

European Working Conditions Survey 2024: Cognitive Pretest

Hadler, Patricia; Lenzner, Timo; Schick, Lukas; Neuert, Cornelia; Steins, Patricia; Behnert, Jan

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GESIS Project Report

2022|08

European Working Conditions Survey 2024

Cognitive Pretest
February 2022

*Patricia Hadler, Timo Lenzner, Lukas Schick,
Cornelia Neuert, Patricia Steins &
Jan Behnert*

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GESIS – Leibniz Institute for the Social Sciences
Survey Design and Methodology
P.O. Box 12 21 55
68072 Mannheim

Phone: +49 (0) 621 1246 - 0
Fax: +49 (0) 621 1246 - 100
E-Mail: pretesting@gesis.org

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Aims of the pretest

Eurofound is preparing to transition the European Working Conditions Survey (EWCS) from a computer-assisted personal interview (CAPI) to self-administered online data collection. GESIS was contracted to adapt the CAPI master questionnaire, translate the adapted online questionnaire into German and Polish, and cognitively pretest the online questionnaire using cross-cultural cognitive interviews and web probing. The main goal of cognitive testing was assessing the comparability of the adapted online questionnaire to the original face-to-face questionnaire. Further objectives were testing whether the online questionnaire is suitable for cross-cultural research and applies gender-sensitive language.

Question and Item Selection

Question and item selection was guided by issues that arose in the course of the adaptation and translation. Depending on the research interest, a question was tested using web probing, cognitive interviewing or both. The results are structured along the topics in the adaptation and translation. However, each selected question/item was subjected to in-depth pretesting along the cognitive process of survey response, with a special focus on issues related to cross-cultural comparability. These additional research questions are presented in the respective chapters of the results. Table 1 gives an overview of the examined question features, the questions submitted to cognitive testing, and the pretesting method applied.

Table 1. Overview of examined features and questions in the EWCS cognitive pretest

Features		Question(s) examined	Cognitive Pretesting Method	
Main Feature	Type of Feature		Cognitive Interviewing	Web Probing
Clarifications in Self-Administered Surveys	Clarifications presented to all respondents	QN1	x	x
		Q16a	x	x
	Clarifications presented on demand via ToolTips	Q7	x	x
		Q14	x	x
		ToolTip evaluation		x
Response Options	Adding substantive response options	Q92	x	x
	Open-ended numeric questions	Q36		x
	Adjustable response units	Q24	x	x
		Q25	x	
Item Batteries	Choosing the optimal question format of item batteries	QM35		x
		Q78		x
	Switching scales	Q30		x
		Q49	x	x
Gender Sensitivity	Asking about gender	Q2new	x	x
		Q62	x	x
	Gender-sensitive wording	Q63	x	
Capturing Work Status and Occu- pation	Work status	Q2c	x	
	ISCO	Q5, Q6	x	x
	NACE	Q13	x	x

Sample

Web Probing

Number of web respondents:	792
Target population:	Working population ages 18 to 65 in the UK, Germany and Poland
Selection of target population:	Non-probability online panel, Quota sample
Quotas:	Working status, gender, age

Table 2. Sample composition web probing¹

	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
Working Status			
Employed (not atypical)	34% (91)	35% (92)	36% (96)
Self-employed (not atypical)	27% (71)	30% (80)	29% (77)
Atypical	39% (102)	35% (92)	34% (91)
Gender			
Male	60% (158)	60% (159)	54% (142)
Female	40% (105)	40% (105)	46% (122)
Other	0% (1)	0% (0)	0% (0)
Age			
18-44 years	45% (120)	44% (117)	46% (121)
45-65 years	55% (144)	56% (147)	54% (143)
Device used to respond to survey			
Smartphone	42% (112)	33% (87)	42% (110)
PC/Laptop or Tablet	57% (151)	63% (166)	58% (153)
Unknown	0% (1)	4% (11)	0% (1)

The quota for the working status (employed, self-employed, atypical) was determined using three questions (Q7 and Q8a from the EWCS questionnaire, and Q_atypical). Respondents to whom one or more of the criteria in Q_atypical applied were assigned to the working status “atypical”; all other respondents were assigned to the status “employed” or “self-employed” depending on their answers to Q7 and Q8a. Table 4 gives an overview of the responses to the quota-relevant questions.

¹ Please note: all percentages are rounded and include no decimals.

Table 3. Questions on working status (web probing)

	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
Q7: Are you working as an employee or are you self-employed (in your main job)?			
Employed	64% (169)	59% (157)	63% (165)
Self-employed	36% (95)	41% (107)	37% (98)
Don't Know	0% (0)	0% (0)	0% (1)
Q8a: Are you paid a salary or wage by an employer?			
Yes	-	-	0% (1)
No	-	-	0% (0)
Don't know	-	-	0% (0)
Q_atypical: (Considering your main job) Does any of the following apply to you?			
My net income is less than [country-specific weekly or monthly poverty line]	18% (48)	22% (58)	13% (33)
My hourly wage is below [country-specific minimum wage]	6% (16)	5% (14)	5% (12)
I work less than 20 hours per week	15% (40)	15% (39)	4% (11)
I work on call and get my wages paid directly, e.g., as a day labourer	6% (16)	6% (15)	8% (20)
[employees only] I have a temporary employment contract with a total duration of less than 6 months	10% (17)	5% (8)	15% (25)
[employees only] I do not have an employment contract	4% (6)	6% (9)	5% (8)
None of the above	61% (162)	65% (172)	66% (173)

Cognitive Interviews

Number of cognitive interviews:

32

Target population:

Working population ages 18 to 65 years in Germany and Poland

Quotas:

The test persons were selected to meet the following quotas within each country:

Working status: respondents who were employed or self-employed in their (main) job or working in atypical or precarious working situations.

Respondents in atypical or precarious working situations could be either employed or self-employed in their (main) job. Atypical or precarious working situations were defined as working a low number of hours, working for an hourly wage under the legal minimum wage, having an income below the poverty line, working as a day labourer, or (in the case of employed respondents) having a contract with a total duration of under six months or no formal working contract.

Number of jobs or businesses: respondents with one job or business, and those with more than one job or business were recruited

Gender: men and women were included in the sample; there were no minimum requirements for non-binary participants

Age: respondents ages 18-44 and 45-65

Education: with / without university entrance exam

Table 4. Quota requirements and sample composition cognitive interviews

Quota characteristic	Quota requirement (per country)	Germany (N = 16)	Poland (N = 16)
Working status			
Employed (in main job)	6	6	6
Self-employed (in main job)	6	6	6
Atypical or precarious working situation	4	4	4
Number of jobs or businesses			
One job or business	at most 11	8	8
More than one job or business	at least 5	8	8
Gender			
Men	at least 4	7	9
Women	at least 4	9	7
Other	no requirement	-	-
Age			
18-44 years	at least 4	6	6
45-65 years	at least 4	10	10
Education			
Low (no university entrance exam)	at least 4	5	4
High (university entrance exam)	at least 4	11	12

Methods

Web Probing

Table 5. Field work details web probing

Field Work Parameter	Details
Countries	United Kingdom (England, Wales, Scotland, Northern Ireland, Channel Islands), Germany, Poland
Field Time	UK: October 28 th - November 3 rd , 2021 DE: October 28 th - November 4 th , 2021 PL: October 29 th - November 4 th , 2021
Survey Mode	CAWI
Incentives	According to the policies of the panel provider
Procedure	Online questionnaire with additional open-ended and closed probing questions (Web Probing)

Cognitive Interviews

Table 6. Field work details cognitive interviews

Field Work Parameters	Germany	Poland
Field time	October 27 th to November 11 th , 2021	November 4 th to November 17 th , 2021
Number of interviewers	3	2
Place / mode of interview		
Video conference	13	3
Telephone	2	-
Face-to-face	1	13
Survey mode	CAWI	CAWI
Incentive for respondents	30 Euros	100 PLN (ca. 21.65 Euros)
Procedure	<p>Due to the dynamics of the pandemic, the cognitive interviews were conducted remotely via video conference or telephone or in person, depending on the local situation.</p> <p>In all cases, the test persons were sent or presented the link to the online questionnaire at the beginning of the interview to ensure that they did not read the questions in advance.</p> <p>The test persons read a survey page, answered it and communicated their respective answers to the interviewer. Cognitive follow-up questions were asked directly following the survey page containing the questions to be tested (concurrent probing).</p>	

Results

Clarifications in Self-Administered Surveys

The overarching goal was to examine whether and how respondents use clarifications which would be provided by interviewer in an interviewer-administered mode. Because this topic is central to the adaptation to an online questionnaire, four questions were examined using both web probing and cognitive interviewing. In QN1, the focus lay on clarifications presented to all respondents in the form of instructions directly below the question text. Q16a employed both clarifications presented to all respondents and clarifications on demand via ToolTips. In Q7 and Q14, we directly compared question versions that either used clarifications on demand or presented them alongside the question text (Q7) or response options (Q14). Finally, respondents were asked to evaluate the ToolTips.

QN1 Number of jobs

The purpose of cognitive pretesting was to examine whether respondents read and understand the instructions. Moreover, both modes were used to examine whether respondents answered correctly, including all additional side jobs.

English:

Do you have one, or more than one job or business?

Having more than one job or business may mean:

- doing paid side jobs (such as babysitting, gardening, ironing)
- working extra hours in a shop or café
- being involved in the platform economy (such as UBER, Task Rabbit)
- carrying out creative work which can be payed with copyrights
- developing a new business activity

- ☐ One job or business
- ☐ More than one job or business

German:

Haben Sie ein(en) oder mehr als ein(en) Beruf bzw. Unternehmen?

Mehr als einen Beruf bzw. mehr als ein Unternehmen zu haben kann Folgendes bedeuten:

- bezahlte Nebenjobs (bspw. Babysitting, Gartenarbeiten, Bügelservice)
- Zusatttätigkeiten in einem Geschäft oder Café
- Tätigkeiten in der "Plattformökonomie" (bspw. bei Uber, JOBRUF oder twago)
- kreative Arbeit, die in Form von Urheberrechten vergütet wird
- neue Geschäftsideen entwickeln

- ☐ Einen Beruf bzw. ein Unternehmen
- ☐ Mehrere Berufe bzw. Unternehmen

Polish:

Czy pracuje Pan(i) w jednym czy w kilku miejscach lub czy prowadzi Pan(i) jedną czy więcej firm?

Praca w kilku miejscach lub prowadzenie kilku firm może oznaczać:

- wykonywanie dodatkowej pracy, za którą pobierane jest wynagrodzenie (np. pilnowanie dziecka, prace w ogrodzie, prasowanie),
- dodatkowa praca w sklepie albo kawiarni,
- praca za pośrednictwem platform takich jak UBER, BOLT,
- wykonywanie pracy twórczej wynagradzanej na podstawie praw autorskich,
- rozwój nowej działalności

- ☐ Pracuję w jednym miejscu lub prowadzę jedną firmę
- ☐ Pracuję w kilku miejscach lub prowadzę kilka firm

Cognitive techniques:

Web probing: Open-ended and Closed Specific Probing

Cognitive interviews: Category Selection Probing, Difficulty Probing, Specific Probing

Findings Web Probing:

Table 7. Frequency distribution web probing QN1 (N = 792)

Answer	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
One job or business	86% (226)	86% (228)	92% (243)
More than one job or business	14% (38)	14% (36)	8% (21)

In Germany and the UK, 14% of respondents reported to have more than one job or business; in Poland, this figure was significantly lower at only 8% ($\chi^2_{(2,792)} = 6.196, p = .045$). In all countries, respondents with more than one job or business were considerably more likely to be self-employed in their main paid job (55%, $n = 52$) than respondents with one job or business (36%, $n = 249$) (see Table 8).

Table 8. Self-declared employment status of respondents with one/multiple jobs or businesses

	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
Respondents with one job or business			
Employed	68% (154)	61% (138)	64% (156)
Self-employed	32% (72)	39% (90)	36% (87)
Respondents with more than one job or business			
Employed (in main job)	39% (15)	53% (19)	43% (9)
Self-employed (in main job)	61% (23)	47% (17)	57% (12)

Which additional jobs did respondents with more than one job or business name?

Respondents who indicated that they had more than one job or business in QN1 were asked to describe their additional job(s) or business(es) (P1_QN1). This applied to 95 respondents, of which 83 gave a substantive description of their additional work. Respondents named a wide variety of answers ranging from unofficial side jobs, such as babysitting pets or mowing other people's lawn, to owning and managing several businesses and serving in the management board. Responses named by several respondents included cleaning ($n = 7$), bookkeeping ($n = 3$), assisting in a shop ($n = 3$), being a landlord ($n = 3$), working in a laundry outlet ($n = 2$) and carrying out newspapers ($n = 2$). Producing and/or selling products, online and/or offline was named by nine respondents, with products ranging from calendars and T-shirts to toys and barbecues. Many respondents named vague sales-related jobs, such as "sales", "arranging sales" or "commissioning". Ten respondents named art- or media-related (presumably freelance) work, such as work as an author, painter, musician, graphic designer, TV producer or teaching musical instruments. Several respondents included conducting workshops, for instance on health or safety. Translation services and scientific consultation (for instance as an art historian) were named. Finally, two respondents referred to social media content they produce, those being online videos and posting. All in all, respondents who had indicated that they have more than one job or business named a wide range of activities.

Did respondents who report having one job or business answer correctly (or did they actually have more than one job or business)?

Respondents who answered that they only had one job or business in QN1 were asked a closed follow-up probe in which they were presented a list of side jobs and were asked to indicate whether (and if so, which) of these side jobs they had carried out against pay in the past month (P2_QN1). In Germany and the UK, 19% and 18% of respondents named a side job they had not included in their answer to QN1 (see Table 9). In Poland, 30% of respondents named at least one side job in answer to the probing question. Thus, 33% ($n = 88$) of respondents in the UK, 32% ($n = 84$) in Germany, and 38% ($n = 99$) in Poland should be considered with multiple jobs or businesses. In all three countries, more respondents with multiple jobs were identified using the probing question than using QN1. This strongly indicates that many respondents did not read the instruction to QN1 in detail, or if they did, remained hesitant to include all side jobs they carried out.

Table 9. Additional jobs mentioned by respondents in P2_QN1

Have you carried out any of the following types of casual work or a part-time job for pay and outside the family in the past month?	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
<i>[Probe not asked, as respondent has more than one job or business as per QN1]</i>	14% (38)	14% (36)	8% (21)
No other job or business	67% (176)	68% (180)	63% (165)
At least one additional job or business	19% (50)	18% (48)	30% (78)
Waiter, waitress or temp in a bar, a restaurant or hotel	5% (14)	3% (8)	2% (4)
Driver for a delivery service for restaurants, online shops or as a parcel courier	5% (12)	2% (6)	3% (7)
Babysitting for children who are not part of the family	3% (8)	1% (3)	5% (13)
Caring for children or persons in need of care who do not belong to the family	3% (9)	2% (4)	2% (5)
Tutoring for children who are not part of the family	1% (3)	2% (6)	3% (8)
Translating services	0% (1)	2% (5)	3% (8)
Gardening (lawn mowing, hedge and tree maintenance, etc.) for persons who do not belong to the family	3% (8)	2% (6)	5% (13)
Helping with the harvest	2% (4)	2% (5)	2% (4)
Helpers in the renovation or construction sector (with activities such as painting, wallpapering, plastering, electricity, plumbing) outside the own household and for persons who do not belong to the family	2% (5)	1% (2)	3% (9)
Producing analyses or reports, scientific papers	0% (1)	3% (7)	3% (7)
Bookkeeping activities	2% (4)	3% (8)	2% (6)
Freelance work via online platforms	1% (3)	2% (4)	4% (11)
Working as an artist or performer	2% (4)	1% (2)	3% (7)
Working as a hostess / gentleman host	0% (1)	1% (3)	2% (5)
Temporary work in the area of security or security service	2% (6)	1% (2)	0% (1)
Distributing advertising or free newspapers	1% (3)	1% (2)	2% (4)
Working as a blogger, influencer or creating other online content for pay	1% (3)	2% (4)	1% (2)
Taking care of pets whose owners are not members of the family	1% (3)	2% (6)	3% (8)
Working as a trainer or coach in sports clubs	1% (2)	1% (3)	0% (0)
Preparing events	1% (3)	2% (6)	2% (4)
Working as a household aid or cleaner	1% (3)	1% (2)	2% (4)
Other	2% (5)	2% (5)	4% (11)

Findings Cognitive Interviews:

The findings from web probing indicated that many respondents did not consider all of their jobs or businesses when responding to QN1. The aim of the cognitive interviews was to examine whether respondents read and understand the instructions and found the given examples suitable and helpful.

Table 10. Frequency distribution cognitive interviews QN1 (N = 32)

Answer	Germany (n = 16)	Poland (n = 16)
One job or business ²	9	8
More than one job or business	7	8

Did respondents with multiple jobs or businesses respond correctly?

All respondents who indicated that they had multiple jobs or businesses responded correctly. In Germany, this applied to seven respondents. Of these, four referred to their main job and their side job. One respondent (DE01) indicated working in multiple student jobs. Finally, two respondents (DE04, DE09) worked as slashers, meaning that they were self-employed in several professions. Participant DE04 was a freelancer working as an actor, author, and sound designer for multiple clients; DE09 stated that he was self-employed and working as a lecturer, consultant, and appraiser for multiple businesses.

In Poland, eight respondents indicated that they had multiple jobs or businesses. These respondents either held several jobs in parallel (n = 3) or were both employed and running their own business (n = 2), had their own business and performed freelance activities (PL15) or had one business and were involved in several other businesses (PL09).

The majority of respondents found the question “very easy” (DE: n = 13; PL: n = 11) to answer. Only in Poland, two respondents stated that the question was “rather” or “very difficult”. However, in both countries there were cases in which respondents stumbled over the wording of the question text and response options, sometimes leading them to incorrectly answering that they had only one job or business.

For one, both in German and in Poland, the **translation of the word “job”** caused respondents with multiple jobs or businesses to classify themselves incorrectly as only having one:

- In Germany, one respondent had two employment contracts with two different employers, but because both contracts were for her trained profession as a nurse, she answered “one job or business” (DExx). She explained that it was “*one job/profession, but two employers*”. This misunderstanding was due to the German word “*Beruf*” meaning both job and profession.
- In Poland, a respondent who worked in tourism, but also held art classes incorrectly classified herself as working in “one job or business” (PL13), despite explaining that these were different jobs with differing legal frameworks. The Polish question text and response options translated the word “job” as “*place of work*”. Therefore, the respondent explained that she chose “one job or business” because she carried out both activities in one place, “*the countryside*”.

For some respondents, the **wording of the question text and response options** implied that one either had one or more jobs (meaning, one or more employments) or had one or more businesses (meaning, self-employed in one or multiple ways):

² One respondent (DE02) incorrectly assigned herself to the response category “one job”. The quota plan depicts the true value.

- In Poland, two respondents who were both self-employed and employed found the response options contradictory (PL09, PL10). Both explained that they “worked in several places”, but did not “run several businesses”
- In Germany, one respondent remarked that the wording of the question text sounded as though only full-time, equally important jobs were meant, and that she would not have included side jobs until after having read the instructions (DE14)

Did respondents read the instructions, and were they comprehensible?

In Germany, all respondents, except one (DE06), read through the instruction. However, six of these respondents explained that they had only skimmed through the instruction or had only read parts of it. Participant DE06 stated that he did not read through the instruction because he only had one job and therefore the instruction was not important to him. In Poland, only eight respondents claimed to have read the instructions at all. Respondents who did not read or only skimmed the instructions argued that they were sure about their answer and therefore did not need to read the instruction:

- *“Yes, I skimmed it, let's say. Since it was clear to me that I only have one profession, it didn't interest me that much.”* (DE05, one job)
- *“I only briefly skimmed it and did not read it carefully. Based on the question text, it was clear to me what applies to me and what does not.”* (DE16, one job)
- *“When I fill in surveys, I usually do it quickly. I just read the main instructions in bold [...] I do not focus on explanations, unless I really find it hard to answer.”* (PL10, more than one job).

Less than half of the respondents found the instructions “very understandable” (DE: $n = 6$; PL: $n = 7$). Many respondents freely admitted that they were not familiar with all of the named jobs or business activities in the instructions but were confident that they would know these terms if they applied to them, or that they could be useful to other respondents.

- *“There are some terms, such as ‘platform economy’, that I do not understand. But I also assume that it simply doesn't apply to me and that those to whom it applies understand it accordingly.”* (DE04, more than one job)
- *“Yes, I find the examples helpful. For me, the second point ‘additional activities in shops or cafés’ is something classic that students do in addition to their main job as a student. It wasn't clear to me what was meant by ‘activities in the platform economy’. But the person who feels addressed knows what is meant by it. Everyone else would probably find themselves in everything else.”* (DE10, multiple jobs)

There were, however, some difficulties in comprehension that arose from the instructions. The first example named in the instructions is **“doing paid side jobs”**, which in Polish is translated as “carrying out additional work for which remuneration is received”. This caused three Polish respondents to question whether the question was meant to include having two equally important, or complementary jobs, which is not unusual in Poland.

Many respondents ($n = 12$), particularly in Germany ($n = 9$), spontaneously mentioned that they were unfamiliar with term **“platform economy”** in the stated examples. Only one German respondent clearly understood and spontaneously defined the term “platform economy”, but suggested replacing it with the term “Portal(e)” (DE09). In Poland, two respondents seemed to be familiar with the examples “UBER” and “BOLT” but criticized that these should be listed as taxi-related activities

(PL04) and that the current wording implied that these were by nature side jobs, when in reality they could be the main source of income (PL05).

Regarding the last part of the instruction, two German and three Polish respondents commented that they were uncertain how to understand “**developing a new business activity**”. All of these respondents asked whether this included unpaid work in the course of developing an idea for a new business or even unpaid work in the early stages of launching a new business.

Summary:

- In web probing, respondents who were self-employed were significantly more likely to indicate that they have more than one job or business in response to QN1.
- In web probing, many respondents who claimed to have only one job or business as per QN1 indicated that they carried out at least one side job for pay in the last month. This indicates that respondents are likely not to include all side jobs when answering QN1. This problem also occurred in the cognitive interviews, though to a smaller extent.
- Regarding the wording of the question text, the translation of the word “job” into German and Polish caused difficulties for some respondents in the cognitive interviews. Moreover, the wording of the response options caused uncertainty among some respondents in Poland who were employed and self-employed.
- Respondents in Germany assumed that multiple jobs or businesses mainly implied having one main job and one or more side jobs. In contrast, several respondents in Poland felt that the wording “additional job” in the instructions excluded people with two or more equally important jobs.
- Regarding the instruction, the term “platform economy” and the notion of “developing a new business activity” were unclear to some respondents in both countries.

QN1 Recommendations:

- The **question text** should clearly address employed and self-employed respondents:
*“Regardless of whether you are employed, self-employed or both:
 Do you have one, or more than one job?”*
 Moreover, the translation of the word “job” should cover both employed and self-employed, and be unambiguous, so as not to refer to the vocational training, but the employed/self-employed work, for instance to ensure that respondents working in two different contracts within the same profession identify as having multiple jobs. A respective translation note should be added to this question regarding the definition and translation of the word “job”.
 In German, this would mean employing the term “berufliche Tätigkeit” (work-related activity) instead of “Beruf”, which can mean “job” or “profession”:
*“Unabhängig davon, ob Sie angestellt und/oder selbständig oder freiberuflich tätig sind:
 Gehen Sie einer, oder mehr als einer beruflichen Tätigkeit nach?”*
 In Polish, the word „praca“ is maintained for job:

“Niezależnie od tego czy jest Pan(i) zatrudniony (-a), samozatrudniony(-a) czy też dotyczą Pana(-ią) obie te sytuacje:

Proszę powiedzieć czy ma Pan(i) jedną pracę czy więcej?”

- The **response options** should be simplified (so as not to name jobs and businesses), and correspond to the question text:

“I have one job”

“I have two (or more) jobs”

German:

“Ich gehe einer beruflichen Tätigkeit nach“

„Ich gehe zwei (oder mehr) beruflichen Tätigkeiten nach“

In Polish, the exact translation of the second response option is “I have more than one job”, as the Polish word for job is not specific in the plural:

“Mam jedną pracę”

“Mam więcej niż jedną pracę”

- We recommend slight changes to the **instruction** to avoid misunderstandings. Regarding the source, we recommend the following changes:
 - The word “platform economy” should be replaced by “online platforms”
 - The instruction “developing a new business activity” should be omitted or explained in more detail (i.e., to include or exclude unpaid work prior to launching a new business)

The examples should be checked for their country-specific applicability in the course of translation.

- In addition, a **follow-up question** to QN1 may be considered to attain a more precise measurement of respondents with multiple jobs or businesses in a self-administered context. The probe P2_QN1 can be used to this purpose:

“Have you carried out any of the following types of casual work or a part-time job for pay and outside the family in the past month?”

Q16a People working at workplace

Web probing was used to examine why respondents choose the “Don’t know” option, and whether it is necessary to offer this response option explicitly for this question. To this purpose, two question versions were compared. Question version 1 included the “Don’t know” option. Question version 2 did not.

In the cognitive interviews, respondents were only presented question version 1. Question Q16a employs both a ToolTip and instructions shown by default. The focus of the cognitive interviews was to examine whether respondents use one or both clarification features and how certain they are about their answers. Finally, respondents’ understanding of the term “workplace” was analysed using both web probing and cognitive interviews.

English (Question Version 1):

Including yourself, how many people in total work at your workplace, that is at the [local site](#) where you work?

Please exclude co-workers working at other sites or premises.

☐ 1 (I work alone)

☐ 2-4

☐ 5-9

☐ 10-49

☐ 50-99

☐ 100-249

☐ 250-499

☐ 500 and over

☐ Don't know

ToolTip text:

- By local site we mean the local unit of the establishment, i.e. the specific building or complex of buildings in which you work.
- If you work in many workplaces, please consider your main workplace.
- If staff from different companies work at your workplace, please include all of them in your answer.

German (Question Version 1):

Sie selbst mitgezählt, wie viele Personen arbeiten insgesamt an Ihrer [Arbeitsstätte](#), d.h. in der örtlichen Betriebsstätte/Niederlassung, in der Sie arbeiten?

Bitte schließen Sie Mitarbeiter/-innen Ihres Unternehmens aus, die an anderen Standorten oder Niederlassungen arbeiten.

- ☐ 1 (ich arbeite alleine)
- ☐ 2 bis 4 Personen
- ☐ 5 bis 9 Personen
- ☐ 10 bis 49 Personen
- ☐ 50 bis 99 Personen
- ☐ 100 bis 249 Personen
- ☐ 250 bis 499 Personen
- ☐ 500 Personen und mehr
- ☐ Weiß nicht

Polish (Question Version 1):

Ile osób łącznie z Panem(-ią) w sumie pracuje w Pana(-i) miejscu pracy, tzn. w [oddziale lub zakładzie](#) w którym miejscu wykonuje Pan(i) swoją pracę?

Proszę wykluczyć osoby pracujące w innych lokalizacjach lub oddziałach

- ☐ 1 (pracuję sam/a)
- ☐ 2–4
- ☐ 5–9
- ☐ 10–49
- ☐ 50–99
- ☐ 100–249
- ☐ 250–499
- ☐ 500 lub więcej
- ☐ Nie wiem

Question Version 2 (English):

Including yourself, how many people in total work at your workplace, that is at the [local site](#) where you work?
Please exclude co-workers working at other sites or premises.

- ☐ 1 (I work alone)
- ☐ 2-4
- ☐ 5-9
- ☐ 10-49
- ☐ 50-99
- ☐ 100-249
- ☐ 250-499
- ☐ 500 and over

Cognitive techniques:

Web probing: (Closed) Specific Probing, Comprehension Probing

Cognitive interviews: Recall Probing, Confidence Rating, Specific Probing

Findings Web Probing:

Respondents were randomly assigned to question version 1, which included an explicit “Don’t Know” option, or question version 2, which did not. In total, seven respondents (2%) chose the “Don’t Know” option when it was available. No respondent left Q16a unanswered in either question version. There were no significant differences in response behaviour between question versions ($\chi^2_{(8,792)} = 13.912, p = .084$) or countries ($\chi^2_{(16,792)} = 25.546, p = .061$).

Table 11. Frequency distribution web probing Q16a by question version (N = 792)

Answer	1: Don't Know option shown (n = 395)	2: No Don't Know option (n = 397)
UK		
1 (I work alone)	24% (34)	22% (28)
2-4	9% (12)	8% (10)
5-9	8% (11)	6% (8)
10-49	15% (21)	15% (19)
50-99	12% (16)	12% (15)
100-249	11% (15)	11% (14)
250-499	4% (6)	7% (9)
500 and over	14% (20)	18% (22)
Don't know	3% (4)	-
Total	100% (139)	100% (125)
Germany		
1 (I work alone)	24% (32)	26% (34)
2-4	15% (20)	12% (15)
5-9	9% (12)	11% (14)
10-49	17% (23)	12% (15)
50-99	12% (16)	14% (18)
100-249	10% (14)	7% (9)
250-499	2% (3)	5% (6)
500 and over	10% (13)	15% (19)
Don't know	1% (1)	-
Total	100% (134)	100% (130)
Poland		
1 (I work alone)	19% (23)	14% (20)
2-4	12% (15)	12% (17)
5-9	14% (17)	8% (12)
10-49	22% (27)	23% (32)
50-99	13% (16)	11% (16)
100-249	6% (7)	11% (16)
250-499	6% (7)	7% (10)
500 and over	7% (8)	13% (19)
Don't know	2% (2)	-
Total	100% (122)	100% (142)

The seven respondents who answered “Don’t Know” were asked the reason for this answer in a closed probing question with an additional open-ended response option (P1_Q16a). Two respondents chose the predefined response option “I recently joined the company”, and one respondent chose “The company I work for is being/was recently restructured”. The other four respondents all chose “Another reason”. One of these respondents answered “about 60”, indicating that this respondent could well have found a suitable response option. The other three respondents named

legitimate reasons why they did not know the number of people working at their workplace, those being that they had not “*counted the staff*”, that they are a temporary worker, or that they simply do not know.

Did respondents include and exclude the correct people as part of their workplace?

In another closed probing question with an open-ended “Other” response option (P3_Q16a), respondents were asked which groups of people they had included or, if they work alone, which groups of people they would have included in their response. This probing question served as an attention check to determine whether respondents had read the information provided to them. The question text said to refer to people working at their “local site”, the ToolTip specified that people working for other companies but at the local site should be included, and the instruction below the question text clarified that co-workers working at other sites should be excluded. Thus, the correct response to the probing question was to select the first and third response, but not the second. Only 2% of respondents in the UK ($n = 6$) and Germany ($n = 4$) answered correctly (i.e., selected both the first and the third option but not the second), and none of the respondents in Poland. This indicates that most respondents did not pay attention to the exact question wording and instructions presented alongside the question text or the ToolTips. However, despite this, it is reasonable to assume that most respondents answered correctly pertaining to their personal situation. 75% ($n = 592$) of respondents correctly included people working for their company at their local site (see Table 12). One in five respondents (20%, $n = 158$) incorrectly answered that they were supposed to include people working at other sites. Respondents in the UK were significantly more likely than respondents in Germany or Poland to correctly include people working for other organisations, but at their local site ($\chi^2_{(2,792)} = 13.957, p = .001$). Respondents who chose “Other people, namely” in the probing question usually only commented on their personal situation and that they work alone.

Table 12. Attention check to Q16a by country (P3_Q16a)

Which of these people did or would you include in your answer? [multiple choice]	UK ($n = 264$)	Germany ($n = 264$)	Poland ($n = 264$)
People who work for my company at my local site	78% (207)	75% (197)	71% (188)
People who work for my company, but at other sites	20% (53)	17% (46)	22% (59)
People who work for other organisations, but at my local site	13% (33)	6% (15)	5% (12)
Other people, namely:	7% (18)	10% (26)	17% (45)

What did respondents understand by the term “workplace”?

Four out of five respondents (79%, $n = 626$) gave substantive responses regarding their understanding of the term “workplace” (P2_Q16a). A response was coded as non-substantive if respondents refused to answer (that is wrote nothing or only random characters into the text field) ($n = 49$) or when they simply repeated their answer to the survey question or answered off-topic ($n = 118$). Non-substantive responses may be a sign of satisficing, that is respondents being unwilling to respond to the probing question but may also indicate that respondents have difficulty describing what

“workplace” means in their personal working situation. Supporting this second notion, respondents in atypical working situation were significantly more likely to give non-substantive responses (28%, $n = 81$) than respondents who were employed (15%, $n = 42$) or self-employed (19%, $n = 44$) ($\chi^2_{(2,792)} = 15.754, p < .001$). Moreover, Polish respondents (29%, $n = 76$) were significantly more likely to give non-substantive responses than German (18%, $n = 48$) or UK respondents (16%, $n = 43$) ($\chi^2_{(2,792)} = 14.402, p = .001$).

Among the substantive responses, respondents demonstrated a comprehensive and correct understanding of the term “workplace”. Half of the respondents (50%, $n = 313$) described their workplace as the specific physical location(s) they work at, such as their building, site, school, hospital, store, warehouse, construction site or the docks, or a part of such a building, such as their department, their personal office or desk or the ward of a hospital. A quarter of the respondents (26%, $n = 164$) gave a vaguely worded definition such as “*where I work*” or “*place of work*”, which likely also refers to the location. One out of ten respondents (9%, $n = 59$) specified their home office as their workplace, and 3% ($n = 19$) mentioned client premises. Thirteen respondents stated that they do not have a “fixed” workplace or a workplace “per se”, but that their workplace is wherever they opened their laptop. Ten respondents defined the term workplace as the location where a team comes together to cooperate for a task (“*An environment in which everyone works together as a team*”). One out of ten respondents (9%, $n = 57$) referred to their company (regardless of the local site). There were significant differences in the distribution of codes between respondents based on their working status, with employed respondents being most likely to name the physical location(s) they work, self-employed being more likely than the other groups to name their home office or agile working places, and respondents in atypical working situations being more likely to offer a vaguely worded definition ($\chi^2_{(10,626)} = 55.316, p < .001$).

