Lessons from Gigmetar™ in Measuring the Online Platform Work in Southeastern Europe

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Gigmetar™

01 Introduction

❖ Digital labour platforms can be understood as gigantic machines for organizationally and spatially reshaping the space of economic activity, connecting massive numbers of users/customers with service providers, advertisers, or other users (Kenney, Zysman, Bearson, & Carlton, 2023; Kenney, & Zysman, 2019).

❖ The use of digital labor platforms is projected to grow significantly in the coming years, potentially challenging what is traditionally known as a "job" (World Bank, 2023; Schor & Vallas, 2023: 83).

❖ While many studies and legislative initiatives have focused on location-based platform work, which is prevalent in Western Europe (Piasna, Zwysen, & Drahokoupil, 2022), Gigmetar ™ aims to shed light on online platform work, which is more common in Southeast Europe -SEE (Colovic, Andjelkovic, & Jakobi, 2021).

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01 Online Labour Index: Inspiration for Gigmetar

❖ The Online Labour Index (OLI) by the Oxford Internet Institute has been created with the ambition to provide an online gig economy equivalent to conventional labour market statistics.

❖ It started in 2016 with monitoring trends of online labour across countries and occupations **by tracking the number of projects and tasks** across 4 global digital platforms in real-time (Freelancer, Fiverr, Guru, and PeoplePerHour).

❖ Its 2020 update (OLI 2020) tracks all the projects/tasks posted on the largest English-language online labour platforms since they represent at least 70% of the global market by traffic. OLI 2020 also provides data on the two largest non-English language markets, Spanish and Russian.

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01 About Gigmetar

❖ The aim of Gigmetar™ is to provide insights about labour dynamics in online digital platforms to ensure evidence-based policy making in Serbia and its neighbouring countries: Hungary, Romania, Bulgaria, Albania, Montenegro, Bosnia and Herzegovina, North Macedonia and Croatia.

❖ It is a statistical instrument collecting data on the number, gender, incomes, and occupations of online platform workers.

❖ Gigmetar™ was released in December 2019. Reports are published biannually, in spring and fall every year.

2   4   10   20   40

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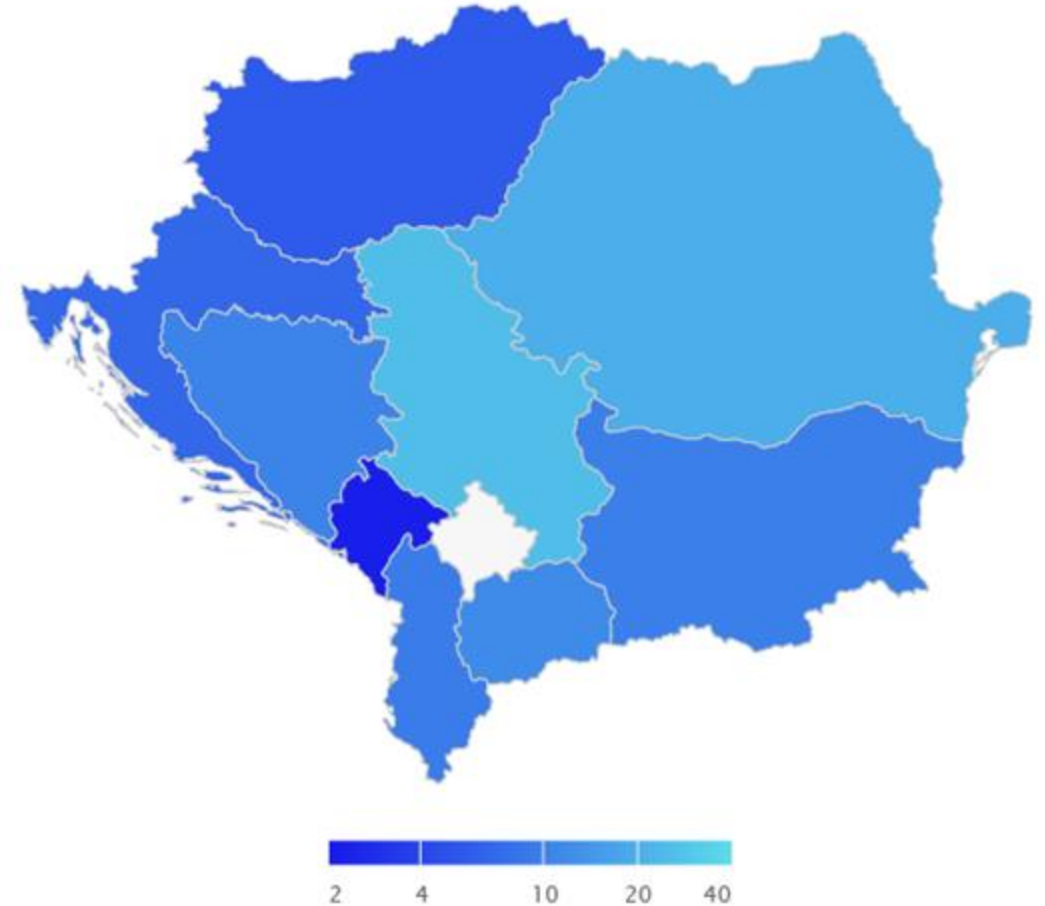
01 Research approach

❖ Upwork has been selected for ongoing monitoring due to its significant popularity among online workers in the Southeast Europe (SEE) region.

❖ The data are collected at regular intervals, twice a year—in February/March and August/September—and reports are published each November and May. Biannual measurements are considered both effective and informative. In 2020 and early 2021, additional measurements were conducted; however, the data showed minimal variation, reinforcing the adequacy of the established biannual schedule.

