TRAILS

**Enabling Data Analytics for Actions
Tackling Skills Shortages & Mismatch**

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QUESTION II – Design of Survey Instruments

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ACRONYMS

Acronym	Explanation
AI	Artificial Intelligence
AL	Active Learning
BMC	BioMed Central
CELEX	Communitatis Europae Lex
CPF	Common Performance Framework
ESS	European Social Survey
EPI	Environmental Performance Index
EU	European Union
EULFS	European Union Labour Force Survey
ILA	Individual Learning Account
ILO	International Labour Organization
IQ	Intelligence Quotient
ISBN	International Standard Book Number
IZA	Institut zur Zukunft der Arbeit (Institute of Labor Economics)
JRC	Joint Research Centre
OECD	Organisation for Economic Co-operation and Development
PIAAC	Programme for the International Assessment of Adult Competencies
PISA	Programme for International Student Assessment
SEO	Search Engine Optimization
UK	United Kingdom
VET	Vocational Education and Training

EXECUTIVE SUMMARY

The deliverable task D2.2 explores the methodologies and thematic priorities essential for conducting surveys within the European Union to better understand workforce skills, resilience, and labour market dynamics. It highlights the importance of collecting robust, nationally representative data to inform policies that are equitable, effective, and adaptive to emerging challenges. The analysis emphasises the critical role of capturing data on skills portfolios, organisational practices, job characteristics, and training experiences to identify gaps and opportunities for workforce development. Special attention is given to platform and microworkers, whose unique employment conditions necessitate targeted data collection to improve fairness, transparency, and career mobility within the platform economy. The document advocates for the integration of behavioural insights and stated preference techniques to uncover worker motivations and trade-offs, enhancing the relevance of training and policy initiatives. Furthermore, the importance of data weighting to achieve national representativeness is discussed as a methodological cornerstone. By leveraging high-quality survey insights, this document supports the development of evidence-based strategies to foster workforce adaptability, economic resilience, and inclusive growth across the European Union.

1. INTRODUCTION

Understanding the evolving dynamics of the European labour market is essential for addressing key challenges related to skills development, workforce resilience, and economic adaptation. Conducting three targeted surveys, each focusing on different aspects of the labour market, offers significant merits in terms of policy insights, evidence-based decision-making, and long-term planning. The deliverable task D3.1 introduces the first systematic drafts of these three surveys for the purposes of the TRAILS project and its forthcoming deliverable tasks.

The first survey, targeting the general population, aims to map the skills of European workers comprehensively. This initiative aligns with the European Skills Agenda (European Commission, 2020), which emphasizes the importance of upskilling and reskilling to meet changing labour market demands. By capturing data on workers' existing skillsets, gaps, and aspirations, this survey can inform policies to enhance workforce competitiveness and foster economic inclusion. Additionally, it provides critical input for designing educational and vocational training systems that respond to sectoral needs and the broader transition toward a green and digital economy.

The second survey employs a stated-preference approach to understand workers' preferences for training programs. This method allows researchers to simulate hypothetical scenarios and elicit nuanced insights into the trade-offs individuals are willing to make between attributes such as cost, duration, and type of skills offered (Louviere et al., 2000). Such insights are invaluable for policymakers and employers aiming to design training initiatives that resonate with workers' motivations and constraints. By understanding these preferences, the survey can support the creation of targeted interventions that maximize participation rates and align with broader strategic goals, such as those outlined in the EU's Recovery and Resilience Facility.

The third survey focuses specifically on platform workers, a growing segment of the labour market characterized by non-standard forms of employment. This group faces unique challenges, including precarious working conditions, limited access to social protections, and skill mismatches (European Parliament, 2021). A dedicated survey on platform workers would provide much-needed data on their demographics, employment conditions, and skills utilization. Such insights are crucial for designing policies that ensure fair working conditions, improve access to training opportunities, and support transitions to more secure employment forms. Furthermore, this survey would contribute to ongoing discussions on the regulation of platform work and its implications for labour rights across the EU.

Together, these three surveys address distinct but interconnected facets of the labour market. By adopting a comprehensive and tailored approach, they contribute to a deeper understanding of the workforce, enabling the EU to remain resilient and competitive in an era of rapid technological and economic transformation. References such as the European Skills Agenda (European Commission, 2020) and research methodologies like stated-preference modelling (Louviere et al., 2000) underscore the importance of data-driven strategies for tackling labour market challenges. Collectively, these surveys will equip policymakers, educators, and employers with the tools to make informed decisions that enhance economic resilience and social cohesion across Europe.

1.1   PURPOSE OF THE DELIVERABLE

Task D2.2 provides the first systematic draft of the state-of-the-art survey questions for the household survey, which will enable primary data collection from some 24 EU countries, plus some 4 countries that are EU candidates or neighbouring the EU. Survey design will ensure the homogeneity in the formatting and translation of the questionnaires in member countries, along with the specification of the criteria to ensure the representativeness of the surveyed samples. It will provide the tools required to elicit the determinants, moderators and consequences of the choice of VET or study programmes, along with the standard demographic and socioeconomic characteristics across different cultures in the EU. The multi-country survey instrument of the TRAILS project will be designed to elicit consumer preferences, attitudes and decision-making towards key facets of the need for upskilling and the determinants of VET choice by individuals. The second update of the survey instrument will involve a second-round set of surveys in at least 4 countries, which will enable the observation of boost samples of key groups of interest, e.g., platform workers and the unemployed, alongside preference elicitation of alternative policy and choice scenarios via conjoint analysis. This deliverable aims to set out the methodology for three theoretically intertwined online surveys.

1.2   RELATION WITH OTHER DELIVERABLES AND TASKS

Task 2.2 receives input from Task 1.1 (D1.1) and Task 1.2 (D1.2), and outputs D2.2 QUESTION II – Design of the Survey Instruments. This document of D2.2 (QUESTION-OI) will contribute to the production of deliverable D2.3 and D2.4 and will inform workpackages 3, 4, 5, 6, and 7.

It is relevant to the following deliverable tasks of workpackage 2 as it produces the draft questionnaires for survey design and stated-preference methods, i.e.:
- D2.3 – QUESTION-III – Design of Interventions and Experimental Protocols (M14)
- D2.4 – QUESTION-IV – Survey Data Generation and Analytics (M21)

It is relevant to all following deliverable tasks of workpackage 3 as it will produce primary material that can complement its purposes and provide additional inputs on behavioural, social and cultural factors conducive to skill development in partcular, i.e.:
- D3.2 – COMPARE-II: Technological change, training and upskilling in Europe (M24)
- D3.3 – COMPARE-III: The impact of skills mismatching on well-being across sectors (M28)
- D3.4 – COMPARE-IV: Behavioural, social, and cultural change for successful development of skills matched to needs (M32)

It could be relevant to the deliverable tasks of workpackage 4 in terms of providing complementary evidence in terms of labour market and household financial resilience in the post-Covid era, as stated below:

- D4.1 – NOVEL-I: Using machine learning to measure skills matched to needs (M18)
- D4.2 – NOVEL-II: Teleworking, digitization and labour market segmentation (M24)
- D4.3 – NOVEL-III: Skills matching and firm resilience in the post-Covid era (M30)
- D4.4 – NOVEL-IV: Technological empowerment of skills matching (M33)

It will provide the novel primary data of the TRAILS project that will be analysed extensively in workpackage 5, and its tasks below:

- D5.1 – PORTFOLIO-I: Training for labour market inclusiveness and resilience (M18)
- D5.2 – PORTFOLIO-II: Resilient education and training in the era of automation and climate change (M23)
- D5.3 – PORTFOLIO-III: Skills portfolios and new types of labour (M26)
- D5.4 – PORTFOLIO-IV: Skills portfolios in times of change (M34)

The novels questionnaires and resulting primary datasets will be conducive to the dissemination activities of the TRAILS project to the wider public as part of workpackage 6:

- D6.1 – SYNTHESIS-I: Dissemination & Business Plan (M09)
- D6.2 – SYNTHESIS-II: Dissemination & Business Report (M36)

Finally, the illustrations of the surveys' output will become part of the illustration of the portal of the TRAILS project as part of workpackage 7 and its following tasks:

- D7.1 – INTEGRATE-I: TRAILS portal architecture, design and integration documentation (M15)
- D7.2 – INTEGRATE-II: TRAILS portal (M24)

1.3 STRUCTURE OF THE DOCUMENT

The remainder of the document is structured as follows: Chapter 2 details the draft questionnaire for each of the general population survey. Chapter 3 presents the experimental design for the stated-preference elicitation regarding training programmes, and a draft proposed implementation. Chapter 4 presents the survey for the platform workers. Section 5 presents additional technical details of the implementation strategy of data collection. Section 6 concludes and discusses the fieldwork preparation (i.e., the scripting and translation procedures). Finally, the penultimate non-numbered section presents the related bibliography.

2. GENERAL-POPULATION SURVEY

Understanding the skills portfolios of European workers is critical to addressing current and future labour market challenges. A survey dedicated to capturing this information would provide valuable insights into the distribution of skills, the prevalence of critical literacies, and workers' training experiences across different sectors and regions. Such an initiative aligns with the European Skills Agenda (European Commission, 2020) and broader EU goals of fostering inclusive, sustainable, and resilient economies.

A comprehensive survey would enable policymakers, educators, and employers to identify the skill gaps that inhibit economic growth and worker mobility. It would also shed light on the alignment between workers' skills and market demands, particularly in the context of ongoing transitions to digital and green economies. By focusing on critical literacies such as digital, financial, and environmental literacy (Panos et al., 2021), the survey could capture how well-equipped European workers are to navigate complex personal and professional environments. Understanding these literacies is not only essential for individual empowerment but also for broader societal goals, including civic engagement and financial inclusion.

Furthermore, by capturing workers' training experiences, the survey would offer insights into the effectiveness of existing education and training programs. Data on participation rates, barriers, and preferences could inform targeted interventions to improve lifelong learning opportunities. This focus is particularly relevant given the rapid pace of technological change and the need for constant upskilling and reskilling (European Social Fund, n.d.). The inclusion of training experiences would also help evaluate the reach and impact of EU-funded programs such as Erasmus+ and the European Social Fund.

Recent literature underscores the value of granular, worker-level data in shaping responsive labour market policies (Cedefop, 2016). For example, Cedefop's pilot employer survey on skill needs demonstrated the potential of detailed surveys to provide actionable insights for both public and private stakeholders. Similarly, Trilling and Fadel's exploration of 21st-century skills emphasizes (Trilling & Fadel, 2009) the importance of capturing a broad spectrum of competencies that go beyond traditional qualifications. These studies highlight the necessity of understanding both technical skills and transversal competencies, such as problem-solving and adaptability, which are increasingly crucial in modern economies.

A new survey on skills portfolios would contribute to building a robust evidence base for policymaking and program design. It would also address critical knowledge gaps, enabling a more precise understanding of the factors shaping workers' experiences and outcomes in the labour market. This initiative represents a vital step toward fostering a competitive and inclusive workforce in Europe.

Understanding the behavioural profiles of individuals, particularly in terms of their cognitive and decision-making biases, is essential for designing effective policies and interventions. Behavioural economics has shown that biases such as loss aversion, present bias, and anchoring significantly influence financial and career-related decisions (Tversky & Kahneman, 1974; Kahneman, 2011). Capturing these profiles through a survey can provide insights into the underlying factors driving

individual choices, enabling more targeted and efficient program designs. For example, incorporating behavioural insights can help structure training incentives, improve financial planning tools, and design nudges that align with workers' natural tendencies. Moreover, understanding biases supports the EU's broader objectives of fostering equitable and evidence-based policy frameworks.

Measuring labour market and household financial resilience is equally critical in understanding the capacity of workers and households to cope with economic shocks and uncertainties. Resilience indicators, such as the ability to manage sudden income disruptions or access emergency funds, provide valuable insights into economic stability and social equity. For instance, the Global Findex Database highlights the importance of financial resilience in promoting inclusive economic growth and reducing vulnerability to poverty (World Bank, 2021). By including these dimensions in the survey, policymakers can identify structural weaknesses and design targeted interventions to enhance economic security. Furthermore, understanding financial resilience supports the EU's goals of fostering inclusive growth and reducing disparities across member states (European Commission, 2020).

Based on partner sampling capacity, the available countries for the general-population survey are the EU 27 plus the United Kingdom, Bosnia, Kosovo, Albania, Montenegro, North Macedonia, Serbia, Turkey, Norway, Switzerland. Following discussions with experts and partner consultation, it was seen as preferable for the purposes of the TRAILS project to have a pan-European survey of the EU27, with the addition of the United Kingdom as the 28th country. In that fashion the target of 24+4 countries set in the proposal is reached, and a homogenous European survey is achieved. Although other neighbouring non-EU countries are of interest, it would be possible to complement the analysis in follow-up workpackages with existing and recent secondary data sources that sample in these countries, e.g., the European Skills and Jobs Survey, the Survey on Access to Finance of Enterprises, inter alia. Table 1 presents the list of countries proposed for sampling for the purpose of D2.2.

The following 5 sub-sections present the list of draft question, distinguishing between distinctive segments of the questionnaire, namely:
1) General background questions I1 – I13.
2) Behavioural background questions B1 – B10.
3) Critical literacy questions L1 – L11.
4) Resilience questions R1 – R7.
5) Skills portfolio questions S1 – S36.

Evidently, as the draft number of questions might be too large for an online survey, the number of questions and the data collection strategy will be revised by TRAILS partners in the coming months, and the finalised strategy and set of questions will be presented in follow-up deliverable tasks, e.g. as part of workpackage 5, inter alia. The following pages present the 5 sets of questions in detail, starting from the general background questions, namely I1 – I13.

Table 1: The list of countries in the TRAILS general population survey

Country	EU Membership	Eurozone	TRAILS Sampling
Austria	EU	Yes	(1)
Belgium	EU	Yes	(2)
Bulgaria	EU	No	(3)
Croatia	EU	Yes	(4)
Cyprus	EU	Yes	(5)
Czech Republic	EU	No	(6)
Denmark	EU	No	(7)
Estonia	EU	Yes	(8)
Finland	EU	Yes	(9)
France	EU	Yes	(10)
Germany	EU	Yes	(11)
Greece	EU	Yes	(12)
Hungary	EU	No	(13)
Ireland	EU	Yes	(14)
Italy	EU	Yes	(15)
Latvia	EU	Yes	(16)
Lithuania	EU	Yes	(17)
Luxembourg	EU	Yes	(18)
Malta	EU	Yes	(19)
Netherlands	EU	Yes	(20)
Poland	EU	No	(21)
Portugal	EU	Yes	(22)
Romania	EU	No	(23)
Slovakia	EU	Yes	(24)
Slovenia	EU	Yes	(25)
Spain	EU	Yes	(26)
Sweden	EU	No	(27)
United Kingdom	Non-EU	No	(28)
Switzerland	Non-EU	No	–
Bosnia	Non-EU	No	–
Kosovo	Non-EU	No	–
Albania	Non-EU	No	–
Montenegro	Non-EU	Yes	–
North Macedonia	Non-EU	No	–
Serbia	Non-EU	No	–
Turkey	Non-EU	No	–
Norway	Non-EU	No	–

2.1 GENERAL BACKGROUND QUESTIONS

I1:	Country / Region / State / City
	Dropdown
Where do you live?	
	Country:
	Province:
	Postal Code:
	City:

I2:	Migration status
I2_1	**In which country were you born?**
	Dropdown
	Country:
I2_2	**Which year did you move in the country in which you currently live?**
	Single response
_0_2	"Less than 2 years ago"
_2_4	"More than 2 and 5 less than 5 years ago"
_5_10	"More than 5 and less than 10 years ago"
_mt_10	"More than 10 years ago"

I3:	AGE
	YEAR/MONTH
	Dropdown
What is your date of birth?	
YEAR	
_1959	Exclude from sampling if year of birth ≤ 1959
_1960	1960
	...
_2000	2000
_2001	Exclude from sampling if year of birth ≥ 2001
MONTH	
_1	January
_2	February
_3	March
_4	April
_5	May
_6	June
_7	July
_8	August
_9	September
_10	October
_11	November
_12	December
Hidden Question	**QUOTAGERANGE**
This is a dummy question that will hold age breaks" for the quotas between ages 25 and 65	
	RESP_AGE [Hidden]
	Single response
_25_35	"25-35",
_36_45	"36-45",
_46_55	"46-55",
_56_65	"56-65"

I4:	GENDER
	RESP_GENDER
	Single response
What is your gender? / Are you?	
_1	Female
_2	Male
_3	Another gender
_4	Prefer not to answer

I5:	Marital Status
	BE01MAR
	Single response
What is your marital status?	
_1	Never Married (Single)
_2	Domestic Partner (Living as a couple)
_3	Married / Civil partnership
_4	Divorced
_5	Widowed

I6:	Main Earner in household
	EU01HINC
	Single response
Are you the one in your household who has the highest income?	
Prompt:	*[person with the largest income from employment, pensions, state benefits, investments or other sources]*
_1	Yes
_2	Yes, together with another household member
_3	No

I7:	Household composition
	HHCMP10
I7_1	How many people are living or staying at your current address?
	Dropdown
Prompt:	*Include yourself and any other adults or children who are currently living or staying at this address for at least two months*
_1	1
_2	2
_3	3
_4	4
_5	5
_6	6
_7	7
_8	8
_9	9
_10	10
_11	11
_12	12+
I7_2	How many are financially-dependent children under the age of 18
_1	1
_2	2
_3	3
_4	4
_5	5
_6	6
_7	7
_8	8
_9	9
_10	10+

I8:	Education
	BE02EDU
I8_1	**What is your highest level of education attained?**
	Single response
_1	Without a diploma or primary education
_2	General lower secondary education (first 3 years completed)
_3	Technical, artistic or professional lower secondary education (first 3 years completed)
_4	General upper secondary education (6 years completed)
_5	Technical or artistic upper secondary education (6 years)
_6	Professional upper secondary (6 years)
_7	Higher education: graduate, candidature, bachelor
_8	University education: bachelor's degree, post-graduate, master's degree
_9	Complementary master
_10	10 Doctorate
I8_2	**How many years of your life have you spent at schooling of any form?**
	Single response
_1	1
_2	2
_3	3
_4	4
_5	5
_6	6
_7	7
_8	8
_9	9
_10	10
_11	11
_12	12
_13	13
_14	14
_15	15
_16	16
_17	17
_18	18
_19	19
_20	20
_21+	21+

