# Using the Occupational Coding Workbook

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#### Workflow for occupational coding data

- Step I: Data is captured/entered into the DME
- Step 2: Data manager exports from DME into macroenabled excel file(s)
  - Coding manager can disaggregate according to specifications (e.g. by coder ID)
- Step 3: Coding manager provides excel files to coders
- Step 4: Coders enter ISCO codes
- Step 5: Coding manager merges back individual files
- Step 6: Coding manager checks reliability of coding
  - If necessary, further coding based on these checks may be needed
- Step 7: Occupational codes are imported back into DME

# Occupational Coding workbook

| 4 | Α      | В       | С  | D  | Е        | F   | G            | Н                |
|---|--------|---------|--|--|----------|-----|--------------|------------------|
| 1 | IDSTUD | Context | Title  | Description  | Language |     | ISCO<br>Code | National<br>Code |
| 2 | 1      | Father  | Machine operator   | Creates car parts  | English  | 601 | 8211         | ı                |
| 3 | 1      | Mother  | Sales person of parquet,feature walls, decking and pebbles | Buys stock and sells stock   | English  | 601 | 5223         |                  |
| 4 | 2      | Father  | machine operator   | operate the machine by working with wool                                     | English  | 602 | 8152         | 1                |
| 5 | 2      | Mother  | stekker  | ordering stock to sell them  | English  | 602 | 9334         |                  |
| 6 | 3      | Father  | security guard   | look at the hotel's cameras and see<br>that nothing bad happens to the hotel | English  | 603 | 5414         |                  |
| 7 | 3      | Mother  | house-wife   | cook, clean, go shopping   | English  | 603 | 9701         |                  |
| 8 | 4      | Father  | accountant   | chief financial officer  | English  | 604 | 2411         | ,                |
| 9 | 4      | Mother  | translator   | translates documents to and from<br>Maltese, English, French and Italian.    | English  | 604 | 2643         |                  |

Column **IDSTUD** contains the student ID

Column **Context** indicates the source (e.g. Mother, Father, Guardian 1 etc.)

Columns **Title** and **Description** contain the occupation information given by the respondent Column **Language** is only applicable for participants testing in more than one language Column **Coder ID** is where coders should enter their identification number.

# Occupational Coding workbook

| Label  | Group<br>Level | Group<br>Label | Major<br>Code | Major Label                                 | Sub-<br>major<br>Code | Sub-major Label  | Minor<br>Code | Minor Label   | Source Variable | Output Variable |
|--|----------------|----------------|---------------|---|-----------------------|--|---------------|---|-----------------|-----------------|
| Mechanical machinery assemblers                  | 4              | Unit           | 8             | Plant and machine operators, and assemblers | 82                    | Assemblers   | 821           | Assemblers  | ST015Q01TA      | ISCO08_F        |
| Shop sales assistants                            | 4              | Unit           | 5             | Service and sales workers                   | 52                    | Sales workers  | 522           | Shop salespersons                                   | ST014Q01TA      | ISCO08_M        |
| Weaving and knitting machine operators           | 4              | Unit           | 8             | Plant and machine operators, and assemblers | 81                    | Stationary plant and machine operators                         | 815           | Textile, fur and leather products machine operators | ST015Q01TA      | ISCO08_F        |
| Shelf fillers                                    | 4              | Unit           | g             | Elementary occupations                      | 93                    | Labourers in mining, construction, manufacturing and transport | 933           | Transport and storage labourers                     | ST014Q01TA      | ISCO08_M        |
| Security guards                                  | 4              | Unit           | 5             | Service and sales workers                   | 54                    | Protective services workers                                    | 541           | Protective services workers                         | ST015Q01TA      | ISCO08_F        |
| Home duties                                      | 4              | Unit           | 9             | Elementary occupations                      | 97                    | #N/A   | 970           | #N/A  | ST014Q01TA      | ISCO08_M        |
| Accountants                                      | 4              | Unit           | 2             | ? Professionals                             | 24                    | Business and administration professionals                      | 241           | Finance professionals                               | ST015Q01TA      | ISCO08_F        |
| Translators, interpreters and other<br>linguists | 4              | Unit           | 2             | ? Professionals                             | 26                    | Legal, social and cultural professionals                       | 264           | Authors, journalists and linguists                  | ST014Q01TA      | ISCO08_M        |
| Building and related electricians                | 4              | Unit           | 7             | Craft and related trades workers            | 74                    | Electrical and electronic trades workers                       | 741           | Electrical equipment installers and repairers       | ST015Q01TA      | ISCO08_F        |

