



Seville – Joint Research Centre, European Commission

*12 December 2019
FINAL MEETING*

**“Compilation of tasks data and development and testing of a tasks
questionnaire”
Work plan, Deliverable 4 and Deliverable 5**

Valeria Cirillo

INAPP - National Institute for the Analysis of Public Policies (Rome)



Our project- wrapping up

➤ *Less than 1 year, lots of achievements...thank you all!!!*

1. Thanks to the JRC for designing a project which allowed to a) strengthen our knowledge in a research domain that is key for our institutions b) build up a great network of researchers representing a promising base to do further research in the next future
2. Thanks to all partners for their invaluable support (and patience) concerning both the administrative dues as well as the realization of the deliverables (high quality work provided always within the agreed deadlines, thank you indeed!)
3. Thanks to all the colleagues and experts (in particular those joining us today) who, since our kick off meeting, provided precious advices and suggestions concerning the revised framework and its implementation
4. We would finally like to thank all the INAPP's administrative colleagues who supported us all along our way making possible something that is from time to time seemed very complicated...☺

1. An in-depth analysis and discussion of the JRC-EF framework...resulting in a **technical report** which is now a valuable base to enrich the framework on theoretical/conceptual grounds! (see the recent paper by Bisello and Macias...)
2. Realization of unique and promising national-level task **databases** which will allow to a) answer super interesting RQs on task, skills and work organization b) compare country-level results highlighting the role of (country-specific) structural and institutional factors contributing to shape the nature of work
3. Great interaction and discussion with the JRC resulting in a very good base for a **new task-based questionnaire**...translation and revision activities very useful for us allowing to improve knowledge and expertise on the matter...
4. Reports (on their way...) with **feedback on questionnaire** which will provide further support in finalizing and consolidating the questionnaire!

➤ *à la* Autor view (from SBTC to RBTC):

1. Tasks as units of work activity producing output
2. 'Technical view' of production
3. Tasks as discrete units of work
4. Depending on what is *technologically feasible*, a task will be performed by the cheapest factor (human or machine) → production function view (Neoclassical framework)

➤ Critical omissions (Fernandez-Macias and Bisello, 2019)

1. Absence of *human agency*
2. Social aspects of the production process
3. Jobs as bundle of tasks but also positions within the social structure of productive organization
4. Tasks as socially embedded entities (changing in contents reflects the structures of consumption of society)

KEY DOMAINS IN THE JRC-EF FRAMEWORK

Content of work

- ✓ **Physical [Strength, Dexterity, Navigation]**
- ✓ **Intellectual [Information processing, Problem solving]**
- ✓ **Social [Serving, Selling, Teaching, Managing, Caring]**

Organizational content of work

- ✓ **Methods [Autonomy, Teamwork, Routine]**
- ✓ **Tools [Non-digital, Digitally-enabled machinery]**

1. **Deliverable 1** – Report including feedback and input on the revised version of the JRC-Eurofound framework **[INAPP supported by UNICATT >> due within 21/04/2019]**
2. **Deliverable 2** – Four national task database **[INAPP, IER, PFU & BIBB >> due within 21/07/2019]**
3. **Deliverable 3** – Technical reports illustrating the four national task database **[INAPP, IER, PFU & BIBB >> due within 21/07/2019]**
4. **Deliverable 4** – Four translated versions of the model questionnaire on tasks **[INAPP, IER, PFU & BIBB >> due within 21/09/2019]**
5. **Deliverable 5** – Technical reports on the four national tests of the model questionnaire on tasks **[INAPP, IER, PFU & BIBB >> due within 21/01/2020]**

Deliverable 5 – Technical reports on the four national tests of the model questionnaire on tasks **[INAPP, IER, PFU & BIBB]**

- 1. Overall evaluation of the tasks questionnaire**
- 2. Specific feedback**
- 3. Evaluate how well the questions are understood by respondents**
- 4. Evaluate whether questions reflect the concepts of the JRC/Eurofound tasks framework**
- 5. Evaluate whether questions reflect adequately the task contents, methods and tools of workers**

Output: technical report for each country

First draft → end of December (before Christmas break)

Final draft → 21/01/2019

Work package 3

Assistance in developing a model questionnaire on tasks and test in four countries

Deliverables 4 and 5

Development and testing of a tasks questionnaire

1- Feedback on questions and items (reported by interviewers)

2- Analysis of answers

INAPP interviewers (socio-economic background):