I9:	Employment status
	EMP01
What is your current employment status?	
	Single response
_1	Employed full-time
_2	Employed part-time
_3	Self employed
_4	Unemployed but looking for a job
_5	Unemployed and not looking for a job/Long-term sick or disabled
_6	Full-time parent, homemaker
_7	Retired
_8	Student/Pupil
_9	N/A
_10	N/A
_11	N/A
_12	N/A

I10:	Respondent Occupation
	BE02OCCR
	Single response
I10_1	**What is your occupation?**

Independent [Expandable Header]

_1	farmer
_2	craftsman, trader with 5 employees or less
_3	industrial, wholesaler with 6 employees or more
_4	liberal profession or profession for which qualification is required

Employee (public or private sector) [Expandable Header]

_6	member of the general management, senior executive responsible for 5 employees or less
_7	member of the general management, senior executive responsible for 6 to 10 employees
_8	member of the general management, senior executive responsible for 11 employees or more
_9	middle management, that is not part of the general management, responsible for 5 employees or less
_10	middle management, that is not part of the general management, responsible for 6 employees or more
_11	other employee who mainly performs office work
_12	other employee who does not do office work (eg teacher, nurses …)

Worker [Expandable Header]

_13	skilled worker
_14	non-skilled worker

Inactive [Expandable Header]

_15	unable for work
_16	pre-retired
_17	retired
_18	student
_19	house man or housewife
_20	unemployed
_97	never worked
_98	other
_99	I do not know

[PN: if BE02OCCR=_16, _17 or _20, then ask BE02OCCR_LAST]

	BE02OCCR_LAST
	Single response
I10_2	**What is the profession that you last exercised?**

Independent [Expandable Header]

_1	farmer
_2	craftsman, trader with 5 employees or less
_3	industrial, wholesaler with 6 employees or more
_4	liberal profession or profession for which qualification is required

Employee (public or private sector) [Expandable Header]

_6	member of the general management, senior executive responsible for 5 employees or less
_7	member of the general management, senior executive for 6 to 10 employees
_8	member of the general management, senior executive responsible for 11 employees or more
_9	middle management, that is not part of the general management, responsible for 5 employees or less
_10	middle management, that is not part of the general management, responsible for 6 employees or more
_11	other employee who mainly performs office work
_12	other employee who does not do office work (eg teacher, nurses ...)
	Worker [Expandable Header]
_13	skilled worker
_14	non-skilled worker

Inactive [Expandable Header]

_15	unable for work
_16	student
_17	house man or housewife
_18	never worked
_19	other
_20	I do not know

I11:	Main earner occupation
	BE02OCCHI
I11_1	**What is the occupation of the main earner?**
	Single response
Independent [Expandable Header]	
_1	farmer
_2	craftsman, trader with 5 employees or less
_3	industrial, wholesaler with 6 employees or more
_4	liberal profession or profession for which qualification is required
Employee (public or private sector) [Expandable Header]	
_6	member of the general management, senior executive responsible for 5 employees or less
_7	member of the general management, senior executive responsible for 6 to 10 employees
_8	member of the general management, senior executive responsible for 11 employees or more
_9	middle management, that is not part of the general management, responsible for 5 employees or less
_10	middle management, that is not part of the general management, responsible for 6 employees or more
_11	other employee who mainly performs office work
_12	other employee who does not do office work (eg teacher, nurses …)
Worker [Expandable Header]	
_13	skilled worker
_14	non-skilled worker
Inactive [Expandable Header]	
_15	unable for work
_16	pre-retired
_17	retired
_18	student
_19	house man or housewife
_20	unemployed
_97	never worked
_98	other
_99	I do not know
[PN: if BE02OCCHI=_16, _17 or _20, then ask BE02OCCHI_LAST]	
	BE02OCCHI_LAST
I11_2	**What is the profession that the main earner last exercised?**
	Single response
Independent [Expandable Header]	
_1	farmer
_2	craftsman, trader with 5 employees or less
_3	industrial, wholesaler with 6 employees or more
_4	liberal profession or profession for which qualification is required
Employee (public or private sector) [Expandable Header]	

_6	member of the general management, senior executive responsible for 5 employees or less	
_7	member of the general management, senior executive responsible for 6 to 10 employees	
_8	member of the general management, senior executive responsible for 11 employees or more	
_9	middle management, that is not part of the general management, responsible for 5 employees or less	
_10	middle management, that is not part of the general management, responsible for 6 employees or more	
_11	other employee who mainly performs office work	
_12	other employee who does not do office work (eg teacher, nurses …)	
Worker [Expandable Header]		
_13	skilled worker	
_14	non-skilled worker	
Inactive [Expandable Header]		
_15	unable for work	
_16	pre-retired	
_17	retired	
_18	student	
_19	house man or housewife	
_20	unemployed	

I12:	Work industry - individual
	IndIndiv03
I12_1:	**In which industry do you work?**
	Single response

Business Services [EXPANDABLE HEADER]

_1	Advertising/Public Relations
_8	Financial Services
_15	Management Consulting
_16	Marketing/Market Research
_28	Sales/Sales Promotion
_33	Transportation/Shipping

Entertainment [EXPANDABLE HEADER]

_17	Film Studio
_18	Movie Theater/Cinema or Chain
_19	Music
_23	Publishing (Magazines, Book, etc.)
_24	Radio
_29	Sports
_31	Television
_35	Video Games
_36	Other Entertainment

Industry/ Agriculture [EXPANDABLE HEADER]

_37	Agriculture
_2	Automotive
_9	Food/Beverages
_20	Paper Products
_22	Pet food/Pet care
_32	Toys

Personal Care [EXPANDABLE HEADER]

_3	Beauty/Cosmetics
_7	Fashion/Clothing
_21	Toiletries

Personal Services [EXPANDABLE HEADER]

_4	Education
_10	Government/Politics
_11	Grocery/Convenience/Dept. Stores
_12	Healthcare/Pharmaceuticals
_14	Insurance
_25	Real Estate
_26	Construction
_27	Restaurants
_34	Travel/Tourism

Technology [EXPANDABLE HEADER]

_5	Electronics

_6	Computer/Software
_13	Internet/E-Commerce
_30	Telecom (phone, cell phone, cable)
_38	None of the above [Exclusive]
_99	Not applicable

I13:	Income
	BE01INC
Into which category does your TOTAL NET HOUSEHOLD monthly income from all sources fall (i.e. income after tax deduction)?	
Probe:	Please include all your income sources : salaries, scholarships, pension and Social Security benefits, dividends from shares, income from rental properties, child support and alimony etc.
	Single response
_1	€ 0 - € 549
_2	€ 550 - € 999
_3	€ 1000 - € 1299
_4	€ 1300 - € 1499
_5	€ 1500 - € 1699
_6	€ 1700 - € 1899
_7	€ 1900 - € 2199
_8	€ 2200 - € 2499
_9	€ 2500 - € 2799
_10	€ 2800 - € 3199
_11	€ 3200 - € 3699
_12	€ 3700 - € 4499
_13	€ 4500 - € 5499
_14	€ 5500 - € 7999
_15	€ 8000 or more
_16	Prefer not to answer

2.2 BEHAVIOURAL BACKGROUND QUESTIONS

Eliciting behavioural background questions in a general population skills survey is essential for gaining a deeper understanding of the factors influencing skill acquisition, utilisation, and development (Bandura, 1997; Gollwitzer, 1999). Behavioural traits and preferences, such as risk tolerance, time preferences, and social norms, play a pivotal role in shaping individuals' educational and career choices, as well as their engagement in lifelong learning and training programs. Incorporating these dimensions into a survey provides critical insights into the interplay between individual behaviour and labour market outcomes.

One key reason for including behavioural questions is to capture the heterogeneity in decision-making processes. For instance, individuals with higher levels of risk tolerance may be more likely to invest in training programs or pursue entrepreneurial opportunities. Similarly, those with strong future-oriented time preferences are often more inclined to engage in skill development initiatives. By measuring these behavioural traits, policymakers and educators can tailor interventions to address specific barriers and motivators.

Behavioural background questions also provide a foundation for understanding how cognitive biases and heuristics influence learning and work-related decisions. Concepts such as loss aversion (Tversky & Kahneman, 1974), present bias (O'Donoghue & Rabin, 1999), and the endowment effect (Thaler, 1980) can affect individuals' willingness to invest time and resources in skills training. For example, loss-averse individuals may avoid retraining opportunities due to the perceived costs of failure, even when the potential benefits outweigh the risks. Addressing such biases through policy design, such as offering incentives or framing training benefits effectively, can improve participation rates.

Furthermore, behavioural data enhances the ability to segment populations and identify groups with similar traits or preferences. This segmentation allows for more targeted and efficient allocation of resources. For instance, understanding social norms within a community can inform strategies to promote skill acquisition collectively, as seen in the success of peer-led education initiatives.

The inclusion of behavioural questions is also critical for addressing inequities in access to and participation in skill development. For marginalized populations, behavioural constraints such as low self-efficacy or social identity concerns may limit engagement in training programs. By identifying these constraints, interventions can be designed to foster inclusivity and equal opportunity (Sen, 1999; Bourdieu, 1986), aligning with the EU's goals under the European Skills Agenda (European Commission, 2020).

Behavioural background questions in skills surveys have been highlighted in existing research and frameworks (Deci & Ryan, 1985; Ajzen, 1991). For example, the OECD's Survey of Adult Skills (PIAAC) includes questions on motivation and learning strategies, which provide valuable behavioural insights. Similarly, studies such as Heckman and Kautz (2012) emphasize the role of non-cognitive skills in economic success, further underscoring the importance of capturing behavioural dimensions.

In conclusion, integrating behavioural background questions into a general population skills survey is crucial for developing a holistic understanding of the factors driving skill development and labour

market outcomes. These questions enable the design of evidence-based policies and programs that address behavioural barriers, promote inclusivity, and enhance workforce adaptability in a rapidly changing economic landscape. The following pages present the behavioural background questions, namely B1 – B10 in detail.

B1:	Generic risk
B1_1	**Suppose you are planning a holiday. Which of the following options would you choose?**
Probe:	Measuring Risk Preferences
	Single response
_1	A familiar destination where you know everything will go smoothly.
_2	A moderately adventurous destination where there is a small chance of travel delays or unexpected experiences.
_3	An exotic, remote location with limited information available but potentially unique and exciting experiences.
_98	I don't know
_99	Prefer not to answer
B1_2	**Which of the following activities generally carries the highest risk?**
Probe:	Measuring Risk Awareness
	Single response
_1	Driving without wearing a seatbelt.
_2	Riding a bicycle in a park.
_3	Walking on a familiar sidewalk.
_98	I don't know
_99	Prefer not to answer
B1_3	**How risky would you consider the following scenario: "You decide to try a new activity such as rock climbing with no prior experience, but under the supervision of an experienced guide"?**
Probe:	Measuring Risk Perception
	Single response
_1	Very risky.
_2	Somewhat risky.
_3	Not risky.
_98	I don't know
_99	Prefer not to answer

B2:	Financial risk
B2_1	**Suppose you are given the option to invest €1,000. Which of the following investment options would you choose?**
Probe:	Measuring Risk Preferences
	Single response
_1	A savings account with a guaranteed return of €50.
_2	A moderate-risk investment with a 50% chance of earning €100 and a 50% chance of earning €0.
_3	A high-risk investment with a 10% chance of earning €500 and a 90% chance of losing €200.
_98	I don't know
_99	Prefer not to answer
B2_2	**Which of the following is a common indicator of high financial risk?**
Probe:	Measuring Risk Awareness
	Single response
_1	A well-diversified investment portfolio.
_2	Investing heavily in a single stock or asset.
_3	Keeping money in a low-interest savings account.
_98	I don't know
_99	Prefer not to answer
B2_3	**How risky do you perceive the following scenario: "Investing in a start-up company that has a 70% chance of failure but a 30% chance of high returns"?**
Probe:	Measuring Risk Perception
	Single response
_1	Very risky.
_2	Somewhat risky.
_3	Not risky.
_98	I don't know
_99	Prefer not to answer

B3:	Loss Aversion
Imagine you have invested €1,000 in a stock. It has dropped in value by €200. What would you most likely do?	
Probe:	Requires balancing emotions around loss with potential strategies for recovery.
	Single response
_1	Sell the stock immediately to avoid further losses.
_2	Hold the stock and wait for it to recover.
_3	Buy more of the stock, expecting it to increase in value.
_98	I don't know
_99	Prefer not to answer

B4:	Time Preferences (Present Bias)
Suppose you are offered the following options for completing a task that pays €150. Which would you choose?	
Probe:	Introduces a time-value trade-off with increasing rewards for delay, revealing the individual's discounting rate.
	Single response
_1	Complete it today and earn €150.
_2	Complete it in 3 days and earn €180.
_3	Complete it in a week and earn €200.
_98	I don't know
_99	Prefer not to answer

B5:	Anchoring
A store advertises a laptop for €1,200 but offers a discount of €300. Another store advertises the same laptop for €900. Which deal feels more attractive?	
Probe:	Tests whether the initial anchor (original price) influences the perception of value.
	Single response
_1	The discounted price at €900.
_2	The lower base price of €900.
_3	Both are the same.
_98	I don't know
_99	Prefer not to answer

B6:	Social Norms
If you knew that 80% of people in your neighbourhood recycle regularly, how would it influence your decision to recycle?	
Probe:	Requires self-reflection on the influence of peer behaviours.
	Single response
_1	I would feel more inclined to recycle.
_2	It would not influence my behaviour.
_3	I would feel less inclined to recycle.
_98	I don't know
_99	Prefer not to answer

B7:	Mental Accounting
You received €1,000 as a tax refund. What would you most likely do with this money?	
Probe:	Requires categorizing windfall income and reflecting on mental accounting practices.
	Single response
_1	Spend it on a vacation or leisure activity.
_2	Save it in a rainy-day fund.
_3	Use it to pay off debt.
_98	I don't know
_99	Prefer not to answer

B8:	Overconfidence
How likely are you to believe your financial decisions will outperform those of a professional financial advisor over a 5-year period?	
Probe:	Assesses confidence levels relative to a professional standard.
	Single response
_1	Much more likely.
_2	Somewhat more likely.
_3	About the same.
_4	Less likely.
_98	I don't know
_99	Prefer not to answer

B9:	Framing Effects
A government is implementing a policy to address a humanitarian crisis in two regions (Region X and Region Y). Two plans are presented:	

- **Plan A: 60% of the population in Region X will survive, but only 30% in Region Y will survive.**
- **Plan B: 70% of the population in Region Y will survive, but only 40% in Region X will survive.**

Which plan would you prefer?

Probe:	
	Single response
_1	Plan A.
_2	Plan B.
_3	Both plans are equally acceptable.
_98	I don't know
_99	Prefer not to answer

B10:	Defaults
Your employer has automatically enrolled you in a retirement savings plan with a 10% contribution rate. What would you most likely do?	
Probe:	Requires evaluating the role of defaults in shaping financial behaviour.
	Single response
_1	Stay in the plan at the default rate.
_2	Adjust the contribution rate.
_3	Opt out of the plan entirely.
_98	I don't know
_99	Prefer not to answer

2.3 CRITICAL LITERACIES

The core literacies emphasized in the European Union (EU) align with its strategic goals for fostering a well-informed, capable, and adaptable population. These literacies reflect essential competencies that enable citizens to thrive in personal, social, and professional contexts (Trilling & Fadel, 2009). They equip EU citizens with the knowledge and skills necessary to participate actively in democratic processes, adapt to rapid societal and technological changes, and contribute to a sustainable and inclusive European future.

The EU promotes these literacies through policies such as the Lifelong Learning Framework, the New Skills Agenda for Europe, and the European Pillar of Social Rights (European Social Fund, n.d.; European Commission, 2020). Each of these frameworks underscores the importance of lifelong education and training to ensure individuals are equipped to navigate and contribute meaningfully to modern society.

Digital literacy, defined as the ability to use digital technologies to find, evaluate, create, and communicate information, is a cornerstone of the EU's strategic initiatives. As part of the Digital Education Action Plan and European Digital Strategy, digital literacy is critical for navigating the ongoing digital transformation and ensuring inclusivity in a technology-driven economy (European Commission, 2020; UNESCO, 2021).

Financial literacy involves understanding and effectively managing personal finances, including saving, budgeting, and investment. This literacy is a focus area under initiatives such as the Capital Markets Union, which aims to enhance financial inclusion and resilience. Financial literacy empowers citizens to make informed economic decisions, contributing to personal and collective financial stability (European Commission, 2020; Atkinson & Messy, 2012).

Environmental and climate literacy encompasses knowledge about climate change, sustainability, and environmental protection, alongside the ability to act responsibly. Central to the European Green Deal and sustainability goals, this literacy is crucial for achieving the EU's climate neutrality target by 2050 (European Parliament, 2020; UNESCO, 2017).

Health literacy refers to the ability to access, understand, and use health-related information for informed decision-making. Promoted through the EU Health Policy and cross-border healthcare initiatives, health literacy is vital for improving public health outcomes and reducing healthcare disparities across member states (European Social Fund, n.d.; Sørensen et al., 2012).

Media and information literacy involves the ability to critically evaluate information from various media and understand the role of media in society. This literacy is integral to combating misinformation and fostering democratic participation, as highlighted in the European Democracy Action Plan (European Commission, 2020; UNESCO, 2013).

Cultural and intercultural literacy emphasizes awareness and understanding of different cultures and the ability to interact effectively in multicultural contexts. Reflecting the EU's motto, "United in

Diversity," this literacy supports initiatives such as Erasmus+ and the promotion of European cultural heritage (Panos et al., 2021; Hofstede, 2001).

Civic and political literacy focuses on understanding democratic processes, EU institutions, and civic responsibilities. Fundamental for active participation in the European democratic system, this literacy is encouraged through voter education campaigns and programs promoting civic engagement (European Commission, 2020; Crick, 2002).

Technological literacy pertains to the knowledge and skills required to understand, evaluate, and interact with emerging technologies, including artificial intelligence, robotics, and the Internet of Things. Central to the Digital Compass 2030 initiative, technological literacy fosters innovation and prepares individuals for advancements in industry and society (European Commission, 2020; National Academy of Engineering and National Research Council, 2002).

Human literacy encompasses skills related to empathy, emotional intelligence, and interpersonal communication. This literacy supports social cohesion and collaboration within diverse EU populations and is promoted through education and workforce development programs (Panos et al., 2021; Goleman, 1995).

