Collecting occupation and industry data in cross-national surveys

Nicolas Bécuwe, llena Knop and Russell Castaneda

20 March 2024





### Agenda

## 1. Challenges

## 2. Solution and implementation

## 3. Quality of the database







## Post-coding traditional approach

- Collecting occupation and industry information has always been a challenge for social surveys and especially for cross-national surveys as there are multiple employment situations and they are sometimes difficult to compare between countries.
- The traditional approach to collect these information was to use open-ended questions and recode verbatims
  using the <u>ISCO-08 classification</u> (International Standard Classification of Occupations) and <u>NACE classification</u>
  (Statistical classification of economic activities).
- Recoding into these two classifications enable social researchers to have detailed information about the respondents' occupation and industry at a granular level but also at a global level since both classifications work with groups and sub-groups: 4-digit level for ISCO and 3-digit level for NACE.
- These variables are therefore key for the data processing and weighting of surveys (especially those targeting workers) and for the analysis of the results.
- While the traditional post-coding approach has been widely used in cross-national surveys, there are many challenges related to its use.

## Challenges to this approach 1/2

#### Cost and time

- The first challenge is that the coding of these verbatims is a costly and very long exercise especially when dealing with several countries and large sample sizes.
- Indeed, it involves many coders who need to be well-trained to understand how to recode verbatims.
- This involves a long process of coding and processing the information before it can be fully integrated into the dataset and used for weighting or analysis.

#### Accuracy

- There is a challenge here in the precision of the information provided by the respondents and in the interpretation done by the coders.
- Respondents, especially when they answer a survey online without the presence of an interviewer, may be too brief in their answers (for example answer only "teacher" instead of "primary school teacher" or "Vocational education teacher") or even worse not clear and provide ambiguous answers.
- Recoding also depends on the interpretation of coders and therefore is also prone to errors. A mitigation measure is to do post-coding with double/triple coding approach, but it has strong costs implications too.

## Challenges to this approach 2/2

#### The increased use of online surveys

- Finally, with the development of online surveys, the absence of the interviewer and therefore the absence of any control on the information provided is another challenge.
- There is only little possibility to ensure that sufficient and clear information was provided.
- Mitigation measures can include instructions to provide sufficient detailed information and script can include error messages when an answer is too short (based on the number of characters) but that is not always sufficient to guarantee high quality verbatims.



To tackle these challenges, Verian team has worked from the database developed by <u>SERISS</u> to create our own module to collect this information via precoded lists.

This approach was used in the European Training and Learning Survey conducted for Cedefop in 2023-2024.

# Solution and implementation





The Verian team went through the following steps to come-up with a self-coding solution on the online mode

Identification of ISCO and NACE classification structure

Translation verification and revision Scripting of keyword search page

Back-end recoding

#### Identification of ISCO and NACE classification structure

Client Requirement: 4 digits of ISCO-08 and 2-digit NACE rev 2 classifications for the occupation and industry responses.

**Step 1:** identify an existing classification system that can output into the required granular classifications.

- SERISS offers cross-country databases of mapped keywords for coding responses for questions often used in socio-economic surveys.
  - Each database has an equivalence column to convert back to NACE (2-digits) and ISCO (4 digits) titles.
  - Added-value of SERISS database to ETLS:
    - Extensive codes (Wage Indicator database; ILO; NACE) documentation
    - Availability in 47 language versions
    - Cross-country comparability

