

Discussion Paper Series

IZA DP No. 18532

April 2026

Unemployment Narratives

Robert Mahlstedt

University of Copenhagen and IZA@LISER

Sonja Settele

University of Cologne, ECONtribute and
Max Planck Institute for Behavioral Economics

Johannes Wohlfart

University of Cologne, ECONtribute and
Max Planck Institute for Behavioral Economics

The IZA Discussion Paper Series (ISSN: 2365-9793) ("Series") is the primary platform for disseminating research produced within the framework of the IZA@LISER Network, an unincorporated international network of labour economists coordinated by the Luxembourg Institute of Socio-Economic Research (LISER). The Series is operated by LISER, a Luxembourg public establishment (établissement public) registered with the Luxembourg Business Registers under number J57, with its registered office at 11, Porte des Sciences, 4366 Esch-sur-Alzette, Grand Duchy of Luxembourg.

Any opinions expressed in this Series are solely those of the author(s). LISER accepts no responsibility or liability for the content of the contributions published herein. LISER adheres to the European Code of Conduct for Research Integrity. Contributions published in this Series present preliminary work intended to foster academic debate. They may be revised, are not definitive, and should be cited accordingly. Copyright remains with the author(s) unless otherwise indicated.



Unemployment Narratives*

Abstract

We study economic narratives — causal accounts of observed events — in a high-stakes real-world context: long-term unemployment. We use open-ended questions to measure narratives about long-term unemployment in samples of Danish unemployed job seekers, firm managers, households from the general population, and experts at labor market institutions, as well as international academic experts. We document three main results. First, there is pronounced heterogeneity in narratives both within and across samples. For instance, job seekers are more likely to attribute long-term unemployment to factors outside the control of the individual and less likely to attribute it to job seekers' own decisions than respondents in the other samples. Second, narratives strongly reflect job seekers' personal experiences during both the current and previous unemployment spells. Third, narratives shape job seekers' and firm managers' quantitative beliefs, decisions and labor market outcomes as measured in survey and linked administrative data, which we demonstrate in a field experiment and correlationally. Our findings highlight the experiential origins of economic narratives and underscore the key role of narratives in belief formation and decision making.

JEL classification

D83, D84, J64

Keywords

narratives, job search, hiring

Corresponding author

Robert Mahlstedt

robert.mahlstedt@econ.ku.dk

* *Acknowledgements:* We thank Claus Kreiner and seminar participants in Amsterdam (Tinbergen Institute Labour Seminar), Copenhagen, Cologne, Regensburg and Bonn (MPI for Behavioral Economics) for helpful feedback. We are indebted to Amalie Sofie Jensen, who made it possible for us to run surveys at Danish policy institutions. We also thank all the academics and expert practitioners who participated in our expert surveys. Egshiglen Batbayar, Julian Goedel, Julius Gross, Lukas Hutter, Ben Huels, Georgios Louvaris, Max Christian Soerensen, Thomas Zamiri Sørensen, Emma Thevissen, Bolette Thomsen and Mathilde Vallat provided excellent research assistance. *Funding:* We thank the Economic Policy Research Network (EPRN) for funding part of this project. Financial support from CEPI and the Danish National Research Foundation, grant DNRF134, is gratefully acknowledged. Settele and Wohlfart: Funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany's Excellence Strategy – EXC 2126/2-390838866. *Ethics approval:* We received ethics approval from the Universities of Copenhagen and Cologne. *Preregistration:* The survey design, sampling procedures and main research questions were pre-registered at the the OSF Registry under <https://osf.io/aph2t> (descriptive surveys) and at the AEA RCT registry under <https://www.socialscienceregistry.org/trials/15681> (experimental surveys).

1 Introduction

Narratives—causal explanations for observed events—provide a lens through which individuals can interpret data and form beliefs. Narratives have been argued to be an important driver of individual and aggregate economic outcomes (Eliaz and Spiegler, 2020; Shiller, 2017). Empirically, narratives have been shown to matter in stylized online experiments on belief updating (Graeber et al., 2024) and persuasion (Barron and Fries, 2025; Charles and Kendall, 2025), and in people’s reasoning about macroeconomic phenomena (Andre et al., 2026). But what are the origins and consequences for decision-making of economic narratives in real-world contexts with high stakes for the involved agents?

In this paper, we study this question in the context of long-term unemployment. Long-term unemployment represents a substantial risk for unemployed job seekers. In OECD countries, roughly one-third of unemployed workers remain unemployed for more than one year. Such prolonged joblessness can have severe adverse consequences, including persistent earnings losses (Couch and Placzek, 2010) and negative health outcomes (Sullivan and von Wachter, 2009). There are several competing explanations for why some job seekers experience long-term unemployment, such as a lack of motivation or search effort among job seekers, weak labor demand or firms’ selective hiring practices, or mismatch in terms of skills or location. As such, long-term unemployment is a setting in which the observed patterns are consistent with multiple plausible explanations, and in which narratives may therefore play an important role.

We study narratives about long-term unemployment using surveys with 2,728 unemployed job seekers, 2,514 firm managers, and 2,244 general population respondents from Denmark. We supplement these data collections with expert surveys with 116 practitioners from Danish labor market institutions and 248 international academics. The core of our surveys is an open-ended question asking respondents to write down why they think some job seekers remain unemployed for an extended period. Unlike structured question formats, our open-ended elicitation captures the respondents’ reasoning in a naturalistic manner and avoids priming through the displayed response options (Haaland et al., 2025). In our job seeker and firm manager surveys, we also elicit a range of quantitative beliefs and behaviors relevant for job search and hiring. Moreover, we link our surveys with register data on personal background and prior experiences as well as job search and hiring outcomes—measures that are immune to common concerns with self-reports such as intention-action gaps, consistency bias, demand effects, or noisy recall. Finally, we conduct a field experiment with 8,609 Danish job seekers in which we randomly vary respondents’ narratives to study causal effects on job search decisions and re-employment outcomes.

We document three main sets of results.

(1) Heterogeneity in narratives: First, we characterize the variation in narratives. There is substantial heterogeneity in narratives both within and across our different samples. We define two broad classes of narratives that embody fundamentally different views on unemployment and job search. “Internal narratives” attribute long-term unemployment to personal factors that are malleable by the job seeker in the short run, such as low motivation, insufficient search effort, or excessive selectivity in job acceptance. About 20% of job seekers invoke such narratives. By contrast, “external narratives” blame factors that are unrelated to and beyond the control of the individual job seeker: discriminatory practices, selective hiring, poor offered working conditions, broader labor market conditions, or inadequate job search assistance. 34% of job seekers express external narratives, making them more common than internal narratives in this sample. Other narratives—which may relate to personal factors but are not malleable in the short term—are also common: roughly one-quarter of job seekers subscribe to each of several additional types of narratives, emphasizing worker age, health, skill mismatch, or a general lack of skills.

There are strong differences between job seekers’ narratives and those invoked by respondents in our other samples: the general population, firm managers, policy experts, and academics are up to 25 pp more likely than job seekers to invoke an internal narrative and up to 15 pp less likely to express an external narrative. Moreover, experts from policy institutions and academia attach even greater importance to skill mismatch and health issues than job seekers themselves.

(2) Experiential origins of narratives: Second, we employ detailed background information from the administrative records to study the role of personal experiences in job seekers’ narratives. These data provide a richer, more granular, and more comprehensive view of job seekers’ experiences than commonly used proxies for experiences such as birth year. Moreover, unlike self-reports, they capture a broad set of relevant experiences rather than only those that respondents actively recall.

We start by relating job seekers’ narratives about the drivers of long-term unemployment with proxies for their own current circumstances and recent experiences. Job seekers’ narratives vary strongly with these proxies: for example, job seekers in tighter labor markets are less likely to invoke weak labor demand; those previously employed in low-skill occupations emphasize a lack of skills; workers living in more remote regions blame location mismatch; older job seekers emphasize age discrimination, while recent graduates point to a lack of work experience. These patterns are markedly less pronounced among employed workers from our general population sample—consistent with the patterns reflecting recent personal experiences while searching for a job. Thus, recent experiences appear to be linked to how job seekers think about the broader phenomenon of long-term unemployment—consistent with the idea that personal ex-

periences shape individuals' broader beliefs and world views (Kuchler and Zafar, 2019; Taubinsky et al., 2026).

Using a follow-up survey three months after the initial wave, we examine how experiences of success or failure in the labor market affect workers' narratives. Conditional on respondents' initial perceived probability of re-employment, successful job search substantially increases the prevalence of internal narratives—those that attribute long-term unemployment to factors within workers' short-run control—and markedly decreases the prevalence of external narratives, which blame firms' hiring practices, labor market conditions, or a lack of job search assistance. These patterns are consistent with multiple explanations. One is the well-known tendency to attribute success to one's own merit and failure to external factors (Bénabou and Tirole, 2016). Another is that job seekers adopt narratives that best “fit” their limited available information or experiences (Schwartzstein and Sunderam, 2021).

We also correlate job seekers' narratives with experiences during previous unemployment spells. Having experienced long-term unemployment in the past is associated with a stronger tendency to adopt an external narrative during the current spell. Unemployment during the pandemic—when the Danish unemployment system faced severe challenges—is linked to a greater likelihood of attributing long-term unemployment to systemic failures, such as insufficient job search assistance. Similarly, individuals with previous spells outside the capital region are more likely to emphasize location mismatch; those who were older during past spells are more likely to invoke age-related narratives; and those who experienced illness in a previous spell more often cite health-related factors. Importantly, all of these patterns hold conditional on workers' current characteristics and circumstances. Unemployment experiences thus seem to have persistent effects that extend to future spells. The impact of earlier unemployment experiences could be amplified by associative memory (Bordalo et al., 2023, 2025b; Kahana, 2012): being unemployed may cue the recall of earlier spells, which are then factored into job seekers' narratives.

(3) Consequences of narratives: Third, we study the consequences of narratives for job seekers' and firm managers' quantitative beliefs, decisions and labor market outcomes. We focus on internal and external narratives, which attribute long-term unemployment to factors inside or outside the control of job seekers, respectively.

To study the causal effects of narratives on job search outcomes, we conduct a field experiment in which we exogenously vary job seekers' narratives. To this end, we recruit a fresh sample of 8,609 job seekers and assign them, on a randomized basis, to (i) the *worker treatment*, in which they receive an internal narrative emphasizing job seekers' behavior as a driver of long-term unemployment, (ii) the *firm treatment*, in which respondents read an external narrative blaming firms' hiring practices, or (iii) the *control*

group, which receives no narrative. These narratives are based on individual responses from our academic expert survey and are presented as such to the respondents. This design allows us to trace how exposure to different narratives affects beliefs, job search behavior, and labor market outcomes.

Our intervention increases the prevalence of internal and external narratives in the respective treatment conditions. These changes in narratives persist in a one-week follow-up, mitigating concerns related to demand effects or short-lived responses to the treatment (de Quidt et al., 2018; Haaland et al., 2023). The effects on respondents' own narratives are stronger for the worker treatment than for the firm treatment.

We next study downstream effects on job search beliefs and decisions. The worker treatment makes job seekers more optimistic about job search, increasing both the perceived job-finding probability at a given effort level and the perceived increase in this probability when search effort rises. These patterns are consistent with the notion that internal narratives assign greater agency to job seekers. In line with these belief changes, the worker treatment also shifts job seekers' decisions and labor market outcomes: it increases planned search effort, makes job seekers less selective regarding wages and non-wage amenities, and raises job-finding rates within the following two months as measured in administrative data by 2.6 pp (about 8%). The downstream effects of the firm treatment are less pronounced, potentially reflecting its weaker first-stage effects: treated participants become somewhat less selective in their desired job attributes, but do not adjust their job search beliefs or planned search effort, and exhibit job-finding rates similar to the control group. Overall, our experimental evidence indicates that job seekers' narratives can have sizable effects on beliefs, job search behavior, and ultimately labor market outcomes.

Finally, we turn to the demand side of the labor market and examine how firm managers' narratives relate to their hiring decisions. Managers who attribute long-term unemployment to job seekers' behaviors view long-term unemployed applicants as significantly less productive, report a lower willingness to hire them, and offer lower wages when hiring such workers. External narratives are associated with the opposite patterns. We confirm these results using linked administrative data on firms' actual hiring decisions. These findings suggest that narratives shape firm managers' views on longer unemployment as a productivity signal, with implications for hiring outcomes.

Contribution and related literature Our study builds on different strands of the literature. First, we contribute to a recent literature on economic narratives (Eliaz and Spiegler, 2020; Schwartzstein and Sunderam, 2021; Shiller, 2017, 2020). Andre et al. (2026) study the narratives individuals invoke to explain the post-pandemic inflation surge. Other studies employ online experiments to understand the role of narratives in belief updating and persuasion (Barron and Fries, 2025; Charles and Kendall,

2025; Graeber et al., 2024). A related literature explores laypeople’s “mental models”—i.e., beliefs about relationships between different variables—in applied settings such as macroeconomic shocks (Andre et al., 2022), financial markets (Andre et al., 2025; Bastianello et al., 2025), taxation (Stantcheva, 2021), trade (Stantcheva, 2023) or firms’ pricing behavior (Han et al., 2024). Other papers examine the role of mental models in learning from feedback (Esponda et al., 2024) or weighting of competing models (Aina and Schneider, 2025; Musolff and Zimmermann, 2025) in more stylized settings. We make three key contributions to the literature on economic narratives: (i) we show that narratives causally shape economic decisions in a high-stakes real-world context; (ii) we provide detailed evidence on the experiential origins of economic narratives; and (iii) we demonstrate that narratives can play an important role not only among households but also among firm managers.

Second, we add to the literature studying subjective beliefs in job search (Mueller and Spinnewijn, 2023a), which documents substantial biases and misperceptions among job seekers based on quantitative belief data. Unemployed workers tend to overestimate their chances of securing re-employment (Balleer et al., 2026; He and Kircher, 2023; Mueller et al., 2021; Spinnewijn, 2015) and often misperceive available wages (Altmann et al., 2026; Caliendo et al., 2023; Conlon et al., 2018; Krueger and Mueller, 2016). To the best of our knowledge, our study is the first to provide direct evidence on the reasoning underlying quantitative beliefs using open-ended survey data.

Third, our paper also relates to a broader literature on the determinants of job search behavior, including search intensity (DellaVigna et al., 2022; Marinescu and Skandalis, 2021), reservation wages (Banfi and Villena-Roldán, 2019; Krueger and Mueller, 2016), and the valuation of non-wage amenities (Le Barbanchon et al., 2021; Maestas et al., 2023). On the demand side of the labor market, existing work studies firms’ willingness to hire unemployed workers (Eriksson and Rooth, 2014; Kroft et al., 2013). Our results suggest that narratives are an important factor shaping quantitative beliefs and decisions in both job search and hiring, and thereby influence labor market outcomes.