The following pages present the critical-literacy questions, namely L1 – L11 in detail.

L1:	Financial literacy
L1_1	**Suppose you have €100 in a savings account earning 5% interest per year, compounded annually. After 2 years, how much do you think you will have in the account?**
Probe:	Understanding Compound Interest (Numeracy)
	Single response
_1	More than €110
_2	Exactly €110
_3	Less than €110
_98	I don't know
_99	Prefer not to answer
L1_2	**Imagine that the annual inflation rate is 3%, and your savings account earns 1% interest per year. After 1 year, will the money in your savings account buy:**
Probe:	Understanding Inflation
	Single response
_1	More than it does today
_2	The same as it does today
_3	Less than it does today
_98	I don't know
_99	Prefer not to answer
L1_3	**Suppose you want to invest €10,000. Is it safer to:**
Probe:	Understanding Risk Diversification
	Single response
_1	Invest the money in a single company's stock
_2	Invest the money in a range of different stocks
_98	I don't know
_99	Prefer not to answer

L2:	Sustainable finance literacy
L2_1	**What does the term "sustainable finance" refer to?**
Probe:	Awareness of Sustainable Finance
	Single response
_1	Financing activities that prioritize environmental, social, and governance (ESG) criteria.
_2	Providing loans with low interest rates.
_3	Investing only in profitable companies.
_98	I don't know
_99	Prefer not to answer
L2_2	**Which of the following is an example of a green investment?**
Probe:	Awareness of Green Investment Options
	Single response
_1	Investing in renewable energy companies.
_2	Purchasing shares in fossil fuel companies.
_3	Saving money in a regular bank account.
_98	I don't know
_99	Prefer not to answer
L2_3	**If you choose to invest in a company, which factor would most likely indicate it has a positive environmental impact?**
Probe:	Evaluating the Impact of Financial Decisions
	Single response
_1	The company has a high profit margin.
_2	The company is actively reducing its carbon emissions.
_3	The company's products are popular globally.
_98	I don't know
_99	Prefer not to answer

L3:	**Digital financial literacy**
L3_1	**You receive an email from your bank asking you to verify your account by clicking a link. What should you do?**
Probe:	Understanding Online Financial Security
	Single response
_1	Click the link immediately and follow the instructions.
_2	Ignore the email and delete it.
_3	Verify the email sender's address and contact the bank directly using their official website or phone number.
_98	I don't know
_99	Prefer not to answer
L3_2	**Which of the following is a key advantage of using digital financial tools, such as mobile banking apps or budgeting platforms?**
Probe:	Using Digital Financial Tools
	Single response
_1	They help track spending and manage budgets in real-time.
_2	They automatically guarantee higher savings.
_3	They eliminate the need to monitor your finances.
_98	I don't know
_99	Prefer not to answer
L3_3	**When making an online purchase, which method is the safest for protecting your financial information?**
Probe:	Understanding Digital Payments
	Single response
_1	Using a bank transfer for convenience.
_2	Saving your card details directly on the website for future purchases.
_3	Using a secure payment method, such as a credit card or PayPal, and verifying the website's SSL certificate (look for "https").
_98	I don't know
_99	Prefer not to answer

L4:	Political literacy
L4_1	**What is the primary function of the European Parliament?**
Probe:	Understanding the Role of EU Institutions
	Single response
_1	To propose laws for EU member states.
_2	To represent the interests of EU citizens and legislate together with the Council of the EU.
_3	To oversee monetary policy in the eurozone.
_98	I don't know
_99	Prefer not to answer
L4_2	**Which two institutions are responsible for passing EU laws?**
Probe:	Understanding Decision-Making in the EU
	Single response
_1	The European Court of Justice and the European Parliament.
_2	The European Commission and the European Council.
_3	The European Parliament and the Council of the EU.
_98	I don't know
_99	Prefer not to answer
L4_3	**How many countries are currently members of the European Union (as of 2025)?**
Probe:	Understanding EU Membership
	Single response
_1	25
_2	27
_3	30
_98	I don't know
_99	Prefer not to answer

L5:	Environmental & climate literacy
L5_1	**Which of the following is the primary cause of global climate change?**
Probe:	Understanding Climate Change and Its Causes
	Single response
_1	Ozone layer depletion.
_2	Greenhouse gas emissions from human activities.
_3	Natural variations in Earth's temperature.
_98	I don't know
_99	Prefer not to answer
L5_2	**Which of the following is considered a renewable energy source?**
Probe:	Understanding Renewable Energy and Sustainability
	Single response
_1	Coal.
_2	Natural gas.
_3	Solar energy.
_98	I don't know
_99	Prefer not to answer
L5_3	**What is the EU's target for reducing greenhouse gas emissions by 2030 compared to 1990 levels?**
Probe:	Understanding EU Climate Goals
	Single response
_1	20%
_2	40%
_3	55%
_98	I don't know
_99	Prefer not to answer

L6:	Health & medical literacy
L6_1	**In the EU, which document allows citizens to receive healthcare in other EU countries under the same conditions as locals?**
Probe:	Understanding Access to Healthcare
	Single response
_1	European Health Insurance Card (EHIC).
_2	Passport.
_3	Driver's License.
_98	I don't know
_99	Prefer not to answer
L6_2	**Which of the following is the most effective way to prevent the spread of infectious diseases like COVID-19?**
Probe:	Understanding Preventive Health
	Single response
_1	Taking antibiotics for every illness.
_2	Regular handwashing and vaccination.
_3	Avoiding outdoor activities.
_98	I don't know
_99	Prefer not to answer
L6_3	**If a doctor prescribes antibiotics, which type of illness are they most likely intended to treat?**
Probe:	Understanding Medical Terminology
	Single response
_1	Viral infections like colds.
_2	Bacterial infections.
_3	Fungal infections.
_98	I don't know
_99	Prefer not to answer

L7:	Digital literacy
L7_1	**How can you best protect your online accounts from being hacked?**
Probe:	Understanding Online Security
	Single response
_1	Use the same password for all accounts.
_2	Use strong, unique passwords and enable two-factor authentication.
_3	Share your password with trusted friends.
_98	I don't know
_99	Prefer not to answer
L7_2	**When you find a news article online, how can you determine if it is credible?**
Probe:	Evaluating Information Credibility
	Single response
_1	Share it on social media to see others' opinions.
_2	Check the date, source, and whether it is shared by reliable outlets.
_3	Assume it is true if it aligns with your beliefs.
_98	I don't know
_99	Prefer not to answer
L7_3	**What is the primary function of cloud storage services like Google Drive or OneDrive?**
Probe:	Using Digital Tools for Communication
	Single response
_1	To store files online and access them from any device.
_2	To back up your files only on your computer.
_3	To increase the speed of your internet connection.
_98	I don't know
_99	Prefer not to answer

L8:	Technological literacy
L8_1	**What does the term "IoT" (Internet of Things) refer to?**
Probe:	Understanding Basic Technological Concepts
	Single response
_1	A new type of internet browser.
_2	A network of devices connected to the internet that can communicate with each other.
_3	A social media platform.
_98	I don't know
_99	Prefer not to answer
L8_2	**If your computer runs slowly, what is the first step you should take to diagnose the problem?**
Probe:	Applying Problem-Solving in Technology
	Single response
_1	Restart the computer and check for software updates.
_2	Replace the computer immediately.
_3	Disconnect from the internet.
_98	I don't know
_99	Prefer not to answer
L8_3	**Understanding Data and Algorithms**
Probe:	What is an algorithm?
	Single response
_1	A set of instructions for a computer to solve a problem or complete a task.
_2	A type of computer hardware.
_3	A program that only works on social media.
_98	I don't know
_99	Prefer not to answer

L9:	Human literacy
L9_1	**Which of the following best describes the purpose of the EU motto, "United in Diversity"?**
Probe:	Understanding Cultural Diversity
	Single response
_1	To emphasize the economic advantages of the EU.
_2	To highlight political differences among EU member states.
_3	To celebrate the cultural, linguistic, and historical diversity of EU member states while promoting unity.
_98	I don't know
_99	Prefer not to answer
L9_2	**If a colleague expresses frustration at work, what is the most appropriate first step to respond?**
Probe:	Empathy and Social Awareness
	Single response
_1	Ignore them and let them calm down on their own.
_2	Ask them what's wrong and offer to listen without judgment.
_3	Assume they are overreacting and advise them to focus on work.
_98	I don't know
_99	Prefer not to answer
L9_3	**When working on a team project with individuals from different cultural backgrounds, what is the best approach to ensure success**
Probe:	Collabouration Skills
	Single response
_1	Encourage open communication, respect for cultural differences, and clearly defined goals.
_2	Avoid discussing cultural differences to prevent conflict.
_3	Focus only on your own part of the project and let others manage their tasks.
_98	I don't know
_99	Prefer not to answer

L10:	Cultural agility
L10_1	**When interacting with someone from a different cultural background, what is the best approach to ensure effective communication?**
Probe:	Awareness of Cultural Differences
	Single response
_1	Ask open-ended questions to understand their cultural perspective.
_2	Assume their customs and preferences are the same as yours.
_3	Avoid discussing cultural differences to prevent conflict.
_98	I don't know
_99	Prefer not to answer
L10_2	**You are attending a business meeting in another EU country where local customs differ from your own. What is the most appropriate action?**
Probe:	Adaptability to Cultural Norms
	Single response
_1	Follow your own customs regardless of the local norms.
_2	Learn about the local customs in advance and adapt your behaviour accordingly.
_3	Avoid interacting with local customs to prevent misunderstandings.
_98	I don't know
_99	Prefer not to answer
L10_3	**Which of the following is the most effective way to overcome cultural stereotypes?**
Probe:	Understanding and Managing Stereotypes
	Single response
_1	Avoid interacting with individuals from cultures you don't understand.
_2	Take time to learn about individuals and their unique experiences instead of relying on generalizations.
_3	Use stereotypes as a guide to predict someone's behaviour.
_98	I don't know
_99	Prefer not to answer

L11:	Media & information literacy
L11_1	**How can you determine if a news article online is credible?**
Probe:	Evaluating Credibility of Information
	Single response
_1	Check the source, author, date, and corroborate with other reliable outlets.
_2	Share the article on social media to see others' opinions.
_3	Assume it is credible if it aligns with your beliefs.
_98	I don't know
_99	Prefer not to answer
L11_2	**What is the best way to identify misinformation or "fake news"?**
Probe:	Recognizing Misinformation
	Single response
_1	Trust articles shared by friends and family without verification.
_2	Look for sensational headlines and verify the information with trusted fact-checking websites.
_3	Only trust news from social media.
_98	I don't know
_99	Prefer not to answer
L11_3	**Understanding Media's Role in Society**
Probe:	What is the primary role of free and independent media in a democracy?
	Single response
_1	To inform citizens and hold those in power accountable.
_2	To entertain citizens.
_3	To promote government agendas.
_98	I don't know
_99	Prefer not to answer

2.4 RESILIENCE QUESTIONS

Eliciting labour market and household financial resilience in a general population skills survey is critical for understanding the ability of individuals and households to adapt to economic changes, recover from financial shocks, and maintain long-term stability. Labour market resilience reflects the capacity of workers to navigate career transitions, engage in skill development, and respond to evolving industry demands. Financial resilience, on the other hand, encompasses the ability to manage unexpected financial pressures, maintain income stability, and access resources during crises. Including these dimensions in a survey provides valuable insights into workforce adaptability and financial well-being, which are essential for designing effective policies and programmes.

Labour market resilience is intrinsically tied to adaptability, skill flexibility, and proactive engagement in career development. For example, individuals who demonstrate adaptability are more likely to pursue opportunities in emerging industries and adjust to technological advancements. Skill development plays a pivotal role in this resilience, as ongoing learning ensures that workers remain relevant in dynamic labour markets (Heckman & Kautz, 2012). Additionally, self-perceived employability—or confidence in one's ability to secure new opportunities—is a key indicator of resilience, reflecting preparedness and adaptability (Fugate et al., 2004). By capturing these elements through targeted survey questions, policymakers can identify gaps and design interventions to support workers in navigating uncertain labour environments.

Similarly, financial resilience is essential for assessing the economic stability of households. It focuses on the ability to manage financial shocks, savings habits, and access to support systems. For instance, shock absorption measures readiness to cope with unexpected expenses, which is critical for preventing long-term financial hardship (World Bank, 2021). Income stability highlights financial vulnerability or resilience related to regular earnings, providing insights into the sustainability of household budgets (OECD, 2020). Access to resources, such as savings, credit, or social networks, underscores the importance of financial safety nets in mitigating crises. Including these aspects in a survey enables a comprehensive understanding of economic resilience and informs policies aimed at enhancing household financial security.

Labour market resilience hinges on flexibility and openness to change. Ongoing learning is essential for staying relevant in evolving industries. Confidence in finding new opportunities reflects preparedness and adaptability.

These questions evaluate readiness to cope with unexpected expenses, highlight financial vulnerability or resilience related to regular income, and identify the support systems and financial safety nets available to households.

Eliciting both labour market and financial resilience in a skills survey is essential for aligning workforce development strategies with economic realities. Resilience data can guide interventions that enhance employability, promote financial stability, and support inclusive growth. For instance, identifying populations with low financial resilience can inform the design of targeted savings incentives or credit access programmes. Similarly, understanding labour market resilience can help shape training initiatives that equip workers with in-demand skills and foster adaptability in uncertain environments. By integrating these dimensions into a skills survey, policymakers can address systemic vulnerabilities and build a more resilient and inclusive labour market.

The following pages present the resilience questions, namely R1 – R7 in detail.

R1:	Labour market resilience
R1_1	**How would you describe your ability to adapt to changes, such as new technologies, processes, or work environments?**
Probe:	Adaptability in a dymamic labour market
	Single response
_1	Very adaptable—I actively seek opportunities to learn and adapt.
_2	Somewhat adaptable—I adjust when needed but may require support.
_3	Not very adaptable—I find it challenging to adjust to changes.
_98	I don't know
_99	Prefer not to answer
R1_2	**How frequently do you participate in activities to improve or update your skills?**
Probe:	Proactive skill development for employability in a changing marketplace
	Single response
_1	Regularly (monthly or quarterly training).
_2	Occasionally (once or twice a year).
_3	Rarely (less than once a year).
_4	Never.
_98	I don't know
_99	Prefer not to answer
Follow-up R_1_2_1:	What type of upskilling activities do you engage in?
_1	Online courses and certifications.
_2	On-the-job training.
_3	Professional workshops or seminars.
_4	Other (please specify).
R1_3	**If you were to lose your current job, how confident are you in your ability to find alternative employment within your field?**
Probe:	Confidence in alternative employment
	Single response
_1	Very confident—I have the skills and network to find another job quickly.
_2	Somewhat confident—I may need some time or additional training.
_3	Not confident—I would struggle to find another job.
_98	I don't know
_99	Prefer not to answer

R2:	Financial resilience
R2_1	**If you faced an unexpected expense equivalent to 1/20th of your country's Gross National Income, how would you manage it?**
Probe:	Handling financial shocks without external support. GNI should be specific to every country (provided in the next page).
	Single response
_1	I could cover it immediately using my savings.
_2	I would need to borrow money or use credit.
_3	I would need to cut back on other expenses to afford it.
_98	I don't know how I would manage it.
_99	Prefer not to answer
R2_2	**Over the past 12 months, how often has your income been sufficient to cover your basic living expenses (e.g., rent, food, utilities)?**
Probe:	Financial stability and vulnerability to income volatility.
	Single response
_1	Always sufficient.
_2	Often sufficient, but sometimes tight.
_3	Occasionally insufficient, requiring adjustments.
_4	Frequently insufficient.
_98	I don't know
_99	Prefer not to answer
R2_3	Imagine you experience a financial shock, such as losing your primary source of income. How would you manage your finances in the following situations?
Probe:	Select all that apply for each timeframe.
Short-Term (1–3 months)	
	Multiple response
_1	Use personal savings.
_2	Use a credit card or take a personal loan.
_3	Borrow from family or friends.
_4	Reduce discretionary spending.
_5	Other (please specify).
Medium-Term (4–6 months)	
_1	Use extended savings or liquidate minor assets (e.g., electronics).
_2	Seek part-time or gig economy work.
_3	Apply for government benefits or unemployment assistance.
_4	Negotiate payment deferrals with creditors (e.g., rent, mortgage).
_5	Other (please specify).
Long-Term (7+ months)	
_1	Liquidate significant assets (e.g., car, property).
_2	Relocate to reduce living costs.
_3	Depend on long-term social welfare or support programs.
_4	Change career paths or re-skill for new job opportunities.
_5	Other (please specify).

Table 2: GNI per capita in the European Union

Country	GNI per Capita (€)	1/20th of GNI per capita (€)
Austria	50,099	2,505
Belgium	61,192	3,060
Bulgaria	31,773	1,589
Croatia	39,058	1,953
Cyprus	43,630	2,182
Czech Republic	43,664	2,183
Denmark	67,482	3,374
Estonia	40,248	2,012
Finland	55,208	2,760
France	52,811	2,641
Germany	61,293	3,065
Greece	34,748	1,737
Hungary	37,953	1,898
Ireland	83,853	4,193
Italy	49,853	2,493
Latvia	35,207	1,760
Lithuania	42,585	2,129
Luxembourg	83,717	4,186
Malta	48,280	2,414
Netherlands	66,088	3,304
Poland	40,273	2,014
Portugal	40,673	2,034
Romania	39,627	1,981
Slovakia	36,975	1,849
Slovenia	46,011	2,301
Spain	44,557	2,228
Sweden	62,042	3,102

Notes: These figures are sourced from the World Bank's data on GNI per capita (PPP) for 2023.
1 PPP international dollar ≈ €0.85 (approximate average for 2023).

R3:	**Net disposable income**

Thinking of your individual yearly net disposable income, can you select a category that best describes it from the ones suggested below?

Probe: Net Disposable Income per Capita is the total amount of money available to each individual in a country for spending and saving, after accounting for taxes and adding social benefits. It is a key measure of economic well-being and represents the resources individuals can use to support their consumption and savings needs. It includes Wages and salaries, Self-employment income, Income from property (rent, interest, dividends), Government benefits (e.g., unemployment, child support, pensions), Other transfers from public and private institutions. It subtracts Income taxes, and Social security contributions.
The figures shown should be only those corresponding to the country of the respondent.

