percent; the remaining are either firms or unknown gender. The majority of services offered are photography and graphic design, but annual earnings are highest in search engine optimization, e-commerce, and customer services. Men make more per transaction but earnings in the last year were roughly equal for men and women.*

Keywords: IT, freelancing, services, exports, Pakistan.

JEL Classification: L86, O14.

Disclaimer

The Global Gig Economy: Pakistan's Opportunity to Become a Leader in Service Exports?

1. Introduction

Sustainable growth and balance of payments stabilization requires targeted policies to improve Pakistan's export performance. Decade after decade, Pakistan has continued to have a narrow base of low value-added exports. Freelance employment can be a promising solution to low export revenue. In FY 2022, a total of 2.6 billion dollars' worth of IT exports were recorded of which freelancing export remittances accounted for 400 million dollars (Hanif, The Express Tribune, 2022). According to an article published by Forbes in 2019, Pakistan exhibited freelancing growth of 47 percent, the fourth highest growth rate in the world, and higher than regional export leaders India and Bangladesh.[1] Among the most popular platforms include Guru, Upwork, and Freelancer.com (see Figure 1a). Even within the broader category of digital work, Pakistan indeed has one of the larger online labor supplies in the world (see Figure 1b)[2].

---

[1] https://www.forbes.com/sites/elainepofeldt/2019/08/18/the-top-10-fastest-growing-freelance-markets-in-the-world/?sh=53f424b0733b. Payoneer's Global Gig Economy Index had provided the data on which these rankings were based.

[2] *World Employment and Social Outlook 2021: The role of digital labour platforms in transforming the world of work* International Labour Office – Geneva: ILO, 2021. Labour supply is captured from four platforms (Fiverr, Freelancer, Guru and PeoplePerHour). Source: Online Labour Observatory (iLabour Project, Oxford Internet Institute and ILO).

Figure 1a: Freelancing platforms: Guru, Upwork, and Freelancer
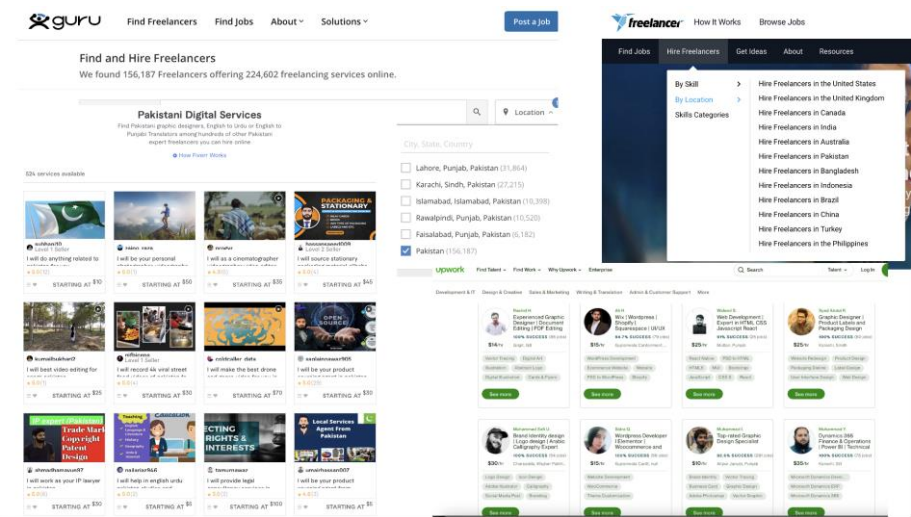
Figure 1b: Online Labor Supply, from ILO's World Employment and Social Outlook 2021
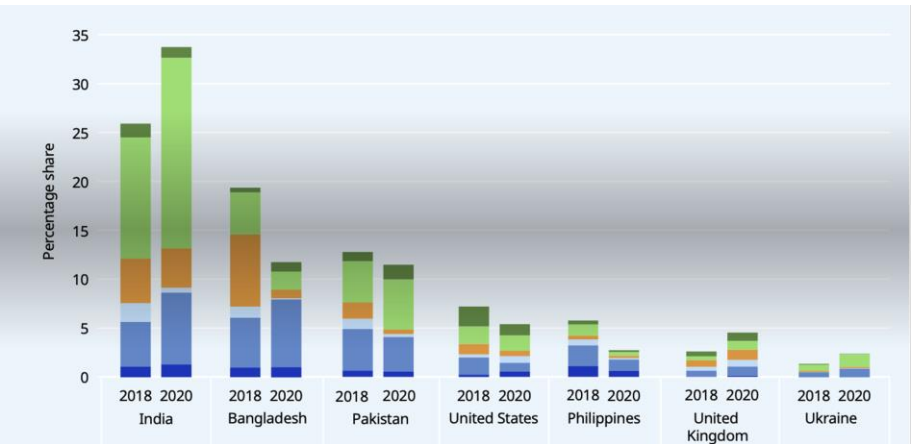
In 2023, Pakistan's prime minister called for increasing IT exports to 15 billion dollars by 2026 (Radio Pakistan, 2023). The government of Pakistan and other entities are encouraging these trends by offering training and co-working spaces. The government-funded DigiSkills.pk Training Program offered free online training in Freelancing and other skills (FY22 Annual Report, SBP), and the Pakistan Skills Development Fund (PSDF) partnered with Zong to train 10,000 young people in "How

to E-lance." The Pakistan Information Technology Board (PITB) has opened e-Earn working spaces, providing internet and other facilities in Gujranwala, Faisalabad, Sargodha, Multan, Sialkot, Rawalpindi, Gujrat, DG Khan, Sahiwal, and Okara (ProPakistani, Feb. 14, 2023).

Improving economic participation and productivity of human capital is also imperative for promoting sustainable growth. 68% of working aged individuals in Pakistan are in their youth i.e. between 10-24 years of age. To realize the demographic dividend of its young population, the country needs to effectively and efficiently utilize its most abundant resource i.e. labor. This calls for increasing labor force participation rates (LFP) - particularly of women. According to the latest Labor Force Survey (2021) female labor force participation (FLFP) stands at only 21.5%, which is lower compared to other South Asian countries in the region. By offering flexibility, freelance employment can ease several constraints (such as mobility, safety, cultural barriers and social norms) making it easier for women to participate in the labor market. The onset of the recent economic recession will likely accelerate demand for non-traditional work opportunities and serve as an important safety net for workers against lay-offs and hiring freezes in the traditional labor market.

Figure 2a: DigiSkills.pk Training Programs
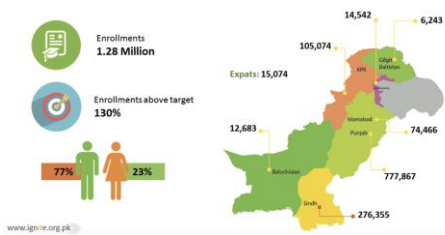
Figure 2b: PSDF/Zong E-lancing Partnership

Encouragingly, Pakistan's ICT exports and the number of ICT services firms have grown rapidly in the last five years, although the target for FY22 had been $3.5 billion, resulting in a shortfall of $0.9 billion (Figure 3a). And of out these services, the share of higher value-added computer-related services (as opposed to telecom and call centers) is growing as well (Figure 3b). Freelancers in Pakistan earned around $400 million in FY21 and FY22. This amounts to about 15% of the $2.6 Billion in ICT

exports. Between FY21 and FY22, IT services[3] *fell* but non-IT services rose enough to make up the shortfall. According to one report based on a survey of around 5000 software developers, Pakistani freelancers were earning around $43 per hour (Nawaz et al. (2020), citing Codementor (2017)).

Figure 3a: Growth of ICT Services Firms and Exports
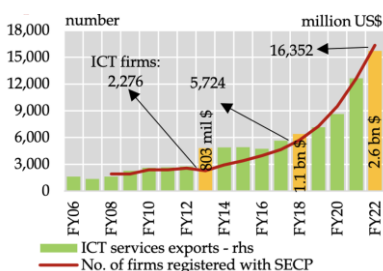
Figure 3b: Breakdown of ICT Services Exports
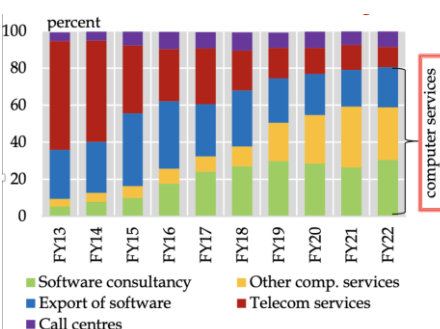
Source: SBP FY22 Annual Report, Chapter 6 (both figures)

Regional Trends

Next we consider what is happening regionally in South Asia. Encouragingly, Pakistan's ICT service exports are higher and growing faster than Bangladesh and Sri Lanka, and IT exports are climbing also <u>as a share</u> of service exports; in other words, IT exports are gaining importance (Figure 4).

