Labor Market Information in Ukraine

Analysis of Available Dissemination Platforms and Proposal for a New Web Portal

World Bank

2018

The publication of this study has been made possible through a grant from the Jobs Umbrella Trust Fund, which is supported by the Department for International Development/UK AID, and the Governments of Norway, Germany, Austria, the Austrian Development Agency, and the Swedish International Development Cooperation Agency.
Summary

The purpose of this note is to make a proposal for a new labor market information dissemination platform in Ukraine, using as a starting point an analysis of available dissemination platforms in the country and examples from other countries. The note can be used as a guide to develop a new platform or improve the existing ones, considering the tools and sections recommended for each type of audience: students and jobseekers, policymakers and institutions, employers, and academics. In addition to this, the graphs and tables presented throughout the text can be used as good examples of ways to present the information in each section in an illustrative and easy-to-understand way.

The primary intended audience of this note are policymakers and specialists in charge of developing the new labor market dissemination platform in Ukraine. However, the recommendations for the structure and information to be displayed can be useful for other countries as well.
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The author benefited from guidance from Katerina Petrina and Abla Safir. The report also benefited from a first review of Ukrainian dissemination portals conducted by Olga Kupets.
1. **Introduction**

The objective of the new Labor Market Information Web Portal is the following:

- Provide jobseekers and students with key labor market information and occupation information to assist their decision-making.

- Provide policy makers and educational institutions with statistics showing the importance of skills in labor market outcomes, the lack of adequacy of the labor force to firm’s demand and problems with education system and employers, among others, to help guide policy discussion and motivate changes in curricula and labor market programs to promote investment in training by employers.

- Provide employers information about the labor force and references of wages paid in the market.

- Provide academics access to updated data bases related to labor market information.

In this note, I first make a diagnostic of current web portals in Ukraine, to account for its weaknesses and areas of improvement. Then, I present a proposal for a dissemination portal, considering web portals from other countries and presenting examples from them. I also use examples from two publications that use actual data from Ukraine in order to illustrate the type of graphs that could be useful. These two publications are: “Skills for a Modern Ukraine”¹ and “Skills gaps and the path to successful skills development”.²

2. **Analysis of Available Dissemination Platforms in Ukraine**

During the present study, I revised 12 dissemination platforms and 5 data sources in Ukraine (the links to web-source of each of them can be found in Appendix 1) in order to analyze weaknesses and areas of improvement.³

The general conclusion is that there is no single platform where you can find all the information relevant for jobseekers, students, policy makers and educational institutions in a user-friendly way, and including updated data in graphs and tables. In addition to this, some portals do not provide the option of choosing English as the language to view the information, or do not translate all the information, limiting its reach to Ukrainian and Russian speaking users.

Where more data is shown, as in State Statistics Service of Ukraine (SSSU), it is not user-friendly, no graphs are provided, and there is no guided information to help the audience know where to focus. For example, if a high-

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³ These dissemination platforms and data sources were also revised by Olga Kupets, who speaks Ukrainian.
school student wants help on what to study, he/she would be lost on where to look, or what to pay attention to.

More user-friendly portals do not include data or, if data is provided, it is not updated. Those that give tips on what to consider when choosing a career, are presented as text, with no data or graphs shown.

Table 1 presents each of the Ukrainian dissemination platforms revised, its apparent audience, whether they are user-friendly and comments about the information they provide and what information is missing.