Fourth, our results add to the literature on labor-market interventions. Previous studies provide job seekers with factual information about wages (Altmann et al., 2026), vacancies (Le Barbanchon et al., 2025), or occupational prospects (Altmann et al., 2022; Belot et al., 2019). Our narrative intervention shifts individuals’ broader beliefs about the determinants of success and failure in the search process. From a policy perspective, our findings suggest that such interventions could be a powerful tool to change job search behavior and improve re-employment prospects.

Lastly, our paper is linked to a literature on the role of memory (Andre et al., 2022; Bordalo et al., 2025a, 2026; Jiang et al., 2025; Link et al., 2025; Taubinsky et al., 2026) and personal experiences (D’Acunto et al., 2021; Kuchler and Zafar, 2019; Malmendier

and Nagel, 2011, 2016) in shaping economic beliefs and behavior. We contribute to this literature by showing that personal experiences also appear to be a core driver of economic narratives—the causal stories individuals adopt to explain reality.

2 Data and design

In this section, we introduce our main samples, describe the design of the main survey module, outline the classification of the open-ended responses on unemployment narratives, and present quality checks for the open-ended data.

2.1 Samples

Our data collections focus on Denmark, where the research infrastructure allows us to (i) survey large samples of relevant and typically hard-to-reach groups and (ii) link our survey responses with high-quality administrative data on respondents' background characteristics, decisions, and labor market outcomes. Below, we describe our main descriptive samples. On top of these samples, we conduct a field experiment with job seekers and several additional descriptive surveys, which we introduce throughout the paper. Appendix Table B.1 provides an overview of all data collections.

Job seekers Our main sample consists of unemployed job seekers—individuals for whom long-term unemployment is an important risk and for whom unemployment narratives are most likely to be decision-relevant. The Danish public employment service (Agency for Labor Market and Recruitment, STAR) provided us with the personal identification (CPR) numbers of 20,000 randomly selected individuals who received unemployment insurance (UI) benefits as of May 6th, 2024. On May 14th, we invited these job seekers to participate in an online survey through Denmark's official digital government mailing system, *digital mail*. Respondents to our surveys are informed that they will be eligible to win one of 20 gift cards worth DKK 1,000 (approximately \$130) if they complete the survey. A total of 3,566 individuals from the job-seeker sample completed the main survey in May 2024, corresponding to a relatively high response rate of 18%. Of these respondents, 2,728 were still actively searching for a job at the time of the survey and constitute our analysis sample. Three months later, we re-invited these respondents to participate in a follow-up study, which was completed by 1,089 of them. Appendix Table B.2 Columns 1–3 provide summary statistics for respondents in our main and follow-up surveys, as well as a comparison to the characteristics of the overall population of unemployed job seekers at the time of our survey. Our survey samples resemble the population of job seekers fairly closely, with the exceptions

of a higher average age and a somewhat higher level of education—the latter being a common phenomenon in online surveys (Haaland et al., 2023).¹

Firm managers Unemployment narratives might also matter for firm managers, who decide whether to hire long-term unemployed job seekers. We therefore obtained company identification (CVR) numbers of Danish firms (as of 23rd February 2024) from a market research company. We invited 20,000 firms through their official inbox in the public mailing system to participate in a survey. This survey was conducted in parallel with the job seeker survey. We invited all firms with 50 or more employees, and sampled firms with fewer than 50 employees proportionally to their number of employees. We excluded firms with fewer than five employees. For smaller firms, firm owners typically attend to incoming mail, while in larger firms the contact person is the head of the executive board or another employee in a lead managing role. Our final working sample consists of 2,514 firm managers who completed our survey. Appendix Table B.3 shows summary statistics of our firm-manager sample as well as benchmarks from the overall population of firms. While our sample includes both smaller and larger companies, it disproportionately contains managers of larger firms and features a somewhat higher fraction of public sector firms than the population.

General population To compare the narratives of job seekers and firm managers with those of individuals for whom long-term unemployment involves lower stakes, we also conducted a survey with a general population sample. We obtained the personal identification numbers of 10,000 randomly selected Danish residents aged 18 or older from Statistics Denmark (DST) and contacted them through *digital mail* in mid-May 2024. Our main working sample consists of 2,244 individuals who completed our survey, of which 1,381 were employed at the time of the survey. Appendix Table B.2 reports population benchmarks and summary statistics for the full sample (Columns 4-5) and for the subsample of employed workers (Columns 6-7). Our sample closely resembles the population, with the exception of a somewhat higher average age in our sample.

Policy experts We also survey expert practitioners at Danish labor market institutions. These agents are of particular interest because they influence labor market policies by advising policymakers and implementing policies, and because they possess expert knowledge of the Danish labor market. In particular, we contact employees of all policy divisions (i.e., excluding supporting divisions like IT and HR) at the Danish Ministry of

¹The summary statistics are based on our final working samples. For our surveys with job seekers, the general population, and firm managers, we only make use of respondents who completed their respective survey. Among those who completed the survey, we drop respondents in the bottom and top percentiles in terms of response time in the respective survey, as these respondents are likely inattentive to the survey. We do not restrict the samples depending on survey completion or response time in our surveys of expert practitioners and of academic labor economists, given that we expect high attention in these samples and that the samples are relatively small.

Employment, economists working in the divisions on labor market topics and on data and analysis at the Danish Agency for Labor Market and Recruitment (STAR), members of the National Employment Council (BER)—a council of policymakers, employer and trade union representatives, and other experts on the Danish labor market—, and employees at a major Danish unemployment fund (Akademikernes Akasse). The survey was conducted in parallel with our other surveys and distributed through contact persons at the institutions, so we did not have direct control over the number of individuals receiving the survey invitation. 116 respondents participated in the survey. Appendix Table B.4, Panel A, provides summary statistics. 96% of the respondents have a university degree and 34% have studied economics or business. 88% indicate that the topic “long-term unemployment” is at least somewhat relevant in their professional role.

Academic experts To interview another group with specialized knowledge of long-term unemployment, we conducted an expert survey with international and Danish labor economists. In May 2024, we invited all members of the IZA network of labor economists (both “fellows” and “affiliates”) as of February 2024, which totals about 2,030 individuals. We also invited the approximately 100 economists from Aarhus University, Copenhagen Business School, the University of Copenhagen, and the University of Southern Denmark—home to the four largest Danish economics departments—who are part of their local research groups on labor economics. 248 of the invited experts participated—which implies a relatively high response rate for expert surveys of this type. Appendix Table B.4, Panel B, displays summary statistics. The experts in our sample completed their PhD on average 17.7 years ago and are located in many different countries (11% of them in Denmark). They have an average number of 4,216 Google Scholar citations (median: 1,158) and an average h-index of 18.7. As such, our sample consists of influential and experienced labor economists and provides us with a state-of-the-art academic benchmark.

2.2 Main survey module

We next describe our main survey module. Appendix E provides the full instructions.

Narratives: a working definition Narratives are the causal accounts, explanations or stories that people use to explain the world. They serve as a sense-making device but also help individuals interpret data and form beliefs about uncertain outcomes. Concretely, we define narratives as *causal accounts for why a specific event occurs*. Causality is at the heart of common definitions of narratives in psychology (Pennington and Hastie, 1992; Sloman and Lagnado, 2015; Trabasso and van den Broek, 1985) and economics (Andre et al., 2026; Eliaz and Spiegler, 2020). While there exist notions of narratives that do not feature a causal element, perceived *causal* relationships are ultimately what

should matter for economic decision-making. As such, our definition of narratives is well-suited for applications in economic contexts.

Open-ended elicitation of narratives We elicit narratives about long-term unemployment using the following open-ended survey question:

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some individuals to stay unemployed for an extended period?²

Survey participants type their response into an open-text box. Our question focuses on reasons for long-term unemployment *in general*, rather than on respondents' views about which factors have led or might lead them personally to remain unemployed for an extended period. This focus offers several advantages. First, we elicit narratives about the same object from all participants, which simplifies the interpretation of heterogeneity in the survey responses. Second, our framing makes the question meaningful both for job seekers early on in their unemployment spell and for those later in the spell. Later in the analysis, we examine the relationship between job seekers' narratives and their beliefs about aspects of their personal situation as well as their job search behavior.

Open-ended elicitations have become increasingly common in economics. Compared to closed-ended question formats, they have a series of advantages. First, they elicit people's reasoning in a very naturalistic manner. Second, they do not inform or prime subjects regarding any potential factor causing long-term unemployment. Third, open-ended question formats allow for an unrestricted elicitation of narratives, giving survey respondents freedom to write down any potential explanation that comes to mind. Fourth, they reveal misunderstandings, inattention, and unwillingness to engage with the question on the part of respondents.

Open-ended elicitations also face some potential limitations, which we address in various ways. First, heterogeneity in how participants interpret the question could have a particularly large effect when there is no additional guidance through the displayed response options. This issue seems less severe in our case, where the question and the object of interest are fairly clear and unambiguous. Second, writing a response to an open-ended question requires more effort from participants than ticking response options in more structured formats. Heterogeneity in the willingness to exert effort could introduce noise. We believe that this issue is substantially mitigated in our setting: our surveys are administered through the official government mailing system, which individuals generally take seriously and in which they exhibit high levels of engagement.

²Our academic experts are predominantly from outside Denmark and many of them are likely unfamiliar with the institutional details of our setting. We therefore explain to them in the beginning of the survey why we focus on Denmark and ask them to respond to the question on what causes long-term unemployment in Denmark to the best of their knowledge as labor economists.

Lastly, classifying open-ended data requires judgment calls on the part of researchers. We address this issue by pre-designing a coding scheme based on pilot data and instructing research assistants to hand-code the data according to this scheme. We describe the coding of the narrative data in detail in the next subsection. Haaland et al. (2025) provide a detailed discussion of the merits and limitations of open-ended elicitations.

Our narrative question is always asked as the first question in the survey, with the goal of minimizing priming as much as possible. The surveys also contain several other questions, such as quantitative beliefs about job search outcomes and measures of decisions regarding job search or hiring, which we introduce throughout the paper.

2.3 Classification and quality of the open-ended data

Coding scheme Prior to the main survey, we devised a fine-grained coding scheme for different potential explanations for why certain job seekers become long-term unemployed. The scheme includes explanations for long-term unemployment put forward in the academic literature and in the public debate as well as arguments respondents frequently raised in pilot collections.

Table 1 presents an overview of our classification of narratives. Our scheme contains codes for 37 narrative factors, and each response can receive multiple codes. This relatively large number enables us to capture the full richness of the open-ended responses. In many of our analyses, we aggregate the 37 narrative factors (second column) into 13 families (first column). Each family groups factors that are closely related and likely have similar implications for job search and hiring. In some exercises, we use an even coarser aggregation and distinguish between three narrative classes: “internal narratives”, capturing factors within job seekers’ short-run control, such as low search effort or unrealistic expectations regarding future jobs; “external narratives”, capturing factors outside the job seekers themselves, such as firms making unattractive job offers or being too selective, a lack of vacancies, or low-quality job search assistance; and “other narratives”, which, among others, include factors related to job seekers’ characteristics that are difficult to change in the short run, such as lack of experience, skill mismatch, high age, or health problems. Table 1 also includes explanations and examples of the different narrative families. In Appendix C, we present a more detailed overview with explanations and example responses for each factor from each of our samples.

Human coding We classify most of the text data relying on human coding, for two main reasons. First, when we started this project, humans were still superior to AI-based methods such as Large Language Models (LLMs) in detecting the often implicit and nuanced statements about causal drivers contained in our text data. Second, data protection regulations prevented us from exporting raw narrative responses from the

Table 1 Narratives codes, aggregation, and examples

Narrative family	Narrative factors	Explanation	Examples
<i>— Narrative class: Internal narratives: —</i>			
Worker behavior	Lack of search effort Lack of motivation Unemployment benefits Workers demand high salary Workers demand amenities Workers are too picky	Job seekers not searching enough, not being motivated, or having unrealistic demands regarding jobs.	“too selective regarding the jobs they are willing to take”; “unrealistic expectations for salary”; “some people are very lazy and do not want to work.”
<i>— Narrative class: External narratives: —</i>			
Firm behavior	Firms offer low salary Firms do not offer amenities Firms are too picky Discrimination	Firms not offering attractive conditions or discriminating against particular types of workers.	“too high demands from employers”; “they are ‘run over’ by unhealthy corporate cultures”; “lack of employers that pay a salary that reflects their qualifications”
Labor market	Slack labor market Firm closure	Lack of available positions.	“business cycles”; “lack of jobs in general”; “plant closure”
System	Lack of assistance Blaming society Frictions	Poor quality of job search assistance, society’s treatment of the unemployed, labor market frictions.	“Lack of help to find the right job”; “societal perceptions”; “a lot of employment protection”
<i>— Narrative class: Other narratives: —</i>			
Lack of skills	Lack of skills Lack of education Language barriers Qualification unacknowledged	Lack of necessary skills or formal qualification.	“lack of skills”; “low education level”; “language problems”, “acquiring certification of their skills may take time”
Skill mismatch	Skill mismatch	Mismatch between job seekers’ skills and skills that are in demand.	“Job seekers may want to change industry without training”; “the employer thinks they are overqualified for the position”
Age	Age	Job seekers’ old age.	“Advanced age”; “firms expect that seniors require too much special needs”
Lack of experience	Lack of experience	Lack of work experience.	“Lack of practical experience”; “employers are preferring someone with experience”
Location	Location	Mismatch between job seekers’ residence and location of jobs.	“Unwillingness to move to where the jobs are.”; “That there is a lack of jobs within their field and geographical area.”
Health	General health Mental health Physical health	Job seekers’ poor health.	“unable to work due to health reasons”; “psychological factors”; “physical injuries”
Duration dependence	Vicious cycle Situation is demotivating Human capital depreciation	Job finding becoming more difficult the longer one is unemployed.	“The longer the unemployment spell, the more skeptical a new employer becomes.”; “demotivation e.g., because of unsuccessful applications”
Search skills	Search skills	Lack of search skills or wrong job search strategy.	“lack of experience regarding interviews”; “lack of networking”
Miscellaneous	Personal circumstances Worker profile No agreement salary No agreement amenities Job search is time-intensive Bad luck Artifact	Residual category for “other narratives” not falling under any of the above categories.	“personal/family reasons”; “career changes, such as from employee to self-employed will involve a period of unemployment”; “luck”

Notes: This table provides an overview of the different codes in our coding scheme and how we aggregate them to different families of narratives, as well as some example responses.

secure servers of the University of Copenhagen, thereby limiting options for AI-based coding. To reduce noise in the data, each response is independently coded by two

research assistants, and conflicts in the coding are resolved by a third research assistant. We also extensively train the research assistants using pilot data.