A	В		C	U	Ł	F	G	н			K	L	M	N	0		P	Q	R	
Code   *	Label Industry_API   Fotestal organit culture sports	s	ORTING * am_8		* am_ET * i のわらざ のみん わて(	ar_EG	<ul> <li>ar_EG</li> <li>ar_EG</li> </ul>	* ar_MA	* ar_MA	* ar_TN	V ar_TN V	bg_8G Y b	og_8G	CS_CZ	✓ cs_CZ Zábava ku	da_DK	V da_	DK × c	e_AT	de_4
111010	Legal and market consultancy, business activities		TRUE T	RUE	የሕማና የንቢያ ማማከ	TRUE	ستشارات القانونية و	A TRUE	بتشارات القانونية و	-SI TRUE	لاستشارات القانونية و	TRUE I	Травна и мари	TRUE	Právní a tr	žní por: T	RUE Juri	disk- og mark	TRUE	Sons
111020	ICT services		TRUE T	RUE	እድ ሲ.ቲ እንልማሎቶች	TRUE	مات تكنولوجيا المع	AF TRUE	مات تكتولوجيا المد	TRUE	خدمات تكنولوجيا المع	TRUE 1	(слуги, информ	a TRUE	IT služby	T	RUE Ikt-f	tjenester	TRUE	Date
111030	Trade, fuelling and repair of motor vehicles Publiching, priotion, media		TRUE T	RUE	792: (99+C +AN	TRUE	جارة ومحطات الوقود	<li>A) TRUE (a) TRUE</li>	دارة ومحطات الوقود اعد مالك مدر ال	ed) TRUE	لتجارة ومحطات الوقود (ما اهة مالك مدر الا	TRUE	Търговия, снаб, (зартеосна деб	QA TRUE	Obchod a :	službyn T tvi tiel T	RUE Har	hdel med og re	TRUE	Hani
111050	Security, cleaning, homework		TRUE T	RUE	EU11148814011	TRUE	من ، التنظيف ، الأعد	S TRUE	ي مالتنظيف ، الأعد	SI TRUE	الأمن ، التنظيف ، الأعد	TRUE	Сигурност, поч	C TRUE	Bezpečnos	t, úklid, T	RUE Ove	rvågning, renj	TRUE	Bew
111060	Healthcare, caring services, social work, personal ser		TRUE T	RUE	የሴና ክብካቤ፣ የእንክ	TRUE	باية الصحية ، خدمة	FINE TRUE	اية الصحية ، خدمة	TRUE الره	لرغاية الصحية ، خدمة	TRUE S	дравеопазван	e, TRUE	Zdravotnic	tví, opa T	RUE Sun	dhedspleje, sc	TRUE	Gest
111070	Education, research		TRUE T	RUE	1990(1199(199) 2000 2000 2000	TRUE	فليم والبحث الغلمى	A) TRUE	ليم والبحث العلمي بقالمانية بالقيماتي	TRUE	التعليم والبحث العلمى	TRUE C	Образование, и	13 TRUE	Skolství, vě	daav, T	RUE Und	dervisning, for	TRUE	Erzie
111090	Real estate, renting, call centres		TRUE T	RUE	መኖሪያ ቤት ማንባታ	TRUE	للارات ، والتأخير ، وه	N TRUE	اران العالية والشراطة و الرات ، والتأخير ، وه	Lat TRUE	الملازات ، والتأخير ، وه	TRUE	тедвижима соб	C TRUE	Nemovitos	ti, pror T	RUE Fas	t elendom, udl	TRUE	Grun
111100	Financial services, banking, insurance		TRUE T	RUE	የፋይናንስ እንልግሎቶ	TRUE	بدمات المالية والممه	A) TRUE	دمات النالية والمصر	udi TRUE	لخدمات المالية والدمم	TRUE	Ринансови усл	yr TRUE	Finančnict	vi, banl T	RUE Ban	kvæsen, finan	TRUE	Kred
1111110	Transport, logistics, communication		TRUE T	RUE	163h7C11M8h	TRUE	قل والخدمات اللوجد.	TRUE	ل والخدمات اللوج، ابدار بالبرانين بال	TRUE	انتقل والخدمات اللوجد	TRUE T	ранспорт, лоп	AC TRUE	Doprava, s	kladov T	RUE Trai	nsport, logisti	TRUE	Tran
1111120	Retail trade		TRUE T	RUE	የቸርቻሮ ንማድ	TRUE	ارة المحالة ال	ai TRUE	رة التحدلة	And TRUE	تعادي وتنقادهم والله تعارة التحالة	TRUE	ърговия на др	eć TRUE	Maloobch	od T	RUE Det	ailhandel	TRUE	Einz
111140	Wholesale		TRUE T	RUE	ጅምላ	TRUE	و الجملة	TRUE	فلمجا	SN TRUE	برج الجملة	TRUE 1	ърговия на ед	pc TRUE	Velkoobch	od T	RUE Eng	roshandel	TRUE	Grof