### Table 1. Ukrainian Dissemination Platforms Assessed in this Revision and Comments to Them

<table>
<thead>
<tr>
<th>Dissemination platform</th>
<th>Audience</th>
<th>User-friendly?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Statistics Service of Ukraine (SSSU)</td>
<td>Policymakers, researchers/analysts, students who analyze the data for term papers, thesis, etc.</td>
<td>No</td>
<td>A lot of information provided in large tables. Not useful for non-specialist audiences. Lack of graphs, or guided information to help the audience know where to focus (which information is useful to look at in case he/she wants to analyze what to study, for example). It is not thought as a web site to help students or job seekers make decisions about occupations and careers, but just providing information in a raw way. Missing information: 1) Employment rate by sector (I only found employment population by sector). 2) Graphs showing information in an informative way. 3) Processed information, as provided in other job portals, for example showing employability of different occupations after 1 year of employment.</td>
</tr>
<tr>
<td>State Employment Service of Ukraine (SES) / Statistical information</td>
<td>Policymakers, researchers/analysts (those who know about this source)</td>
<td>No</td>
<td>Web page with statistics not shown when you choose English as language. Services for the population include “professional orientation” with articles covering different topics (such as “Professional orientation in the SES” or</td>
</tr>
<tr>
<td>Career guidance platform and professional orientation testing (supported by UNDP and other organizations)</td>
<td>Schoolchildren and their parents, students of colleges and universities (those who know about this source)</td>
<td>Yes</td>
<td>“How to choose a profession”). These, however, are only texts without tables or figures with information. It takes you to <a href="http://www.education.ua/ua/professions/">http://www.education.ua/ua/professions/</a>, where there is detailed information about each occupation, describing duties, work place, personal qualities, and education needed. However, they do not explain where they take the personal qualities needed, and this is not available for all occupations. For example, for teachers and biophysics, they only explain general characteristics, job responsibilities and qualifications. It also gives &quot;tips&quot; of what to consider when choosing a career. A free 3 hours test is available to help discover inclinations and abilities (you need to register first) Missing information: No data provided (tables nor graphs).</td>
</tr>
<tr>
<td>Institute of professional qualifications (supported by the Federation of Employers)</td>
<td>Difficult to say (may be employers and TVET institutions)</td>
<td>50-50 (user-friendly for interested people)</td>
<td>They provide a list of occupational standards and state education standards for a limited number of blue-collar professions. It also includes news, information about their projects, and laws and regulations. However, it is not conceived as a labor market dissemination platform that could help students or job seekers in their decision making process, nor it provides any data related to the labor market in graphs or tables.</td>
</tr>
<tr>
<td>Analysis of labor market situation and surveys by Head Hunter job portal (maintained by a private)</td>
<td>Job seekers and employers</td>
<td>Yes</td>
<td>Possibility to choose English, but not all graphs in the articles are translated. Data about wages and satisfaction with it are taken from a survey in Head</td>
</tr>
<tr>
<td>Employment agency HeadHunter</td>
<td>Hunter portal. Good articles with tips about interviews, updating cv, etc. No regular update of the information.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animated videos &quot;Job search&quot;, 24 series (supported by SES)</td>
<td>Difficult to say (intended audience is schoolchildren, students and adult job seekers) Yes They seem to be very friendly videos, but they are not in English. Using google translate, I can see the short description of each of them. They seem to be a useful guide for someone looking for a job.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>News about education, rankings of educational institutions, and several articles on career guidance</td>
<td>Schoolchildren and their parents, students of colleges and universities (those who know about this source) No Portal in Ukrainian. Using google translate, I was able to read it. Useful rank of universities, with information about its tuition fee. However, rankings are not shown by career and Universities are often listed according to their financial contribution to &quot;osvita.ua&quot; but not in accordance with their performance indicators or alphabet. Platform with a lot of advertising;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis of labor demand (current and in the next 5 years), project of Liga.net in 2015 (maintained by a news agency LigaBusinessInform)</td>
<td>Difficult to say (readers of liga.net) 50-50 Only in Ukrainian. Possibility of translating it with Google Chrome, bit tables and graphs are not translated. Infographics are useful but text is not well-structured</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List and a short description of occupations (professions) in highest demand, with job requirements, average wage and prospects (maintained by a private employment agency RabotaPlus)</td>
<td>Students of colleges and universities, adult job seekers (those who know about this source) Yes Only in Ukrainian (translated with google chrome). Information of occupations: general information, pros and cons, work, personal qualities, salary and prospects for the profession (all provided in text. No graph shown).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List of training centers by region and occupation (maintained by a private employment agency RabotaPlus)</td>
<td>Students of colleges and universities, adult job seekers (those who know about this source)</td>
<td>Yes</td>
<td>Only in Ukrainian (translated with google chrome). Useful information about courses, with duration, cost, dedication (part-time or full-time), number of participants.</td>
</tr>
<tr>
<td>List and a short description of selected occupations (professions) with basic job requirements (maintained by a private education portal education.ua, link from <a href="http://mycareer.org.ua/job-choice">http://mycareer.org.ua/job-choice</a>)</td>
<td>Schoolchildren and their parents, students of colleges and universities, adult job seekers (those who know about this source)</td>
<td>Yes</td>
<td>Only in Ukrainian or Russian (translated with Google Chrome). Detailed information about each occupation, describing duties, work place, personal qualities, and education needed. However, I don't know where they take personal qualities needed, and this is not available for all occupations. For example, for teachers and biophysics, they only explain general characteristics, job responsibilities and qualifications. Information missing: No data provided (tables nor graphs).</td>
</tr>
<tr>
<td>List of training centers by region and occupation (maintained by a private education portal education.ua)</td>
<td>Schoolchildren and their parents, students of colleges and universities, adult job seekers (those who know about this source)</td>
<td>No</td>
<td>Only in Ukrainian or Russian (translated with google chrome). Detailed information about available courses in different training institutions, with details about cost, course description, duration and time frequency (even possible hours to take the course). A lot of advertising; Universities are often listed according to their financial contribution to &quot;osvita.ua&quot; but not in accordance with their performance indicators or alphabet.</td>
</tr>
</tbody>
</table>

