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Coding education and occupation in the international surveys at FORS field practices and challenges

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International Surveys at FORS

- MOSAiCH-ISSP (International  MOSAiCH Social Survey Program) 

Web/
paper

 - ESS (European Social Survey) 

CAPI

 - EVS (European Values Study) 

CAPI-
Web/
paper

 - SHARE (Survey on Age, health and retirement in Europe) 

CAPI
centra-
lized
- LIS (Luxembourg Income Study)
- CNEF (Cross National Equivalent File)

Education coding

Gruppi		Codic
Scuola elementare	Scuola elementare non terminata	A
	Scuola elementare (scolarità di 4 a 6 anni)	B
Scuola media	Scuola secondaria, scuola media (e scuola elementare di 8-9 anni)	C
	10° anno, pretirocinio, corso preprofessionale, offerte transitorie	D
Scuole di cultura generale	Scuole specializzate (3 anni, certificato, maturità specializzata) scuola per professioni sanitarie/sociali (ssps), scuole di diploma (SDD), scuola commerciale	E
	Maturità ginnasiale, Liceo	F
Scuole di maturità	Maturità ginnasiale per adulti o apprendistato dopo maturità ginnasiale	G
	Scuola magistrale, patente di maestro/a (per scuola dell'infanzia e scuola elementare)	H
	Maturità professionale	I
	Maturità professionale per adulti	J
Formazione professionale	Formazione professionale di base (Certificato federale di formazione pratica), Apprendistato breve (2 anni), Scuole commerciali (1 anno), Scuole di formazione generale (1-2 anni)	K
	Apprendistato 3-4 anni (AFC: attestato federale di capacità) tirocinio in azienda o in scuola professionale di base	L
	Secondo apprendistato o apprendistato come seconda formazione	M
	Maestria, brevetto federale e altri esami professionali superiori	N
	Diploma o postdiploma di una scuola professionale superiore, p.es. in campo tecnico, amministrativo, salute, lavoro sociale, arti applicate	O
	Diploma o postdiploma di una delle seguenti scuole superiori: scuola tecnica superiore (STS) scuola superiore dei quadri per l'economia e l'amministrazione (SSQEA) scuola superiore di arti applicate (SSAA) scuola superiore di economia domestica (SSED) scuola alberghiera di Losanna (titoli conseguiti negli anni 1998, 1999 e 2000)	P
	Scuole universitarie professionali (SUP), Alte scuole pedagogiche (ASP)	Q
Università, Politecnico Federale	Master, licenza, diploma, postdiploma	R
	Biennio propedeutico, primo ciclo con certificato	S
	Bachelor, licenza in 3-4 anni	T
	Licenza/laurea che richiede più di 4 anni di studio	U
	Master, diploma, postdiploma	V
	Dottorato, PhD	W

WEB:

In TWO STEPS

- (1) Groups
- (2) Categ.

Education coding

23 categories

- + simultaneous fine tuned coding in national and international levels
- + higher likeliness to find ones education in the list (less subjective self-coding)

- Cognitive burden for respondents
- Time consuming
- Challenge to implement in web mode (especially for mobile devices)

=> Consistent with the previous 18 categories list, but shorter lists do not obtain reliable results.

NACE Sectors coding: 2 pages Showcard (or open text to postcode based on same list)

Showcard : Wirtschaftsbranchen in der Schweiz

Land- und Forstwirtschaft, Fischerei	
01	Landwirtschaft, Jagd und damit verbundene Tätigkeiten (inkl. Gartenbau, Weinbau, Hundezucht)
02	Forstwirtschaft und Holzeinschlag
03	Fischerei und Aquakultur
Bergbau und Gewinnung von Steinen und Erden	
05	Kohlenbergbau
06	Gewinnung von Erdöl und Erdgas
07	Erzbergbau
08	Gewinnung von Steinen und Erden, sonstiger Bergbau (inkl. Edelstein, Kies, Torf)
09	Erbringung von Dienstleistungen für den Bergbau und für die Gewinnung von Steinen und Erden (inkl. Erkundung, Schachtbau, Rettung)
Verarbeitendes Gewerbe/Herstellung von Waren	
10	Herstellung von Nahrungs- und Futtermitteln
11	Getränkeherstellung (inkl. Wein)
12	Tabakverarbeitung
13	Herstellung von Textilien
14	Herstellung von Bekleidung (inkl. Hüte)
15	Herstellung von Leder, Lederwaren und Schuhen (ohne Lederbekleidung → 14)
16	Herstellung von Holz-, Flecht-, Korb- und Korkwaren (ohne Möbel → 31)
17	Herstellung von Papier, Pappe und Waren daraus
18	Herstellung von Druckerzeugnissen; Vervielfältigung von Bespielten Ton-, Bild- und Datenträgern
19	Kokerei und Mineralölverarbeitung
20	Herstellung von chemischen Erzeugnissen (inkl. Parfum, Pflegeprodukte)
21	Herstellung von pharmazeutischen Erzeugnissen
22	Herstellung von Gummi- und Kunststoffwaren

