SESSION 6

THE LABOUR MARKET
AT THE TIME OF COVID _19
INSIGHTS AND COMMENTS

Mario Mezzanzanica
WHAT’S THE GOAL?

Analyze web data… …to improve knowledge and support decision making process
THE CONTEXT

The Italian COVID-19 emergency forced to Italian Government to establish a lockdown all over the country, that since the third decade of February leaded to:

• **The lockdown of almost all businesses and institutions** (except those belonging to essential economic sectors, such as health and food);
• **The establishment of the smart-working for many activities** (when possible)

As a consequence, **heavy and significant effects** on the labour market over the last months, specifically:
• Massive use of layoffs
• Massive reduction of new contracts
• Significant contraction of the labor marked demand for almost all economic sectors and professions in Italy.
A SHOCK THAT NEVER HAPPENED BEFORE

Being able to continuously observe and to deeply understand the key elements of such a shock is crucial to support effective policy and intervention actions.
SOME QUESTIONS

- Which are the effects that COVID-19 will have over occupations? Can we identify occupations that will suffer more the COVID effects? Are occupations affected in the same way? If not, which are affected most?
- Which sectors are affected more?
- Do territorial differences exist in the Italian COVID-19 crisis?
- …

And more…
can we forecast what will happen in the future of occupation?
THE LABOUR MARKET AT THE TIME OF COVID_19 GLOBAL OVERVIEW AND SUMMARY DATA

Layoff - Italian national data

- Gen/ Apr 2020: 834,8 Million hours Layoff admitted
- Gen/ Apr 2019: 91 Million hours Layoff admitted
- Gen/ Apr 20 vs 19: +816%
THE LABOUR MARKET AT THE TIME OF COVID_19
GLOBAL OVERVIEW AND SUMMARY DATA

Mandatory Notifications (Cob) – Source: Polis Lombardy

New contracts
Jan/Mar 20 vs 19: -10.4%
Mar 20 vs Mar 19: -34%

Contract categories
Jan/Mar 20 vs 19:
-13% Temporary
-10% Permanent
-19% Apprenticeship

Mar 20 vs Mar 19:
-44.5% Temporary
-20.6% Permanent
-40% Apprenticeship

Economic Sectors
Jan/Mar 20 vs 19:
-5% Agriculture
-11% Trade and Services
-11% Constructions
-10% Industry

Mar 20 vs Mar 19:
-8% Agriculture
-35% Trade and Services
-44% Constructions
-30% Industry
THE LABOUR MARKET AT THE TIME OF COVID_19
GLOBAL OVERVIEW AND SUMMARY DATA

Data from Online Job Vacancies - OJV – Italy

Mar 20 vs Mar 19

OJV
Jan/Mar 20 vs 19:  
-17%
Mar 20 vs Mar 19:  
-34%

Source: WOLLYBI

Territory
-37%
-34%
-28%
-34%

Economical Sectors
-73%
-62%
-37%
-34%
-30%
-33%
-31%
ONLINE JOB VACANCIES
FIRST QUARTER 2020

☑️ Trend of Occupations
☑️ Within territory
☑️ Within economic sector

Source:
TREND VARIATION – PROFESSIONAL GROUPS
Q1, 20 VS Q1,19

<table>
<thead>
<tr>
<th>Series 1</th>
<th>0 - Total</th>
<th>1 - Managers</th>
<th>2 - Professionals</th>
<th>3 - Technicians and associate professionals</th>
<th>4 - Clerical support workers</th>
<th>5 - Service and sales workers</th>
<th>7 - Craft and related trades workers</th>
<th>8 - Plant and machine operators and assemblers</th>
<th>9 - Elementary occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-17%</td>
<td>-40%</td>
<td>-11%</td>
<td>-17%</td>
<td>-16%</td>
<td>-15%</td>
<td>-23%</td>
<td>-22%</td>
<td>-9%</td>
</tr>
</tbody>
</table>
TREND VARIATION – TERRITORIAL AREA
Q1, 20 VS Q1,19

North West

<table>
<thead>
<tr>
<th>Region</th>
<th>Valore percentuale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nord Ovest</td>
<td>-17%</td>
</tr>
<tr>
<td>Lombardia</td>
<td>-19%</td>
</tr>
<tr>
<td>Piemonte</td>
<td>-9%</td>
</tr>
<tr>
<td>Valle d’Aosta</td>
<td>-10%</td>
</tr>
<tr>
<td>Liguria</td>
<td>-19%</td>
</tr>
</tbody>
</table>

North East

<table>
<thead>
<tr>
<th>Region</th>
<th>Valore percentuale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nord Est</td>
<td>-18%</td>
</tr>
<tr>
<td>Veneto</td>
<td>-18%</td>
</tr>
<tr>
<td>Emilia-Romagna</td>
<td>-20%</td>
</tr>
<tr>
<td>Friuli-Venezia</td>
<td>-18%</td>
</tr>
<tr>
<td>Prov. Aut. di Bolzano</td>
<td>-21%</td>
</tr>
<tr>
<td>Prov. Aut. di Trento</td>
<td>16%</td>
</tr>
</tbody>
</table>