Data quality and validation We confirm the high quality of the open-ended data and of our coding procedure in several ways.

First, 94% of the responses to our job seeker, firm manager and general population surveys and close to 100% of the responses to our surveys with academics and expert practitioners can be classified with our coding scheme, suggesting that our scheme captures the content of the responses well.

Second, we detect a high inter-rater reliability: when one research assistant assigns a particular narrative family (class) to a survey response, then there is a 77% (88%) chance that the other research assistant does so as well (pooling the five main descriptive samples). This suggests that the level of ambiguity in our open-ended responses is limited and that it is mostly clear which codes in our scheme apply for a given response.

Third, in Appendix C we show that our manual coding procedure has a high overlap with an AI-based approach, which we were able to implement with a separate sample.

Lastly, in March 2026 we conducted a separate survey with a sample of 290 unemployed job seekers from the US via Prolific.³ After responding to our standard open-ended question on unemployment narratives, the respondents answer a closed-ended version listing our 13 narrative families in structured response options. As shown in Appendix Figure A.1, the relative frequency of different narrative families is similar across the two question formats, although the absolute frequencies of the different codes are higher when using the closed-ended question format. This is a common finding when comparing responses between open-ended and closed-ended question formats, which may reflect both (i) higher effort cost of responding to open-ended questions and (ii) effects of priming and information through the displayed response options in structured questions (Andre et al., 2022; Link et al., 2025). Appendix Table B.5 highlights that there is a strong cross-sectional correlation in whether a particular narrative family is mentioned in the open-ended and in the closed-ended measure.

Overall, these patterns speak to the high quality of our open-ended data and the validity and reliability of our coding approach.

2.4 Administrative data

We link our survey data on job seekers' narratives and beliefs to high-quality administrative records that provide detailed information on respondents' backgrounds and labor

³We use Prolific due to ease of recruitment and to preserve the limited pool of Danish job seekers. Summary statistics are presented in Appendix Table D.1. The instructions can be found in Appendix E.3. For this survey, we apply AI-based coding of the open-ended data, as described in Appendix C.

market outcomes. Specifically, we combine the survey with Danish register data containing (i) socio-demographic characteristics from the population registers (BEF), (ii) complete records of unemployment spells and benefit receipt (DREAM), and (iii) employer-reported information on employment status, working hours, earnings, and occupations from the tax authority registers (BFL). These data allow us to construct precise measures of individuals' past and current labor market experiences and to follow their outcomes after survey participation. Because the administrative records are highly accurate and continuously updated, we can observe both prior histories and future outcomes without relying on re-interviews or potentially noisy self-reported recall.

3 Heterogeneity in unemployment narratives

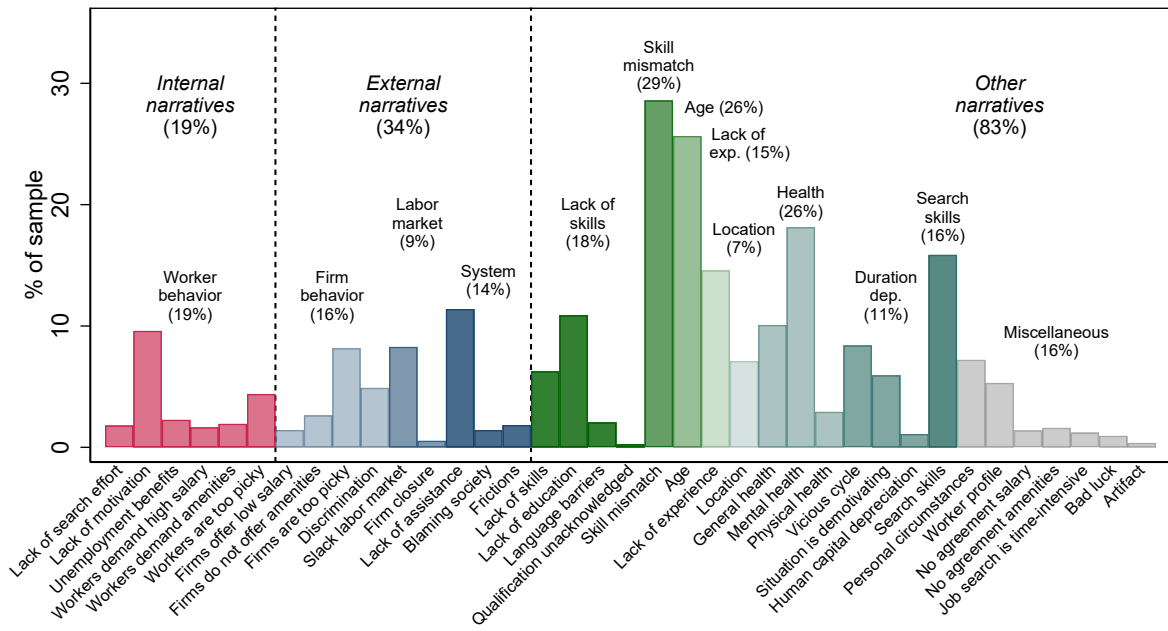
We start by describing the narratives respondents in our different samples invoke.

Job seekers Panel A of Figure 1 displays the frequency of different narrative factors, families and classes among job seekers. There is strong heterogeneity, with each family being invoked by at most one-third of unemployed workers. On average, respondents cite 2.4 narrative factors from 2.2 narrative families and 1.4 narrative classes. 19% invoke an internal narrative that blames workers for the occurrence of long-term unemployment, citing factors such as insufficient search, lack of motivation, or workers feeling relaxed because of high unemployment benefits as causes of long-term unemployment. External narratives are somewhat more prevalent at 34%: 16% attribute long-term unemployment to firms' hiring practices, 9% to adverse aggregate labor market conditions, and 14% to systemic shortcomings—e.g., inadequate job-search assistance.

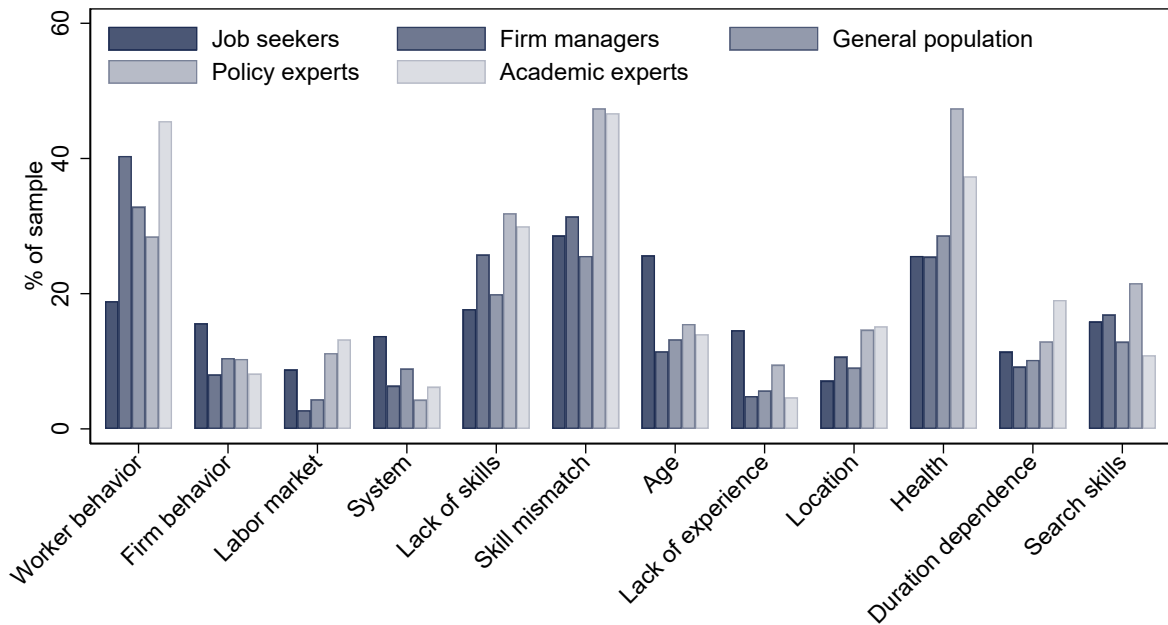
Beyond internal and external narratives, many job seekers view a lack of skills (18%) or skill mismatch (29%) as key drivers of long-term unemployment. Other common narrative families include job seekers' high age (26%) or lack of experience (15%), mental or physical health issues (26%), and poor search skills (16%). 11% of all responses feature some form of duration dependence—an issue that has received a lot of attention in the academic literature (Kroft et al., 2013; Mueller and Spinnewijn, 2023b; Mueller et al., 2021)—such as unemployment resembling a “vicious cycle”.

Firm managers and general population How do job seekers' narratives compare to those of other economic agents? Firm managers and general population respondents' narratives on average include 2.3 factors from 2.0 families and 1.3 classes—similar to job seekers. As shown in Panel B of Figure 1, firm managers and general population respondents are 21 and 14 pp more likely to attribute long-term unemployment to worker behavior, relative to an incidence of 19% among job seekers. By contrast, ex-

Figure 1 Distribution of narratives
A. Distribution of narratives among job seekers



B. Distribution of narrative families across samples



Note: This figure displays the distribution of narrative factors and families among unemployed job seekers (Panel A) and differences in the distribution of narrative families across samples (Panel B). **Panel A:** Each bar represents the frequency of individual narrative factors within the sample of unemployed job seekers ($N = 2,728$), with different colors indicating broader narrative families. The percentage in parentheses refers to the share of respondents who mention at least one narrative factor within the corresponding family. **Panel B:** Each bar represents the frequency of narrative families within the corresponding sample of (i) job seekers ($N = 2,728$), (ii) firm managers ($N = 2,514$), (iii) members of the general population ($N = 2,244$), (iv) policy experts ($N = 116$) and (v) academic experts ($N = 248$). All samples were interviewed in May 2024.

ternal narratives focusing on firms' hiring practices, adverse labor market conditions, or systemic failures are invoked by 16% of firm managers and 22% of general population respondents—substantially less frequently than among job seekers (34%). Similarly, firm managers and general population respondents are less likely than job seekers to attribute long-term unemployment to job seekers' high age (11% and 13% versus 26%) or limited experience (5% and 6% versus 15%). There are no strong differences to job seekers in firms' and general population respondents' tendency to cite a lack of skills or skill mismatch, location mismatch, health issues or duration dependence.

Expert practitioners and academics Panel B of Figure 1 also illustrates how job seekers' narratives differ from those of agents with expert knowledge of the labor market—expert practitioners at Danish labor market institutions and international academics. On average, expert practitioners and academics provide more extensive narratives than respondents in the other samples, citing 3.4 and 3.1 distinct narrative factors, respectively. Similar to households and firms, experts are substantially more likely than job seekers to invoke internal narratives and somewhat less likely to emphasize external narratives. For example, 46% of academics attribute long-term unemployment to worker behavior—more than twice the corresponding share among job seekers.

A distinctive feature of experts' narratives is the elevated prevalence of skill-related explanations. For instance, 47% of expert practitioners cite skill mismatch, making it the most common narrative family in this sample. Similarly, poor health is mentioned even more frequently than by job seekers themselves, reaching 47% among expert practitioners and 37% among academics. In contrast, narratives focusing on high age or limited experience are less common than among job seekers. Finally, academics assign substantially greater importance to duration dependence than any other group, with 19% referencing this mechanism.

Taken together, our first main result is the following:

Result 1. *Narratives about long-term unemployment vary substantially both within and across different types of economic agents. Internal narratives that attribute responsibility to workers' behavior are less prevalent among job seekers than among other groups, whereas external narratives focusing on firms' hiring practices, adverse labor market conditions, or systemic shortcomings are more common. Other frequently cited explanations include insufficient or inadequate skills, high age, lack of experience, and health issues.*

In Appendix D.1 we present evidence from additional data collections on how job seekers' narratives vary across different countries.

4 Experiential origins of unemployment narratives

Personal experiences have been shown to be an important driver of quantitative beliefs and economic decisions (Gennaioli et al., 2025; Kuchler and Zafar, 2019; Malmendier and Nagel, 2011). In this section, we exploit the detailed Danish register data to shed light on the experiential origins of job seekers' narratives. Our analysis proceeds in three steps. First, we examine how narratives vary cross-sectionally with job seekers' personal background and recent experiences. Second, we study how job seekers update their narratives in response to experienced labor market success or failure. Finally, we relate job seekers' narratives to their experiences from previous unemployment spells.