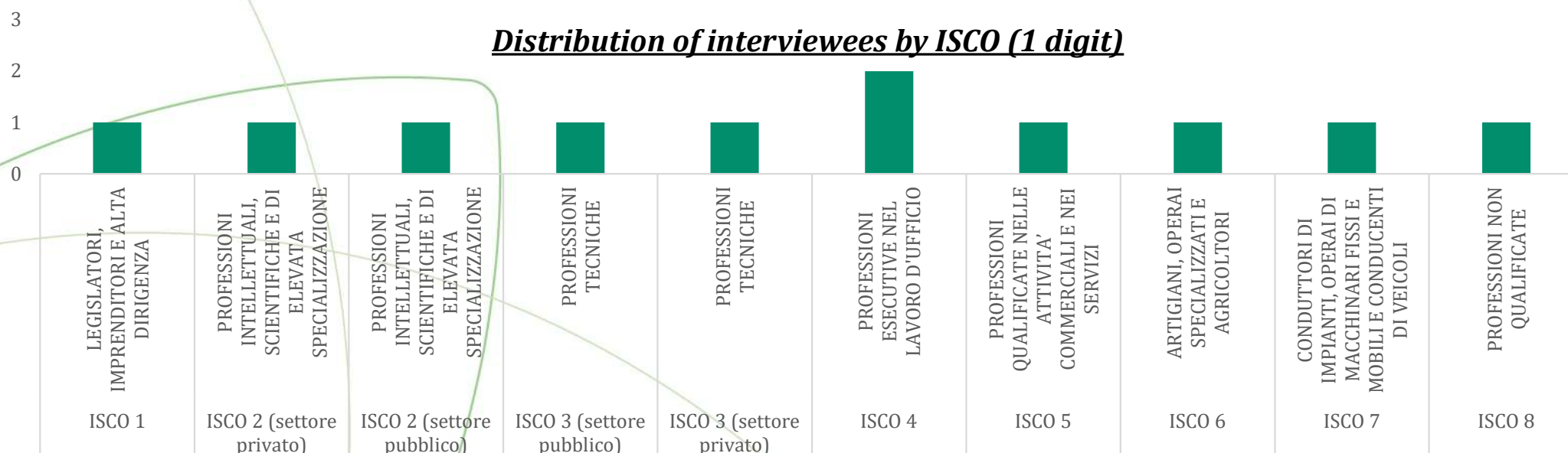
Teresa Barbieri, Valeria Cirillo, Lucrezia Fanti, Massimiliano Franceschetti, Valentina Gualtieri, Dario Gurascio, Rita Porcelli, Matteo Tubiana