111150	Construction, technical consultancy		TRUE T	RUE	ማስባታ፤ የቴክኒክ ማ	TRUE	ستشارات الفنية في م	(5) TRUE	بتشارات الفنية في م	USI TRUE	الاستشارات الفنية في م	TRUE 0	троителство, т	e> TRUE	Stavebnict	VÍ T	RUE Byg	ge- og anlægs	TRUE	Bauj
1111100	Waste treatment, sanitation, supply of electricity, gas Manufacturine		TRUE T	RUE	mm23	TRUE	yang Ogan Ker	20 TRUE	منع التقاوت وتقار	ad TRUE	لتصنيع	TRUE	ретиране на о Производство	TRUE	Průmyslov	á výrot T	RUE Frei	mstillingsvirki	TRUE	Vera
111180	Extraction, mining, quarrying		TRUE T	RUE	ማዕድን ማውጣት	TRUE	تخرج المعادن والمتا	TRUE IN	خرج المعادن والمنا	TRUE Nuc	استخراج المعادن والمنا	TRUE /	добив, минна д	ei TRUE	Téžba a úp	rava su T	RUE Rås	tofudvinding	TRUE	Berg
111190	Agriculture, forestry, fishing		TRUE T	RUE	ማብርና፣ ደጉ ሰጣት፣	TRUE	زمة والتشجير وصيد	TRUE الن	مة والتشجير وصيد	UN TRUE	لزرامة والتشجير وصيد	TRUE	елско и горски	TRUE	Zemědělstv	ri, lesni T	RUE Lan	dbrug, skovbri	TRUE	Lanc
120	Growing of crops, market gardening, norticulture Growing of fruit, puts, beverage and spice crops		TRUE T	RUE	5454I ADHI (P)	TRUE	حاصيل الروانية والد مة الفاكمة بالمكسرات	TRUE	داهين الزراهية ولد ة الفاكمة والمكسرات	ALL TRUE	المحاصين الزراقية والد دامة الفاكمة والمكسات	TRUE	лтлеждане на Этгоеждане на	e, TRUE	Ovecnářst	výroba, i víněst T	RUE DVF	kning af marki kning af flerår	TRUE	Aphy
130	Plant propagation		TRUE T	RUE	የተክል ማርባት	TRUE	ار النيات	true TRUE	, النباتات	/dd) TRUE	كتار النبات	TRUE J	дейности на ра	SI TRUE	Reprodukc	e rostli T	RUE Plai	nteformering	TRUE	Betr
140	Farming of animals		TRUE T	RUE	67200 - 200	TRUE	ية الحيوانات	TRUE	بة الحيوانات	TRUE	تربية الحيوانات	TRUE 2	Кизотновъдств	o TRUE	Živočišná	rýroba T	RUE Hus	dyravl	TRUE	Tieri
150	Mixed farming Support activities to agriculture and post-barvest cro		TRUE T	RUE	APPLICE ENV 0404	TRUE	مته كمانية من كانية مته كمانيا من كاني	A TRUE	مة المعتملة منة دعم الداعة متم	TRUE	الزوقة المحتطة أنشطة دعم الدافة متم	TRUE	комоинирано р помагателни	NS TRUE	Podpůrné i	finnost T	RUE BIAI RUE Seo	ndet drift vicevdelser til	TRUE	Erbr
170	Hunting, trapping and related service activities		TRUE T	RUE	የአደን፣ የማስማድና	TRUE	سيد وما يتعلق به	a) TRUE	ید وما پتعلق به	al TRUE	الصيد وما يتعلق به	TRUE	Тов и спомагат	e TRUE	Lov a odch	yt divo T	RUE Jagt	t, fældefangst	TRUE	Jagd
200	Forestry and logging		TRUE T	RUE	ደን ሰማትና ጣውላ ና	TRUE	ابات والتحطيب	A) TRUE	بات والتحطيب	UU TRUE	لغابات والتحطيب	TRUE I	орско стопано	TRUE	Lesnictví a	téžba c T	RUE Sko	vbrug og skovi	TRUE	Fors
240	Support services to forestry Fishing		TRUE T	RUE	CLI PATT 224 A	TRUE	ALC 10.444 0000	. TRUE	10 10 10 10 10 10 10 10 10 10 10 10 10 1	TRUE	محدمات الدهم للغاوات	TRUE 0	помагателни,	QR TRUE	Podpurner	tinnost T	RUE Sen	viceydelser til	TRUE	Eror
320	Fish farming and fish related services		А			в			EN	EO	EP	EO	ER	ES	ET	EU	EV	EW		EX
510	Mining of hard coal	1 0	ccupai3 API	MA	STER LABEL		<b>*</b>	nl BE	<b>*</b>	ni NL 👻	nl SR 👻	no NO 👻	ol PL 👻	pt AO 👻	pt BR 👻	pt CV 👻	pt GW 👻	pt MZ 👻	ot PT	