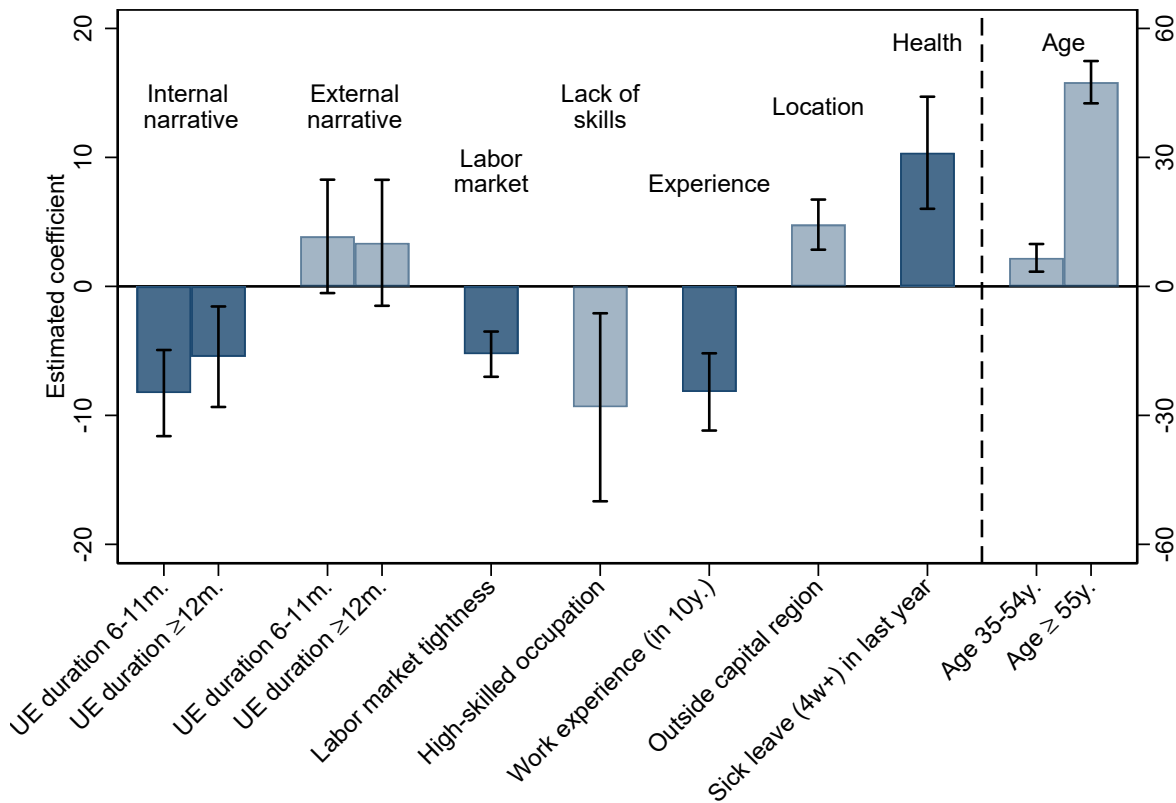
4.1 Personal background and recent experiences

We begin by examining the association between job seekers' narratives and proxies for personal background and recent experiences. Specifically, we estimate multivariate regressions of indicators for whether a respondent invokes a narrative from a given class or family on a set of covariates constructed from linked administrative data. Figure 2 highlights the key estimates discussed in the text, while Appendix Table B.6 reports the full set of estimated coefficients.

Several patterns suggest that job seekers' unemployment narratives are closely linked to their recent personal experiences. The prevalence of internal and external narratives varies systematically with the current length of respondents' unemployment spell. Individuals who have been unemployed for six to eleven months or for twelve months or more are 8 pp ($p < 0.001$) and 5 pp ($p = 0.006$) less likely, respectively, to invoke an internal narrative attributing long-term unemployment to job seekers' behavior than respondents early in their spell. We observe the reverse pattern—though smaller in magnitude and statistically insignificant—for narratives emphasizing factors external to the job seeker.

Beyond the internal–external distinction, the tendency to invoke narratives from particular families strongly varies with proxies for related personal experiences. Individuals facing tighter labor market conditions—proxied by the number of vacancies per 100 job seekers in the respondent's previous occupation and region of residence—are less likely to invoke narratives emphasizing weak labor demand (-1.4 pp per standard deviation, $p < 0.001$). Those who previously worked in high-skilled occupations are 9 pp less likely to attribute long-term unemployment to a lack of skills ($p = 0.012$). Individuals with more work experience are less likely to cite a lack of experience (-8 pp per ten additional years of experience, $p < 0.001$). Similarly, workers residing outside the capital region—a proxy for living in remote areas—are more likely to emphasize location mismatch ($+5$ pp, $p < 0.001$), and individuals with at least four weeks of sick leave during

Figure 2 Correlations of job seekers' narratives with recent experiences



Note: This figure shows how narratives correlate with background characteristics among unemployed job seekers ($N = 2,728$). We regress indicators for mentioning each narrative group (listed above the bars) on the corresponding explanatory variable (listed on the x -axis). Each bar plots the estimated coefficient with 95% confidence intervals (based on robust standard errors). The explanatory variables are defined as follows: indicators for the length of the current unemployment spell; labor market tightness, measured as the number of vacancies per 100 job seekers in the respondent's previous occupation and region of residence; an indicator for previously holding a high-skilled occupation, defined as managerial or professional occupations (ISCO major groups 1 and 2); work experience, measured as the respondent's cumulative time in paid employment; an indicator for residing outside the capital region; sick leave, defined as an indicator for at least four weeks of sick leave during the 12 months prior to the survey; and age at the time of the survey. All regressions additionally control for gender, previous job characteristics, and an indicator for searching for part-time work. The full set of estimates is reported in Table B.6.

the preceding year are more prone to cite health-related narratives (+10 pp, $p < 0.001$). Finally, older workers often emphasize high worker age, with 50% of workers aged 55 or above citing high worker age as a driver of long-term unemployment, compared to only 5% among those younger than 35 ($p < 0.001$).

An interpretation of these patterns is that job seekers' personal experiences shape how they think about the broader phenomenon of long-term unemployment, which is the focus of our survey question. This interpretation aligns with prior evidence that beliefs about aggregate economic outcomes are influenced by personal and local experiences (Kuchler and Zafar, 2019; Taubinsky et al., 2026). Our findings suggest that this mechanism extends to individuals' narratives and reasoning. If the observed corre-

lations indeed reflect the influence of experiences during unemployment, they should be weaker among individuals who are not currently unemployed. To test this, we run a similar analysis with currently employed respondents from our general population sample. As shown in Appendix Figure A.2 and Appendix Table B.7, the estimated associations are substantially smaller in magnitude and—with the exception of the patterns for the age narrative—statistically insignificant among employed workers. This supports the interpretation that the relationships documented above are linked to experiences made while unemployed.⁴

An alternative interpretation is that job seekers may have understood our question as referring to the determinants of their own long-term unemployment rather than to the general phenomenon. However, as shown in Appendix Figure A.3, the patterns remain similar when restricting the sample to individuals in the early phase of their unemployment spell (less than three or six months), for whom the question clearly refers to a situation distinct from their own.

4.2 Experiences of labor market success or failure

Above, we documented that internal narratives—those holding job seekers responsible for long-term unemployment—are less common among job seekers than among other agents, whereas narratives emphasizing external factors are more frequent. We also showed that individuals later in their unemployment spell are less likely to invoke internal narratives. We next provide more direct evidence on how narratives change in response to labor market success or failure.

In particular, we employ the sample of job seekers who participate in both our main and our three-month follow-up survey and estimate specifications of the following type:

$$(1) \quad \Delta \text{Narrative class}_{i,t} = \beta_0 + \beta_1 \times \text{Employment shock}_{i,t} \\ + \beta_2 \times (\text{Perceived re-empl. prob.}_{i,t-1}/100) + \Pi \mathbf{X}_{i,t-1} + \epsilon_{i,t},$$

with

$$\text{Employment shock}_{i,t} = \begin{cases} 1 - (\text{Perceived re-empl. prob.}_{i,t-1}/100), & \text{if employed in } t, \\ 0 - (\text{Perceived re-empl. prob.}_{i,t-1}/100), & \text{if not.} \end{cases}$$

where $\Delta \text{Narrative class}_{i,t}$ denotes the change between the main and the follow-up sur-

⁴Additional patterns in the general population sample include (i) a stronger tendency among self-employed individuals to adopt internal narratives, and (ii) a pronounced gradient by political orientation—which was not elicited in our job seeker sample: left-leaning respondents are 17 pp ($p < 0.001$) less likely to endorse an internal and 6 pp ($p = 0.006$) more likely to hold an external narrative.

vey in an indicator for mentioning a narrative from the corresponding class (recoded to take values 0 or 100). Perceived re-empl. prob. $_{i,t-1}$ is the respondent’s subjective three-month job finding probability as elicited in the initial survey, and $\mathbf{X}_{i,t-1}$ is a vector of controls measured at baseline. The coefficient β_1 captures the effect of an employment shock equal to one (i.e., completely unexpectedly finding a job) on the percent chance that the respective narrative class is mentioned. We also estimate specifications that split the employment shock at zero, creating separate variables for positive and negative surprises, each equal to zero when the shock has the opposite sign.

Table 2 reports the results. As shown in Columns 1 and 3, an employment shock of one—i.e., finding a job despite a previously perceived job finding probability of 0%—increases the probability of invoking an internal narrative by 6.5 pp ($p = 0.038$) and reduces the probability of invoking an external narrative by 5.1 pp ($p = 0.083$). Columns 2 and 4 break the independent variable into positive and negative employment shocks. A positive shock of one increases the probability of invoking an internal narrative by 14 pp (Column 2, $p = 0.023$), while having no significant effect on the probability of invoking an external narrative. Conversely, a negative shock of -1 raises the probability of invoking an external narrative by 14 pp (Column 4, $p = 0.005$), with no corresponding effect on internal narratives. These effects are sizable, given baseline shares of 19% and 34% citing internal and external narratives, respectively. Columns 5 and 6 show that employment shocks have no significant effects on the tendency to subscribe to other narratives that do not clearly attribute responsibility either to job seekers’ behavior or to external factors.

Taken together, these results suggest that job seekers’ narratives are shaped by their personal experiences of success or failure in the labor market. Successful job finding is associated with a shift towards internal narratives, while unsuccessful job search increases the prevalence of external narratives. One possible explanation are self-image concerns, which lead individuals to attribute personal success to their own merit and failure to bad luck (Bénabou and Tirole, 2016). Another explanation is that job seekers endorse narratives that best fit their limited available database (Schwartzstein and Sunderam, 2021)—which disproportionately features their own experiences.

4.3 Experiences from past unemployment spells

Previous studies suggest that, while there is recency bias in the role of experiences in shaping beliefs and decisions, experiences can have long-lasting effects (Gennaioli et al., 2025; Goldfayn-Frank and Wohlfart, 2020; Malmendier and Nagel, 2011). We therefore examine whether more distant experiences—those acquired during earlier unemployment spells—continue to be reflected in job seekers’ narratives.

Table 2 Job seekers' narrative updating in response to labor market success or failure

	Δ Narrative family $_{i,t}$					
	Internal narrative [-100; 100]		External narrative [-100; 100]		Other narrative [-100; 100]	
	(1)	(2)	(3)	(4)	(5)	(6)
Employment shock $_{i,t}$	6.49** (3.12)		-5.14* (2.96)		-1.53 (2.34)	
$\times \mathbb{1}(\text{employment shock}_{i,t} \geq 0)$		14.01** (6.15)		6.04 (5.88)		-2.06 (4.75)
$\times \mathbb{1}(\text{employment shock}_{i,t} < 0)$		0.55 (5.33)		-13.97*** (4.91)		-1.11 (4.11)
Perceived re-empl. prob. $_{i,t-1}/100$	14.00*** (4.92)	12.24** (5.17)	-6.74 (4.64)	-9.36** (4.69)	0.45 (3.86)	0.57 (4.04)
Observations	1,089	1,089	1,089	1,089	1,089	1,089
Mean dep. variable	7.53	7.53	-3.03	-3.03	26.35	26.35

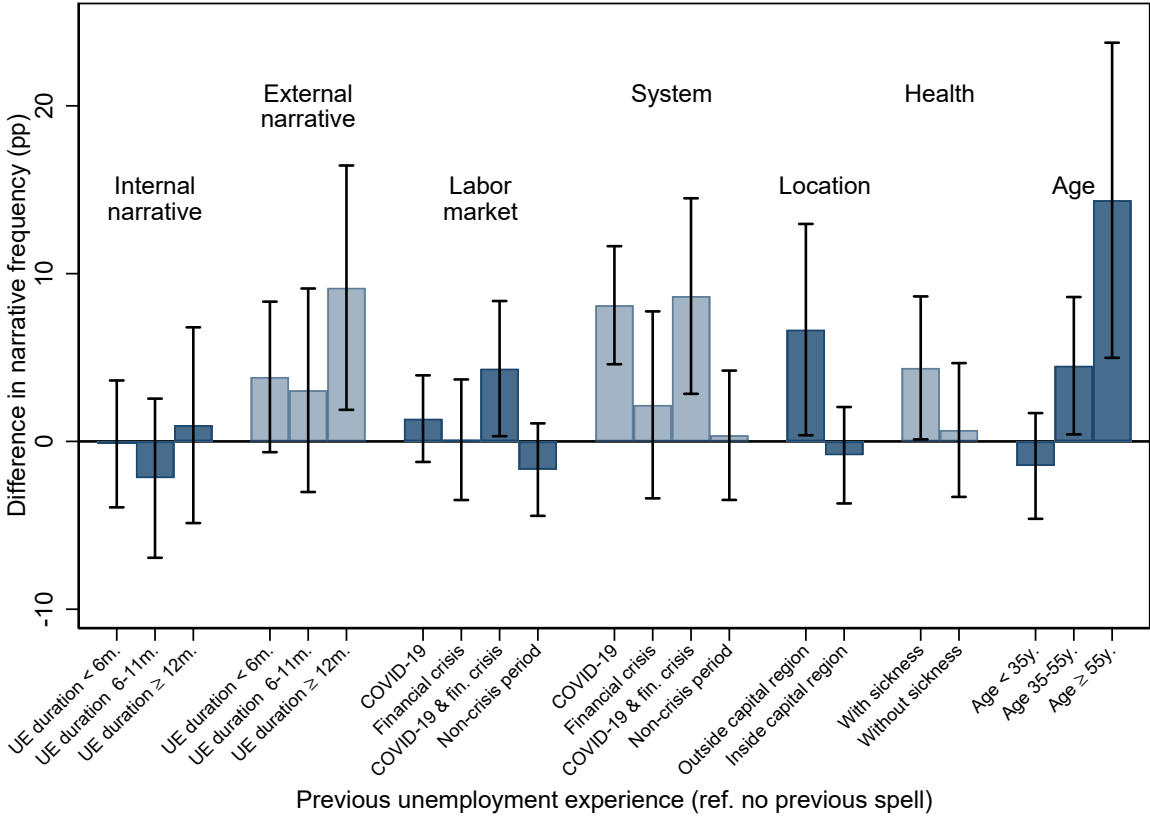
Note: The table reports how unemployed job seekers update their narratives in response to employment shocks. Employment shocks are defined as the difference between an indicator for being employed in wave 2 and the expected three-month job-finding probability reported in wave 1 (divided by 100). In columns (2), (4), and (6), we instead use separate variables for positive and negative shocks, each equal to zero when the shock has the opposite sign. The dependent variables measure the change between wave 1 and wave 2 in the frequency of mentioning each narrative class. The sample includes all respondents who were unemployed in wave 1 and participated in wave 2. All specifications control for a rich set of background characteristics and indicators for narrative classes mentioned in wave 1. Robust standard errors are reported in parentheses. ***/**/* indicate statistical significance at the 1%/5%/10%-level.

Specifically, we regress indicators for whether a respondent invokes a narrative from a given class or family on variables capturing whether the respondent experienced previous unemployment spells under particular circumstances as well as indicators for past spells without such circumstances. We additionally control for a rich set of current characteristics, including the respondent's current unemployment duration, place of residence, and age.