Time of duration of each interview: 20-40 minutes

Total number of interviewees: 11

Place of interview: the interviewee's place of work / home

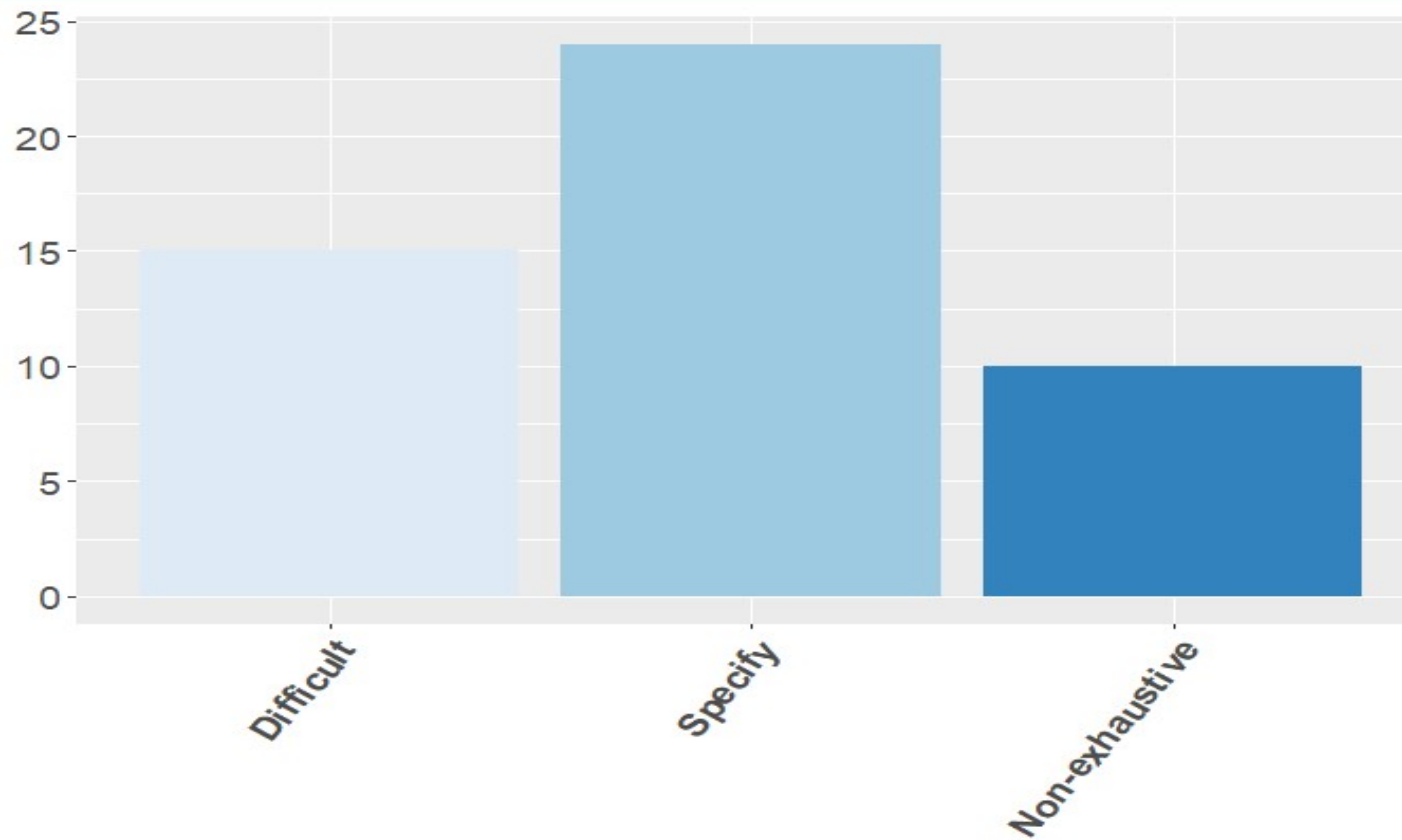
Distribution of interviewees by ISCO (1 digit)



Feedback on questions and items (freely reported by interviewers)

✓ *We group feedback in three main categories:*

1. **Difficult to understand** → the respondent does not understand the question / she is not sure about what the question means / she asks for clarifications
2. **Need to specify** → the question is comprehensible but the interviewee needs more information (for example it is necessary to include a list of professions or a list of sectors...). In order to answer the interviewee needs more information (for example if the question refers to her main activity or not)
3. **Non-exhaustive items** → the respondent needs to have more items to adequately reply to that specific question