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01   Research approach (2)

❖ Descriptive statistics approach is applied – it helps highlight key trends and patterns, allowing audiences to quickly understand data characteristics without getting overwhelmed. Additionally, descriptive statistics are computationally less intensive, which is beneficial when working with extensive datasets, as it reduces processing time and resource demands.

❖ While there are plans to implement AI-driven analysis, its adoption requires substantial setup, computational resources, and specialized expertise. At present, these resources are deemed unnecessary, as core research questions are adequately addressed through conventional descriptive and inferential statistical methods.

❖ Currently, Gigmetar focuses exclusively on labor supply within digital online platforms. However, there are plans to incorporate comparisons with traditional labor markets to examine how trends in the online marketplace both influence and are influenced by local labor dynamics.

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02   What and how we measure?

- Gigmetar™ is using the publicly available data on the leading global digital platform - Upwork. To a lesser extent the data are also collected from other two platforms: Freelancer and Guru.

- The data is collected by web scrapping available online workers' profiles, using comercially available software.

- Gigmetar™ is based on the analysis of massive data, representing approx. 70-80% of the total number of active digital workers.

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02   WHAT and HOW we measure?

We use the following data about gig worker:
- Gender,
- Location (city, region),
- Skills,
- Main and additional occupations (six main groups of occupations, as classified by Oxford's Open Labour Index (OLI)),
- Hourly rate,
- Total income, total jobs and hours,
- Success rate and rating,
- Number of completed jobs, including details on last completed job,
- Number of jobs in progress, including details on last job in progress.

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Landing Page   Web Design   PSD to WordPress   Avada Theme Customization   WordPress Development   +6

Hi, my name is Xabi Khan with over 4 years of experience in the field of freelancing I have helped hundreds of clients around the world with their Websites designing and development. I started my freelancing career back in 2016 and till now I have worked wit...

Designer
Italy

View profile

$50/hr   👑 99% Job Success $200K+ earned

Packaging Design   Logo Design   Corporate Brand Identity   3D Rendering   Box   Maxon Cinema 4D   Illustration

I'm an Art director & Graphic designer with 15+ years experience in packaging design, Corporate identity, advertising and marketing materials. I'm specialized in the cosmetic, medical and food fields and I can take care of all steps of your new project...

Videomaker and VR Developer
Italy

View profile

$25/hr   👑 100% Job Success $10K+ earned

Game Design   Video Editing & Production   Video Shoot   Film Editing   Writing   Drone Videography   Videography

Hi I'm ▮▮▮▮ you may remember me from such immersive 360 degrees movies as Mea Maxima Culpa or vr experiences as Meta Gallery and Wild Side, or even incredible culinary works such as my Carbonara cor guanciale de Devis. So, if you need...

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26 **4**
Total jobs Total hours

Hours per week

More than 30 hrs/week
< 24 hrs response time ⓘ

Videomaker and VR Developer $25.00/hr

Hi I'm ▮▮▮▮▮▮
you may remember me from such immersive 360 degrees movies as Mea Maxima Culpa or vr experiences as Meta Gallery and Wild Side, or even incredible culinary works such as my Carbonara cor guanciale de Devis.

So, if you need traditional or 360° shooting, aerial footage of your Eucalyptus Cinerea fields, professional editing of video and audio of your movies and help in filmmaking, adding interactions to your multimedia works creating new virtual worlds, or tryin one of the best carbonaras out there...you can count on me.

Fate brought me in Turin to study cinema engineering and completing my cycle of studies with highest honors GG.
It's precisely because learning new things and traveling are commonplace that this story still has to be written.

Work history

Completed jobs (22)   In progress (4)

Videographer and Editor in PARIS

Jan 24, 2024 - Aug 11, 2024

No feedback given

Private earnings

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02 Challenges

❖ Some of data necessary for our analyses, such as gender or dominant occupation, are not accessable directy from the profile,

❖ Gender is determined by names (automatically, by genderize.io service) or by photo (manually),

❖ Occupation grouping (Main and additional) is based on self-set skills and translation table between skills and OLI occupations (relations are set by human),

❖ Fake profiles increasingly occur and needs to be cleared manually,

❖ Upwork frequently makes minor changes in the design and data available, which heavily influences data collection process.

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02 Limitations

❖ Tracks diligently only one digital labour platform (others are examined to less extent),

❖ Tracks individual gig workers not projects,

❖ Cannot see people hiding their profiles,

❖ Measures the requested and not the obtained price per hour,

❖ Cannot provide information on hours worked and not paid,

❖ Cannot track the freelancer sentiment, etc.