The next nine columns will be filled in automatically when entering an ISCO-08 code, providing respective descriptions of the code from the ISCO-08 Classification scheme

Column **Source Variable** displays the input variable name which the responses are based on Column **Output Variable** displays the variable name for the variable to be exported back into the DME

### Exporting workbook from DME

- Once data is fully captured/entered into DME, export feature will create two excel files:
  - Master
  - Secondary (for double coding)
- Coding manager will then need to disaggregate (for instance by coderID, language, context, studentIDs)
- Coders for Occupational data will each be assigned a 3 digit number beginning with 6
  - E.g. 601, 602, 603 ..... 630
  - 600 is reserved for lead coder (if one is to be designated in your country)

# Merging spreadsheets

This program merges all records from Occupational Coding sheets of the same type as this file (Main/Double) that are saved in this folder.

Please note that only files will be considered for merging if the filename starts with "PISA 2021 FT Occupational Coding Sheet\_" (Main) resp. "PISA 2021 FT Double Coding Occupational Coding Sheet\_" (Double)

To start the merge operation please press the button below.

#### Merge Occupational Coding Sheets

 Merging enables the reassembly of the disaggregated sheets (e.g. putting together sheets that were allocated to different coders)

## Double coding check

This program lists all mismatches between Main Occupational Coding and Double Occupational Coding and calculates the agreement.

Please make sure that both, Main and Double Occupational Coding, files are stored in the same folder.

To start the calculation please press the button below.

Double Occupational Coding Check

 Once both the Master and Secondary files have been coded (and combined) you can run a check on the Occupational Coding (files need to be named appropriately)

### Double coding check

#### Agreement 98.70%

If the agreement is less than 85%, check the original instrument for incorrect entered occupation codes. If codes were entered correctly, check for incorrect coding and systematic inconsistencies in coding.

| IDSTUD | Context ▼ | Title  | Description   | ISCO08 | D_ISCO08 |
|--------|-----------|--|---|--------|----------|
| 1      | Father    | Machine operator   | Creates car parts   | 8152   | 8152     |
| 1      | Mother    | Sales person of parquet,feature walls, decking and pebbles | Buys stock and sells stock  | 9334   | 9334     |
| 2      | Father    | machine operator   | operate the machine by working with wool                                  | 5414   | 5414     |
| 2      | Mother    | stekker  | ordering stock to sell them   | 9701   | 9704     |
| 3      | Father    | security guard   | look at the hotel's cameras and see that nothing bad happens to the hotel | 2411   | 2411     |
| 3      | Mother    | house-wife   | cook, clean, go shopping  | 2643   | 2643     |
| 4      | Father    | accountant   | chief financial officer   | 7411   | 7411     |
| 4      | Mother    | translator   | translates documents to and from Maltese,<br>English, French and Italian. | 9701   | 9701     |
| 5      | Father    | Electrician and plumber                                    | Maintanace and installing electricty and water                            | 8322   | 8322     |

 The check enables you to review the agreement between original and double coders

#### Practical Exercise

- There are three files that you will need for this exercise:
  - PISA 2021 FT Occupational Coding Sheet\_Demo1.xlsm
  - PISA 2021 FT Occupational Coding Sheet\_Demo2.xlsm
  - PISA 2021 FT Double Coding Occupational Coding Sheet\_Demo.xlsm
- Save these files to the same folder on your computer
- Fill in the ISCO codes for Demol and Demo2 (that you completed earlier) and save both files
- Go to Demol and try to merge the two files
- Enter some ISCO codes in the Double coding file (make sure there are some differences in comparison to the Master sheet)
- Run the check to see the agreement rates between the primary and secondary sheet