Findings Cognitive Interviews:

Table 13. Frequency distribution cognitive interviews Q16a (N = 32)

Answer	Germany ($n = 16$)	Poland ($n = 16$)
1 (I work alone)	2	4
2-4	3	2
5-9	1	3
10-49	6	1
50-99	1	3
100-249	1	2
250-499	-	-
500 and over	1	1
Don't know	1	-

All respondents answered the question. Only one participant did not know how many people work at his workplace, because he just started working there, and therefore chose “Don’t know” (DE01).

What did respondents understand under the term “workplace”?

Respondents understood “workplace” as the physical location where they work, such as the individual building or building complex, premises in larger buildings, or their home. Regarding businesses with multiple sites, respondents understood their workplace to refer to the building where they mainly work:

- *“The company has a building near the station and another big one near the school. And I am in an extra factory again. So, we are not in this main building. I understood that it's only about the people who work directly with me.” (DE03, 10-49)*
- *“I thought of the place of business, the place where I work. I only took into account the people who work at my place of business. We are represented throughout Germany, but I excluded the others.” (DE11, 100-249)*

Whom did respondents include and exclude in the number of people at their workplace, and how confident were they about their answer?

When explaining their answer, most respondents correctly referred to their local site and correctly defined who they included and excluded when counting the number of people at their workplace:

- *“I was thinking of the nursing home and the people who work there, that is the nursing staff, the housekeepers, the caretakers. Everyone who is there regularly and works there.”*
- *“I thought about my basic place of work and first calculated only people teaching children, then I added all the administration staff.”*
- *“One person exactly, I work on my own. In future there will be another business in the same building, so there will be one more person, but right now I am the only person with some business here.”*

However, in several cases, probing showed that some respondents had to interpret parts of the instructions and clarifications to adapt them to their work situation. This was most likely to be the case when respondents were self-employed and either had no business premises or rented premises in larger buildings with unrelated businesses:

- A free-lance actor considered his main client at the time of the interview to be his workplace and referred to the artistic and logistic personnel of the specific play
- A self-employed non-medical practitioner first answered “one person”, but after reading the ToolTip decided to include a person she employed to do the bookkeeping once a month or once every two months
- One self-employed coach had several employees, but no business location, as everyone either worked from home or on client premises. This respondent instead counted the number of people working for her business
- An employed respondent working in a warehouse was unsure whether his “workplace” or “local site” referred only to the warehouse or the entire store. The respondent decided to only consider his direct working environment of the warehouse
- A self-employed designer had his business premises in a large office building that housed many companies and several hundred employees, but only considered his own company consisting of two business partners within the building

All respondents were either “very sure” (DE: $n = 14$; PL: $n = 11$) or “rather sure” (DE: $n = 2$; PL: $n = 5$) that their answers were correct. Respondents who indicated that they were only “rather sure” either did not know the exact number of people working in the building they were referring to (e.g., DE02) or were uncertain whom exactly to include in their specific case. The respondent who occasionally had assistance with bookkeeping remained uncertain whether including this person was correct. In Polish, the instruction could be understood as meaning to exclude workers at “other sites or premises” or at “other sites or in other departments”. This caused some respondents to consider only their direct department ($n = 1$) or the entire company ($n = 2$).

Did respondents read the instructions and ToolTip, and did they find the information useful?

Four respondents from Germany and nine from Poland did not read the **instructions**. In Poland, three respondents claimed not to have noticed the instructions. All others explained that the question was clear for them without reading the instruction:

- “I did not read that, but my answer is still correct. So, I took it into account without having read it.” (DE05)
- “I didn't miss it, I skipped it because I was very sure. But because I was curious and I was able to answer it quickly, I read it afterwards.” (DE10)
- “The instruction sort of blurs with the question, but the question was obvious.” (PL06)
- “I skipped it because I knew how many people work here.” (PL07)

In both countries, six respondents read the **ToolTip** spontaneously, while ten did not use the ToolTip for “local site”³. These respondents explained that they did not think it was necessary because for them the term was self-explanatory:

- “Because for me the term is actually clear.” (DE04)
- “Because it was clear to me that it could only be the building where I now work with many other colleagues who also work in other departments, but that all belongs to the workplace.” (DE08)

All respondents indicated that the information in the instruction and the ToolTip was generally useful and relevant at least to some respondents. However, several respondents had difficulties combining the information from the instructions with the information from the ToolTip on whom to include and exclude in their response. For instance, two respondents in Poland remained uncertain how to deal with businesses based in large building complexes that contained many unrelated companies (PL11, PL14):

- “I cannot really understand the third point [in the ToolTip]. It says ‘workplace’ and I consider my company to be my workplace, and not the physical place only [...] If there was a big office building and my company employed ten people, while 3,000 people work in the office building, should I indicate ten people or 3,000? [...] If I [read] the tooltip, I would indicate 3,000 people. If you had not asked me to read it, I would have indicated ten.” (PL11)

³ Please note: In Germany, the ToolTip marked the word for “workplace”.

One respondent (DE03) suggested to move some parts of the ToolTip to the instruction:

- *“I would display the last two points [of the ToolTip] directly below the question. Because these are not explanations, but important information for answering the question. For example, ‘Please refer only to your main place of work’ - I don't know that unless I click on [the ToolTip].” (DE03)*

Summary:

- Based on the findings from both web probing and cognitive interviewing, only few respondents did not know how many people worked at their workplace. These people, however, required a “Don’t Know” response option, for instance, because they recently joined the company or worked for a temporary work agency.
- In both web probing and cognitive interviews, the term “workplace” was clear to most respondents, regardless of their personal working situation, and whether they read the ToolTip.
- Based on the findings from both cognitive interviews and web probing, most respondents generally did not read the instructions and clarifications in detail. However, in most cases, respondents seemed to give the correct answer despite this.
- Most of the cognitive interviewing respondents estimated the people based on the building in which they mainly work. In ambiguous cases, respondents had to make decisions whom to include. For instance, when a company was located in a larger building complex containing many unrelated companies, respondents referred to their company only. Respondents who employed external assistance (e.g., bookkeeping or cleaning) included these people (see also the subchapter on the translation of “workplace” in chapter 2).

Q16a Recommendations:

- We recommend including all information that pertains to the calculation of people working at the workplace in the **instructions**:
“If you work in many workplaces, please consider your main workplace. Please exclude co-workers working at other sites or premises. If staff from different companies work at your workplace, please include all of them in your answer.”
- We recommend restricting the clarification provided on demand in the **ToolTip** to the definition of workplace, which is only relevant to certain respondent groups:
“Local site refers to the local unit of the establishment, i.e. the specific building or complex of buildings in which you work.”
- Regarding the **response options**, we recommend including a “Don’t know” category

Q7 Employee self-declared

Web probing and cognitive interviews were used to examine the use of clarifications on demand (so-called ToolTips), in particular in comparison to displaying clarifications alongside the question text to all respondents.

Question version 1 included ToolTips for the terms “employee” and “self-employed”. Question version 2 displayed the same clarifications beneath the question text. Question version 3 was only used in the web probing study and included no clarifications.

English (Question Version 1):

The next questions are about your employment status.

Are you working as an [employee](#) or are you [self-employed](#) ?

- ☐ An employee
- ☐ Self-employed
- ☐ *Don't know*

The next questions are about your employment status in your main job.

Are you working as an [employee](#) or are you [self-employed](#) in your main job?

- ☐ An employee
- ☐ Self-employed
- ☐ *Don't know*

ToolTip text: see question version 2

German (Question Version 1):

In den folgenden Fragen geht es um Ihren Beschäftigungsstatus.

Sind Sie angestellt oder sind Sie selbstständig ?

☐ Angestellt

☐ Selbstständig

☐ Weiß nicht

Polish (Question Version 1):

Kolejne pytania dotyczą Pana(-i) statusu zatrudnienia.

Czy pracuje Pan(i) jako pracownik najemny czy osoba samozatrudniona ?

☐ Pracownik najemny

☐ Osoba samozatrudniona

☐ Nie wiem

Question Version 2 (English):

The next questions are about your employment status.

Are you working as an employee or are you self-employed?

By **employee** we mean someone who gets a salary from an employer or a temporary work agency. This does not have to be linked to a contract of employment as such. If you are hired on an 'agreement outside of an employment relationship' or on a 'civil law contract', please select 'employee'.

Self-employed includes people who have their own business or are partners in a business as well as freelancers. A self-employed person may or may not have employees. 'Self-employed' also includes employees working for their own business and members of producers' cooperatives.

Family workers should determine which alternative matches their situation best.

☐ An employee

☐ Self-employed

☐ Don't know

Question Version 3 (English):

The next questions are about your employment status.

Are you working as an employee or are you self-employed?

☐ An employee

☐ Self-employed

☐ Don't know

Cognitive techniques:

Cognitive interviews: Specific Probing

Findings Web Probing:

Respondents were randomly assigned to one of the three question versions with clarifications shown on demand (ToolTip), to all respondents (via instruction) or without clarification. In total, 62% ($n = 491$) of respondents reported that they were employed, 38% ($n = 300$) reported to be self-employed, and only one respondent answered question Q7 with “Don’t know” (see Table 14). There were no significant differences between question versions ($\chi^2_{(4,792)} = 3.022, p = .554$) or countries ($\chi^2_{(4,792)} = 3.236, p = .519$).

Based on the response distributions, there is no indication whether or in which way clarifications are presented impacts response behaviour. Cognitive interviews were used to gain insights on possible silent misunderstandings, that is an incorrect understanding and subsequent self-assignment of respondents to the answer categories.

Table 14. Frequency distribution web probing Q7 by question version (N = 792)

Answer	1: ToolTip (n = 263)	2: Instruction (n = 264)	3: No Clarification (n = 265)
UK			
An employee	67% (64)	63% (47)	62% (58)
Self-employed	33% (32)	37% (28)	38% (35)
Don't know	0% (0)	0% (0)	0% (0)
Total	100% (96)	100% (75)	100% (93)
Germany			
An employee	62% (54)	62% (58)	54% (45)
Self-employed	38% (33)	38% (36)	46% (38)
Don't know	0% (0)	0% (0)	0% (0)
Total	100% (87)	100% (94)	100% (83)
Poland			
An employee	64% (51)	61% (58)	63% (56)
Self-employed	36% (29)	38% (36)	37% (33)
Don't know	0% (0)	1% (1)	0% (0)
Total	100% (80)	100% (95)	100% (89)

Findings Cognitive Interviews:

In the cognitive interviews, respondents were first shown question version 1 (ToolTip) and after discussing this question version, they were shown question version 2 (instructions displayed directly) on a separate screen.

Table 15. Frequency distribution cognitive interviews Q7 (N = 32)

Answer	Germany (n = 16)	Poland (n = 16)
An employee	9	8
Self-employed	7	7
Don't know	-	1

In Germany, nine respondents declared themselves as employees and seven respondents as self-employed. In Poland eight respondents declared themselves as employees and seven respondents as self-employed. Additionally, one respondent (PL15) could not assign himself to one of the options.

While in Germany there were mainly no problems with the understanding of the two terms “employee” and “self-employed”, in Poland different understandings of “employee” were mentioned. This is because in Poland the term for “employee” (PL: Pracownik najemny) can have negative connotations. Therefore, a question was explicitly asked in Poland whether the term “employee” was actually perceived negatively.

Eight Polish respondents stated that the term "employee" had negative connotations for them. They mostly understood it to refer to working arrangements based on another type of contract than employment contract (of mandate, specific work) or simple jobs such as being hired, without any social security or rights:

- *"Hired [PL: najemny] means there is a contract, but I would identify it more with blue collar work, with some simple jobs."* (PL05, employee)
- *"For me an 'employee' is a person who must get money of course, but who works for some limited time only, when needed."* (PL09, self-employed)

This assessment most likely stems from the characteristics of the Polish labor market with very complex regulations which do not protect the weakest players of the labor market.

The other eight Polish respondents defined "employee" in neutral terms, as a person employed based on any kind of contract or working for someone else's business, also as a subcontractor.

Apart from the negative connotation of the term "employee" in Poland, two respondents (PL07, PL15) who owned a company with limited liability had problems classifying themselves correctly:

- *"I am one of the owners [of a company], so I wonder whether I am self-employed. A limited liability company is a kind of business where you are not self-employed, you have to sign an employment contract with such a person. Limited liability company is a family business, with 50% for me and 50% for my husband."* (PL07, self-employed)
- *"On one hand, I am not an employee and on the other hand a self-employed person makes me think of a one-man business. And I am employed in my own company, but this is a limited liability company and I do not have to be employed there."* (PL15, don't know)

Additionally, in Germany two respondents (DE03, DE05) had problems understanding what was meant by "family workers":

- *"The explanation of 'self-employed' is very informative, it's a longer text. Only the last part, with the family workers, I didn't understand."* (DE03, employee)
- *"For example, 'members of producer's cooperatives, family workers decide for themselves which of the answer options best fit their situation' [...] It is a bit unclear what is meant."* (DE05, self-employed)

Except for two respondents (DE09, PL04), no one used the ToolTips to answer this question. Most of the participants explained that they knew the answer to this question without looking up clarifications and that it was easy for them to differentiate between employee and self-employed:

- *"I understand what is meant by the question. It's very simple, whether I'm self-employed or employed."* (DE03, employee)
- *"I didn't check it because the answer was clear."* (PL14, self-employed)

In addition, seven respondents (DE: $n = 1$, PL: $n = 6$) explained that they did not use the ToolTips because they either did not know they could use it, did not notice it, or forgot about it:

- *"I forgot that there is such an option. But I read that such an option is possible at the beginning."* (PL05)
- *"I did not notice that I can move my mouse over it."* (PL06)

In both countries, the explanations of the terms “employee” and “self-employed” in the ToolTips were found to be informative. In Poland, seven respondents preferred the version with the ToolTips, eight preferred the version with the instructions shown directly and one respondent (PL02) found both versions equally good. In Germany, eleven respondents preferred the version with ToolTips and five the version with the instructions shown directly.

Respondents preferring ToolTips stated that it is easier to answer the question in this format and that it is clearly arranged:

- *“I think the ToolTips are better. It's clearer. You can click on it when you need it. [...] With the alternative version, I immediately think: ‘Oh God, that's a lot to read’.”* (DE01, employee)
- *“[Otherwise], I would have to read everything, even if it didn't concern me. I find the version with the ToolTips clearer; you can answer quickly, and you don't get lost in the explanation.”* (DE16, self-employed)
- *“Although I did not check these instructions in ToolTips, I am a visual person. If there is too much text for me, I just don't read it.”* (PL10, employee)

Respondents preferring the instruction shown directly explained that they would probably oversee the ToolTips, because they are hardly intuitive:

- *“I have to say, at first I thought the ToolTips were cool, they looked cool. But when I compare it now, it's true that I saw them but ignored them. Here I at least have to read about it, with the description below the text I find it better.”* (DE06, employee)
- *“I have the whole message here. I just forgot that the blue ones, the text fragments with blue highlights, may lead to some explanation.”* (PL05, employee)

One respondent (PL06) explained that there is no consistency in how the information is displayed in the questionnaire, that's why he overlooked the ToolTips:

“Explanation directly below question is clearer and I prefer this option. It is also because the previous questions came with such an explanation below, so that's what I expected.” (PL06, employee)

Summary:

- In web probing, question format (ToolTips vs. instructions shown directly vs. no instructions at all) had no effect on respondents' answers to Q7.
- In the cognitive interviews, the majority of the respondents did not use the ToolTips and there was no clear preference between the two versions (ToolTips vs. Instructions shown directly).
- In Poland, the term “employee” was partly understood in a negative way and was understood in different ways. In addition, respondents who had a company with limited liability had problems classifying themselves.
- In Germany, the definition for “family worker” was not clear to everyone.

Q7 Recommendations:

- We recommend displaying the **clarifications** in the ToolTip as an instruction below the question text. The concept of employment and self-employment are central to the EWCS. These explanations can be repeated in the form of ToolTips when the terms are used again in later questions.
- The term “family worker” in the **instructions** should be highlighted visually in bold font and separated from the definitions of employed and self-employed.
- In Polish, the term “employee” [PL: pracownik najemny] should be replaced by a more neutral term in both the question text and the response options. One possibility is to use the word “Pracownikiem” as a noun and add an explanation in brackets:
“Czy w swoim miejscu pracy jest Pan(i) pracownikiem (czyli osobą zatrudnioną przez pracodawcę) czy też osobą samozatrudnioną?” [In your job, are you an employee (i.e., a person employed by an employer) or are you self-employed?]
“Pracownikiem (czyli osobą zatrudnioną przez pracodawcę)” [An employee (i.e. a person employed by an employer)]
“Osobą samozatrudnioną” [Self-employed]
“Nie wiem” [Don’t know]

Q14 Economy sectors

Web probing and cognitive interviews were used to examine the use of clarifications on demand (ToolTips), in particular in comparison to displaying clarifications alongside the question text to all respondents. Both pretest modes examined whether respondents gave a correct response and whether they perceived different formats as more or less burdensome. Cognitive interviews were used to determine whether all four sectors require clarifications and how respondents who work in more than one sector react to the question.

Question version 1 included ToolTips for the terms “private sector”, “public sector”, “joint private-public organisations or companies”, and “not-for-profit sector and NGOs”. Question version 2 displayed the same clarifications beneath the question text. Question version 3 was only used in the web probing study and included no clarifications.

English (Question Version 1):

In which sector of the economy do you work?

Point the cursor over / Click on these words to find out more about the [private sector](#) , the [public sector](#) , [joint private-public organisations or companies](#) , or the [not-for-profit sector and NGOs](#) .

- ☐ In the private sector
- ☐ In the public sector
- ☐ In a joint private-public organisation or company
- ☐ In the not-for-profit sector or an NGO
- ☐ Other, please specify:

ToolTip text: see question version 2

German (Question Version 1):

In welchem Wirtschaftsbereich arbeiten Sie?

Bewegen Sie Ihre Maus über bzw. klicken Sie auf diese Wörter, um mehr über die [Privatwirtschaft](#) , [staatliche und andere öffentliche Unternehmen](#) , [öffentlich-privatwirtschaftliche Organisationen oder Unternehmen](#) , oder den [gemeinnützigen Bereich und Nicht-Regierungsorganisationen](#) zu erfahren.

- ☐ In der Privatwirtschaft
- ☐ In einem staatlichen Unternehmen oder einer anderen öffentlichen Einrichtung
- ☐ In einer/einem öffentlich-privatwirtschaftlichen Organisation/Unternehmen
- ☐ Im gemeinnützigen Bereich, Nicht-Regierungsorganisation
- ☐ Sonstiges, bitte angeben:

Polish (Question Version 1):

W jakim sektorze Pan(i) pracuje?

Proszę najechać myszką/ Kliknąć na te słowa, aby uzyskać więcej informacji na temat [sektora prywatnego](#) , [sektora publicznego](#) , [firmy lub organizacji publiczno-prywatnej](#) , lub [sektora non-profit, organizacji pozarządowej](#) .

- ☐ W sektorze prywatnym
- ☐ W sektorze publicznym
- ☐ W firmie lub organizacji publiczno-prywatnej
- ☐ W sektorze non-profit, organizacji pozarządowej
- ☐ Inne, jakie:

Question Version 2 (English):

In which sector of the economy do you work?

- ☐ **In the private sector**
The private sector includes all companies and organisations that are fully privately owned, but excluding not-for-profit organisations.
- ☐ **In the public sector**
The public sector includes all parts of the public administration at national, regional or local level as well as public services provided by the state or from state funds (including state run schools, hospitals, universities etc.).
- ☐ **In a joint private-public organisation or company**
A joint private-public organisation or company is any company in which the state has a stake but which also has private capital involvement.
- ☐ **In the not-for-profit sector or an NGO**
The not-for-profit sector includes all organisations that are not publicly funded. Their principle aim is a collective, public or social benefit, and thus not to generate a profit. This includes charities, many NGOs, social cooperatives etc.
- ☐ Other, please specify:

Question Version 3 (English):

In which sector of the economy do you work?

- ☐ In the private sector
- ☐ In the public sector
- ☐ In a joint private-public organisation or company
- ☐ In the not-for-profit sector or an NGO
- ☐ Other, please specify:

Cognitive techniques:

Web probing: Category Selection Probing, Confidence Rating

Cognitive interviews: Specific Probing, Confidence Rating

Findings Web Probing:

Table 16. Frequency distribution web probing Q14 by question version (N = 792)

Answer	1: ToolTip	2: Instruction	3: No clarification
UK			
In the private sector	67% (58)	79% (70)	76% (67)
In the public sector	31% (27)	19% (17)	22% (19)
In a joint private-public organisation or company	1% (1)	0% (0)	0% (0)
In the not-for-profit sector or an NGO	1% (1)	1% (1)	2% (2)
Other, namely:	0% (0)	1% (1)	0% (0)
Total	100% (87)	100% (89)	100% (88)
Germany			
In the private sector	68% (63)	74% (66)	73% (61)
In the public sector	15% (14)	13% (12)	14% (12)
In a joint private-public organisation or company	9% (8)	8% (7)	11% (9)
In the not-for-profit sector or an NGO	4% (4)	2% (2)	0% (0)
Other, namely:	3% (3)	2% (2)	1% (1)
Total	100% (92)	100% (89)	100% (83)
Poland			
In the private sector	73% (65)	67% (56)	73% (66)
In the public sector	21% (19)	27% (23)	24% (22)
In a joint private-public organisation or company	4% (4)	5% (4)	2% (2)
In the not-for-profit sector or an NGO	0% (0)	1% (1)	0% (0)
Other, namely:	1% (1)	0% (0)	1% (1)
Total	100% (89)	100% (84)	100% (91)

Respondents were randomly assigned to one of the three question versions. Responses did not differ significantly between the question versions (see Table 16; $\chi^2_{(8,792)} = 2.939, p = .938$).

Responses differed significantly between countries, with German respondents being generally more likely to work in joint private-public organisations or companies and less likely to work in the public sector than UK and Polish respondents ($\chi^2_{(8,792)} = 39.212, p < .001$).

Moreover, the chosen sector differed based on the respondents' working status (see Table 17). Self-employed respondents were significantly more likely to choose "private sector" than respondents who were employed or in atypical working situations ($\chi^2_{(8,792)} = 59.962, p < .001$). Of the nine respondents who chose the answer category "Other, namely:", eight were self-employed or in atypical working situations.

Table 17. Frequency distribution web probing Q14 by working status (N = 792)

Answer	Employed (n = 279)	Self- employed (n = 228)	Atypical (n = 285)
In the private sector	65% (182)	88% (200)	67% (190)
In the public sector	28% (79)	5% (12)	26% (74)
In a joint private-public organisation or company	3% (9)	5% (12)	5% (14)
In the not-for-profit sector or an NGO	3% (8)	0% (0)	1% (3)
Other, namely:	0% (1)	2% (4)	1% (4)

The open-ended answers of the respondents who named another sector showed that certain groups of respondents had difficulty naming their sector. For one, low-qualified workers sometimes had difficulty recognizing that they work in the private sector. This applied to a cleaning aid working in a private household (which the respondent did not conclude to be the private sector) and a respondent who stocked shelves at a (presumably private, for-profit) food retailer. Secondly, some self-employed or freelancers who seemed to receive contracts from different sectors did not seem to realize that their own business was part of the private sector. One respondent owned a business as a gardener, growing and selling plants. Another respondent worked as a detective. A third worked freelance as an alternative, non-medical practitioner. Finally, some respondents working in sectors that can be run privately, publicly, or jointly seemed uncertain in which sector their business was active. These respondents worked in health care, a pharmaceutical company, oil and gas exploration, and a cultural institution.

Did respondents answer correctly?

Directly following the closed survey question (which sector of the economy respondents work in), a probe asked respondents to describe in their own words which sector they work in (P1_Q14). These responses were used to check whether respondents had answered the survey question correctly. One in ten respondents gave a non-substantive answer to the probing question (10%, $n = 78$), that is, they left the text field empty or inserted random characters or other non-codable content. In 76% ($n = 600$) of all cases, respondents' answers to the open-ended probe coincided with their survey responses, that is they either clearly confirmed that respondents had chosen the correct sector or at least gave no reason to assume otherwise. In 7% of responses ($n = 55$), the responses were ambiguous, making it impossible to determine whether a respondent had classified the sector correctly. For instance, one respondent who chose "private sector" worked in waste collection but did not specify whether he/she worked for the municipality or a private sub-contractor. The same applied to other respondents who worked in other sectors that are partially public, partially private, such as health or education, and who did not provide details on their organisation's structure. In 5% ($n = 38$) of responses, respondents had clearly chosen the incorrect sector. A common misunderstanding was that respondents whose work included dealing with the general population, such as workers in supermarkets, chose "public sector". Examples of this misunderstanding are "I work in a supermarket", "I work with the customers who want help with the house and/or garden" or "client service, car diagnostics". Finally, 3% of respondents ($n = 21$) answered that they didn't know which sector they worked in ("I have my own gardening business and I am the only person working for this business so maybe this could be privately owned").

Based on the analysis of the probing question, there were no significant differences in the share of correct responses to Q14 depending on the question version, that is, whether clarifications of the sector were shown (1) on demand via ToolTips, (2) to all respondents alongside the response options, or even if (3) no clarifications were presented ($\chi^2_{(8,792)} = 8.747$, $p = .364$). Likewise, there were no significant differences in the correctness of the survey responses by country ($\chi^2_{(8,792)} = 4.739$, $p = .785$).

Table 18. Correctness of survey response to Q14 based on probe response P1_Q14 by sector

Analysis of probe response (P1_Q14)	Private sector (<i>n</i> = 572)	Public sector (<i>n</i> = 165)	Joint private-public (<i>n</i> = 35)	Not-for-profit sector or NGO (<i>n</i> = 11)
Survey response was correct	85% (486)	63% (104)	9% (3)	64% (7)
Survey response was incorrect	0% (1)	15% (25)	29% (10)	18% (2)
Unclear whether survey response was correct or not	3% (19)	11% (18)	49% (17)	9% (1)
Respondent was unsure of their survey response	2% (9)	2% (3)	0% (0)	0% (0)

However, the correctness of the response significantly differed depending on the respondents' answer to the survey question (see Table 18; $\chi^2_{(12,783)} = 239.394$, $p < .001$). In other words, respondents who indicated that they worked in the private sector were most likely to have chosen the correct sector (85%, $n = 486$). Respondents who had chosen the public, joint private-public or not-for-profit sector were significantly more likely to have given an incorrect response (for instance by misunderstanding public sector to mean that their customers are the general public), or to at least be so ambiguous in their description of their sector that their response remained unclear.

Did respondents' confidence that they chose the correct answer differ depending on the question version?

Confirming the results of the analysis of the open-ended probe, there were no significant differences in respondents' confidence ratings depending on question version (see Table 19; $\chi^2_{(6,792)} = 3.109$, $p = .795$) or by country ($\chi^2_{(6,792)} = 9.739$, $p = .136$).

Table 19. Confidence rating for economic sector by question version and country (P2_Q14)

How sure are you that your answer is correct and that you do not work in a different sector?	1: ToolTip (n = 268)	2: Instruction (n = 262)	3: No clarification (n = 262)
Very sure	75% (200)	73% (191)	76% (198)
Rather sure	20% (53)	23% (61)	19% (51)
Rather unsure	4% (11)	3% (9)	4% (10)
Very unsure	1% (4)	0% (1)	1% (3)

Respondents who had indicated that they worked in the private sector were significantly more likely to be “very sure” of their response as compared to respondents who chose one of the other sectors (see Table 20; $\chi^2_{(3,792)} = 11.238, p = .011$).

Table 20. Confidence rating for economic sector by sector (P2_Q14)

How sure are you that your answer is correct and that you do not work in a different sector?	Private Sector (n = 572)	Other Sector (n = 220)
Very sure	76% (436)	70% (153)
Rather sure	20% (117)	22% (48)
Rather unsure	3% (16)	6% (14)
Very unsure	1% (3)	2% (5)

Findings Cognitive Interviews:

Table 21. Frequency distribution cognitive interviews Q14 (N = 32)

Answer	Germany (n = 16)	Poland (n = 16)
In the private sector	7 (1)	9
In the public sector	6	4
In a joint private-public organisation or company	(1)	-
In the not-for-profit sector or an NGO	-	2
Other, please specify:	-	1
Don't know	2	-

In both countries, about half of the respondents (DE: $n = 7$; PL: $n = 9$) categorized themselves as working in the private sector, while most of the others answered that they worked in the public sector (DE: $n = 6$; PL: $n = 4$). In Germany, one respondent changed his answer from “in the private sector”

to “in a joint private-public organization or company” while answering, and two respondents did not know where they should categorize themselves. In Poland, two respondents classified themselves as working in the not-for-profit sector. One respondent did not understand the term “sector” and finally answered “other” and inserted that he worked in the “construction sector” (PL12).

Did respondents answer correctly and were they confident regarding their answers?

The majority of respondents classified themselves correctly (DE: $n = 12$; PL: $n = 14$). In Germany, two self-employed respondents referred to their main clients (e.g., publicly run schools or theatres) rather than their own business, causing them to incorrectly answer that they worked in the public sector or joint private-public organisation. Moreover, another self-employed respondent wanted to select both the private and public sector in which his clients work, and only chose the correct answer “private sector” because the question layout forced this. Two other respondents could not classify themselves at all. One of them worked as a nurse, in an institution that could be in the public or private sector, while the other respondent clearly worked in the private sector at a manufacturer.

In Poland, two respondents reacted overwhelmed by the question and the definitions. One of them incorrectly answered with “public sector”, despite clearly working in the private sector as a security guard. The other respondent finally chose the “other” category, explaining that he worked in “construction”.

Most respondents (DE: $n = 12$; PL: $n = 14$) claimed to be “very confident” that their answers were correct. Among the six respondents who were not “very confident” of their response were the two German respondents who could not answer the question. Four respondents were not confident regarding the company’s ownership, because the company had a complex structure (DE05, DE06, PL16) or they had just started working for it (DE01).

Finally, two self-employed respondents (DE09, DE15) answered that they were very confident regarding their answers, but addressed problems defining whether they should indicate the sector of the clients they work for or their own company:

- *“I can't answer that. Why? Because I work for all kinds of sectors, several companies. So, for me it would be the private sector, but also state-owned enterprises and public-private enterprises.”* (DE09, public sector)
- *“Difficult, that's a question I find hard to answer. If I classify my own company, then I work in the private sector [...] When I look at my clients, I work in many countries and in many sectors, but I don't think that's what is meant here.”* (DE15, private sector)

Having multiple jobs or businesses did not cause confusion regarding this question. All respondents who had multiple jobs or businesses correctly referred to their main job or business only.

Were the ToolTips used?

The majority of respondents read at least one of the ToolTips. However, respondents in Germany were more likely to read at least one definition (DE: $n = 15$; PL: $n = 10$). The respondents who did not use the ToolTips explained that they did not need them because they knew the definitions of the sectors or could clearly assign themselves to one sector:

- *“I knew the definitions of the sectors, so I didn't need this help.”* (DE09)
- *“It was clear for me. I did not have to use the instruction.”* (PL01)

Six respondents (DE: $n = 4$; PL: $n = 2$) read the ToolTips for selected sectors only. In all cases, these respondents were fairly certain of their response, but wanted to check the correctness of their answer. Some respondents did this by reading through the definition of their chosen sector, while others read through sectors that they were not as familiar with:

- *“I immediately knew that my sector is the ‘public’ sector. I also knew immediately what ‘not-for-profit’ sector means. Regarding the other [sectors], I wanted to be sure whether they mean what I believe they mean.”* (DE10, public sector)
- *“I only read through the sector that applies to me. I didn’t bother to read the others.”* (DE11, public sector)

Three respondents reported technical difficulties using a tablet or because the mouseover boxes with the dark background and white font strained their eyes.

Were the definitions in the ToolTips perceived as informative?

Four respondents (two from each country) criticized that the definitions of the sectors were too abstract and suggested adding examples to the clarifications:

- *“I don’t get these explanations at all. It would be good if examples were given so that one could better imagine what is included [in which category] [...] I don’t know whether it is the public sector or the private-public sector.”* (DE02, don’t know)
- *“The explanations are sufficient, but perhaps an example could be added to each of them.”* (PL11, public sector)

In Poland, one respondent specifically criticized that the definition of the “not-for-profit” sector was not comprehensible (PL01), and another noted that the definitions should also include how to classify “foundations”, as they can contain both private and public funding (PL06).

Did respondents prefer receiving clarifications via ToolTips or alongside the response options?

Respondents showed a preference for the clarifications to be shown alongside the response options (DE: $n = 11$; PL: $n = 9$). The reasons for this were that the definitions were well visible, and the definitions could be compared to each other:

- *“Since I don’t understand at all what all these terms mean, I think it would be better if the explanations were displayed directly.”* (DE02)
- *“The definitions are available right away and easier to use, I can compare them right away.”* (PL06)
- *“This [version] seems more straightforward to me. All explanations appear at once. [In the other version] you have to do something to look for these explanations.”* (PL13)

Four respondents from Germany and six from Poland preferred the version with ToolTips. These respondents explained that the ToolTips led to less text being displayed on the screen at once and that the format did not force them to read unnecessary information:

- *“The great thing about the ToolTips is that as soon as I go into another field, they disappear, and it doesn’t feel so overloaded.”* (DE06)

- “I’ve already gotten used to the ToolTips; they are easier on the eyes, less exhausting.” (DE12)
- “In simple working situations, you do not need to look at them because you know immediately. I understand that if someone works in several sectors and cannot make up their mind, these hints are necessary.” (PL14)

In Poland, one respondent was indifferent towards the format. In Germany, one respondent suggested a mix of the two formats, with the clarifications being shown on demand in the response options (DE09).