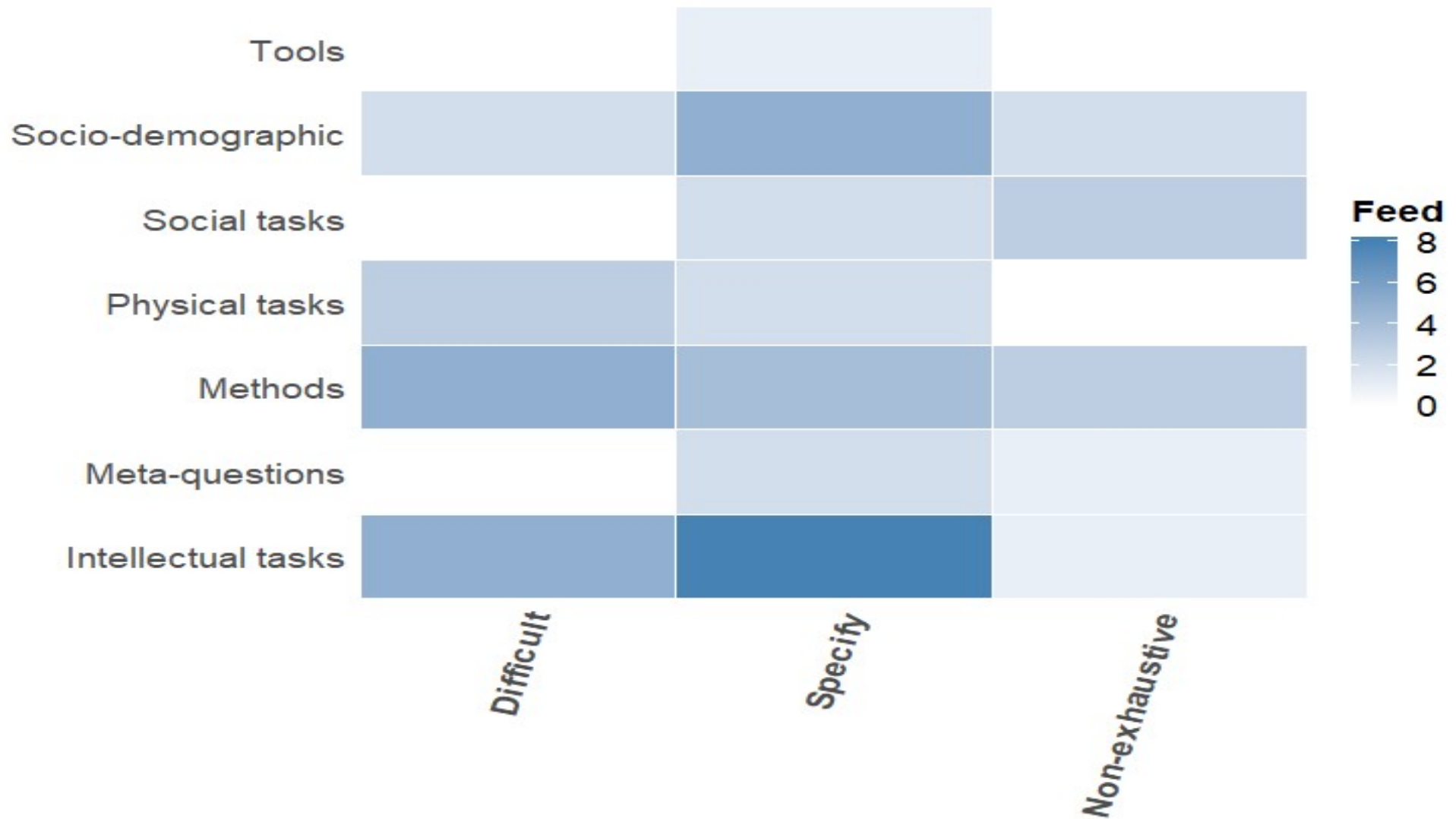
N. of questions: 76

N. of questions (“difficult to understand”) → 15 (19,7%)

N. of questions (“need to specify”) → 24 (31,5%)

N. of questions (“non-exhaustive replies”) → 10 (13,5%)

Distribution of feedback by main sections of the questionnaire



Distribution of feedback by questions



16a. How often does your job require to: Use fingers, hands or tools to finely handle or manipulate objects?

- INAPP interviewer (ISCO 1, 2, 4, 8) → finely handle is not clear

16b. ... Respond promptly (using eyes, feet, body) to a signal (sound, light, figure) when it occurs?

- INAPP interviewer (ISCO 4, 5, 8) → the respondent does not know how to answer, better including an example

18a. ... Focus on or identify specific images, details or patterns (except text) even in the presence of other distracting signals/visual inputs

- INAPP interviewer (ISCO 2, 3, 5) → difficult to understand; this item is confused with the concept of «concentration». The respondent asks to repeat the question, she does not understand what «modelli specifici» means in the Italian translation (that is «patterns»)

32. How often does your job require to find or obtain information from relevant sources?

- INAPP interviewer (ISCO 3, 6, 8) → the concept of “relevant sources” is not clear. Examples are needed.

33. How often does your job require to combine information to form general rules or conclusions?

- INAPP interviewer (ISCO 2, 3, 6, 7) → the question has not been understood. Examples are needed. Possible measurement errors.

46. In order to get your job done, do you: strictly follow instructions, targets, or orders

- INAPP interviewer (ISCO 2, 3, 6) → It is not applicable for those works in which following strict rules is not required; instructions, targets, or orders are put together and this is perceived as confusing.
- Items of responses are not very clear: what do you mean by “orders”?

22. How often does your job require you to read, understand business and management plans, balance sheets (including financial records), administrative files and/or records or resource allocation?

- INAPP interviewer (ISCO 2) → «in general or related to the place where I work?»

23. How often does your job require you to write letters, memos, administrative files and/or records or resource allocation

- INAPP interviewer (ISCO 4) → Is the use of email included?

26. ... How often does your job require you to write reports or fill forms?

- INAPP interviewer (ISCO 6) → The question is not clear. What do you mean by forms? Also invoices and/or receipts ?

57. For the team in which you work mostly, do the members decide by themselves...?

- INAPP interviewer (ISCO 8) → Shift works are included? (internal working time)
- Add if Q11=1 jump and move on to the next one

Examples of questions classified as “Need to specify”

27. How often does your job require to read, understand, use arithmetic, algebra, geometry, statistics, and their applications?