---

[3] IT services: web development, logo design, graphic designing, developers of mobile apps and java; Non-IT services: Content writing, translation, virtual assistantship, sales, marketing, accounting, finance and customer service.

Figure 4: Regional ICT Service Exports in Current US$ and as Share of Service Exports in Pakistan, Sri Lanka, and Bangladesh

Sources: Panel A:
https://data.worldbank.org/indicator/BX.GSR.CCIS.CD?end=2021&locations=PK-BD-LK
&start=1990&view=chart
Panel B:
https://data.worldbank.org/indicator/BX.GSR.CCIS.ZS?end=2021&locations=PK-BD-LK-
PH-IN&start=2000&view=chart
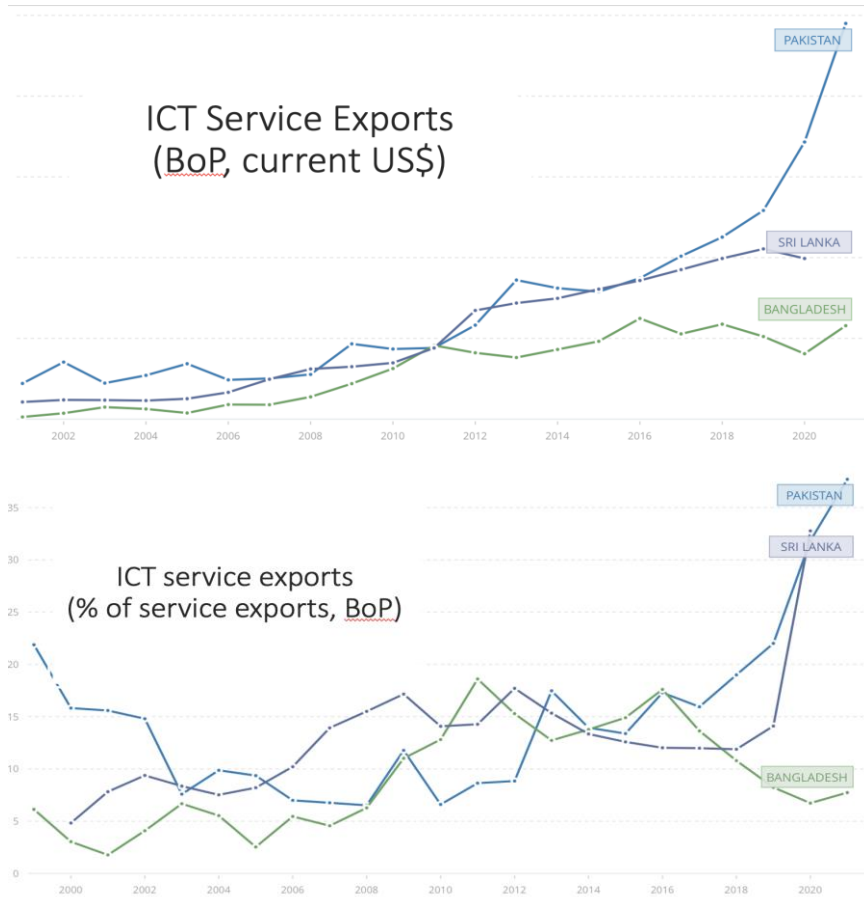
On the other hand, the Philippines has ICT exports of more than double that of Pakistan, despite its population being only half that of Pakistan. Further, India's US$ 119.5 billion dwarfs the figures of the other countries considered here, not only in absolute but also in per capita terms. India's services exports are nearly 50 times those of Pakistan; in per capita terms, India's ICT exports are 8 times those of Pakistan (Figure 5).

Figure 5: ICT Service exports (BoP, current US$)

Source: https://data.worldbank.org/indicator/BX.GSR.CCIS.CD?end = 2021&locations = PK-BD-LK-PH-IN&start = 1990&view = chart
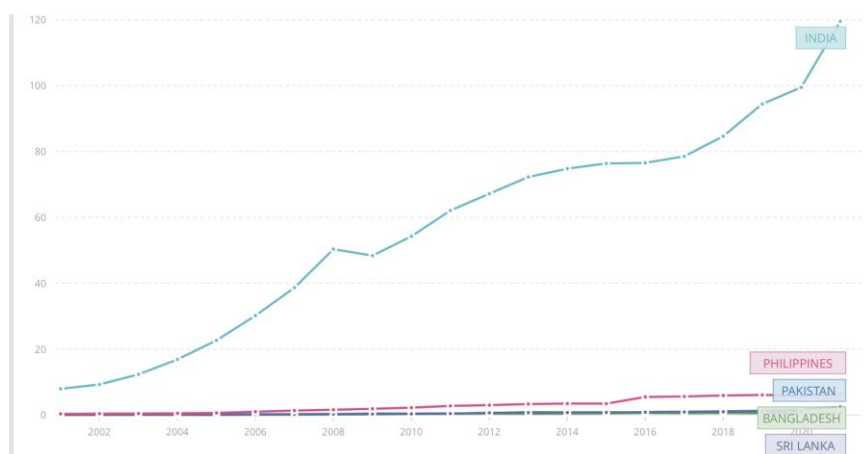
Trade in services is still not a substantial percent of GDP for countries like Pakistan and Bangladesh, whose services trade make up only around 5 percent of GDP (Figure 6). This contrasts with India and the Philippines, whose trade in services is nearly three times that figure, at around 15 percent of GDP.

Figure 6: Trade in services (% of GDP)

Source:
https://data.worldbank.org/indicator/BG.GSR.NFSV.GD.ZS?end = 2021&locations = PK-BD-LK-PH-IN&start = 1990&view = chart
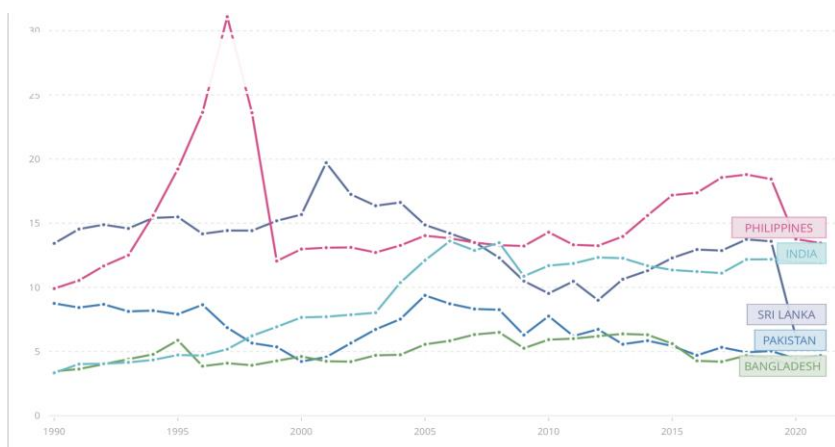
Further, the services portion of Pakistan's current account is negative despite the fact that Telecoms and IT has a surplus of $2 billion, mainly due to the Transport category's huge debit (just sea freight is responsible for $5283M of the debt) (Table 1). Still, the $2 billion net in ICT service exports has a long way to go before it would come anywhere close to the $31 billion received in remittances (Table 2).