Summary:

- Based on both web probing and cognitive interviews, self-employed respondents had more problems categorizing themselves than employed respondents.
- Moreover, respondents who reported that they worked in the private sector generally answered correctly, while respondents who claimed to work in the public sector were more often subject to a false understanding of the term public sector.
- Some respondents had difficulties understanding the clarifications of the sectors and would have preferred examples alongside the explanations to illustrate the economic sectors.
- The cognitive interviews revealed that most respondents preferred the clarifications of the sectors to be shown alongside the response options. Besides the personal preference, there were no differences in the correctness of the answers depending on the question format (based on web probing).

Q14 Recommendations:

- We recommend employing a **filter** so that self-employed respondents do not receive this question (as they work in the private sector by definition).
If, for self-employed respondents, the question should measure which sector(s) their (main) clients work in, a respective instruction indicating this should be added.
- We recommend presenting **clarifications** of the sectors alongside the response options instead of on demand via ToolTips.
- The **clarifications** should include both a definition and examples of each sector. The examples should include common sectors, but also sectors that were repeatedly incorrectly classified by respondents.

For instance:

“private sector

This includes all companies and organisations that are fully privately owned except not-for-profit organisations. It includes banks, craftsmans’ businesses, supermarkets and stores, cleaning services, but also privately owned hospitals or schools.”

ToolTip evaluation

At the end of the web probing study, respondents were asked questions about their use of clarifications via ToolTips.

Cognitive techniques:

Analysis of response behaviour, Specific Probing

Findings Web Probing:

Across all countries, only 18% ($n = 142$) respondents reported to have looked up an explanation via ToolTips at least once. Importantly, respondents in atypical working situations were significantly more likely to access clarifications via ToolTips (25%, $n = 72$) than respondents who were employed (14%, $n = 39$) or self-employed (14%, $n = 31$; $\chi^2_{(2,792)} = 16.286, p < .001$).

There was a significant difference between countries ($\chi^2_{(2,792)} = 26.789, p < .001$), with respondents from Poland being most likely and respondents from Germany being least likely to access ToolTips (see Table 22). Moreover, respondents who filled out the survey on a smartphone were significantly more likely to access ToolTips (22%, $n = 72$) than respondents answering on a laptop or desktop PC (15%, $n = 70$; $\chi^2_{(1,792)} = 5.485, p = .019$).

Table 22. Use of ToolTips by country

	UK ($n = 264$)	Germany ($n = 264$)	Poland ($n = 264$)
Did you look up explanations using a tooltip at any point?			
Yes	16% (43)	10% (27)	27% (72)
No	84% (221)	90% (237)	73% (192)
Why didn't you use the tooltips? (Basis: ToolTips not used)			
I did not notice them	44% (98)	47% (112)	49% (94)
I did not need additional explanations	62% (137)	58% (138)	54% (104)
No explanatory text was displayed	4% (9)	8% (20)	5% (9)
The explanatory text was not displayed correctly	1% (2)	1% (3)	1% (1)
Other reasons, namely:	1% (2)	1% (2)	1% (1)
Did not think of using them; Did not feel the need to use them; Concentrated on giving the answers			

The most common reason why respondents did not use the ToolTips was because they did not require additional explanations (58%, $n = 379$). Others indicated that they did not notice the ToolTips (47%, $n = 304$), though it can be assumed that these respondents would have paid more attention

to the highlighted text (bold, blue font) if they had required explanations. Technical difficulties, such as the clarifying text not being (correctly) displayed, were rarely reported.

Table 23. Frequency and acceptance of ToolTips by country

	UK (n = 43)	Germany (n = 27)	Poland (n = 72)
How often did you look up explanations using ToolTips? (<i>Basis: ToolTips used</i>)			
Always	28% (12)	11% (3)	11% (8)
Often	21% (9)	15% (4)	21% (15)
Sometimes	26% (11)	26% (7)	47% (34)
Rarely	26% (11)	48% (13)	21% (15)
Did you find the ToolTips that you used useful for answering the questions? (<i>Basis: ToolTips used</i>)			
Yes	86% (37)	67% (18)	96% (69)
No	14% (6)	33% (9)	4% (3)

Among respondents who used ToolTips at least once, 36% ($n = 51$) used them “always” or “often”, while the majority seemed to have used them only in specific cases when they required them. German respondents accessed ToolTips significantly less frequently than respondents from Poland or the UK ($\chi^2_{(6,142)} = 15.526, p = .017$) and were significantly less likely to find them useful ($\chi^2_{(2,142)} = 15.182, p = .001$; see Table 23).

The 18 respondents who did not find the ToolTips they had accessed useful in order to answer the question were asked to name reasons for this in an open-ended probe. The main reason was that they had not required any explanation in the first place, making the ToolTips text irrelevant to them. Two respondents added that the explanatory text lacked structure, was difficult to understand, and that they would have preferred an example of how to fill out the survey question.

Summary:

- Only a small group of respondents accessed the ToolTips, indicating that the clarifications that were only made available on demand were indeed not needed by the majority of respondents.
- Respondents in atypical working situations were more likely than others to access ToolTips, indicating that the clarifications that are only available on demand were accessed by respondent groups requiring additional explanation.
- Of the respondents who used ToolTips, the vast majority used them only when required, but often found the clarifications useful.
- German respondents reacted more hesitantly towards the ToolTips than respondents in the UK or Poland.

- In general, we recommend offering clarifications on demand in the online questionnaire of the EWCS24 to avoid presenting clarifications to all respondents that are only required by a small share.
- However, which text is offered only on demand and the exact wording of these clarifications should be revised in some cases. These recommendations are specified in the respective questions.

Conclusion

The findings indicate that most respondents did not read clarifications that are provided on demand via ToolTips, either because they did not notice them (despite the fact that they were informed about their existence on the welcome page of the questionnaire), or because they did not believe they required additional clarification to answer the survey question.

Respondents were more likely to read clarifications when they were presented alongside the survey question as instructions or alongside the response options. However, even in this case, many respondents did not read the instructions or only skimmed them, as could be seen by the large share of respondents in QN1 who indicated that they had at least one side job in a follow-up question, although they had not mentioned this in the survey question.

We recommend presenting clarifications pertaining to central concepts – such as the definition of being employed or self-employed – alongside the question text (Q7) or response options (Q14). Clarifications presented on demand should only be used in cases in which respondents who need them are likely to look them up (Q16).

Response Option: Adding Substantive Response Options

Q92 Work until which age

The adaptation to an online format required a decision whether to explicitly show the response option “I want to work as long as possible”, which was previously coded spontaneously by the interviewers. The adaptation decided to implement this as a closed response option as an alternative to the open-ended numeric text field in which the respondents could insert a specific age. Additionally, a closed response option “I want to stop working as early as possible” was implemented.

Web probing was used to examine which respondents chose the closed response alternatives and why. Cognitive interviews were used to examine whether the combination of an open-ended numeric field and closed response options was understood by respondents, and why they decided to answer in the open-ended numeric or closed format.

English:

Until what age do you want to work?

☐ Please type in age:

☐ I want to work as long as possible

☐ I want to stop working as early as possible

13. Until what age do you want to work?

You have not answered this question. Please indicate until what age you want to work, or choose one of the alternative responses below.

☐ Please type in age:

☐ I want to work as long as possible

☐ I want to stop working as early as possible

☐ *I don't know*

German:

Bis zu welchem Alter möchten Sie arbeiten?

☐ Bitte das Alter eingeben:

☐ Ich möchte so lange wie möglich arbeiten

☐ Ich möchte so früh wie möglich aufhören zu arbeiten

Polish:

Do którego roku życia chciał(a)by Pan(i) pracować?

☐ Proszę wpisać wiek:

☐ Chcę pracować tak długo, jak to możliwe

☐ Chcę przestać pracować możliwie najwcześniej

Cognitive techniques:

Web probing: Analysis of response behaviour, Category Selection Probing

Cognitive interviews: Category Selection Probing, Specific Probing, Difficulty Probing

Findings Web Probing:

The question was asked only to respondents ages 45 or older ($n = 434$). Across all countries, 37% ($n = 160$) of the respondents chose to give a numeric answer to the question how long they want to work, while 45% chose the closed response option “I want to work as long as possible” and 18% chose “I want to stop working as early as possible”. Response behaviour differed significantly between the three countries (see Table 24; $\chi^2_{(4,434)} = 16.593$, $p = .002$), with respondents in the UK being most likely to offer a numeric response, while respondents from Poland being most likely to want to work as long as possible. In the UK, retirement age is rather flexible, and respondents gave varying answers in the numeric format. In Germany, respondents who entered a numeric age were most likely to answer 65, the previous retirement age, or 66 to 67, which is the retirement age currently being implemented. The most common response in Poland was 60, certainly due to this age being a re-instated retirement age, at least for women, followed by 65.

Response behaviour also differed by the respondents’ work situation (see Table 25). Respondents who were employed were more likely to give a numeric response and less likely to answer that they wished to work as long as possible ($\chi^2_{(4,434)} = 13.069$, $p = .011$).

Table 24. Frequency distribution web probing Q92 by country ($N = 434$)

Until what age do you want to work?	UK ($n = 144$)	Germany ($n = 147$)	Poland ($n = 143$)
Numeric response	43% (62)	35% (51)	33% (47)
Of these (% based on numeric response):			
- under 60 years	21% (13)	4% (2)	19% (9)
- 60 years	24% (15)	12% (6)	34% (16)
- 62, 63 or 64 years	11% (7)	18% (9)	9% (4)
- 65 years	15% (9)	43% (22)	23% (11)
- 66 or 67 years	18% (11)	18% (9)	2% (1)
- 68 years or older	11% (7)	6% (3)	13% (6)
I want to work as long as possible	36% (52)	42% (62)	57% (81)
I want to stop working as early as possible	21% (30)	23% (34)	10% (15)

Table 25. Frequency distribution web probing Q92 by working status (N = 434)

Until what age do you want to work?	Employed (n = 148)	Self- employed (n = 148)	Atypical (n = 138)
Numeric response	44% (65)	33% (49)	33% (46)
I want to work as long as possible	35% (51)	54% (80)	46% (64)
I want to stop working as early as possible	22% (32)	13% (19)	20% (28)

How did respondents explain their response?

Respondents were asked to explain why they chose their answer (P1_Q92). In total, 85% (n = 434) of the respondents gave a substantive answer to the probing question, with no difference in the share of valid responses regardless of whether respondents chose to give a numeric response or one of the closed alternatives.

Among respondents who stated that they wanted to **work as long as possible**, 84% (n = 164) named one or more substantive reasons. Respondents either planned to voluntarily continue working as long as possible or explained that they had to continue to work for financial reasons – and some respondents named both of these reasons. The most common reason to continue working voluntarily was that respondents enjoyed their profession; this was mentioned in 41% of valid responses (n = 68). Respondents often (additionally) named that they viewed working as giving them a sense of purpose and/or could not imagine life without working (12%, n = 20). This included viewing their profession as a daily routine, as their chosen way of life, stating that they enjoyed keeping busy, or that they perceived the thought of retirement as boring, were afraid that they wouldn't know what to do with themselves or, in one case, that their constant presence at home might annoy their spouse. Further named benefits of working as long as possible were keeping physically (n = 11) and/or mentally (n = 6) fit. Some respondents specified that they would work as long as their health permitted (n = 21), and few specified that they would continue working, but reduce their hours (n = 6). Finally, six respondents explained that they could only choose this answer because they carried out work that could be done beyond the official retirement age, for instance because it was not physically demanding or because they were self-employed. In contrast to these voluntary reasons, 23% of respondents (n = 37) stated the main reason to continue working was financial necessity. These respondents argued that they had little or no pension to expect and would therefore work until it was no longer possible or even till death. Others had financial obligations towards their family or due to a mortgage (n = 5). For others, continuing to work beyond retirement age was not a financial necessity, but would make life more comfortable (n = 12) or respondents stated that they simply enjoyed having an active income of their own (n = 2).

Of the respondents who indicated that they wished to **stop working as soon as possible**, 81% (n = 64) named one or more substantive reasons. The most common set of reasons were positive aspects of retirement (40%, n = 26) such as wanting as much time as possible to enjoy retirement and life in general, to pursue free-time activities such as travel, or spend more time with family and friends, at best while still being relatively young and healthy. The second line of argumentation were negative aspects of working life (33%, n = 21), in particular not enjoying one's job, working only as a means to an end, or poor working conditions such as a bad social atmosphere or low pay. The third cluster of arguments were health-related (22%, n = 14), with respondents explaining that they were chronically sick, exhausted, often because their jobs were physically and/or emotionally

demanding. Finally, 19% ($n = 12$) specified that they would only continue to work as long as it was financially necessary.

Respondents who gave a numeric answer were asked to insert a number between 15 and 100; however, there were no plausibility checks preventing respondents from inserting their current age or even younger. Of the 160 respondents who gave a numeric answer, four inserted an age that was below their current age and five inserted their current age. Of these, one person wrote that they had severe physical impairments since this age and believe they should have been able to retire at that moment. Another respondent wrote that they didn't retire at the age he/she had inserted but would have preferred this. One respondent was due to retire in the next months, and a second was already semi-retired with health problems. In one case, the inserted age seemed to include a typing error based on the response to the probe. In the other four cases, it remained unclear why the respondents typed in the respective response.

In total, 84% ($n = 135$) of respondents who gave a **numeric answer** inserted an age that was higher than their current age and gave a substantive answer to the probing question. Among these, respondents named manifold reasons why they chose to insert the age that they did. The most common line of argumentation was that this was the optimal age for them, for instance because they could retire without deductions at this age (30%, $n = 41$), that this was the age they were planning to retire or working up to retiring at (17%, $n = 23$), that this age was simply their personal preference and felt "right" ($n = 5$), or that they felt they will have worked enough years by then ($n = 12$). Other respondents explained that they had inserted the earliest age they believed they would be able to retire (24%, $n = 32$), with the reasons for wanting to retire mirroring those of the respondents who chose the closed response option. Less often ($n = 11$) respondents indicated that they wanted to continue as long as possible and that they believed this would be the age that is possible.

Findings Cognitive Interviews:

The cognitive interviews aimed to reveal if the combined format of open-ended numeric and closed response options was understood and to reveal the reasons for answering with a numeric or a closed option. For this question, only the interviews of the respondents who were over the age of 45 years were analysed. In Germany and Poland, ten respondents were over the age of 45 years, respectively.

Table 26. Frequency distribution cognitive interviews Q92 ($N = 20$)

Until what age do you want to work?	Germany ($n = 10$)	Poland ($n = 10$)
Numeric response		
Of these:		
- 55 years	-	1
- 60 years	-	2
- 63 years	1	-
- 65 years	2	1
- 67 years	1	-
- 70 years	1	-
I want to work as long as possible	4	5
I want to stop working as early as possible	1	1

Five respondents in Germany and six respondents in Poland selected a closed response option. Participants DE08 and PL16 selected “I want to stop working as soon as possible”. Respondent DE08 stated that she does not want to work longer than the legally mandated years. Respondent PL16 explained, that he did not enjoy his work and therefore wanted to stop working as soon as possible.

Of the nine respondents who selected “I want to work as long as possible”, six explained that their work was important for their life satisfaction and that they enjoyed it:

- *“The most important reason is that I enjoy my work [...] I can say for myself that I would lose a lot of life's purpose if I could no longer do it for some reason.” (DE04)*
- *“I love my work. It keeps me young, and it is so much a part of me because it comes directly from my own creativity. I can't imagine living without it.” (DExx)*
- *“I like my job and that's why I'd like to work and be active as long as I can.” (PL08)*

Two respondents indicated that they want to work as long as possible because they needed to earn a living:

- *“I can hardly earn riches in my job, can hardly earn a monetary buffer, and so I also have to keep working to simply feed myself.” (DE04)*
- *“I don't know what my retirement benefit would be and the most realistic solution is to continue working.” (PL14)*

Finally, two respondents stated that they want to work as long as possible because it keeps them healthy:

- *“I believe that being professionally active [to a bit lesser extent than now] keeps us intellectually fit for longer.” (PL07)*
- *“Because you have to work, if you stop working and thinking, you get old quickly.” (PL02)*

When being asked why they selected a closed response option instead of entering a numeric answer, respondents either argued that they did not know until what age they were able to work or that the legal regulations could change:

- *“Since I don't know how old I will become, I can't give a figure accordingly. Actually, I would like to work until I die.” (DE04)*
- *“I could answer in a number, but this is related to the current retirement law, which is changing, and I don't know when and which way it will change. Guessing what will happen in 10 or 20 years is a lottery.” (PL14)*

On the other hand, the respondents who chose a numerical answer had a precise idea of the age at which they wanted to stop working. The respondents' considerations here related to the need to work until this age in order to have a pension, to pursue leisure activities, or to no longer be able to perform work due to age:

- *“Well, I'm [age] now and my husband is already retired. We actually want to travel a bit and spend a lot of time together. As long as that's still possible and that's why I think in [number] years it will be enough.” (DE05, “work until the age of 65”)*
- *“That is my official retirement age and I think I will have to work that long to build up my pension.” (DE15, “work until the age of 67”)*
- *“I still have some energy so I may make it at this pace.” (PL13, “work until the age of 60”)*

All respondents found it “rather” or “very easy” to answer this question.

Summary:

- The web probing study showed that respondents in regular employment were more likely to be able to name a specific age at which they plan and wish to retire than respondents who are self-employed or in atypical working situations. Cognitive interviews confirmed that respondents who could plan their financial situation with certainty were more likely to give a numeric response.
- Respondents who gave an exact number referred to the desire for time off, legal requirements, or not being able to work due to increasing age.
- Reasons for wanting to work as long as possible included both positive aspects related to working life or financial necessity. If this differentiation is important for analytical reasons, it must be asked separately.
- The cognitive interviews revealed no difficulties in answering this question.

Q92 Recommendations:

No changes recommended.

Response Options: Open-Ended Numeric Questions

Q36 Time spent commuting

Web probing was used to examine how respondents dealt with the open-ended numeric format and whether this influenced response behavior. Question version 1 used an open-ended numeric format, while question version 2 offered closed, predefined numeric ranges. Respondents were randomly assigned to a question version.

English (Question Version 1):

In total, how many minutes per day do you usually spend [travelling](#) from home to work and back?

In total, how many minutes per day do you usually spend [travelling](#) from home to work and back for your main job?

Please enter the combined total of [both](#) the outgoing and return journeys to and from work. If your journey times vary from day to day, please provide an estimated average.

Number of minutes per day:

German (Question Version 1):

Wie viele Minuten sind Sie üblicherweise pro Tag insgesamt [unterwegs](#) , um von zu Hause zur Arbeit zu gelangen und wieder zurück?

Wie viele Minuten sind Sie üblicherweise pro Tag insgesamt [unterwegs](#) , um im Rahmen Ihres Hauptberufs von zu Hause zur Arbeit zu gelangen und wieder zurück?

Bitte geben Sie die Gesamtzeit für den Hinweg zur [und](#) den Rückweg von der Arbeit an. Wenn Ihre Fahrtzeiten stark variieren, geben Sie bitte einen geschätzten Durchschnittswert an.

Anzahl der Minuten pro Tag:

Polish (Question Version 1):

Łącznie ile minut dziennie poświęca Pan(i) zazwyczaj na [dojazd](#) z domu do pracy i z powrotem?

Łącznie ile minut dziennie poświęca Pan(i) zazwyczaj na [dojazd](#) z domu do pracy i z powrotem w przypadku swojego głównego miejsca pracy?

Proszę podać całkowity czas podróży do pracy i z powrotem. Jeśli czas podróży jest różny w różnych dniach, proszę podać wartości w przybliżeniu.

Liczba minut dziennie:

Question Version 2 (English):

In total, how many minutes per day do you usually spend [travelling](#) from home to work and back?

In total, how many minutes per day do you usually spend [travelling](#) from home to work and back for your main job?

Please enter the combined total of both the outgoing and return journeys to and from work. If your journey times vary from day to day, please provide an estimated average.

- ☐ less than 15 minutes
- ☐ between 15 and 29 minutes
- ☐ between 30 and 59 minutes
- ☐ between 1 hour and under 1 1/2 hours
- ☐ between 1 1/2 hours and under 2 hours
- ☐ between 2 hours and under 3 hours
- ☐ between 3 hours and under 4 hours
- ☐ 4 hours or more

Cognitive techniques:

Recall Probing

Findings Web Probing:

There was no difference in non-response between question versions, with exactly one respondent not answering in either format. When examining both the responses to the survey question and the following probing question, there were no implausible values (in either question version). In the open-ended numeric format, 8% ($n = 61$) of the respondents answered with 0 minutes of commuting, indicating that these respondents worked from home. A similar distinction between respondents with a short versus no commute could not be made based on the predefined response options in the closed question. The responses to the open-ended numeric question showed that respondents tended to provide rounded responses (i.e., 10, 15, 20 or 30 minutes) rather than “exact” times (i.e., 24 minutes).

The response distributions between the two question formats differed significantly when the open-ended numeric responses were recoded to exactly depict the predefined closed responses (see Table 27; $\chi^2_{(7,790)} = 19.143, p = .008$).

Table 27. Frequency distribution web probing Q36 by question version ($N = 792$)

Q36: Time Spent Commuting	1: Open-ended numeric ($n = 396$)	2: Closed question ($n = 396$)
less than 15 minutes	27% (106)	31% (122)
between 15 and 29 minutes	14% (57)	22% (89)
between 30 and 59 minutes	30% (120)	26% (104)
between 1 hour and under 1 1/2 hours	17% (68)	10% (40)
between 1 1/2 hours and under 2 hours	4% (15)	5% (19)
between 2 hours and under 3 hours	4% (16)	4% (14)
between 3 hours and under 4 hours	2% (7)	1% (3)
4 hours or more	2% (6)	1% (4)
<i>Item non-response</i>	0% (1)	0% (1)

However, response distributions were nearly identical when the open-ended answers were recoded to include the rounded minutes (see Table 28; $\chi^2_{(7,790)} = 5.643, p = .570$). This indicates that respondents in the closed response format who were on the verge between two responses (i.e., because their commute is approximately 30 minutes) tended to choose the lower value.

Table 28. Recode of time spent commuting (Q36)

Q36: Time Spent Commuting			
Recoded Response	1: Open-ended	2: Closed question	Response Options
Open-ended Numeric	numeric	(n = 396)	Closed Question
	(n = 396)		
0-15 minutes	31% (122)	31% (122)	less than 15 minutes
16-30 minutes	22% (89)	22% (89)	between 15 and 29 minutes
31-60 minutes	30% (120)	30% (120)	between 30 and 59 minutes
61-90 minutes	8% (32)	8% (32)	between 1 hour and under 1 1/2 hours
91-120 minutes	4% (17)	4% (17)	between 1 1/2 hours and under 2 hours
121-180 minutes	2% (6)	2% (6)	between 2 hours and under 3 hours
181-240 minutes	1% (3)	1% (3)	between 3 hours and under 4 hours
241 minutes or more	2% (6)	2% (6)	4 hours or more
<i>Item non-response</i>	<i>0% (1)</i>	<i>0% (1)</i>	<i>Item non-response</i>

There were no significant differences in response behaviour between countries. However, self-employed respondents were significantly more likely to work from home and report the value “0 minutes” in the open-ended numeric format or “less than 15 minutes” in the closed question version than respondents who were employed or in atypical working situations ($\chi^2_{(16,792)} = 55.549, p < .001$).

How did respondents arrive at their answer?

Most respondents (80%, $n = 633$) gave substantive responses to the probe on how they arrived at their answers. There were no significant differences between the shares of substantive probe responses depending on the question version. However, respondents in atypical working situations were more likely to give non-substantive responses (29%, $n = 84$) than respondents who were employed (16%, $n = 45$) or self-employed (13%, $n = 30$) ($\chi^2_{(2,792)} = 24.153, p < .001$).

Among the substantive responses, almost half of the respondents (42%, $n = 267$) reported a clear **strategy** how they arrived at the number of minutes they spent travelling to and from work each day. These respondents either reported a calculation, mainly by summing up the time spent to get to work and back (i.e., “I need 40 minutes in one direction from door to door. I took this value times two”) or based their answer on the distance between their home and workplace (i.e., “I live 600 meters from my work”). A second group of respondents (29%, $n = 182$) gave short responses based on their everyday **experiences**, such as “Because that is how long I drive” or “That is my experience”. In 13% of substantive responses ($n = 83$), respondents explained that the time they spent travelling **varied strongly**, depending on traffic, the vehicle(s) they used, or where they had to travel to for work. In some cases, respondents travelled to varying client premises. In other cases, respondents worked mainly from home, but when they travelled, travelled far (i.e., a performing artist wrote: “We do events all over the country, so we travel a lot when we have a show. The rest of the time we work

from home”). Many of these respondents reported an estimated average (i.e., “I work in many locations, so this is an average travel time” or “In extreme cases, I travel more than three hours to markets and fairs. But most of the time I work from home or in the warehouse not far from me, so the average time is rather low”). Finally, 16% of respondents ($n = 101$) reported that they did not travel to work at all because they **work from home**. Respondents who received the open-ended numeric format all inserted the value “0” as their travel time. Respondents who received the question version with the closed response options chose “less than 15 minutes”, but often commented that they were missing a response option to express that they do not commute (e.g., “I work from home, so the answer is ‘no time is spent travelling to work’ but that was not an option”).

Inconsistency in reporting occurred when respondents seldom travelled to work or had travelled to work before the beginning of the COVID pandemic. For instance, in the case of the performing artist mentioned above, the respondent reported a travelling time of “between 3 hours and under 4 hours”, indicating the average time to a performance. Other respondents who mainly worked from home calculated an average. Among respondents who were working from home due to the pandemic at the time of the web probing study, some reported their current situation, while others reported their regular commute before the start of the pandemic. For instance, one respondent who inserted “0” as the number of minutes spent commuting explained: “I have been working from home since the start of COVID, so I do not travel. My actual office is a one-hour commute - if I ever do it again.” In contrast, another respondent answered “between 1 ½ and under 2 hours”, clearly only referring to the situation before the pandemic: “I non-COVID times, my office is 40 miles away and my typical commute is between 45 and 60 minutes each way.”

Table 29. Probe response by working status (P1_Q36)

How did you arrive at your answer? (P1_Q36) (Basis: Substantive responses; main codes)	Employed ($n = 234$)	Self-employed ($n = 198$)	Atypical ($n = 201$)
Strategy: response based on calculation, sum, or distance	54% (127)	31% (61)	39% (79)
Experience: as long as it takes	30% (70)	25% (49)	31% (63)
Varying travel times	9% (22)	13% (25)	18% (36)
Respondent works from home, no travel	6% (15)	32% (63)	11% (23)

There were no significant differences in probe responses between question versions, indicating that the cognitive strategies used by respondents to answer the survey question did not differ by question format. However, there were significant differences in probe responses based on the respondent’s working situation ($\chi^2_{(6,633)} = 69.436, p < .001$). Employed respondents were most likely to base their survey response on a clear calculation of their travel time and distance, while respondents in atypical working situations were more likely to report strongly varying travel times, and self-employed respondents were most likely to work from home (see Table 29).

Summary:

- Either question format (open-ended numeric or closed) is suitable to capture the time spent commuting.
- Respondents who seldom travelled for work sometimes reported an average across all days, and sometimes only reported their average travel times on days that they travelled.

Q36 Recommendations:

- We recommend to add a preceding question on how many days per month a respondent usually travels to work.
This will help respondents who do not travel daily to provide an average for the days that they do travel. Moreover, the share of respondents who regularly spend part of their working time working from home is likely to increase in the aftermath of the COVID-19 pandemic.
- The question can be asked using either an open-ended numeric or a closed response format.
- If the closed response format is implemented, the response options should include the next rounded value (i.e., 1-15 minutes, 16-30 minutes).
- In either question format, an additional closed response option “I do not commute / I work from home” should be implemented.

Response Options: Adjustable Response Units

In the CAPI questionnaire of the EWCS, several numeric questions were worded using a certain unit (i.e., working hours per week), but gave interviewers the possibility to insert responses in another unit (i.e. working hours per month) if the respondent answered in this way or had difficulties with the first-offered response units. In the course of the online adaptation, the most common response unit was maintained, and respondents were offered an open-ended numeric field and an alternative, closed-ended response that they would prefer to answer in a different unit. Cognitive interviewing and web probing were used to examine whether this format was understood by respondents and which respondents were most likely to employ the alternative response units.

Q24, Q24b Work hours

Web probing focused on examining how many and which respondents choose which response units (that is, reporting their working hours on a weekly or monthly basis). Moreover, the understanding of the term “usually” was examined.

Cognitive interviews were used to gain a deeper understanding of the cognitive response process and of how respondents arrive at their answer.

English:

The next questions are about your working time.

How many hours do you usually work per week in your main paid job?

The next questions are about your working time.

How many hours do you usually work per week in your paid job?

Please exclude meal times and time spent travelling to and from work.

☐ Number of hours per week:

☐ I prefer to answer about the number of hours per month

How many hours do you usually work per month in your main paid job?

How many hours do you usually work per month in your paid job?

Please exclude meal times and time spent travelling to and from work.

Number of hours per month:

German:

In den folgenden Fragen geht es um Ihre Arbeitszeit.

Wie viele Stunden pro Woche arbeiten Sie normalerweise in Ihrem Beruf?

Bitte schließen Sie Mittagspausen und Fahrzeiten von und zur Arbeit aus.

☐ Anzahl der Stunden pro Woche:

☐ Ich möchte die Arbeitsstunden lieber pro Monat angeben

Wie viele Stunden pro Monat arbeiten Sie normalerweise in Ihrem Beruf?

Bitte schließen Sie Mittagspausen und Fahrzeiten von und zur Arbeit aus.

Anzahl der Stunden pro Monat:

Polish:

Kolejne pytania dotyczą Pana(-i) czasu pracy.

Ile godzin tygodniowo zwykle pracuje Pan(i) w swoim miejscu pracy?

Proszę wykluczyć przerwy na lunch oraz czas spędzony na dojazd do i z pracy.

☐ Liczba godzin tygodniowo:

☐ Wolę podać liczbę godzin w miesiącu

Ile godzin miesięcznie zwykle pracuje Pan(i) w swoim miejscu pracy?

Proszę wykluczyć przerwy na lunch oraz czas spędzony na dojazd do i z pracy.

Liczba godzin w miesiącu:

Cognitive techniques:

Web probing: Recall Probing, Comprehension Probing

Cognitive interviews: Recall Probing, Difficulty Probing, Comprehension Probing, Specific Probing

Findings Web Probing:

The vast majority (93%, $n = 734$) of respondents reported their working hours in hours per week. Respondents in Poland were significantly more likely to report their working hours per month than respondents in Germany or the UK ($\chi^2_{(2,792)} = 15.888, p < .001$). Also, Polish respondents reported a significantly higher number of weekly working hours than the UK or German respondents ($F_{(2,731)} = 7.213, p = .001$). The same pattern held true for the reported monthly hours, though the difference was not significant. In particular, the majority of Polish respondents (60%, $n = 138$) responded that their usual weekly working hours were exactly 40 hours, while this share was at only 21% and 24% in the UK and Germany, respectively.

Table 30. Frequency distribution web probing Q24, Q24b (N = 792)

Answer	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
Chosen response format			
Weekly hours reported	96% (253)	95% (250)	88% (231)
Monthly hours reported	4% (11)	5% (14)	13% (33)
Weekly working hours			
<i>n</i>	253	250	231
Mean	35.1	36.7	40.3
Median	36.0	40.0	40.0
Standard deviation	19.2	15.2	8.9
Minimum	2	4	2
Maximum	168	140	72
Distribution of weekly hours			
1-19 hours	15% (37)	10% (24)	3% (6)
20-29 hours	15% (37)	13% (32)	3% (7)
30-34 hours	13% (32)	10% (25)	6% (13)
35-39 hours	20% (50)	17% (43)	7% (17)
40 hours	21% (52)	24% (61)	60% (138)
41-49 hours	8% (20)	14% (34)	10% (22)
50+ hours	10% (25)	12% (31)	12% (28)
Total	100% (253)	100% (250)	100% (231)
Distribution of monthly hours			
1-40 hours	25% (3)	57% (8)	12% (4)
41-80 hours	25% (3)	0% (0)	6% (2)
81-160 hours	50% (6)	14% (2)	33% (11)
161-720 hours	0% (0)	29% (4)	48% (16)
Total	100% (12)	100% (14)	100% (33)

How did respondents arrive at their answer?

Approximately three quarters of respondents (77%, $n = 609$) gave a substantive answer to the probing question asking how they arrived at their answer (P1_Q24). A response was coded as non-substantive if the respondent inserted no answer or random characters ($n = 75$), simply repeated their survey answer (i.e., the number of hours) or gave an otherwise off-topic, non-codable answer ($n = 108$). Non-substantive responses may be a sign of satisficing, that is respondents being unwilling to respond to the probing question but may also indicate that respondents have difficulty answering the survey and/or probing question. Supporting this second notion, respondents with (presumably) irregular working hours were more likely to give non-substantive answers. For instance, respondents in atypical working situations were significantly more likely to give non-substantive answers (30%, $n = 85$) than self-employed (20%, $n = 46$) or employed (19%, $n = 52$) ($\chi^2_{(2,792)} = 11.478$, $p = .003$). Also, respondents who reported their monthly working hours (50%, $n = 29$) rather than their weekly hours (21%, $n = 154$) were significantly more likely to give non-substantive answers ($\chi^2_{(1,792)} = 25.477$, $p < .001$).

Among the substantive responses, respondents described how they arrived at their answers. Around two fifths of the respondents (43%, $n = 263$) described their calculation to arrive at their working hours. Many of those respondents averaged their working hours over certain time periods, such as a week or a month. Some respondents counted or summed up the hours and others estimated their working hours. In five cases, respondents reported that they had guessed their working hours. Other responses indicated that respondents thought of their contracted hours or their working scheme (16%, $n = 97$). A similar share of the respondents did not elaborate further on their answer, pointing out “that’s what I work” (13%, $n = 78$). A few respondents set their own working hours, which therefore varied.