Single response

Country	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10
Austria	<7,500	≥7,500	≥11,250	≥15,000	≥18,750	≥22,500	≥25,000	≥32,500	≥42,500	≥57,499
Belgium	<8,100	≥8,100	≥12,150	≥16,200	≥20,250	≥24,300	≥27,000	≥35,100	≥45,900	≥62,099
Bulgaria	<2,100	≥2,100	≥3,150	≥4,200	≥5,250	≥6,300	≥7,000	≥9,100	≥11,900	≥16,099
Croatia	<3,000	≥3,000	≥4,500	≥6,000	≥7,500	≥9,000	≥10,000	≥13,000	≥17,000	≥23,000
Cyprus	<6,600	≥6,600	≥9,900	≥13,200	≥16,500	≥19,800	≥22,000	≥28,600	≥37,400	≥50,599
Czech Republic	<4,500	≥4,500	≥6,750	≥9,000	≥11,250	≥13,500	≥15,000	≥19,500	≥25,500	≥34,500
Denmark	<9,000	≥9,000	≥13,500	≥18,000	≥22,500	≥27,000	≥30,000	≥39,000	≥51,000	≥69,000
Estonia	<4,200	≥4,200	≥6,300	≥8,400	≥10,500	≥12,600	≥14,000	≥18,200	≥23,800	≥32,199
Finland	<8,400	≥8,400	≥12,600	≥16,800	≥21,000	≥25,200	≥28,000	≥36,400	≥47,600	≥64,399
France	<7,800	≥7,800	≥11,700	≥15,600	≥19,500	≥23,400	≥26,000	≥33,800	≥44,200	≥59,799
Germany	<8,400	≥8,400	≥12,600	≥16,800	≥21,000	≥25,200	≥28,000	≥36,400	≥47,600	≥64,399
Greece	<4,800	≥4,800	≥7,200	≥9,600	≥12,000	≥14,400	≥16,000	≥20,800	≥27,200	≥36,800
Hungary	<3,600	≥3,600	≥5,400	≥7,200	≥9,000	≥10,800	≥12,000	≥15,600	≥20,400	≥27,599
Ireland	<9,600	≥9,600	≥14,400	≥19,200	≥24,000	≥28,800	≥32,000	≥41,600	≥54,400	≥73,600
Italy	<6,600	≥6,600	≥9,900	≥13,200	≥16,500	≥19,800	≥22,000	≥28,600	≥37,400	≥50,599
Latvia	<3,600	≥3,600	≥5,400	≥7,200	≥9,000	≥10,800	≥12,000	≥15,600	≥20,400	≥27,599
Lithuania	<3,900	≥3,900	≥5,850	≥7,800	≥9,750	≥11,700	≥13,000	≥16,900	≥22,100	≥29,899
Luxembourg	<12,000	≥12,000	≥18,000	≥24,000	≥30,000	≥36,000	≥40,000	≥52,000	≥68,000	≥92,000
Malta	<6,000	≥6,000	≥9,000	≥12,000	≥15,000	≥18,000	≥20,000	≥26,000	≥34,000	≥46,000
Netherlands	<8,700	≥8,700	≥13,050	≥17,400	≥21,750	≥26,100	≥29,000	≥37,700	≥49,300	≥66,700
Poland	<3,300	≥3,300	≥4,950	≥6,600	≥8,250	≥9,900	≥11,000	≥14,300	≥18,700	≥25,299
Portugal	<5,100	≥5,100	≥7,650	≥10,200	≥12,750	≥15,300	≥17,000	≥22,100	≥28,900	≥39,100
Romania	<2,700	≥2,700	≥4,050	≥5,400	≥6,750	≥8,100	≥9,000	≥11,700	≥15,300	≥20,700
Slovakia	<4,200	≥4,200	≥6,300	≥8,400	≥10,500	≥12,600	≥14,000	≥18,200	≥23,800	≥32,199
Slovenia	<6,000	≥6,000	≥9,000	≥12,000	≥15,000	≥18,000	≥20,000	≥26,000	≥34,000	≥46,000
Spain	<6,900	≥6,900	≥10,350	≥13,800	≥17,250	≥20,700	≥23,000	≥29,900	≥39,100	≥52,899
Sweden	<9,300	≥9,300	≥13,950	≥18,600	≥23,250	≥27,900	≥31,000	≥40,300	≥52,700	≥71,300

R4:	Gross Household Wealth

Thinking of your gross household wealth, can you select a category that best describes it from the ones suggested below?

Probe: Gross household wealth refers to the total value of all assets owned by a household, before deducting liabilities (such as debts or loans). It provides a comprehensive measure of the economic resources available to a household, reflecting its financial stability and potential for consumption or investment. Gross household wealth typically includes Financial Assets (Bank account balances, Investments in stocks, bonds, and mutual funds, Pension funds and retirement accounts), Non-Financial Assets (Real estate properties, Vehicles, Valuable personal possessions), and Business Assets (Ownership of small businesses or shares in privately held companies). Liabilities are not deducted when calculating gross household wealth (e.g. Mortgages, Credit card debt, Student loans, Other personal loans).
The figures shown should be only those corresponding to the country of the respondent.

Single response

Country	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10
Austria	<132,000	≥132,000	≥198,000	≥264,000	≥330,000	≥396,000	≥440,000	≥572,000	748,000	≥1,012,000
Belgium	<172,500	≥172,500	≥258,750	≥345,000	≥431,250	≥517,500	≥575,000	≥747,500	977,500	≥1,322,500
Bulgaria	<43,200	≥43,200	≥64,800	≥86,400	≥108,000	≥129,600	≥144,000	≥187,200	244,800	≥331,200
Croatia	<70,200	≥70,200	≥105,300	≥140,400	≥175,500	≥210,600	≥234,000	≥304,200	397,800	≥538,200
Cyprus	<145,800	≥145,800	≥218,700	≥291,600	≥364,500	≥437,400	≥486,000	≥631,800	826,200	≥1,117,800
Czech Republic	<86,400	≥86,400	≥129,600	≥172,800	≥216,000	≥259,200	≥288,000	≥374,400	489,600	≥662,400
Denmark	<220,500	≥220,500	≥330,750	≥441,000	≥551,250	≥661,500	≥735,000	≥955,500	1,249,500	≥1,690,499
Estonia	<75,899	≥75,899	≥113,849	≥151,799	≥189,749	≥227,699	≥252,999	≥328,900	430,099	≥581,899
Finland	<180,000	≥180,000	≥270,000	≥360,000	≥450,000	≥540,000	≥600,000	≥780,000	1,020,000	≥1,380,000
France	<186,300	≥186,300	≥279,450	≥372,600	≥465,750	≥558,900	≥621,000	≥807,300	1,055,700	≥1,428,300
Germany	<192,000	≥192,000	≥288,000	≥384,000	≥480,000	≥576,000	≥640,000	≥832,000	1,088,000	≥1,472,000
Greece	<100,800	≥100,800	≥151,200	≥201,600	≥252,000	≥302,400	≥336,000	≥436,800	571,200	≥772,799
Hungary	<72,000	≥72,000	≥108,000	≥144,000	≥180,000	≥216,000	≥240,000	≥312,000	408,000	≥552,000
Ireland	<296,400	≥296,400	≥444,600	≥592,800	≥741,000	≥889,200	≥988,000	≥1,284,400	1,679,600	≥2,272,400
Italy	<151,799	≥151,799	≥227,699	≥303,599	≥379,499	≥455,399	≥505,999	≥657,800	860,199	≥1,163,799
Latvia	<52,800	≥52,800	≥79,200	≥105,600	≥132,000	≥158,400	≥176,000	≥228,800	299,200	≥404,799
Lithuania	<64,800	≥64,800	≥97,200	≥129,600	≥162,000	194,400	≥216,000	≥280,800	367,200	≥496,799
Luxembourg	<378,000	≥378,000	≥567,000	≥756,000	≥945,000	≥1,134,000	≥1,260,000	≥1,638,000	2,142,000	≥2,898,000
Malta	<121,500	≥121,500	≥182,250	≥243,000	≥303,750	≥364,500	≥405,000	≥526,500	688,500	≥931,499
Netherlands	<224,400	≥224,400	≥336,600	≥448,800	≥561,000	≥673,200	≥748,000	≥972,400	≥1,271,600	≥1,720,400
Poland	<52,500	≥52,500	≥78,750	≥105,000	≥131,250	≥157,500	≥175,000	≥227,500	≥297,500	≥402,499
Portugal	<85,800	≥85,800	≥128,700	≥171,600	≥214,500	≥257,400	≥286,000	≥371,800	≥486,200	≥657,800
Romania	<42,000	≥42,000	≥63,000	≥84,000	≥105,000	≥126,000	≥140,000	≥182,000	≥238,000	≥322,000
Slovakia	<62,400	≥62,400	≥93,600	≥124,800	≥156,000	≥187,200	≥208,000	≥270,400	≥353,600	≥478,399
Slovenia	<112,500	≥112,500	≥168,750	≥225,000	≥281,250	≥337,500	≥375,000	≥487,500	≥637,500	≥862,499
Spain	<144,000	≥144,000	≥216,000	≥288,000	≥360,000	≥432,000	≥480,000	≥624,000	≥816,000	≥1,104,000
Sweden	<252,000	≥252,000	≥378,000	504,000	630,000	756,000	840,000	≥1,092,000	≥1,428,000	≥1,931,999

R5:	Net Household Wealth

Thinking of your net household wealth, can you select a category that best describes it from the ones suggested below?

Probe: Net household wealth refers to the total value of all assets owned by a household, minus its liabilities. It represents the financial position of a household, reflecting its ability to meet financial obligations and accumulate savings for future needs. It subtracts liabilities from gross household wealth, i.e., Mortgages (Outstanding balances on loans secured by real estate), Consumer Debt (Credit card balances and personal loans), Student Loans (Debt related to education), Auto Loans (Debts for vehicle purchases), Other Debts (Any other outstanding financial obligations).

The figures shown should be only those corresponding to the country of the respondent.

Single response

Country	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	≥Decile 8	Decile 9	Decile 10
Austria	<117,000	≥117,000	≥175,500	≥234,000	≥292,500	≥351,000	≥390,000	≥507,000	663,000	897,000
Belgium	<154,500	≥154,500	≥231,750	≥309,000	≥386,250	≥463,500	≥515,000	≥669,500	≥875,500	≥1,184,500
Bulgaria	<38,700	≥38,700	≥58,050	≥77,400	≥96,750	≥116,100	≥129,000	≥167,700	≥219,300	≥296,700
Croatia	<64,200	≥64,200	≥96,300	≥128,400	≥160,500	≥192,600	≥214,000	≥278,200	≥363,800	≥492,199
Cyprus	<133,800	≥133,800	≥200,700	≥267,600	≥334,500	≥401,400	≥446,000	≥579,800	≥758,200	≥1,025,800
Czech Republic	<78,900	≥78,900	≥118,350	≥157,800	≥197,250	≥236,700	≥263,000	≥341,900	≥447,100	≥604,900
Denmark	<190,500	≥190,500	≥285,750	≥381,000	≥476,250	≥571,500	≥635,000	≥825,500	≥1,079,500	≥1,460,500
Estonia	<69,899	≥69,899	≥104,849	≥139,799	≥174,749	≥209,699	≥232,999	≥302,900	≥396,099	≥535,899
Finland	<156,000	≥156,000	≥234,000	≥312,000	≥390,000	≥468,000	≥520,000	≥676,000	≥884,000	≥1,196,000
France	<165,300	≥165,300	≥247,950	≥330,600	≥413,250	≥495,900	≥551,000	≥716,300	≥936,700	≥1,267,300
Germany	<165,000	≥165,000	≥247,500	≥330,000	≥412,500	≥495,000	≥550,000	≥715,000	≥935,000	≥1,265,000
Greece	<91,800	≥91,800	≥137,700	≥183,600	≥229,500	≥275,400	≥306,000	≥397,800	≥520,200	≥703,800
Hungary	<66,000	≥66,000	≥99,000	≥132,000	≥165,000	≥198,000	≥220,000	≥286,000	≥374,000	≥505,999
Ireland	<260,400	≥260,400	≥390,600	≥520,800	≥651,000	≥781,200	≥868,000	≥1,128,400	≥1,475,600	≥1,996,399
Italy	<133,799	≥133,799	≥200,699	≥267,599	≥334,499	≥401,399	≥445,999	≥579,800	≥758,199	≥1,025,799
Latvia	<48,300	≥48,300	≥72,450	≥96,600	≥120,750	≥144,900	≥161,000	≥209,300	≥273,700	≥370,300
Lithuania	<58,800	≥58,800	≥88,200	≥117,600	≥147,000	≥176,400	≥196,000	≥254,800	≥333,200	≥450,799
Luxembourg	<318,000	≥318,000	≥477,000	≥636,000	≥795,000	≥954,000	≥1,060,000	≥1,378,000	≥1,802,000	≥2,438,000
Malta	<109,500	≥109,500	≥164,250	≥219,000	≥273,750	≥328,500	≥365,000	≥474,500	≥620,500	≥839,499
Netherlands	<195,900	≥195,900	≥293,850	≥391,800	≥489,750	≥587,700	≥653,000	≥848,900	≥1,110,100	≥1,501,900
Poland	<49,500	≥49,500	≥74,250	≥99,000	≥123,750	≥148,500	≥165,000	≥214,500	≥280,500	≥379,499
Portugal	<76,800	≥76,800	≥115,200	≥153,600	≥192,000	≥230,400	≥256,000	≥332,800	≥435,200	≥588,800
Romania	<39,000	≥39,000	≥58,500	≥78,000	≥97,500	≥117,000	≥130,000	≥169,000	≥221,000	≥299,000
Slovakia	<56,400	≥56,400	≥84,600	≥112,800	≥141,000	≥169,200	≥188,000	≥244,400	≥319,600	≥432,399
Slovenia	<100,500	≥100,500	≥150,750	≥201,000	≥251,250	≥301,500	≥335,000	≥435,500	≥569,500	≥770,499
Spain	<129,000	≥129,000	≥193,500	≥258,000	≥322,500	≥387,000	≥430,000	≥559,000	≥731,000	≥988,999
Sweden	<216,000	≥216,000	≥324,000	≥432,000	≥540,000	≥648,000	≥720,000	≥936,000	≥1,224,000	≥1,655,999

R6:	Portfolio diversification	
R6_1	How is your household's financial wealth distributed across the following asset categories?	
Probe:	Select all that apply and indicate approximate percentages if possible.	
	Financial wealth refers to the total value of an individual's or household's financial assets minus liabilities. It encompasses liquid and semi-liquid assets that can be readily converted into cash or used to generate returns. Unlike total wealth, financial wealth excludes physical and tangible assets like real estate or vehicles.	
	Multiple response	
_1	Cash and Deposits (e.g., savings accounts, fixed deposits):	___ %
_2	Real Estate (excluding primary residence, e.g., rental properties):	___ %
_3	Equities (e.g., individual stocks, mutual funds, ETFs): ___ %	___ %
_4	Fixed Income (e.g., government or corporate bonds):	___ %
_5	Pension Funds or Retirement Accounts:	___ %
_6	Insurance Products with Investment Components (e.g., life insurance savings plans):	___ %
_7	Other Investments (e.g., commodities, cryptocurrencies):	___ %
_8	Not invested or only in cash:	___ %
_98	I don't know.	
_99	Prefer not to answer	
R6_2	Do you believe your current distribution is sufficiently diversified to reduce financial risks?	
Probe:	Follow-Up Question.	
	Single response	
_1	Yes.	
_2	No.	
_3	Not sure.	
_98	I don't know	
_99	Prefer not to answer	

R7:	Financial situation at childhood						
Thinking about the financial situation at home when you were a child, how difficult would you say it was?							
Probe:	e.g., aged 12-14						
	Single response						
	1 Very difficult	_2	_3 Neither difficult not easy	_4	5 Very easy	_98 I don't know	_99 Prefer not to answer
Our financial situation at childhood was…							

2.5 SKILLS-PORTFOLIO QUESTIONS

Eliciting skills portfolio questions in a general population survey is essential for understanding the complex interplay between workers' skills, organisational practices, job characteristics, and training experiences. By addressing these dimensions, the survey can provide nuanced insights into how individuals acquire, develop, and utilise their skills within diverse work environments. This information is vital for designing targeted policies and initiatives aimed at fostering a skilled and adaptable workforce.

Organisational practices play a crucial role in shaping workers' skills portfolios (Sung & Choi, 2014; Boxall & Purcell, 2011). Practices such as on-the-job training, mentorship programmes, and opportunities for internal mobility influence both the breadth and depth of an individual's skills. Organisations that prioritise employee development often see greater innovation and productivity (Garavan et al., 1999). Furthermore, capturing data on organisational support for skills development can help identify gaps and disparities across sectors and regions, providing policymakers with actionable insights.

Job characteristics are another critical dimension. The nature of a worker's role—including task complexity, autonomy, and technological integration—significantly impacts skill development and utilisation. Research highlights that jobs requiring high levels of problem-solving, collaboration, and adaptability are associated with greater skill accumulation (Autor et al., 2003; Felstead et al., 2007). By capturing information on job characteristics, the survey can illuminate how work environments influence the demand for and application of specific skills.

The skills portfolio dimension focuses on the range and diversity of competencies that individuals possess. A comprehensive skills portfolio includes not only technical expertise but also transversal skills such as communication, critical thinking, and adaptability. These skills are increasingly recognised as essential for navigating rapidly changing labour markets (Cedefop, 2020; OECD, 2019). Survey questions aimed at eliciting details about workers' skills portfolios can help identify which skills are most valued and where gaps exist, informing both educational curricula and workforce development initiatives.

Training experiences form the fourth dimension, encompassing both formal and informal learning. Participation in training programmes is a key driver of skill acquisition and career advancement. Understanding the frequency, quality, and accessibility of training opportunities provides insights into how workers enhance their skills throughout their careers (Eraut, 2004; Ashton & Sung, 2002). Training data can also reveal disparities in access, particularly among underrepresented groups, and inform policies aimed at promoting inclusive lifelong learning (European Commission, 2020).

By integrating these four dimensions into a skills survey, policymakers and researchers can develop a holistic understanding of the factors shaping workers' competencies and career trajectories. Such data is crucial for aligning workforce development strategies with the needs of both employers and employees. Additionally, the findings can guide investments in education and training systems, ensuring that they are responsive to labour market demands and contribute to economic resilience.