Table 1: Services Accounts, Pakistan's Balance of Payments (millions of USD$)

I T E M S	FY20			FY21 R			FY22 P		
	Credit	Debit	Net	Credit	Debit	Net	Credit	Debit	Net
b. Services	5,437	8,753	(3,316)	5,945	8,461	(2,516)	6,950	11,969	(5,019)
1. Manuf. services	-	-	-	-	-	-	-	-	-
2 Maintenance/ repair	7	65	(58)	3	48	(45)	3	38	(35)
3 Transport	741	3,036	(2,295)	544	3,279	(2,735)	821	6,787	(5,966)
4 Travel	490	1,229	(739)	501	752	(251)	541	1,356	(815)
5 Construction	166	77	89	116	2	114	94	40	54
6 Insurance and pension	42	276	(234)	47	247	(200)	40	290	(250)
7 Financial services	135	468	(333)	138	472	(334)	92	194	(102)
8 Intellectual property	4	181	(177)	13	254	(241)	13	209	(196)
9 Telecoms, computer, and information services	1,440	385	1,055	2,108	530	1,578	2,618	612	2,006
10 Other business services	1,328	2,560	(1,232)	1,448	2,408	(960)	1,644	1,912	(268)
11 Personal, cultural, and recreational	8	1	7	11	-	11	13	1	12
12 Government goods and services n.i.e.	1,076	475	601	1,016	469	547	1,071	530	541

Note: Figures in parentheses represent a net debit.
Source: Table 9.4 Pakistan's Balance of Payments (BPM-6), SBP Annual Report-Statistical Supplement FY 22

Table 2: Workers' Remittances to Pakistan

	Amount (in millions of USD)				
	FY18	**FY19**	**FY20***	**FY21**	**FY22**
Cash Remittances	19,913.60	21,739.40	23,132.30	29,449.90	31,278.80

Source: Table 9.7 Workers' Remittances, SBP Annual Report-Statistical Supplement FY 22

Literature:

Existing research on the gig economy mostly focuses on developed countries (Oyer, 2020). While the majority are descriptive, a few RCT-type experimental analyses have explored issues related to (extrinsic/intrinsic) motivation versus risk aversion, disintermediation incentives (to avoid platform fees), and the value to freelancers of reputation (Butsheh et al., 2022; Gu & Zhu, 2021; Holtz et al., 2022). Key takeaways from the descriptive body of work are: Firstly, the growth of the gig economy and in the share of independent workers is largely concentrated on the lower end of the skill distribution. Secondly, workers cite flexibility as the main reason for choosing the gig economy over traditional jobs (van der Zwan et al., 2020). Third, freelancers do not necessarily take away traditional jobs but may be complementary to the traditionally employed under certain conditions (Burke & Cowling, 2020). Lastly, during times of recession, the gig economy has helped safeguard workers against fluctuating economic conditions (Pulignano et al., 2021). Some important policy issues that have been identified in this area include (but are not limited to): (i) accurately quantifying the size of the gig economy, (ii) taxation, to ensure that the tax burden is relatively equal between traditional and independent workers and to prevent independent workers from avoiding taxes and the government from losing tax revenue; (iii) developing effective worker protection policies for independent workers to protect them against greater risk, uncertainty and volatility in income relative to traditional workers; and (iv) understanding why, despite greater flexibility, women constitute a smaller share of the gig economy relative to male workers.

There are also a handful of studies on freelancing in Pakistan specifically. Rehman et al. (2021) found programming freelancers to be more satisfied with their jobs and were earning similarly to traditionally-employed programmers, although uncertainty and income insecurity were concerns to the freelancers. Ahsan et al. (2022) similarly found freelancer satisfaction

to be high. Other studies considered the factors that led to higher client satisfaction for web development freelancing gigs (Haq et al., 2018), or opportunities freelancing offered to women (Rawoof et al., 2021), while others drew attention to the occupational hazards of freelancers who need to sit in front of a computer full time (Tasmeer et al., 2022).

Despite its huge potential, there is little research on growth of the gig economy for independent freelance workers in developing countries including Pakistan. We hope to bridge this gap in the literature. Our main aims for the proposed study are as follows:

1. Assess the size of the gig economy in Punjab

2. Map out a demographic profile of gig-economy workers in Pakistan in terms of their age, gender, education, experience, location and the services they provide.

3. Explore the skill categories offered by freelancers and the relative pay for each of them;

4. Quantify whether there is a gender pay gap between male and female gig economy workers

Analysis:

Next, we acquired data from the freelancing websites Guru.com, Fiverr, and Freelancer.com. In addition to finding out whether the share of active freelancers is similarly low across platforms, these other websites share different information, such as: price per hour, price per specific task, education of freelancer, freelance work history, part-time/full time status, job ratings, on-time completion, and repeat hire rate. These websites will allow us to explore other questions related to returns to skills, returns to experience, and gender differences in wage demands. Data from Upwork was unable to be scraped due to web security protecting the site. Our analysis focuses on the two sites that provided the most informative variables, which were Guru and Freelancer.

Freelancer.com

We begin with the data from Freelancer.com. In Figure 7, we visualize the different skills offered in addition to the geographic breakdown. The majority of the 9,495 freelancers advertising their services on the site are based in Punjab and Sindh, the most populous provinces, although

workers based in Islamabad and Khyber Pakhtunkhwa (KPK) can also be found. Few workers hail from the northern areas of Gilgit-Baltistan and Kashmir. The top five skills offered on Freelancer.com are in the categories of programming/web/app development, followed by design, research/writing, photography, and marketing.

Figure 7: The Geographic Distribution of Workers on Freelancer.com by Skill in Pakistan
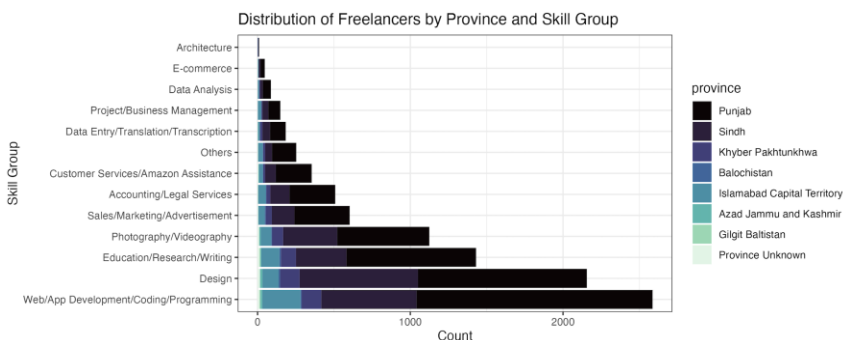
Source: Authors' calculations based on data from Freelancer.com

The majority of workers offering each type of skill on Freelancer.com are active, in the sense that they have had some transactions, measured as a non-zero income on the site (Figure 8). Unfortunately, we do not know the total number of jobs each freelancer has completed. The closest we have to such a measure is the total number of reviews each freelancer on the site has received.

Figure 8: Listed (green+blue) vs Active Freelancers (light green) on Freelancer.com by Skill
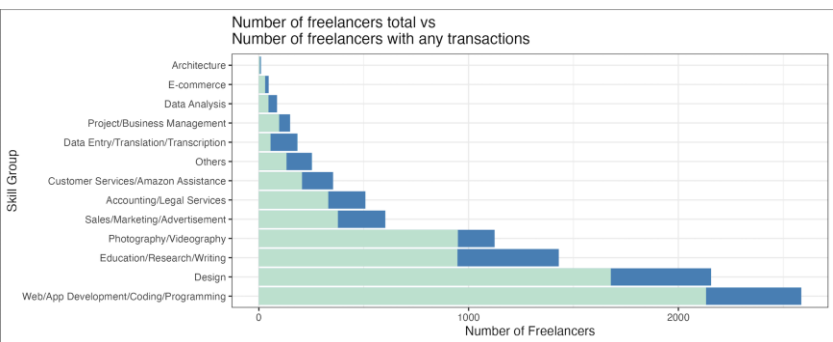
Source: Authors' calculations based on data from Freelancer.com

The workers with the highest median earnings on Freelancer.com are those in the fields of photography, programming/web/app development, design, marketing, and accounting/legal services (Figure 9a). Unfortunately, we do not have information on how long each freelancer has been earning on the site, so we have no measure of annual earnings, only total earnings. In Figure 9b, we observe that firms have the highest median earnings and that men and women's median total earnings are comparable.