3. Proposal for a New Web Portal

The new portal should be comprehensive, concentrating all the information in one place for specialists and non-specialists. It will be created thinking of it as a tool to help students and jobseekers decide what to
study, which occupation to choose. As such, information will be displayed in an illustrative way, using graphs and tables easy to understand by non-specialists, providing all the information in one portal, but guiding the user on what information to look at and the relevance of it for his/her decision. Information will also be given for policymakers, institutions and employers, but displayed differently and focusing in other aspects of the labor market.

**The information should be available in English, in addition to Ukrainian and Russian.** This feature will allow non-Ukrainian nor Russian speakers to be able to use the platform, increasing its reach.

### 3.1 Main Ideas for Improvement

In this section, I summarize the main areas of improvement proposed in this note, which are missing in available portals in Ukraine:

1) _Employment rate by sector_ (currently, only population employed by sector is shown).

2) _Graphs showing information in an informative and easy way for non-specialists._

3) _Processed information_, for example showing employability and wages of different occupations after 1 year of employment.

4) _Updated information_, showing evolution or changes over time. It is not enough to see the picture at one moment in the past. Graphs and labor market information should be updated regularly to show the latest numbers, trends and changes.

5) _Growth of job vacancies, to understand its dynamic and evolution over time._ If only the number in the present year (or month) is shown, it could be the case that there is a high demand for an occupation due to a short term shock not likely to be sustained (or that there is a seasonal demand). Therefore, it is also useful to see vacancies compared to previous years.

6) _Projected employment level in 5 years_, by industry, occupations and skills level.

7) _Occupations and sectors with the largest number of firms hiring (good hiring prospects)._ It is easier to find a job when many firms, rather than few firms, are hiring. Large firms could hire at certain times of the year, or even not every year; instead, if there are many firms in the market hiring, even if small, it is more likely to have vacancies all year round and in different locations.⁴

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⁴ Georgia’s infographic.
8) Table showing for each occupation, employability 1 year after graduation, average earnings 4 years after graduation, annual tuition fee.

9) *Labor mobility:* map showing labor migration of recent graduates within the country, and the wage they are receiving.

10) *Why continue studying?* Show that in some occupations, those that continued studying receive XX more than those that didn’t. However, choosing the right occupation for each person, depending on each one’s skills, and considering those occupations with good outlook, is key to receiving the payoffs of education.

11) *Occupation simulator,* with occupation’s outlook, occupation’s education and skills or competencies requirements, wages, key facts about the occupation⁵, list of programs available in the market to prepare for the occupation (information of the institutions, duration of the program, tuition cost, institutional accreditation).

12) *Importance of skills in labor market outcomes.*

13) *Lack of adequacy of labor force to firm’s demand.*

14) *Problems with education sector and employers.*

### 4. Ideas for Students and Jobseekers

Students and jobseekers can begin their search considering general information of the labor market or using the occupations’ simulator. In the former, tables are presented for all occupations, giving students and jobseekers the possibility of ordering information in terms of a preferred concept (for example, wage, vacancies, etc.). In the latter, the information concentrates around one occupation, which has been chosen by the user, or which was the result of the simulator considering the user’s main skills.