Three respondents criticized the survey question. Two of these respondents said they would have preferred to insert a number with a decimal. The third respondent wanted to indicate “*that the hours or days I work are different all the time*” but could only put down numbers. Furthermore, some respondents (6%, $n = 38$) reported their breaks despite the instructions asking them not to, because their breaks are paid working time as per their contract.

What do respondents understand by the term “usually”?

Three quarters of the respondents (75%, $n = 592$) gave substantive responses regarding their understanding of the term “usually” (P2_Q24). The remaining respondents either refused to answer the probe ($n = 103$) or simply repeated their answer to the survey question or answered off-topic ($n = 96$). Again, respondents in atypical working situation were significantly more likely to give non-substantive responses (30%, $n = 86$) than respondents who were employed (22%, $n = 61$) or self-employed (23%, $n = 52$) ($\chi^2_{(2,792)} = 6.093$, $p = .048$).

Among respondents who gave a substantive, codable answer, 4% ($n = 35$) responded that the question didn’t apply to them because they had no usual working hours. For instance, one respondent wrote “*There is no such thing, every day is different*”, another “*I do not have fixed working hours*”, and a third explained “*[My working hours] vary greatly because they are order-related. The term ‘usually’ misses the mark here.*” The majority of these respondents (60%, $n = 21$) were self-employed. Similarly, another 9% ($n = 56$) of respondents stated that their working hours depended on their workload and thus varied, for instance depending on the season or their current projects.

Despite these cases in which respondents refused to or could not define what the term “usually” meant to them in this question, the majority gave a clear explanation. In about one third of the substantive responses, respondents explained the term “usually” with synonymous phrases, such as

their “typical”, “standard” or “regular” work schedule (29%, $n = 174$). Another common strategy was for respondents to calculate their “average” amount of hours (17%, $n = 98$). In total, 13% of respondents indicated that their working hours contained no variation, for instance because they were defined by the contract. Other respondents explained that “usually” referred to their “most common” hours (9%, $n = 52$) or their working hours when business goes “as planned” and there are no “unusual circumstances” (3%, $n = 17$). Some respondents explicitly excluded overtime hours, holidays, or sick leave.

Findings Cognitive Interviews:

The cognitive interviews aimed to gain a deeper insight into the retrieval process of the respondents with a specific focus on people whose working hours varied a lot. In addition, the understanding of the term “usually” was analyzed.

Table 31. Frequency distribution cognitive interviews Q24, Q24b ($N = 32$)

Answer	Germany ($n = 16$)	Poland ($n = 16$)
1 – 19 hours per week	1	1
20 - 29 hours per week	1	-
30 – 34 hours per week	1	-
35 – 39 hours per week	5	-
40 hours per week	1	7
> 40 hours per week	2	6 (1)
I prefer to answer in hours per month	3	1
Don't know	1	-

In Germany, twelve respondents answered this question in hours per week, three respondents answered in hours per month and one (DE04) respondent did not answer this question. In Poland fourteen respondents answered this question in hours per week, one (PL09) respondent answered in hours per month and one (PL15) respondent answered the question with a range of working hours per week.

A common retrieval process of the respondents was to refer to their work contract:

- “This number is written in my employment contract. I also considered the time for teaching hours, time I need to prepare for them, and meetings. That’s about as much as it takes.” (40 hours per week)
- “It says ‘normally’ here. This week, for example, I had to work one extra hour. But I don’t normally work like that. I just know the number of hours, it’s also in my employment contract. [...] I didn’t include travelling time and so on.” (35 hours per week)

Some respondents could not refer to their work contract since they are self-employed, or their work hours deviate from it. These respondents estimated an average of their work hours:

- *“There are weeks when I have had 27 hours, some 32 and some even 40. Strong fluctuations.”* (30 hours per week)
- *“I can only estimate that. It's always imprecise and it fluctuates and changes. As a self-employed person, you don't have fixed working hours.”* (35 hours per week)
- *“I took the lowest number of hours I spend per week and the highest I spend per week, and made an average number.”* (40 hours per week)

The respondent (DE04) who did not answer this question explained that it *“is actually not possible for me to answer this question, as the number of hours alone varies so drastically between months or weeks that it is simply not possible to give an average”* (DE04, don't know). In addition, the respondent (PL15) who answered with a period of working hours in a week stated: *“I have irregular working hours. I am unable to determine this time, especially as it is written here to exclude lunch breaks and commuting. I am not able to calculate this”* (PL15, 40 – 60 hours per week).

Especially respondents who were self-employed or whose working hours varied a lot found it difficult to answer this question:

- *“I can't describe it as anything other than highly variable. The main reason is that there is no attendance clock in this profession and even the working time on a single day is sometimes difficult to estimate.”* (DE04, don't know)
- *“I think what is meant by that is that we self-employed should align ourselves as much as possible with employees, and I try to do that, but it is almost impossible. In my opinion, this is a question that only employees can answer.”* (DE12, 35 hours per week)
- *“Very difficult. In my job we do not have fixed working hours.”* (PL04, 40 hours per week)

Regarding the understanding of the term “usually”, the respondents either explained that these are the hours defined by the working contract or that they had to estimate an average:

- *“The regular fixed working hours according to the contract. Of course, there are also times when you have to substitute for a colleague. Then it's overtime.”* (DE13, 18 hours per week)
- *“An average, so normally, does not exist for me.”* (DE15, 40 hours per week)

Summary:

- Most respondents preferred to report their weekly and not their monthly working hours.
- Some respondents asked for the option to insert a decimal, for instance because they work 19.5 hours per week as per their contract.
- Based on the results from web probing and cognitive interviews, respondents with irregular working hours had more difficulty responding to the question.
- The term “usually” was well understood by all respondents; however, respondents with working hours that vary strongly felt the need to explain this, which was not possible using the current closed question.

Q24, Q24b Recommendations:

- We recommend either giving respondents the option to insert a decimal number (i.e., 19.5 hours) or asking them to enter a whole number in the instruction.
- Respondents with strongly varying working hours have difficulty answering this question, and are therefore most likely to leave it unanswered. We therefore recommend inserting a

prompt for respondents who leave the question unanswered: “Even if your working hours vary strongly, please try to calculate a weekly [monthly] average.”

Q25, Q25.1 Preferred work hours

Cognitive interviews aimed to reveal how the respondents arrive at their answer while balancing preferred working hours and the need to earn a living.

English:

9. Provided that you could make a free choice regarding your working hours and taking into account the need to earn a living:

How many hours per week would you prefer to work at present?

Please indicate your preferred working hours for all jobs together.

☐ Number of hours per week:

☐ I prefer to answer in number of hours per month

☐ The same number of hours as currently

9. Provided that you could make a free choice regarding your working hours and taking into account the need to earn a living:

How many hours per week would you prefer to work at present?

☐ Number of hours per week:

☐ I prefer to answer in number of hours per month

☐ The same number of hours as currently

9. Provided that you could make a free choice regarding your working hours and taking into account the need to earn a living:

How many hours per month would you prefer to work at present?

Please indicate your preferred working hours for all jobs together.

☐ Number of hours per month:

☐ The same number of hours as currently

9. Provided that you could make a free choice regarding your working hours and taking into account the need to earn a living:

How many hours per month would you prefer to work at present?

☐ Number of hours per month:

☐ The same number of hours as currently

German:

**9. Wenn Sie frei entscheiden könnten, wie viele Stunden Sie arbeiten wollen:
Wie viele Stunden pro Woche würden Sie gegenwärtig am liebsten arbeiten?
Bitte beziehen Sie mit ein, dass Sie Ihren Lebensunterhalt verdienen müssen.**

Geben Sie bitte Ihre bevorzugte Anzahl an Arbeitsstunden für alle Tätigkeiten zusammen an.

☐ Anzahl der Stunden pro Woche:

☐ Ich möchte die Arbeitsstunden lieber pro Monat angeben

☐ Die gleiche Anzahl Stunden wie zurzeit

**9. Wenn Sie frei entscheiden könnten, wie viele Stunden Sie arbeiten wollen:
Wie viele Stunden pro Monat würden Sie gegenwärtig am liebsten arbeiten?
Bitte beziehen Sie mit ein, dass Sie Ihren Lebensunterhalt verdienen müssen.**

Geben Sie bitte Ihre bevorzugte Anzahl an Arbeitsstunden für alle Tätigkeiten zusammen an.

☐ Anzahl der Stunden pro Monat:

☐ Die gleiche Anzahl Stunden wie zurzeit

Polish:

9. Zakładając, że miał(a)by Pan(i) swobodny wybór odnośnie do godzin pracy oraz biorąc pod uwagę potrzebę zarobienia na życie:

ile godzin w tygodniu chciał(a)by Pan(i) w chwili obecnej pracować?

Proszę wskazać, ile chciał(a)by Pan(i) pracować we wszystkich miejscach pracy łącznie.

☐ Liczba godzin tygodniowo:

☐ Wolę podać liczbę godzin w miesiącu:

☐ Ta sama liczba godzin jak obecnie

9. Zakładając, że miał(a)by Pan(i) swobodny wybór odnośnie do godzin pracy oraz biorąc pod uwagę potrzebę zarobienia na życie:

ile godzin w miesiącu chciał(a)by Pan(i) w chwili obecnej pracować?

Proszę wskazać, ile chciał(a)by Pan(i) pracować we wszystkich miejscach pracy łącznie.

☐ Liczba godzin w miesiącu:

☐ Ta sama liczba godzin jak obecnie

Cognitive techniques:

Recall Probing, Difficulty Probing, Specific Probing

Findings Cognitive Interviews:

Table 32. Frequency distribution cognitive interviews Q25, Q25.1 (N = 32)

Answer	Germany (n = 16)	Poland (n = 16)
20 - 29 hours per week	1	1
30 – 34 hours per week	6	2
35 – 39 hours per week	3	1
40 hours per week	-	3
> 40 hours per week	1	6
I prefer to answer in hours per month	1	-
The same number of hours as currently	3	3
Don't know	1	-

Eleven German and 13 Polish respondents gave a numeric answer. Most of these respondents weighed between their income and their preferred working hours:

- *“In the past, I have also worked 8 hours a day, but in those cases only for the minimum wage. And now I work one hour less every day but end up with a much higher salary. And working 7 hours is much more pleasant than 8 hours a day.”* (DE03, 35 hours per week)
- *“If the information about ‘still having to earn a living’ hadn’t been there, I would have answered 20 hours. For me, part-time would be better for my life satisfaction, but then of course the money factor comes into play, which is why I don’t work part-time. Therefore, I would only reduce my working hours a bit.”* (DE06, 30 hours per week)
- *“Six hours a day, i.e. 30 per week, considering that I work 5 days a week, it would be enough to earn the living.”* (PL08, 30 hours per week)

Apart from the need to earn a living, one respondent (DE05) said that the work itself requires a certain number of hours of work:

“Well, of course you have to weigh up how much time I need to care for my patients properly. And yes, how much do I want so that I feel good. I mean, I don’t feel so bad when I work more. But ideally, a free evening once or twice a week would be very nice.” (DExx, 38 hours per week)

Six respondents (DE: $n = 3$, PL: $n = 3$) indicated that they would prefer to work the same number of hours as currently:

- *“I was thinking about what my hourly wage is. That’s actually okay. And the time commitment is acceptable. So, I don’t see any reason to change.”* (DE01)
- *“Basically, 35 hours is optimal. That’s what I chose for myself. I just want a kind of work-life balance, but just enough to make a living.”* (DE16)

Respondent DE12 gave a numeric answer but indicated the same number of hours as she currently works: *“I thought about how satisfied I am with the amount of work I already have. And I am. I am in harmony with it. This is the number of hours I can manage”* (DE12, 60 hours per week).

Furthermore, one respondent (DE04) did not answer this question and explained: *“This question is based on the same arithmetic that I was already unable to do in [question 24]. I can’t even say I would like to work as few hours as possible, because it’s just not true. Because I don’t see work just as a livelihood, but as an enrichment of my life”* (DE04, don’t know).

Most respondents found it “very easy” or “rather easy” to answer the question ($n = 25$). Respondent DE03 mentioned that he would like to give a range instead of an exact number: *“I would like to write ‘35 – 40’ hours here. But that’s not possible, you can only enter a number. If I had to choose, I would enter 35”* (DE03, 35 hours per week).

Out of the respondents with multiple jobs ($n = 15$), four respondents (two from each country) only referred to their main job.

Summary:

- Most of the respondents found it easy to answer this question and weighed between the hours of work and the need to earn a living.
- Some respondents with multiple jobs only referred to their main job.

Q25, Q25.1 Recommendations:

No changes recommended.

Conclusion

Respondents showed no difficulties when presented with an open-ended numeric field and a closed response option that led them to alternative response units. As was to be expected, respondents in atypical working situations, such as working irregular hours, were more likely to use the alternative response units, hence providing alternatives facilitated their response process.

Item Batteries: Question Format

Adapting item batteries can be done in multiple ways, requiring several questionnaire design decisions. Cognitive pretesting was used to compare the effect of question design on response behavior for different types of item batteries.

In the course of the adaptation, item batteries were adapted using an **item-by-item design**, with items displayed below each other, and response options shown vertically. This form of presentation is optimized for the small screens of smartphones, but the presentation remains identical on larger screens (that are large enough to display a matrix). The clear advantage of a mobile first layout is that it increases comparability across devices as questions and response scales will be presented in an identical way.

Another option is to display questions in a way that is optimized for the specific device, called a **responsive layout**. In this case, respondents answering an item battery on a larger screen of a laptop or tablet will see an item battery in the form of a **grid**, enabling them to see all (or at least several) items at once, while respondents answering on a smaller screen of a smartphone are presented the items in an item-by-item format.

When item batteries offer dichotomous responses (i.e., “yes” and “no” or “applies” and “does not apply”), so-called **check-all-that-apply** (CATA) or multiple response formats present another alternative way of formatting the question. CATA questions are automatically presented in the same way on different devices, as they require less screen space. However, previous research has indicated that CATA produces different survey results than formats that require input from the respondent for each item separately.

Item batteries using scales, such as frequency questions, are always in danger of fatiguing respondents in a self-administered format. Therefore, alternative approaches using **two consecutive questions** were developed. In the first question, respondents indicate which work locations they visited at all (either using a check-all-that apply or an item-by-item question). The second question asks respondents to fill out the frequency scale, but only for items indicated in the first part of the question.

Web probing was used to examine the impact of these different question formats on the response behavior, using an item battery with a frequency scale (QM35) and with dichotomous response options (Q78), respectively.

QM35 Locations of work

In question version 1, the question asked about the frequency in which work locations are used, with all items using a five-point frequency scale ranging from “always” to “never”. Question versions 2 and 3 consisted of two consecutive questions. In question version 2, the first question (Part A) used a check-all-that-apply (CATA) format to determine which locations had been frequented by the respondent at all. For these locations, a second question (Part B) asked about the frequency, using a four-point scale ranging from “always” to “rarely”. In question version 3, Part A used an item-by-item design with “yes” and “no” as response options, followed by the same four-point frequency scale as used for locations visited in the past 12 months (Part B).

English (Question Version 1):

The next questions are about the locations in which you work.

During the last 12 months, how often have you worked in any of the following locations?

Your employer's premises (office, factory, shop, school, etc.)

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

Your own business' premises other than at home (office, factory, shop, etc.)

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

Locations you're sent to by your employer or requested to go to by clients

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

In a car or another vehicle

☐ Always

☐ Often

☐ Sometimes

☐ Rarely

☐ Never

Your own home

☐ Always

☐ Often

☐ Sometimes

☐ Rarely

☐ Never

Other locations

☐ Always

☐ Often

☐ Sometimes

☐ Rarely

☐ Never

Please note: The question text was modified depending on how long a respondent had been working in their current job (if longer than 12 months: “During the last 12 months, [...]”, if not, then “Since you started your [main] paid job, [...]”) and whether they had one or multiple job.

German (Question Version 1):

In den folgenden Fragen geht es um die Orte, an denen Sie arbeiten.

Wie häufig haben Sie in den vergangenen 12 Monaten an den folgenden Orten gearbeitet?

In den Räumlichkeiten Ihres Arbeitgebers (Büro, Fabrik, Laden, Schule usw.)

- ☐ Immer
- ☐ Häufig
- ☐ Manchmal
- ☐ Selten
- ☐ Nie

In Ihren eigenen Geschäftsräumen außer Haus (Büro, Fabrik, Laden usw.)

- ☐ Immer
- ☐ Häufig
- ☐ Manchmal
- ☐ Selten
- ☐ Nie

An Orten, an die Sie von Ihrem Arbeitgeber oder Kunden geschickt werden

- ☐ Immer
- ☐ Häufig
- ☐ Manchmal
- ☐ Selten
- ☐ Nie

In einem Auto oder anderem Fahrzeug

- ☐ Immer
- ☐ Häufig
- ☐ Manchmal
- ☐ Selten
- ☐ Nie

In Ihrem eigenen Zuhause

- ☐ Immer
- ☐ Häufig
- ☐ Manchmal
- ☐ Selten
- ☐ Nie

An sonstigen Orten

- ☐ Immer
- ☐ Häufig
- ☐ Manchmal
- ☐ Selten
- ☐ Nie

Polish (Question Version 1):

Kolejne pytania dotyczą miejsc, w których Pan(i) pracuje.

Jak często w ciągu ostatnich 12 miesięcy pracował(a) Pan(i) w którymkolwiek z wymienionych miejsc?

W obiektach Pana(-i) pracodawcy (biuro, fabryka, sklep, szkoła itp.)

- ☐ Zawsze
- ☐ Często
- ☐ Czasami
- ☐ Rzadko
- ☐ Nigdy

W obiektach Pana(-i) własnej firmy poza domem (biuro, fabryka, sklep itp.)

- ☐ Zawsze
- ☐ Często
- ☐ Czasami
- ☐ Rzadko
- ☐ Nigdy

W miejscu, do którego skierował Pana(-ią) pracodawca lub klient.

- ☐ Zawsze
- ☐ Często
- ☐ Czasami
- ☐ Rzadko
- ☐ Nigdy

W samochodzie lub innym pojeździe

- ☐ Zawsze
- ☐ Często
- ☐ Czasami
- ☐ Rzadko
- ☐ Nigdy

W Pana(-i) własnym domu

- ☐ Zawsze
- ☐ Często
- ☐ Czasami
- ☐ Rzadko
- ☐ Nigdy

W innych miejscach

- ☐ Zawsze
- ☐ Często
- ☐ Czasami
- ☐ Rzadko
- ☐ Nigdy

Question Version 2, Part A (CATA) (English):

During the last 12 months, have you worked in any of the following locations?

Please select all that apply.

- ☐ Your employer's premises (office, factory, shop, school, etc.)
- ☐ Your own business' premises other than at home (office, factory, shop, etc.)
- ☐ Locations you're sent to by your employer or requested to go to by clients
- ☐ In a car or another vehicle
- ☐ Your own home
- ☐ Other locations

Question Version 2, Part B (Frequency) (English):

And how often have you worked in these locations?

Your employer's premises (office, factory, shop, school, etc.)

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely

Your own business' premises other than at home (office, factory, shop, etc.)

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely

Please note: Part B displays those locations that a respondent visited in the past 12 months as per Part A.

Question Version 3, Part A (Item-by-Item) (English):

During the last 12 months, have you worked in any of the following locations?

Your employer's premises (office, factory, shop, school, etc.)

☐ Yes

☐ No

Your own business' premises other than at home (office, factory, shop, etc.)

☐ Yes

☐ No

Locations you're sent to by your employer or requested to go to by clients

☐ Yes

☐ No

In a car or another vehicle

☐ Yes

☐ No

Your own home

☐ Yes

☐ No

Other locations

☐ Yes

☐ No

Question Version 3, Part B (Frequency) (English):

And how often have you worked in these locations?

Your employer's premises (office, factory, shop, school, etc.)

☐ Always

☐ Often

☐ Sometimes

☐ Rarely

Your own business' premises other than at home (office, factory, shop, etc.)

☐ Always

☐ Often

☐ Sometimes

☐ Rarely

Please note: Part B displayed those locations that a respondent visited in the past 12 months as per Part A.

Cognitive techniques:

-

Findings Web Probing:

Respondents who were employed in the main paid job were asked about the location “Your employer’s premises”, whereas respondents who were self-employed in the main paid job were asked about “Your own business’ premises other than at home (office, factory, shop, etc.)”. All other items were shown to all respondents in the same version.

In total, 39% ($n = 306$) respondents indicated that they (at least rarely) worked in one location, while 61% ($n = 479$) reported working at two or more locations. There were no significant differences in the number of work locations reported by country. However, the number of reported work locations differed significantly by question version (see Table 33). Respondents who answered using the check-all-that-apply format reported a lower number of work locations than respondents who received one of the other question versions. Most strikingly, 61% ($n = 161$) of respondents in the check-all-that-apply format reported exactly one working location, while 25% ($n = 67$) and 30% ($n = 78$) did this in the other formats. In the UK and Germany, there were no significant differences between the number of reported work locations between question versions 1 and 3. However, in Poland, respondents reported a significantly higher number of work locations when they were presented the frequency scale directly (question version 1) than when they first answered an item-by-item “yes/no” format followed by a frequency scale (question version 3); the data showed the same (albeit non-significant) tendency in the other two countries.

Table 33. Summary of reported work locations in QM35 by question version

	1: Fre- quency Scale	2: Check- all-that- apply, fol- lowed by frequency	3: Item- by-item, followed by fre- quency	Significance
Number of work locations reported				
1 location	25% (67)	61% (161)	30% (78)	$\chi^2_{(8,785)} = 151.012, p < .001$
2 locations	19% (50)	26% (67)	29% (75)	
3 locations	17% (44)	8% (22)	19% (48)	
4 locations	16% (42)	5% (12)	12% (31)	
5 locations	24% (63)	0% (0)	10% (25)	
Mean number of reported work locations by country				
UK	2.93	1.49	2.51	V1 vs V2: $T_{(173)} = 7.809, p < .001$; V1 vs V3: $T_{(172)} = 1.990, p = .059$; V2 vs V3: $T_{(175)} = -6.206, p < .001$
Germany	2.82	1.73	2.48	V1 vs V2: $T_{(178)} = 5.590, p < .001$; V1 vs V3: $T_{(170)} = 1.556, p = .122$; V2 vs V3: $T_{(168)} = -4.336, p < .001$
Poland	3.07	1.45	2.26	V1 vs V2: $T_{(171)} = 9.309, p < .001$; V1 vs V3: $T_{(175)} = 3.974, p < .001$; V2 vs V3: $T_{(170)} = -5.190, p < .001$

The most commonly named location was the employer's premises, which 84% of employed respondents had visited at least rarely in the past 12 months or since they started their (main) job. The second most common location was one's own home (53%), though this result is certainly strongly influenced by the COVID-19 pandemic. Among self-employed respondents, one's own business premises were named by 52% of the respondents. Clients' premises were frequented by 44% of respondents, vehicles served as a work location for 29% and other locations were named by 30% of respondents.

Table 34. Share of respondents who worked at locations as per QM35A by question version

	1: Frequency Scale	2: Check-all-that-apply, followed by frequency	3: Item-by-item, followed by frequency	Significance
UK				
(Basis: Employed) Your employer's premises	90% (52)	80% (43)	84% (48)	$\chi^2_{(2,169)} = 2.170, p = .338$
(Basis: Self-employed) Your own business' premises other than at home	52% (15)	23% (8)	32% (10)	$\chi^2_{(2,95)} = 5.954, p = .051$
Locations you're sent to by your employer or requested to go to by clients	54% (47)	28% (25)	47% (41)	$\chi^2_{(2,264)} = 12.859, p = .002$
In a car or another vehicle	44% (38)	8% (7)	36% (32)	$\chi^2_{(2,264)} = 30.621, p < .001$
Your own home	71% (62)	45% (40)	69% (61)	$\chi^2_{(2,264)} = 16.110, p < .001$
Other locations	44% (38)	11% (10)	33% (29)	$\chi^2_{(2,264)} = 23.329, p < .001$
Germany				
(Basis: Employed) Your employer's premises	88% (51)	75% (39)	87% (41)	$\chi^2_{(2,157)} = 4.017, p = .134$
(Basis: Self-employed) Your own business' premises other than at home	65% (22)	49% (18)	72% (26)	$\chi^2_{(2,107)} = 4.483, p = .106$
Locations you're sent to by your employer or requested to go to by clients	53% (49)	38% (34)	47% (39)	$\chi^2_{(2,264)} = 4.156, p = .125$
In a car or another vehicle	40% (37)	18% (16)	24% (20)	$\chi^2_{(2,264)} = 11.949, p = .003$
Your own home	64% (59)	47% (42)	58% (48)	$\chi^2_{(2,264)} = 5.375, p = .068$
Other locations	42% (39)	6% (5)	33% (27)	$\chi^2_{(2,264)} = 33.070, p < .001$
Poland				
(Basis: Employed) Your employer's premises	88% (53)	80% (43)	79% (41)	$\chi^2_{(2,166)} = 2.206, p = .332$
(Basis: Self-employed) Your own business' premises other than at home	79% (23)	53% (16)	49% (19)	$\chi^2_{(2,98)} = 7.056, p = .029$
Locations you're sent to by your employer or requested to go to by clients	70% (62)	20% (17)	41% (37)	$\chi^2_{(2,264)} = 43.318, p < .001$
In a car or another vehicle	49% (44)	13% (11)	29% (26)	$\chi^2_{(2,264)} = 27.128, p < .001$
Your own home	48% (43)	31% (26)	45% (41)	$\chi^2_{(2,264)} = 6.015, p = .049$
Other locations	54% (48)	11% (9)	38% (35)	$\chi^2_{(2,264)} = 36.349, p < .001$

The table shows the share of respondents who visited different work locations by question version (Table 34). For question version 1, this means that respondents answered “Rarely” or more often. In question versions 2 and 3, this means that respondents reported these locations as locations they had visited in part A of the question. Respondents in question version 2 (CATA) were less likely to report any given location. Respondents in question version 1 were more likely to report work

locations than respondents in question version 2 in many, but not all cases. There were no significant differences for the item “Your employer’s premises” in any of the three countries. Differences between question versions for the location “Your own business premises” were significant for Poland only, and “Locations you’re sent to by your employer or requested to go to by clients” was significant in the UK and Poland, but not Germany. For the other three locations, “In a car or vehicle”, “Your own home” and “Other locations”, the frequency of reporting differed significantly between question versions for all three countries. Applying a Bonferroni correction for multiple testing to the p-values would make some of these differences non-significant; however, the T-tests above based on the number of reported work locations confirmed the result.

Tables 35 to 40 show the reported frequency of visiting work locations. For this, the responses to the two question parts in question versions 2 and 3 were combined to form a frequency scale as in question version 1. A look at the frequencies confirms the results from above. There were significant differences in the reported frequencies of visiting work locations for all locations except “Your employer’s premises” and “Your own business premises”, though even these two items show the same tendency (A1: $\chi^2_{(8,792)} = 15.328$, $p = .053$; A2: $\chi^2_{(8,792)} = 14.736$, $p = .064$; B: $\chi^2_{(8,792)} = 79.555$, $p < .001$; C: $\chi^2_{(8,792)} = 76.922$, $p < .001$; E: $\chi^2_{(8,792)} = 43.342$, $p < .001$; F: $\chi^2_{(8,792)} = 118.335$, $p < .001$).

A closer look at the frequencies shows that respondents in the check-all-that-apply format tended to either not report a certain work location or report a high frequency of working there. This effect is particularly strong for locations that are typically not the main working place.

Table 35. Frequency of working at employer's premises by question version (QM35A1)

QM35A1: Your employer’s premises (office, factory, shop, school, etc.)	1: Frequency Scale	2: Check-all-that-apply, followed by frequency	3: Item-by-item, followed by frequency
UK (Basis: Employed; n = 169)			
Always	41% (24)	50% (27)	51% (29)
Often	19% (11)	22% (12)	19% (11)
Sometimes	12% (7)	4% (2)	4% (2)
Rarely	17% (10)	4% (2)	11% (6)
Never	10% (6)	20% (11)	16% (9)
Total	100% (58)	100% (54)	100% (57)
DE (Basis: Employed; n = 157)			
Always	38% (22)	42% (22)	36% (17)
Often	29% (17)	23% (12)	30% (14)
Sometimes	9% (5)	8% (4)	15% (7)
Rarely	12% (7)	2% (1)	6% (3)
Never	12% (7)	25% (13)	13% (6)
Total	100% (58)	100% (52)	100% (47)
PL (Basis: Employed; n = 166)			
Always	52% (31)	54% (29)	48% (25)
Often	22% (13)	11% (6)	21% (11)
Sometimes	8% (5)	9% (5)	6% (3)
Rarely	7% (4)	6% (3)	4% (2)
Never	12% (7)	20% (11)	21% (11)
Total	100% (60)	100% (54)	100% (52)

Table 36. Frequency of working at one's own business premises by question version (QM35A2)

QM35A2: Your own business' premises other than at home (office, factory, shop, etc.)	1: Frequency Scale	2: Check-all-that-apply, followed by frequency	3: Item-by-item, followed by frequency
UK (Basis: Employed; n = 95)			
Always	24% (7)	9% (3)	19% (6)
Often	14% (4)	3% (1)	6% (2)
Sometimes	7% (2)	6% (2)	6% (2)
Rarely	7% (2)	6% (2)	0% (0)
Never	48% (14)	77% (27)	68% (21)
Total	100% (29)	100% (35)	100% (31)
DE (Basis: Employed; n = 107)			
Always	26% (9)	14% (5)	25% (9)
Often	26% (9)	22% (8)	25% (9)
Sometimes	3% (1)	11% (4)	14% (5)
Rarely	9% (3)	3% (1)	8% (3)
Never	35% (12)	51% (19)	28% (10)
Total	100% (34)	100% (37)	100% (36)
PL (Basis: Employed; n = 98)			
Always	17% (5)	17% (5)	18% (7)
Often	21% (6)	13% (4)	15% (6)
Sometimes	28% (8)	20% (6)	13% (5)
Rarely	14% (4)	3% (1)	3% (1)
Never	21% (6)	47% (14)	51% (20)
Total	100% (29)	100% (30)	100% (39)

Table 37. Frequency of working at locations sent to by employers or clients by question version (QM35B)

QM35B: Locations you're sent to by your employer or requested to go to by clients	1: Frequency Scale	2: Check-all-that-apply, followed by frequency	3: Item-by-item, followed by frequency
UK (n = 264)			
Always	15% (13)	8% (7)	15% (13)
Often	8% (7)	8% (7)	18% (16)
Sometimes	15% (13)	10% (9)	8% (7)
Rarely	16% (14)	2% (2)	6% (5)
Never	46% (40)	72% (64)	53% (47)
Total	100% (87)	100% (89)	100% (88)
DE (n = 264)			
Always	8% (7)	6% (5)	11% (9)
Often	13% (12)	15% (13)	19% (16)
Sometimes	16% (15)	15% (13)	13% (11)
Rarely	16% (15)	3% (3)	4% (3)
Never	47% (43)	62% (55)	53% (44)
Total	100% (92)	100% (89)	100% (83)
PL (n = 264)			
Always	21% (19)	4% (3)	9% (8)
Often	9% (8)	7% (6)	13% (12)
Sometimes	18% (16)	7% (6)	8% (7)
Rarely	21% (19)	2% (2)	11% (10)
Never	30% (27)	80% (67)	59% (53)
Total	100% (89)	100% (84)	100% (90)

Table 38. Frequency of working in a car or another vehicle by question version (QM35C)

QM35C: In a car or another vehicle	1: Frequency Scale	2: Check-all-that-apply, followed by frequency	3: Item-by-item, followed by frequency
UK (n = 264)			
Always	11% (10)	3% (3)	15% (13)
Often	7% (6)	1% (1)	10% (9)
Sometimes	13% (11)	3% (3)	7% (6)
Rarely	13% (11)	0% (0)	5% (4)
Never	56% (49)	92% (82)	64% (56)
Total	100% (87)	100% (89)	100% (88)
DE (n = 264)			
Always	3% (3)	4% (4)	6% (5)
Often	8% (7)	6% (5)	6% (5)
Sometimes	13% (12)	4% (4)	8% (7)
Rarely	16% (15)	3% (3)	4% (3)
Never	60% (55)	82% (73)	76% (63)
Total	100% (92)	100% (89)	100% (83)
PL (n = 264)			
Always	8% (7)	1% (1)	1% (1)
Often	9% (8)	5% (4)	12% (11)
Sometimes	20% (18)	4% (3)	8% (7)
Rarely	12% (11)	4% (3)	8% (7)
Never	51% (45)	87% (73)	71% (65)
Total	100% (89)	100% (84)	100% (91)

Table 39. Frequency of working from home by question version (QM35E)

QM35E: Your own home	1: Frequency Scale	2: Check-all-that-apply, followed by frequency	3: Item-by-item, followed by frequency
UK (n = 264)			
Always	24% (21)	19% (17)	19% (17)
Often	22% (19)	11% (10)	26% (23)
Sometimes	11% (10)	10% (9)	17% (15)
Rarely	14% (12)	4% (4)	7% (6)
Never	29% (25)	55% (49)	31% (27)
Total	100% (87)	100% (89)	100% (88)
DE (n = 264)			
Always	18% (17)	18% (16)	16% (13)
Often	17% (16)	18% (16)	19% (16)
Sometimes	12% (11)	8% (7)	19% (16)
Rarely	16% (15)	3% (3)	4% (3)
Never	36% (33)	53% (47)	42% (35)
Total	100% (92)	100% (89)	100% (83)
PL (n = 264)			
Always	10% (9)	5% (4)	12% (11)
Often	11% (10)	12% (10)	18% (16)
Sometimes	19% (17)	13% (11)	13% (12)
Rarely	8% (7)	1% (1)	2% (2)
Never	52% (46)	69% (58)	55% (50)
Total	100% (89)	100% (84)	100% (91)

Table 40. Frequency of working at other locations by question version (QM35F)

QM35F: Other locations	1: Frequency Scale	2: Check-all-that-apply, followed by frequency	3: Item-by-item, followed by frequency
UK (n = 264)			
Always	7% (6)	9% (8)	10% (9)
Often	8% (7)	0% (0)	7% (6)
Sometimes	11% (10)	2% (2)	10% (9)
Rarely	17% (15)	0% (0)	6% (5)
Never	56% (49)	89% (79)	67% (59)
Total	100% (87)	100% (89)	100% (88)
DE (n = 264)			
Always	2% (2)	2% (2)	5% (4)
Often	12% (11)	1% (1)	6% (5)
Sometimes	13% (12)	1% (1)	13% (11)
Rarely	15% (14)	1% (1)	8% (7)
Never	58% (53)	94% (84)	67% (56)
Total	100% (92)	100% (89)	100% (83)
PL (n = 264)			
Always	4% (4)	4% (3)	1% (1)
Often	9% (8)	2% (2)	10% (9)
Sometimes	18% (16)	4% (3)	21% (19)
Rarely	22% (20)	1% (1)	7% (6)
Never	46% (41)	89% (75)	62% (56)
Total	100% (89)	100% (84)	100% (91)

Summary:

- Respondents reported significantly fewer work locations in the check-all-that-apply format than in the other two question versions.
- There were no significant differences in response behaviour between question versions for the main location(s) at which respondents work, that is the employer's premises for employees and one's own business premises for the self-employed.
- For locations that were not the main place of work, check-all-that-apply formats led respondents not to report locations they "Sometimes" or "Rarely" work from.