Figure 9a: Total Earnings by Skill on Freelancer.com
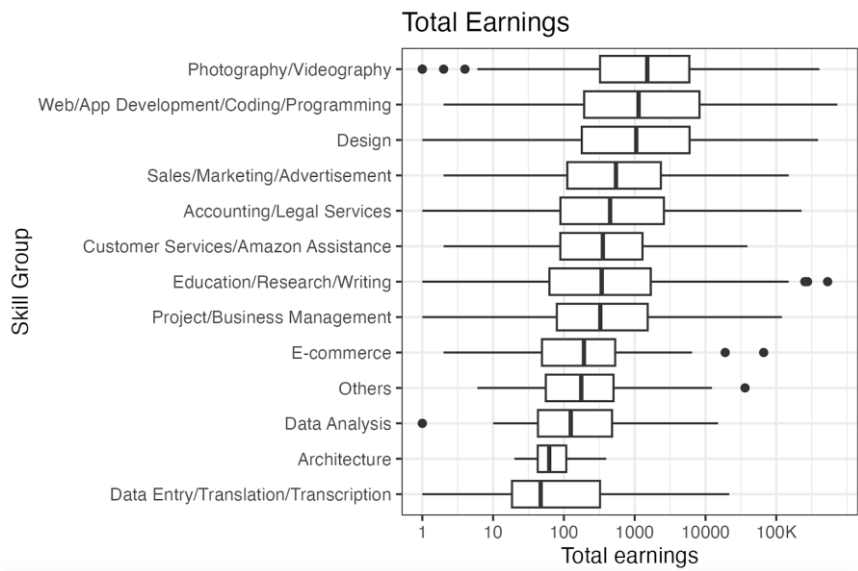
Figure 9b: Total Earnings by Freelancer Identity/Gender on Freelancer.com
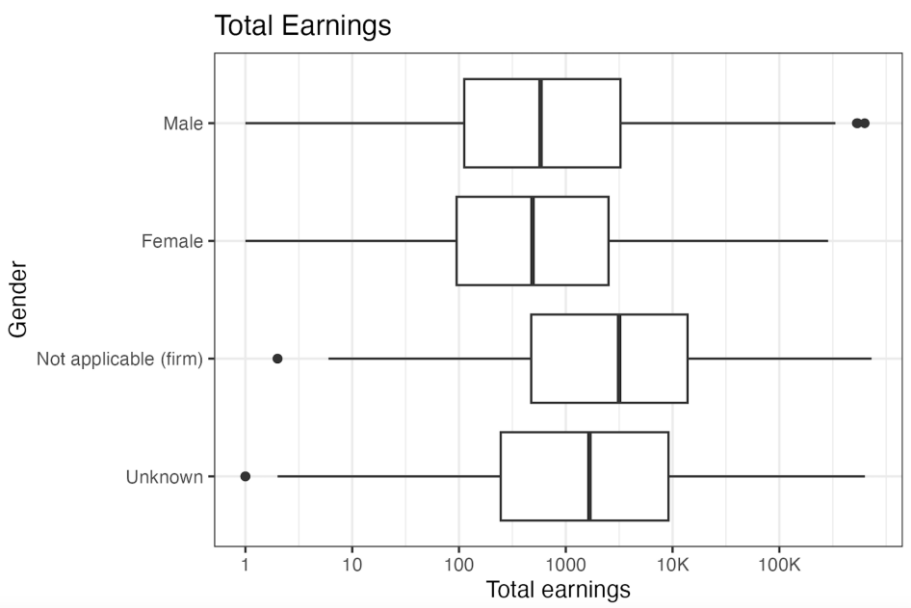
Source: Authors' calculations based on data from Freelancer.com

While we do not have information on income per transaction or per annum, we do have data on the freelancers' hourly rates (Figure 10). Freelancers doing high-skill work in areas such as architecture and programming/app development charge the highest median rates per hour. Hourly charges for customer services/Amazon assistance were surprisingly steep. Accounting/legal and data analysis on the other hand fell in the middle of the pack.

Figure 10: Hourly Rates of Workers on Freelancer.com
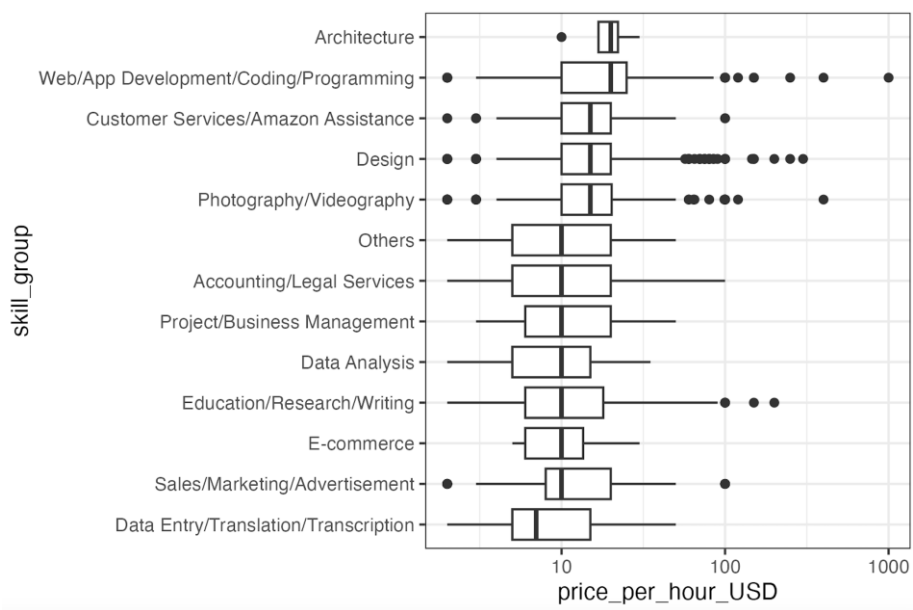
Source: Authors' calculations based on data from Freelancer.com

Firms charge the most per hour on average and have completed the largest number of jobs, proxied by the number of reviews (Table 3). Men charge a around $2.40 more per hour than women and have larger total earnings, even though they have completed fewer transactions (proxied by the number of reviews). Women have the highest repeat hire rate as compared to both men and firms. The average rating for all freelancer identities is nearly identical (around 4.88); similarly, performance outcomes are almost indistinguishable along the dimensions of percentage of jobs completed, jobs completed on time, and jobs completed on budget.

Table 3: Outcomes for Freelancers by Identity/Gender

Gender	Price per hour (US$)	N	Total earnings (US$)	N	Number of reviews	N	% Repeat hire	N
Male	$16.86	6,352	$6540.63	4,473	34.15	4,479	28.17	2,657
Female	14.48	843	5469.76	615	36.16	615	31.86	348
Firm	19.67	730	19576.49	616	90.19	616	23.96	454
Undetermined	19.25	1,570	14270.35	1,269	87.89	1,271	25.16	872
Gender	Average rating (out of 5)	N	% Jobs completed on time	N	% Jobs on budget	N	% Jobs completed	N
Male	4.89	2,317	94.70	4,412	95.13	4,406	97.24	4,512
Female	4.88	361	95.36	605	94.94	602	97.58	619
Firm	4.87	348	94.68	609	95.36	612	97.27	618
Undetermined	4.89	660	94.81	1,257	95.97	1,256	97.47	1,271

Source: Authors' calculations based on 2023 Freelancer.com data

It could be the case, however, that earnings and hourly rates differ by identity/gender of freelancers due to differences in the fields in which they are working. We explore this in Table 4, where we regress either ln (total earnings) or ln(rate per hour) on identity/gender categories, controlling non-linearly for experience (total reviews) and performance indicators (jobs completed on time and average ratings). In the odd-numbered columns, we exclude the controls for the skill categories and the gaps by identity/gender in income and rate per hour are large. In columns 1 and 5, we see that men and women both earn less and charge less per hour than firms. We see in columns 3 and 7 that women charge less than men. When we include the skill category fixed effects in the even-numbered columns, the estimates of the earnings and hourly rate gap by freelancer identity/gender fall in magnitude; in other words, some of the gap is explained by the different types of work done by men, women, and firms. Controlling for performance and skill category, men charge 9.7 percent and women charge 16.2 percent less than firms' hourly rates; women charge 6.7 percent less than men at an hourly rate. Earnings and hourly rates are increasing (at a decreasing rate) in the experience of freelancers (measured by total reviews) and percentage of jobs completed on time. Average ratings, however, have no statistically significant impact.