#### 4.1 Labor Market Information

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⁵ Number of people that work in that occupation, distribution across sectors, % that work all year and % that work only part of the year, compares to all occupations’ share, age groups of those who work in these occupations, gender distribution, educational attainment.
This option provides general information of the labor market. The idea is to show tables with general information, where the student or jobseeker can order by a certain criterion, and basic graphs. This section would include:

1) Labor market outlook

a. Job vacancies number and growth with respect to base level. Graphs showing sectors (or occupations) with the largest vacancies (best job availability as defined in Georgia’s infographic)\(^6\) and the average number of applicants and suitable applicants per vacancy. Example: figure 1 below, which shows graphs from “Skills for a Modern Ukraine”\(^7\) and from Australia’s Labour Market Research Occupational Report for Accountants.\(^8\)

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\(^6\) Jobs availability: Occupations are said to have good jobs availability when there is a large number of job openings at a time. However, having a large number of vacancies does not imply good job prospects, as occupations with high number of job openings can also have large number of layoffs (temporary jobs as in construction).


Source: Skills for a Modern Ukraine.

Source: Administrative data of the State Employment Service of Ukraine.

Source: Ukraine state employees survey 2014.
b. Occupations and sectors with the largest number of firms hiring.

c. Bar graph showing the number of graduates per occupation vs the number of firms hiring. Another possibility is to show the top 10 occupations with respect to the number of graduates, vs. the vacancies of those occupations.

d. Jobs prospects, measured by increases in employment (in levels and in percentage growth). Unemployment rate by type of education, to show that more education not necessarily guarantees a job. Hence, the importance of making an informed decision. Example: figure 2 below, which shows graphs from “Skills gaps and the path to successful skills development”.  

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Figure 2. Example of Figures to Show that More Education not Necessarily Guarantees a Job

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Table showing for each occupation, employability 1 and 5 years after graduation, average earnings 4 years after graduation, annual tuition fee. Example: Occupation finder in Chile’s web portal “Futuro laboral”, www.mifuturo.cl, shown in figure 3.

Figure 3. Example of Table with Labor Market Outlook
f. Employment level projections in 5 years, by industry, occupations and skill level. For example, the Australian Labour Market Information Portal offers this information in downloadable tables. The projections have been derived from best practice time series models that summarize the information that is in a time series and convert it into a forecast. The projections are made by combining forecasts from autoregressive integrated moving average (ARIMA) and exponential smoothing with damped trend (ESWDT) models, with some adjustments made to take account of research undertaken by the Department of Employment and known future industry, occupational and regional developments.

g. Wages across fields (sectors and occupations), by personal and geographic characteristics.

i. Monthly wages offered on job postings by education level required. Example: table 3.7 “Skills for a Modern Ukraine” shown in figure 4.

**Figure 4. Example of Table with Monthly Wages by Education Level**
ii. Hourly wages among people working in different occupations.

iii. Five programs or occupations with the highest earnings and employment rates upon graduation.

2) Job requirements

Tables showing, by occupation, experience, education and skills required (key skills in people active in the labor market in that occupation).

a. Common competencies by occupation. Example: tables 4.1 and 4.2 “Skills for a Modern Ukraine” presented in figure 5.

Figure 5. Example of Table with Common Competencies by Occupation
b. Separating cognitive, socio-emotional and technical skills.

3) Labor Mobility

Map showing labor migration of recent graduates within the country. In Colombia’s portal, “Graduados Colombia” www.graduadoscolombia.edu.co, you can choose between the options “emission” or “reception”. The former shows the percentage of graduates in the department that migrate to other parts of the country, and the wage they are receiving. The latter shows the percentage of the graduates in the department that comes from other parts of the country, and the average wage they are receiving. See figure 6.

Figure 6. Example of Map with Labor Mobility Information
4) Why continue studying?

Show that in some occupations, those that continued studying receive XX more than those that didn’t. However, choosing the right occupation for each person, depending on each one’s skills, and considering those occupations with good outlook, is key to receiving the payoffs of education. Example: in Chile’s web portal “Futuro laboral”, www.mifuturo.cl, they include a very descriptive illustration about the payoffs of education:

Figure 7. Example of Illustration with Information about Why Continue Studying

Source: Chile’s web portal “Futuro laboral”, www.mifuturo.cl.

4.2 Occupation Simulator

This option provides customized information of the labor market. The student can choose from a list of skills and personal characteristics, those that he thinks he has (up to a maximum of 15, for example). Based on these, the simulator lists occupations where these skills or characteristics are more valued and that are more present
among people working in those occupations. See figure 8 for an example of the checklist provided in Canada’s web portal (the list of possible skills and knowledge is larger. It includes ten skills categories and nine knowledge categories).