Center

<table>
<thead>
<tr>
<th>Region</th>
<th>Valore percentuale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centro</td>
<td>-16%</td>
</tr>
<tr>
<td>Lazio</td>
<td>-15%</td>
</tr>
<tr>
<td>Marche</td>
<td>-12%</td>
</tr>
<tr>
<td>Toscana</td>
<td>-18%</td>
</tr>
<tr>
<td>Umbria</td>
<td>-22%</td>
</tr>
</tbody>
</table>

South and Islands

<table>
<thead>
<tr>
<th>Region</th>
<th>Valore percentuale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sud e Isole</td>
<td>-19%</td>
</tr>
<tr>
<td>Abruzzo</td>
<td>-24%</td>
</tr>
<tr>
<td>Basilicata</td>
<td>-25%</td>
</tr>
<tr>
<td>Calabria</td>
<td>-33%</td>
</tr>
<tr>
<td>Campania</td>
<td>-15%</td>
</tr>
<tr>
<td>Molise</td>
<td>-8%</td>
</tr>
<tr>
<td>Puglia</td>
<td>-15%</td>
</tr>
<tr>
<td>Sardaigna</td>
<td>-16%</td>
</tr>
<tr>
<td>Sicilia</td>
<td>-18%</td>
</tr>
</tbody>
</table>
TREND VARIATION OJV – **ECONOMIC SECTORS**
Q1, 20 VS Q1, 19

*Representation of economical sectors with an overall coverage of 93% of analyzed data*
Professions with greater trend variation (Q1,20 vs Q1,19) and Feb-Mar 20 greater variation

Most requested occupations

<table>
<thead>
<tr>
<th>Profession</th>
<th>Percent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Professionals</td>
<td>336</td>
</tr>
<tr>
<td>Nursing associate professionals</td>
<td>202</td>
</tr>
<tr>
<td>Social work associate professionals</td>
<td>170</td>
</tr>
<tr>
<td>Cashiers and ticket clerks</td>
<td>115</td>
</tr>
<tr>
<td>Health care assistants</td>
<td>84</td>
</tr>
<tr>
<td>Personal care workers in health services</td>
<td>139</td>
</tr>
<tr>
<td>Shelf fillers</td>
<td>57</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Feb vs Mar '20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Professionals</td>
<td>539</td>
</tr>
<tr>
<td>Nursing associate professionals</td>
<td>452</td>
</tr>
<tr>
<td>Social work associate professionals</td>
<td>416</td>
</tr>
<tr>
<td>Cashiers and ticket clerks</td>
<td>294</td>
</tr>
<tr>
<td>Health care assistants</td>
<td>266</td>
</tr>
<tr>
<td>Personal care workers in health services</td>
<td>243</td>
</tr>
<tr>
<td>Shelf fillers</td>
<td>175</td>
</tr>
</tbody>
</table>

Source: Nursing professionals, Nursing associate professionals, Social work associate professionals, Cashiers and ticket clerks, Health care assistants, Personal care workers in health services, Shelf fillers.
PROFESSIONS WITH GREATER TREND VARIATION (Q1,20 VS Q1,19) AND FEB-MAR-20 MORE NEGATIVE

<table>
<thead>
<tr>
<th>Profession</th>
<th>Tendential Variation</th>
<th>Feb vs Mar '20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast food preparers</td>
<td>-18</td>
<td>-68</td>
</tr>
<tr>
<td>Kitchen helpers</td>
<td>-34</td>
<td>-66</td>
</tr>
<tr>
<td>Business services and administration managers not elsewhere classified</td>
<td>-66</td>
<td>-51</td>
</tr>
<tr>
<td>Electrical and electronic equipment assemblers</td>
<td>-5</td>
<td>-50</td>
</tr>
<tr>
<td>Enquiry clerks</td>
<td>-26</td>
<td>-50</td>
</tr>
<tr>
<td>Chefs</td>
<td>-52</td>
<td>-49</td>
</tr>
<tr>
<td>Shoemaking and related machine operators</td>
<td>-27</td>
<td>-45</td>
</tr>
</tbody>
</table>

Source: Fast food preparers, Kitchen helpers, Business services and administration managers not elsewhere classified, Electrical and electronic equipment assemblers, Enquiry clerks, Chefs, Shoemaking and related machine operators.
CONCLUSIONS: WHAT DATA ARE TELLING US?