Table 4: Earnings and Hourly Rates by Gender/Freelancer Identity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Earnings Men/ Women/ Firms	Earnings Men/ Women/ Firms	Earnings Men/ Women	Earnings Men/ Women	Hourly Rate Men/ Women/ Firms	Hourly Rate Men/ Women/ Firms	Hourly Rate Men/ Women	Hourly Rate Men/ Women
Male	-0.411**	-0.358**			-0.120**	-0.097*		
	(0.111)	(0.109)			(0.040)	(0.040)		
Female	-0.608***	-0.455**	-0.193+	-0.116	-0.244***	-0.162**	-0.123**	-0.067+
	(0.144)	(0.143)	(0.107)	(0.107)	(0.053)	(0.052)	(0.039)	(0.039)
average_rating	-0.170	-0.208	0.060	-0.044	0.061	0.164	0.164	0.243
	(0.525)	(0.517)	(0.572)	(0.563)	(0.192)	(0.187)	(0.211)	(0.207)
average_rating_sq uared	0.021	0.024	-0.006	0.006	-0.004	-0.019	-0.017	-0.030
	(0.072)	(0.070)	(0.077)	(0.076)	(0.026)	(0.026)	(0.028)	(0.028)
total_reviews	0.019***	0.019***	0.020***	0.020***	0.002***	0.002***	0.003***	0.002***
	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
total_reviews_sqar ed	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
jobs_completed_o n_time	0.172***	0.172***	0.169***	0.170***	0.024**	0.020**	0.025**	0.021**
	(0.019)	(0.019)	(0.020)	(0.019)	(0.007)	(0.007)	(0.007)	(0.007)
jobs_completed_o n_time_squared	-0.001***	-0.001***	-0.001***	-0.001***	-0.000***	-0.000**	-0.000***	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Skill Group Fixed Effects?	N	Y	N	Y	N	Y	N	Y
R^2	0.467	0.489	0.445	0.468	0.099	0.148	0.091	0.137
Observations	2992	2992	2647	2647	2992	2992	2647	2647

Notes: In even numbered columns, we include fixed effects for the skill categories. In col 1-2 & 5-6 the excluded category is Firms; in the columns 3-4 & 7-8, the excluded category is Male; Standard errors in parentheses, $^+ p < 0.10$, $^* p < 0.05$, $^{**} p < 0.01$, $^{***} p < 0.0001$

Guru.com

Next, we examine the data from Guru.com. There were more than 85,000 individuals and firms listing their services on the site. The majority of freelancers were based in Punjab, Sindh, and Islamabad (Figure 11a) but the distribution of skilled vs unskilled freelancers is around 85/15 across all territories (Figure 11b).

Figure 11a: The Geographic Distribution of Freelance Workers on Guru.com in Pakistan
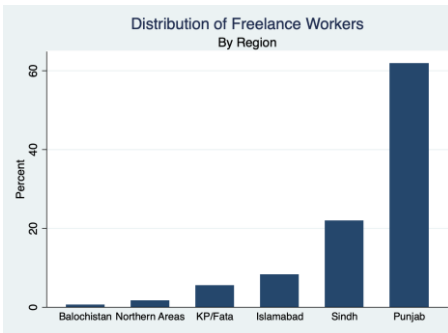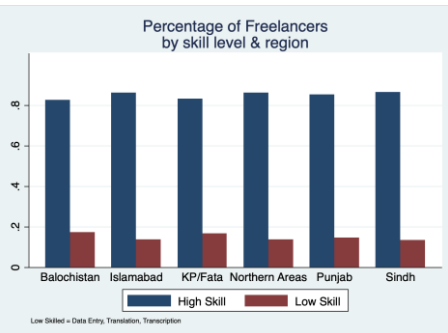
Figure 11b: Geographic Distribution of Skill Level of Pakistan-based Workers on Guru.com

Source: Authors' calculations based on data from Guru.com

By far, the most commonly offered skill on Guru.com by Pakistan-based freelancers is graphic design and photography. This is followed by data entry, writing/research, web development, and data processing. Next, comes a number of business services, like sales/marketing, finance/accounting, virtual assistance, and customer assistance (Figure 12a). After removing outliers, the highest earning skills for Pakistan-based freelancers on Guru.com are in search engine optimization, e-commerce, and customer service (Figure 12b).

Figure 12a: The Distribution of Skills Offered by Pakistan-based Freelance Workers on Guru.com
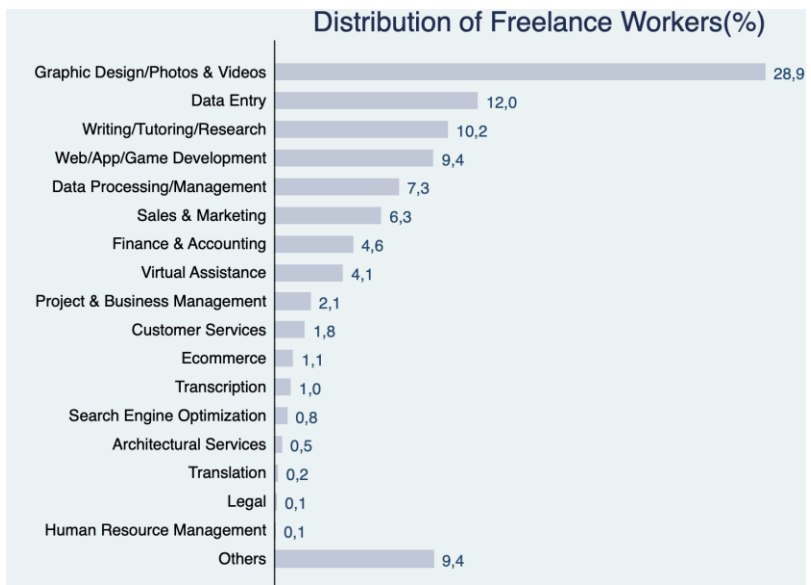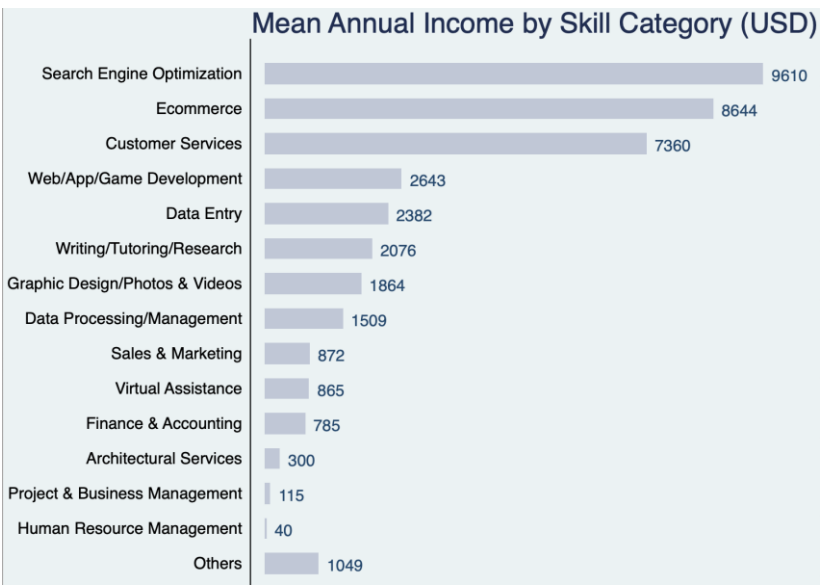
Distribution of Freelance Workers(%)

Skill	%
Graphic Design/Photos & Videos	28,9
Data Entry	12,0
Writing/Tutoring/Research	10,2
Web/App/Game Development	9,4
Data Processing/Management	7,3
Sales & Marketing	6,3
Finance & Accounting	4,6
Virtual Assistance	4,1
Project & Business Management	2,1
Customer Services	1,8
Ecommerce	1,1
Transcription	1,0
Search Engine Optimization	0,8
Architectural Services	0,5
Translation	0,2
Legal	0,1
Human Resource Management	0,1
Others	9,4

Figure 12b: Average Annual Earnings on Guru.com by Pakistan-based Freelance Workers by Skill Category

Mean Annual Income by Skill Category (USD)

Skill	USD
Search Engine Optimization	9610
Ecommerce	8644
Customer Services	7360
Web/App/Game Development	2643
Data Entry	2382
Writing/Tutoring/Research	2076
Graphic Design/Photos & Videos	1864
Data Processing/Management	1509
Sales & Marketing	872
Virtual Assistance	865
Finance & Accounting	785
Architectural Services	300
Project & Business Management	115
Human Resource Management	40
Others	1049

Source: Authors' calculations based on data from Guru.com

We were surprised to discover that out of the 85,000 freelancers offering services on Guru.com, only 1,100 (1.3%) had ever earned anything through the site. The gender of freelancer was not provided by the site, so we used some programs that interpolated gender for almost three-fourths of the observations. We found that about 10 percent of active freelancers were men, another 10 percent were women, and half were firms (Table 5). The lack of transactions seemed to be common across the skills offered (Figure 13).