**Figure 8. Example of Skills and Knowledge Checklist for the Occupation’s Simulator**

![Skills and Knowledge Checklist](https://www.jobbank.gc.ca/report_skillknowledge-eng.do?action=search_form)

In addition to these skills and knowledge items, the portal presents 9 essential skills that apply to most of the jobs: reading, writing, document use, numeracy, oral communication, thinking, digital technology, working with others and continuous learning. The job seeker or student can explore how these essential skills are used in different occupation’s profiles.\(^{10}\)

Another option is that the student chooses directly those occupations he/she is interested in. In both cases, then he can access the following information:

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\(^{10}\) If the essential skill is in fact not needed in a certain occupation, it says so. For example, for “cleaners”, under “digital technology”, it says: “This occupation does not use computers”. Otherwise, it gives details of tasks performed by a person with that occupation, that requires the essential skill.
1) Occupation’s outlook

Based on job vacancies, jobs prospects (employment change and growth), hiring prospects and jobs availability (as defined in Georgia’s infographic)\(^\text{11}\), we can show for the occupations that match his/her skills or the occupation chosen in the filter, the occupation outlook as “good” (★★★), “fair” (★★☆) or “limited” (★☆☆). Example: “Working in Canada”, [www.workingincanada.gc.ca](http://www.workingincanada.gc.ca).

Figure 9. Example of Occupation’s outlook from Occupation’s Simulator

![Local Employment Potential Information](image)


2) Occupation’s education and skills or competencies requirements

In the list of skills required, those that the student identified as having are identified with a ✓, and those missing are identified with a ¡. Skills and competencies requirements come from what employers consider important in each occupation. Example: “Working in Canada”, [www.workingincanada.gc.ca](http://www.workingincanada.gc.ca), shown in figure 10.

Figure 10. Example of Occupation’s Skills Requirements

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\(^{11}\) Jobs prospects: Occupations are said to have good prospects if they are highly demanded by employers, measured by increases in employment (in levels and in percentage growth).

Hiring prospects: Occupations are said to have good hiring prospects when a large number of firms is hiring.
3) **Occupation’s wages**

Table showing minimum, median, and highest wages per hour. If possible, we could show this information by region. If we can have information for different years of experience, we could show evolution of wages at different points after graduation, to show the growth curve. Example: In Chile (web portal “Furuto laboral”, www.mifuturo.cl), they show average gross monthly wages from the 1st and 5th year after graduation, of the highest 10%, highest 25%, 50th percentile, lowest 25% and lowest 10%. In Canada’s portal, they show a table with low, median and high wage ($/hr) by occupation and city (see figure 11).

**Figure 11. Example of Tables and Graphs Showing Occupation’s Wages**

*Panel a. Example of graphs from Chile’s web portal*
Panel b. Example of table from Canada’s web portal

4) Some key facts about the occupation

   a. Number of people that work in that occupation.

   b. Distribution across sectors for people that work in that occupation.

   c. Percentage of people who work all year and percentage that work only part of the year, compared to all occupations’ shares.
4.3 Guides

Finally, the section for jobseekers and students will include a set of guides. First, it will include a guide to help the high school student know what he/she has to do if he/she wants to pursue a higher education program (general steps). In addition to this, another guide will explain why it is important to stand out and how to do so to obtain a job. Finally, VET and college students will find guides explaining how to prepare for a job.
1) **Path to higher education**

A guide step by step to start a higher education program. Example: Chile's web portal “Futuro laboral”, [www.mifuturo.cl](http://www.mifuturo.cl), shown in figure 13.

**Figure 13. Example of Path to Higher Education Information**

![Image of the guide](https://example.com/image13.png)

*Source: Chile’s web portal “Futuro laboral”, www.mifuturo.cl.*

2) **Preparing for a job and improving your odds in the job market**

Presentations offering a guide on how to improve the chances of being chosen for a position and how to prepare for a job, in the case of graduate students and VET students. For example, the Australian portal offers three very illustrative presentations, mentioning why the need to stand out and how to do so. Figure 14 shows two of the slides from one the presentations. Presentations for VET and graduate students offer similar information but providing figures and tips for the specific audience.