The following pages present the skills-portfolio questions, namely S1 – S36 in detail.

2.5.1 ORGANISATIONAL PRACTICES

S1:	Innovation						
S1_1	**Is your organisation normally at the forefront when it comes to adopting innovations, new knowledge or new methods, or is it more a follower?**						
Probe:							
	Single response						
	_1 Mainly at the forefront	_2	_3 Neither at the forefront, nor a follower	_4	_5 Mainly a follower	_98 I don't know	_99 Prefer not to answer
My organisation is…							
S1_2	**How would you characterise the extent of innovation in your organisation or your work with respect to the following aspects?**						
Probe:							
	Single response						
	_1 Very low	_2	_3 Neither low nor high	_4	_5 Very high	_98 I don't know	_99 Prefer not to answer
The product or service produced or offered							
The technology used							
The tools or instruments used							
The knowledge or methods used							

S2:	Organisational Practices
Which of the following statements best describes the standard practices used by your organization?	
Probe:	Please
	Multiple responses
_1	My organization supports my career development by offering training or education
_2	My organization encourages me to broaden my skills
_3	My organization gives me the opportunity to perform different tasks
_4	My organization carries out long-term career planning for its managerial staff
_5	My organization monitors, appraises and rewards high performance
_96	None of the above

2.5.2   JOB CHARACTERISTICS

S3:	Job entry
Which of the following best describe the circumstances under which you entered your current job?	
Probe:	Please
	Single response
_1	Directly from school \ university
_2	After being made redundant from my previous job
_3	After leaving my previous job
_4	Following a spell of unemployment \ inactivity
_5	None of the above
_98	I don't know
_99	Prefer not to answer

S4:	Job tenure and labour market experience	
How many years have you been working with your current employer and in the labour market in general?		
Probe:	Include part time, evening or weekend work or any other type of work activity	
	Single response	
	With my current employer	In general
NUMERIC RANGE	0...50	0...50
_98	I don't know	I don't know
_99	Prefer not to answer	Prefer not to answer

S5:	Job experience
Since you started working (start of your career), how many different paid jobs have you done (for how many different firms or organisations have you worked)?	
Probe:	Include part time, evening or weekend work or any other type of work activity
	Single response
NUMERIC RANGE	0...30
_98	I don't know
_99	Prefer not to answer

S6:	Learning by doing
How long did it take for you, after you first started doing this type of job, to learn to do it well?	
Probe:	If answers 'Still learning', ask: 'How long do you think it will take?':
	Single response
_1	Less than 1 week
_2	Less than 1 month
_3	1 month and over, up to 3 months
_4	3 months and over, up to 6 months
_5	6 months and over, up to 1 year
_6	1 year and over, up to 2 years
_7	2 years and over
_98	I don't know
_98	Prefer not to answer

S7:	Promotion
S7_1:	**Since you started working for your employer, have you changed jobs or been promoted to a position that had new or additional duties?**
	Single response
_1	Yes
_2	No
_98	I don't know
_99	Prefer not to answer
S7_2:	**Since you started working for your employer, has there been any change in your job duties and tasks even if you were not promoted?**
	Single response
_1	Yes
_2	No
_98	I don't know
_99	Prefer not to answer
S7_3:	In the next 3 years, how likely are you to be promoted?
	Single response
_1	Very likely
_2	Not very likely
_98	I don't know
_99	Prefer not to answer

S8:	Moonlighting
In the last week, have you done one job or more than one?	
Probe:	Include part time, evening or weekend work or any other type of work activity
	Single response
_1	One
_2	More than one
_98	I don't know
_99	Prefer not to answer

S9:	Moonlighting reason			
What is the primary reason why you hold more than one jobs?				
Probe:				
Single response				
	_1 Yes	_2 No	_98 I don't know	_99 Prefer not to answer
Hours constrained in primary job				
Skills diversification/portfolio				
Transition to entrepreneurship				
Financial constraints				
Own pleasure				
Other-please specify				

S10:	How many hours per week do you usually work at your main job and any other job/jobs?	
Into		
Probe:	Exclude meal breaks and travel to work time but include 'usual' overtime If the number is not a whole number (e.g. 37.5 hours), round up to the next hour (i.e. 38 hours)	
Open response		
	Main job	Other job(s)
Numeric range	1…168	1…168
_198	I don't know	I don't know
_199	Prefer not to answer	Prefer not to answer

S11:	Work arrangement
What kind of work arrangement do you have at your primary job?	
Probe:	People have different kinds of work arrangements with their employers. Some are regular permanent employees and others may be independent contractors, temp workers, seasonal workers, or may only work when called and work is available.
	Single response
_1	stable work under an indefinite employment contract
_2	independent contracting, consultancy or freelancing
_3	seasonal work
_4	work done under contract for a fixed period or for a fixed task
_5	work paid by a temporary agency
_6	work only when called and work is available
_7	other work arrangement (PLEASE SPECIFY)
_98	I don't know
_99	Prefer not to answer

S12:		Job satisfaction
How satisfied are you with your job overall and its facets?		
Probe:		
Single response		

		_0 Lowest	_1	_2	_3	_4	_5	_6	_7	_8	_9	_10 Highest	_97 Does not apply
S4_1	Job overall												
S4_2	The nature of the work itself												
S4_3	Pay and benefits												
S4_4	Flexibility												
	Hours of work												
S4_5	Skills you have learned or developed on the job												
S4_6	Training opportunities												
S4_7	Other, please specify												

S13: Job perception

Indicate the extent to which the following statements apply to your current job

Probe:

Single response

		_1 Not at all	_2	_3	_4	_5 To a very high extent	_97 Not applicable	_98 I don't know	_99 Prefer not to answer
_1	I apply many of the skills and competencies learnt during my formal education in my current job								
_2	I apply many of the skills and competencies learnt during previous jobs in my current job?								
_3	I find my current job intellectually fulfilling								
_4	I find my current job environment motivating								
_5	The duties and tasks of my current job are my in line with my prior expectations								
_6	The opportunities for career progression in my current job are in line with my prior expectations								

S14:	Job autonomy
How much freedom do you have to decide how to do your job in your own way, rather than following a fixed procedure or a supervisor's instructions?	
Probe:	Please
	Single response
_0	No freedom
_1	
_2	
_3	
_4	
_5	
_6	
_7	
_8	
_9	
_10	Complete freedom
_98	I don't know
_99	Prefer not to answer

S15:	**New Technologies**								
As part of your job, how often do you use new technologies in your current job?									
Probe:	Single code only for each item. Rotate order of items.								
	Single response								
		_1 Never	_2 Rarely	_3 Sometimes	_4 Most of the time	_5 Always	_97 Not applicable	_98 I don't know	_99 Prefer not to answer
_1	Virtual/augmented reality								
_2	Big data								
_3	Artificial intelligence								
_4	Internet of things								
_5	Internet of services								
_6	3D printing								
_7	Blockchain technology								
_8	Other technologies								
_97	Inapplicable								
_98	I don't know								
_99	Prefer not to answer								

S16:	Career breaks			
Have you had any breaks in your career overall so far and why?				
Probe:				
Single response				
	_1 Yes	_2 No	_98 I don't know	_99 Prefer not to answer
Caregiving				
Health				
Education				
Voluntary unemployment				
Involuntary unemployment				
Family reasons				
Military service				
Other-please specify				

S17:	Seniority			
What is/was your level of seniority in your current or most recent occupation?				
Probe:				
Single response				
	_1 Yes	_2 No	_98 I don't know	_99 Prefer not to answer
Entry-level				
Mid-level				
Senior-level				
Executive				
None of the above				
Other-please specify				

S18:   Alternative career aspirations

Is there any other activity that you would you like to do instead of your current activity?

Probe:

Single response

	_1 Yes	_2 No	_98 I don't know	_99 Prefer not to answer
Different role in my current job				
Different occupation				
Start a business				
Further education				
None of the above				
Other-please specify				

S19:   Barriers to alternative activities

What is the main reason you are not currently pursuing this alternative activity?

Probe:

Single response

	_1 Yes	_2 No	_98 I don't know	_99 Prefer not to answer
Financial constraints				
Lack of opportunities				
Family responsibilities				
Skills shortage				
None of the above				
Other-please specify				

S19: Barriers to alternative activities

How are you currently looking for a/another job?

Probe:

Single response

	_1 Yes	_2 No	_98 I don't know	_99 Prefer not to answer
Online job boards				
Networking				
Recruitment agencies				
Direct applications				
Not actively looking				
Other-please specify				

2.5.3   SKILL PORTFOLIO

S20:	Skills Portfolio I			
Do your current and/or previous job tasks entail any of the following skills?				
	Single response	**Probe: Tick where appropriate**		
			Current job	Previous job(s)
_1	Job specific skills	Specialist knowledge or understanding needed to perform job duties, Knowledge of particular products or services, ability of operating specialized technical equipment		
_2	Basic skills: Numeracy and literacy	Calculations using decimals, percentages or fractions, reading manuals and procedures, Calculations using advanced mathematical or statistical procedures, Reading short documents such as short reports, letters or memos, Writing long documents such as long reports, handbooks, articles or books		
_3	Problem solving skills	Spotting problems or faults, Working out the cause of problems or faults, Thinking of solutions to problems, Noticing when there is a mistake, Paying close attention to details		
_4	ICT skills (basic and advanced)	use ICT technology as a tool to carry out your duties		
_5	Communication skills (verbal, written)	Making speeches or presentations, teaching and instructing people, sharing information with co-workers/clients, Persuading or influencing others		
_6	Team-working skills	ability to cooperate with co-workers, negotiating with people		
_7	Foreign language skills	needed to perform duties		
_8	Learning and knowledge acquisition skills	explore and expand opportunities own opportunities to gain expertise, initiative to advance skill levels, engagement in learning, find and process information		
_9	Planning and organisation skills	ability to set up plans and manage duties according to plans, Planning the activities of others, Delegating tasks, organizing work time		
_10	Customer management	Selling a product/service, Dealing with people, Counselling, advising or caring for customers or clients		
_11	Flexibility and adaptability	ability to respond to non-routine situations in the course of performing duties, ability to cope with changing work environment, ability to adapt to varied job roles and responsibilities, taking initiative		
_98	I don't know			
_98	Prefer not to answer			

S21: Skills portfolio II

Below is a list of skills and competences required to do your present job.
What is the required level of competence in your current work?

Probe:

Single response

		_1 Very low	_2	_3	_4	_5 Very high	_97 Not applicable	_98 I don't know	_99 Prefer not to answer
_1	Job specific skills								
_2	Technical or practical								
_3	Planning & Organisation								
_4	Customer management								
_5	Oral communication								
_6	Written communication								
_7	Problem solving skills								
_8	Team working skills								
_9	Strategic management								
_10	Basic literacy skills								
_11	Basic numeracy skills								
_12	Advanced IT or software								
_13	Office administration								
_14	Basic computer use								
_15	Advanced computer use								
_16	Foreign language skills								
_17	Analytical thinking								
_18	Co-ordination skills								
_19	Learning and Knowledge acquisition skills								
_20	Native or Own language skills								
_21	Ability to come up with new ideas and solutions								
_22	Memory recall ability								
_23	Information processing speed								
_24	Environmental resource management skills								
_25	Interpersonal skills								
_26	Cultural awareness and comprehension skills								
_27	Change management skills								
_28	Entrepreneurial skills								

S22:	Skill gaps					
Would you describe your current [ICT | Literacy | Numeracy | Other] skills as						
Probe:						
Single response						
		_1	_2	_3	_98	_96
		Lower than required to do your job	Matched to the requirements of your job	Higher than required for my job	I don't know	Not applicable
_1	Job specific skills					
_2	Technical or practical					
_3	Planning & Organisation					
_4	Customer management					
_5	Oral communication					
_6	Written communication					
_7	Problem solving skills					
_8	Team working skills					
_9	Strategic management					
_10	Basic literacy skills					
_11	Basic numeracy skills					
_12	Advanced IT or software					
_13	Office administration					
_14	Basic computer use					
_15	Advanced computer use					
_16	Foreign language skills					
_17	Analytical thinking					
_18	Co-ordination skills					
_19	Learning and Knowledge acquisition skills					
_20	Native or Own language skills					
_21	Ability to come up with new ideas and solutions					
_22	Memory recall ability					
_23	Information processing speed					
_24	Environmental resource management skills					
_25	Interpersonal skills					
_26	Cultural awareness and comprehension skills					
_27	Change management skills					
_28	Entrepreneurial skills					

S23:	Skill gaps reasoning
If answered 3 to any of the above, ask employee:	
You indicated that you are in a job where your skills are higher than what is required to do the job? Why is this?	
Probe:	
	Single response
_1	Could not find a job to match my skills
_2	I chose my current job despite having excess skills
_98	I don't know
_99	Prefer not to answer

S24:	Initial skills gaps					
When you were initially hired for your job, were your [ICT | Literacy | Numeracy | Other] skills…:						
Probe:						
Single response						
		_1	_2	_3	_98	_99
		Lower than required to do your job	Matched to the requirements of your job	Higher than required for my job	I don't know	Prefer not to answer
_1	Job specific skills					
_2	Technical or practical					
_3	Planning & Organisation					
_4	Customer management					
_5	Oral communication					
_6	Written communication					
_7	Problem solving skills					
_8	Team working skills					
_9	Strategic management					
_10	Basic literacy skills					
_11	Basic numeracy skills					
_12	Advanced IT or software					
_13	Office administration					
_14	Basic computer use					
_15	Advanced computer use					
_16	Foreign language skills					
_17	Analytical thinking					
_18	Co-ordination skills					
_19	Learning and Knowledge acquisition skills					
_20	Native or Own language skills					
_21	Ability to come up with new ideas and solutions					
_22	Memory recall ability					
_23	Information processing speed					
_24	Environmental resource management skills					
_25	Interpersonal skills					
_26	Cultural awareness and comprehension skills					
_27	Change management skills					
_28	Entrepreneurial skills					

S25:	Skills development								
To what extent were the following activities helpful in developing the skills and knowledge you need to do your job?									
Probe:									
	Single response								
		_1 Of no help at all	_2	_3	_4	_5 A great deal of help	_97 Not applicable	_98 I don't know	_99 Prefer not to answer
_1	Doing this work or similar work on a regular basis.								
_2	Studying for educational qualifications.								
_3	Studying for technical qualifications.								
_4	Watching or listening to others at work.								
_5	Doing a training course with your current employer, away from your usual place of work.								
_6	Doing a training course with a previous employer, away from your usual place of work.								
_7	Reading manuals, books, videos or on-line materials.								
_8	Activities outside of work, education or training.								
_9	Other [Please specify…]								

S26:	Skill change			
If you compare the work you do now, with that same kind of work when you started your current job, to what extent do you agree with the following statements				
Probe:				
Single response				
	_1 Agree	_2 Disagree	_98 I don't know	_99 Prefer not to answer
Important professional skills I had, have decreased				
Important professional skills I had, have decreased				
I am less qualified than I used to be for my job				
Tasks that I am good at, are becoming less important				
Technological developments make many of my skills outdated				
Several skills I have, are no longer appreciated by employers				
During re-organisations, jobs such as mine are often at risk				
My type of job is becoming less common in organisations				
I am good at handling modern tools and resources in my job				

S27:	Skill in short supply
What is the main skill that you believe is in short supply and is preventing you from effectively filling existing vacancies?	
Probe:	Please
	Open ended

S28:	Skills acquisition
Can you estimate the number and describe the type of skills you have developed during your current job	
Probe:	Please
	Open ended

2.5.4 TRAINING

S29:	Training			
Which of the following statements best describes your situation?				
Probe:				
	Single response			
	_1 Agree	_2 Disagree	_98 I don't know	_99 Prefer not to answer
My organization generally does not provide any training or education				
In the last 12 months my organization has provided training but I did not attend because of work-related reasons (e.g. work or time pressure)				
In the last 12 months my organization has provided training but I did not attend because of planned non-work-related reasons (e.g. family responsibilities/ child care)				
In the last 12 months my organization has provided training for my work but I did not attend because of unforeseen non-work-related events.				

S30:	Past training
S30_1	**Have you participated in any vocational training courses in the past?**
	Single response
_1	Yes
_2	No
S30_2	**Did you obtain a degree, diploma, or completion certificate as a result?**
	Single response
_1	Yes
_2	No
S30_3	**What was the duration of your most recent course?**
	Single response
_1	Less than a month
_2	1-3 months
_3	4-6 months
_4	More than 6 months
S30_4	**What was the duration of your most recent course?**
	Multiple response
_1	Career change
_2	Career progression
_3	To find a job
_4	Skill enhancement
_5	Personal interest
_6	Pay rise
_7	Other-please specify
S30_5	**How satisfied are you with the skills you learned during this training?**
	Single response
_1	Very dissatisfied
_2	Somewhat dissatisfied
_3	Neither dissatisfied nor satisfied
_4	Somewhat satisfied
_5	Very satisfied

S31:	**Are you currently studying for any kind of formal qualification?**				
	Multiple responses				
		Probe:	**Examples:**	1 - Yes	2 - No
_1	**Vocational Education and Training (VET)**	Practical, work-based training programs for specific professions or industries.	Apprenticeships, school-based VET, CPD courses		
_2	**Higher Education Training**	University or non-university programs with academic or practical components.	Erasmus+, European Universities Initiative, Bachelor's, Master's, or Doctorate programs		
_3	**EU-Funded Training Programs**	Training supported by EU initiatives for mobility, innovation, and skill-building.	Erasmus+, European Social Fund+, Digital Europe Programme		
_4	**Sector-Specific Training**	Focused programs in fields like healthcare, IT, green energy, and engineering.	Renewable energy technician training, coding bootcamps, medical staff upskilling programs		
_5	**Lifelong Learning and Adult Education**	Programs for adults to acquire new or update existing skills.	Evening classes, online courses, community-based training		
_6	**Digital and E-Learning Programs**	Online training in digital skills, often supported by EU frameworks.	MOOCs, SELFIE tool, online certification programs		
_7	**Language Training**	Programs to enhance multilingual skills, supporting mobility and employment.	Erasmus+ Online Linguistic Support (OLS), language courses at schools/universities		
_8	**Inclusive Training Programs**	Tailored programs for marginalized groups such as migrants, disabled individuals, and the unemployed.	ESF+ initiatives, Erasmus+ Inclusion and Diversity Strategy		
_9	**Youth-Oriented Training**	Training aimed at young individuals transitioning into the workforce.	European Solidarity Corps, Youth Guarantee Scheme		

S32: Training & Skill transferability

If the answer to any of the previous training options is yes:

Do you feel that the skills or knowledge which you acquired in this training would be of any use in…?