Table 5: Active vs Listed Freelancers on Guru.com (2023)

Gender	Number of Freelancers on Guru.com	Percent	Number of Freelancers with Earnings >0	Percent
Female	12,978	15.2%	104	9.5%
Male	59,550	69.8	110	10
Firm	1,728	20	571	51.9
Unknown	11,052	12.95	315	28.6

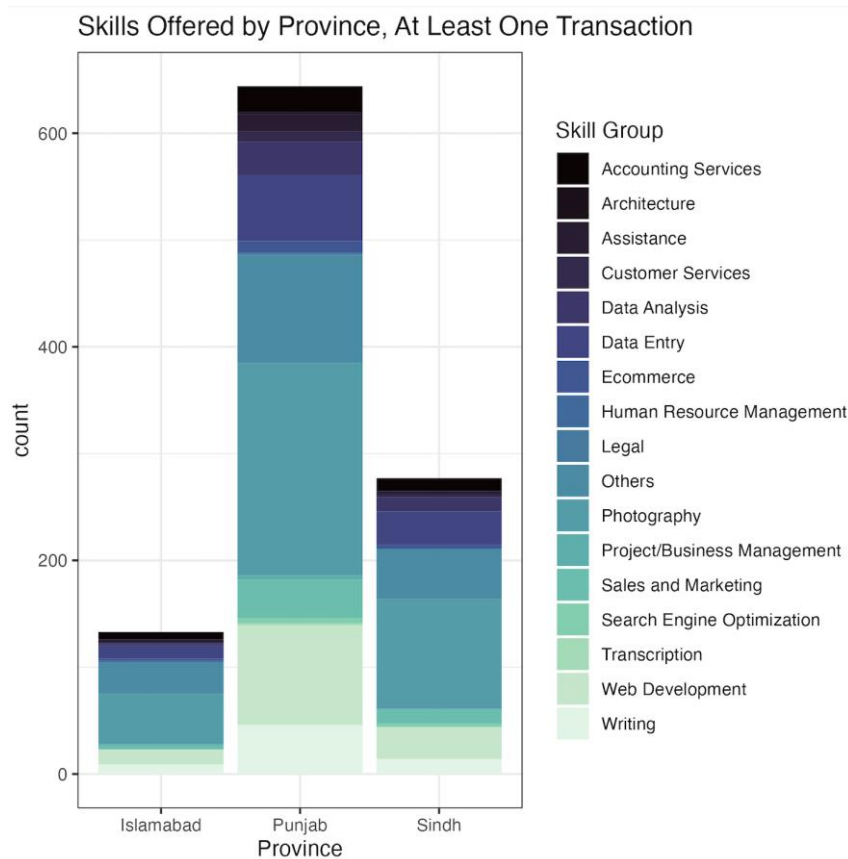Source: Authors' calculations based on data from Guru.com

Figure 13: Listed (green+blue) vs Active Freelancers (light green) on on Guru.com by Skill

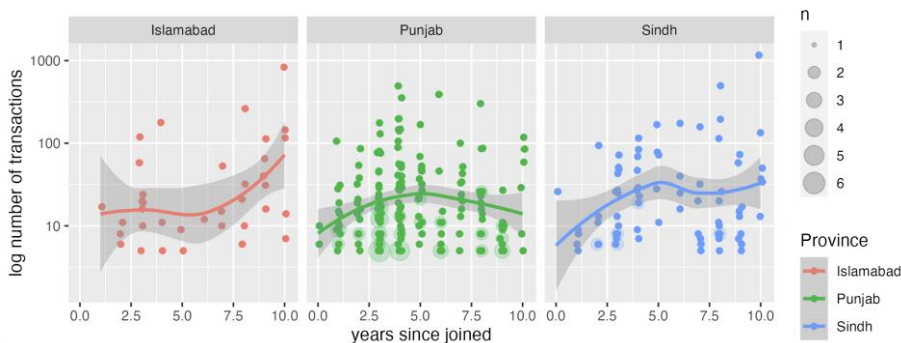Source: Authors' calculations based on data from Guru.com

The geographic distribution of skills for those freelancers with transactions seems to be similar across the three provinces with the majority of freelancers: Punjab, Sindh, and Islamabad (Figure 14). Further, we note that for Islamabad and Sindh, there is an positive relationship between the number of years on Guru.com and the growth in transactions (Figure 15).

Figure 14: Geographic Distribution of Skills on Guru.com

Source: Authors' calculations based on data from Guru.com

Figure 15: Transactions by Tenure on Guru.com for Pakistan-based Freelance Workers

Source: Authors' calculations based on data from Guru.com

While the majority of freelancers with larger numbers of transactions are also located in Punjab, Sindh, and Islamabad, there are a (surprisingly) handful of very active freelancers in the Northern Areas and Kashmir (Figures 16a and 16b).

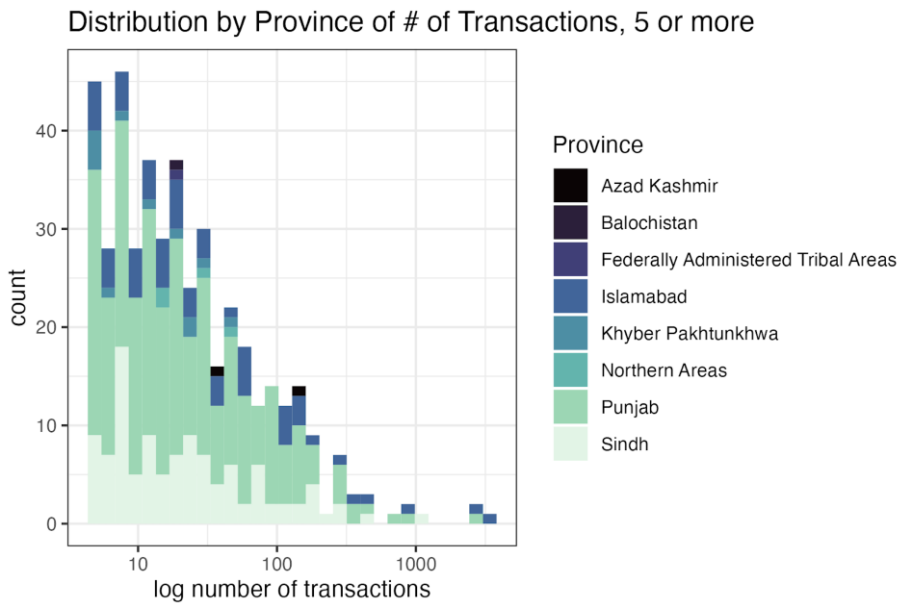**Figure 16a: Distribution by Province of Number of Transactions, 5 or more**
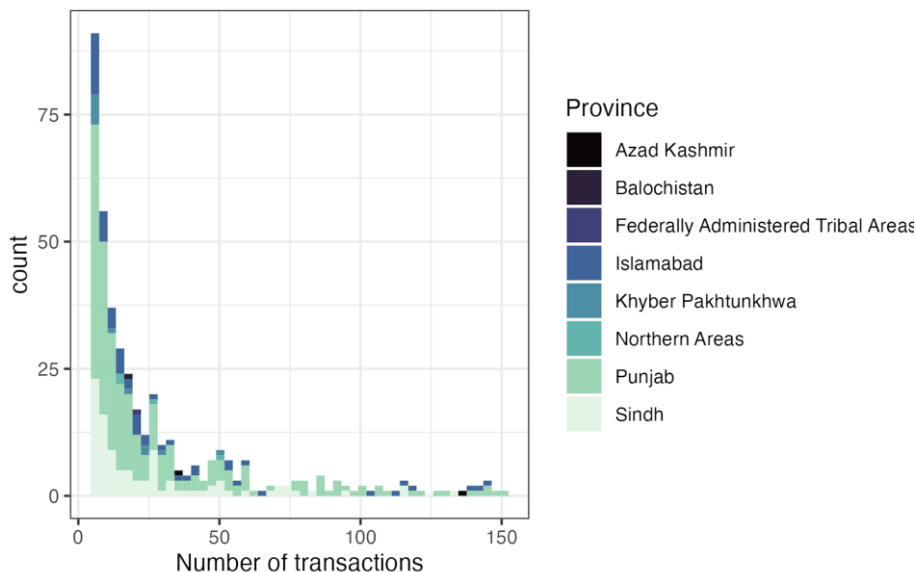
Figure 16b: Distribution by Province of Number of Transactions, 5 to 150

Distribution by Province of # of Transactions, 5 to 150

Source: Authors' calculations based on data from Guru.com

The number of transactions are very small for the first few categories (transcription, legal services, and architecture, but they are lucrative relative to other skills (Figure 17b).