- INAPP interviewer (ISCO 3) → Examples are needed

28. How often does your job require to use more advanced math, such us calculus, regressions techniques?

- INAPP interviewer (ISCO 5) → Interviewee does not understand the examples and she does not know what «regressions» mean.

31. How often does your job require to use or calculate fractions, decimals or percentages?

- INAPP interviewer (ISCO 3) → Overlap with the previous question on the use of basic mathematics

32. How often does your job require to find or obtain information from relevant sources?

- INAPP interviewer (ISCO 3, 6, 8) → the concept of “relevant sources” is not clear. Examples are needed (we use the translation “fonti autorevoli”)

39. How often does your job require to instruct, train or teach people?

- INAPP interviewer (ISCO 8) → Is training-on-the-job included in the possible answers?

42. How often does your job require persuade or influence people for selling them services or products?

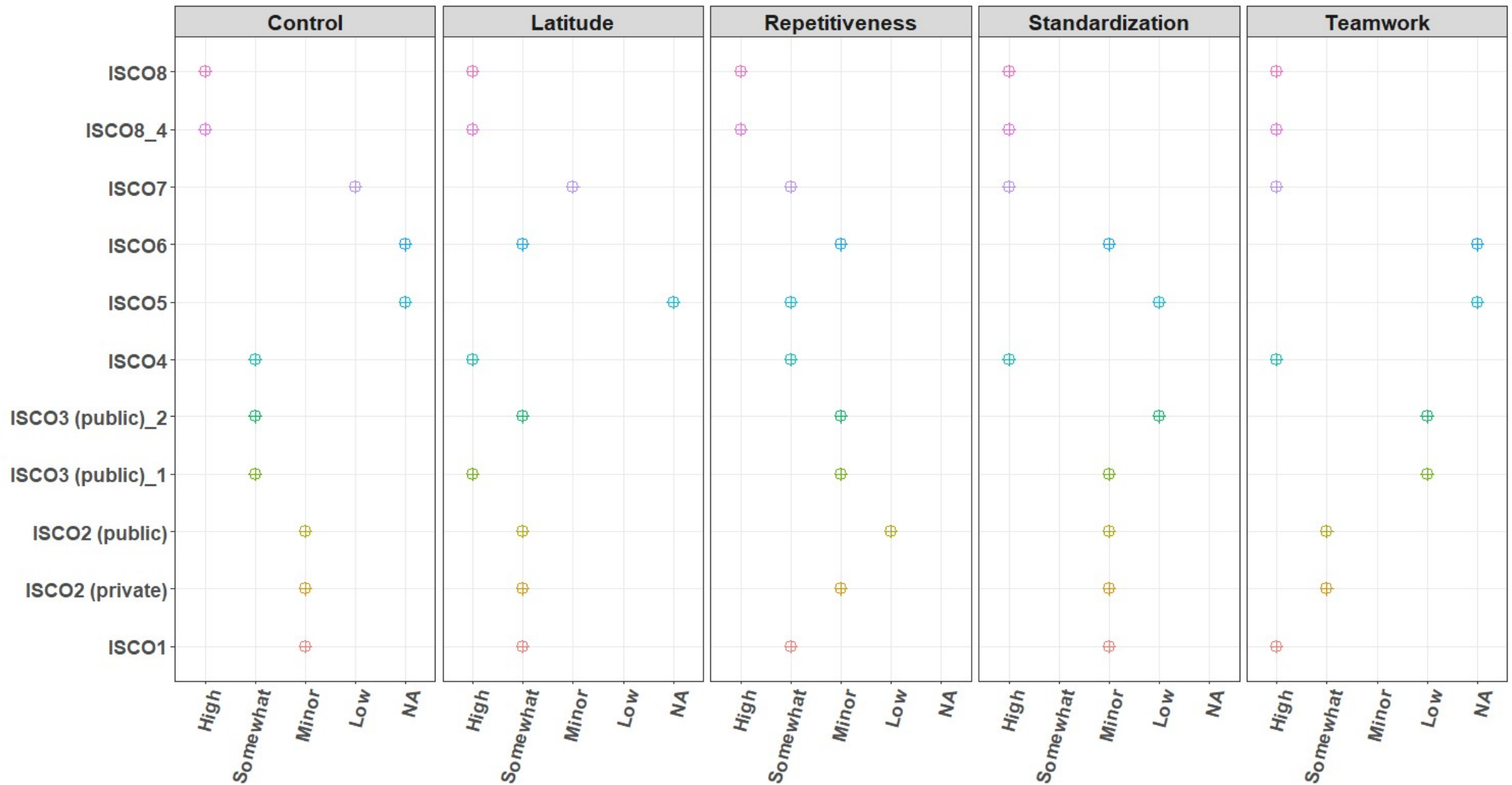
- INAPP interviewer (ISCO 8) → Is it in a broad sense, otherwise too much linked to trade activities?