520	Mining of lignite	2	11000010001	8 Air	force captain			Kapitein hii d	de luchtmacht	Kapitein hii de	Kapitein bii de luc	htmacht	Pułkownik :	Capitão da l	Capitão da f	Capitão da f	Capitão da l	foCapitão da f	Capitão da	forca aérea
620	Extraction of natural gas	-	11000030001	2 AU	force captain			Marchallor lu	uchtmacht	Marchallor luc	http://www.uchter	acht	Gonoral Sit	D Marachal d	Marachal da	Marachal da	Marachal d	a Marochal dr	Marachal d	a forca aóroa
710	Mining of iron ores	2 -	11000020001	io Aii	force marshar			all of the	actionactic	warshaner foc	anviarsmaner ruchten	lacine	Generaron	internation	a marecharda	all a la	all a l c	a Marecharus	all to 1.0	a loiça aerea
111070	Mining of uranium and thorium ores	۹ 	11000030001		torce pilot			Phoot lucitu	nacrit	Phoot luciture	aphoot identifiaent		Pooporaczi	Photo da lo	in photo da for	Photo da loi	Photo da lo	Piloto da lo	Photo da lo	nça aerea
111070	Quarrying of ornamental and building stone, limesto	5	11000040001	8 Am	ny captain			Kapitein strij	jdkrachten	Kapitein strijd	ikkapitein strijdkrad	inten	Kapitan Wo	ji Capitao do	e Capitao do e	Capitao do e	Capitao do	e Capitao do e	Capitao do	exercito
111070	Quarrying of sand and clay	6 _	11000050001	8 Am	ny colonel			Kolonel strijo	dkrachten	Kolonel strijdi	k Kolonel strijdkrad	hten	Pułkownik	Coronel do	eCoronel do e	Coronel do	Coronel do	eCoronel do	Coronel do	exèrcito
111070	Mining of chemical and fertiliser minerals Extraction of peat	7	11000060001	IS Am	ny major			Majoor strijd	ikrachten	Majoor strijdk	r Majoor strijdkrach	nten	Major Wojs	k Major do e>	Major do exi	Major do ex	Major do ex	«Major do ex	Major do e	xército
111070	Extraction of salt	Β	11000070001	8 Am	ny officer			Ritmeester		Ritmeester	Ritmeester		Oficer wojs	k Oficial do e	x Oficial do ex	Oficial do ex	Oficial do e	×Oficial do e:	Oficial do e	exército
111070	Other mining and quarrying	9	11000080001	8 Nav	vy captain			Kapitein (ma	arine)	Kapitein (mari	ir Kapitein (marine)			Capitão da i	marinha	Capitão da n	Capitão da i	mCapitão da r	Capitão da	marinha
111070	Support activities for petroleum and natural gas extr Support activities for other mining and quarrying	0	11000090001	8 Nav	vy lieutenant			Luitenant ter	r zee (marine)	Luitenant ter a	Luitenant ter zee i	(marine)	Kapitan Ma	n Tenente da	Tenente da i	Tenente da	Tenente da	r Tenente da	Tenente da	i marinha
111070	Manufacture of food products 1	1	11001000000	0 Cor	mmissioned officer	r armed foro	es	Officier strije	dkrachten	Officier strijdk	officier strijdkrad	h Ferdigstilt offisi	Oficer sit zb	oficial das f	Oficial das fo	Oficial das f	Oficial das f	fc Oficial das f	Oficial das	forças armadas
111070	Manufacture of beverages	2	11002000000	IO MI	itary operations le	ader		Leider milita	ire operaties	Leider militair	eLeider militaire op	Militære operas	Dowódca ze	Líder de op	e Líder de ope	Líder de ope	Líder de op	e Líder de ope	Líder de op	erações militares