Figure 17a: Earnings in the Previous Year (2023), log scale

Figure 17b: Earnings per Transaction, log scale
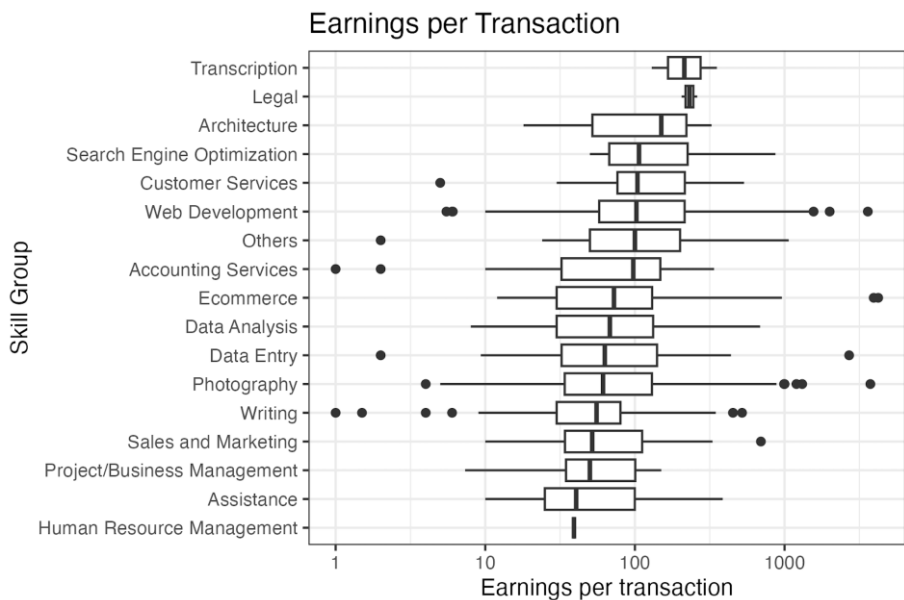
Source: Authors' calculations based on data from Guru.com

Women appear to be represented to at least some extent in most of the skills offered, although women's representation is higher in writing and lower in digital assistance and web development (Figure 18a, Figure 18b).

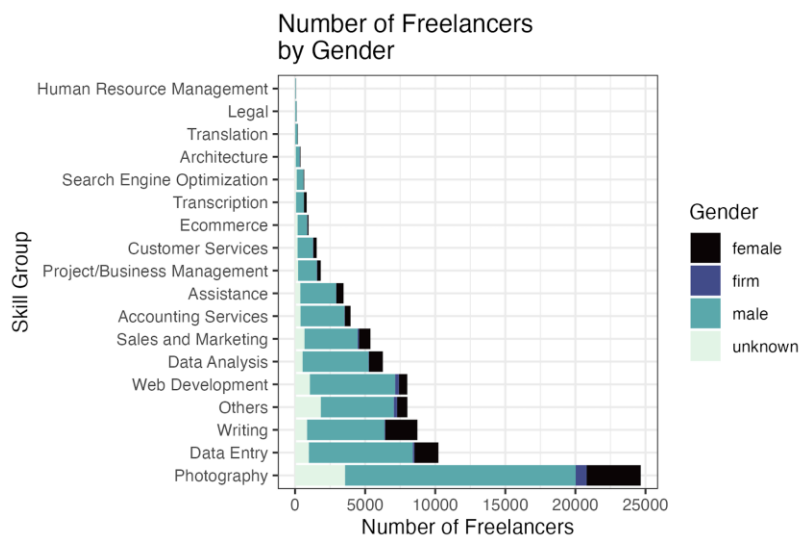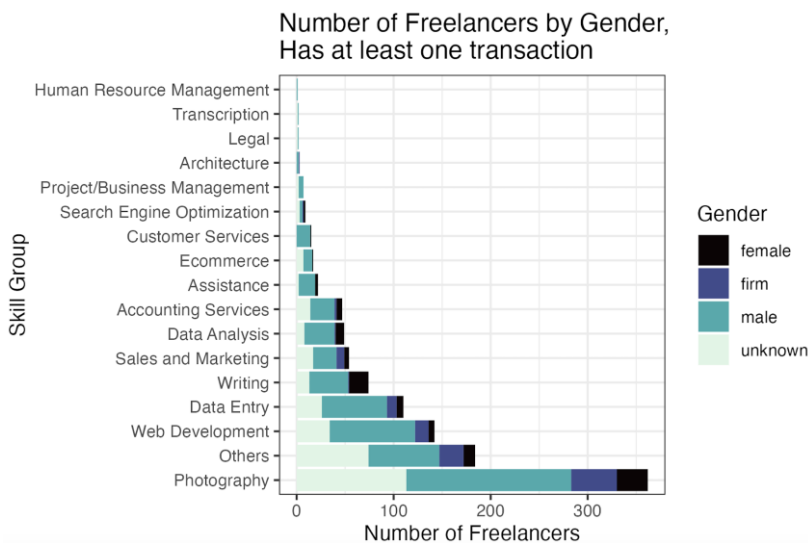**Figure 18a: Gender and Skills of Freelancers on Guru.com**

Figure 18b: Gender and Skills of Freelancers with Any Transactions on Guru.com

Source: Authors' calculations based on data from Guru.com

Like on Freelancer.com, firms on Guru.com appear to have the highest annual earnings highest earnings per transaction in 2022 on Guru.com (Figure 19a - 19b). Men and women's median annual earnings are nearly the same, but men's earnings per transaction appear both a bit higher on average and more spread.