70. [if q67=yes] The change in salary was the result of..

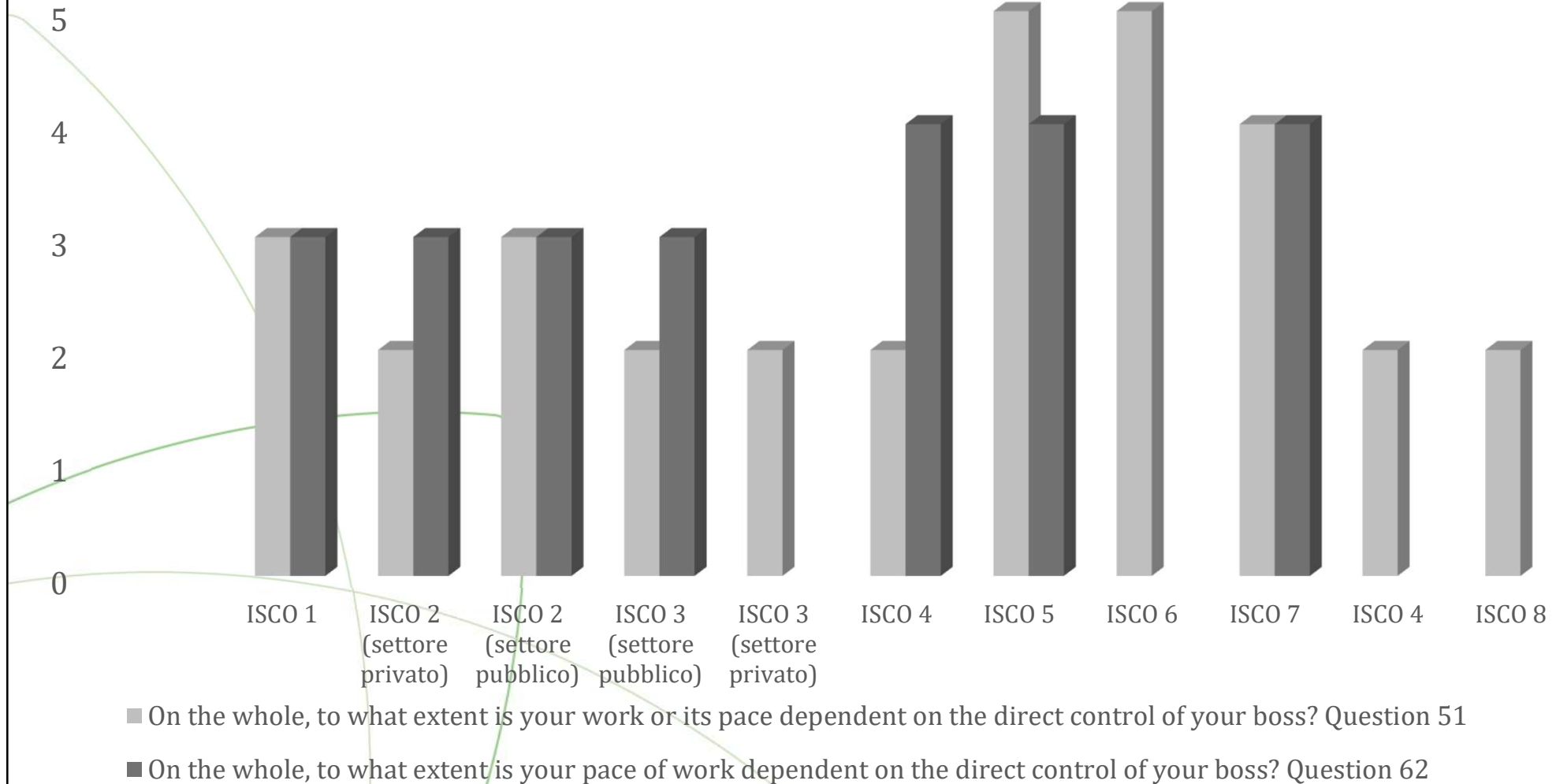
- INAPP interviewer (ISCO 5) → According to the respondent there are no enough alternatives, in her case the salary was lower because firm suffered a decrease in revenues
- INAPP interviewer (ISCO 7) → On this question a doubt is expressed: items are all positive. In the specific case, the change in remuneration was negative