A SNAPSHOT - Number of gig workers per country

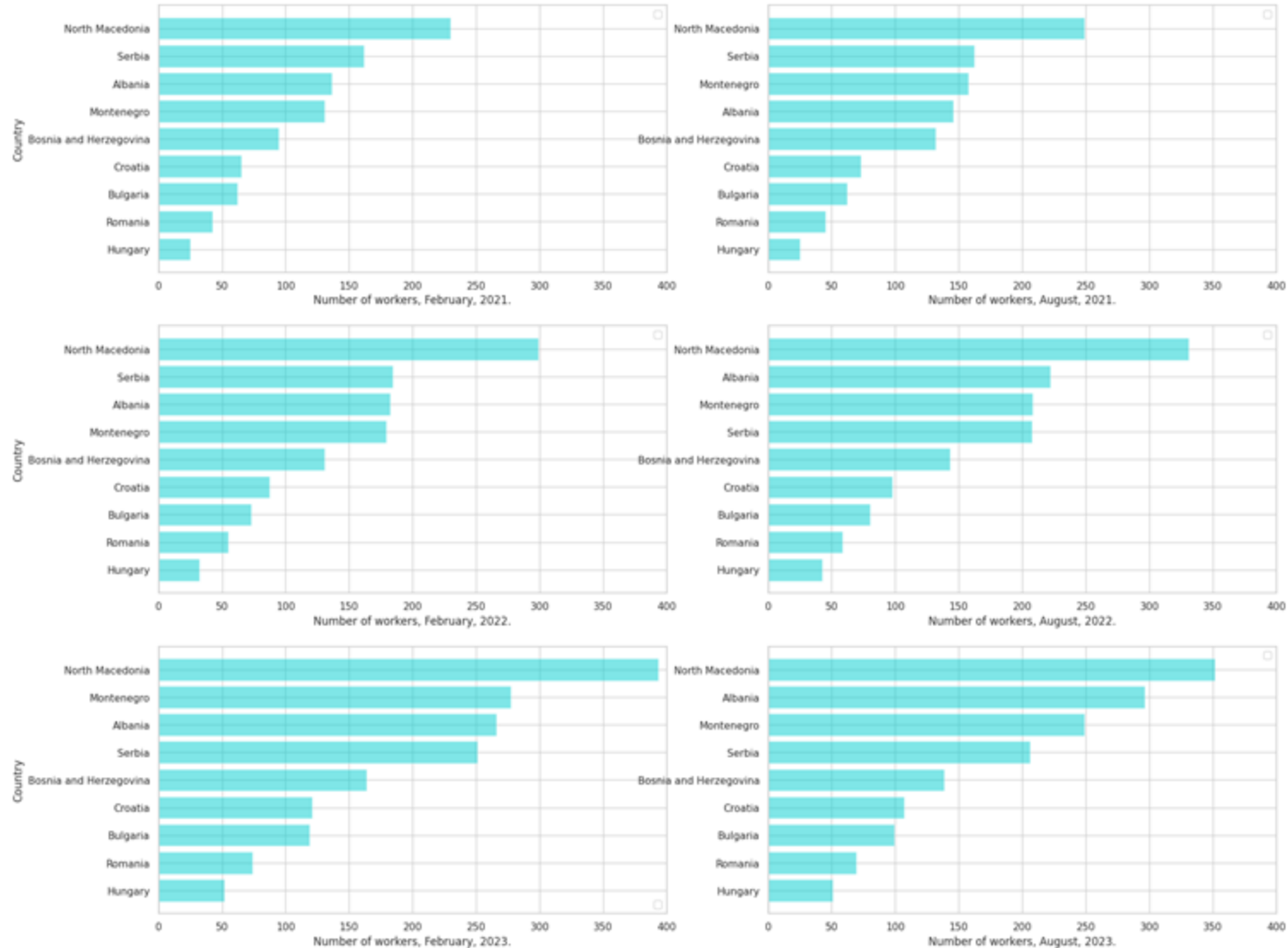All countries recorded an increase in the number of workers since initial measurement
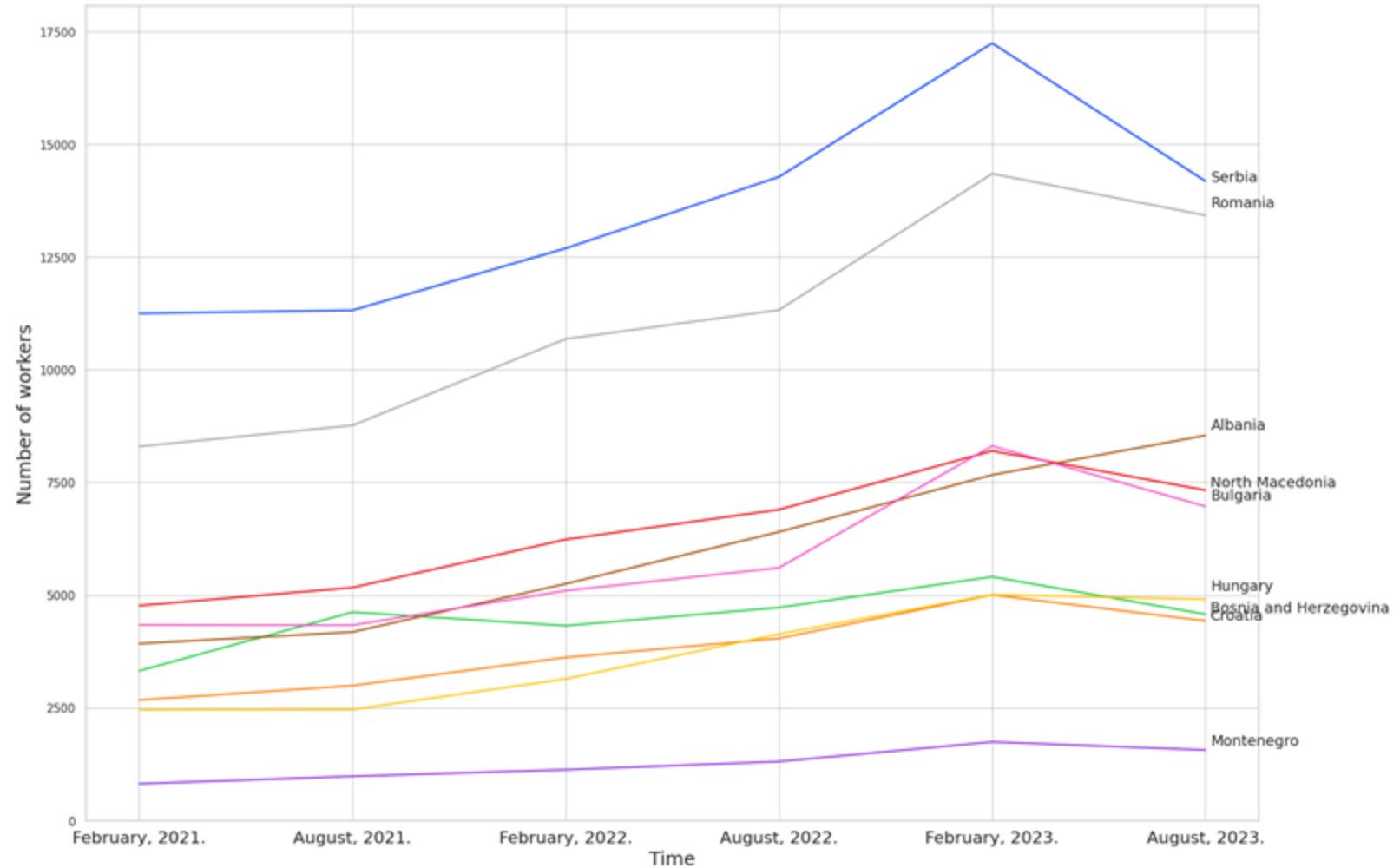
Y axis: number of workers, X axis: measurement intervals