Figure 3 summarizes the results on experiences from previous unemployment spells, focusing on the key coefficient estimates. Previous long-term unemployment (≥ 12 months) has no significant effect on the likelihood of invoking an internal narrative but is associated with a 9pp higher likelihood of invoking an external narrative ($p = 0.014$). Past unemployment spells of shorter duration have no significant effects on the prevalence of either internal or external narratives.

Having experienced unemployment during both major recessions of the past decades—the financial crisis (2007-08) and the Covid-19 recession—is associated with a 4pp higher likelihood of attributing long-term unemployment to weak labor demand ($p = 0.035$). Experiencing unemployment during only one of these episodes, or outside

Figure 3 Correlations of job seekers’ narratives with experiences from past unemployment spells



Note: This figure shows how narratives correlate with past unemployment experience among currently unemployed job seekers ($N = 2,728$). We regress indicators for mentioning each narrative group (listed above the bars) on indicators for the corresponding unemployment experience (listed on the x -axis). Each bar plots the estimated coefficient with 95% confidence intervals (based on robust standard errors), relative to individuals with no prior unemployment spell. All regressions control for a rich set of background characteristics measured at the time of the survey, including gender, education, age, duration of the current spell, prior work experience and occupation, past sick-leave take-up, and labor market tightness in the previous occupation and current place of residence.

these recessions, has no comparable effect. In addition, having been unemployed during the Covid-19 recession—the Danish unemployment system faced severe challenges—significantly increases the propensity to attribute long-term unemployment to systemic failures, whereas unemployment during other periods does not.

Previous unemployment spells while residing outside the capital region increase the likelihood of invoking a location-related narrative by 7 pp ($p = 0.038$), while past spells within the capital region have no such effect. Similarly, a previous unemployment spell during a period of sickness increases the likelihood of invoking a health-related narrative by 4 pp ($p = 0.044$), whereas prior spells without sickness have no effect. Finally, having previously been unemployed at age 55 or older increases the likelihood of invoking an age-related narrative by 14 pp ($p = 0.003$), whereas past spells experienced before age 35 have no effect. Importantly, these patterns by location, health, and age

hold conditional on respondents' current place of residence, health status and age.

These findings suggest that unemployment experiences can have persistent effects on job seekers' narratives that extend to future spells. A potential mechanism amplifying these effects is associative memory (Bordalo et al., 2023; Kahana, 2012): being unemployed may cue memories of previous spells, which are then factored into job seekers' narratives.

Taken together, our second main result is the following:

Result 2. *Personal experiences appear to play a central role in shaping job seekers' unemployment narratives. First, unemployment narratives vary systematically across job seekers with their personal circumstances and recent experiences. Second, experiences of labor market success and failure are associated with updating toward internal and external narratives, respectively. Finally, experiences from past unemployment spells are persistently reflected in job seekers' narratives.*

Appendix D.2 provides additional evidence on how second-hand experiences are related to job seekers' narratives.

5 Consequences of unemployment narratives

In this section, we examine the consequences of unemployment narratives for job search and hiring. We first present experimental evidence on how narratives shape job seekers' beliefs, search behavior, and re-employment outcomes. We then study how narratives are associated with firm managers' hiring decisions. Throughout, we focus on internal and external narratives—i.e., narratives that attribute long-term unemployment to factors within the short-run control of job seekers, and narratives that instead emphasize external forces such as firms' hiring practices or weak labor demand.

5.1 Narratives and job search

To study the causal effects of narratives on job search outcomes, we present evidence from an experiment in which we exogenously vary job seekers' narratives. Our setup allows us to separate the effects of narratives from the experiences that shape them.

5.1.1 Experimental design

Setting and sample The experiment was conducted in April and May 2025. We invited 80,000 Danish UI recipients to participate in our main survey. The analysis sample consists of 8,609 job seekers who are still actively searching and who completed the survey. About one week later, respondents who finished the main survey were invited to

take part in a follow-up survey, which was completed by 3,107 of them.⁵ Appendix Table B.8 reports summary statistics for the final sample of respondents completing the main survey and shows that it is balanced across the three included treatment conditions. The full instructions for main and follow-up survey are provided in Appendix E.5.

Narrative treatments In the main survey, we randomly assign our respondents to one of three conditions with equal probability:

- the **worker treatment** truthfully explains to the respondents that we conducted a survey with academic experts and that these experts emphasized that the behavior of job seekers (a lack of motivation, insufficient job search, selectivity regarding jobs) is an important reason for long-term unemployment.
- the **firm treatment** provides a similar explanation that experts consider the behavior of firm managers (selectivity regarding applicants, biases and discriminatory practices) to be an important driver of long-term unemployment.⁶
- the **control group** does not receive any information.

The two treatments are supplemented with quotes from our academic expert survey.

Outcome measures To study the effects of exposure to different narratives on job seekers' beliefs, search behavior, and labor market outcomes, we collect a range of survey-based and administrative outcome measures.

Following the treatment, we elicit a range of quantitative beliefs. Most centrally, we measure the respondents' perceived probability of receiving at least one job offer within the next four weeks under two scenarios: searching for five hours and searching for fifteen hours per week. The responses allow us to construct measures of what is known as *baseline beliefs* and *control beliefs* (Mueller and Spinnewijn, 2023a). Baseline beliefs refer to the perceived probability of a job offer at a fixed level of search (five hours), while control beliefs capture the perceived increase in this probability when search effort rises from five to fifteen hours. Control beliefs are sometimes referred to as the "perceived returns to search". We also elicit the respondents' perceived unconditional probability of finding a job within the next three months, a belief commonly studied in the job search literature (Mueller and Spinnewijn, 2023a; Mueller et al., 2021). Respondents further estimate how many out of 100 unemployed individuals in Denmark

⁵We only make use of respondents who completed their respective survey. Among those who completed the survey, we drop respondents in the bottom and top percentiles in terms of response time in the respective survey in our analysis, as these respondents are likely inattentive to the survey. In the follow-up, we additionally drop those who are dropped from the baseline survey sample. The reported sample sizes refer to the samples after applying these restrictions.

⁶The firm treatment also mentioned firms' reluctance to hire older or inexperienced workers. Although the age and experience narratives are not strictly external narratives—as they blame job seekers' characteristics—, we included them with the intention of making the firm treatment relevant for a broad share of respondents. Empirically, respondents primarily update about external narratives in response to this treatment, suggesting that external narratives are the most salient feature of the treatment.

remain unemployed for twelve months or longer—a measure of the perceived overall risk of long-term unemployment—and report the wage they would expect to be offered if they received a job offer within the next four weeks.

In addition, we collect several measures of search behavior. In particular, we elicit two measures of planned search effort over the next seven days: (i) the number of hours a respondent plans to spend searching for a job, and (ii) the number of job applications they plan to submit. We further elicit respondents’ reservation wage—the lowest wage at which they would accept a job—and the concessions they would be willing to make to secure re-employment (e.g., long commute, additional training, or a change of occupation), which we summarize in an index ranging from 0 to 100.⁷

At the end of the survey, we ask all respondents our standard open-ended question about their own narratives regarding long-term unemployment. We re-elicite the respondents’ narratives in the one-week follow-up survey. Crucially, in the follow-up, respondents are not reminded of the narratives provided in the main survey, nor are they exposed to any new narratives or information.

Finally, we link the survey data to administrative records on labor market outcomes, which provide information on monthly employment status, working hours, and labor earnings as reported by employers. A key advantage of these non-self-reported measures is that they are immune to concerns such as consistency bias within the survey, intention–action gaps, and recall error.

Our design allows us to identify the causal effects of exposure to different narratives on job search beliefs and labor market outcomes by comparing the post-treatment evolution of beliefs and behaviors across the three treatment conditions.

AI-based coding Unlike in our descriptive analysis, we classify the open-ended responses on respondents’ narratives using AI-based coding. To comply with Danish data protection regulations, we first construct a dataset that contains only treatment status, demographic variables, and anonymized open-ended responses. Only after these steps do we apply our coding procedure using GPT-4o. As a consequence, we can analyze the first-stage and reduced-form effects of the experiment only separately and are unable to directly conduct instrumental variable estimations. Details on the AI-based coding procedure and a validation against human coding are provided in Appendix C.

5.1.2 Results

We regress the different outcomes on indicators for assignment to the worker or the firm treatment, along with control variables. Table 3 summarizes the treatment effects

⁷The index is constructed as the mean of nine indicator variables for willingness to make specific concessions, multiplied by 100.

on job seekers' own narratives, beliefs, job search behavior and labor market outcomes.

Own narratives Panel A of Table 3 displays the first-stage effects of the two treatments on the prevalence of different narrative classes. The worker treatment increases the prevalence of internal narratives from the worker behavior family by 8.1 pp (Column 1, $p < 0.001$)—relative to 22.7% in the control group—and has no significant effect on the tendency to invoke external narratives (Column 2). Conversely, the firm treatment increases the fractions invoking external narratives by 3.9 pp (Column 2, $p = 0.002$)—up from a baseline fraction of 36.4%. Other narratives are somewhat less frequent in the worker (Column 3, -2.3pp , $p = 0.024$) and the firm treatment conditions (Column 3, -1.5pp , $p = 0.123$) than in the control group.

These results indicate that job seekers incorporate expert-provided narratives into their own explanations for long-term unemployment. Particularly the worker treatment has a strong first-stage effect on job seekers' narratives. Appendix Figure A.4 shows that these effects persist at a somewhat reduced (worker treatment) or increased size (firm treatment) in the one-week follow-up. Since the respondents are less likely to recall the exact presentation of the treatment information at that stage, this mitigates the concern that the immediate effects on narratives reflect experimenter demand effects (de Quidt et al., 2018; Haaland et al., 2023).

Beliefs about job search Panel B of Table 3 reports treatment effects on downstream beliefs elicited in the main survey. The worker treatment increases respondents' baseline belief—the perceived probability of finding a job when searching five hours per week—by 2.3 pp (Column 4, $p < 0.001$), and their control belief—the perceived increase in this probability when search effort rises from five to fifteen hours—by 1.3 pp (Column 5, $p = 0.001$). Similarly, the worker treatment increases respondents' perceived probability of finding a job themselves by 4.1 pp (Column 6, $p < 0.001$) and lowers the perceived share of job seekers becoming long-term unemployed by 1.9 pp (Column 7, $p = 0.001$). The worker treatment has no significant effect on expected wages (Column 8).

These patterns suggest that internal narratives lead job seekers to adopt more optimistic beliefs about job search. The effects are economically large: control group respondents on average perceive returns to search of 7 pp, so the 1.3 pp effect corresponds to a 17% increase relative to the control mean. By contrast, the firm treatment has mostly no significant effects on job search beliefs.

Job search behavior How are these belief adjustments reflected in search behavior? Theoretically, a higher control belief should unambiguously increase search intensity by raising the perceived returns to effort. A higher baseline belief has the opposite effect, as it increases the expected value of unemployment and can make job seekers more relaxed (for a formal illustration of these mechanisms, see Harmon et al., 2026). As

Table 3 Narratives and job search: Experimental evidence

	A. First stage			B. Beliefs about job search				
	Internal narrative [0; 100]	External narrative [0; 100]	Other narrative [0; 100]	Baseline belief [0; 100]	Control belief [-100; 100]	Own job finding [0; 100]	LTU rate [0; 100]	Offered wage [log]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Worker treatment (a)	8.08*** (1.15)	-1.57 (1.25)	-2.26** (1.00)	2.25*** (0.61)	1.28*** (0.38)	4.05*** (0.78)	-1.94*** (0.58)	-0.02 (0.03)
Firm treatment (b)	1.15 (1.08)	3.88*** (1.24)	-1.50 (0.97)	-0.78 (0.59)	-0.40 (0.35)	-1.10 (0.77)	-1.04* (0.57)	0.00 (0.02)
<i>p</i> -value (a)=(b)	0.000	0.000	0.464	0.000	0.000	0.000	0.123	0.438
Observations	8,609	8,609	8,609	8,609	8,609	8,609	8,609	8,609
Mean control group	22.68	36.36	83.39	24.55	7.49	50.61	30.93	10.26
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	C. Job search behavior				D. Labor market outcomes			
	No. of appl.	Hours searched	Reserv. wage [log]	Conc. index [0; 100]	Job finding [0; 100]	Working hours	Labor earnings [DKK]	Hourly wage [log]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Worker treatment (a)	0.26*** (0.09)	0.53* (0.29)	-0.05** (0.02)	3.26*** (0.55)	2.64** (1.23)	5.76** (2.62)	1,446** (632)	0.01 (0.01)
Firm treatment (b)	0.08 (0.08)	-0.20 (0.28)	-0.01 (0.02)	1.18** (0.54)	1.52 (1.20)	1.75 (2.51)	541 (606)	0.02 (0.01)
<i>p</i> -value (a)=(b)	0.039	0.013	0.120	0.000	0.368	0.130	0.157	0.348
Observations	8,609	8,609	8,609	8,609	8,609	8,609	8,609	3,550
Mean control group	3.83	13.71	10.18	41.92	31.02	59.55	13,709	5.41
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table reports the effects of the narrative treatments on reported narratives, beliefs, job search behavior, and subsequent labor market outcomes among unemployed job seekers ($N = 8,609$). Each outcome is regressed on indicators for assignment to the worker and firm treatments. Robust standard errors are reported in parentheses. *P*-values refer to post-estimation tests of equality between the worker and firm treatment coefficients. All regressions control for demographic characteristics and prior labor-market histories. The dependent variables are defined as follows. **Panel A:** Columns (1)–(3): indicator for reporting at least one narrative in each narrative class (internal, external, or other). **Panel B:** Column (4): expected probability of receiving a job offer within four weeks when searching 5 hours per week. Column (5): expected increase in the job-offer probability when searching 15 rather than 5 hours per week. Column (6): expected own probability of finding a job within three months. Column (7): expected share of long-term unemployed among all job seekers. Column (8): expected wage in the next job. **Panel C:** Column (1): planned number of job applications to be submitted in the next four weeks. Column (2): planned hours of job search in the next week. Column (3): minimum acceptable wage (reservation wage). Column (4): willingness to make search concessions (index based on nine items). **Panel D:** Column (5): realized job finding (≥ 10 weekly working hours) within two months after the survey. Columns (6)–(7): total working hours and total labor earnings accumulated within two months. Column (8): average hourly wage within two months, conditional on employment.

shown in Panel C of Table 3, the worker treatment increases the planned number of job applications by 0.3 (Column 1, $p = 0.002$) and raises planned weekly search time by 0.5 hours (Column 2, $p = 0.069$), suggesting that the effect operating through control beliefs dominates empirically. The worker treatment also lowers respondents' reservation wage by 5% (Column 3, $p = 0.024$) and increases the willingness to make concessions by 3.3

index points (Column 4, $p < 0.001$). The firm treatment does not significantly affect planned search effort or reservation wages, but increases the concessions index by 1.2 points (Column 4, $p = 0.028$).