Probe:

Single response

	_1 Yes	_2 No	_98 I don't know	_99 Prefer not to answer
Getting a similar job with another employer [transferable skills]				
Performing a different job altogether [general skills]				
Performing better only in your current job [job-specific skills]				

S33: Training adequacy

S32_1 | **Was the training you received over the last year in your current job adequate for keeping up to date with the skills required?**
	Single response
_1	Yes
_2	No
_98	I don't know
_99	Prefer not to answer
S32_2	**Would you say that this training or education has improved your skills?**
_1	a lot
_2	a little
_3	or not at all?
_98	I don't know
_99	Prefer not to answer

S34: No training

If the answer to all previous training options is no:

What is the primary reason why you did not participate in any training?

Probe: Please

	Single response
_1	I did not want any training.
_2	My employer was not willing to provide any training, even though I wanted it
_3	My family commitments made it hard to find the time for training
_4	I did not need any additional training for my main job
_5	Training would not help me to get a better job in my organization
_6	My work commitments made it hard to find the time for training
_7	I could not bear the cost of the training on my own
_98	I don't know
_99	Prefer not to answer

S35:	**Training need**								
How important are the following in describing the circumstances leading to your current need for training?									
Probe:									
	Single response								
		_1 Not important	_2	_3	_4	_5 Very important	_97 Not applicable	_98 I don't know	_99 Prefer not to answer
_1	My formal education at school\college\university did not provide me with the general skills required for my current job.								
_2	My skills have fallen behind because of the introduction of new technologies within my current job.								
_3	My skills have fallen behind because the introduction of new work practices within my current job								
_4	I have changed occupation and have limited experience in some areas of my current work.								
_5	I have been reassigned to a new post by my superiors.								
_6	Other								

S36:	Classroom training				
I'm going to read a list of types of classroom training. For each, please tell me whether you have had that kind of training in the past 3 years.					
Probe:	In the past 3 years/since you started your current position/since you started this job				
Single response					
		_1 Yes	_2 No	_98 I don't know	_99 Prefer not to answer
Reading, writing, math, or English-language skills					
Customer service or sales training					
Managerial or supervisory skills, such as how to manage employees and resolve conflicts.					
Communication and team skills training, such as how to conduct effective meetings, work in groups, and make presentations					
Quality control techniques, such as statistical process control or how to use quality control charts to monitor errors, defects, or customer complaints					
Other technical skills for your specific occupation, for example, engine repair if you are a mechanic, a new bookkeeping program if you are an accountant, or some other technical skill used in your line of work					

3. BOOST SURVEY I: CONJOINT ANALYSIS

The economics literature provides substantial insights into the design and evaluation of training programs, particularly those aimed at improving employee productivity and addressing workplace challenges. De Grip and Sauermann (2012) conducted a field experiment to evaluate how training impacts both individual and co-worker productivity. Their study highlighted that well-designed training not only benefits the trainee but also has positive spillover effects, reinforcing the importance of high-quality workplace training programs. Similarly, Leuven and Oosterbeek (2008) explored the wage returns to private-sector training, demonstrating that participation in training leads to significant wage growth, particularly when programs align with employee and employer needs.

Workplace training policies also play a pivotal role in shaping access and incentives for training. For example, Leuven and Oosterbeek (2004) analyzed tax deductions for training expenses, providing evidence that financial incentives can significantly enhance participation rates. Bassanini et al. (2005) expanded on this by examining workplace training across Europe, noting substantial differences in training provision linked to institutional frameworks and labour market structures. These findings emphasize the importance of tailoring training policies to national and regional contexts to optimize effectiveness.

The demand and supply dynamics of work-related training were examined in Oosterbeek's (1998) study, which unraveled factors driving training participation. Similarly, Leuven and Oosterbeek (1999) analyzed training markets in four countries, identifying barriers that prevent equitable access to training opportunities. These studies stress the necessity of addressing both employer-driven and employee-driven factors to increase training uptake.

Research also highlights broader social dimensions of training. Buser, Niederle, and Oosterbeek (2014) investigated gender competitiveness and its influence on career choices, underscoring the importance of designing training that mitigates gender disparities in the workplace. Furthermore, Leuven et al. (2007) and Fredriksson et al. (2013) explored educational funding and class size, respectively, linking early interventions to improved long-term outcomes. These studies suggest that a comprehensive approach to skills development, spanning education to employment, is essential for fostering sustainable growth.

Finally, international comparisons offer valuable insights into training systems. Leuven, Oosterbeek, and van Ophem (2004) examined male skill wage differentials across countries, linking differences to training demand and supply. These studies collectively highlight the multifaceted nature of training program effectiveness and offer a roadmap for developing robust, inclusive, and impactful initiatives. The combination of financial incentives, contextualized policy design, and a focus on inclusivity emerges as key strategies for addressing modern workforce challenges.

3.1.1   SELECTING SAMPLE AND TARGET GROUP

Table 3: Considerations when selecting the countries for sampling in conjoint analysis

#	Country	Adult Learning Participation Rate (%)	Unemployment Rate (%)	GDP per Capita (USD)	Individuals with Basic Digital Skills (%)	EPI Score
1	Austria	14.8	5.2	50,100	79	75.5
2	Belgium	8.5	6.3	61,190	75	73.2
3	Bulgaria	2.3	4.9	31,770	32	65
4	Croatia	4	6	39,060	57	66.3
5	Cyprus	7.4	7.1	43,630	62	68.9
6	Czech Republic	8.3	2.8	43,660	75	77.3
7	Denmark	20.8	4.4	67,480	82	82.9
8	Estonia	19.1	5.4	40,250	83	76.1
9	Finland	29.2	6.8	55,210	81	87.7
10	France	18.8	7.9	52,810	62	81.6
11	Germany	8	3.6	61,290	78	81.3
12	Greece	4.2	12.7	34,750	51	61.2
13	Hungary	5.7	3.9	37,950	58	69.4
14	Ireland	13.3	4.5	83,850	70	80.1
15	Italy	7.7	9.2	49,850	46	67.9
16	Latvia	8.5	7.7	35,210	71	74.2
17	Lithuania	6.2	6.1	42,590	74	76.7
18	Luxembourg	15.7	4.6	83,720	79	85.3
19	Malta	8.4	3.4	48,280	72	78.5
20	Netherlands	19.3	3.8	66,090	83	81.9
21	Poland	5.1	3	40,270	60	72.8
22	Portugal	10.2	6.1	40,670	55	69.9
23	Romania	1.3	5.5	39,630	28	64.1
24	Slovakia	3.9	5.7	36,980	69	73.6
25	Slovenia	11.2	4.1	46,010	80	75.8
26	Spain	10.4	12.6	44,560	64	71.3
27	Sweden	29.6	7.2	62,040	84	88.3
28	United Kingdom	14.2	4.1	38,700	75	79.5

Data sources: Adult Learning Participation Rate (%): Eurostat's Adult Learning Statistics, European Commission, Unemployment Rate (%): Eurostat's Unemployment Statistics, GDP per Capita (Euros): Eurostat's National Accounts, Individuals with Basic Digital Skills (%): Eurostat's Digital Skills Indicator
EPI Score: Environmental Performance Index by Yale and Columbia Universities

The design could be implemented to:
  - o All individuals
  - o All unemployed Individuals

3.1.2   DEFINING VIGETTE ATTRIBUTES

A vignette is a hypothetical scenario or program characterized by attributes. Each attribute has multiple levels, creating a design space when combined.

The criteria when selecting attributes for the purposes of D2.2 were the following:
- EU Priorities: Reflects the EU's focus on the green and digital transitions as well as addressing long-term unemployment.
- Equity: Considers the financial and logistical barriers for unemployed individuals.
- Market Relevance: Incorporates employer involvement and certification for greater job placement success.
- Diversity: Addresses the needs of a multicultural and multilingual workforce.

When selecting attributes and their levels for a conjoint analysis design, careful consideration is required to ensure the study produces meaningful and actionable results. The criteria for selecting attributes and levels include the following:

1. Relevance: Attributes should reflect the key factors that influence decision-making in the context being studied. They should be directly related to the choices respondents are likely to face (e.g., cost, duration, certification in a training program).

2. Comprehensiveness: The set of attributes should cover all important dimensions of the decision-making process without leaving out critical factors. However, one should avoid including too many attributes, as this can overwhelm respondents and reduce the quality of the data.

3. Independence: Attributes should be independent of each other to avoid multicollinearity and ensure that each attribute's effect can be separately estimated. For example, avoid overlapping attributes like "cost" and "subsidy level" in the same design.

4. Realism: The combination of attribute levels must represent plausible and realistic scenarios. Respondents should perceive the options as credible and relevant to their own decision-making.

5. Variability: Each attribute should have sufficient variability to allow for meaningful distinctions among levels. For example, "Cost" might have levels such as "Free," "€200," and "€500" to reflect a range of financial commitments.

6. Discrimination Power: Attributes should be distinct enough that respondents can clearly evaluate trade-offs. One should avoid attributes that are too similar, as they may confuse respondents.

7. Alignment with Research Objectives: The attributes should align with the research questions or policy objectives. For example, if the study focuses on sustainability, attributes like "EU Taxonomy Alignment" or "Green Skills" would be appropriate.

8. Manageable Number of Attributes: Include a manageable number of attributes (generally 5-8) to avoid overloading respondents. Too many attributes can make the task cognitively demanding and reduce data quality.

9. Sufficient Levels: Each attribute should have at least two levels, but 3-5 levels are typical for conjoint analysis. Levels should reflect realistic and actionable variations within the attribute (e.g., for "Duration," levels like 30, 60, and 90 hours).

10. Balance and Orthogonality: Attribute levels should be balanced (i.e., levels occur with equal frequency across scenarios) and orthogonal (i.e., attributes are statistically independent).

11. Stakeholder and Expert Input: For the purposes of the TRAILS project, we consulted with stakeholders, domain experts, and reviewed prior research to identify attributes and levels that are most relevant to the context. We Incorporated feedback to ensure alignment with real-world considerations.

12. Policy and Market Relevance: In policy-oriented studies, attributes should align with regulatory priorities or market trends. For example, attributes might include "Green Skills" or "Job Placement Support" to reflect labour market priorities.

13. Feasibility in Implementation: Attributes and levels should reflect scenarios that are feasible to implement if a policy or product is launched. Unrealistic levels can distort results and reduce the study's practical value.

14. Cognitive Simplicity: Attribute levels should be easy to understand and compare. Avoid overly technical or abstract descriptions.

The hypothetical scenario we wish to introduce in the D2.2. is that for the attributes and levels for an Adult Learning Programme. Its presentation to respondents is the following:

Scenario: Selecting a Professional Development Training Program
You have recently decided to enhance your skills to improve your career prospects. You are exploring different training programs offered by various providers. These programs vary in several aspects, including duration, cost, delivery format, certification, and alignment with industry trends. Below, you are presented with several training program options. Each option consists of specific features that define the program. Please review these options carefully and select the one you would most likely choose. If none of the options appeal to you, you can indicate that as well.

1. Programme Duration:
   a) 30 hours
   b) 60 hours
   c) 90 hours
2. Type of Skills Offered:
   a) Digital Skills (e.g., data analytics, AI tools)
   b) Green Skills (e.g., sustainability practices, renewable energy)

     c)   Leadership and Management (e.g., project management, people leadership)
     d)   Technical Skills (e.g., engineering, mechanics, healthcare)
3. EU Taxonomy Alignment:
     a)   Jobs in environmentally sustainable sectors
     b)   Jobs in social impact sectors
     c)   Jobs in non-taxonomy-specific sectors
4. Delivery Format with Language Accessibility:
     a)   In-person classes (Local Language Only),
     b)   Online learning modules (Multilingual Options),
     c)   Hybrid Learning (Online & In person, Local Language Only).
5. Certification:
     a)   No certification (Informal)
     b)   Certificate of completion (Microcredentials registered to an nationally recognised Individual Learning Account)
     c)   Professional accreditation (Recognised by employers).
6. Cost Employer and Employment Support:
     a)   Free (Government-Sponsored Training Programme)
     b)   €200 (Employer/Union/Professional Sociation Sponsored Training Programme)
     c)   500 (No sponsorship)
7. Job Placement Support
     a)   Included (with guaranteed interviews)
     b)   Included (without guaranteed interviews)
     c)   Not Included
8. Flexible Scheduling
     a)   Fully Flexible (learn at your own pace)
     b)   Semi-Flexible (set schedule with some flexibility)
     c)   Fixed Schedule

The choice of vignette attributes was the outcome of a systematic literature review conducted in D2.1. It also stemmed from a set of consultations with experts in the field. Certain attributes might be worth additional discussion. For instance, the inclusion of the EU Taxonomy as an attribute was decided upon the following criteria:

1) Policy Alignment: It reflects the EU's goals for a sustainable and socially inclusive economy.
2) Future-proofing: It prepares interested workers for jobs in sectors that are likely to grow under EU regulations.
3) Clarity: It helps distinguish programmes that target specific, impactful industries from more generic ones.
4) Awareness: It is of interest to examine if European workers are aware of the EU taxonomy of sustainable activities.

This attribute connects training programmes with the EU taxonomy's objectives for economic activities that significantly contribute to environmental sustainability and social equity. The levels for the attribute, and their related probes, i.e., available explanations to respondents will be the following:

a)   Jobs in Environmentally Sustainable Sectors:
- Renewable energy (e.g., solar or wind power installation)
- Energy efficiency (e.g., retrofitting buildings)
- Pollution prevention and control (e.g., waste management, water treatment)

b)   Jobs in Social Impact Sectors:
- Healthcare (e.g., elderly care, nursing support)
- Education (e.g., teaching assistants, language instructors)
- Social work (e.g., community support, disability services)

c)   Jobs in Non-taxonomy-specific Sectors:
- Generic skills (e.g., administrative roles, retail)
- Broad employability across sectors (e.g., transferable skills like communication or basic IT)

Another level of an attribute of interest was that related to microcredentials linked to ILAs. The role of Individual Learning Accounts (ILAs) in fostering participation in adult learning is highlighted in a report by Cedefop (2022). The European Commission (2021) proposed a Council Recommendation to standardize ILAs across Member States, emphasizing their potential to increase access to training and skill development. Insights into the current state of ILAs were provided during the European Year of Skills (2023), alongside contributions from the Mutual Learning Programme (European Commission, 2023). The European Social Fund (2023) explored innovative funding mechanisms for lifelong learning, reinforcing the importance of demand-driven training initiatives. The OECD (2021) discusses the long-term benefits of skill acquisition through ILAs, while the International Labour Organization (2022) emphasizes their role in building a resilient workforce. An evaluation of France's Compte Personnel de Formation (CPF) provides a successful example of ILA implementation and its broader impacts on lifelong learning strategies (European Commission, 2020). Additionally, Cedefop (2023) reviews changes in adult learning policies across the EU, including shifts towards individual-focused learning approaches.

Progression in the implementation of ILAs has not been homogenous across the EU. The table below shows the progression by country for ILA adoption, and an estimated percentage among training programmes. The estimation is based on the following criteria:

- Established National ILA System (100%): Countries with a fully implemented and functional national ILA system offering entitlements for lifelong learning, i.e., France, with the Compte Personnel de Formation (CPF).
- Partial Adoption or Regional Systems (50%): Countries offering regional or sector-specific ILA-like schemes or transitioning from pilot programs to full implementation, e.g. Austria (regional schemes) and Germany (voucher systems undergoing reform).

Table 4: Progression towards ILA adoption

Country	Status of ILA Implementation	Percentage of ILA Adoption
Austria	Offers national and regional schemes similar to ILAs.	50
Belgium	No national ILA system.	0
Bulgaria	Participating in the EU's Mutual Learning Programme for ILAs.	20
Croatia	Implemented a voucher system with plans to transition to ILAs.	40
Cyprus	No national ILA system.	0
Czech Republic	No national ILA system.	0
Denmark	Training leave rights but no national ILA system.	20
Estonia	Well-established supply-side funding arrangements.	30
Finland	No national ILA system.	0
France	Comprehensive ILA system (Compte Personnel de Formation).	100
Germany	Experience with voucher schemes and undergoing reforms.	50
Greece	No national ILA system.	0
Hungary	Observer in the EU's Mutual Learning Programme.	10
Ireland	National Training Fund with supply-side funding strategies.	30
Italy	Participating in the EU's Mutual Learning Programme for ILAs.	20
Latvia	No national ILA system.	0
Lithuania	No national ILA system.	0
Luxembourg	No national ILA system.	0
Malta	No national ILA system.	0
Netherlands	Previously had the STAP budget, now discontinued.	20
Poland	Developing an ILA pilot with EU funding.	30
Portugal	No national ILA system.	0
Romania	Piloting an ILA scheme in the construction sector.	40
Slovakia	No national ILA system.	0
Slovenia	No national ILA system.	0
Spain	No national ILA system.	0
Sweden	No national ILA system.	0

Notes:

- Piloting ILA Systems (30–40%): Countries running pilot programs or temporary schemes for specific sectors or populations, e.g., Poland (developing a pilot under the European Social Fund) and Croatia (voucher system with ILA aspirations).
- Observer or Planning Stage (10–20%): Countries participating in EU-level programs or consultations for developing strategic roadmaps but without concrete national implementation, e.g., Bulgaria, Hungary, and Italy (EU's Mutual Learning Programme).

- No National ILA System (0%): Countries without any implementation of ILA systems or related initiatives, e.g., Belgium, Greece, and Malta.
- Well-Established Alternative Schemes (20–30%): Countries with robust adult learning and training systems funded through supply-side mechanisms, leaving less room for large-scale demand-driven ILAs, e.g., Ireland (National Training Fund) and Estonia (supply-side funding focus).

3.1.3   EXPERIMENTAL DESIGN

The full factorial design enables:
1. Comprehensive Exploration: It examines all potential attribute interactions and effects.
2. High Statistical Power: The exhaustive nature of the design ensures that all main effects and interactions can be analyzed without bias.
3. Flexibility: It serves as the foundational dataset for creating reduced subsets, such as fractional factorial designs, if needed.