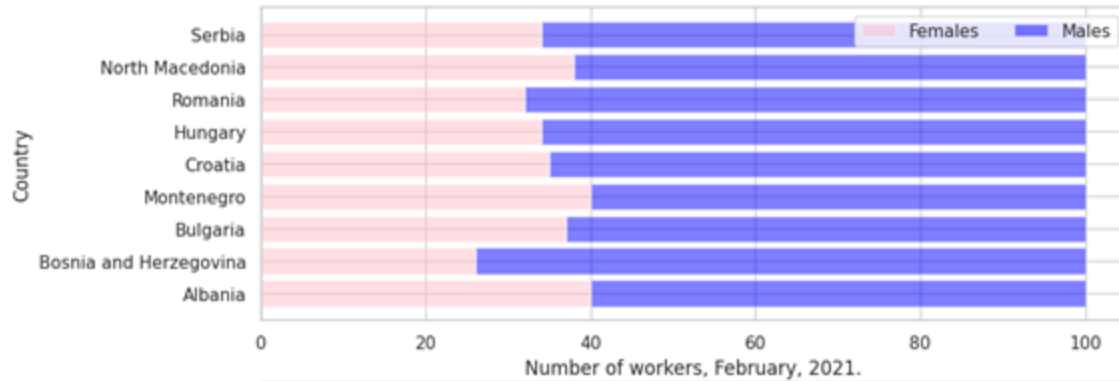# Number of online workers per 100.000 inhabitants per country

Correcting for the size of the market we introduced the relative measure - number of gig workers on 100,000 inhabitants
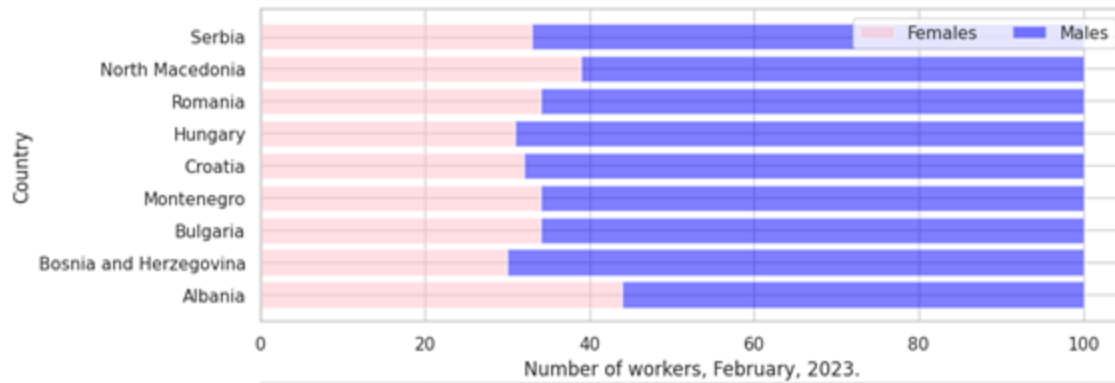

Y axis: countries, X axis: number of workers per capita

Share of women and men in gig population by country (I)

Y axis: countries, X axis: share of women and men

Share of women and men in gig population by country (II)

Number of workers, February, 2023.

Number of workers, August, 2023.