Labor market outcomes Finally, we examine effects on re-employment outcomes as measured in linked administrative data (Panel D of Table 3). Consistent with the higher search intensity, the worker treatment increases the probability of starting a new job in the two months after the survey by 2.6 pp (Column 5, $p = 0.032$). Relative to the control group mean of 31%, this corresponds to a sizable increase of about 8%. This higher job-finding rate translates into higher cumulative working hours and labor earnings over the same horizon. Cumulative working hours increase by 5.8 (Column 6, $p = 0.028$) and labor earnings by DKK 1,446 (Column 7, $p = 0.022$), corresponding to increases of 9.7% and 10.5%, respectively. By contrast, the treatment has no significant effect on the hourly wage in the first job (Column 8), suggesting that most of the increase in hours and earnings is driven by higher job-finding rates rather than changes in job quality. Finally, the firm treatment does not significantly affect labor market outcomes, in line with its mostly muted effects on beliefs and job search decisions.

Summary Taken together, the experimental evidence shows that narratives can have sizable causal effects on job seekers' beliefs, search behavior, and ultimately labor market outcomes. The results of the worker treatment are consistent with an agency-based mechanism: narratives that attribute long-term unemployment to job seekers' own decisions raise perceived returns to search, leading to more intensive search, lower selectivity over wages and non-wage amenities, and faster re-employment. By contrast, the firm treatment has mostly muted effects on downstream outcomes, consistent with the smaller shift in narratives produced by this treatment.

5.2 Narratives and hiring

Finally, we study the role of narratives on the demand side of the labor market. In particular, we examine how narratives are associated with firm managers' hiring decisions.

Measures of beliefs and hiring decisions In the firm manager survey, we elicit several measures of managers' beliefs about unemployed workers and firms' hiring practices. As in the job seeker survey, respondents first estimate how many out of 100 job seekers in Denmark become long-term unemployed. We then measure firm managers' beliefs about the productivity of long-term unemployed applicants. Specifically, respondents are asked to think of an applicant who has been unemployed for twelve months or longer and whose CV is otherwise comparable to that of applicants who are currently employed at other firms. Managers indicate how they expect the unemployed applicant's productivity to compare to that of the employed applicants. We employ a

Table 4 Narratives and hiring: Correlational evidence

	A. Beliefs about job seekers		B. Hiring intention		C. Labor market outcomes	
	Exp. LTU rate [0; 100] (1)	Exp. prod. gap [-100; 100] (2)	Hiring gap [z-score] (3)	Wage offer gap [-100; 100] (4)	Share LTU hires [0; 100] (5)	Hiring prob. LTU [0; 100] (6)
Internal narrative (a)	-1.11 (0.69)	-2.15*** (0.61)	-0.09** (0.04)	-0.75** (0.30)	-0.71* (0.41)	-3.54* (1.87)
External narrative (b)	1.73* (0.92)	1.47* (0.79)	0.13** (0.05)	0.48 (0.34)	1.37** (0.63)	5.78** (2.56)
<i>p</i> -value (a)=(b)	0.016	0.000	0.001	0.006	0.004	0.003
Observations	2,514	2,514	2,514	2,514	2,514	2,514
Mean dep. variable	14.98	-10.82	-0.00	-4.44	5.21	32.18
Control variables	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table reports correlations between narratives and the beliefs and hiring decisions of firm managers ($N = 2,514$). Each outcome is regressed on indicators for (1) mentioning an internal narrative (worker behavior) and (2) mentioning an external narrative (firm behavior, labor market, or system). Robust standard errors are reported in parentheses. *P*-values refer to post-estimation tests of equality between the coefficients for internal and external narratives. All regressions control for manager characteristics (gender, education, age, the respondents' position within the firm, employment duration and influence on hiring decisions) and firm size. The dependent variables are defined as follows. Column (1): expected share of long-term unemployed among all job seekers. Column (2): expected productivity gap between long-term unemployed and other workers (in pp). Column (3): gap in hiring willingness between long-term unemployed and other workers (standardized outcome based on a 7-point scale ranging from "much less likely" to "much more likely"). Column (4): gap in offered wages between long-term unemployed and other workers (in pp). Column (5): typical share of previously long-term unemployed among new hires. Column (6): probability of hiring a long-term unemployed worker within four months after the survey, measured using register data.

two-step procedure where the respondents first provide a qualitative comparison and then report a quantitative assessment of the percent difference in productivity.

Next, respondents report their willingness to hire a long-term unemployed applicant relative to otherwise comparable employed applicants on a seven-point scale ranging from "much less likely" to "much more likely". We treat this measure as cardinal and standardize it using the sample mean and standard deviation. We also elicit the wage the manager would offer the long-term unemployed applicant relative to employed applicants, using the same two-step procedure as for productivity beliefs.

Finally, respondents report the typical composition of their newly hired employees depending on whether the employees were previously short-term unemployed, long-term unemployed, or employed at other firms. Lastly, we link the survey to administrative records on firms' actual hiring behavior and construct an indicator for whether the firm hires a long-term unemployed worker within four months after the survey.⁸

⁸In the administrative data, long-term unemployed hires are defined as workers who had been unemployed for more than six months, corresponding to the definition used by the Danish public employment service (Harmon et al., 2026). Elsewhere in the paper, we use the 12-month definition following the international convention. The four-month outcome window is determined by the availability of register data.

Results We regress the different outcomes on dummy variables for whether the respondent mentions at least one internal narrative or at least one external narrative, as well as control variables. Table 4 presents the results.

Managers who invoke internal narratives expect a 1.1 pp lower share of job seekers to become long-term unemployed (Column 1, $p = 0.107$). Moreover, managers who express internal narratives perceive a 2.2 pp more negative productivity gap between long-term unemployed and employed applicants than managers without internal narratives (Column 2, $p < 0.001$). This effect is economically large: firm managers on average perceive long-term unemployed applicants to be 10.8% less productive than employed applicants. We detect opposite patterns for external narratives.

How do these differences in beliefs translate into hiring decisions? Managers who invoke internal narratives exhibit a 0.09 standard deviations lower relative willingness to hire long-term unemployed applicants (Column 3, $p = 0.031$). Managers with internal narratives also exhibit a 0.75 pp more negative gap in offered wages between long-term unemployed and comparable employed applicants (Column 4, $p = 0.012$), and report a 0.7 pp lower share of long-term unemployed among their typical hires ($p = 0.086$). Again, we detect reverse patterns for external narratives, with statistically significant effects in two of the three cases. Lastly, administrative data show that firms whose managers invoke an internal narrative are 3.5 pp less likely to hire at least one long-term unemployed worker in the four months after the survey (Column 6, $p = 0.058$). In contrast, firms whose managers express an external narrative are 5.8 pp more likely to do so (Column 6, $p = 0.024$). These effects are large relative to an unconditional probability of hiring a long-term unemployed worker of 32.2%.

These findings suggest that narratives shape how strongly firm managers interpret unemployment duration as a productivity signal, and thereby influence hiring decisions. These results illustrate the reasoning underlying the hiring penalties for long-term unemployed workers documented in the literature (Eriksson and Rooth, 2014; Kroft et al., 2013) and highlight a source of variation in these penalties across firms.

Taken together, our third and final result is the following:

Result 3. *Narratives have important consequences for labor market behavior. When job seekers are exogenously exposed to internal narratives—which attribute long-term unemployment to lack of worker motivation or insufficient search—, they increase their perceived returns to search, job-finding expectations, and planned search effort, and ultimately secure re-employment more quickly. Firm managers invoking internal (external) narratives perceive long-term unemployed applicants to be less (more) productive and are less (more) likely to hire such applicants.*

6 Conclusion

We study economic narratives—causal accounts of observed events—in a high-stakes real-world setting: long-term unemployment. We conduct surveys with Danish job seekers, firm managers, households from the general population, and experts at labor market institutions as well as international academic experts and measure narratives using open-ended questions. We document three main results. First, there is pronounced heterogeneity in narratives both within and across samples. For instance, job seekers are more likely to attribute long-term unemployment to factors outside the control of the individual (*external narratives*) and less likely to blame job seekers' own decisions (*internal narratives*) than respondents in the other samples. Second, narratives strongly reflect job seekers' personal experiences during both the current and previous unemployment spells. Third, narratives shape job seekers' and firm managers' quantitative beliefs, decisions and labor market outcomes as measured in survey and linked administrative data. We document these effects using a field experiment for job seekers and correlational evidence for firm managers.

Our findings suggest that narratives are a central force underlying commonly studied job-search beliefs (Mueller and Spinnewijn, 2023a). Most importantly, internal narratives play a key role in shaping job seekers' quantitative beliefs about the effectiveness of job search and the risk of long-term unemployment. Internal narratives increase both *baseline beliefs*—the perceived probability of receiving a job offer at a fixed level of search—and *control beliefs*—the perceived increase in this probability when search effort rises. More broadly, narratives appear to permeate job seekers' belief formation and decision-making along multiple dimensions, including search intensity, wage expectations and reservation wages, and the perceived importance of and willingness to make concessions to secure re-employment. Narratives are also linked to firm managers' perceptions of job seeker characteristics, as well as to wage-setting and hiring decisions. Taken together, our findings highlight a broader research agenda aimed at identifying the common drivers of job-search beliefs and decisions rooted in labor market participants' reasoning and understanding.

A broader take-away of our paper is that narratives can matter for economic decision-making in high-stakes real-world contexts. Our results also underscore the key role of personal experiences in shaping these narratives—adding to previous work relating experiences to quantitative beliefs and preferences. Our findings on the role of experiences are consistent with recent theoretical work assigning an important role to familiarity in determining which mental frameworks people rely on (Bordalo et al., 2025b). Future work could explore in more detail the context-dependence of narratives, as well as the interaction of context and familiarity.

From a policy perspective, our findings suggest that even short interventions empha-

sizing the importance of worker motivation and sustained search effort can accelerate job finding among unemployed workers. The effects of scaling up such interventions will depend on general equilibrium forces, which remain an important topic for future research. At the same time, our evidence on the supply and demand sides of the labor market points to an important trade-off: while promoting internal narratives in the public debate may encourage job seekers to search more intensively and thereby increase job finding, it may also reduce re-employment opportunities for the long-term unemployed by reinforcing stigma and strengthening the tendency of employers to interpret unemployment as a negative productivity signal.

References

- Aina, Chiara and Florian Schneider, “Weighting Competing Models,” *CESifo Working Paper*, 2025.
- Altmann, Steffen, Anita Marie Glenny, Robert Mahlstedt, and Alexander Sebald, “The Direct and Indirect Effects of Online Job Search Advice,” *IZA Discussion Paper No. 15830*, 2022.
- , Robert Mahlstedt, Malte Jacob Rattenborg, Alexander Sebald, Sonja Settele, and Johannes Wohlfart, “Wage Expectations and Job Search,” *CESifo Working Paper*, 2026.
- Andre, Peter, Carlo Pizzinelli, Christopher Roth, and Johannes Wohlfart, “Subjective Models of the Macroeconomy: Evidence from Experts and Representative Samples,” *Review of Economic Studies*, 2022, 89 (6), 2958–2991.
- , Ingar Haaland, Christopher Roth, Mirko Wiederholt, and Johannes Wohlfart, “Narratives about the Macroeconomy,” *Review of Economic Studies*, 2026.
- , Philipp Schirmer, and Johannes Wohlfart, “Mental Models of the Stock Market,” *Available at SSRN 4452588*, 2025.
- Balleer, Almut, Georg Duernecker, Susanne Forstner, and Johannes Goensch, “The Effects of Biased Labor Market Expectations on Consumption, Wealth Inequality, and Welfare,” *American Economic Journal: Macroeconomics*, 2026, 18 (1), 297–335.
- Banfi, Stefano and Benjamín Villena-Roldán, “Do High-Wage Jobs Attract More Applicants? Directed Search Evidence from the Online Labor Market,” *Journal of Labor Economics*, 2019, 37 (3), 715–746.
- Barron, Kai and Tilman Fries, “Narrative Persuasion,” *CESifo Working Paper*, 2025.
- Bastianello, Francesca, Paul H Décaire, and Marius Guenzel, “Mental Models and Financial Forecasts,” *Working Paper*, 2025.
- Belot, Michèle, Philipp Kircher, and Paul Muller, “Providing Advice to Jobseekers at Low Cost: An Experimental Study on Online Advice,” *Review of Economic Studies*, 2019, 86 (4), 1411–1447.
- Bénabou, Roland and Jean Tirole, “Mindful Economics: The Production, Consumption, and Value of Beliefs,” *Journal of Economic Perspectives*, 2016, 30 (3), 141–164.
- Bordalo, Pedro, Giovanni Burro, Katherine B Coffman, Nicola Gennaioli, and Andrei Shleifer, “Imagining the Future: Memory, Simulation and Beliefs,” *Review of Economic Studies*, 2025, 92 (3), 1532–1563.
- , John Conlon, Nicola Gennaioli, Spencer Kwon, and Andrei Shleifer, “Memory and Probability,” *The Quarterly Journal of Economics*, 2023, 138 (1), 265–311.
- , —, —, —, and —, “How People Use Statistics,” *Review of Economic Studies*, 2026, 93 (1), 250–285.
- , Nicola Gennaioli, Giacomo Lanzani, and Andrei Shleifer, “A cognitive Theory of Reasoning and Choice,” *National Bureau of Economic Research Working Paper*, 2025.
- Caliendo, Marco, Robert Mahlstedt, Aiko Schmeißer, and Sophie Wagner, “The Accuracy of Job Seekers’ Wage Expectations,” *arXiv preprint arXiv:2309.14044*, 2023.