111070	Manufacture of tobacco products 1	3	21000010001	8 Am	ny sergeant			Sergeant stri	Ildkrachten	Sergeant strile	Sergeant striidkra	chten	Sierzant Wo	Sargento do	Sargento do	Sargento do	Sargento do	Sargento do	Sargento d	o exército
111070	Manufacture of wearing apparel	4	21000020001	8 Flig	tht sergeant			Wachtmeest	er koninkliike ma	Wachtmeeste	r Wachtmeester ko	ninklijke marech	Starszy Sier	z Sargento de	Sargento de	Sargento de	Sargento de	Sargento de	Sargento d	e voo
1500	Manufacture of leather and related products	-	21000020001	e Sar	reant major			Serreant-ma	ioor striidkrachte	Serreant-main	Sergeant-mainor	striidkrachten	Starsty Cho	Rrigadairo	Brigadairo	Brigadairo	Prinadairo	Prinadairo	Prinadairo	
1700	Manufacture of paper and paper products	2 -	21000050001		geomernajor		6	Orderettete	goor strijdkrachter	Onders History	- Ondersefficier stall	Jaran anadara at	4 Dealedison	Oficial a Za	ofigial all all a	oficial alla	Oficial alla	oficial alla	Oficial alla	
1811	Printing of newspapers	° -	21001000000		/ incommissioned o	muer annieu	Tortes	onderonnoie	er sunjokradinten	onderonnder	sonderonneler strij	Idiron-opporagion	e control s							connissionado das rorças
1812	Other printing 1 Pre-press and pre-media services		31000010001	IS AIF	force airman			vilegerlucht	tstrijokracht	vileger luchts	ti vileger luchtstrijd	ikracht	Szeregowy	S Aviador da	Aviador da f	Aviador da f	Aviador da	reAviador da t	Aviador da	torça aerea
1814	Binding and related services 1	8	31000020001	8 Air	force corporal			Korporaal luo	chtstrijdkracht	Korporaal luch	htKorporaal luchtstr	ijdkracht	Plutonowy	S Cabo da for	ç Cabo da forç	Cabo da forç	Cabo da for	ç Cabo da for	Cabo da foi	rça aérea
1820	Reproduction of recorded media	9	31000030001	8 Am	ny commando			Bewaker krij	igsmacht	Bewaker krijg:	si Bewaker krijgsma	cht	Komandos	V Comando d	e Comando de	Comando de	Comando d	o Comando d	Comando o	lo exército
1900	Manufacture of coke and refined petroleum products Manufacture of chemicals and chemical products	0	31000040001	IS Am	ny corporal			Korporaal op	perationele strijd	Korporaal ope	r Korporaal operation	onele strijdkracht	Plutonowy	V Cabo do exi	é Cabo do exé	Cabo do exé	Cabo do ex	é Cabo do exé	Cabo do ex	ército
2100	Manufacture of basic pharmaceutical products and 2	!1	31000050001	8 Am	ny gunner			Artillerist leg	ger	Artillerist lege	Artillerist leger		Artylerzysta	Artilheiro d	Artilheiro do	Artilheiro di	Artilheiro d	ldArtilheiro d	Artilheiro o	lo exército
2200	Manufacture of rubber and plastic products 2	2	31000060001	8 Am	ny infantryman			Infanterist of	perationele strijo	Infanterist op	e Infanterist operat	ionele strijdkrach	it Zołnierz pie	Soldado de	i Soldado de i	Soldado de	i Soldado de	i Soldado de	i Soldado de	infantaria do exército
2300	Manufacture of bricks, tiles, glass, ceramic goods, a Manufacture of cement lime and plaster	3	31000070001	8 Am	ny mortarman			Marechausse	ee .	Marechaussee	Marechaussee		Operator m	o Soldado mo	soldado moi	Soldado mo	Soldado mo	or Soldado mo	Soldado m	orteiro do exército