The observed SEE region belongs to one of the most gender-balanced regions in the world
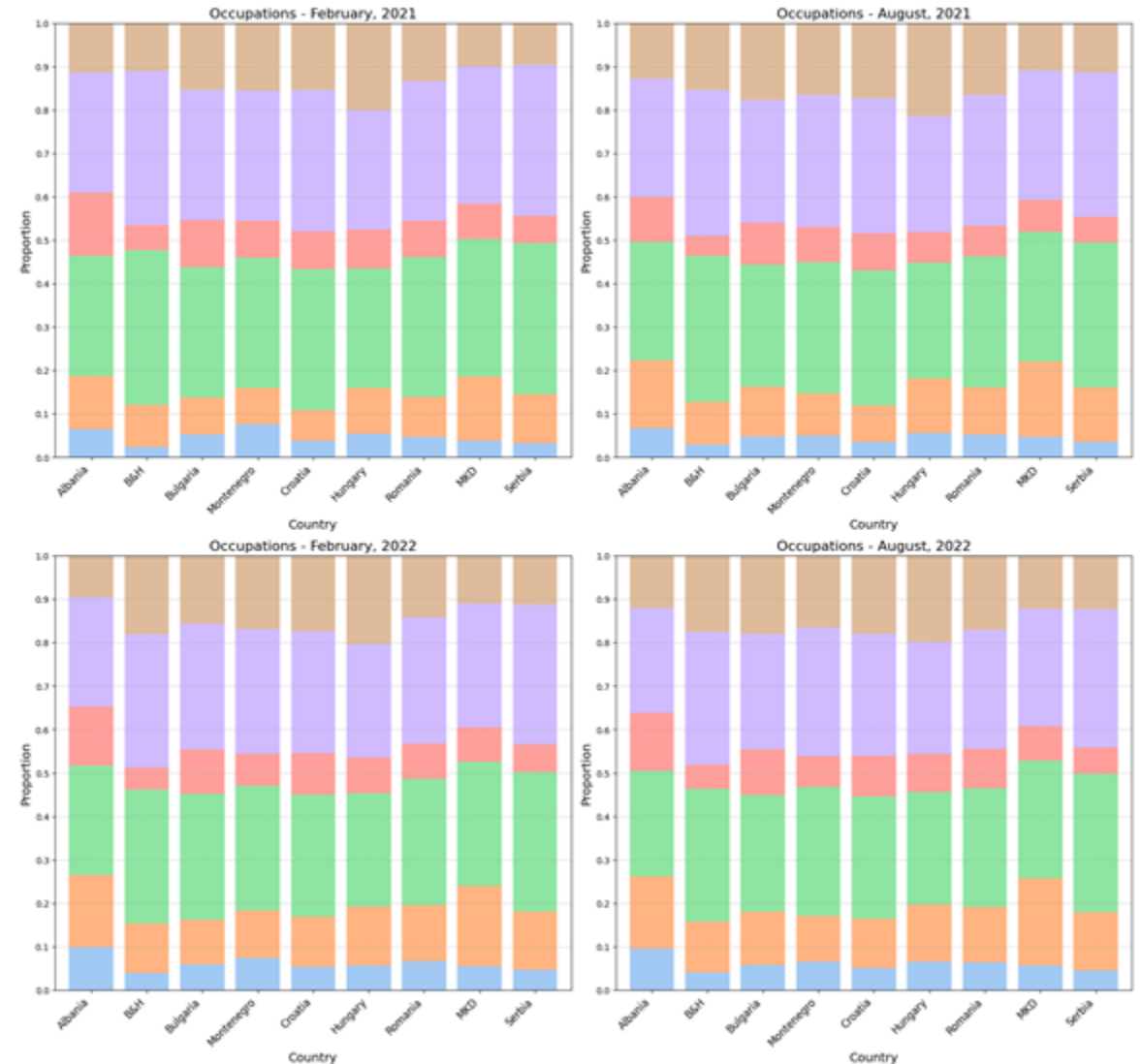
Y axis: countries, X axis: share of women and men

Occupations by country (I)

Occupations are grouped according to OLI classification:

i) software development, ii) creative services and multimedia, iii) professional services are considered higher-paid occupations, iv) writing and translation, v) sales and marketing, and v) clerical and data entry
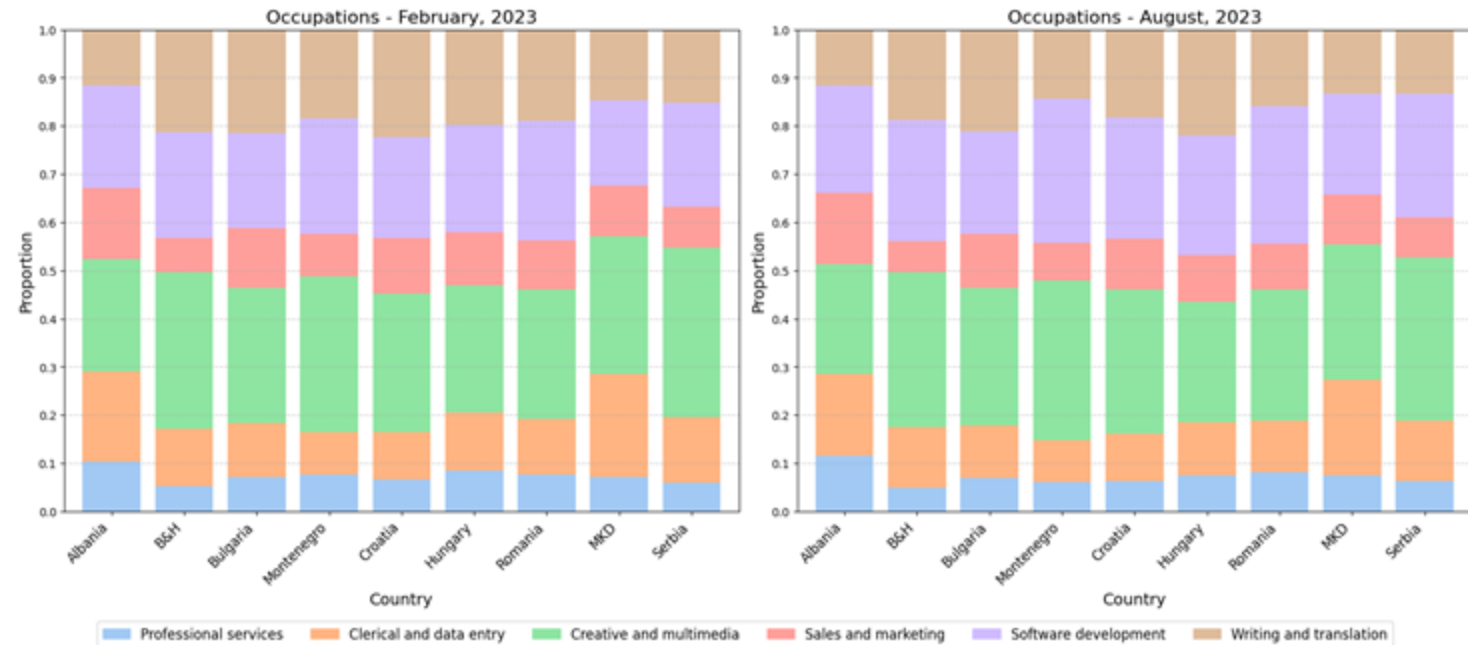
Y axis: countries, X axis: proportion of occupations