QM35 Recommendations:

We recommend keeping the question format from question version 1, as was recommended in the course of the adaptation to an online questionnaire.

Q78 Health problems

Web probing was used to examine how best to adapt the original CAPI question on health problems in an online questionnaire. In the interviewer-administered format, the interviewer read out each health problem and the respondent answered each item with “Yes” or “No”, depending on whether they had suffered under the specific problem in the past 12 months. In self-administered surveys, an alternative common practice is to ask the same questions in a check-all-that-apply format.

In such a question adaptation, using a check-all-that-apply format, respondents only select the health problems they suffered under, leaving the others blank. They are instructed to check-all-that-apply. To be able to differentiate nonresponse from selecting no response for substantive reasons, this question version added an exclusive response option “None of the above”. Question version 2 used an item-by-item design in which the respondent indicated “Yes” or “No” for each health problem. Question version 3 replicated the original grid question from the interviewer’s CAPI questionnaire with two columns for the “Yes” and “No” answers. Respondents in web probing were randomly assigned to a question version. However, since the online questionnaire was programmed in a responsive design, the grid question was displayed on smartphones in the item-by-item format.

Analyses focus on the differences between the question versions and differentiate between PC/tablet and smartphone users. Differences between countries are reported.

English (Question Version 1):

The following questions are about your health, not necessarily related to your work.

Over the last 12 months, did you suffer under any of the following health problems?

Please select all that apply.

- ☐ Backache
- ☐ Muscular pains in shoulders, neck and/or upper limbs (arms, elbows, wrists, hands, etc.)
- ☐ Muscular pains in lower limbs (hips, legs, knees, feet, etc.)
- ☐ Headaches, eyestrain
- ☐ Anxiety
- ☐ Overall fatigue
- ☐ Other, namely:
- ☐ None of the above

German (Question Version 1):

In den folgenden Fragen geht es um Ihre Gesundheit im Allgemeinen.

Haben Sie innerhalb der letzten 12 Monate an einem der folgenden gesundheitlichen Probleme gelitten?

Bitte wählen Sie alle zutreffenden Antworten aus.

- ☐ Rückenschmerzen
- ☐ Muskelschmerzen in den Schultern, im Nacken und/oder in den oberen Gliedmaßen (Arme, Ellenbogen, Handgelenke, Hände usw.)
- ☐ Muskelschmerzen in den unteren Gliedmaßen (Hüfte, Beine, Knie, Füße usw.)
- ☐ Kopfschmerzen, Überanstrengung der Augen
- ☐ Depressionen oder Angstgefühle
- ☐ Allgemeine Erschöpfung
- ☐ Sonstiges, und zwar:
- ☐ Keine der genannten Probleme

Polish (Question Version 1):

Kolejne pytania dotyczą Pana(-i) stanu zdrowia, niekoniecznie związanego z pracą.

Czy w ciągu ostatnich 12 miesięcy cierpiał(a) Pan(i) na jakikolwiek z poniższych problemów zdrowotnych?

Proszę wskazać wszystkie pasujące odpowiedzi.

- ☐ Bóle pleców
- ☐ Bóle mięśni ramion, szyi oraz/lub kończyn górnych (rąk, łokci, nadgarstków, dłoni itp.)
- ☐ Bóle mięśni w kończynach dolnych (biodra, nogi, kolana, stopy itp.)
- ☐ Bóle głowy, zmęczenie oczu
- ☐ Niepokój
- ☐ Ogólne zmęczenie
- ☐ Inne, jakie:
- ☐ Żadne z powyższych

Question Version 2 (English):

<p>The following questions are about your health, not necessarily related to your work.</p> <p>Over the last 12 months, did you suffer under any of the following health problems?</p>
<hr/>
<p>Backache</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p>
<hr/>
<p>Muscular pains in shoulders, neck and/or upper limbs (arms, elbows, wrists, hands, etc.)</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p>
<hr/>
<p>Muscular pains in lower limbs (hips, legs, knees, feet, etc.)</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p>

Question Version 3 (English):

The following questions are about your health, not necessarily related to your work.

Over the last 12 months, did you suffer under any of the following health problems?

	Yes	No
Backache	<input type="radio"/>	<input type="radio"/>
Muscular pains in shoulders, neck and/or upper limbs (arms, elbows, wrists, hands, etc.)	<input type="radio"/>	<input type="radio"/>
Muscular pains in lower limbs (hips, legs, knees, feet, etc.)	<input type="radio"/>	<input type="radio"/>
Headaches, eyestrain	<input type="radio"/>	<input type="radio"/>
Anxiety	<input type="radio"/>	<input type="radio"/>
Overall fatigue	<input type="radio"/>	<input type="radio"/>
Other, namely: <input type="text"/>	<input type="radio"/>	<input type="radio"/>

Cognitive techniques:

Specific Probing

Findings Web Probing:

Across all countries, backaches were the most commonly reported health problem, followed by muscular pains in shoulders, neck and/or upper limbs (see Table 41). Of the pre-defined health problems, anxiety was named least often, in particular in Germany.⁴

⁴ Possibly, the German translation of anxiety into “depression or feelings of fear” (“Depressionen oder Angstgefühle”) caused the lower figure. Two respondents from the UK and one respondent from Poland named depressions as a health problem in the open-ended text field, supporting the notion that German respondents might only be reporting clinical depression, whereas UK and Polish respondents include milder cases of anxiety.

Table 41. Frequency distribution web probing Q78 (N = 792)

Reported health problems	UK	Germany	Poland
Backache	47% (124)	56% (147)	64% (170)
Muscular pains in shoulders, neck and/or upper limbs	44% (116)	58% (154)	57% (151)
Muscular pains in lower limbs	41% (108)	35% (92)	44% (116)
Headaches, eyestrain	41% (107)	49% (129)	63% (166)
Anxiety	39% (104)	18% (48)	35% (92)
Overall fatigue	42% (110)	37% (98)	61% (161)
Other, namely:	4% (11)	6% (15)	6% (15)

Respondents who used a mobile device were generally more likely (84%, $n = 259$) to report **at least one health problem** than respondents who used a PC or tablet (77%, $n = 360$; $\chi^2_{(1,779)} = 5.960$, $p = .015$). Respondents who answered the questionnaire on PC or tablet were significantly more likely to report at least one health problem when they were presented the question in an item-by-item format (see Table 42). There were no significant differences by question version for smartphone users. Within the PC/tablet users, Polish respondents were more likely to report at least one health problem (83%, $n = 127$) than respondents from Germany (76%, $n = 126$) and the UK (71%, $n = 107$; $\chi^2_{(2,470)} = 6.322$, $p = .042$). Among PC/tablet users, respondents in the UK were significantly more likely to report at least one health problem when the question was presented in an item-by-item format than in the other two question versions.

Table 42. Summary of reported health problems in Q78 by question version, device and country

At least one health problem reported	1: Check-all-that-apply	2: Item-by-item	3: Grid	Significance
By device:				
PC/Tablet	73% (114)	84% (127)	74% (119)	$\chi^2_{(2,470)} = 6.140$, $p = .046$
Smartphone†	83% (85)	82% (88)	88% (86)	$\chi^2_{(2,309)} = 1.682$, $p = .431$
By country				
(Basis: PC/Tablet users only):				
UK	67% (36)	85% (39)	63% (32)	$\chi^2_{(2,151)} = 6.405$, $p = .041$
Germany	70% (37)	81% (42)	77% (47)	$\chi^2_{(2,166)} = 1.792$, $p = .408$
Poland	82% (41)	85% (46)	82% (40)	$\chi^2_{(2,153)} = .283$, $p = .868$

†Smartphone users were not presented Q78 as a grid, but in an item-by-item design as in question version 2.

An examination of the **mean number of reported health problems** showed that respondents who filled out the questionnaire on a smartphone reported a significantly higher number of health

problems (mean: 3.19) than respondents answering on a PC/tablet (mean: 2.60; $T_{(777)} = 3.837$; $p < .001$). Regardless of which device respondents used, respondents reported a significantly lower number of health problems when the question was presented in a check-all-that-apply format than as an item-by-item or grid (see Table 43). Respondents from Poland reported significantly more health problems (mean: 3.13) than respondents from Germany (mean: 2.36) or the UK (mean: 2.33; $F_{(2,267)} = 7.462$, $p = .001$). Among PC/tablet users, respondents from Germany and Poland reported significantly fewer health problems in the CATA format than in the item-by-item format. The difference between CATA and grid was significant for PC/tablet users from Poland (see Table 43).

Table 43. Mean number of reported health problems in Q78 by question version, device and country

Mean number of reported health problems	1: Check-all-that-apply	2: Item-by-item	3: Grid	Significance
By device:				
PC/Tablet	1.99 ^{b,c}	3.11 ^a	2.71 ^a	Welch's $F_{(2, 309.25)} = 13.31$, $p = .000$
Smartphone†	2.61 ^{b,c}	3.45 ^a	3.50 ^a	$F_{(2, 306)} = 6.13$, $p = .002$
By country (Basis: PC/Tablet users only):				
UK	2.00	2.93	2.14	$F_{(2, 148)} = 2.87$, $p = .060$
Germany	1.72 ^b	2.75 ^a	2.57	$F_{(2, 163)} = 4.49$, $p = .013$
Poland	2.26 ^{b,c}	3.61 ^a	3.49 ^a	$F_{(2, 150)} = 6.44$, $p = .002$

†Smartphone users were not presented Q78 as a grid, but in an item-by-item design as in question version 2.

^{a, b, c} Statistically significant difference to (a) question version 1, (b) question version 2, (c) question version 3 ($p < .05$).

To better understand the differences between question formats, a closed probing question (P1_Q78) asked respondents to rate how strongly the reported health problems impacted everyday life on a five-point scale ranging from “Very weak impact” to “Very large impact”.

The rationale was to discover whether the check-all-that-apply format promoted respondents to only report severe health problems that impacted them in their everyday life, rather than reporting all health problems they had had. However, there were no significant differences in the level of impact between question versions (see Table 44). This means that respondents in the check-all-that-apply format did not interpret the question differently than respondents who were presented the other formats and did not misconceive the question to be asking about more severe health problems. Thus, the differences in the frequencies with which health problems were reported in the survey question can only be attributed to the CATA format promoting a satisficing behaviour among respondents, resulting in the lower share of reported health problems using this format.

While there were no differences in the perceived impact on daily life by question version, there were significant differences by device and country. Respondents using a smartphone reported a significantly stronger impact (mean: 3.24) than respondents on a PC/tablet (mean: 2.86; $T_{(617)} = 5.120$;

$p < .001$). Moreover, Polish respondents reported a significantly stronger impact (mean: 3.02) than German (2.74) or UK respondents (2.81; $F_{(2,357)} = 3.289$; $p = .038$).

Table 44. Impact of health problems on everyday life by question version (P1_Q78)

Mean impact (across all health problems) (scale from 1 “Very weak impact” to 5 “Very large impact”)	1: Check-all-that-apply	2: Item-by-item	3: Grid	Significance
	Mean (SD)	Mean (SD)	Mean (SD)	
By device:				
PC/Tablet	2.90 (0.88)	2.82 (0.87)	2.86 (0.99)	$F_{(2, 357)} = .206, p = .814$
Smartphone†	3.26 (0.88)	3.24 (0.86)	3.23 (1.06)	$F_{(2, 256)} = .030, p = .970$
By country (Basis: PC/Tablet users only):				
UK	3.03 (0.89)	2.79 (0.86)	2.60 (0.87)	$F_{(2, 104)} = 2.099, p = .128$
Germany	2.62 (0.78)	2.72 (0.82)	2.84 (1.10)	Welch’s $F_{(2, 81.73)} = .060, p = .552$
Poland	3.03 (0.92)	2.94 (0.93)	3.09 (0.90)	$F_{(2, 124)} = .299, p = .742$

†Smartphone users were not presented Q78 as a grid, but in an item-by-item design as in question version 2.

Summary:

- Respondents who were presented the question in the check-all-that-apply format reported a significantly lower number of health problems than in the other two formats.
- There were no differences in the perceived impact of these health problems depending on question format, indicating that the question presentation in the CATA format promotes incomplete reporting (satisficing behaviour).
- Response behaviour differed depending on which device was used to fill out the questionnaire. Respondents who filled out the questionnaire on a smartphone reported a higher number of health problems and rated these problems as having a higher impact on their daily life than respondents using a PC or tablet.
- Polish respondents reported a higher number of health problems and a stronger impact of these health problems on their everyday life than respondents from Germany or the UK. Further research should clarify whether these country-specific differences are caused by differences in health across countries or by the translation of health problems.

Q78 Recommendations:

- We recommend to employ an item-by-item format (question version 2) rather than a check-all-that apply format.
- We recommend reviewing the translation of the listed health problems to ensure that differences found between countries are caused by existing differences in health.

Conclusion

Across both questions, respondents who were shown questions in a check-all-that-apply format reported significantly fewer work locations and health problems. In particular, CATA questions caused respondents to only report their “main” responses, for instance their most often frequented work place(s), omitting others. In the interest of maintaining comparability across waves and also comparability across modes, if the EWCS is run using CAPI and CAWI in parallel, we recommend an item-by-item format (presenting both yes and no options). If a frequency scale is employed, it should be presented directly.

Item Batteries: Switching Scales

In the course of the adaptation to an online questionnaire, seven-point frequency scales were changed into five-point scales using vague quantifiers based on the 2020 CATI questionnaire. Cognitive pretesting was used to examine whether the two scales produce comparable data and how the chosen response options on the different scales are interpreted by respondents.

Q30 Risks

Web probing was used to compare the two answer scales. Question version 1 showed the five-point answer scale as it was proposed in the course of the adaptation to an online questionnaire. Question version 2 showed the seven-point answer scale from the EWCS CAPI questionnaire.

English (Question Version 1):

<p>How often does your main paid job involve the following?</p> <hr/>
<p>Tiring or painful positions</p> <p><input type="radio"/> Always</p> <p><input type="radio"/> Often</p> <p><input type="radio"/> Sometimes</p> <p><input type="radio"/> Rarely</p> <p><input type="radio"/> Never</p> <hr/>
<p>Lifting or moving people</p> <p><input type="radio"/> Always</p> <p><input type="radio"/> Often</p> <p><input type="radio"/> Sometimes</p> <p><input type="radio"/> Rarely</p> <p><input type="radio"/> Never</p>

Carrying or moving heavy loads

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

Sitting

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

German (Question Version 1):

Wie oft schließt Ihr Hauptberuf Folgendes ein?
Schmerzhaft oder ermüdende Körperhaltungen
<input type="radio"/> Immer
<input type="radio"/> Häufig
<input type="radio"/> Manchmal
<input type="radio"/> Selten
<input type="radio"/> Nie
Tragen oder Bewegen von Personen
<input type="radio"/> Immer
<input type="radio"/> Häufig
<input type="radio"/> Manchmal
<input type="radio"/> Selten
<input type="radio"/> Nie

Tragen oder Bewegen schwerer Lasten

- ☐ Immer
- ☐ Häufig
- ☐ Manchmal
- ☐ Selten
- ☐ Nie

Sitzen

- ☐ Immer
- ☐ Häufig
- ☐ Manchmal
- ☐ Selten
- ☐ Nie

Polish (Question Version 1):

Jak często Pana(-i) główna praca zarobkowa wiąże się z następującymi czynnościami?

Bolesne lub męczące pozycje

☐ Zawsze

☐ Często

☐ Czasami

☐ Rzadko

☐ Nigdy

Podnoszenie lub przenoszenie ludzi

☐ Zawsze

☐ Często

☐ Czasami

☐ Rzadko

☐ Nigdy

Noszenie lub przesuwanie ciężkich ładunków

- ☐ Zawsze
- ☐ Często
- ☐ Czasami
- ☐ Rzadko
- ☐ Nigdy

Siedzenie

- ☐ Zawsze
- ☐ Często
- ☐ Czasami
- ☐ Rzadko
- ☐ Nigdy

Question Version 2 (English):

How often does your main paid job involve the following?

Tiring or painful positions

☐ All of the time

☐ Almost all of the time

☐ Around 3/4 of the time

☐ Around half of the time

☐ Around 1/4 of the time

☐ Almost never

☐ Never

Lifting or moving people

☐ All of the time

☐ Almost all of the time

☐ Around 3/4 of the time

☐ Around half of the time

☐ Around 1/4 of the time

☐ Almost never

☐ Never

Please note: The screenshot only depicts the first two items.

Cognitive techniques:

-

Findings Web Probing:

Respondents were randomly assigned to either question version 1 or question version 2.

For the first item “tiring or painful positions”, there was a significant difference in response behaviour between countries for question version 1, with Polish respondents being much less likely to report that this “never” applies to their job (see Table 45; $\chi^2_{(8,396)} = 40.311, p < .001$). There were no significant differences between countries for any of the other items in either question version.

Across all four items, a similar share of respondents chose the extreme scale points (“always” or “all of the time”, and “never”), with the exception of Polish respondents in their answers to the first item. For the first item, 3% ($n = 5$) of the Polish respondents in question version 1 answered that they “never” work in “tiring or painful positions”, while 19% ($n = 23$) answered “never” in question version 2.

Table 45. Frequency distribution web probing Q30A by question version ($N = 792$)

Q30A: Tiring or painful positions	UK ($n = 264$)	Germany ($n = 264$)	Poland ($n = 264$)
Question Version 1: 5-point scale			
Always	6% (8)	4% (5)	6% (9)
Often	14% (18)	21% (27)	18% (26)
Sometimes	27% (34)	21% (26)	41% (58)
Rarely	25% (32)	28% (35)	31% (45)
Never	28% (35)	26% (33)	3% (5)
Total	100% (127)	100% (126)	100% (143)
Question Version 2: 7-point scale			
All of the time	5% (7)	3% (4)	6% (7)
Almost all of the time	9% (12)	7% (10)	7% (8)
Around 3/4 of the time	4% (5)	5% (7)	6% (7)
Around half of the time	9% (12)	9% (13)	15% (18)
Around 1/4 of the time	15% (21)	17% (24)	15% (18)
Almost never	29% (40)	41% (57)	33% (40)
Never	29% (40)	16% (22)	19% (23)
Item left unanswered	0% (0)	1% (1)	0% (0)
Total	100% (137)	100% (138)	100% (121)

Table 46. Frequency distribution web probing Q30B by question version (N = 792)

Q30B: Lifting or moving people	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
Question Version 1: 5-point scale			
Always	8% (10)	5% (6)	1% (2)
Often	6% (8)	5% (6)	6% (9)
Sometimes	7% (9)	6% (7)	10% (14)
Rarely	11% (14)	8% (10)	15% (21)
Never	68% (86)	77% (97)	68% (97)
Total	100% (127)	100% (126)	100% (143)
Question Version 2: 7-point scale			
All of the time	5% (7)	2% (3)	3% (4)
Almost all of the time	3% (4)	1% (2)	2% (2)
Around 3/4 of the time	1% (2)	2% (3)	5% (6)
Around half of the time	3% (4)	3% (4)	2% (2)
Around 1/4 of the time	7% (10)	4% (5)	3% (4)
Almost never	11% (15)	9% (13)	15% (18)
Never	69% (95)	78% (107)	70% (85)
<i>Item left unanswered</i>	0% (0)	1% (1)	0% (0)
Total	100% (137)	100% (138)	100% (121)

Table 47. Frequency distribution web probing Q30C by question version (N = 792)

Q30C: Carrying or moving heavy loads	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
Question Version 1: 5-point scale			
Always	9% (11)	7% (9)	9% (13)
Often	9% (11)	10% (12)	8% (11)
Sometimes	26% (33)	17% (22)	18% (26)
Rarely	23% (29)	22% (28)	27% (39)
Never	34% (43)	44% (55)	38% (54)
Total	100% (127)	100% (126)	100% (143)
Question Version 2: 7-point scale			
All of the time	4% (6)	2% (3)	7% (8)
Almost all of the time	5% (7)	4% (5)	3% (4)
Around 3/4 of the time	6% (8)	4% (6)	7% (9)
Around half of the time	6% (8)	4% (6)	7% (8)
Around 1/4 of the time	20% (28)	11% (15)	12% (14)
Almost never	18% (25)	29% (40)	19% (23)
Never	40% (55)	45% (62)	45% (55)
<i>Item left unanswered</i>	0% (0)	1% (1)	0% (0)
Total	100% (137)	100% (138)	100% (121)

Table 48. Frequency distribution web probing Q30D by question version (N = 792)

Q30D: Sitting	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
Question Version 1: 5-point scale			
Always	20% (26)	28% (35)	29% (42)
Often	41% (52)	41% (52)	36% (52)
Sometimes	21% (27)	13% (16)	16% (23)
Rarely	11% (14)	14% (18)	12% (17)
Never	6% (8)	4% (5)	6% (9)
Total	100% (127)	100% (126)	100% (143)
Question Version 2: 7-point scale			
All of the time	18% (25)	11% (15)	18% (22)
Almost all of the time	26% (35)	35% (48)	31% (37)
Around 3/4 of the time	15% (21)	9% (13)	10% (12)
Around half of the time	9% (12)	18% (25)	17% (21)
Around 1/4 of the time	13% (18)	4% (6)	7% (9)
Almost never	12% (16)	12% (17)	11% (13)
Never	7% (10)	9% (13)	6% (7)
<i>Item left unanswered</i>	0% (0)	1% (1)	0% (0)
Total	100% (137)	100% (138)	100% (121)

Which response options in the two scales corresponded to each other?

From a logical and linguistic point of view, the end points of the scale should approximately correspond to each other (“Always” and “All of the time”, as well as “Never”), as should the second-lowest frequency (“Rarely” and “Almost never”). The response option “Often” from the 5-point scale should encompass the response options “Almost all of the time” and “Around ¾ of the time” from the seven-point scale, while the response option “Sometimes” should encompass the response options “Around half of the time” and “Around ¼ of the time” (see Table 49).

Table 49. Assumed corresponding response options in grids

5-point scale	7-point scale
Always	All of the time
Often	Almost all of the time
	Around 3/4 of the time
Sometimes	Around half of the time
	Around 1/4 of the time
Rarely	Almost never
Never	Never

The response distributions corresponded well to each other, with the exception of the last item Q30D “Sitting” (see Table 50). For the final item, the upper part of the scale diverged, with respondents being considerably more likely to indicate “Always” on the five-point-scale than “All of the time” on the seven-point scale. However, even in the case of the final item, the lower half of the scale with the categories “Rarely“, “Almost never” and “Never” corresponded very well.

Table 50. Comparison of response distribution for Q30 across scales (N = 792)

Q30A: Tiring or painful positions			
Question Version 1: 5-point scale		Question Version 2: 7-point scale	
Always	6% (22)	5% (18)	All of the time
Often	18% (71)	8% (30)	Almost all of the time
		5% (19)	Around 3/4 of the time
Sometimes	30% (118)	11% (43)	Around half of the time
		16% (63)	Around 1/4 of the time
Rarely	28% (112)	35% (137)	Almost never
Never	18% (73)	21% (85)	Never
Item non-response	-	0% (1)	Item non-response
Total	100% (396)	100% (396)	Total
Q30B: Lifting or moving people			
Question Version 1: 5-point scale		Question Version 2: 7-point scale	
Always	5% (18)	4% (14)	All of the time
Often	6% (23)	2% (8)	Almost all of the time
		3% (11)	Around 3/4 of the time
Sometimes	8% (30)	3% (10)	Around half of the time
		5% (19)	Around 1/4 of the time
Rarely	11% (45)	12% (46)	Almost never
Never	71% (280)	72% (287)	Never
Item non-response	-	0% (1)	Item non-response
Total	100% (396)	100% (396)	Total
Q30C: Carrying or moving heavy loads			
Question Version 1: 5-point scale		Question Version 2: 7-point scale	
Always	8% (33)	4% (17)	All of the time
Often	9% (34)	4% (16)	Almost all of the time
		6% (23)	Around 3/4 of the time
Sometimes	20% (81)	6% (22)	Around half of the time
		14% (57)	Around 1/4 of the time
Rarely	24% (96)	22% (88)	Almost never
Never	38% (152)	43% (172)	Never
Item non-response	-	0% (1)	Item non-response
Total	100% (396)	100% (396)	Total

Q30D: Sitting**Question Version 1:
5-point scale****Question Version 2:
7-point scale**

Always	26% (103)	16% (62)	All of the time
Often	39% (156)	30% (120)	Almost all of the time
		12% (46)	Around 3/4 of the time
Sometimes	17% (66)	15% (58)	Around half of the time
		8% (33)	Around 1/4 of the time
Rarely	12% (49)	12% (46)	Almost never
Never	6% (22)	8% (30)	Never
Item non-response	-	0% (1)	Item non-response
Total	100% (396)	100% (396)	Total

Summary:

- Based on the response distributions, both the five-point and seven-point scales corresponded well to each other, indicating that both can be used to capture the constructs they measure.
- Only for the item Q30D “Sitting” did the upper scale half diverge, with respondents reporting a higher frequency of sitting in the five-point scale.

Q30 Recommendations:

We recommend using the five-point-scale that was implemented in the course of the adaptation, both because it is shorter and because it can be implemented consistently across most of the EWCS questionnaire (see also Q49)

Q49 highspeed, tightdead

Web probing and cognitive interviews were used to compare the two answer scales. Question version 1 showed the five-point answer scale as it was proposed in the course of the adaptation to an online questionnaire. Question version 2 shows the seven-point answer scale from the EWCS CAPI questionnaire.

English (Question Version 1):

How often does your job involve the following?
<hr/>
How often does your main job involve the following?
<hr/>
Working at very high speed
<input type="radio"/> Always
<input type="radio"/> Often
<input type="radio"/> Sometimes
<input type="radio"/> Rarely
<input type="radio"/> Never
<hr/>
Working to tight deadlines
<input type="radio"/> Always
<input type="radio"/> Often
<input type="radio"/> Sometimes
<input type="radio"/> Rarely
<input type="radio"/> Never

German (Question Version 1):

Wie häufig beinhaltet Ihre Arbeit Folgendes?

Wie häufig beinhaltet die Arbeit in Ihrem Hauptberuf Folgendes?

Ein hohes Arbeitstempo

- ☐ Immer
- ☐ Häufig
- ☐ Manchmal
- ☐ Selten
- ☐ Nie

Arbeiten unter Termindruck

- ☐ Immer
- ☐ Häufig
- ☐ Manchmal
- ☐ Selten
- ☐ Nie

Polish (Question Version 1):

Jak często Pana(-i) praca wymaga wykonywania następujących czynności?

Jak często Pana(-i) główna praca zarobkowa wymaga wykonywania następujących czynności?

Praca z bardzo dużą szybkością

- ☐ Zawsze
- ☐ Często
- ☐ Czasami
- ☐ Rzadko
- ☐ Nigdy

Praca w napiętych terminach

- ☐ Zawsze
- ☐ Często
- ☐ Czasami
- ☐ Rzadko
- ☐ Nigdy

Question Version 2 (English):

How often does your job involve the following?

How often does your main job involve the following?

Working at very high speed

- ☐ All of the time
- ☐ Almost all of the time
- ☐ Around $\frac{3}{4}$ of the time
- ☐ Around half of the time
- ☐ Around $\frac{1}{4}$ of the time
- ☐ Almost never
- ☐ Never

Working to tight deadlines

- ☐ All of the time
- ☐ Almost all of the time
- ☐ Around $\frac{3}{4}$ of the time
- ☐ Around half of the time
- ☐ Around $\frac{1}{4}$ of the time
- ☐ Almost never
- ☐ Never

Cognitive Techniques and Analyses:

Cognitive interviews: Category Selection Probing, Specific Probing

Findings Web Probing:

Respondents were randomly assigned to either question version 1 or question version 2. For the first item, there were significant differences between countries in both question versions (see Table 51; question version 1: $\chi^2_{(8,395)} = 17.020$, $p = .030$; question version 2: $\chi^2_{(12,397)} = 24.734$, $p = .016$), with German respondents being more likely to report that they worked at a very high speed. In contrast, there were no significant differences between countries in either question version of the second item (see Table 52; question version 1: $\chi^2_{(8,395)} = 7.544$, $p = .479$; question version 2: $\chi^2_{(12,396)} = 17.334$, $p = .137$).

Table 51. Frequency distribution web probing Q49A by question version (N = 792)

Q49A: Working at very high speed	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
Question Version 1: 5-point scale			
Always	10% (14)	12% (15)	5% (6)
Often	27% (39)	33% (41)	20% (25)
Sometimes	30% (44)	37% (46)	40% (49)
Rarely	19% (28)	13% (16)	24% (30)
Never	14% (20)	6% (8)	11% (14)
Total	100% (145)	100% (126)	100% (124)
Question Version 2: 7-point scale			
All of the time	6% (7)	8% (11)	8% (11)
Almost all of the time	8% (10)	22% (30)	12% (17)
Around 3/4 of the time	14% (17)	19% (26)	17% (24)
Around half of the time	22% (26)	20% (27)	18% (25)
Around 1/4 of the time	13% (16)	14% (19)	19% (27)
Almost never	21% (25)	15% (21)	15% (21)
Never	15% (18)	3% (4)	11% (15)
Total	100% (119)	100% (138)	100% (140)

Table 52. Frequency distribution web probing Q49B by question version (N = 792)

Q49B: Working to tight deadlines	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
Question Version 1: 5-point scale			
Always	14% (20)	12% (15)	8% (10)
Often	37% (54)	30% (38)	27% (34)
Sometimes	30% (43)	36% (45)	42% (52)
Rarely	13% (19)	15% (19)	16% (20)
Never	6% (9)	7% (9)	6% (8)
Total	100% (145)	100% (126)	100% (124)
Question Version 2: 7-point scale			
All of the time	16% (19)	12% (16)	11% (15)
Almost all of the time	15% (18)	14% (20)	12% (17)
Around 3/4 of the time	18% (21)	14% (19)	11% (16)
Around half of the time	19% (23)	12% (17)	21% (30)
Around 1/4 of the time	13% (16)	21% (29)	24% (33)
Almost never	13% (16)	20% (28)	11% (16)
Never	4% (5)	7% (9)	9% (13)
<i>Item non-response</i>	1% (1)	0% (0)	0% (0)
Total	100% (119)	100% (138)	100% (140)

Which response options in the two scales correspond to each other?

From a logical and linguistic point of view, the end points of the scale should approximately correspond to each other (“Always” and “All of the time”, as well as “Never”), as should the second-lowest frequency (“Rarely” and “Almost never”). The response option “Often” from the 5-point scale should encompass the response options “Almost all of the time” and “Around $\frac{3}{4}$ of the time” from the seven-point scale, while the response option “Sometimes” should encompass the response options “Around half of the time” and “Around $\frac{1}{4}$ of the time” (see Table 49 in Q30). The response distributions confirm this notion (see Table 53).

Table 53. Comparison of response distribution for Q49 across scales

Q49A: Working at very high speed			
Question Version 1: 5-point scale		Question Version 2: 7-point scale	
Always	9% (35)	7% (29)	All of the time
Often	27% (105)	14% (57)	Almost all of the time
		17% (67)	Around 3/4 of the time
Sometimes	35% (139)	20% (78)	Around half of the time
		16% (62)	Around 1/4 of the time
Rarely	19% (74)	17% (67)	Almost never
Never	11% (42)	9% (37)	Never
Total	100% (395)	100% (397)	Total
Q49B: Working to tight deadlines			
Question Version 1: 5-point scale		Question Version 2: 7-point scale	
Always	11% (45)	13% (50)	All of the time
Often	32% (126)	14% (55)	Almost all of the time
		14% (56)	Around 3/4 of the time
Sometimes	35% (140)	18% (70)	Around half of the time
		20% (78)	Around 1/4 of the time
Rarely	15% (58)	15% (60)	Almost never
Never	7% (26)	7% (27)	Never
<i>Item non-response</i>		0% (1)	<i>Item non-response</i>
Total	100% (395)	100% (397)	Total

Findings Cognitive Interviews:

Respondents were first shown question version 1 (5-point scale) and after discussing this question version, they were shown question version 2 (7-point scale) on a separate screen. The probes aimed at examining how the respondents understood the response options in both question versions and whether they preferred the 5-point or the 7-point scale.

In the question version using the five-point scale, none of the Polish respondents answered either item with “always”, while none of the German respondents answered the first item with “never” (see Table 54 and Table 55).