**Figure 14. Example of Slides About Improving Your Odds in the Job Market**

![Image of the presentations](https://example.com/image14.png)
You need to stand out when applying for a job
Vacancies advertised on the internet or in a newspaper, Australia

Average number of applicants per vacancy
15

Average number of applicants interviewed
3

12 not interviewed

Source: Department of Employment, Survey of Employers’ Recruitment Experiences, 48 regions surveyed and Metro, 12 months to December 2015

Tips for improving your odds

Think and explore
Education
Soft skills
Job search

Source: Australia’s Labour Market Information Portal.
5. Ideas for Policymakers and Institutions

1) Importance of skills in labor market outcomes

a. Bar graph showing the contribution of different factors to hourly wages, including socioemotional and cognitive skills, by age groups. Example: figure O.4 “Skills for a Modern Ukraine” or figure 5.1 “Skills gaps and the path to successful skills development” (shown below).12

**Figure 15. Example of Graphs Showing the Factors Explaining Wages**

Panel a. Example of Bar Graph Showing Factors Associated with Variations in Hourly Wages

Panel b. Example of Graphs Showing the Importance of Skills for Wages

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b. Show how employers ranked skills, personal characteristics and personal traits in importance for retaining new hires. Example: figure 4.1 “Skills gaps and the path to successful skills development”.

Source: “Skills gaps and the path to successful skills development”,

Note: Results obtained using regression-based decomposition according to the Field’s approach (Fields, 2004) where the dependent variable is the log of hourly wages. The height of each bar represents the total R-squared for that regression. The sub-components of each bar show the contribution of each factor (or set of regressors) to the R-squared. Education = Years of education, Demographic = Demographic Characteristics, Job Char = Job characteristics, Info Skills = Use of information processing skills at work, Generic skills = Generic skills at work.
Show the decreasing signaling power of diplomas in Ukraine. The share of employers requiring university degree is larger than in other countries due to credential inflation and negative grade drift (“Skills gaps and the path to successful skills development”). In addition to this, for youth and prime age workers, the use of skills is more important than education for earnings. Example: figure 5.1 “Skills gaps and the path to successful skills development” (shown in Figure 15, panel b in this note).
2) **Lack of adequacy of labor force to firm’s demand**

a. Firm’s view of students’ preparation. Example: figure 4.1 “Skills for a Modern Ukraine”.

**Figure 17. Example of Graphs to Show Firm’s View of Students’ Preparation**

![Graph showing firm's view of students' preparation](image)

*Source: “Skills for a Modern Ukraine”,

b. List of occupations with the largest skill gaps.

c. Shortage of workers with certain level of education in the private sector (they are more likely to be in the public sector).

d. Show that highly appreciated skills are also in short supply. Example: figures 4.4 and 4.5 “Skills gaps and the path to successful skills development” (Figure 18 shows figure 4.4. Figure 4.5 is a similar graph, but for blue collar workers).

**Figure 18. Example of Graphs to Show That Highly Appreciated Skills are Also in Short Supply**

![Graph showing highly appreciated skills in short supply](image)
e. New economy skills are lacking even in young generation. Example: figure 5.4 and 5.5 “Skills gaps and the path to successful skills development” (Figure 19 shows figure 5.4. Figure 5.5 is a similar graph, but for blue collar workers).

Figure 19. Example of Lack of New Economy Skills
Skills gap from:

i. Employer side: Show the number of firms that reported problems when hiring, and the % of firms reporting skills as the main obstacle when hiring. Example: figures 3.1 and 3.2 “Skills gaps and the path to successful skills development”.

Figure 20. Graphs to Show Skills Gap From Employer Side
Figure 3.1: Firms want to, but find problems in hiring workers

A majority of firms have tried to hire in the past year

Percentage of firms with hiring experience

<table>
<thead>
<tr>
<th></th>
<th>Ukraine</th>
<th>Georgia</th>
<th>Armenia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue collar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White collar</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

And many firms experienced problems in hiring, especially for white collar workers

Percentage of firms with hiring experience reporting problems in hiring

<table>
<thead>
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</table>

Source: Authors, based on STEP employer surveys.
ii. Employee side: Show the % of workers that feel overqualified for the job. Example: figure 3.4 “Skills gaps and the path to successful skills development”. 
Figure 3.4: There is a perceived mismatch between job requirements and education levels

While most workers feel well matched to their jobs, a significant share consider themselves overeducated.