Analysis of answers

Analysis of answers



Very similar questions, different answers



- ✓ Many questions need to be simplified, perceived as difficult to understand (examples are needed)
- ✓ Consistency of scales' meaning along the questionnaire
- ✓ Several questions need to be better specified (including a scale or a grid of responses to facilitate the interviewee to reply) – list of tools/list of ISCO to be filled instead of open-ended questions;
- ✓ The order of questions is important in influencing answers
- ✓ Discussing the opportunity to include «ad-hoc» items as in the recent O*NET release concerning the introduction and the use of relevant technologies and/or organizational practices (use of specific digital devices)

INAPP's main data sources for this project

The Italian O*Net – Indagine Campionaria Professioni

Answers provided on a double 'intensity scale': **IMPORTANCE** and **COMPLEXITY/FREQUENCY**

B.1 Impresa e gestione di impresa

Conoscenza dei principi e dei metodi che regolano l'impresa e la sua gestione relativi alla pianificazione strategica, all'allocazione delle risorse umane, finanziarie e materiali, alle tecniche di comando, ai metodi di produzione e al coordinamento delle persone e delle risorse

A. Quanto è importante quest'area di conoscenza nello svolgimento della sua attuale professione?

- Non importante 1|_ → passare all'area di conoscenza successiva
- Appena importante 2|_
- Importante 3|_
- Molto importante 4|_
- Di assoluta importanza 5|_

B. A quale livello, fra quelli indicati, sono necessarie queste conoscenze per lo svolgimento della sua attuale professione?

Firmare un mandato di pagamento

Controllare l'andamento di un progetto per assicurare la sua realizzazione nei tempi previsti

Gestire un'azienda con un fatturato da 10 milioni di euro



Thank you for your attention

Appendix

List of feedback by question

1. How old are you?

- INAPP interviewer (ISCO 6) → better asking birth year: «What is your year of birth?»

5. What is the title of your main paid job?

- INAPP interviewer (ISCO 2 public sector) → better having a list of ISCO for the interviewer in order to stimulate the interviewee to describe in detail her profession

6. What is the main sector or economic activity of the company or organisation you work for?

- INAPP interviewer (ISCO 5) → She does not know how to answer, she needs a list of sectors

9. Are you working in...?

- INAPP interviewer (ISCO 2 public sector) → The item number 3 is not entirely clear (a joint private-public organisation or company)

11. How many people in total (including yourself) work at your workplace, that is at the local site/plant where you carry out your work?

- INAPP interviewer (ISCO 8) → is «workplace» related to workers of her company or including also other workers in the same place?

12. How many years have you been in your company or organisation?

- INAPP interviewer (ISCO 6) → better asking : «In which month and year did you start working?»

14. How many people work under your supervision (i.e., require your express authorization, follow your instructions)?

- INAPP interviewer (ISCO 2 public sector) → difficult to understand?
- Introduce a filter → If Q11=1, do not complete and skip to the following one
- INAPP interviewer (ISCO 8) → is this referred to the main activity?

16. How often does your job require to: Use fingers, hands or tools to finely handle or manipulate objects?

- INAPP interviewer (ISCO 1, 2, 4, 8) → finely handle is not clear

16b. ... Respond promptly (using eyes, feet, body) to a signal (sound, light, figure) when it occurs?

- INAPP interviewer (ISCO 4, 5, 8) → the respondent does not know how to answer, better including an example

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33. How often does your job require to combine information to form general rules or conclusions?

- INAPP interviewer (ISCO 2, 3, 6, 7) → the question has not been understood. Examples are needed. Possible measurement errors.

35. How often does your job require to plan, organise, schedule resource allocation or your own or other's work?

- INAPP interviewer (ISCO 3, 6) → Need to specify better whether it is a technical planning (intermediate levels) or more general linked to a stronger degree of command. The concept “resource” is not clear, need to be detailed.

37. How often does your job require to respond to direct demands from people outside the organization (customers, clients, audiences)?

- INAPP interviewer (ISCO 3) → why only people external to the organization?