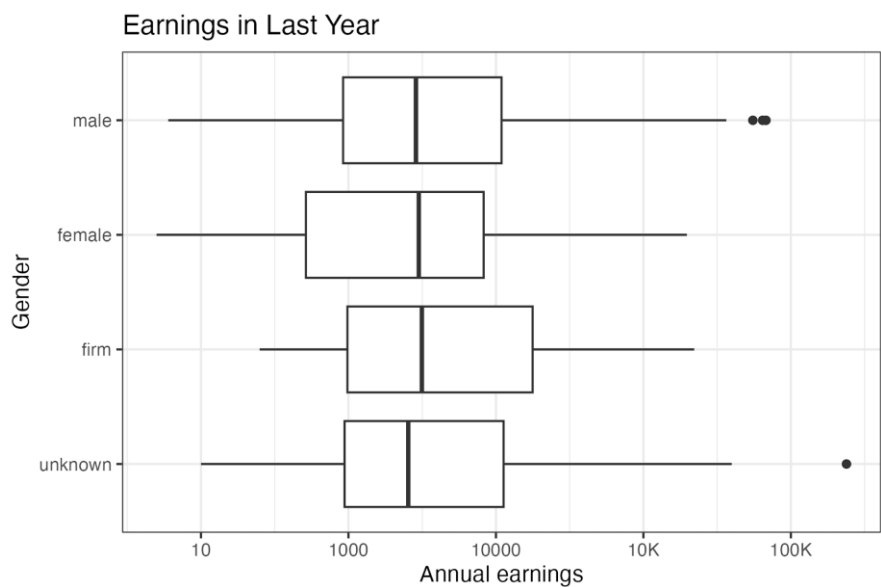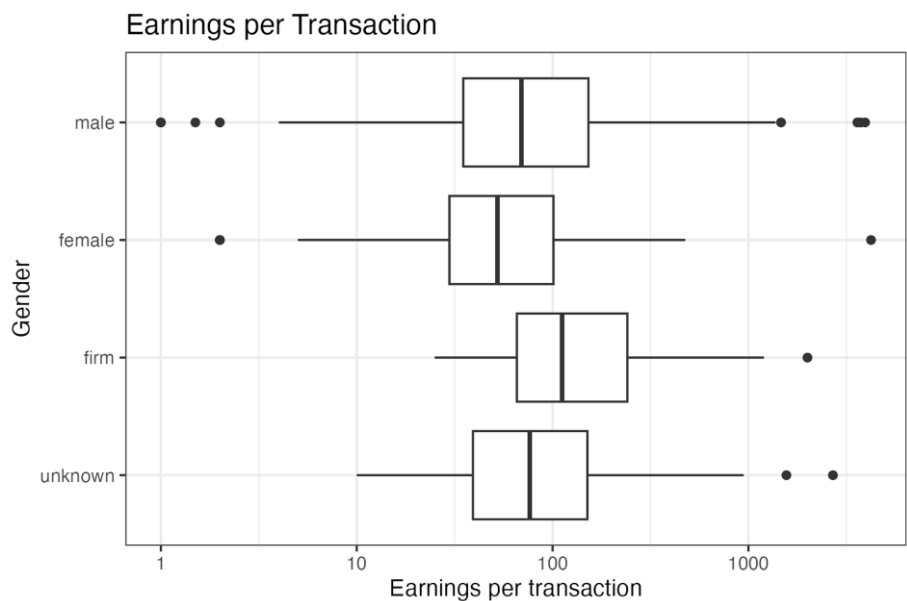**Figure 19a: Annual Earnings (2022) by Gender on Guru.com**

Figure 19b: Earnings per Transaction by Gender on Guru.com

Source: Authors' calculations based on data from Guru.com

Conclusion

Freelancers in Pakistan earned around $400 million in both FY21 and FY22, accounting for about 15% of the $2.6 Billion in ICT exports. To learn more about the landscape of freelancing in Pakistan, we scraped the data on Pakistan-based freelancers from the sites Guru.com and Freelancer.com.

The most commonly advertised skill on freelancing is in programming, web and app development, followed by design, research/writing, photography, and marketing. Nearly three-quarters of the workers listed have earned money through the site. Men charge around $2.40 more per hour than women and have larger total earnings, even though they have completed fewer transactions. Women have the highest repeat hire rate as compared to both men and firms. Performance outcomes are almost indistinguishable along the dimensions of average rating, percentage of jobs completed, jobs completed on time, and jobs completed on budget.

Out of 85,314 freelancers advertising their services on the site Guru.com, only 1,100 (1.3 percent) had ever completed a transaction. The majority of freelancers are based in Punjab, Sindh, and Islamabad, but there are also a handful of extremely active workers in the Northern Areas and AJK. More than two-thirds with profiles on the site are men and women make up another 15 percent; the remaining are either firms or unknown gender. The majority of services offered are photography and graphic design, but annual earnings are highest in search engine optimization, e-commerce, and customer services. Men make more per transaction but earnings in the last year were roughly equal for men and women.

References

Ahsan, M. N., Rafiq, M., Hassan, M., & Gohar, N. (2022). Impact of Online Freelancing on Economic Growth of Developing Countries Like Pakistan. *Asian Journal of Management, Entrepreneurship and Social Science*, *2*(02), 209-228.

APP (2023). "Increase IT Exports to $15b by 2026: PM," The Express Tribune. January 6, 2023 https://tribune.com.pk/story/2394484/increase-it-exports-to-15b-by-2026-pm (Accessed December 6, 2023.)

Burke, A., & Cowling, M. (2020). The relationship between freelance workforce intensity, business performance and job creation. *Small Business Economics*, *55*, 399-413.

Butschek, S., Amor, R. G., Kampkötter, P., & Sliwka, D. (2022). Motivating gig workers–evidence from a field experiment. *Labour Economics*, *75*, 102105.

Gu, G., & Zhu, F. (2021). Trust and disintermediation: Evidence from an online freelance marketplace. *Management Science*, *67*(2), 794-807.

Hanif, Usman (2022). "Freelancers earn $400 million in 2022," The Express Tribune. August 24, 2022. https://tribune.com.pk/story/2372834/freelancers-earn-400-million-in-fy22 (Accessed December 6, 2023.)

Haq, N. U., Raja, A. A., Nosheen, S., & Sajjad, M. F. (2018). Determinants of client satisfaction in web development projects from freelance marketplaces. *International Journal of Managing Projects in Business*, *11*(3), 583-607.

Holtz, D. M., Scult, L., & Suri, S. (2022, April). How much do platform workers value reviews? An experimental method. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (pp. 1-11).

ILO (2021). *World Employment and Social Outlook 2021: The role of digital labour platforms in transforming the world of work*. Geneva: ILO.

Pakistan Bureau of Statistics (2021). Labor Force Survey Annual Report (2020-21).

Pofeldt, Elaine (2019). "The Top 10 Fastest Growing Freelance Markets in the World," Forbes, August 18, 2019. https://www.forbes.com/sites/elainepofeldt/2019/08/18/the-top-10-fastest-growing-freelance-markets-in-the-world/?sh=107eefe9733b (Accessed December 6, 2023.)

Pulignano, V., Domecka, M., Muszyński, K., Vermeerbergen, L., & Riemann, M. L. (2021). Creative labour in the era of Covid-19: The case of freelancers. *ETUI Research Paper-Working Paper*.

Oyer, P. (2020). The gig economy. *IZA World of Labor*.

ProPakistani staff (2023) "Punjab Opens Registration for E-Earn Co-Working Spaces at Discounted Rates for Freelancers," ProPakistani, February 14, 2023, https://propakistani.pk/2023/02/14/punjab-opens-registration-for-e-earn-co-working-spaces-at-discounted-rates-for-freelancers/ (Accessed December 7, 2023.)

Rawoof, H. A., Ahmed, K. A., & Saeed, N. (2021). The role of online freelancing: Increasing women empowerment in Pakistan. *Int. J. Disaster Recovery Bus. Continuity*, *12*, 1179-1188.

Rehman, Z., Usman, M., Abrar, M. F., & Ullah, N. (2021). Freelancing as an alternative Market for software Professionals in Pakistan. *VFAST Trans. Softw. Eng*, *9*, 78-92.

State Bank of Pakistan (2022). State of Pakistan's Economy, Annual Report (2021-22).

van der Zwan, P., Hessels, J., & Burger, M. (2020). Happy free willies? Investigating the relationship between freelancing and subjective well-being. *Small Business Economics*, *55*, 475-491.

The Lahore School of Economics was established in 1993 as a private, non-profit university with the goal of developing world class teaching and research in Pakistan. The objectives of the LSE are to prepare young Pakistanis to undertake research in economics, finance, banking, business management, industry, and development, in order to deepen their understanding of, and be able to productively contribute to, the major issues and policies that impact Pakistan and Asia at large.

The Innovation and Technology Centre (ITC) was established in April 2015 at the Lahore School of Economics with an aim to promote innovation, a key to growth in Pakistan. The ITC is a platform for academics, the business community and the public sector to collaborate in areas of economic and social importance including innovation and technology, macroeconomic and microeconomic constraints facing firms, productivity growth, manufacturing, export promotion, and environment sustainability. In addition to the internationally recognized academic output it produces every year, the ITC conducts annual surveys of manufacturers, exporters and policymakers on business confidence, technology adoption, innovation, and export competitiveness. The Centre enjoys a wide range of connections with top-level policymakers, the Chambers of Commerce of various major cities of Pakistan and manufacturers.

The ITC produces consumer reports, working papers and other outputs as part of the LSE's overall publication programme, which also comprises of the Lahore Journal of Economics, Lahore Journal of Policy Studies, Lahore Journal of Business, a textbook series, Lahore School Case Study Journal, the CREB Working Paper Series, and CREB Policy Paper Series. The LSE strongly encourages both in-house and external contributors.