Table 54. Frequency distribution cognitive interviews Q49A (N = 32)

Q49A: Working at very high speed	Germany (n = 16)	Poland (n = 16)
Question Version 1: 5-point scale		
Always	2	-
Often	7	4
Sometimes	2	6
Rarely	5	2
Never	-	3
<i>Refusal</i>	-	1
Question Version 2: 7-point scale		
All of the time	1	-
Almost all of the time	2	2
Around 3/4 of the time	4	1
Around half of the time	1	2
Around 1/4 of the time	2	3
Almost never	6	2
Never	-	4
<i>Refusal</i>	-	2

Table 55. Frequency distribution cognitive interviews Q49B (N = 32)

Q49B: Working to tight deadlines	Germany (n = 16)	Poland (n = 16)
Question Version 1: 5-point scale		
Always	3	-
Often	6	9
Sometimes	3	5
Rarely	2	1
Never	1	1
<i>Refusal</i>	1	-
Question Version 2: 7-point scale		
All of the time	1	-
Almost all of the time	4	2
Around 3/4 of the time	3	2
Around half of the time	1	5
Around 1/4 of the time	4	2
Almost never	2	2
Never	1	1
<i>Refusal</i>	-	2

How did respondents interpret the response options on the 5-point scale?

Respondents who said they “always” had to work at very high speed or to tight deadlines referred to having constant pressure:

- *“I always have to hurry and am always under pressure to get everything done. In nursing, you never actually get to sit down.”* (“always, highspeed”)
- *“Our diary is always full. When I open the diary in the morning and see that appointments are double- and triple-booked, I already know how the day will go.”* (“always, tightdead”)

Respondents who answered one or both items with “often” explained that this meant “almost all of the time” or “almost every day”, but that working at a high speed or working towards tight deadlines was the typical, but not the only state of working they knew:

- *“There are phases in which I have deadline pressure, but that doesn’t necessarily mean one has to work at a fast pace.”* (“often, tight deadlines”)
- *“It is not always the case, sometimes there are quiet phases.”* (“often, highspeed”)
- *“[Often] means ‘practically every day’. We get so-called online orders and must complete them. Given the current situation, people would rather shop online than in a stationary shop.”* (“often, highspeed”)

The scale point “sometimes” was interpreted as meaning “from time to time” or “not too often”, while “rarely” was associated with something that happens extremely seldom. Some respondents explained that these were cases that occurred, but were not their typical work situation, as their main tasks involved the opposite of working at a high speed or towards tight deadlines. Thus, the scale points “sometimes” and “rarely” describe events that are seldom or irregular:

- *“My job rather requires concentration than fast pace.”* (“rarely, highspeed”)
- *“It depends on clients who expect me to respond quickly to some notification, but these are not frequent cases.”* (“sometimes, highspeed”)

One respondent said that she needs an additional response option “regular” because “often” is not suitable for “working under tight deadlines”:

- *“I can’t answer the question ‘working under tight deadlines’. I would need a category like ‘regularly’. For me, that’s regularly every month. ‘Often’ is not necessarily regularly.”* (“refusal, tight deadlines”)

How did respondents interpret the response options on the 7-point scale?

On the 7-point-scale respondents calculated the amount of time they work at very high speed or toward tight deadlines into hours per day, per week or per month. When they were uncertain about the exact share of working time, they preferred the vaguely worded response options “almost all of the time” instead of “around $\frac{3}{4}$ of the time” and “almost never” instead of “around $\frac{1}{4}$ of the time”:

- *“I don’t know how to calculate it, honestly. A quarter of the time is 25%. Twenty-five percent of 30 hours doesn’t seem like it to me. It happens once or twice a week that a patient comes in. That is not 25%.”* (DE14, “almost never, highspeed”)
- *“It is difficult to distinguish between ‘almost all of the time’ and ‘around $\frac{3}{4}$ of the time’. These two phrases are very much alike.”* The respondent further explained that she chose

‘almost all of the time’ because in the other case, she would have had to calculate whether she worked at a high speed around six hours a day; therefore, the general wording was closer to her perceived reality (PL10, “almost all of the time, highspeed”)

- *“I believe [the seven-point scale is] better, because it is a measurable scale. It can be compared to something. If I were to answer here, I would indicate ‘almost never’ or ‘around ¼ of the time’. ‘Around ¼ of the time’ of a 40-hour working week is ten hours. Therefore, I have to indicate ‘almost never’.”* (PL11, “almost never, highspeed”)
- One respondent understood “almost all of the time” to imply that he must work at a high speed on a daily basis: *“Every day at some moment of the day, that’s for sure.”* (PL13, “almost all of the time, highspeed”)
- *„I hesitate between ‘around ¼ of the time’ and ‘almost never’, because ‘around ¼ of the time’ is two hours out of eight, I guess. That could be a bit much.”* (PL16, “almost never, highspeed”)

One respondent refused to answer both items using the seven-point scale, because she could not calculate a share of working time (PL07).

Which response options in the two scales correspond to each other?

Based on the assumed corresponding response options (see Table 49), the majority of respondents (Q49A: DE: $n = 10$, PL: $n = 11$) (Q49B: DE: $n = 12$, PL: $n = 8$) used corresponding response options on the five-point and seven-point scales. Respondents who diverged were more likely to report a lower frequency using the seven-point scale (Q49A: DE: $n = 5$, PL: $n = 4$) (Q49B: DE: $n = 3$, PL: $n = 5$). One German respondent reported a higher frequency using the seven-point scale for the first item, and one Polish respondent reported a higher frequency using the seven-point scale for the second item. The remaining two respondents refused to answer the item using the five-point scale only (DE, highspeed), the seven-point scale only (PL, both items). In the following, the reasons why respondents chose diverging response options on the two scales are discussed:

- The respondent who answered both items with “Always” on the five-point scale and “Almost all of the time” using the seven-point scale explained that she had to work at a very high speed under time pressure. For her, these scale points corresponded to each other because she interpreted “Always” to mean that she works at a high speed and to tight deadlines “every day”, but she chose “Almost all of the time” instead of “All of the time” because on most days, she had the opportunity to sit down and take a break.
- Respondent who answered both items with “Often” using the five-point scale and “Around half of the time” using the seven-point scale: Directly upon seeing the five-point scale, this respondent commented that they would prefer a seven-point scale and explained the choice of the response option “Often” to the first item as meaning *“I say half of my working time is fast paced”*.
- The respondent who answered the first item with “Often” and refused to answer the second item using the five-point scale but chose “Around ¼ of the time” for both items using the seven-point scale explained that the workload was usually very high towards the beginning of the month, but decreased towards the end, and that the seven-point scale made it easier to indicate this.

- The respondent who answered the first item with “sometimes” on the five-point scale but refused to answer the item using the seven-point scale explained the difference between the scales as follows: *“‘Around ¼ of the time’ would mean two hours a day. If I worked at a very high speed [two hours a day], this would seem like a stressful job and would be exaggerated. In fact, I do not know which answer to indicate. The term ‘sometimes’ implies that it simply happens, but I am not able to define it precisely, because it is not every day or with any regularity.”*
- The respondent who answered the first item with “often” on the five-point scale and “around half of the time” on the seven-point scale explained that he spent half of his working time processing online orders, which required him to work quickly. This share of working time corresponded to the response option “often” on the five-point scale.

Both respondents who chose a higher frequency on the seven-point scale than on the five-point scale chose “rarely” on the five-point and “around ¼ of the time” of the time on the seven-point scale (DE06, highspeed; PL16, tightdead).

Respondents indicated a slight preference for the 5-point scale in Germany and for the seven-point scale in Poland, resulting in equal proportions across both countries (5-point scale preferred: DE: $n = 9$, PL: $n = 6$) (7-point scale preferred: DE: $n = 6$, PL: $n = 9$). In each country, one respondent had no preference. The five-point scale was considered more intuitive and reader-friendly but was criticised as being less exact and objective. The seven-point scale was considered more precise and the more objective measure but required more reflection and calculating hours.

Summary:

- Based on the response distributions in web probing, the five-point and seven-point scales corresponded well to each other, indicating that both can be used to capture the constructs they measure.
- The results from the cognitive interviews confirmed that many respondents used corresponding response options on both scales. When there were differences, respondents tended to report a lower frequency using the seven-point scale.
- Cognitive interviews did not reveal a clear preference for one scale type. The seven-point scale was considered more exact, and the five-point scale more intuitive.

Q49 Recommendations:

We recommend keeping the five-point-scale that was implemented in the course of the adaptation, as it is shorter, simple to answer, and because it can be implemented consistently across most of the EWCS questionnaire.

Conclusion

Both the original CAPI scale and the adapted CAWI scale are understood and correctly employed by respondents in an online setting. We recommend employing the five-point scale used in the adaptation, as it is shorter, simple to answer and can be used consistently throughout most parts of the EWCS questionnaire.

Gender Sensitivity: Asking About Gender

The EWCS questionnaire asks about gender in three questions: the gender of the respondent (Q2new), the gender of other household members in the proxy reporting (Q3c), and the gender of the immediate boss (Q62). In the course of the adaptation, these questions were redesigned to capture gender identity and in particular, to present a third, non-binary gender option. The goal of cognitive pretesting was to examine how the new questions, in particular the presentation of a non-binary gender option was perceived by respondents. To this end, the question on the respondents' gender and the gender of the immediate boss were cognitively pretested.

Q2new Gender identity

The question on the respondent's gender identity was tested using three question versions:

Question Version 1: Two binary response options and a third, closed response option "other" (this version was proposed during the adaptation to an online questionnaire).

Question Version 2: Two binary response options and third, open-ended response option "other, namely: [TEXT FIELD]" (this had been discussed as an alternative during adaptation).

Question Version 3: Two binary response options (as a control group).

English (Question Version 1):

Would you describe yourself as...?

☐ a man

☐ a woman

☐ other

Please note: The wording in the English question reflects the respondents' self-description. Because a literal translation of the source is not possible in German, the German translation of the question text is "How would you describe yourself regarding your gender identity?", thus explicitly naming the construct of gender identity. The Polish translation is "Please indicate [your] gender".

German (Question Version 1):

Wie würden Sie sich selbst hinsichtlich Ihrer Geschlechtsidentität beschreiben?

☐ Männlich

☐ Weiblich

☐ Andere Geschlechtsidentität

Polish (Question Version 1):

Proszę zaznaczyć płeć.

☐ mężczyzna

☐ kobieta

☐ inna

Question Version 2 (English):

Would you describe yourself as...?

☐ a man

☐ a woman

☐ other, namely:

Question Version 3 (English):

Would you describe yourself as...?

☐ a man

☐ a woman

Cognitive techniques:

Web probing: Specific Probing

Cognitive interviews: Specific Probing

Findings Web Probing:

In the web probing study, the question on gender was quota-relevant and thus presented at the beginning of the survey. Respondents were randomly assigned to question version 1, 2 or 3.

Table 56. Frequency distribution web probing Q2new by country and question version (N = 792)

Question Version	Response Options	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
1: Closed 'other' category	A man	48% (42)	63% (51)	59% (54)
	A woman	51% (44)	37% (30)	41% (38)
	Other	1% (1)	0% (0)	0% (0)
	Total	100% (87)	100% (81)	100% (92)
2: Open-ended 'other' category	A man	66% (61)	61% (56)	56% (48)
	A woman	34% (32)	39% (36)	44% (38)
	Other	0% (0)	0% (0)	0% (0)
	Total	100% (93)	100% (92)	100% (86)
3: Only binary options	A man	65% (55)	57% (52)	47% (40)
	A woman	35% (29)	43% (39)	53% (46)
	Total	100% (84)	100% (91)	100% (86)

Did respondents select the response option “other” and what did respondents mean when they chose the gender option “other”?

Only one respondent who completed the survey chose the third gender option “other” (see Table 56). This person was assigned to question version 1 with the closed response option; therefore, the respondent’s exact self-identification remains unknown.

Of those respondents who did not complete the survey⁵, seven respondents chose the option “other”. Of these, four were assigned to question version 1 with the closed “other” category, and three to question version 2 with the open-ended “other” category. Two were from the UK, three from Germany, and two from Poland. One of the three respondents with the open-ended “other” category inserted a specification (“trans woman”), indicating a correct understanding and usage of the response option.

⁵ None of these respondents dropped out of the survey. Three were screened out due to unemployment or age, and four were assigned to a closed quota.

Did respondents break off the survey when a non-binary gender option was shown?

In total, 157 respondents dropped out of the survey. Of these, only nine respondents dropped out on the survey page that included the question on respondent gender.⁶ There were no significant differences between countries or the question version (see Table 57).

Table 57. Break offs web probing on the survey page of Q2new

Question Version	UK	Germany	Poland
1: Closed 'other' category	2	-	1
2: Open-ended 'other' category	-	2	1
3: Only binary gender options	-	1	2

Did respondents perceive the non-binary category as a provocation?

A closed probing question asked respondents in question versions 1 and 2 what they thought about presenting a third gender category in a survey (P1_Q2new). Respondents could indicate whether they found it “(rather) appropriate”, “(rather) inappropriate”, or whether it didn’t matter to them if a third option was presented (see Table 58). Across all countries and question versions, 15% of respondents expressed a negative attitude, finding it “(rather) inappropriate” to present a third gender option. There was a significant difference in response to the probing question between countries ($\chi^2_{(4,531)} = 47.895, p < .001$). In the UK and Germany, the most common response was that it didn’t matter. In Poland, in contrast, the most common answer was that respondents found it appropriate to include a third gender option. There were no significant differences depending on question version in any country (UK: $\chi^2_{(2,180)} = 2.625, p = .269$; DE: $\chi^2_{(2,173)} = 1.532, p = .465$; PL: $\chi^2_{(2,178)} = 2.364, p = .307$).

⁶ Most break offs occurred during the first open-ended survey questions (Q5 and Q6, $n = 13$ and $n = 14$) and the first open-ended probing questions (P1/P2_Q14 and P2/P3_Q16a, $n = 35$ and $n = 16$).

Table 58. Reaction to third gender category (P1_Q2new) (by question version and country)

Question Version	Response Options	UK (n = 264)	Germany (n = 264)	Poland (n = 264)
1: Closed 'other' category	I find it (rather) appropriate	21% (18)	20% (16)	59% (54)
	I find it (rather) inappropriate	18% (16)	14% (11)	8% (7)
	It doesn't matter to me	61% (53)	67% (54)	34% (31)
	Total	100% (87)	100% (81)	100% (92)
2: Open-ended 'other' category	I find it (rather) appropriate	31% (29)	26% (24)	50% (43)
	I find it (rather) inappropriate	17% (16)	16% (15)	14% (12)
	It doesn't matter to me	52% (48)	58% (53)	36% (31)
	Total	100% (93)	100% (92)	100% (86)

Findings Cognitive Interviews:

The cognitive interviews aimed to examine if the third non-binary response option was accepted and which question version the respondents preferred. Respondents first answered question version 1 (with the closed “other” category) and after responding to two probes on this version, they were shown the alternative question versions 2 and 3 on a separate survey page. None of the respondents chose the response category “other” (see Table 59).

Table 59. Frequency distribution cognitive interviews Q2new (N = 32)

Answer	Germany (n = 16)	Poland (n = 16)
A man	7	9
A woman	9	7
Other	-	-

While there were no problems in understanding this question in Germany, four respondents in Poland stated that they did not know who the question is addressing. The Polish translation literally read “Please indicate [your] gender”, with the pronoun “your” not being explicitly named in the question text. This caused confusion among two respondents who were still contemplating the questions on their boss’s gender:

- “The question is not really clear because it does not specifically say whose gender should be marked here.” (PL16)
- “This statement is too general, especially as we’ve just had questions about the male boss, female boss, manager and so on.” (PL11)

Did respondents perceive the non-binary category as a provocation?

In Germany, 14 respondents stated that they found the non-binary response option “(rather) appropriate” and two indicated that it “doesn’t matter”. In Poland, ten respondents stated that they found the non-binary response option “(rather) appropriate”, four indicated that it “doesn’t matter”, one found it “(rather) inappropriate”, and one respondent had no preference. Most respondents argued that it was good that people who cannot identify themselves as either male or female had an opportunity to respond appropriately and that this was in accordance with the times:

- *“Personally, I don't care, but I think it's appropriate because nowadays there are also people who are not even aware whether they are a man or a woman or something. That's why I think the answer option 'Other gender identity' is also good.” (DE07)*
- *“I think it's good that people who don't want to clearly label themselves as male or female are given this option. This should be used as often as possible against discrimination. These people should be seen and noticed.” (DE12)*
- *“It doesn't matter for me, but I understand that in the light of what is happening now, which is related to different genders, to human freedom, I think that ['other'] should be here.” (PL09)*

One respondent (PL03) who found the non-binary option “(rather) inappropriate” as well as one respondent (PL16) who stated that it “doesn’t matter” explained that there were only two genders for them, namely men and women.

Which of the three question versions did respondents prefer?

In Germany, eight respondents indicated that they preferred question version 1 with the closed “other” category, seven indicated that they preferred question version 2 with the open-ended “other” category and one respondent had no preference. In contrast, the open variant was preferred by most respondents in Poland ($n = 11$). Three respondents indicated that they preferred question version 1 with the closed “other” category and two preferred the question version with only two response options (PL03, PL16).

Those who indicated that they preferred the question version with the closed “other” category explained that answering the question in an open format would contain too much private information:

- *“It's enough to state that it's a different gender identity. What exactly is not anyone's business.” (DE02)*
- *“The [closed] 'other' category, and there does not have to be anything to specify here. I don't think anyone would like to get into details.” (PL12)*

Respondents who indicated that they preferred question version 2 explained that this version offered the opportunity to describe themselves in more detail while at the same time allowing for simply selecting the answer option without specifying it any further:

- *“You can enter everything here, there is room for all possibilities. And you can also just click on it and leave the text field open.” (DE01)*
- *“[...] gives the option of a) the other gender identity and b) especially the description. Whether you use it or not is the question, you can also write in, don't want to make a comment, but the option should actually be there.” (DE04)*

One respondent did not indicate a preference, as she did not fall into the category of "other", and therefore found it difficult to assess which of the two alternatives was the better one: *"Since I don't fall into this category myself, I don't know to what extent someone there would like to put that down or not"* (DE15).

Summary:

- In web probing, only one respondent used the third gender option "other". This person was assigned to the question version with the closed response option; therefore, the respondent's exact self-identification remains unknown.
- Break offs on the survey page with the gender question were extremely rare. Offering a third response option did not influence break offs.
- In web probing, unfavourable reactions to the third gender option were voiced by 15% of respondents. Polish respondents reacted more favourably to the inclusion of a third gender category in response to a (closed) probe than respondents in the UK or Germany, who were in turn more likely to react indifferently towards the third option. Whether the third option was presented as a closed or open-ended response option did not influence the reaction of the category.
- In the cognitive interviews, all except two Polish respondents found the question versions offering a non-binary response option appropriate. There was no clear preference for this response option to be closed or open-ended.

Q2new Recommendations:

- Based on cognitive pretesting, no changes to the question are recommended.
- However, the question should be revisited from the perspective of cross-cultural comparability. While the English source questionnaire asks about gender identity without using the word "gender" in any way by asking how the respondents would "describe themselves", the German translation directly asks about "gender identity" and the Polish translation is worded as a sentence and simply asks respondents to indicate their "gender". Formulating a question that unmistakably asks about gender identity, and thus self-identification, remains challenging in many languages, and it is not possible to word the question in the same way across languages. For instance, in German, the meaning of a literal translation of the source "Would you describe yourself as..." remains unclear until the words "regarding your gender identity" are added to the question text. In Polish, in contrast, asking about gender self-identification is considered highly intrusive. Thus, a careful compromise must be found between keeping the construct of gender identity comparable across languages and countries, and remaining sensitive to linguistic and cultural nuances. We recommend that each country document their way of translating providing a rationale and an explanatory back translation.

Q62 Gender of immediate boss

Both web probing and cognitive interviews were used to examine why respondents who are employed responded to this question with “I have no boss”. Cognitive interviews were used to analyse how the question text and the non-binary response option “other” were perceived and accepted by respondents and whether reactions differed cross-culturally.

English:

What is the gender of your immediate boss?
If you have more than one boss, please consider the one who has most responsibility for your work or tasks.

☐ Male

☐ Female

☐ Other

☐ I have no boss

German:

Welches Geschlecht hat Ihr/e direkte/r Vorgesetzte/r?
Falls Sie mehr als eine/n direkte/n Vorgesetzte/n haben, denken Sie bitte an die Person, die für Ihre Arbeit oder Tätigkeiten hauptverantwortlich ist.

☐ Männlich

☐ Weiblich

☐ Anderes

☐ Ich habe keine/n Vorgesetzte/n

Polish:

Czy Pana(-i) bezpośredni przełożony jest kobietą czy mężczyzną?
Jeżeli ma Pan(i) więcej niż jednego bezpośredniego przełożonego, proszę wziąć pod uwagę tego, który w większym stopniu odpowiada za Pana(-i) pracę lub zadania.

☐ Mężczyzna

☐ Kobieta

☐ Inna

☐ Nie mam szefa/ szefowej

Cognitive techniques:

Web probing: Category Selection Probing

Cognitive interviews: Specific Probing

Findings Web Probing:

Question 62 was only shown to employed respondents. With one exception, all respondents answered the question on their immediate boss' gender (see Table 60). In all three countries, the majority of bosses was male (65%, $n = 322$), though there were no significant differences between countries. In total, nine respondents indicated that they had no boss. These respondents were asked to explain the reason for this response in an open-ended probing question (P1_Q63). Four respondents did not give a substantive reason, simply repeating that they had no boss or leaving the text field empty. Of the other five, one explained that he/she worked in an *"independent position reporting directly to the company director"*, three explained that they were part of the management board or the director of a company, and one claimed to be self-employed (in contradiction to the respondent's answer to Q7).

Table 60. Frequency distribution web probing Q62 by country (Basis Employed; $N = 492$)

Gender of immediate boss (Basis: Employed)	UK ($n = 169$)	Germany ($n = 157$)	Poland ($n = 166$)
Male	63% (107)	71% (112)	62% (103)
Female	34% (58)	27% (42)	36% (59)
Other	1% (1)	0% (0)	0% (0)
I have no boss	1% (2)	2% (3)	2% (4)
Item non-response	1% (1)	0% (0)	0% (0)

Findings Cognitive Interviews:

In Germany, none of the cognitive interview respondents who self-identified as being employed indicated having no boss while in Poland, two respondents (PL07, PL10) indicated having no boss (see Table 61). Both explained that they were co-owners of a company with limited liability and that no one was superior to them:

- *"I do not have any boss, because I am one of the company owners. We signed an employment contract with each other – my husband [and I]."*
- *"I am a finance director of a foundation where I am also a vice-president. There is a president, but we are on equal terms. And there is no hierarchy for us. Although, in fact, because the employment contract is signed with me, the president signs it, because I could not sign it with myself."*

Table 61. Frequency distribution cognitive interviews Q62 (Basis Employed; N = 19)

Gender of immediate boss (Basis: Employed)	Germany (n = 9)	Poland (n = 10)
Male	8	4
Female	1	4
Other	-	-
I have no boss	-	2

How did respondents react to the gender-inclusive wording of the question text?

In Germany, eight of the nine respondents receiving question 62 stated that they found the gender-inclusive wording “(rather) good” and one respondent answered that it “doesn’t matter” whether both or only one gender was mentioned. In Poland, seven respondents stated that they found the gender-inclusive wording “(rather) good”, two respondents answered with “doesn’t matter” and one respondent found it “(rather) bad”. Most respondents argued that the gender-inclusive wording did not discriminate against any gender and that it has moved with time because people are already used to this kind of wording:

- “It would be discriminatory if you had a female boss and only the masculine form would be given” (DE08)
- “We are used to reading it like this by now, and I think it's good that it's formulated like this” (DE10)
- “Bosses are not only men, they are also women, and I think that the use of both forms is absolutely correct.” (PL12, “Rather good”)

The respondent who stated that he found the gender-inclusive wording “(rather) bad” explained that he believed that using both forms at the same time artificially lengthened the question.

How did respondents react to the non-binary response option?

Regarding the non-binary response option, six German respondents stated that they found the non-binary response option “(rather) appropriate”, one participant found it “(rather) inappropriate” and two indicated that it “doesn’t matter” whether a third response options was provided or not. In Poland, four respondents stated that they found the non-binary response option “(rather) appropriate”, two participants found it “(rather) inappropriate” and the remaining four indicated that it “doesn’t matter” whether a third response options was provided or not.

Those finding the non-binary response option appropriate or being indifferent argued that the answer option “other” would not bother them and that it was possible that the gender of the boss could not be clearly assigned. Therefore, the option should be available:

- “It doesn't hurt me. When your boss is ‘other’, you do not have to make a decision.” (DE06)
- “I find it appropriate because one’s boss could be neither male nor female. Otherwise, you couldn't select it if it applied.” (DE10)

One respondent (PL03), who was against showing a non-binary response option in question 62, explained that for him there were only two genders, namely men and women. Additionally, one

respondent (PL16), who answered that it “doesn’t matter” also explained that there are only two genders. One respondent (PL01) did not understand what the third gender “other” meant. Another respondent who was against showing a non-binary response option in question 62 (DE02) explained that she found it inappropriate to describe someone else’s gender as “other”:

“I think it's strange because everyone can decide for themselves. I would find it strange to call someone else ‘other’. Normally you don't know that. The person can say that about themselves, but I find it strange to be called that by a third party.” (DE02)

Summary:

- Based on the findings from web probing and the cognitive interviews, the answer category “I have no boss” is a response option that is rarely selected, but an important category to maintain even when this question is only presented to employed respondents.
- Based on the cognitive interviews, most respondents either found it appropriate to use a gender-inclusive wording in the question text and to provide a non-binary response option or were indifferent to it.

Q62 Recommendations:

No changes recommended.

Conclusion

Cognitive pretesting revealed no indication that including a non-binary response category threatens data quality. However, asking about respondents’ gender identity in a consistent fashion across countries remains challenging for both linguistic and cultural reasons. We therefore recommend further discussion on the construct to be measured and its operationalization in a cross-national survey.

Gender Sensitivity: Gender-Sensitive Wording

Q63 Boss description

The goal of the cognitive interviews was to find out how gender-sensitivity can best be achieved in the respective languages.

In Germany, respondents first answered a gender-aligned question version based on their answers to question 62. For example, those who stated they had a female boss (Q62) received the items with a female pronoun (“She...”). Afterwards, they were shown a gender-neutral version of the question displaying both the male and the female pronoun for each item (“He/She...”).

In Poland, respondents were first shown a gender-neutral question version that included no third-person pronouns. Afterwards, they were shown a gender-aligned question version in which each item either began with “My [male] boss” or “My [female] boss” or if the boss’ gender was unknown or non-binary “My [male/female] boss” [Polish: szef/szefowa].

English:

12. To what extent do you agree or disagree with the following statements about your immediate [male/female] boss?

He/She respects me as a person

- ☐ Strongly agree
- ☐ Tend to agree
- ☐ Neither agree nor disagree
- ☐ Tend to disagree
- ☐ Strongly disagree

He/She is successful in getting people to work together

- ☐ Strongly agree
- ☐ Tend to agree
- ☐ Neither agree nor disagree
- ☐ Tend to disagree
- ☐ Strongly disagree

☐ *Not applicable*

He/She is helpful in getting the job done

- ☐ Strongly agree
- ☐ Tend to agree
- ☐ Neither agree nor disagree
- ☐ Tend to disagree
- ☐ Strongly disagree

He/She provides useful feedback on my work

- ☐ Strongly agree
- ☐ Tend to agree
- ☐ Neither agree nor disagree
- ☐ Tend to disagree
- ☐ Strongly disagree

He/She encourages and supports my development

- ☐ Strongly agree
- ☐ Tend to agree
- ☐ Neither agree nor disagree
- ☐ Tend to disagree
- ☐ Strongly disagree

German:

12. Inwieweit stimmen Sie den folgenden Aussagen über Ihre/n direkte/n Vorgesetzte/n zu oder nicht zu?

Er/Sie respektiert mich als Mensch

- ☐ Stimme voll und ganz zu
- ☐ Stimme eher zu
- ☐ Stimme weder zu noch nicht zu
- ☐ Stimme eher nicht zu
- ☐ Stimme überhaupt nicht zu

Er/Sie schafft es, Menschen zur Zusammenarbeit zu bewegen

- ☐ Stimme voll und ganz zu
- ☐ Stimme eher zu
- ☐ Stimme weder zu noch nicht zu
- ☐ Stimme eher nicht zu
- ☐ Stimme überhaupt nicht zu

☐ *Trifft nicht zu*

Er/Sie ist bei der Erledigung der Arbeit hilfreich

- ☐ Stimme voll und ganz zu
- ☐ Stimme eher zu
- ☐ Stimme weder zu noch nicht zu
- ☐ Stimme eher nicht zu
- ☐ Stimme überhaupt nicht zu

Er/Sie gibt mir nützliches Feedback zu meiner Arbeit

- ☐ Stimme voll und ganz zu
- ☐ Stimme eher zu
- ☐ Stimme weder zu noch nicht zu
- ☐ Stimme eher nicht zu
- ☐ Stimme überhaupt nicht zu

Er/Sie fördert und unterstützt meine Entwicklung

- ☐ Stimme voll und ganz zu
- ☐ Stimme eher zu
- ☐ Stimme weder zu noch nicht zu
- ☐ Stimme eher nicht zu
- ☐ Stimme überhaupt nicht zu

Polish:

12. W jakim stopniu zgadza się Pan(i) lub nie zgadza z następującymi stwierdzeniami dotyczącymi Pana(-i) bezpośredniego przełożonego/bezpośredniej przełożonej?

Szanuje mnie jako osobę

- ☐ Zdecydowanie zgadzam się
- ☐ Zgadzam się
- ☐ Ani się zgadzam, ani się nie zgadzam
- ☐ Nie zgadzam się
- ☐ Zdecydowanie nie zgadzam się

Umiejętnie zachęca ludzi do współpracy

- ☐ Zdecydowanie zgadzam się
- ☐ Zgadzam się
- ☐ Ani się zgadzam, ani się nie zgadzam
- ☐ Nie zgadzam się
- ☐ Zdecydowanie nie zgadzam się

- ☐ Nie dotyczy

Pomaga w doprowadzeniu pracy do końca

- ☐ Zdecydowanie zgadzam się
- ☐ Zgadzam się
- ☐ Ani się zgadzam, ani się nie zgadzam
- ☐ Nie zgadzam się
- ☐ Zdecydowanie nie zgadzam się

Dostarcza mi użytecznych informacji zwrotnych na temat mojej pracy

- ☐ Zdecydowanie zgadzam się
- ☐ Zgadzam się
- ☐ Ani się zgadzam, ani się nie zgadzam
- ☐ Nie zgadzam się
- ☐ Zdecydowanie nie zgadzam się

Zachęca mnie do samorozwoju i go wspiera

- ☐ Zdecydowanie zgadzam się
- ☐ Zgadzam się
- ☐ Ani się zgadzam, ani się nie zgadzam
- ☐ Nie zgadzam się
- ☐ Zdecydowanie nie zgadzam się

Cognitive techniques:

Specific Probing

Findings Cognitive Interviews:

Nine German and eight Polish respondents received this question (see Table 62). These respondents were all employees and had indicated that they had a boss in Q62.

Table 62. Frequency distribution cognitive interviews Q63 (Basis: Employed; N = 17)

(Basis: Employed)	Germany (n = 9)	Poland (n = 8)
He / She respects me as a person		
Strongly agree	7	5
Tend to agree	2	2
Neither agree nor disagree	-	1
Tend to disagree	-	-
Strongly disagree	-	-
He / She is successful in getting people to work together		
Strongly agree	3	4
Tend to agree	4	2
Neither agree nor disagree	1	2
Tend to disagree	-	-
Strongly disagree	-	-
Not applicable	1	-
He / She is helpful in getting the job done		
Strongly agree	3	1
Tend to agree	5	5
Neither agree nor disagree	1	2
Tend to disagree	-	-
Strongly disagree	-	-
He / She provides useful feedback on my work		
Strongly agree	2	3
Tend to agree	4	4
Neither agree nor disagree	1	-
Tend to disagree	2	-
Strongly disagree	-	-
<i>Refusal</i>	-	1
He / She encourages and supports my development		
Strongly agree	4	3
Tend to agree	3	2
Neither agree nor disagree	-	1
Tend to disagree	2	-
Strongly disagree	-	1
<i>Refusal</i>	-	1

Since the probes differed between Poland and Germany due to the different languages, the two countries were evaluated separately.

In Germany, five of the nine respondents who received this question stated that they would prefer the gender-specific wording in the statements, three respondents that they would prefer the version with double pronouns (“He/She”) and one respondent had no preference for either version.

Those who preferred the gender-specific version or who were indifferent argued that it was more personalised and more fluid to read than the other version:

- *“It’s easier to read with the single pronoun, but that doesn’t bother me”* (DE01, no preference)
- *“It looks more fluid and is easier to read.”* (DE02, preferred gender-specific wording)

Those who preferred the gender-neutral version (“He/She”) argued that it was more fluid to read and that if the questions/statements were worded this way throughout the questionnaire, there would be no need to ask question 62 beforehand:

- *“Personally, I would prefer this variant because of the reading flow.”* (DE10)
- *“You should actually formulate it like that throughout. Then you don’t even have to determine whether the boss is male or female.”* (DE11)

In Poland, five of the eight respondents stated that they preferred the question version with no pronoun or noun as a sentence subject. Of these, two respondents stated that the version with no pronoun was simpler and sufficient. Another respondent explained that he thought the gender specific version was not necessary because: *“It is not a question of gender but function of a person which does not have any gender definition here”* (PL12). The remaining two respondents explained that the grammatical structure using the noun phrase implied that there was only one employee.

Two of the eight respondents stated that they preferred the version with the noun because its presence would make it easier to understand the text and the relationship between employee and boss. One respondent (PL16) had no preferences and explained: *“It does not matter to me whether my boss is a man or a woman”* (PL16).