• **OJV provide a very-short-term vision.** Using a metaphor, we may say *we sailing in some uncharted waters*. It seems like the COVID shock interrupted a prospective vision that vacancies have always shown, that is their ability in anticipating new real labour contracts;

• Medium-skill-level professions, as well as weaker workers in the labor market are the hardest hit by the COVID crisis, as young people, temporary workers (see apprenticeship contracts, fixed-term contracts and female gender);

• The territories are all affected significantly, and some economic sectors are affected more than others (eg: tourism, trade and industry in particular);

**SOME KEY ELEMENTS:**

✓ On the one side, training activities are needed to support the reskilling and retraining of workers; on the other side, services for workers are crucial to help people in career and vocational guidance after the COVID-shock

✓ Data availability to monitor and catch ongoing changes, to support labour market stakeholder in identifying proper policy and intervention actions
THANK YOU
SESSION 6

WEB LABOR MARKET IN ICT OCCUPATION ANALYSES
A USE CASE

ITALIAN OBSERVATORY OF DIGITAL COMPETENCES

Fabio Mercorio
THE CONTEXT

Since 2017, the four major Italian associations for ICT are involved in an initiative aimed to monitor, interpret and support ICT profession spreading across different sectors in Italy.

This initiative is called **Italian Observatory of Digital Competences**

Today we'll present you some brief valuable insights, coming from the usage on Web Data in the analysis of the evolution of Digital Skills across several professions.
A COUPLE OF DEFINITIONS

Skills Rate
estimate the incidence of Digital, Hard non Digital and Soft skills in a single occupation

Skills Relevance
defines the weight of each skill for the considered occupation

Idea: Exploit the informative power of the OJV for computing the Skill Rate and skill Relevance

Skills Rate and Relevance methodology was defined and used by CRISP in 2017, 2018 and 2019 for the Italian Observatory of Digital Skills promoted by the Italian ICT associations
AND NOW? ANALYTICAL PATH

Now we can **drill** into competences, to better understand how professions are changing their skill mix across time, sectors, corporate areas and so on…

**Level 1, digital pervasiveness across sector categories**

![Diagram showing digital pervasiveness across sectors](image-url)
ANALYTICAL PATH

Level 2, Digital Skill Rate across corporate areas (Manufacturing sector)
ANALYTICAL PATH

Level 3, Skill Rate for specific professions (Manufacturing, Core Business area)
ANALYTICAL PATH

Level 4, Focus on Digital Skills groups

- **Applied and Management Skills** = ability to use tools and software to manage both operational and decisional processes
- **Basic Skill** = for everyday use of basic IT tools
- **ICT Techniques Skill** = very specialized on solutions, platforms and programming languages
- **Information Brokerage Skill** = for the use of IT tools aimed at corporate communication
## Analytical Path

### Level 5, elementary Skills analysis

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Applied and Management Skills</th>
<th>ICT techniques</th>
<th>Information Brokerage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Database usage</td>
<td>Front-end Website implementation</td>
<td>Graphic Software Usage</td>
</tr>
<tr>
<td></td>
<td>Programs for draughtsmen</td>
<td>Web programming</td>
<td>SW markup usage</td>
</tr>
<tr>
<td></td>
<td>3D modelling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphic and multimedia designers</td>
<td>2.5</td>
<td>4.5</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Applied and Management Skills</th>
<th>Information Brokerage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Database usage</td>
<td>Digital data management</td>
</tr>
<tr>
<td></td>
<td>ERP</td>
<td>SEO Search Engine Optimiz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social Network Usage</td>
</tr>
<tr>
<td>HR training specialist</td>
<td>4.5</td>
<td>4.5</td>
</tr>
</tbody>
</table>

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ETF: Working together learning for life

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24
NOW ONLINE

Starting from 2019, the **Italian Observatory of Digital Competences** is online.

Updated every quarter, it helps professionals, associations, journalists and citizens better understanding how Digital Skills are changing Labor Market in all the sectors and all the professions.

You can take a look on:  

https://competenzedigitali.org/
THANK YOU
SESSION 6

WEB LABOR MARKET FOR EDUCATION
A USE CASE

UNIVERSITIES AND TRAINING PROVIDERS

Alessandro Vaccarino
THE CONTEXT

Several Italian universities and training providers are using Web Labor Market data to keep their courses updated in terms of competences formed, to help their student achieve a successful career.

How?

Comparing Online demand with their courses.

This is the goal of WollyEdu, our educational platform.

Let’s see it in detail
Italian Educational Minister request, for each Degree course offered by a University, a specific document that describe:
- Course objective
- Course content (aka syllabus)
- Potential outcoming Occupations
- ...

WollyEdu extract information from those documents and uses it to provide a summary of Labour Market Demand for every specific professions.
Selecting the desired **Course Degree**, the system will present several information, including...
...TO ANALYSES

The overall OJVs trend in the last year
The most requested Professions with respect to ESCO standard
...TO ANALYSES

The Experience required and the type of Contract offered.

But, above all
The Skill mix requested for each Profession and, for each skill type,...
...TO ANALYSES

The most relevant elementary Skills
WHAT’S THE BENEFIT?

Universities and training providers are using this system to achieve 2 main goals:
- Support students understanding:
  - which kind of jobs they could found
  - where those jobs are located
  - which contract and salary range they can expect
  - …
- Supports Departments updating and reviewing their courses:
  - Updating some courses, to be more aligned with Labor Market needs
  - Introducing new courses
  - Evaluating new methodologies, to prepare also soft skills
THANK YOU