2400	Manufacture of basic metals 2	4	31000080001	8 Nav	/y seaman			Marine zeem	nan	Marine zeema	mMarine zeeman		Marynarz M	la Marinheiro		Marinheiro	Marinheiro	Marinheiro	Marinheiro	
	2	5	31000090001	8 Nav	y submariner			Bemanningsl	lid onderzeeër	Bemanningsli	d Bemanningslid on	Iderzeeër	Marynarz ło	Mergulhadi	Mergulhado	Mergulhado	Mergulhade	Mergulhado	Mergulhad	or da marinha
	2	6	31000100001	8 Par	atrooper			Paratrooper		Paratrooper	Paratrooper		Spadochron	Paraquedis	te Paraquedist	Paraquedist	Paraquedis	taParaquedist	Paraquedis	ta
		7	31000110001	8 Sol	dier			Soldaat		Soldaat	Soldaat	Soldat	Zotnierz	Soldado		Soldado	Soldado	Soldado	Soldado	
		." L	21000120001	O Tan	h seen member			Demannings	lid took loo doook	Domanningsli	d Componingelid to	ak landmacht	Capitaista	Mambro de	Atombro do	Mambra da	Mambro do	Mambro do	Mambro de	a anuina da carras da cor
	2		31000120001		ik crew member			Terrarings	no cank ranomaci	Terrari	Bernanningsnu tai	Tik fanomacine	Czolgista	Califada	Caldada	Califada	Califada	Califada	Califada	equipa de carros de cor
	2	9	31000130001	8 1ro	oper			Trooper		trooper	Trooper		szeregowy	Soldado	Soldado	Soldado	Soldado	Soldado	Soldado	
	3	0	31002000000	Mil	itary air operation:	s crew mem	ber	ud operation	nere luchtstrijdkr	udoperatione	e uo operationele l	umilitære luft op	euztonek od	o iripulante i	ripulante d	i ripulante d	ripulante o	or i ripulante o	ripulante	de operações militares a
	3	1	31003000000	IO MIL	itary weapons spe	cialist		Specialist mi	ilitaire wapens	Specialist mili	t Specialist militaire	e Militære våpen	eSpecjalista	o Especialista	Especialista	Especialista	Especialista	Especialista	Especialista	a em armas militares
	3	2	31004000000	IO Sea	iman, military oper	rations crew	member	Matroos ope	rationele strijdkr	Matroos opera	at Matroos operation	n Seaman, militæ	r Marynarz, c	z Marinheiro	Marinheiro,	Marinheiro,	Marinheiro	, Marinheiro,	Marinheiro	, tripulante de operaçõe
	3	3	31005000000	IO Soli	dier, military opera	ations crew i	member	Soldaat bij o	perationele strijo	Soldaat bij op	e Soldaat bij operat	i Soldat, militære	żołnierz, cz	Soldado, tri	Soldado, trip	Soldado, tri	Soldado, tri	ipSoldado, tri	Soldado, tr	ipulante de operações m
	3	14	31006000000	IO Spe	cial forces crew m	ember		Militair of ma	atroos special for	Militair of mat	tr Militair of matroo	s Spesialstyrker m	Członek od	d Integrante	d Integrante d	Integrante d	Integrante	d Integrante o	Integrante	das forças especiais
	3	15	111100010001	8 Ald	lerman			Wethouder		Wethouder	Wethouder	Oldermann	Radny miej	s Vereador	Vereador	Vereador	Vereador	Vereador	Vereador	
	3	6	111100020001	8 Loc	al government me	mber		Lid gemeent	elijke of provinci	Lid gemeente	li Lid gemeentelijke	of provinciale co	Członek wła	Membro do	Membro do	Membro do	Membro do	Membro do	Membro de	o governo local
	2	7	111100030001	8 Pol	itician			Politicus		Politicus	Politicus	Politiker	Polityk	Político	Politico	Politico	Politico	Politico	Politico	
		-		-									1.							