Occupations by country (II)

Comparative advantages by country:

- **Professional services:** ALB, MNG, HUN, ROM and MKD

- **Clerical and data entry**: ALB, MKD and SRB

- **Creative and multimedia**: BIH, MNG, CRO and SRB

- **Sales and marketing:** ALB, BGR, CRO, HUN and ROM

- **Software development:** BIH, MNG, CRO and SRB

- **Writing and translation:** BIH, BGR, MNG, CRO, HUN and ROM



Y axis: countries, X axis: proportion of occupations

The average hourly rates by country

In 2023, Croatia was the country with the most expensive workforce ($26/h), followed by Hungary ($25.68/h) and Romania ($25.14/h)

The hourly rates in Albania, Serbia, Bosnia and Herzegovina and North Macedonia were lower than regional average ($23/h)

With an average hourly rate of $17.97/h, North Macedonia is the country with the lowest hourly rates and remains as a sole country in the sample with an average hourly rate of below US$20
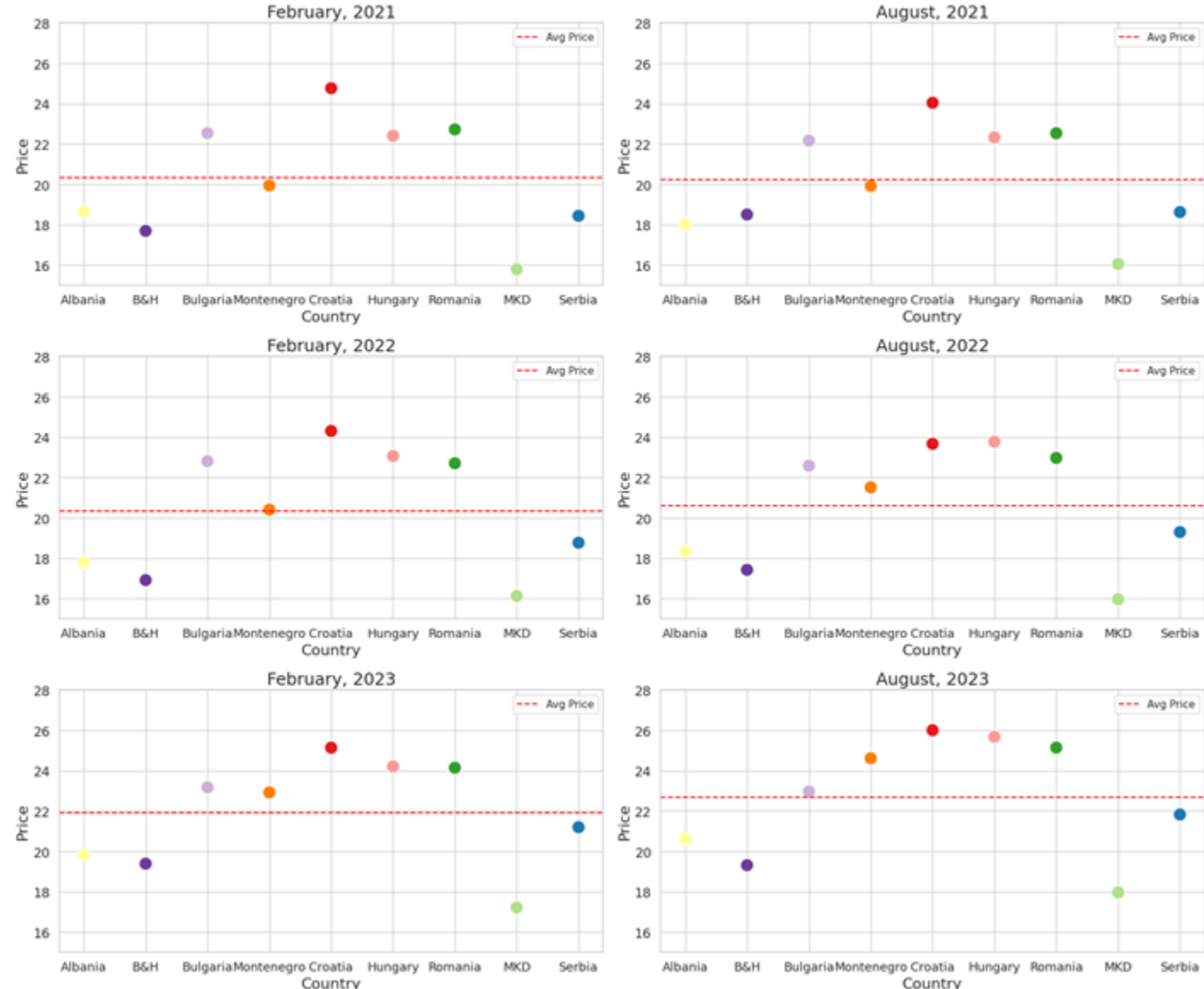
Y axis: countries, X axis: average hourly rates

The average hourly rates between women and men, by country

Gender convergence has been recorded: women in the region earned 86% of the average earnings of male gig workers (August 2023) compared to the 81% (February 2021).