38. How often does your job require to look after people's wellbeing?

- INAPP interviewer (ISCO 2, 6, 8) → It is not very clear whether in a broad sense or not. For example, care and protection of the personal freedom of the client in the case of legal assistance?

39. How often does your job require to instruct, train or teach people?

- INAPP interviewer (ISCO 8) → Is training-on-the-job included in the possible answers?

42. How often does your job require persuade or influence people for selling them services or products?

- INAPP interviewer (ISCO 8) → Is it in a broad sense, otherwise too much linked to trade activities?

45a. Your supervisors instruct you on "what" to do. In general, ...? to what extent do they tell you how to carry out your tasks

- INAPP interviewer (ISCO 2) → Need to specify better "what"

46. In order to get your job done, do you:

- INAPP interviewer (ISCO 2, 3, 6) → It is not applicable for those works in which following strict rules is not required; instructions, targets, or orders are put together and it is perceived as confused
- Items of responses are not very clear: what do you mean by "orders"?

50. In your current job, to what extent are you free to make decisions about your work without the consent of others?

- INAPP interviewer (ISCO 3) → Need to clarify

52. On the whole, to what extent is your work or its pace dependent on the work done by colleagues?

- Add if Q11=1 jump and move on to the next one

56. Is that always in the same team or group, or in several teams or groups?

- INAPP interviewer (ISCO 4) → Not easy to understand

57. For the team in which you work mostly, do the members decide by themselves...?

- INAPP interviewer (ISCO 8) → Shift works are included? (internal working time)
- Add if Q11=1 jump and move on to the next one

59. To what extent is your work subject to predefined and codified rules?

- INAPP interviewer (ISCO 3) → Not easy to understand

60. On the whole, to what extent is your pace of work dependent on numerical production targets or performance targets?

- INAPP interviewer (ISCO 5) → Not easy to understand

A. In terms of the content:

1. **Physical tasks:** aimed at the physical manipulation and transformation of material things:
 - a. *Strength:* lifting people and heavy loads, standing, strength.
 - b. *Dexterity:* precisely coordinated movements with hands or fingers.
 - c. *Navigation:* moving objects or oneself in unstructured and changing spaces
2. **Intellectual tasks:** aimed at the manipulation and transformation of information and the active resolution of problems:
 - a. *Information processing:*
 - I. *Visual and/or auditory processing of uncodified/unstructured information*
 - II. Processing of codified information
 - i. Literacy:
 - a. Business: read or write letters, memos, invoices,...
 - b. Technical: read or write manuals, instructions, reports, forms,...
 - c. Humanities: read or write articles or books.
 - ii. Numeracy:
 - a. Accounting: calculate prices, fractions, use calculators,...
 - b. Analytic: prepare charts, use formulas or advanced maths
 - b. *Problem solving:*
 - I. Information gathering and evaluation.
 - i. *Information search and retrieval*
 - ii. Conceptualization, learning and abstraction
 - II. Creativity and resolution
 - i. Creativity
 - ii. *Planning*
3. **Social tasks:** whose primary aim is the interaction with other people:
 - a. *Serving/attending:* responding directly to demands from public or customers
 - b. *Teaching/training/coaching:* impart knowledge or instruct others
 - c. *Selling/influencing:* induce others to do or buy something, negotiate
 - d. *Managing/coordinating:* coordinate or supervise the behavior of colleagues
 - e. *Caring: provide for the welfare needs of others.*

B. In terms of the methods and tools of work:

1. **Methods:** forms of work organization used in performing the tasks:
 - a. *Autonomy*
 - I. Latitude: ability to decide working time, task order, methods and speed.
 - II. *Control (in reverse): direct control by boss or clients monitoring of work.*
 - b. *Teamwork:* extent to which the worker has to collaborate and coordinate her actions with other workers
 - c. *Routine*
 - I. *Repetitiveness:* extent to which the worker has to repeat the same procedures
 - II. *Standardization:* extent to which work procedures *and outputs* are predefined and encoded in a formalized system
2. **Tools:** type of technology used at work:
 - a. *Non-digital machinery (analog)*
 - b. *Digitally-enabled machinery*
 - I. *Autonomous (robots)*
 - II. *Non-autonomous*
 1. *Computing devices*
 - a. *Basic ICT (generic office applications)*
 - b. *Intermediate ICT (specialized software)*
 - c. *Advanced ICT (programming)*
 2. *Others*



INAPP - Istituto Nazionale per l'Analisi delle Politiche Pubbliche
Corso d'Italia, 33 - 00198 Roma - tel. +39.06.85447.1 - www.inapp.org