- Charles, Constantin and Chad Kendall**, “Causal Narratives,” *Working Paper*, 2025.
- Conlon, John J, Laura Pilossoph, Matthew Wiswall, and Basit Zafar**, “Labor Market Search With Imperfect Information and Learning,” *NBER Working Paper No. 24988*, 2018.
- Couch, Kenneth A and Dana W Placzek**, “Earnings Losses of Displaced Workers Revisited,” *American Economic Review*, 2010, *100* (1), 572–589.
- D’Acunto, Francesco, Ulrike Malmendier, Juan Ospina, and Michael Weber**, “Exposure to Grocery Prices and Inflation Expectations,” *Journal of Political Economy*, 2021, *129* (5), 1615–1639.
- de Quidt, Jonathan, Johannes Haushofer, and Christopher Roth**, “Measuring and Bounding Experimenter Demand,” *American Economic Review*, 2018, *108*, 3266–3302.
- DellaVigna, Stefano, Jörg Heining, Johannes F Schmieder, and Simon Trenkle**, “Evidence on Job Search Models from a Survey of Unemployed Workers in Germany,” *The Quarterly Journal of Economics*, 2022, *137* (2), 1181–1232.
- Eliaz, Kfir and Ran Spiegler**, “A Model of Competing Narratives,” *American Economic Review*, 2020, *110* (12), 3786–3816.
- Eriksson, Stefan and Dan-Olof Rooth**, “Do Employers Use Unemployment as a Sorting Criterion when Hiring? Evidence from a Field Experiment,” *American Economic Review*, 2014, *104* (3), 1014–1039.
- Esponda, Ignacio, Emanuel Vespa, and Sevgi Yuksel**, “Mental Models and Learning: The Case of Base-rate Neglect,” *American Economic Review*, 2024, *114* (3), 752–782.
- Gennaioli, Nicola, Marta Leva, Raphael Schoenle, and Andrei Shleifer**, “How Inflation Expectations De-Anchor: The Role of Selective Memory Cues,” *Working Paper*, 2025.
- Goldfayn-Frank, Olga and Johannes Wohlfart**, “Expectation Formation in a New Environment: Evidence from the German Reunification,” *Journal of Monetary Economics*, 2020, *115*, 301–320.
- Graeber, Thomas, Christopher Roth, and Florian Zimmermann**, “Stories, Statistics, and Memory,” *The Quarterly Journal of Economics*, 2024, *139* (4), 2181–2225.
- Haaland, Ingar, Christopher Roth, and Johannes Wohlfart**, “Designing Information Provision Experiments,” *Journal of Economic Literature*, 2023, *61* (1), 1–38.
- , –, **Stefanie Stantcheva, and Johannes Wohlfart**, “Understanding Economic Behavior Using Open-ended Survey Data,” *Journal of Economic Literature*, 2025, *63* (4), 1244–1280.
- Han, Yi, David Huffman, and Yiming Liu**, “Minds, Models and Markets: How Managerial Cognition Affects Pricing Strategies,” *Working Paper*, 2024.
- Harmon, Nikolaj, Robert Mahlstedt, and Mette Rasmussen**, “Job Search, Overoptimism and Statistical Profiling: Can Information Provision Improve Job Search Outcomes?,” *Working Paper*, 2026.

- He, Qiwei and Philipp Kircher**, “Updating about Yourself by Learning about the Market: The Dynamics of Beliefs and Expectations in Job Search,” *National Bureau of Economic Research Working Paper 31940*, 2023.
- Jiang, Zhengyang, Hongqi Liu, Cameron Peng, and Hongjun Yan**, “Investor Memory and Biased Beliefs: Evidence from the Field,” *The Quarterly Journal of Economics*, 2025, 140, 2749–2804.
- Kahana, Michael Jacob**, *Foundations of Human Memory*, OUP USA, 2012.
- Kroft, Kory, Fabian Lange, and Matthew J Notowidigdo**, “Duration Dependence and Labor Market Conditions: Evidence from a Field Experiment,” *The Quarterly journal of economics*, 2013, 128 (3), 1123–1167.
- Krueger, Alan and Andreas Mueller**, “A Contribution to the Empirics of Reservation Wages,” *American Economic Journal: Economic Policy*, 2016, 8 (1), 142–179.
- Kuchler, Theresa and Basit Zafar**, “Personal Experiences and Expectations about Aggregate Outcomes,” *The Journal of Finance*, 2019, 74 (5), 2491–2542.
- Le Barbanchon, Thomas, Lena Hensvik, and Roland Rathelot**, “How Can AI Improve Search and Matching? Evidence From 59 Million Personalized Job Recommendations,” *Working Paper*, 2025.
- , **Roland Rathelot, and Alexandra Roulet**, “Gender Differences in Job Search: Trading off Commute against Wage,” *The Quarterly Journal of Economics*, 2021, 136 (1), 381–426.
- Link, Sebastian, Andreas Peichl, Oliver Pfäuti, Christopher Roth, and Johannes Wohlfart**, “Attention to the Macroeconomy,” *CESifo Working paper*, 2025, (10858).
- Maestas, Nicole, Kathleen J Mullen, David Powell, Till von Wachter, and Jeffrey B Wenger**, “The Value of Working Conditions in the United States and the Implications for the Structure of Wages,” *American Economic Review*, 2023, 113 (7), 2007–2047.
- Malmendier, Ulrike and Stefan Nagel**, “Depression Babies: Do Macroeconomic Experiences Affect Risk-taking?,” *The Quarterly Journal of Economics*, 2011, 126 (1), 373–416.
- and —, “Learning from Inflation Experiences,” *The Quarterly Journal of Economics*, 2016, 131 (1), 53–87.
- Marinescu, Ioana and Daphné Skandalis**, “Unemployment Insurance and Job Search Behavior,” *The Quarterly Journal of Economics*, 2021, 136 (2), 887–931.
- Mueller, Andreas I and Johannes Spinnewijn**, “Expectations Data, Labor Market, and Job Search,” *Handbook of Economic Expectations*, 2023, pp. 677–713.
- and —, “The Nature of Long-term Unemployment: Predictability, Heterogeneity and Selection,” *NBER Working Paper 30979*, 2023.
- , —, and **Giorgio Topa**, “Job Seekers’ Perceptions and Employment Prospects: Heterogeneity, Duration Dependence, and Bias,” *American Economic Review*, 2021, 111 (1), 324–363.
- Musolf, Robin and Florian Zimmermann**, “Model Uncertainty,” *CESifo Working Paper*, 2025.

- Pennington, Nancy and Reid Hastie**, “Explaining the Evidence: Tests of the Story Model for Juror Decision Making,” *Journal of Personality and Social Psychology*, 1992, 62 (2), 189–206.
- Schwartzstein, Joshua and Adi Sunderam**, “Using Models to Persuade,” *American Economic Review*, 2021, 111 (1), 276–323.
- Shiller, Robert J.**, “Narrative Economics,” *American Economic Review*, 2017, 107 (4), 967–1004.
- Shiller, Robert J.**, *Narrative Economics: How Stories Go Viral and Drive Major Economic Events*, Princeton University Press, 2020.
- Sloman, Steven A. and David Lagnado**, “Causality in Thought,” *Annual Review of Psychology*, Available at SSRN, 2015, 66, 223–247.
- Spinnewijn, Johannes**, “Unemployed but Optimistic: Optimal Insurance Design with Biased Beliefs,” *Journal of the European Economic Association*, 2015, 13 (1), 130–167.
- Stantcheva, Stefanie**, “Understanding Tax Policy: How Do People Reason?,” *The Quarterly Journal of Economics*, 2021, 136 (4), 2309–2369.
- , “Understanding of Trade,” *Working Paper*, 2023.
- Sullivan, Daniel and Till von Wachter**, “Job Displacement and Mortality: An Analysis using Administrative Data,” *The Quarterly Journal of Economics*, 2009, 124 (3), 1265–1306.
- Taubinsky, Dmitry, Luigi Butera, Matteo Saccarola, and Chen Lian**, “Beliefs About the Economy are Excessively Sensitive to Household-Level Shocks: Evidence from Linked Survey and Administrative Data,” *Working Paper*, 2026.
- Trabasso, Tom and Paul van den Broek**, “Causal Thinking and the Representation of Narrative Events,” *Journal of Memory and Language*, 1985, 24 (5), 612–630.

For Online Publication Only:

Appendix

Unemployment Narratives

Robert Mahlstedt Sonja Settele Johannes Wohlfart

Summary of the online appendix

Section A provides additional figures.

Section B provides additional tables.

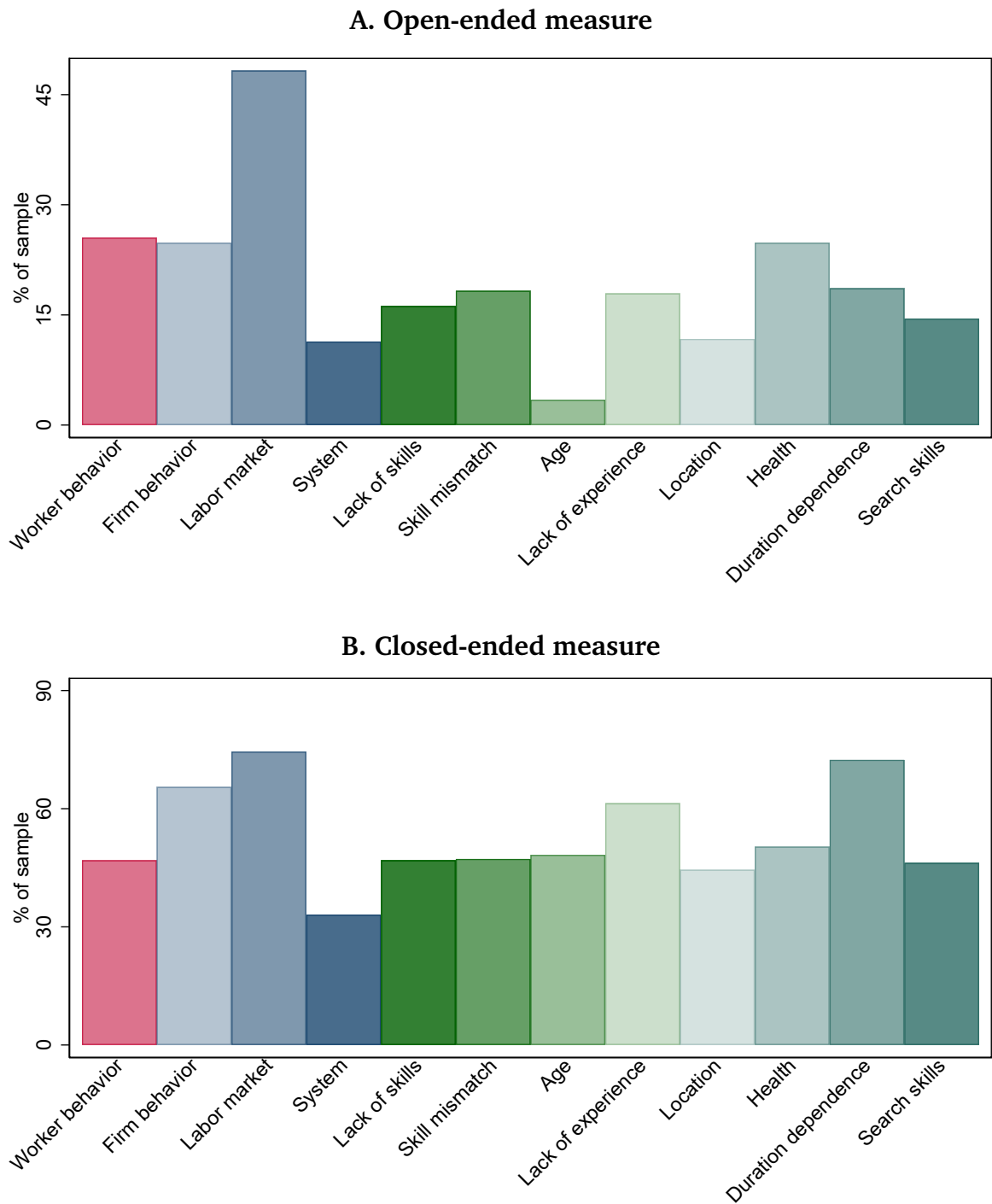
Section C describes details on the coding procedure for the open-ended data.

Section D describes additional analyses.

Section E provides the survey instructions.

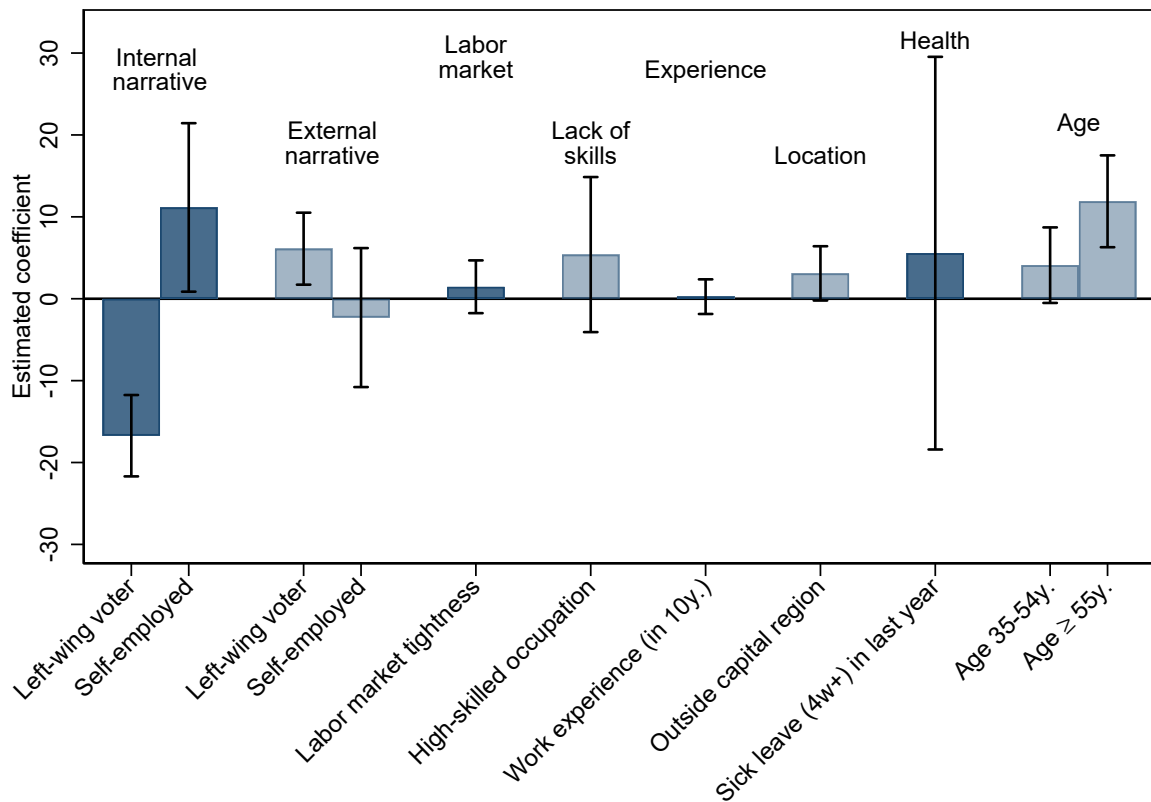
A Additional figures

Figure A.1 Distribution of narrative families: Open-ended and closed-ended measures