According to this indicator, the region is significantly ahead of the global average: the global average is 82% globally according to the Payoneer survey (Payoneer, 2022) and only 52% according to the Bloomberg survey (Bloomberg, 2022) in the USA.

Albania is the country with the most egalitarian labour price: women earn on average 97.16% of the average wage of gig workers.

The biggest inequality is present in Croatia – female gig workers earn around 80% of the wages of gig workers.

Y axis: countries, X axis: average hourly rates
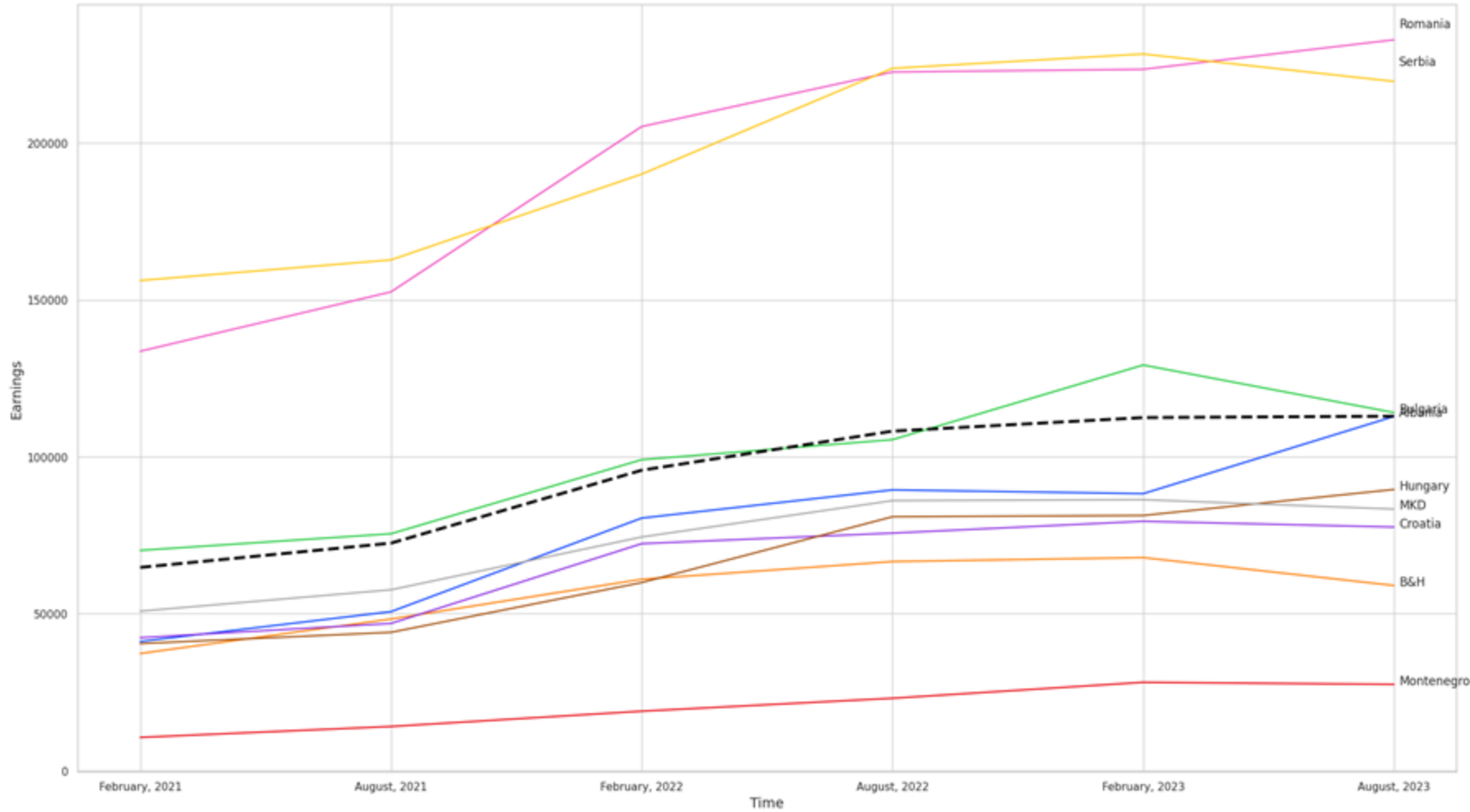
Earnings per country

Largest proportion of income on the platform is generated by online workers from Serbia and Romania, primarily due to the largest online workers' population in these countries

Workers from Montenegro earn the smallest share of earnings on the platform compared to other countries.

In 2023, several countries recorded declining in earnings - Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, North Macedonia and Serbia

Albanian, Hungarian and Romanian workers earned more from February to August 2023

**Y axis: earnings (USD), X axis: measurement intervals**

Earnings proportion - women and men in observed countries

Women in the region earned around 52% of income earned by men (August 2023)

The biggest earning gap between women and men was recorded in Bosnia and Herzegovina, where women achieved only 36.4% of men's earnings.