This design is ideal for:
- Survey-based conjoint analysis, where participants evaluate a subset of vignettes.
- Simulating preferences to assess the relative importance of attributes and levels.
- Guiding policy decisions by identifying the most attractive combinations of training features.

The full factorial design provides a complete and unbiased framework for analysing stated preferences and designing effective training programs. It combines all possible levels of all attributes. The total number of combinations (Vignettes) is calculated as:

$$Total\ Combinations = \prod_{i=1}^{n} Levels_i$$

Total Combinations=3×4×3×3×3×3×3×3=2,916

Thus, there are 2,916 unique vignettes in the full factorial design, representing every possible configuration of attribute levels. Presenting 2,916 vignettes to respondents is impractical. The fractional factorial design reduces the burden on respondents while still enabling meaningful analysis. The fractional design focuses on estimating main effects and selected interactions, maintaining high statistical efficiency for these parameters. The design ensures that all attribute levels are represented multiple times across the 50 vignettes, allowing for robust statistical inferences. The fractional design can be used in survey settings where respondents are presented with a manageable number of vignettes (e.g., 5 per respondent).

To reduce the design space while preserving statistical efficiency, fractional factorial designs are used. These designs aim to estimate main effects (and sometimes interactions) with far fewer vignettes.

In this specific case, the fractional factorial design with 50 vignettes can be created by applying random sampling from the full factorial design, ensuring that:

- Coverage of Attribute Levels: All levels of each attribute are represented in the sampled subset. This ensures that the resulting design retains diversity and allows estimation of main effects.
- Random Selection: The vignettes were randomly sampled from the full factorial design, ensuring an unbiased representation of attribute levels. Randomization is useful when more advanced optimization methods (like D-optimality) are not applied due to tool limitations.
- Practical Feasibility: A manageable subset of 50 vignettes was chosen, suitable for presenting to respondents in survey settings. This ensures that respondents can evaluate a reasonable number of vignettes without fatigue.
- Statistical Reliability: While random sampling does not explicitly optimize statistical properties like orthogonality or D-efficiency, it provides a diverse range of combinations that can still support meaningful analysis of main effects.
- Balance Across Attributes: Random sampling implicitly introduces balance across attribute levels since all levels in the full factorial design are equally likely to be selected.

The full factorial design contains 2,916 combinations, which are reduced to 50 combinations in this fractional factorial design. A carefully chosen subset of 50 combinations ensures balanced representation across attributes and levels. The subset is randomly sampled from the full factorial design while maintaining diversity and ensuring coverage of all attribute levels.

While random sampling ensures coverage and feasibility, it does not explicitly optimize for (a) orthogonality. i.e. ensuring that attribute levels are uncorrelated, and (b) efficiency, i.e., minimizing standard errors for parameter estimation.

If a more statistically optimized subset is required, methods like D-optimal design or manual balancing of the sample should be applied. The D-optimal design includes 75 vignettes, a fraction of the full factorial design's 2,916 combinations. It caters to its optimality criterion, by maximising the determinant of the information matrix, ensuring the highest possible precision for estimating main effects and selected interactions. Moreover, it caters to statistical efficiency by reducing redundancy in the design, this approach maintains the ability to estimate critical parameters with lower sample sizes compared to random or fractional designs.

By selecting 75 vignettes, the design becomes more manageable for data collection and analysis compared to the full factorial design. The design ensures that main effects and critical interactions of interest are estimable with high precision. The reduced number of vignettes ensures that respondents are not overwhelmed during surveys or conjoint analysis exercises. The algorithm selects combinations that distribute attribute levels evenly, avoiding overrepresentation of certain levels. The design can be used in a survey setting where respondents evaluate a smaller number of vignettes (e.g., 5 vignettes per respondent). The D-optimal design represents an efficient and statistically robust approach for exploring preferences while reducing the burden of evaluating an exhaustive set of vignettes.

The optimal number of vignettes in a D-optimal design depends on several factors, including: (a) Number of Attributes and Levels: The more attributes and levels, the more vignettes are typically

needed to capture the variability in responses; (b) Desired Statistical Precision: More vignettes allow for better estimation of interactions and higher-order effects; (c) Respondent Fatigue: Presenting too many vignettes to each respondent can lead to reduced data quality; (d) Given these considerations, one determine the optimal number of vignettes for 1,000 individuals, as a D-optimal design with 75 vignettes ensures sufficient coverage of the attributes and levels for a robust analysis. To distribute these among 1,000 individuals, if each individual evaluates 6 vignettes:

$$\text{Total Responses Required} = 1,000 \times 6 = 6,000$$

$$\text{Responses per Vignette} = 6,000 / 75 = 80 \text{ respondents per vignette.}$$

The optimal number of vignettes depends on the desired balance between: (a) Statistical Efficiency: 75 vignettes are sufficient to estimate main effects and selected interactions for this design, and (b) Respondent Burden: Presenting 6 vignettes per respondent is manageable and avoids fatigue. If one wants to reduce the number of vignettes further (e.g., to 50 or fewer), it may compromise the ability to estimate certain interactions or effects. However, the 75-vignette design balances precision and practicality effectively for 1,000 respondents.

The comparison of the two previous designs in summary is the following:

Design	Number of Vignettes	Key Features
D-Optimal Design	75	High resolution for main effects and interactions. Suitable for robust analysis.
F-Fractional Design	50	Focused on main effects. Offers strong replication and simpler analysis.

The full set of 75 vignettes from the D-Optimal design is presented in the following table 5. Then, Table 6 presents an example of the 6 vignettes offered to the 1st individuals in our sample.

Table 5: The full set of 75 vignettes from the D-Optimal Design

#	Programme Duration	Type of Skills Offered	EU Taxonomy Alignment	Delivery Format	Certification	Cost/ Employer Support	Job Placement Support	Flexible Scheduling
1	30 hours	Technical Skills	Environmentally sustainable sectors	In-person classes (Local Language Only)	Certificate of completion	€500	Not Included	Semi-Flexible
2	60 hours	Green Skills	Non-taxonomy-specific sectors	Online learning modules (Multilingual Options)	Certificate of completion	€200	Included (with guaranteed interviews)	Fully Flexible
3	60 hours	Technical Skills	Non-taxonomy-specific sectors	In-person classes (Local Language Only)	Professional accreditation	€200	Included (without guaranteed interviews)	Fixed Schedule
4	90 hours	Leadership and Management	Environmentally sustainable sectors	Hybrid Learning (Online & In person, Local Language Only)	Certificate of completion	€500	Included (without guaranteed interviews)	Fixed Schedule
5	30 hours	Leadership and Management	Non-taxonomy-specific sectors	Online learning modules (Multilingual Options)	No certification	€500	Included (without guaranteed interviews)	Fixed Schedule
6	30 hours	Leadership and Management	Non-taxonomy-specific sectors	Online learning modules (Multilingual Options)	Certificate of completion	€200	Included (without guaranteed interviews)	Fully Flexible
7	60 hours	Digital Skills	Social impact sectors	In-person classes (Local Language Only)	Certificate of completion	€200	Included (without guaranteed interviews)	Fully Flexible
8	30 hours	Technical Skills	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	No certification	€200	Not Included	Fully Flexible
9	90 hours	Leadership and Management	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	No certification	€500	Included (without guaranteed interviews)	Fully Flexible
10	30 hours	Green Skills	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	Certificate of completion	€200	Included (with guaranteed interviews)	Fixed Schedule
11	30 hours	Technical Skills	Environmentally sustainable sectors	In-person classes (Local Language Only)	Certificate of completion	Free	Included (with guaranteed interviews)	Fully Flexible
12	60 hours	Technical Skills	Environmentally sustainable sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	Free	Not Included	Fixed Schedule
13	60 hours	Green Skills	Social impact sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	Free	Not Included	Fixed Schedule
14	60 hours	Green Skills	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	Certificate of completion	€500	Included (with guaranteed interviews)	Fixed Schedule

15	90 hours	Digital Skills	Social impact sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	€200	Included (without guaranteed interviews)	Fixed Schedule
16	60 hours	Leadership and Management	Social impact sectors	In-person classes (Local Language Only)	Certificate of completion	Free	Not Included	Fully Flexible
17	90 hours	Green Skills	Social impact sectors	In-person classes (Local Language Only)	Certificate of completion	€500	Not Included	Fixed Schedule
18	60 hours	Technical Skills	Social impact sectors	Hybrid Learning (Online & In person, Local Language Only)	Professional accreditation	€200	Not Included	Fully Flexible
19	60 hours	Digital Skills	Social impact sectors	Online learning modules (Multilingual Options)	No certification	€200	Not Included	Fully Flexible
20	60 hours	Green Skills	Non-taxonomy-specific sectors	Online learning modules (Multilingual Options)	Certificate of completion	€200	Included (with guaranteed interviews)	Semi-Flexible
21	30 hours	Digital Skills	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	Certificate of completion	€500	Included (without guaranteed interviews)	Fully Flexible
22	90 hours	Green Skills	Social impact sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	Free	Not Included	Fully Flexible
23	30 hours	Green Skills	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	Professional accreditation	Free	Included (without guaranteed interviews)	Semi-Flexible
24	30 hours	Leadership and Management	Environmentally sustainable sectors	Hybrid Learning (Online & In person, Local Language Only)	Professional accreditation	€500	Included (without guaranteed interviews)	Fixed Schedule
25	60 hours	Technical Skills	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	Certificate of completion	€500	Not Included	Fixed Schedule
26	90 hours	Technical Skills	Non-taxonomy-specific sectors	In-person classes (Local Language Only)	No certification	€200	Included (without guaranteed interviews)	Semi-Flexible
27	30 hours	Digital Skills	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	Professional accreditation	€500	Included (without guaranteed interviews)	Fully Flexible
28	90 hours	Leadership and Management	Social impact sectors	Hybrid Learning (Online & In person, Local Language Only)	Professional accreditation	€500	Included (with guaranteed interviews)	Fully Flexible
29	90 hours	Leadership and Management	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	Certificate of completion	€500	Not Included	Fixed Schedule
30	90 hours	Leadership and Management	Social impact sectors	Online learning modules (Multilingual Options)	No certification	Free	Not Included	Fixed Schedule

31	90 hours	Technical Skills	Environmentally sustainable sectors	In-person classes (Local Language Only)	Certificate of completion	Free	Included (without guaranteed interviews)	Fixed Schedule
32	90 hours	Leadership and Management	Environmentally sustainable sectors	Hybrid Learning (Online & In person, Local Language Only)	Certificate of completion	€200	Not Included	Fixed Schedule
33	90 hours	Technical Skills	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	€200	Included (without guaranteed interviews)	Fully Flexible
34	90 hours	Digital Skills	Non-taxonomy-specific sectors	In-person classes (Local Language Only)	No certification	€500	Not Included	Fixed Schedule
35	90 hours	Green Skills	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	Certificate of completion	Free	Included (with guaranteed interviews)	Semi-Flexible
36	60 hours	Leadership and Management	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	€500	Included (without guaranteed interviews)	Fully Flexible
37	30 hours	Technical Skills	Non-taxonomy-specific sectors	Online learning modules (Multilingual Options)	Certificate of completion	€500	Included (with guaranteed interviews)	Semi-Flexible
38	30 hours	Leadership and Management	Non-taxonomy-specific sectors	In-person classes (Local Language Only)	Professional accreditation	€500	Included (with guaranteed interviews)	Fixed Schedule
39	90 hours	Digital Skills	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	Certificate of completion	€200	Included (without guaranteed interviews)	Semi-Flexible
40	60 hours	Green Skills	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	Professional accreditation	€500	Included (without guaranteed interviews)	Fixed Schedule
41	30 hours	Green Skills	Non-taxonomy-specific sectors	In-person classes (Local Language Only)	Professional accreditation	€200	Included (without guaranteed interviews)	Fixed Schedule
42	90 hours	Digital Skills	Non-taxonomy-specific sectors	In-person classes (Local Language Only)	No certification	€500	Not Included	Semi-Flexible
43	90 hours	Technical Skills	Non-taxonomy-specific sectors	Online learning modules (Multilingual Options)	Certificate of completion	€500	Included (without guaranteed interviews)	Fixed Schedule
44	30 hours	Green Skills	Social impact sectors	Hybrid Learning (Online & In person, Local Language Only)	Professional accreditation	Free	Included (with guaranteed interviews)	Semi-Flexible
45	90 hours	Green Skills	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	€200	Included (with guaranteed interviews)	Semi-Flexible
46	90 hours	Leadership and Management	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	No certification	€500	Not Included	Fully Flexible
47	60 hours	Technical Skills	Social impact sectors	In-person classes (Local Language Only)	No certification	€500	Included (without	Fixed Schedule

						guaranteed interviews)	
48	60 hours	Technical Skills	Non-taxonomy-specific sectors	In-person classes (Local Language Only)	Professional accreditation	€500	Included (without guaranteed interviews)	Fully Flexible
49	30 hours	Green Skills	Non-taxonomy-specific sectors	In-person classes (Local Language Only)	Professional accreditation	€200	Included (with guaranteed interviews)	Fully Flexible
50	30 hours	Digital Skills	Environmentally sustainable sectors	In-person classes (Local Language Only)	No certification	€500	Included (without guaranteed interviews)	Fully Flexible
51	90 hours	Green Skills	Social impact sectors	In-person classes (Local Language Only)	Certificate of completion	€500	Included (without guaranteed interviews)	Fixed Schedule
52	90 hours	Green Skills	Social impact sectors	In-person classes (Local Language Only)	Professional accreditation	€200	Included (with guaranteed interviews)	Fully Flexible
53	60 hours	Digital Skills	Non-taxonomy-specific sectors	In-person classes (Local Language Only)	Professional accreditation	€500	Included (without guaranteed interviews)	Fully Flexible
54	60 hours	Technical Skills	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	Professional accreditation	€500	Not Included	Fixed Schedule
55	60 hours	Digital Skills	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	Free	Included (with guaranteed interviews)	Semi-Flexible
56	30 hours	Green Skills	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	No certification	Free	Not Included	Fixed Schedule
57	30 hours	Leadership and Management	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	Free	Not Included	Fixed Schedule
58	30 hours	Green Skills	Social impact sectors	Hybrid Learning (Online & In person, Local Language Only)	Professional accreditation	€200	Not Included	Semi-Flexible
59	60 hours	Technical Skills	Environmentally sustainable sectors	Hybrid Learning (Online & In person, Local Language Only)	Professional accreditation	€500	Included (without guaranteed interviews)	Fixed Schedule
60	60 hours	Digital Skills	Non-taxonomy-specific sectors	Online learning modules (Multilingual Options)	Certificate of completion	€200	Included (without guaranteed interviews)	Fully Flexible
61	60 hours	Leadership and Management	Non-taxonomy-specific sectors	Online learning modules (Multilingual Options)	Certificate of completion	Free	Not Included	Semi-Flexible
62	90 hours	Leadership and Management	Social impact sectors	Online learning modules (Multilingual Options)	Professional accreditation	€200	Included (without guaranteed interviews)	Fully Flexible

63	60 hours	Green Skills	Non-taxonomy-specific sectors	Online learning modules (Multilingual Options)	Professional accreditation	€500	Included (without guaranteed interviews)	Fully Flexible
64	60 hours	Technical Skills	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	No certification	€500	Included (with guaranteed interviews)	Semi-Flexible
65	30 hours	Digital Skills	Environmentally sustainable sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	€500	Not Included	Semi-Flexible
66	30 hours	Green Skills	Social impact sectors	In-person classes (Local Language Only)	Professional accreditation	€500	Not Included	Semi-Flexible
67	90 hours	Green Skills	Social impact sectors	Hybrid Learning (Online & In person, Local Language Only)	Professional accreditation	€500	Included (with guaranteed interviews)	Fully Flexible
68	90 hours	Digital Skills	Social impact sectors	Hybrid Learning (Online & In person, Local Language Only)	Certificate of completion	Free	Included (with guaranteed interviews)	Fixed Schedule
69	90 hours	Leadership and Management	Social impact sectors	Online learning modules (Multilingual Options)	Professional accreditation	€500	Not Included	Semi-Flexible
70	60 hours	Technical Skills	Social impact sectors	Online learning modules (Multilingual Options)	Certificate of completion	€500	Included (without guaranteed interviews)	Fully Flexible
71	60 hours	Digital Skills	Non-taxonomy-specific sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	Free	Not Included	Fully Flexible
72	90 hours	Digital Skills	Environmentally sustainable sectors	Online learning modules (Multilingual Options)	Certificate of completion	Free	Included (without guaranteed interviews)	Fully Flexible
73	60 hours	Technical Skills	Social impact sectors	Online learning modules (Multilingual Options)	Certificate of completion	Free	Included (with guaranteed interviews)	Fully Flexible
74	90 hours	Green Skills	Social impact sectors	Online learning modules (Multilingual Options)	Certificate of completion	€200	Included (with guaranteed interviews)	Fully Flexible
75	60 hours	Green Skills	Environmentally sustainable sectors	Hybrid Learning (Online & In person, Local Language Only)	No certification	€500	Included (with guaranteed interviews)	Fully Flexible

Table 6: The 6 vignettes assigned to Individual #1 from the D-Optimal Design

Resp. ID: #1	Vignette 1	Vignette 2	Vignette 3	Vignette 4	Vignette 5	Vignette 6
Programme Duration	30 hours	60 hours	60 hours	90 hours	30 hours	30 hours
Typef Skills Offered	Technical Skills	Green Skills	Technical Skills	Leadership and Management	Leadership and Management	Leadership and Management
EU Taxonomy Alignment	Environmentally sustainable sectors	Non-taxonomy-specific sectors	Non-taxonomy-specific sectors	Environmentally sustainable sectors	Non-taxonomy-specific sectors	Non-taxonomy-specific sectors
Delivery Format	In-person classes (Local Language Only)	Online learning modules (Multilingual Options)	In-person classes (Local Language Only)	Hybrid Learning (Online & In person, Local Language Only)	Online learning modules (Multilingual Options)	Online learning modules (Multilingual Options)
Certification	Certificate of completion	Certificate of completion	Professional accreditation	Certificate of completion	No certification	Certificate of completion
Cost/Employer Support	€500	€200	€200	€500	€500	€200
Job Placement Support	Not Included	Included (with guaranteed interviews)	Included (without guaranteed interviews)	Included (without guaranteed interviews)	Included (without guaranteed interviews)	Included (without guaranteed interviews)
Flexible Scheduling	Semi-Flexible	Fully Flexible	Fixed Schedule	Fixed Schedule	Fixed Schedule	Fully Flexible

4. BOOST SURVEY II: PLATFORM WORKERS

Conducting a survey among platform and microworkers is increasingly important for understanding the dynamics of a rapidly growing and transformative segment of the labour market. As platform work continues to expand across Europe and globally, it presents both opportunities and challenges for workers, policymakers, and employers. By collecting data from platform and microworkers, surveys can provide insights into working conditions, skill utilisation, income security, and the broader implications of digital labour platforms.