Occupation coding

- **CAPI:**

- Two open questions (Title and Main activities)
- Training of interviewers to get meaningful information
- Postcoding

- **Paper**

- Two open questions (Title and main activities) with instructions
- Postcoding

- **Web**

- Title to self-code (or open text if not found)
- Open question for main activities (for checks)
- Checks of self-coded results and postcoding of non coded titles

Occupation questions

D20a Welchen Beruf üben Sie zurzeit aus, oder haben Sie zuletzt ausgeübt?

Bitte geben Sie den Titel/die Bezeichnung Ihres Hauptberufes an.

D20b Welche Art von Arbeit beinhaltet(e) Ihre Berufstätigkeit hauptsächlich?

Geben Sie bitte eine möglichst genaue Beschreibung.

D20a

Welchen Beruf üben Sie zurzeit aus, oder haben Sie zuletzt ausgeübt?

Bitte geben Sie die ersten Buchstaben (mind. 3) der Bezeichnung oder des Titels Ihres Hauptberufes ein, danach können Sie aus der erscheinenden Liste den Begriff auswählen, der Ihre Tätigkeit am besten beschreibt.

Occupation self-coding on web

Quelle est votre profession actuelle, ou si vous ne travaillez pas/plus, quelle était votre dernière profession ?

Merci de saisir les premières lettres (minimum 3) du nom ou titre de votre emploi principal. Vous pourrez ensuite sélectionner dans la liste qui s'affichera le terme qui vous convient le mieux.

- Maçon-ferrailleur
- Ferrailleur
- Contremaître ferrailleur
- Fondeur de ferraille
- Agent technique de fonderie, fonte de métaux non ferreux
- Mouleur de fonderie, fonte de métaux non ferreux
- Ouvrier à la fabrication de métal non ferreux
- Soudeur de métal lourd non ferreux
- Découpeur de ferraille
- Maréchal-ferrant
- Maréchal-ferrant

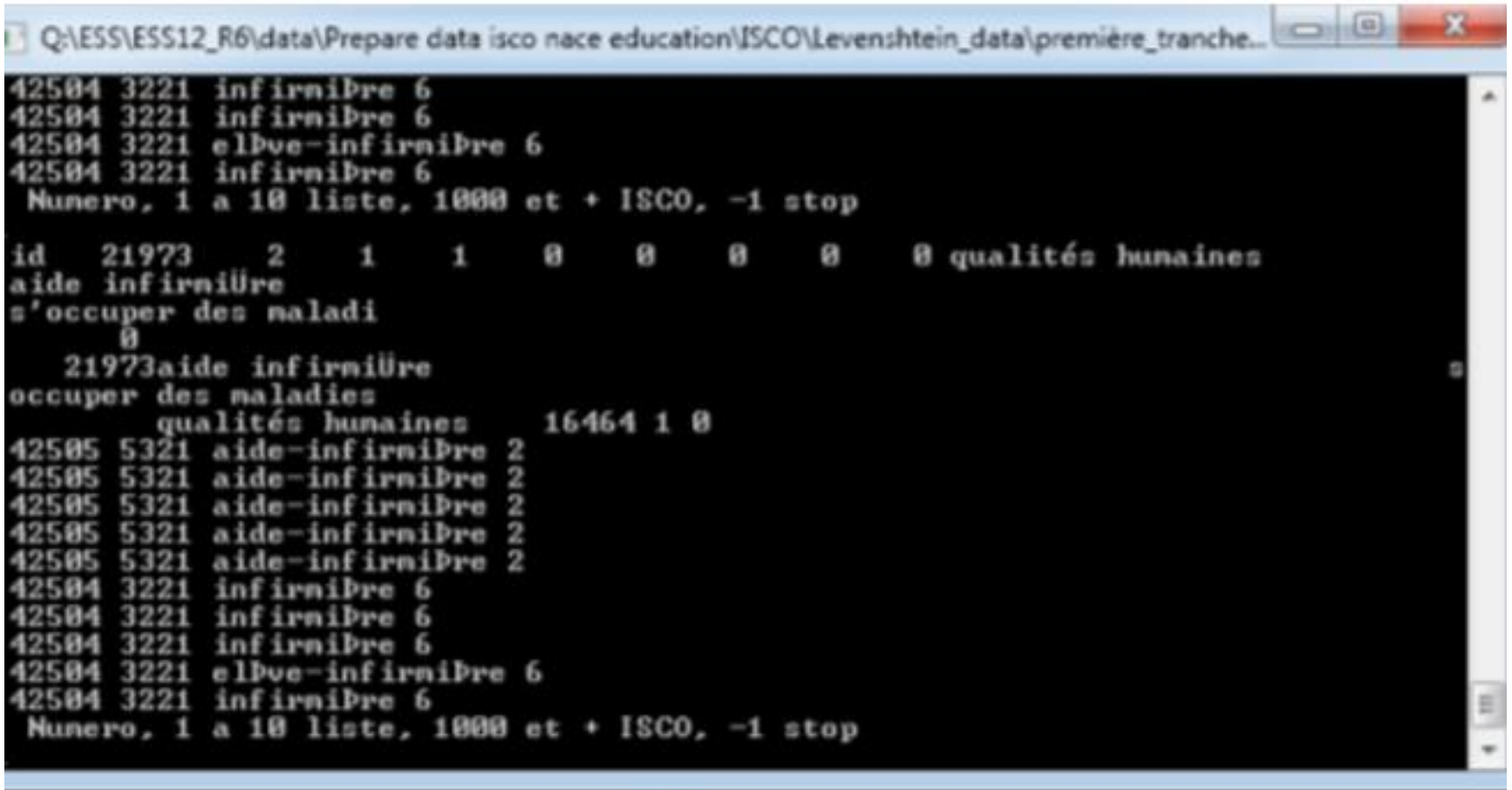
List with more than 20'000 titles each, and corresponding ISCO code