Four Polish respondents mentioned that the term “szef/ szefowa” as “[male/female] boss” in the item text was too colloquial and should be replaced by “bezpośredni przełożony/ bezpośrednia przełożona” (direct female/male supervisor).

Summary:

- Across both countries, respondents preferred the question versions suggested during the adaptation. German respondents preferred gender-aligned wordings (because it would be more personalized and fluid to read), while Polish respondents preferred the gender-neutral wording without any personal pronoun (which is the usual way of speaking).
- In Poland, suggestions were made to use a different term for “immediate boss”.

Q63 Recommendations:

- The pretest confirms that the optimal gender-sensitive language is language-specific. In German, gender-sensitivity for this question is best achieved by using a gender-aligned wording for “[male/female/non-binary or unknown gender] boss”, while in Polish, using no pronoun is considered more appropriate and natural. For further translations, we

recommend applying a translation note that the grammatically optimal sentence structure should be applied. Moreover, if different language version require different programming (i.e., because one country has two or three gender-aligned versions, whereas others only require one gender-neutral version), this must be considered early on in questionnaire programming.

- We recommend checking the Polish translation of the term “immediate boss” (see also the subchapter on the translation of “manager” in chapter 2).

Capturing Work Status and Occupation

Collecting high-quality data on the respondents' work status and occupation is central to the EWCS. Therefore, the validity of the responses to questions Q2c (work status), Q5 (job title), Q6 (job description) and Q13 (sector) was cognitively pretested. All of these questions were previously accompanied by extensive interviewer notes.

The response categories in Q2c were adapted in the online questionnaire to incorporate some of the information from previous interviewer notes. Cognitive interviews examined whether this adaptation made it easier for respondents in atypical working situations to choose the correct answer. The other three questions were asked in an open-ended fashion in the CAPI questionnaire, and interviewers received training that focused on gaining the needed depth of information from the respondents. Web probing was used to examine the share of codable responses to the open-ended questions in a situation with no interviewer present (regardless of whether the respondents' answers led to a correct ISCO or NACE coding). Cognitive interviews were used to examine whether respondents entered enough information for an ISCO or NACE coding, but in addition whether they provided the relevant information for correct coding. Also, cognitive interviews tested an alternative question presentation using a provided closed answers presented as a search tree (see Q5 & Q6) instead of open-ended questions.

Q2c Work status

The aim of the cognitive interviews was to determine whether this question led to comprehension problems. In particular, it was examined how people working in family businesses allocated themselves to a response category.

In web probing, Q2c was used as a screening question, but was not cognitively tested.

English:

Which of these categories describes your current situation the best?

Self-employment includes the case that your business does not (yet) generate profit or income.

- ☐ At work full time as employee or employer, self-employed, or as a paid relative assisting on family farm or business
- ☐ At work in a part time capacity as employee or employer, self-employed, or as a paid relative assisting on family farm or business
- ☐ Unemployed
- ☐ Unable to work due to long-term illness or disability
- ☐ At work and on child-care leave or other leave
- ☐ Retired
- ☐ Full time homemaker or unpaid family member
- ☐ In full time education, i.e., as a pupil at school or student at university
- ☐ Other, please specify:

German:

Welche dieser Kategorien beschreibt Ihre derzeitige Situation am besten?

Selbständigkeit beinhaltet auch, wenn Ihr Unternehmen (noch) keinen Gewinn oder Einkommen erwirtschaftet.

- ☐ In Vollzeit berufstätig, als Mitarbeiter/in, Arbeitgeber/in, Selbständige/r oder als Verwandte/r auf dem Bauernhof der Familie oder im Familienbetrieb
- ☐ In Teilzeit berufstätig, als Mitarbeiter/in, Arbeitgeber/in, Selbständige/r oder als Verwandte/r auf dem Bauernhof der Familie oder im Familienbetrieb
- ☐ Arbeitslos
- ☐ Arbeitsunfähig aufgrund einer Langzeiterkrankung oder Behinderung
- ☐ Berufstätig und im Erziehungsurlaub oder sonstiger Beurlaubung
- ☐ Im Ruhestand/Vorruhestand
- ☐ Hausmann bzw. Hausfrau oder unbezahlt mithelfende/r Familienangehörige/r
- ☐ Schüler/in, Auszubildende/r oder Student/in
- ☐ Sonstiges, und zwar:

Polish:

Która z tych kategorii najlepiej opisuje Pana(-i) obecną sytuację?

Samozatrudnienie oznacza również sytuację, kiedy Pana(-i) firma nie przynosi (jeszcze) żadnych zysków ani dochodów

- ☐ Praca w pełnym wymiarze godzin jako pracownik/pracownica lub pracodawca/pracodawczyni, osoba samozatrudniona, krewny(-a) odpłatnie pomagający(-a) w rodzinnym gospodarstwie rolnym lub biznesie
- ☐ Praca w niepełnym wymiarze godzin jako pracownik/pracownica lub pracodawca/pracodawczyni, osoba samozatrudniona, krewny(-a) odpłatnie pomagający(-a) w rodzinnym gospodarstwie rolnym lub biznesie
- ☐ Bezrobotny(-a)
- ☐ Niezdolny(-a) do pracy z powodu długotrwałej choroby lub niepełnosprawności
- ☐ Osoba zatrudniona, przebywająca na urlopie macierzyńskim/ tacierzyńskim, wychowawczym lub innym urlopie
- ☐ Na emeryturze
- ☐ Osoba zajmująca się domem w pełnym wymiarze godzin pracy lub członek rodziny wykonujący nieodpłatną pracę
- ☐ Nauka w trybie dziennym (w szkole, na uniwersytecie) / student(ka), uczeń/uczenica
- ☐ Inne, jakie:

Please note: In Germany and Poland, the response options were worded in a gender-aligned manner, using male, female or neutral formulations depending on the respondent's self-reported gender identity. The screenshot depicts the neutral wording.

Cognitive techniques:

Category Selection Probing

Findings Cognitive Interviews:

Most respondents indicated that they work full time as employee or employer, self-employed, or as a paid relative assisting on family farm or business (DE: $n = 12$, PL: $n = 13$). Five respondents worked part time (DE: $n = 2$, PL: $n = 3$) and two German respondents were “at work and on child-care leave or other leave” or “in full time education”, respectively (see Table 63).

Table 63. Frequency distribution cognitive interviews Q2c ($N = 32$)

Answer	Germany ($n = 16$)	Poland ($n = 16$)
At work full time as employee or employer, self-employed, or as a paid relative assisting on family farm or business	12	13
At work in a part time capacity as employee or employer, self-employed, or as a paid relative assisting on family farm or business	2	3
Unemployed	-	-
Unable to work due to long-term illness or disability	-	-
At work and on child-care leave or other leave	1	-
Retired	-	-
Full time homemaker or unpaid family member	-	-
In full time education, i.e., as a pupil at school or student at university	1	-
Other, please specify:	-	-
Refusal	-	-

The cognitive interviews revealed two problems. Firstly, respondent DE02, who stated that she was on parental or other leave, was still working on the side and understood the option to encompass both:

“I would interpret that as parental leave and working at the same time. After all, I also work alongside my parental leave.” (DE02)

Secondly, two Polish respondents (PL02, PL04) incorrectly identified themselves as working part time. Respondent PL04 only referred to her main job and not all of her jobs together, while participant PL02 misinterpreted the question as referring to the flexibility of one’s working hours and not the usual number of hours. Even though he was self-employed and stated in Q24 that he works a total of 50 hours a week, he indicated that he works in part time capacity and explained: “[...] as a self-employed person I can go on holiday or get away whenever I want” (PL02).

Summary:

- Most respondents had no problems answering this question.
- One German respondent misinterpreted the response option “at work and on child-care leave or other leave” as meaning being on leave while at the same time having another job.
- In Poland, one respondents only referred to her main job and one respondent misinterpreted the question as referring to the flexibility of one’s working hours and not the usual number of hours.

Q2c Recommendations:

- We recommend a simplification of the **response categories**:
 - The first two response options should omit any reference to employment, self-employment or family members: “*At work full-time*” and “*At work part-time*”
 - The response option “At work and on child-care leave or other leave” should be changed into “*On child-care leave or other leave*”.
 - The seventh category would be shortened to “*Full-time homemaker*”
- We recommend deleting the **instruction**, which pertains to self-employed. Due to the changes in the response options, the instruction is no longer required.

Q5 Job title & Q6 Job description

Web probing focused on examining the response quality of the answers to the open-ended questions, to assess whether a classification along ISCO is possible with this approach.

The focus of the cognitive interviews was an in-depth examination of whether respondents read and understand the instructions below the question texts and determine possible improvements for the instructions.

Moreover, respondents in the cognitive interviews were presented an alternative format to select their occupation using a search tree. To this end, the Survey Codings Occupation Database of the project Social Sciences & Humanities Open Cloud (SSHOC) was used, which is funded by the EU framework programme Horizon 2020 (<https://www.surveycodings.org/occupation/database-live-search>).

English:

What is the title of your job?

What is the title of your main job?

Please indicate the exact job title. For example, write "forwarding merchant" and not "commercial employee", or "machine fitter" instead of "worker". If you are a civil servant, please indicate your job title, e.g. "policemaster", or "study council". If you are a trainee, please indicate the profession you are training for.

What do you mainly do in your job?

Please describe your professional activity and your main tasks in as much detail as possible. Examples are "Filling shelves with products and taking inventory", "Caring for patients, giving medication, monitoring vital signs", "Caring for patients, treating teeth and gums", "Monitoring the inventory in the women's department, serving customers and cashier activities".

German:

Welchen Beruf üben Sie zurzeit aus?

Welchen Beruf üben Sie zurzeit in Ihrem Hauptberuf aus?

Bitte geben Sie die genaue Berufsbezeichnung an. Schreiben Sie bspw. "Speditionskaufmann/frau" statt "kaufmännische/r Angestellte/r", oder "Maschinenschlosser/in" statt "Arbeiter/in". Wenn Sie verbeamtet sind, geben Sie bitte Ihre Amtsbezeichnung an, bspw. "Polizeimeister/in" oder "Studienrat/rätin". Wenn Sie als Auszubildende/r, Trainee oder Volontär/in tätig sind, geben Sie bitte Ihren Ausbildungsberuf an.

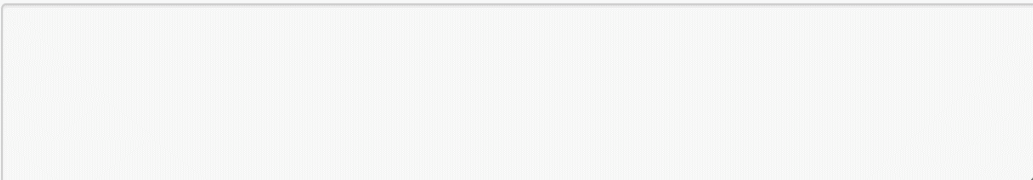
Was machen Sie hauptsächlich bei Ihrer Arbeit?

Bitte beschreiben Sie Ihre berufliche Tätigkeit und Ihre wesentlichen Aufgaben so genau wie möglich. Beispiele sind "Regale mit Produkten auffüllen und Inventur machen", "Patienten versorgen, Medikamente geben, Vitalzeichen überwachen", "Patienten betreuen, Zähne und Zahnfleisch behandeln", "Überwachung des Warenbestandes in der Damenabteilung, Bedienen von Kundinnen und Kassiertätigkeit".

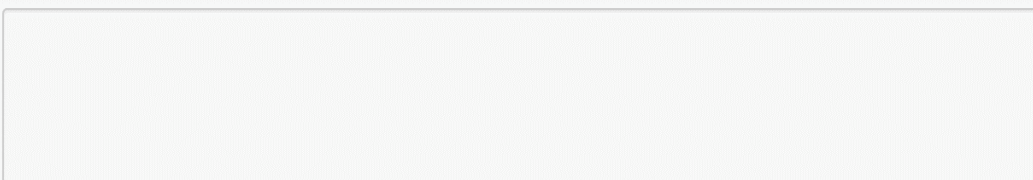
Polish:

Jak nazywa się Pana(-i) zawód?**Jak nazywa się Pana(-i) główny zawód?**

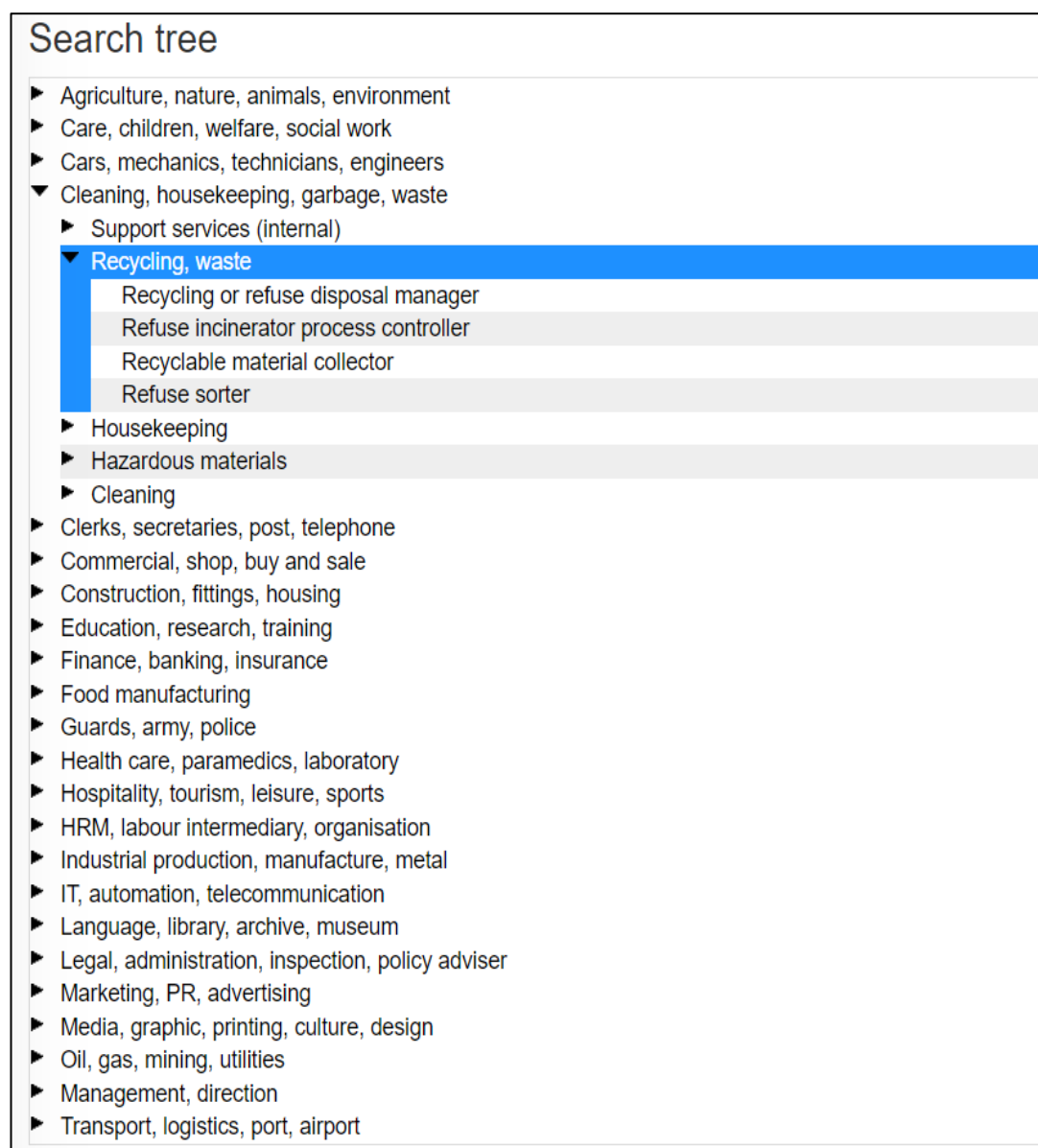
Proszę wskazać Pana(-i) dokładny zawód. Na przykład, należy zapisać "sprzedawca spedycyjny" zamiast "pracownik handlowy", albo "monter" zamiast "robotnik". Jeśli jest Pan(i) urzędnikiem państwowym, proszę podać swoją nazwę stanowiska, np. "urzędnik wydziału komunikacji". Jeśli pracuje Pan(i) w sektorze publicznym, proszę podać nazwę wykonywanej pracy, np. "nauczyciel", "strażak". Jeśli jest Pan(i) na stażu, proszę podać zawód, w którym Pan(i) zdobywa praktykę.

**Co Pan(i) głównie robi w swojej pracy?**

Proszę opisać możliwie szczegółowo to, czym się Pan(i) zajmuje zawodowo oraz jakie są Pana(-i) główne zadania w pracy. Przykładowe odpowiedzi: "Układanie produktów na półkach i przeprowadzanie inwentaryzacji", "Opieka nad pacjentami, podawanie leków, monitorowanie funkcji życiowych", "Opieka nad pacjentami, leczenie zębów i dziąseł", "Monitorowanie stanów magazynowych w dziale damskim, obsługa klientów i obsługa kasy".



Question Version 2 (search tree) (English):



Cognitive techniques:

Cognitive interviews: Specific Probing, Difficulty Probing

Findings Web Probing:

As shown in Table 64, 70% ($n = 551$) of the respondents provided sufficient information in their answers to questions 5 and 6 to allow their occupation to be classified at the 4-digit ISCO-08 level. There were no significant differences in response quality between countries ($\chi^2_{(4,792)} = 1.981$, $p = .739$). Respondents aged 50 or older were significantly more likely to provide codable responses (75%, $n = 234$) than younger respondents (66%, $n = 318$) ($\chi^2_{(4,792)} = 13.816$, $p = .008$). Self-employed respondents (79%, $n = 180$) were more likely to explain their occupation in more detail and thus to

provide codable answers than respondents who were employed (67%, $n = 186$) or in atypical working situations (65%, $n = 186$) (see Table 65; $\chi^2_{(4,792)} = 21.164, p < .001$).

Table 64. Share of codable answers to Q5 and Q6 at the 4-digit ISCO-08 level by country

	UK ($n = 264$)	Germany ($n = 264$)	Poland ($n = 264$)
Codable at 4-digit ISCO-08 level	71% (188)	68% (179)	70% (185)
Not codable at 4-digit ISCO-08 level	27% (70)	28% (74)	26% (69)
<i>Refusal</i>	2% (6)	4% (11)	4% (10)

Table 65. Share of codable answers to Q5 and Q6 at the four-digit ISCO-08 level by working status

	Employed ($n = 279$)	Self-employed ($n = 228$)	Atypical ($n = 285$)
Codable at 4-digit ISCO-08 level	67% (186)	79% (180)	65% (186)
Not codable at 4-digit ISCO-08 level	32% (89)	18% (41)	29% (83)
<i>Refusal</i>	1% (4)	3% (7)	6% (16)

Little surprisingly, the mean number of words was higher in response to Q6, which required respondents to describe the main tasks of their (main) job, than to Q5, which asked them to name their job title. Moreover, responses that could be coded at the 4-digit ISCO-08 level were significantly longer than responses that could not be coded at this level (see Table 66; Q5: $T_{(763)} = -3.774, p < .001$; Q6: $T_{(763)} = -7.497, p < .001$). However, even codable responses to Q5 merely averaged slightly over two words, meaning that many responses of only one to two words length could be successfully assigned an ISCO code. Minimum requirements on response length cannot be recommended.

Table 66. Mean number of words in response to open-ended questions on occupation

Mean number of words (standard deviation)	Codable Response ($n = 552$)	Not codable Response ($n = 213$)
Response to Q5	2.30 (2.32)	1.67 (1.12)
Response to Q6	6.14 (5.94)	2.96 (2.79)

Findings Cognitive Interviews:

Did the answers to the open-ended questions allow for classifying respondents' occupations at the 4-digit ISCO-08 level?

As shown in Table 67, all 16 German respondents and 11 Polish respondents provided sufficient information in their answers to questions 5 and 6 to allow their occupation to be classified at the 4-digit ISCO-08 level.

Table 67. Respondents' answers to questions 5 and 6 and respective four-digit ISCO-08 code

Country ⁷	Question 5 (Job title)	Question 6 (Job description)	ISCO-08 Code (4-digit)
DE	Management consultant	Advising companies on marketing	2421 Management and organisation analysts
DE	Social pedagogue at a primary school	Accompanying and supporting children in class, social learning (e.g. introduce class council, break helper group), advising teachers, contact with parents, dispute resolution	2359 Teaching professionals not elsewhere classified OR 2635 Social work and counselling professionals
DE	Participant management clerk in training and further education (occupational health and safety seminars)	Booking participants in occupational health and safety seminars, sending out participant documents/invitations etc., issuing certificates, settling travel expenses, and answering all related enquiries	4415 Filing and copying clerks
DE	Courier driver for a postal company	I work as a courier driver for a small postal company in the mornings and deliver company mail to about a dozen customers in [CITY]. I take this from their post boxes. In addition, I receive registered mail and additional charges. I use my own car for this work. I also take outgoing mail from some customers.	9621 Messengers, package deliverers and luggage porters
DE	General practitioner (Family doctor)	Interviewing patients, treating them, making them healthy	2211 General medical practitioners
DE	Project engineer	Determine and calculate routes for power lines and arrange for the necessary approvals	2151 Electrical engineers
DE	Jobber	Assemble fruit and vegetable scales, assemble scanners	8211 Mechanical machinery assemblers
DE	Student assistant	Computer-aided data preparation and research	9629 Elementary workers not elsewhere classified
DE	Certified geriatric nurse	Creating care plans, providing care, talking to doctors.... etc.	5322 Home-based personal care workers
DE	Grammar school teacher (Official title: "Studienrat")	Teaching at a 'Gymnasium' (maths, geography)	2330 Secondary education teachers
DE	Alternative practitioner	Listening to patients, performing anamnesis (clinical physical	3230 Traditional and complementary

⁷ To reduce the possibility of identifying an individual, no respondent IDs are assigned to the responses here.

Country ⁷	Question 5 (Job title)	Question 6 (Job description)	ISCO-08 Code (4-digit)
	(Naturopath)	examination), prescribing medication if necessary.	medicine associate professionals
DE	Author/narrator/creative, free-lance specialist in the field of language promotion in day-care centres	Write novels and short stories, conduct readings as well as supervise children in the kindergarten within the framework of language promotion, also stimulate their creativity through storytelling	2641 Authors and related writers
DE	Financial clerk	Process allowances for employees who work shifts, check separation allowance and relocation allowance claims, process job tickets	4311 Accounting and bookkeeping clerk
DE	Self-employed (e-commerce)	Selling products via online sales channels / online shop, creating offers, ordering and sending goods, product presentations (creating product photos), processing stock, marketing, etc.	5221 Shop keepers
DE	Trainer, coach and consultant on the subject of change management in the field of occupational health and safety	Coaching managers, consulting, training	2359 Teaching professionals not elsewhere classified OR 2424 Training and staff development professionals
DE	Actor	Playing roles in theatre plays (mainly for children) including rehearsal, i.e. learning texts and stage actions, creatively developing stage processes and character drawings	2655 Actors
PL	Teacher	Teaching children, planning educational work, working with children who need support (pedagogical therapy), working in the school day-care centre; activities related to organising school work - as a school director.	<i>Not codable at 4-digit level</i>
PL	Warehouse worker	Completing orders, looking for orders, loading trucks, unloading, preparing deliveries and issuing goods ordered from the warehouse	9333 Freight handlers
PL	Product manager	Finding suppliers of equipment, machinery, finding suppliers, for example of vegetables, processing vegetables, fruit, packaging, selling, bookkeeping.	1311 Agricultural and forestry production managers
PL	IT specialist	I program the facility management system	2514 Applications programmers
PL	Security guard	I keep an eye on industrial facilities or construction sites. To make sure no one gets into the area.	5414 Security guards

Country ⁷	Question 5 (Job title)	Question 6 (Job description)	ISCO-08 Code (4-digit)
PL	Researcher, process engineer	I run research, invent solutions of problems for companies, write articles, write projects, I am responsible for purchasing for the projects	<i>Not codable at 4-digit level</i>
PL	Waste collection business	Logistics	<i>Not codable at 4-digit level</i>
PL	Teacher	In my work I am concerned with teaching children, supporting their upbringing, shaping their attitudes, accompanying their development, developing their interests, equalising their educational opportunities.	<i>Not codable at 4-digit level</i>
PL	Director of Finance and Development	Managing the finances of the foundation's subordinate units, raising funds for the activities of the foundation and the individual units. Supervising the financial department, searching for financing options for the development as well as development opportunities of the foundation.	1120 Managing directors and chief executives
PL	Businessman/ finance director	Company management, company finance, payments	1120 Managing directors and chief executives
PL	Carpenter	I do plenty of things in my company, ranging from cleaning to being the company president, transport, supplies, talking to clients, production.	1120 Managing directors and chief executives
PL	Designer	I design parts of machines, support information from clients, implement changes in machines and industrial devices.	<i>Not codable at 4-digit level</i>
PL	Caregiver	I have to feed the baby, change the baby, I go out with the baby for a walk, we play with construction bricks or draw.	5311 Child care workers
PL	Cutting machine operator	I deal with cutting out of solid cardboard packaging, e.g. boxes for medicines, cosmetics.	8183 Packing, bottling and labelling machine operators
PL	Installer, responsible for maintenance and construction of radio-technical and radio-communications systems	Designing, producing and maintenance of radio communication and alarm systems	3521 Broadcasting and audiovisual technicians
PL	Artist	An artist – I run workshops cultivating the tradition of living in the countryside in extracurricular education	2659 Creative and performing artists not elsewhere classified

Did respondents read the instructions in both questions (Q5 and Q6) and how understandable did they find them?

With the exception of two Polish respondents (PL01, PL06), who argued that they found no need to read the instructions because the questions were clear, all participants indicated that they had read the instructions when answering the two questions. Most found both instructions “very” or “rather understandable”. Two problems arose regarding the instruction for question 5 (job title).

Firstly, participant DExx⁸ rated the instruction “rather not understandable”, because he was not sure whether he had answered in the desired level of detail. In his opinion, the instruction was not clear, especially because he felt that the two terms in the first example (forwarding merchant / commercial employee) were very similar:

“I don't know, this ‘forwarding merchant and not commercial employee’? Yes, ok, I can see now that one term is a little bit more specific. In the case of ‘machine fitter instead of worker’ I think it's clearer because I think it's easier to see what's intended. But I'm not sure whether I should have written more, maybe. I could have gone on to write, for example, ‘project planning engineer in the electricity grid’ or something like that. So, I was kind of puzzling over it. The explanations didn't really help me.” (DExx)

Secondly, participant DExx pointed out that the example for civil servants was not well chosen, as the title “Studienrat/rätin” (study council) was rather unspecific (and thus the opposite of “exact” as requested by the instruction):

“At first, I would probably have typed in ‘teacher’. It says here that if you are a civil servant, you should enter the official title. In detail, I would have written ‘Gymnasiallehrer’ (grammar school teacher), whereas ‘Studienräte’ (study council) can be all kinds of teachers. It's not so clear to me. That's why I wrote in both. Because I'm not sure.” (DExx)

Did respondents find it difficult to answer both questions in an open-ended format?

Three Polish respondents, who were older and less educated, reported problems with writing down their professional activities (Q6) on their own. The other respondents (in both countries) had no difficulties answering the two questions in an open-ended format.

However, many of the Polish respondents found it difficult to answer both questions due to three reasons. Firstly, eleven participants said it was unclear whether the questions referred to their profession by education or their current occupation, which in four cases were not related at all:

- *“It is not clear for me. My occupation by education is a manager. I graduated from marketing. But the instruction to the question I read define what I should really consider regarding my present position and occupation practiced. That's why I typed this one. But in fact I am a manager and this is not really related to my current position.” (PL)*
- *“I wonder whether this could be a profession by education or the one I do? The description here refers to the job I do, so that's what I write here.” (PL)*

Secondly, five respondents reported difficulties because of the variety, flexibility, or complexity of their tasks:

⁸ To reduce the possibility of identifying individual respondents, no respondent IDs are shown when quotations refer to the job title and description.

- *“This was rather difficult. Sometimes I work as a researcher and technology engineer, sometimes as a scientist and then as a lecturer.” (PL)*
- *“When you are self-employed and your business has flexible profiles, it is hard to define occupation clearly.” (PL)*

Thirdly, three self-employed respondents reported difficulties in defining their occupation and describing their professional activities because they were unsure whether to focus on activities related to company management (reporting, controlling, advertising) or their area of market activities (e.g., making furniture,; fitting appliances).

Three participants (two German, one Polish) indicated that they had difficulty deciding how much text they were supposed to enter in the text box(es):

- *“This question is quite broad. I have a lot of essential tasks, so it might be good if the question mentioned a specific number of activities you are supposed to type in. [...] I don’t know how much I should write in here.” (DE)*
- *“In both questions, I felt I wrote in more text than I was supposed to. I practically wrote a whole line in each row and I wasn’t quite sure if that was okay or if you should do it very concisely.” (DE)*
- *“It would be more comfortable, if we have one box for each activity.” (PL)*

One German participant stated that she did not know the exact title of her (unskilled) job and therefore simply entered “jobber”:

- *“To be honest, I don’t know what it’s called in my case. But I definitely understand the question. [...] I’d have to look it up in my employment contract. It was some English term. I don’t know.”*

Did respondents prefer other question formats (e.g., with closed answer options) to indicate their occupation?

Participants were presented with the “search tree” implemented in the Survey Codings Occupation Database and asked to select their occupation from the options displayed. Most respondents had difficulty finding their occupation among the categories presented and it took them a long time to select an option. With the exception of one participant, who immediately identified his occupation (“Transport, logistics, port, airport” → “Driver” → “Courier”), none of the German respondents could find their actual occupation in the search tree. In the Polish sample, another 12 participants indicated that they could not find their correct occupation in the search tree.

Most respondents ($n = 19$) selected the occupation closest to their actual one, one German respondent only selected a job at the top level of the search tree (“Care, children, welfare, social work”), and four respondents only selected a job at the second level of the search tree (e.g., “Construction, fittings, housing” → “Fitting”). Four German respondents did not select any category because they felt that none of the categories fitted their jobs. In the following, we present examples of two of the problems mentioned above:

- Occupation closest to actual one selected: *“I’m looking for ‘geriatric nurse’ under the tab ‘Care, children, welfare, social work’, but it seems it doesn’t belong here. Then I’ll look under ‘Health care, paramedics, laboratory’. Then I would select ‘Nursing’ and then... there is no*

‘geriatric nursing’ here. Then I would probably select ‘Certified nurse’ because everything else doesn’t fit.”

- No fitting category found: *“I looked under ‘education, research, training’, then ‘Secondary teaching’, because I assume to find my occupation ‘grammar school teacher’ here. But I can’t find my profession. Or am I blind? But I don’t know under which other category I should look. [Respondent reads through all categories]. My profession must be under ‘Education’. It is not listed under ‘Secondary teaching’ and it is not ‘Primary teaching’. There are teachers for vocational education listed, but there is just nothing for general schools. It all refers to vocational teachers. That doesn’t fit. I can’t find anything.”*

Three German respondents not only had problems finding the right occupation in the search tree, but also found the functionality of the search tree unintuitive and did not realise that they could click on the categories to go to more specific subcategories.

When asked which question format (open-ended questions vs. search tree) respondents would prefer to indicate their occupation, the majority of participants ($n = 26$) stated that they would prefer to answer two-open ended questions. They justified this preference firstly because they could not find their occupation in the search tree, and secondly because they could answer more quickly and accurately if they typed in their job title and job description rather than having to read an extensive list of options. One respondent had no preference as to the question format and the five respondents who preferred the search tree (DE: $n = 2$; PL: $n = 3$) argued that – even if they had difficulty finding their occupation – this format could in principle avoid typing errors and guaranteed that respondents answered in the way intended by the researchers and with the desired level of detail.

Summary:

- Most respondents in the cognitive interviews, and the majority of respondents in web probing provided enough detail in their answers to Q5 and Q6 to allow for classifying their occupations at the 4-digit ISCO-08 level (even when their answers were limited to very few words).
- Most respondents found the instruction clear and helpful, but some suggestions were made on how to re-word or substitute the examples given.
- Many Polish respondents had difficulties answering Q5 and Q6 because a) they found it unclear whether the questions ask about their learned profession or the one they currently perform (which were sometimes very different), b) they had several equally important jobs and were unsure on which to report, and c) some self-employed participants were unsure whether to report activities related to company management (reporting, controlling, advertising) or related to their area of market activities (e.g., making furniture).
- Most respondents had difficulty finding their correct occupation in the search tree provided by the Survey Codings Occupation Database of the project Social Sciences & Humanities Open Cloud (SSHOC) and therefore preferred answering open-ended questions on their occupation.

Q5 & Q6 Recommendations:

- Regarding the **question format**, we recommend retaining the two open-ended questions to capture the occupational status.
- Q5 (job title)
 - Regarding the **question text**, the Polish translation should ask about the “name of the current [main] position” to avoid confusion among respondents who work in a profession that differs from their education
 - Regarding the **instruction**, the term “study council” should be replaced by an ISCO-relevant category, such as the level at which someone teaches (i.e., “secondary school teacher”)
- Q6 (job description)
 - Although this did not lead to problems during the cognitive pretest, we recommend adapting the **question text** for respondents working in multiple jobs, to ensure that they relate to their main job only. To avoid having the word “main” twice within the question text the following wording could be used:
“And what do you mainly do in this job?”

Q13 Sector

Web probing focused on examining the response quality of the answers to the open-ended question, to assess whether a classification along NACE is possible with this approach.

The focus of the cognitive interviews was an in-depth examination of whether respondents read and understand the instructions below the question text and determine possible improvements for the instructions.

English:

What sector of business or industry is the company or organisation where you work mainly active in?

Please describe the sector of business or industry in as much detail as possible. Examples are:
 “retail sale of food, beverages and tobacco” (not: “trade”),
 “manufacture of cutlery” (not: “factory”),
 “management of real estate on a fee or contract basis” (not: “service sector”), or
 “software development” (not: “IT”).