% workers who consider themselves overeducated, undereducated, and well matched

- Armenia: 29, 66, 7
- Georgia: 33, 61, 6
- Moldova: 11, 71, 5
- Ukraine: 2, 5, 96

Cont.
3) **Problems with education sector and employers**

a. Poor quality of general education and vocational training system. Show that firms and workers are dissatisfied with the quality of education and vocational training system. Example: figure 6.1 and 6.2 “Skills gaps and the path to successful skills development”.

*Source: “Skills gaps and the path to successful skills development”,*
Figure 6.1: Employers view education and training systems as failing in providing necessary skills

Disatisfaction with the general education system

<table>
<thead>
<tr>
<th>Percentage of firms considering that the general education system...</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOOD ATTITUDE AND SELF-DISCIPLINE</td>
</tr>
<tr>
<td>PRACTICAL SKILLS</td>
</tr>
<tr>
<td>UP TO DATE knowledge of methods, materials, and technology</td>
</tr>
<tr>
<td>KINDS of skills needed</td>
</tr>
<tr>
<td>LEVEL of skills needed</td>
</tr>
<tr>
<td>...DOES meet the skill needs of employers adequately</td>
</tr>
</tbody>
</table>

Disatisfaction with the TVET system

<table>
<thead>
<tr>
<th>Percentage of firms considering that the national TVET system...</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOOD ATTITUDE AND SELF-DISCIPLINE</td>
</tr>
<tr>
<td>PRACTICAL SKILLS</td>
</tr>
<tr>
<td>UP TO DATE knowledge of methods, materials, and technology</td>
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<tr>
<td>KINDS of skills needed</td>
</tr>
<tr>
<td>LEVEL of skills needed</td>
</tr>
<tr>
<td>...DOES meet the skill needs of employers adequately</td>
</tr>
</tbody>
</table>

Source: Authors, based on STEP employer surveys
b. Low incidence of training among firms. Example: figure 6.4 “Skills gaps and the path to successful skills development”.

Figure 23. Graphs to Show Training Among Firms
c. Little interaction between education system and enterprise sectors. Example: figure 6.6 and 6.7 “Skills gaps and the path to successful skills development”.

Figure 24. Graphs to Show Interaction between Education Sector and Enterprises
4) **Regional rates of employment of graduates upon completion of training programs**

“Skills for a Modern Ukraine” mentions that the State Employment Service (SES) reports it.

5) **Unemployment rate by type of education**

In order to show that more education not necessarily guarantees a job. Example: figure 3.3 “Skills gaps and the path to successful skills development” shown in Figure 2 in this note.

6) **Sectors and occupations with the largest vacancies**

Example: figures 3.7-3.9 “Skills for a Modern Ukraine” shown in Figure 1 in this note.

6. **Ideas for Employers**

1) **Map with labor force characterization**

Number of people working in a certain occupation, divided in public-private sector, gender distribution, maximum educational attainment, types of skills prevalent (self-reported), skills used most in the occupation (self-reported). Example: Colombia’s portal “Graduados Colombia” www.graduadoscolombia.edu.co"
Figure 25. Example of Labor Force Characterization

Panel a. Example of labor force characterization in Bogotá

Panel b. Information shown when choosing Health Sciences in Bogotá

Source: Colombia’s web portal “Graduados Colombia”, www.graduadoscolombia.edu.co.
2) **Wages paid to recent graduates per occupation**

This information is useful as a reference for an employer who needs to fill a position.

3) **Link between employer’s posting and jobseekers**

If we could link this portal with the public and private sector job portal, the employer could invite to apply to his/her job posting those students or jobseekers registered that he/she thinks has the skills he/she needs for the position.

7. **Ideas for Academics**

This section will include all the data series used to provide the information presented in the portal, with the possibility of creating graphs and viewing them in the portal or downloading the time series in Excel and .dta format for further analysis.
8. Appendix 1: Detail of the dissemination platforms and data sources studied

For the present document, I carried out a revision of the following dissemination platforms in Ukraine:

<table>
<thead>
<tr>
<th>Name or description of the dissemination platform</th>
<th>Link to web-source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 State Statistics Service of Ukraine (SSSU)</td>
<td><a href="http://www.ukrstat.gov.ua">www.ukrstat.gov.ua</a></td>
</tr>
<tr>
<td>2 State Employment Service of Ukraine (SES) / Statistical information</td>
<td><a href="http://www.dcz.gov.ua/control/uk/statdatacatalog/list/category?cat_id=30543">www.dcz.gov.ua/control/uk/statdatacatalog/list/category?cat_id=30543</a></td>
</tr>
<tr>
<td>3 Career guidance platform and professional orientation testing (supported by UNDP and other organizations)</td>
<td><a href="http://mycareer.org.ua/">http://mycareer.org.ua/</a></td>
</tr>
<tr>
<td>4 Institute of professional qualifications (supported by the Federation of Employers), including the list of occupational standards and state education standards for a limited number of blue-collar professions</td>
<td><a href="http://www.ipq.org.ua/">http://www.ipq.org.ua/</a></td>
</tr>
<tr>
<td>5 Analysis of labor market situation and surveys by Head Hunter job portal (maintained by a private employment agency HeadHunter)</td>
<td><a href="https://hh.ua/articles">https://hh.ua/articles</a></td>
</tr>
<tr>
<td>6 Animated videos &quot;Job search&quot;, 24 series (supported by SES)</td>
<td><a href="https://www.youtube.com/channel/UCx2oO5gClaoTV6b3BNLeAkg/videos?shelf_id=1&amp;view=0&amp;sort=dd">https://www.youtube.com/channel/UCx2oO5gClaoTV6b3BNLeAkg/videos?shelf_id=1&amp;view=0&amp;sort=dd</a></td>
</tr>
<tr>
<td>7 News about education, rankings of educational institutions, and several articles on career guidance</td>
<td><a href="http://osvita.ua/vnz/">http://osvita.ua/vnz/</a></td>
</tr>
<tr>
<td>8 Analysis of labor demand (current and in the next 5 years), project of Liga.net in 2015 (maintained by a news agency LigaBusinessInform)</td>
<td><a href="http://www.liga.net/projects/jobtrends/">http://www.liga.net/projects/jobtrends/</a></td>
</tr>
<tr>
<td>9 List and a short description of occupations (professions) in highest demand, with job requirements, average wage and prospects (maintained by a private employment agency RabotaPlus)</td>
<td><a href="https://jobs.ua/career">https://jobs.ua/career</a></td>
</tr>
<tr>
<td>10 List of training centers by region and occupation (maintained by a private employment agency RabotaPlus)</td>
<td><a href="https://jobs.ua/qualification">https://jobs.ua/qualification</a></td>
</tr>
</tbody>
</table>
List and a short description of selected occupations (professions) with basic job requirements (maintained by a private education portal education.ua, link from http://mycareer.org.ua/job-choice)

List of training centers by region and occupation (maintained by a private education portal education.ua)

In addition to this, I revised the following data sources:

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Agency collecting the primary data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Labor Force Survey</td>
<td></td>
</tr>
<tr>
<td>2 Survey of firms on labor statistics</td>
<td>SSSU</td>
</tr>
<tr>
<td>3 Survey of firms on the level and structure of wages by gender, age, education and occupational groups</td>
<td></td>
</tr>
<tr>
<td>4 Administrative statistics on registered unemployment</td>
<td>SES</td>
</tr>
<tr>
<td>5 Administrative statistics on registered vacancies</td>
<td></td>
</tr>
</tbody>
</table>

From other countries, the following dissemination platforms were revised:

<table>
<thead>
<tr>
<th>Name or description of the dissemination platform</th>
<th>Country</th>
<th>Link to web-source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Labor future (“Futuro Laboral”)</td>
<td>Chile</td>
<td><a href="http://www.mifuturo.cl">www.mifuturo.cl</a></td>
</tr>
<tr>
<td>3 Colombia’s graduates (“Graduados Colombia)</td>
<td>Colombia</td>
<td><a href="http://www.graduadoscolombia.edu.co">www.graduadoscolombia.edu.co</a></td>
</tr>
<tr>
<td>4 Working in Canada</td>
<td>Canada</td>
<td><a href="http://www.workingincanada.gc.ca">www.workingincanada.gc.ca</a></td>
</tr>
<tr>
<td>5 Observatory of labor insertion of ANECA (“Observatorio de inserción laboral de ANECA”)</td>
<td>Spain</td>
<td><a href="http://www.aneca.es">www.aneca.es</a></td>
</tr>
</tbody>
</table>