Platform and microworkers operate in a distinctive employment context characterised by flexible arrangements, task-based remuneration, and a reliance on digital technologies. While these features offer advantages such as autonomy and access to diverse income opportunities, they also introduce significant challenges, including income instability, lack of social protections, and limited access to training and career progression (De Stefano, 2016; ILO, 2021). A survey targeting this group would help quantify these challenges and identify areas for intervention, such as improving access to social safety nets and upskilling initiatives.

Understanding the demographics and skills of platform workers is crucial for addressing issues of inequality and inclusion. Research indicates that platform work often attracts marginalised groups, such as migrants, young workers, and women seeking flexible work arrangements (Pesole et al., 2018; Forde et al., 2017). By gathering data on these demographics, a survey can inform targeted policies aimed at promoting equity and inclusivity in the platform economy.

Skills utilisation and development are central themes for platform and microworkers. These workers frequently engage in tasks requiring specialised skills, such as coding, graphic design, and content moderation, alongside more general tasks like data entry or delivery services (Codagnone et al., 2016). A survey would provide insights into the types of skills being utilised and the barriers to further skill development. This information is essential for designing tailored training programmes and enhancing career mobility within the platform economy.

Another critical area is the role of algorithms and digital ratings in shaping the experiences of platform and microworkers. Ratings systems and task allocation algorithms can significantly influence income stability, job access, and worker autonomy (Kellogg et al., 2020; Wood et al., 2019). Surveys can explore these dynamics, providing data to inform regulatory frameworks that ensure fairness and transparency in digital labour platforms.

In addition to individual worker experiences, surveys can examine the broader economic and social impacts of platform work. For instance, the prevalence of precarious working conditions in the platform economy has implications for income inequality and social cohesion (Huws et al., 2017; Aloisi, 2015). By capturing these macro-level trends, a survey can contribute to debates on the future of work and the role of platforms in shaping modern labour markets.

Recent legislative changes in the European Union have further highlighted the importance of addressing the rights and working conditions of platform workers. The proposed Directive on Improving Working Conditions in Platform Work, introduced by the European Commission in 2021, seeks to establish clear criteria for determining employment status, improve algorithmic transparency, and enhance social protections for platform workers. This legislative effort reflects a

growing recognition of the need to balance the flexibility offered by platform work with fair treatment and equitable access to rights and benefits. Surveys targeting platform and microworkers can provide essential data to monitor the implementation and impact of such legislative measures, ensuring they effectively address the unique challenges of the platform economy.

Finally, a survey of platform and microworkers can guide the development of evidence-based policies at both national and international levels. Insights from such surveys are vital for aligning labour laws with the realities of digital work, ensuring fair working conditions, and fostering sustainable growth in the platform economy (European Commission, 2020; OECD, 2019).

The design of the survey of platform workers is still under consideration at the time of this deliverable and its details will be described in short, aiming also to avoid repetition from the previous section of the general-population survey. In the paragraphs below, we present an overview of the current draft, and later on in this sub-sections some more detailed questions that are worth overviewing.

Section 1: Demographics
- P1: Age: [Open-ended or select ranges]
- P2: Gender: [Open-ended or multiple choice]
- P3: Country of residence: [Dropdown menu of EU countries]
- P4: Current living situation: [Urban, Suburban, Rural]

Section 2: Employment Background
- P5: Are you currently working on a platform? (e.g., Uber, TaskRabbit, Fiverr)
  - Yes
  - No
- P6: In the last 12 months, did you use an internet platform or app for phones or tablets to provide any of the following services or work for pay or profit?
  - The detailed format of the question is provided below
- P7: Why do you provide services via an online platform (e.g. a website or app like Upwork, AmazonTurk, Peopleperhour)?
  - The detailed format of the question is provided below
- P8: Can I check, is such online platform work done in addition to your main job?
  - The detailed format of the question is provided below
- P9: Is working via an online platform your main income
  - The detailed format of the question is provided below
- P10: In the last 12 months, how often have you used an online platform to sell goods or services?
  - The detailed format of the question is provided below
- P11: Does such work done using an online platform involve the selling of goods or services mostly online, offline or both?
  - The detailed format of the question is provided below
- P12: In which job categories do you accept most of projects or tasks as part of your regular platform work?
  - The detailed format of the question is provided below
- P13: How long have you been working on platforms?
  - Less than 6 months

- 6 months to 1 year
- 1–3 years
- More than 3 years

P14: How many hours per week do you work on platform tasks? [Open-ended or ranges]

Section 3: Skills and Competencies

P15: What skills do you currently use for platform work? (Select all that apply)
- Digital/Technical Skills
- Communication Skills
- Craftsmanship/Handicraft
- Driving/Delivery Skills
- Administrative Support
- Other: [Open text field]

P17: In the last month, did you spend time learning any of the following skills?
- The detailed format of the question is provided below

P16: What skills have you acquired since starting platform work? [Open text field]

P17: Do you hold any formal certifications relevant to your platform work?
- Yes: [Please specify]
- No

P18: How confident are you in your current skill set to succeed in platform work? (Scale 1–5)

P19: Since you started working in online platforms, have you developed any of the following skills as a result of the work you have done for them?
- The detailed format of the question is provided below

Section 4: Skill Development and Training

P20: Have you taken any training or upskilling courses for platform work?
- Yes: [Please specify]
- No

P21: If available, would you be interested in training programs to enhance your skills?
- Yes
- No
- Maybe

P22: What type of training would you find most valuable? (Select all that apply)
- Technical Skills (e.g., coding, design)
- Soft Skills (e.g., communication, time management)
- Financial Literacy (e.g., taxes, savings)
- Business Management (e.g., scaling, marketing)
- Other: [Open text field]

P23: What barriers, if any, prevent you from accessing training? (Select all that apply)
- Cost
- Time
- Lack of Information
- Limited Access
- Other: [Open text field]

Section 5: Future Aspirations

P24: What are your career goals within the next 5 years? [Open text field]

P25: Do you see platform work as:
- A short-term gig
- A long-term career option
- A stepping stone to other opportunities
- Other: [Please specify]

P26: What support would help you achieve your career goals? [Open text field]

Section 6: Feedback

P27: What do you enjoy most about platform work? [Open text field]

P28: What challenges do you face in platform work? [Open text field]

P29: How could platforms better support workers like you? [Open text field]

P30: How satisfied are you with your platform work so far? [Ranging between 1 and 5]

Examples of the more analytical responses for specific questions are provided below:

P6:	Platform work
In the last 12 months, did you use an internet platform or app for phones or tablets to provide any of the following services or work for pay or profit?	
Probe:	Please
	Multiple responses
_1	Taxi services, using for example Uber or Free Now?
_2	Delivery of food or any other goods, using for example Deliveroo or Wolt?
_3	Renting out a room, a house, or any accommodation, using for example Airbnb or Booking.com?
_4	Selling or advertising for sale any goods or items, using for example Depop or Amazon Seller?
_5	Cleaning or handiwork, including plumbing, electrician works or similar, using for example Tradify or Helpling?
_6	Child or elderly care, such as baby-sitting or shopping for elderly people, using for example Mindme or Comfortkeepers?
_7	Medical and health care services, using for example VideoDoc or Best Doctors?
_8	Tutorials or teaching, using for example homeschool.ie or Classhub?
_9	Translation, using for example ProZ or Gengo?
_10	IT services, such as programming, coding, web or graphic design, data or text entry or editing, using for example Upwork or 99Designs?
_11	Online support or checks for online content, using for example Mod Squad or icus.social?
_12	Creating content such as videos or texts, using for example Contena or Upwork?
_13	Other services or work?
_98	I don't know
_99	Prefer not to answer

P7:	Reasoning
Why do you provide services via an online platform (e.g. a website or app like Upwork, AmazonTurk, Peopleperhour)?	
Probe:	
	Multiple response in order of highest rank
_1	To supplement my income
_2	Unable to find regular work
_3	Unable to perform regular work (e.g. health conditions, child care)
_4	I like being my own boss
_5	Projects and tasks in online platforms are interesting
_6	To further develop my skills
_7	To balance my work and other life obligations
_8	Other reason
_98	I don't know
_99	Prefer not to answer

P8:	Platform moonlighting
Can I check, is such online platform work done in addition to your main job?	
Probe:	
	Single response
_1	Yes
_2	No
_98	I don't know
_99	Prefer not to answer

P9:	Platforms only
Is working via an online platform your main income	
Probe:	
	Single response
_1	Yes
_2	No
_98	I don't know
_99	Prefer not to answer

P10:	Platform frequency
In the last 12 months, how often have you used an online platform to sell goods or services?	
Probe:	
	Single response
_1	Every day
_2	Most days
_3	About once or twice per month
_4	About once every three months
_5	About once every six months
_6	Less often
_98	I don't know
_99	Prefer not to answer

P11:	Online or offline
Does such work done using an online platform involve the selling of goods or services mostly online, offline or both?	
Probe:	
	Single response
_1	Mostly online e.g. using a portable device
_2	Mostly offline e.g. riding a taxi, food delivery, cleaning services
_3	Both online and offline
_98	I don't know
_99	Prefer not to answer

P12:	Platform tasks
In which job categories do you accept most of projects or tasks as part of your regular platform work?	
Probe:	Please
	Multiple response in order of highest rank
_1	Web, Mobile and Software Development
_2	Design and Creative (e.g. animation, graphic design, photo editing)
_3	Admin Support and clerical tasks
_4	IT and Networking
_5	Writing and Translation (e.g. article writing, copywriting, proofreading)
_6	Customer Service
_7	Sales and Marketing (e.g. posting ads, social media management, SEO optimisation)
_8	Data Science and Analytics
_9	Accounting and Consulting
_10	Engineering and Architecture
_11	Legal
_12	Data Entry
_13	Project management
_14	Transportation and delivery (e.g. driving, food delivery)
_15	Other on-location services (e.g. housekeeping, beauty services, language teaching)
_16	Other micro tasks (e.g. object classification, tagging, content review, website feedback
_98	I don't know
_99	Prefer not to answer

P17:	**Platform skills overall**				
Since you started working in online platforms, have you developed any of the following skills as a result of the work you have done for them?					
Multiple response in order of highest rank					
	Probe:	_1 Yes	_2 No	_3 I don't know	_4 Prefer not to say
Technical skills in your area of specialty	e.g., web development, graphic design, writing, data analytics				
Foreign language skills					
Skills in obtaining work on platforms	e.g., self-promotion, how to price my work, how to use the platform				
Learning skills					
Skills in being a freelancer	e.g., how to get business permits, taxation, working alone, etc.				
Communication skills	e.g., handling customers, handling cultural differences, presentation skills, email etiquette, etc.)				
Personal dispositions	(e.g., confidence, creativity, resilience, independence, flexibility, etc.)				
Organisational skills	e.g., time management, project management, discipline				
Analytical skills					
Computer literacy					

P19: Platform skills recently

In the last month, did you spend time learning any of the following skills?

Single response

	Probe:	_1 Yes	_2 No	_3 I don't know	_4 Prefer not to say
Technical skills in your area of specialty	e.g., web development, graphic design, writing, data analytics				
Foreign language skills					
Skills in obtaining work on platforms	e.g., self-promotion, how to price my work, how to use the platform				
Learning skills					
Skills in being a freelancer	e.g., how to get business permits, taxation, working alone, etc.				
Communication skills	e.g., handling customers, handling cultural differences, presentation skills, email etiquette, etc.)				
Personal dispositions	(e.g., confidence, creativity, resilience, independence, flexibility, etc.)				
Organisational skills	e.g., time management, project management, discipline				
Analytical skills					
Computer literacy					

5. IMPLEMENTATON

5.1 SCRIPTING OF THE SURVEYS

Once the questionnaires are ready for scripting, the Ipsos scripting team will create an online survey script for each of the surveys. Ipsos will use a single harmonised survey infrastructure that provides uniformity across different EU Member States during fieldwork. This means that all data are collected in a single database, and that any potential for platform-related inconsistencies between country versions of any survey are eliminated.

The script will incorporate automated routing and checking (e.g. of extreme values for numeric responses or inconsistent answers) to minimise the scope for missing or erroneous data, which is especially important for online surveys. Furthermore, the scripting software will be ideally suited for scripting the stated-preference survey, as it offers pre-defined and question-dependent routing solutions as well as the possibility to implement visual/interactive stimuli into the survey design.

Finally, the scripting software uses a "device agnostic" survey approach, meaning that the survey will render effectively based on the screen size of the device being used.

5.2 TRANSLATION OF THE SURVEYS

The translation will be undertaken by Ipsos in-house linguists. All individuals involved in the translation process will be native/mother tongue speakers. All would receive a concise briefing document explaining the survey and specific terms used in the questionnaire.

The English source questionnaire will be translated into all the official languages of the selected Member States where it will be conducted. The overarching aim of the translation is to 1) ensure that the themes explored / topics covered by questions are conveyed in an equivalent way to all respondents; 2) achieve equivalent meaning rather than literal translations.

The translation teams executing the translations will have an independent team member who reviews and double-checks the translation; this reviewer will flag up any issues in the translation.

In a final step, the completed translation will be proofread to ensure that no residual errors, typographical errors, punctuation, grammar, accidentally omitted items and the like are present.

5.3 WEIGHTING OF THE DATASETS

Weighting data to ensure national representativeness is a fundamental step when conducting surveys across the European Union (EU). Given the diversity of the EU's member states in terms of population size, socio-economic structures, and cultural contexts, weighting is essential for producing accurate and comparable insights that reflect the true characteristics of each national population.

In a multi-country survey, raw data often contain imbalances due to variations in response rates, sampling methods, and population structures. For example, smaller countries with lower populations might be overrepresented in unweighted data, while larger countries could be underrepresented. Similarly, certain demographic groups, such as younger individuals or urban residents, may respond at higher rates than others, leading to biased results. Weighting adjusts for these discrepancies, aligning the survey sample with known population parameters such as age, gender, education level, and regional distribution.

Weighting also ensures that the aggregated EU-level results are reflective of the Union's overall demographic and economic composition. This is particularly critical when using survey findings to inform EU-wide policies or programmes. For example, without proper weighting, survey results might disproportionately reflect the views of respondents from smaller or more active member states, skewing perceptions of broader trends and needs.

A robust weighting procedure relies on accurate auxiliary data, such as census or administrative records, to calculate weights for different population groups. These weights are then applied during data analysis to ensure that each respondent contributes appropriately to the final estimates. Advanced weighting techniques, such as post-stratification and raking, allow for adjustments across multiple demographic dimensions simultaneously, further improving the representativeness of the results.

The importance of weighting is underscored in existing EU surveys, including the European Social Survey (ESS) and Eurobarometer, both of which implement rigorous weighting strategies to achieve representativeness. These surveys highlight the critical role of weighting in producing high-quality data that policymakers and researchers can trust for evidence-based decision-making.

Neglecting to weight survey data can lead to biased findings, undermining the credibility and utility of the results. For instance, unweighted data might exaggerate the prevalence of certain opinions or behaviours while underestimating others, leading to misinformed policies. Weighting is therefore not just a technical adjustment but a methodological necessity for ensuring fairness, accuracy, and relevance in cross-national surveys.

In conclusion, weighting data to make them nationally representative is vital for capturing the full diversity of the EU's populations and producing insights that are both accurate and actionable. By

implementing effective weighting procedures, researchers can ensure that their findings serve as a reliable foundation for addressing the complex and varied challenges facing the EU today.

6. CONCLUDING REMARKS

Task 2.2 has provided a comprehensive analysis of the intricate dimensions surrounding the survey methodologies, data collection strategies, and thematic insights into workforce skills, resilience, and the evolving nature of labour markets. The evidence and discussions presented underscore the pressing need for a nuanced understanding of the challenges and opportunities inherent in capturing data that reflects the complexities of modern labour and societal dynamics.

Through the exploration of thematic areas such as skills portfolios, financial and labour market resilience, and the role of platform workers, this report highlights the interconnectedness of these dimensions. By examining these themes, we illuminate pathways to better align policy measures with the lived realities of workers and organisations across the European Union.

As the European Union navigates the challenges of technological transformation, demographic shifts, and economic disruptions, the importance of robust data cannot be overstated. Surveys that are methodologically sound and nationally representative are critical for informing policies that are equitable, effective, and future-focused. By integrating behavioural insights, demographic nuances, and sectoral variations, such surveys can guide actionable strategies to enhance skills development, support economic resilience, and foster inclusive growth.
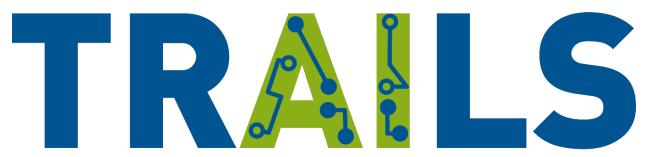
Data on platform workers is particularly critical given their growing presence in the labour market and their unique working conditions. These workers often face challenges such as income instability, limited access to social protections, and reliance on algorithmic management systems. Understanding the demographics, working conditions, and skill utilisation of platform workers can inform targeted policies to improve fairness, transparency, and access to training opportunities within this segment of the workforce.

The use of stated preference techniques in survey designs adds significant value by capturing individual trade-offs and preferences in hypothetical scenarios. This approach is particularly useful for understanding how workers value different attributes of training programmes, such as cost, duration, and type of skills offered. Stated preference data enables policymakers to design initiatives that align with the actual motivations and constraints of the workforce, thereby maximising participation and impact.

The task introduces the draft questions aiming for generating high-quality, evidence-based surveys that will allow researchers and policy makers in the European Union to better navigate the complexities of modern labour markets, ensuring that policies are adaptive, inclusive, and aligned with the needs of a dynamic workforce. Such efforts are essential for building economic resilience, fostering innovation, and promoting sustainable growth across the Union.

The exact design and implementation will be completed in the following months, and its final versions will be presented in follow-up deliverable tasks, e.g., in workpackage 5.

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