The greatest convergence was observed in Albania, where women were able to earn almost 92% of the total income achieved by men.

Y axis: countries, X axis: average hourly rates

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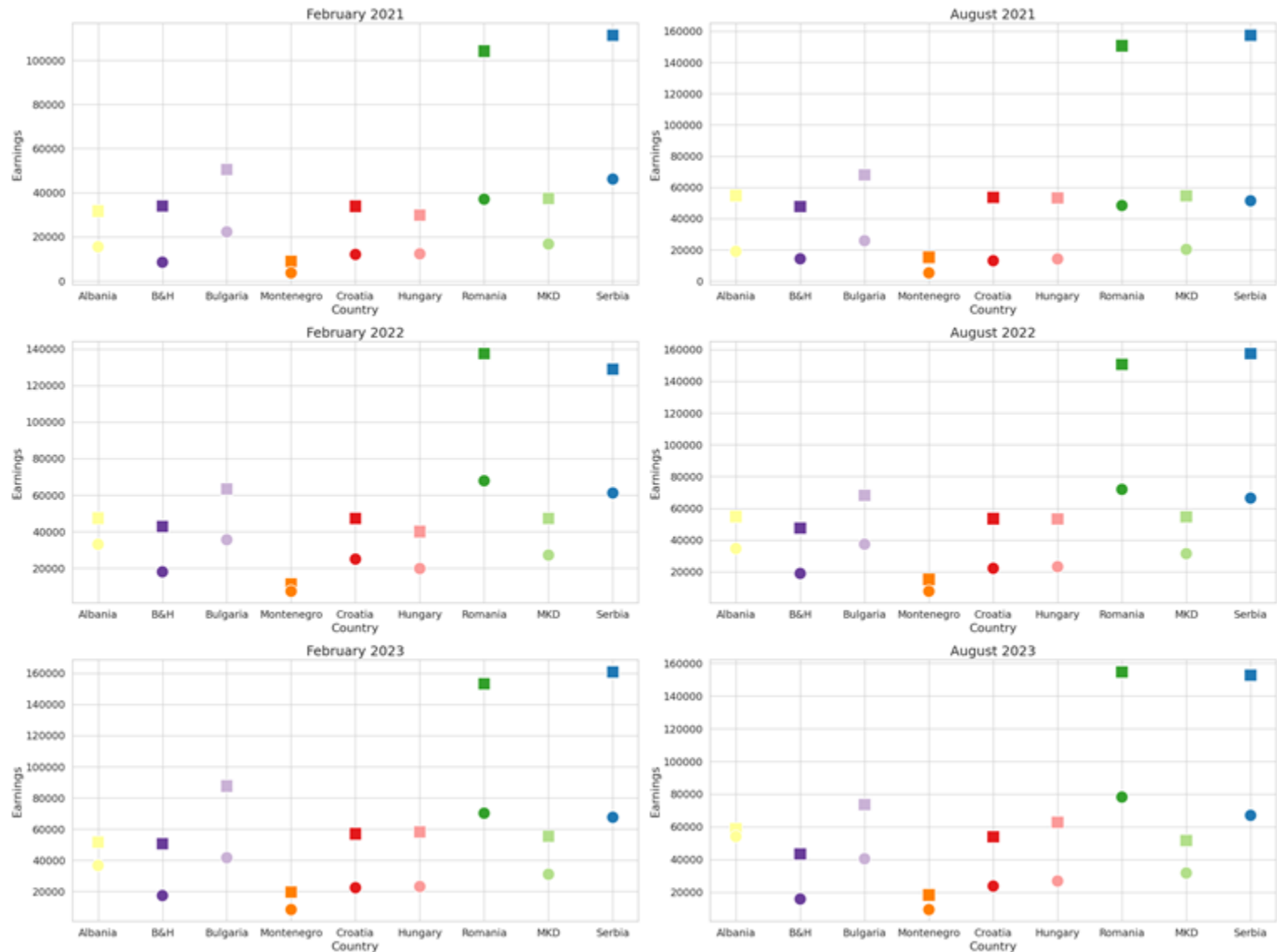
CONCLUSIONS

The data presented show a general increase in the number of online workers in most countries, with some countries doubling their gig population in two years.

There is also a higher number of online workers per capita in less developed countries, suggesting that platform work is more popular in these environments.

The overrepresentation of men in the online labour workforce is also observed in all countries, with some having a larger gender gap than others.

The data also showcase the dominant fields of professions in all countries, highlighting those that are having comparative advantages in certain fields.

Finally, the data suggest that platform work represents a viable alternative to jobs offered in traditional labour markets.

Limitations of Gigmetar™

 Methodology has so far been successfully tested and applied only by exploiting the data from the Upwork platform and to lesser depth to Guru.com and Freelancer.com;

 Requires continuous mapping of platforms in observed countries so that the data remain relevant;

 Gigmetar does not provide insights into local labour markets in the background and hence cannot provide comparisons on a larger scale;

 Yet, Gigmetar™ provides observations on several levels, which may be cross-tabulated, offering rich insights into online platform work in Serbia and the region.

Taking stock, looking ahead: Further possibilities of Gigmetar™

There are two venues for future research & development of the Gigmetar algorithm and use of existing datasets:

1. Possibilities within the Gigmetar framework, which can be divided into:

   - Using existing data to explore diverse phenomena (unused material - e.g., text mining or econometric/descriptive analysis of non-used features in the sample - or longitudinal data)
   - Broadening the framework to a greater number of countries

2. Possibilities outside of the Gigmetar framework, accommodating the methodology to a larger sample of platforms

Thank you for your attention!

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