Separate lists for men, women, German, French and Italian)

Occupation postcoding

- **Tools:**
 - Always with the help of the 20'000 titles list maintained and delivered by the Swiss Federal Statistical Office
 - This list includes a bridge towards the ISCO code
 - A small house made and old software based on a Levenshtein-distances algorithm helps us to find the 10 closest titles.
 - Additional information used (if available):
 - gender and language to get the right list
 - description of activities
 - employment status (employee, self-employed),
 - being member of the direction, supervising people and their number,
 - education required for the job (not highest)

Occupation postcoding: our 'levens.exe'



```
Q:\ESS\ESS12_R6\data\Prepare data isco nace education\ISCO\Levenshtein_data\première_tranche...
42504 3221 infirmière 6
42504 3221 infirmière 6
42504 3221 elbve-infirmière 6
42504 3221 infirmière 6
Nunero, 1 a 10 liste, 1000 et + ISCO, -1 stop

id 21973 2 1 1 0 0 0 0 0 qualités humaines
aide infirmière
s'occuper des maladi
0
21973aide infirmière
occuper des maladies
qualités humaines 16464 1 0
42505 5321 aide-infirmière 2
42505 5321 aide-infirmière 2
42505 5321 aide-infirmière 2
42505 5321 aide-infirmière 2
42505 5321 aide-infirmière 2
42504 3221 infirmière 6
42504 3221 infirmière 6
42504 3221 infirmière 6
42504 3221 elbve-infirmière 6
42504 3221 infirmière 6
Nunero, 1 a 10 liste, 1000 et + ISCO, -1 stop
```

- If no proposition corresponds, manual coding following the ISCO manual (mostly because of typos, multiple or insufficient information)

Occupation postcoding

- **Procedure:**
 - ideally double coding (at least double coding of some hundreds of occupations to get convergent coding practices);
 - Case-by-case level: check of ambiguity codes, too general codes and checks with hierarchical characteristics and requested education
 - Inter-interviewer difference in aggregate correlations with educational level and income and between respondent and partner and/or father (or compare with results from other editions); in case of double coding a MTMM analysis can be performed to test coder and construct validity

Challenges and needs

- Education:
=> better solution for web, comparable with CAPI and paper
 - Economic sectors (NACE):
=> manual postcoding is quite quick, no urgent need
 - Occupation:
=> reduce burden of postcoding (more performant tool?)
=> improve self-coding on web
- ➔ Harmonize the codings and tools on national level (at least inside FORS) and offer user-friendly tools and guidance for the Swiss academic community

More information

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