German:

In welcher Branche oder in welchem Wirtschaftszweig ist das Unternehmen bzw. die Organisation, für die Sie arbeiten, überwiegend tätig?

Bitte beschreiben Sie die Branche/den Wirtschaftszweig so detailliert wie möglich. Beispiele sind:
"Einzelhandelsverkauf von Lebensmitteln, Getränken und Tabakwaren" (nicht: "Handel"),
"Herstellung von Besteck" (nicht: Fabrik),
"Verwaltung von Immobilien auf Honorar- oder Vertragsbasis" (nicht: "Dienstleistungssektor"), oder
"Softwareentwicklung" (nicht: "IT").

Polish:

W jakiej branży lub sektorze rynku głównie działa firma lub organizacja, w której Pan(i) pracuje?

Proszę opisać branżę lub sektor rynku możliwie szczegółowo. Przykładowe odpowiedzi:
"sprzedaż detaliczna żywności, napojów oraz produktów tytoniowych" (nie: "handel"),
"produkcja sztućców" (nie: "fabryka"),
"zarządzanie nieruchomościami na podstawie umowy prowizyjnej" (nie: "sektor usług"), lub
"tworzenie oprogramowania" (nie: "IT").

Cognitive techniques:

Cognitive interviews: Specific Probing

Findings Web Probing:

Despite the fact that the instruction in question 13 asked respondents to describe the sector of business or industry in as much detail as possible, most of the answers in all three countries were very short (UK: $M = 2.3$ words, DE: $M = 2.2$ words, PL: $M = 2.2$ words). Even when additionally taking the respondents' answers on their occupation in Q5 and Q6 into account, it was only possible to assign the 3-digit NACE code to approximately 60% of the respondents (see Table 68).

Table 68. Amount of codable answers to Q13 at the 3-digit NACE 2.0 level by country

	UK (<i>n</i> = 264)	Germany (<i>n</i> = 264)	Poland (<i>n</i> = 264)
Codable at 3-digit NACE 2.0 level	58% (154)	66% (173)	59% (155)
Not codable at 3-digit NACE 2.0 level	38% (100)	27% (72)	36% (94)
<i>Refusal</i>	4% (10)	7% (19)	6% (15)

There were no significant differences in codability depending on country (see Table 68; $\chi^2_{(4,792)} = 9.098, p = .059$), gender or age. However, there were significant differences in the codability of responses based on the working situation of respondents (see Table 69; $\chi^2_{(4,792)} = 12.872, p < .05$). Respondents in atypical working situations were most likely to not provide any form of substantive answer. Importantly, however, respondents who were employed were significantly more likely to provide substantive, but non-codable responses (39%, $n = 108$) than respondents who were self-employed (30%, $n = 69$) or in atypical working situations (31%, $n = 89$). This finding, which is consistent with the pattern of response quality to Q5 and Q6, indicates that respondents who are employed are least likely to find their occupation and sector worth a detailed explanation.

Table 69. Amount of codable answers to Q13 at the 3-digit NACE 2.0 level by working status

	Employed (<i>n</i> = 279)	Self- employed (<i>n</i> = 228)	Atypical (<i>n</i> = 285)
Codable at 3-digit NACE 2.0 level	59% (164)	64% (146)	60% (172)
Not codable at 3-digit NACE 2.0 level	39% (108)	30% (69)	31% (89)
<i>Refusal</i>	3% (7)	6% (13)	8% (24)

Also mirroring the findings from the questions on occupation, responses that could be coded at the three-digit NACE 2.0 level were significantly longer than responses that could not be coded at this level (see Table 70; $T_{(746)} = -4.568, p < .001$). However, with codable responses to Q13 averaging between two and three words for codable responses, minimum requirements on response length cannot be recommended to improve response quality.

Table 70. Mean number of words in response to open-ended questions on sector (Q13)

Mean number of words (standard deviation)	Codable Response (n = 482)	Not codable Response (n = 266)
Response to Q13	2.44 (2.44)	1.77 (1.65)

The low share of codable responses suggests that most web respondents either did not read the instruction (thoroughly) or were not motivated to spend much time on typing in more detailed answers. The findings from the cognitive interviews should shed light on this question.

Findings Cognitive Interviews:

Did the answers to the open-ended question allow for classifying the sector of business or industry in which the respondents work in at the 3-digit level of NACE 2.0?

As shown in Table 71, ten of the 16 German respondents provided sufficient information in their answers to question 13 to classify the sector of business or industry at the 3-digit level of NACE 2.0. If we additionally considered the respondents’ answers to questions 5 and 6, it was possible for all but one German respondent to classify the sector at the 3-digit level.

Regarding the Polish respondents, only eight provided sufficient information to classify the sector of business or industry at the 3-digit level of NACE 2.0. If we additionally considered the respondents’ answers to questions 5 and 6, it was possible for a total of twelve Polish respondents to classify the sector at the 3-digit level.

All in all, it was possible to determine the NACE 2.0 code for 84% (n = 27) of the cognitive interview participants.

Table 71. Respondents' answers to Q13 and respective NACE 2.0 level and code

Country ⁹	Question 13 (Sector)	NACE level	NACE code
DE	Public sector - Corporation under public law	2-digit	84 Public administration and defence, compulsory social security
DE	Energy supply	2-digit / 3-digit	35 Electricity, gas, steam and air conditioning supply / 35.1 Electric power generation, transmission and distribution
DE	Creative industries and cultural offers/services	2-digit / 3-digit	90 Creative, arts and entertainment activities / 90.0 Creative, arts and entertainment activities
DE	Healthcare	2-digit / 3-digit	86 Human health activities / 86.2 Medical and dental practice activities
DE	Manufacture of scales	3-digit	28.2 Manufacture of other general-purpose machinery
DE	Nursing home	3-digit	87.1 Residential nursing care activities
DE	Health industry, complementary medicine	3-digit	86.9 Other human health activities
DE	Postal service	2-digit / 3-digit	53 Postal and courier activities / 53.2 Other postal and courier activities
DE	Service, consulting for companies in the field of marketing	3-digit	70.2 Management consultancy activities
DE	Education	2-digit / 3-digit	85 Education / 85.3 Secondary education
DE	German Meteorological Service	3-digit	74.9 Other professional, scientific and technical activities
DE	Art, Culture, Entertainment	3-digit	90.0 Creative, arts and entertainment activities
DE	Social science research	3-digit	72.2 Research and experimental development on social sciences and humanities
DE	Primary school	3-digit	85.2 Primary education
DE	Adult education for clients in industry (different sectors)	3-digit	85.5 Other education
DE	Online retailing (distribution of products via online channels)	3-digit	47.9 Retail trade not in stores, stalls or markets
PL	Higher education	3-digit	85.4 Higher education
PL	Construction	- / 3-digit	52.1 Warehousing and storage

⁹ To reduce the possibility of identifying an individual, no respondent IDs are assigned to the responses here.

Country ⁹	Question 13 (Sector)	NACE level	NACE code
PL	Extracurricular education forms	3-digit	85.59 Other education n.e.c.
PL	Designing tools for industry	2-digit	28 Manufacture of machinery and equipment n.e.c.
PL	Third sector, NGO	-	-
PL	Education – primary school	3-digit	85.20 Primary education
PL	Education, teaching and raising children on elementary level (classes 1-3)	3-digit	85.20 Primary education
PL	IT	-	-
PL	An individual	- / 3-digit	88.91 Child day-care activities
PL	Furniture production and wood processing	3-digit	31.0 Manufacturer of furniture
PL	Radio communication, design and execution of dispatching networks for various market sectors	3-digit	95.12 Repair of communication equipment
PL	Education	2-digit	85 Education
PL	Property protection	2-digit / 3-digit	80 Security and investigation activities / 80.10 Private security activities
PL	Service sector	- / 3-digit	38.1 Waste collection
PL	Processing and sales of pet food	3-digit	47.76 Retail sale of flowers, plants... and pet food in specialised stores
PL	Manufacturing of cardboard packaging for the cosmetics and pharmaceutical industries	3-digit	17.21 Manufacture of ... and of containers of paper and paperboard

Did respondents read the instruction below the question text and did they find it understandable?

All but one respondent (PL12) indicated that they had read the instruction when answering question 13 and most found the instruction “very” or “rather understandable”. However, as mentioned above, the answers of more than half of the respondents ($n = 17$) were not coherent with the instruction, suggesting that it needs to be revised.

Three German respondents criticised the grammatical structure of the examples given (with the “not:...” in brackets). This would make it unnecessarily complicated to understand what kind of answer is desired:

- *“By ‘not’, do you mean not to write it? I understand it to mean that you want me to be more specific. So, I shouldn't just write such a broad term? [...] Perhaps it would be better to turn it around and not write it in brackets but integrate it directly into the sentence. So ‘Instead of factory, please write manufacture...’.” (DE03)*

Seven respondents (DE: $n = 3$, PL: $n = 4$) suggested revising some of the examples to make them clearer and adding or substituting some of them:

- *“The example ‘management of real estate on a fee or contract basis’ is already very specific, whereas ‘software development’ is still a very general word and not very meaningful in this case. If for ‘factory’ the specification is ‘manufacture of cutlery’, for ‘software development’ I also expect a more precise specification such as ‘software development for computer games/apps’.”*
- *“The examples all refer to the economy, so it might be helpful to include something that is not purely economic. Education, for example. That the explanation is a little more diverse.”*
- *“They are helpful, but I wonder whether it would not be worth having a close look at the industry or sectors which are dominant in the economy (in terms of number of people employed in them), because ‘cutlery production’ is rather detailed and few people would use this hint. I understand that this is supposed to show how detailed the answer should be. Simply, it could be better to name more popular industries.”*

Four Polish respondents pointed out that the term “market sector” was confusing in this question, because they associated it with the notions of “private sector”, “public sector”, and “not for profit sector”. The term “market sector” was interpreted much broader than “industry” and using both terms together in the question text confused respondents.

Summary:

- Only about 60% of the web probing respondents gave sufficiently detailed answers to Q13 to assign the 3-digit NACE code, even when combining their answers to Q13 with those to Q5 and Q6. In the cognitive interviews, results were markedly better, with 84% of respondents providing sufficient details.
- Respondents found the instruction clear and helpful, however, more than half of them did not answer in accordance with the instruction. Some suggestions were made on how the instruction could be revised.
- Several Polish respondents were confused by the term “market sector” in the question text, which they associated with the private, public or not-for-profit sector. Using it

together with the term “industry” made them wonder what kind of information was required.

Q13 Recommendations:

- Regarding the **question format**, the results from cognitive pretesting show that a four-digit coding of the NACE level cannot be achieved for a clear majority of respondents using open-ended questions. If a four-digit NACE level coding is required, we suggest that this information is collected by interviewers in the course of an offline recruitment.
- Regarding the **question text**, the Polish translation of the word “sector” should be omitted, and only the translation of the word “industry” kept, to avoid confusion with the public and private sector
- Regarding the **instruction**, we recommend
 - mirroring the grammatical structure of the instructions in Q5 (i.e., “write ‘[detailed example]’ instead of ‘[vague example]’”)
 - including examples from common industries, such as construction, transport, health sector, or teaching

Conclusion

The questions on work status, occupation and sector are central to the EWCS questionnaire. In the CAPI questionnaire, they are accompanied by extensive interviewer notes and interviewers are trained to follow up with respondents if the respondent has difficulties answering. In a self-administered questionnaire, the respondents are on their own to find the suitable answer category or provide relevant and sufficient information to code open-ended responses. Due to the high level of detail required, the transition to self-administration must be considered carefully for these questions. The question on work status should be revised to develop clear response categories. In the web probing study, 70% of responses could be classified at the 4-digit ISCO-08 level in questions Q5 and Q6. For question Q13 on sector, the 3-digit NACE code could only be determined for 60% or responses. The codability of the responses to Q5, Q6 and Q13 differed significantly by respondent characteristics such as working status. Therefore, we recommend (additionally) considering interviewer-administered data collection for these questions.

Appendix: Cognitive Interview Protocols

Web Probing

Question 14

- P1_Q14 Please describe in your own words sector you work in and why you chose this answer.
- P2_Q14 How sure are you that your answer is correct and that you do not work in a different sector?

Question 16

- P1_Q16a In the previous question, you indicated that you do not know how many people work at your workplace. Why did you choose this answer? Please select all that apply.
- P2_Q16a What does the term workplace mean to you in this question?
- P3_Q16a Which of these people did or would you include in your answer? Please select all that apply.

Question 24

- P1_Q24 How did you arrive at your answer? Please indicate which working times you included and excluded in your response (i.e., meal times, coffee breaks, phases with little to do).
- P2_Q24 And what does the word "usually" mean to you in this question? Please explain whether your working hours vary, and if they do, how you depict a "usual" week or month.

Question 36

- P1_Q36 How did you arrive at your answer?

Question 62

- P1_Q62 The previous question asked about your immediate boss.
Your answer was: "I have no boss".
Why did you choose this answer?
- You previously indicated that you are employed. Therefore, we would like to know why you do not have an immediate boss.

Question 78

- P1_Q78 And how strongly did these health problems impact your everyday life? Please use the scale to indicate how strongly you were impacted in everyday activities, such as your work, household chores, or physical activities, such as climbing up stairs

Question 92

P1_Q92 The previous question was: "Until what age do you want to work?" Your answer was: "". Why did you choose this answer?

Reasons may relate to your profession, your private plans, or your financial situation (i.e., you enjoy your profession, because you cannot imagine being retired, or you must work for as long as possible for financial reasons).

Reasons may relate to your profession, your private plans, or your financial situation (i.e., you do not enjoy your profession, you have personal plans you wish to pursue in retirement, or you intend to work only until you have enough financial security to retire).

Reasons may relate to your profession, your private plans, or your financial situation (i.e., because you enjoy or do not enjoy your profession, because you have personal plans you wish to pursue in retirement, or cannot imagine being retired, you need to work until this age for financial security, this is the typical or mandatory retirement age for your profession).

Question QN1

P1_QN1 The questions until now were about your main job. However, at the beginning of the questionnaire, you indicated that you have more than one job or business. Please describe what you do in your additional job(s) or business(es) that are not your main job.

P2_QN1 Earlier in the questionnaire, you indicated that you have one job or business. Beside this job, have you carried out any of the following types of casual work or a part-time job for pay and outside the family in the past month? Please select all that apply.

Question Q2new

P1_Q2new At the beginning of the questionnaire, we asked about your gender. The question was:

"Would you describe yourself as...?"

The response options were:

- A man
- A woman
- Other

What do you think about the third gender option?

Do you find it appropriate to provide this response option in a survey, do you find it inappropriate, or does it not matter to you whether a third option is provided?

Cognitive Interviews

Question 1

- P1_Q1 *INT: If Q1 = "More than one job or business":*
You have indicated that you have more than one job or business. Can you please elaborate on the different jobs or businesses you had in mind when answering the question? (Which activities did you have in mind when answering the question?)
- P2_Q1 How easy or difficult did you find answering this question?
(*INT: Read out answer options!*)
- | | |
|------------------|----------------------------------|
| Very easy | <input type="checkbox"/> → P4_Q1 |
| Rather easy | <input type="checkbox"/> |
| Rather difficult | <input type="checkbox"/> |
| Very difficult | <input type="checkbox"/> |
- P3_Q1 *INT: If P2_Q1 ≠ "Very easy":*
Why did you find it [answer P2_Q1] to answer this question?
- P4_Q1 This question includes an explanation of what is meant by "more than one job or business" below the question text. Did you read this explanation?
- | | |
|-----|----------------------------------|
| Yes | <input type="checkbox"/> → P6_Q1 |
| No | <input type="checkbox"/> |
- P5_Q1 *INT: If P4_Q1 = "no":*
Why didn't you read this explanation? (Is it irrelevant for you because you have only one job? Do you find it too lengthy?)
- P6_Q1 How understandable do you find the explanation?
(*INT: Read out answer options!*)
- | | |
|---------------------------|----------------------------------|
| Very understandable | <input type="checkbox"/> → P8_Q1 |
| Rather understandable | <input type="checkbox"/> |
| Rather not understandable | <input type="checkbox"/> |
| Not understandable at all | <input type="checkbox"/> |
- P7_Q1 *INT: If P6_Q1 ≠ "very understandable":*
Why do you find the explanation [answer P6_Q1]? How could it be improved?
- P8_Q1 Do you find the examples given in the explanation useful? Were they helpful in finding the answer option that applies to you?

Questions 2/3

P1_Q2/3 The previous two questions contain instructions on the level of detail to be used to describe the job title and professional activities. Did you read these instructions in both questions, in one question only, or in neither of the two questions?

- Read in both questions (Q2 and Q3) ☐ → P3_Q2/3
 Read only in Q2 ☐
 Read only in Q3 ☐
 Read in neither of the two questions ☐

P2_Q2/3 *INT: If P1_Q2/3 ≠ "Read in both":*
 Why didn't you read these instructions in both questions? (Do you find one or both too lengthy or uninformative/irrelevant?)

P3_Q2/3 How understandable do you find the instruction in question 2?
(INT: Read out answer options!)

- Very understandable ☐ → P5_Q2/3
 Rather understandable ☐
 Rather not understandable ☐
 Not understandable at all ☐

P4_Q2/3 *INT: If P3_Q2/3 ≠ "very understandable":*
 Why do you find the instruction [answer P3_Q2/3]? How could it be improved?

P5_Q2/3 And how understandable do you find the instruction in question 3?
(INT: Read out answer options!)

- Very understandable ☐ → P7_Q2/3
 Rather understandable ☐
 Rather not understandable ☐
 Not understandable at all ☐

P6_Q2/3 *INT: If P5_Q2/3 ≠ "very understandable":*
 Why do you find the instruction [answer P5_Q2/3]? How could it be improved?

P7_Q2/3 How easy or difficult did you find answering these questions in an open-ended format, that is, by writing in the answer in your own words?
(INT: Read out answer options!)

- | | | | |
|------------------|------------------------------------|------------------|------------------------------------|
| Question 2: | | Question 3: | |
| Very easy | <input type="checkbox"/> → P9_Q2/3 | Very easy | <input type="checkbox"/> → P9_Q2/3 |
| Rather easy | <input type="checkbox"/> | Rather easy | <input type="checkbox"/> |
| Rather difficult | <input type="checkbox"/> | Rather difficult | <input type="checkbox"/> |
| Very difficult | <input type="checkbox"/> | Very difficult | <input type="checkbox"/> |

P8_Q2/3 *INT: If P7_Q2/3 ≠ "Very easy":*
Why do you find it [answer P7_Q2/3] to answer [question 2/question 3/ both of these questions]?

P9_Q2/3 Please click on 'Continue' and then on the link you see on the next page (or copy & paste it into your browser: <https://www.surveycodings.org/occupation/database-live-search>). Next, please select "Germany"/"Poland" from the drop-down list. On this website, you see an alternative way of asking respondents for their job title and job description. Please select your job using the "search tree" (NOT the "search box").

INT: Note down occupation selected by respondent:

P10_Q2/3 Which format do you prefer for indicating your professional activity (in your main job)?
(*INT: Read out answer options!*)

Answering two open-ended questions

(such as question 2 and question 3)

Selecting an answer from a "search tree"

A different format

☐
☐

☐ → P12_Q2/3

P11_Q2/3 *INT: If P10_Q2/3 ≠ "A different format":*
Why do you prefer [answer P10_Q2/3]?

P12_Q2/3 *INT: If P10_Q2/3 = "A different format":*
What kind of format would you prefer, and why?

Question 4

P0_Q4 *Only asked in Poland:*
What does the term "pracownik najemny" mean to you in this question? (How else could this be worded?)

P1_Q4 *INT: If not observable, ask P1_Q4. Otherwise, code respondent behavior into response options:*
This question uses so-called "tooltips" that provide explanations of the terms "employee" and "self-employed" when you hover over the respective term with the mouse pointer. Did you use these tooltips and read the explanations?

Used for both terms

Used only for "employee"

Used only for "self-employed"

Not used for any of the two terms

☐ → P3_Q4

☐
☐
☐

P2_Q4 *INT: If P1_Q4 ≠ "Used for both terms":*
- *If observation or answer: both tooltips not used:*

- [I saw that you did not use the tooltips and look up the explanations for the terms “employee” and “self-employed”].
- Why didn’t you use the tooltips for any of the two terms?
- *If observation or answer, tooltip only used for ONE term:*
- [I saw that you only used the tooltip for looking up the explanation for the term “employee”/”self-employed”].
- Why didn’t you also look up the explanation for the term [“employed”/“self-employed”]?

P3_Q4 How informative do you find these explanations? Are both explanations equally informative (or uninformative)? (If uninformative: What is missing from the explanation?)

P4_Q4 Please click on ‘Continue’.
On the next survey page, you see an alternative version of the question, in which the explanations of the tooltips are shown directly below the question text.
Which format do you prefer: The one using the tooltips, the one showing the explanations directly, or yet another format?

Tooltips version preferred	<input type="checkbox"/>
Instructions shown directly preferred	<input type="checkbox"/>
A different format	<input type="checkbox"/> → P6_Q4

P5_Q4 *INT: If P4_Q4 ≠ “A different format”:*
Why do you prefer the format with [answer P4_Q4]?

P6_Q4 *INT: If P4_Q4 = “A different format”:*
What kind of format would you prefer, and why?

Question 5

P1_Q5 *INT: If not observable, ask P1_Q5. Otherwise, code respondent behavior into response options:*
Again, this question contains an instruction on the level of detail to be used to describe the sector of business or industry your company or organisation is mainly active in. Did you read this instruction?

Yes	<input type="checkbox"/> → P3_Q5
No	<input type="checkbox"/>

P2_Q5 *INT: If P1_Q5 = “No”:*
Why didn’t you read this instruction? (Do you find it too lengthy or uninformative/irrelevant?)

P3_Q5 How understandable do you find this instruction?
(*INT: Read out answer options!*)

Very understandable	<input type="checkbox"/> → P5_Q5
Rather understandable	<input type="checkbox"/>

Rather not understandable ☐
 Not understandable at all ☐

P4_Q5 *INT: If P3_Q5 ≠ "very understandable":*
 Why do you find the instruction [answer P3_Q5]? How could it be improved?

P5_Q5 *INT: If not yet recognizable:*
 Do you find the examples given in the instruction helpful or would you prefer others?

Question 6

P1_Q6 Do you work in more than one economic sector?

Yes ☐
 No ☐ → P3_Q6

P2_Q6 *INT: If P1_Q6 = "Yes":*
 In which economic sectors do you work? How did you decide to what sector to select in this question? (Did you refer only to your main job?)

P3_Q6 How sure are you that you work in the [answer question 6] and not in a different sector?
(INT: Read out answer options!)

Very sure ☐ → P5_Q6
 Rather sure ☐
 Rather unsure ☐
 Very unsure ☐

P4_Q6 *INT: If P3_Q6 ≠ "very sure":*
 Why are you [answer P3_Q6]?

P5_Q6 *INT: If not observable, ask P5_Q6. Otherwise, code respondent behavior into response options:*
 This question again uses so-called "tooltips" that provide explanations of the different economic sectors. Did you use these tooltips and read the explanations?

Used for 3 or more sectors ☐ → P7_Q6
 Used for 1 or 2 sectors ☐
 Not used for any of the sectors ☐

P6_Q6 *INT: If P5_Q6 ≠ "Used for 3 or more sectors":*
 - *If observation or answer: tooltip only used for 1 or 2 sectors:*
 [I saw that you only used the tooltip for looking up the explanation for some sectors].

- Why didn't you look up the explanations for all of the sectors?
 - *If observation or answer: tooltips not used:*
 [I saw that you did not use the tooltips and look up the explanations for the different economic sectors.]
 Why didn't you use the tooltips for any of the sectors?
- P7_Q6 How informative do you find these explanations? Are some explanations more informative than others?
- P8_Q6 *INT: If not yet recognizable:*
 Do you think all explanations equally useful or necessary? Or would it be sufficient to provide explanations for only some of these terms?
- All are equally informative ☐ → P10_Q6
 Would be sufficient to provide fewer explanations ☐
- P9_Q6 *INT: If P8_Q6 = "Would suffice to provide fewer explanations":*
 Which terms should be provided with explanations?
- P10_Q6 Please click on 'Continue'.
 On the next survey page, you see an alternative version of the question, in which the explanations of the tooltips are shown directly after the response options.
 Which format do you prefer: The one using the tooltips, the one showing the explanations directly, or yet another format?
- Tooltips version preferred ☐
 Instructions shown directly preferred ☐
 A different format ☐ → P12_Q6
- P11_Q6 *INT: If P10_Q6 ≠ "A different format":*
 Why do you prefer the format with [answer P10_Q6]?
- P12_Q6 *INT: If P10_Q6 = "A different format":*
 What kind of format would you prefer, and why?

Question 7

- P1_Q7 How did you arrive at your answer to this question? (What building or site did you have in mind when answering this question? Who did you include and/or exclude from your answer?)
- P2_Q7 How sure are you that [answer question 7] people work at your workplace?
(INT: Read out answer options!)
- Very sure ☐ → P4_Q7

Rather sure ☐

Rather unsure ☐

Very unsure ☐

P3_Q7 *INT: If P2_Q7 ≠ "very sure":*
Why are you [answer P2_Q7]?

P4_Q7 *INT: If not yet recognizable, ask P4_Q7. Otherwise, code respondent behavior into response options:*
This question contains an instruction on who to exclude when calculating the number of people at one's workplace. Did you read this instruction?

Yes ☐ → P6_Q7

No ☐

P5_Q7 Why didn't you read this instruction? (Did you overlook it? Should it be made more visible?)

P6_Q7 Did you use the tooltip for the term "local site"?

Yes ☐ → P8_Q7

No ☐

P7_Q7 Why didn't you use the tooltip for the term "local site"?

P8_Q7 How informative do you find the explanations provided by the tooltip?

Question 8

P1_Q8 How did you arrive at your answer to this question? (Did you count the hours or rather provide an estimate? What times did you include and/or exclude from your answer?)

P2_Q8 How easy or difficult did you find answering this question?
(*INT: Read out answer options!*)

Very easy ☐ → P4_Q8

Rather easy ☐

Rather difficult ☐

Very difficult ☐

P3_Q8 *INT: If P2_Q8 ≠ "Very easy":*
Why do you find it [answer P2_Q8] to answer this question?

P4_Q8 What does "usually" mean to you in this question?

P5_Q8 Do your working hours vary a lot or are they rather constant?

- Vary (a lot) ☐
Are (rather) constant ☐ → Question 9

P6_Q8 *INT: If P5_Q8 = "Vary (a lot)":*
How did you determine what your "usual" working hours are?

Question 9

P1_Q9 How did you arrive at your answer to this question? (How did you weigh between your working hours and your income?)

P2_Q9 How easy or difficult did you find answering this question?
(*INT: Read out answer options!*)

- Very easy ☐ → P3_Q9
Rather easy ☐
Rather difficult ☐
Very difficult ☐

P3_Q9 *INT: If P2_Q9 ≠ "Very easy":*
Why do you find it [answer P2_Q9] to answer this question?

P4_Q9 *INT: If respondent has two or more jobs:*
Did you take all your jobs and the respective earnings into account to decide on your preferred number of working hours?

- Yes ☐
No ☐

Question 10

P1_Q10 Regarding the first part of the question, you answered that your (main) job [answer item 1] involves working at very high speed. Why did you select this answer? (Can you please explain your answer further? What does [answer item 1] mean to you here?)

P2_Q10 And regarding the second part of the question, you answered that your (main) job [answer item 2] involves working to tight deadlines. Why did you select this answer? (Can you please explain your answer further? What does [answer item 2] mean to you here?)

P3_Q10 Using this scale, you answered that your (main) job involves working at very high speed [answer first item on 7-point scale]. Why did you select this answer? (Can you please explain your answer further? What does [answer item 1] mean to you here?)

P4_Q10 And regarding the second part of the question, you answered that your (main) involves working to tight deadlines job [answer second item on 7-point scale]. Why did you select this answer? (Can you please explain your answer further? What does [answer item 2] mean to you here?)

P5_Q10 Which format do you prefer: the one with the 5-point scale or the 7-point scale?

5-point scale ☐

7-point scale ☐

P6_Q10 Why do you prefer the format with a [answer P5_Q10]? (Is one format easier to use than the other? Is one more exact than the other?)

Question 11

P1_Q11 *INT: If Question 11 = "I have no boss":*
You said that you have no boss. Could you please explain to me why you do not have a boss (given that you are working as an employee)?

P2_Q11 In the question text, both the masculine and feminine forms of boss are explicitly mentioned. Do you find the naming of both genders rather good, rather bad or does it not matter in your opinion whether both or only one gender is mentioned?

(Rather) good ☐

(Rather) bad ☐

Doesn't matter ☐

P3_Q11 Why do you think it (is) [answer P2_Q11] that both genders are mentioned?

P4_Q11 And what do you think about the third option available for the boss' gender? Do you find it appropriate to provide this response option, do you find it inappropriate, or does it not matter to you whether a third option is provided?

(Rather) appropriate ☐

(Rather) inappropriate ☐

Doesn't matter ☐

P5_Q11 Why do you find it [answer P4_Q11] to provide a third response option for the boss' gender?

Question 12

P1_Q12 Please click on 'Continue'.
On the next survey page, you see an alternative version of the question with a slightly different wording of the statements.
Which version of the statements would you prefer:

[Poland:] The one using no pronoun or the one starting with “My male/female boss”?

[Germany:] The one using a gender-specific wording or the one using a double pronoun (Er/Sie...)?

[Poland:]

Prefer version using no pronoun ☐

Prefer version starting with “My male/female boss” ☐

I have no preference ☐

[Germany:]

Prefer version with gender-specific wording ☐

Prefer version using a double pronoun (Er/Sie...) ☐

I have no preference ☐

P2_Q12 Why do you [answer P1_Q12]?

P3_Q12 *INT: If not yet recognizable:*
Which version do you find clearer? Which is better language?

Question 13

P1_Q13 You answered that you want to [answer Question 13]. Can you explain your answer further? (Why do you want to [answer Question 13])?

P2_Q13 *INT: If respondent provides a numeric answer:*
Why did you give a numeric answer rather than selecting one of the two closed answer options?

P3_Q13 *INT: If respondent selects one of the two closed options:*
Why did you select a closed answer option rather than providing a numeric answer?

P4_Q13 How easy or difficult did you find deciding whether to provide a numeric answer or select a closed answer option?
(*INT: Read out answer options!*)

Very easy ☐ → Question 14

Rather easy ☐

Rather difficult ☐

Very difficult ☐

P5_Q13 *INT: If P4_Q13 ≠ “Very easy”:*
Why do you find it [answer P4_Q13]?

Question 14

P1_Q14 What do you think about the third option available for the respondents' gender? Do you find it appropriate to provide this response option in an online survey (with no interviewer present), do you find it inappropriate, or does it not matter to you whether a third option is provided?

(Rather) appropriate ☐

(Rather) inappropriate ☐

Doesn't matter ☐

P2_Q14 Why do you find it [answer P1_Q14] to provide a third response option for the respondents' gender?

P3_Q14 Please click on "Continue".
On the next survey page, you see two alternative versions of the question with different response options. Which of the three question versions do you prefer in an online survey (with no interviewer present)?
(INT: Read out answer options!)

The version with only two answer options ☐

The one with a closed "other" category ☐

The one with an open-ended "other" category ☐

Or do you have no preference? ☐

P4_Q14 Why do you [answer P3_Q14]?

Question 15

P1_Q15 Would you please elaborate on your answer? Why did you select [answer Question 15]?

Glossary: Cognitive Techniques

Category Selection Probing¹⁰	<p>Questions about the choice of answer category, e.g.:</p> <p><i>“You have selected [answer] for this question. Please explain your answer in more detail. Why did you choose this answer?”</i></p>
Comprehension Probing	<p>Questions on understanding, e.g.:</p> <p><i>“What do you understand by ‘a highly responsible professional activity’ in this question?”</i></p>
Confidence Rating	<p>Assessment of the reliability of the response, e.g.:</p> <p><i>“How sure are you that you've seen a doctor in the last 12 months?”</i></p>
Difficulty Probing	<p>Questions on the difficulty of answering, e.g.:</p> <p><i>“How easy or difficult was it for you to answer this question?”</i></p> <p><i>If rather/very difficult:</i></p> <p><i>“Why did you find it rather/very difficult to answer this question?”</i></p>
Emergent Probing	<p>Spontaneous questioning in response to an utterance or behavior of the test person, e.g.:</p> <p><i>“You just frowned and laughed when I read you the answer options. Can you please explain to me why you did that?”</i></p>
General Probing	<p>Non-specific questions, e.g.:</p> <p><i>“Do you have any (further) comments on this question?”</i></p>
Paraphrasing	<p>Test persons reproduce the question text in their own words:</p> <p><i>„Can you tell me in your own words what this question is asking?”</i></p>
Process Probing	<p>Questions on how the answer was formed, e.g.:</p> <p><i>„How did you arrive at that answer? What was going through your mind?”</i></p>
Recall Probing	<p>Questions on event recall, e.g.:</p> <p><i>“How did you remember that you had been to the doctor for the last 12 months? Did you count or estimate the number of appointments?”</i></p>
Response Scale Probing	<p>Questions on differentiating between response scale values, e.g.:</p> <p><i>„Your answer on a scale of 0 to 10 was [answer]. Why did you choose that value rather than the value just above or below it?”</i></p>

¹⁰ Also referred to as „Elaborative Probing”.

Sensitivity Probing

Questions on the sensitivity of a question:

„Do you think that this question asks about things that are too private, or is it ok to ask this?“

Specific Probing

Specific questions, e.g.:

“You answered ‘yes’ in this question. Does this mean that you have already given up on career opportunities for your family, or that you might be willing to give them up but have not yet done so?“

Think Aloud

Technique of thinking aloud:

“Please vocalize everything that comes to your mind while you answer the following question. Please also vocalize things that seem unimportant to you. The question is...“.