Industry: NACE API codes: 340 categories Occupation: ISCO code set: 4232 categories

Translation verification and revision

The keywords are crucial in self-classification. Hence, the language should be accurate and consistent with the source keyword.

**Step 2.** Verify and ensure that translations are sound and accurate to resonate with what people use to describe the jobs or the industry where they belong.

- We sampled first 100 lines per language and asked revisors to dry run a revision test
- We assessed the rate of errors revisions made

**Output:** revised translations of each of the industry and occupation categories.

Two treatments are shown for each language version based on the finding of the translation tests.

Finding	Treatment
Good enough	revision
Not so good	Retranslate + revise

Scripting of keyword search page

**Step 3.** We scripted a search box that filters the list of categories based on the first characters entered.

- The language version is aligned automatically with the questionnaire language-country version.
- The respondent is asked to enter the first few characters and the script filters the list being displayed based on those first characters.
- The respondent selects the item that best describes the industry or occupation where they belong.
- Live demo link



Q Bearch I	Selected: 0
Accounting, bookkeeping and auditing activities; tax consultancy	
Activities of amusement parks and theme parks	
Activities of business and employers membership organisations	
Activities of collection agencies and credit bureaus	
Activities of employment placement agencies	
Activities of extraterritorial organisations and bodies	
Activities of head offices	
Activities of holding companies	
Activities of insurance agents and brokers	
Activities of other membership organisations	

Q Search	I	Selected: 🧕	
3d artist			
3d designer			
Abrasive wheel	l moulder		
Acceptance offi	licer financial institution		
Accordion mak	(er		
Accordion tune	er		
Account collect	tor		
Account manag	ger		
Account manag	ger conferences or events		
Account manag	ger for private clients		

#### Back-end recoding

**Step 4.** We recode all values SERISS API codes into the broader international industry and occupation classification titles (ISCO and NACE, respectively).





# Quality of the database





## Studies used to compare the quality of the database

ESJS2 versus ETLS

#### <u>Second Skills and Job Survey (2019):</u>

- Conducted on behalf of the European Centre for the Development of Vocational Training (CEDEFOP).
- Carried out in the EU27, Norway and Iceland among 46,000 workers.
- Used both online and RDD telephone methods.
- Traditional post-coding used to classify industry (NACE) and occupation (ISCO).
- Weighted results (including occupation and industry variables), representative of workers within the EU27, Norway and Iceland.



#### **European Training and Learning Survey (2024)**:

- Conducted on behalf of the European Centre for the Development of Vocational Training (CEDEFOP).
- Carried out in the EU27, Norway and Iceland among 44,500 workers.
- Used both online (using our online probablitistics online panel PVOICE together with online access panels) and RDD telephone methods.
- Traditional post-coding used to classify industry (NACE) and occupation (ISCO) for CATI.
- Database used to classify industry and occupation for CAWI.

## Studies used to compare the quality of the database ESJS2 vs ETLS

- The European Training and Learning Survey was first piloted in all 29 countries and Verian team checked the distribution of the answers regarding occupation and industry.
- Then, after validating the approach via the pilot survey, Verian team conducted the main survey and checked the quality of the verbatim based on the unweighted approach. Our initial conclusions are:
  - The results are close to the weighted results of the 2<sup>nd</sup> ESJS.
  - There are small variations within the database that can be rectified using weighting.



The results provided with our database will be shown by comparing the unweighted results of ETLS with the weighted statistics obtained with the ESJS data

#### Occupation – ISCO-08

Classical post-coding versus database of occupation



Industry – NACE 2.0



Occupation by education



Lower secondary education or below (ISCED 0-2)

 Upper secondary or post-secondary non-tertiary education (ISCED 3-4)
 Tertiary education (ISCED 5-8)

#### Industry by education



Upper secondary or post-secondary non-tertiary education (ISCED 3-4)

Tertiary education (ISCED 5-8)

#### Occupation by sector



Industry by sector



Occupation by income

Classical Post-Codina Database ESJS2 (2019) - weighted ETLS (2023) 26% 19% 15% 4% 6% 14% 7% 6% 5% 11% 9% 9% 3% 6% 9% 2% 3% 5% 3% 8% 7% 7% 5% Skilled Semi-skilled Elementary Skilled Semi-skilled Elementary Manual Manual occupations occupations Under lowest quartile Between lowest quartile and median

Between median and highest quartile

Above highest quartile

Industry by income



Occupation by gender



Industry by gender



### Final remarks

Using the databases for future cross-national surveys

- The use of the database represents a progress for the collection of information related to
  occupation and industry as it reduces significantly time and costs and enable researchers to
  access high-quality granular information on these key variables.
- Quality control of the whole implementation process is key. Special care needs to be taken before using and programming these databases to ensure that they can be adequately used.
- These databases are suitable for online or face-to-face mode **but not telephone** as respondents need to be in control of the information entered.

## Thank you!





Nicolas Bécuwe

nicolas.becuwe@veriangroup.com

#### llena Knop

llena.knop@veriangroup.com



Powering decisions that shape the world.