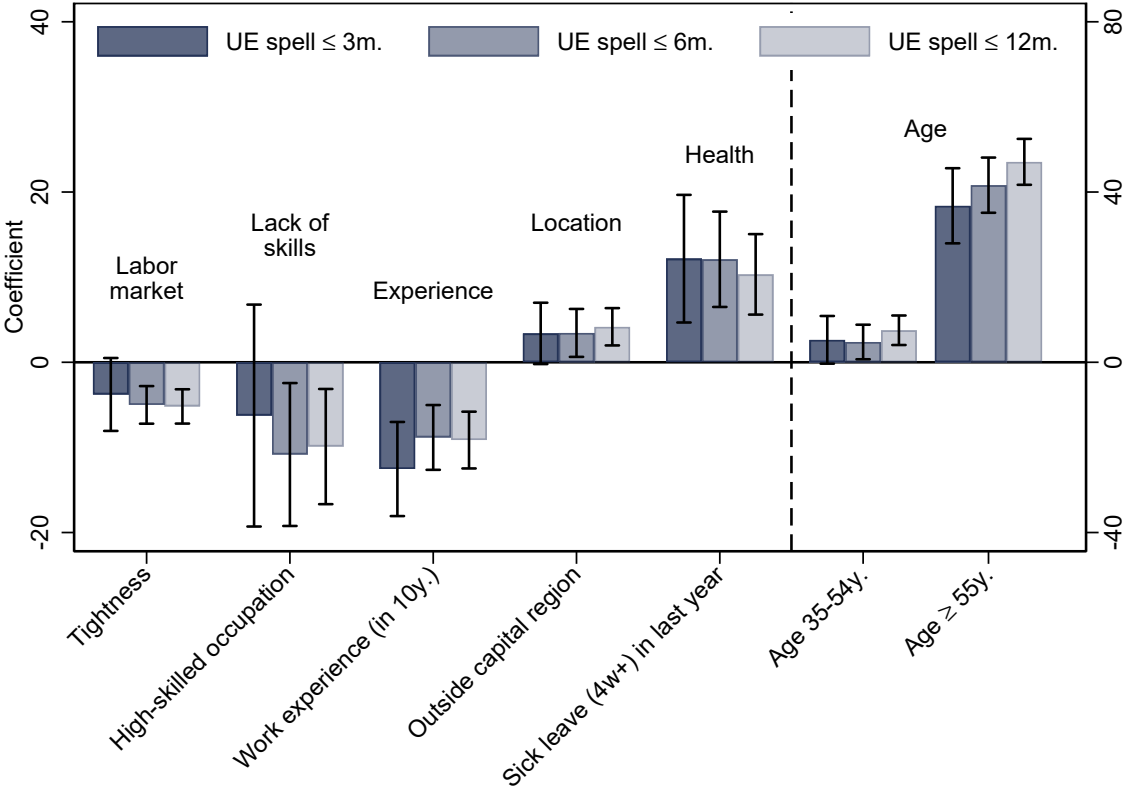
Note: The figure shows the distributions of open-ended (Panel A) and closed-ended (Panel B) measures of narrative families. The sample includes unemployed job seekers from the US who participated in our validation survey in March 2026 ($N = 290$).

Figure A.2 Correlates of employed workers' narratives



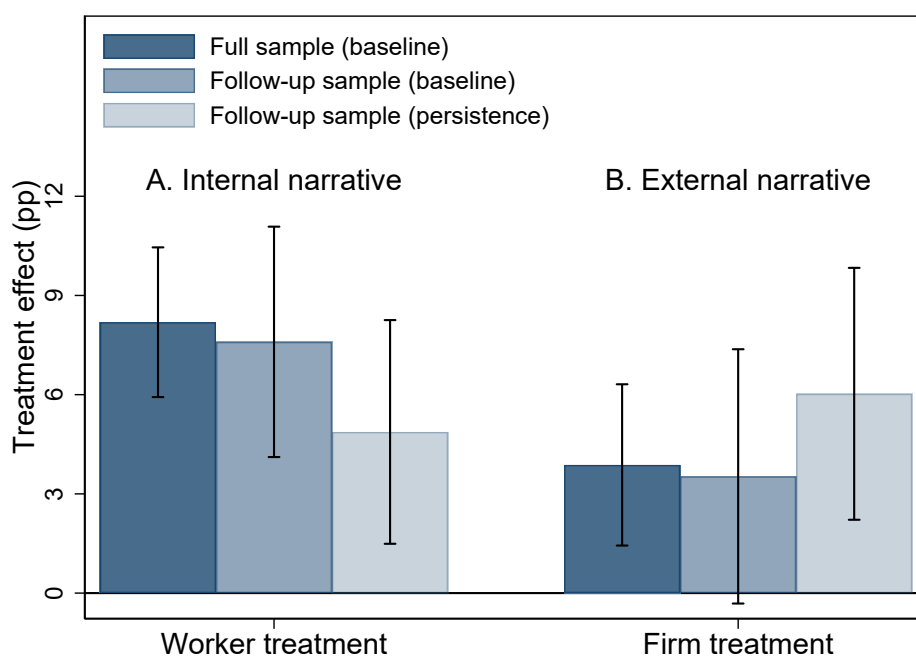
Note: The figure shows how narratives correlate with background characteristics among employed workers ($N = 1,381$). We regress indicators for mentioning each narrative group (listed above the bars) on the corresponding explanatory variable (listed on the x -axis). Each bar plots the estimated coefficient with 95% confidence intervals (based on robust standard errors). All regressions control for background characteristics measured at the time of the survey, including gender, education, age, duration of the current spell, prior work experience and occupation, past sick-leave take-up, and labor market tightness in the previous occupation and current place of residence.

Figure A.3 Correlations of job seekers' narratives with recent experiences by current unemployment duration



Note: This figure shows how narratives correlate with background characteristics among unemployed job seekers at different stages of their unemployment spell. The colors distinguish samples observed (1) within the first three months ($N = 828$), (2) within the first six months ($N = 1,583$), and (3) within the first 12 months of unemployment ($N = 2,237$). We regress indicators for mentioning each narrative group (listed above the bars) on the corresponding explanatory variable (listed on the x -axis). Each bar plots the estimated coefficient with 95% confidence intervals (based on robust standard errors). All regressions control for background characteristics measured at the time of the survey, including gender, education, age, duration of the current spell, prior work experience and occupation, past sick-leave take-up, and labor market tightness in the previous occupation and current place of residence.

Figure A.4 Experimental evidence on narratives and job search: Persistence of shifts in narratives



Note: The figure illustrates the persistence of the treatment effects on reported narratives among job seekers. Each bar displays the estimated coefficient and 95% confidence interval (based on robust standard errors). Panel A reports the effect of the worker treatment on an indicator for reporting at least one internal narrative, while Panel B reports the effect of the firm treatment on an indicator for reporting at least one external narrative. Dark blue bars show the baseline effect measured in the main survey for the full experimental sample. Medium blue bars report the corresponding baseline effect restricted to respondents who also completed the follow-up survey (one to two weeks later). Light blue bars display the treatment effect on narratives elicited in the follow-up survey. All regressions control for demographic characteristics and prior labor-market histories.

B Additional tables

Table B.1 Overview of data collections

Population	Recruitment	<i>n</i>	Survey content
<i>— Main descriptive surveys: —</i>			
Job seekers (DK)	CPRs from STAR*. Contacted via digital mail. May-July 2024.	2,728	<i>Main:</i> Open-ended elicitation of narratives, job search beliefs and decisions.
Job seekers (DK)	CPRs from STAR*. Contacted via digital mail. August-September 2024.	1,089	<i>Follow-up:</i> Open-ended elicitation of narratives.
Firm managers (DK)	CVRs from market research company. Contacted via digital mail. May-July 2024.	2,514	Open-ended elicitation of narratives, job search beliefs and decisions.
General population (DK)	CPRs from DST**. Contacted via digital mail. May-July 2024.	2,244	<i>Main:</i> Open-ended elicitation of narratives.
General population (DK)	CPRs from DST**. Contacted via digital mail. August-September 2024.	1,176	<i>Follow-up:</i> Open-ended elicitation of narratives.
Expert practitioners (DK)	Labor market institutions. May-July 2024.	116	Open-ended elicitation of narratives.
Academic experts (global)	Contacted via email. May-July 2024.	248	Open-ended elicitation of narratives.
<i>— Additional descriptive surveys: —</i>			
Job seekers (US)	Prolific. March 2026.	290	<i>Validation:</i> Open-ended and closed-ended elicitation of narratives.
Job seekers (DE)	Bilendi. April 2025.	313	<i>Cross-country:</i> Open-ended elicitation of narratives.
Job seekers (UK)	Prolific. April 2025.	329	<i>Cross-country:</i> Open-ended elicitation of narratives.
Job seekers (US)	Prolific. April 2025.	306	<i>Cross-country:</i> Open-ended elicitation of narratives.
<i>— Experimental surveys: —</i>			
Job seekers (DK)	CPRs from STAR*. Contacted via digital mail. April-July 2025.	8,609	<i>Main:</i> Random assignment to receiving (i) an internal narrative, (ii) an external narrative, (iii) no narrative. Open-ended elicitation of narratives; job search beliefs and decisions.
Job seekers (DK)	CPRs from STAR*. Contacted via digital mail. April-July 2025.	3,107	<i>Follow-up:</i> Open-ended elicitation of narratives; job search beliefs and decisions.

Note: This table provides an overview of all our data collections.

* Danish Agency for Labor Market and Recruitment.

** Statistics Denmark.

Table B.2 Summary statistics: Job seekers, general population and employed workers

	Unemployed job seekers			General population			
	Full population (1)	Survey (main) (2)	Survey (follow-up) (3)	All		Employed workers	
				Full population (4)	Survey (5)	Full population (6)	Survey (7)
Demographic characteristics							
Female	0.507	0.554	0.555	0.507	0.466	0.488	0.535
Age							
Below 35 years	0.417	0.285	0.225	0.276	0.179	0.333	0.199
35-54 years	0.364	0.335	0.297	0.305	0.302	0.384	0.396
55 years or above	0.219	0.380	0.478	0.419	0.519	0.283	0.405
Education							
Less than high school	0.167	0.105	0.100	0.169	0.177	0.147	0.083
High school	0.450	0.427	0.413	0.419	0.405	0.480	0.444
University degree	0.373	0.463	0.482	0.411	0.418	0.366	0.470
Unempl. duration (in weeks)	33.14	28.28	27.92				
Characteristics of previous/current job							
Monthly wage (in DKK)	31,395	36,306	37,755			38,023	45,887
Full-time employment	0.694	0.721	0.725			0.805	0.867
Occupation							
Managers	0.022	0.041	0.048			0.041	0.055
Professionals	0.205	0.262	0.270			0.258	0.337
Technicians	0.077	0.094	0.100			0.099	0.112
Clerical support workers	0.103	0.143	0.160			0.082	0.088
Service and sales workers	0.182	0.165	0.142			0.173	0.127
Craft-related and plant workers	0.123	0.083	0.086			0.109	0.076
Elementary occupations	0.145	0.093	0.074			0.084	0.052
Other or missing occupations	0.143	0.118	0.119			0.154	0.154
Industry							
Agriculture	0.010	0.010	0.010			0.013	0.007
Manufacturing	0.108	0.113	0.110			0.124	0.120
Construction	0.061	0.026	0.028			0.061	0.058
Trade	0.243	0.213	0.186			0.229	0.148
Business services	0.260	0.261	0.251			0.204	0.201
Public sector	0.264	0.311	0.345			0.327	0.417
Other services	0.054	0.065	0.070			0.042	0.049
Observations	88,786	2,728	1,089	4,812,734	2,244	2,892,899	1,381

Note: The table reports summary statistics comparing survey respondents to the corresponding full population observed in the register data. All values are percentage shares unless indicated otherwise. Columns (1)–(3) focus on unemployed job seekers, while Columns (4)–(5) refer to the general population. Columns (6)–(7) consider the subsample of the general population that was employed at the time of the survey.

Table B.3 Summary statistics: Firm managers

	All firms (1)	Invited to survey (2)	Completed survey (3)
Firm characteristics			
Firm size			
5–9 employees	0.451	0.183	0.154
10–19 employees	0.269	0.223	0.205
20–49 employees	0.173	0.320	0.327
50–99 employees	0.057	0.146	0.172
100+ employees	0.050	0.128	0.142
Public sector	0.082	0.088	0.122
Total assets (DKK 1,000)	545	1,214	1,288
Equity (DKK 1,000)	151	294	395
Net profit (DKK 1,000)	25.5	51.8	83.8
Industry			
Construction	0.128	0.111	0.083
Manufacturing / industry	0.098	0.122	0.118
Health and social work	0.077	0.071	0.106
Wholesale and retail trade	0.191	0.181	0.163
Information, communication and knowledge	0.129	0.137	0.132
Real estate, finance, insurance	0.045	0.047	0.047
Accommodation, travel and food	0.125	0.110	0.080
Arts, entertainment, and education	0.053	0.071	0.098
Agriculture and mining	0.043	0.032	0.037
Public administration, defense, and police	0.005	0.012	0.015
Transportation and storage	0.044	0.050	0.057
Other services	0.050	0.044	0.054
Manager characteristics			
Female			0.471
Age			
Below 35 years			0.035
35-54 years			0.467
55 years or above			0.498
Education			
Less than high school			0.074
High school			0.359
University degree			0.568
Position			
Owner			0.267
CEO or board member			0.228
Middle management			0.463
Employee			0.147
Job tenure			
Below 2 years			0.136
2-5 years			0.177
5-10 years			0.201
10-20 years			0.249
20 years or longer			0.237
Influence on hiring			
No influence			0.060
Little or some influence			0.265
Substantial influence			0.201
High influence			0.474
Studied economics			0.656
Observations	50,882	20,000	2,514

Note: This table reports summary statistics for firms and managers, comparing firms that responded to the survey (Column 3) with the corresponding full population of all firms in Denmark with at least five employees (Column 1) and the full sample of firms invited to participate in the survey (Column 2). All values are percentage shares unless indicated otherwise.

Table B.4 Summary statistics: Policy and academic experts

	Survey respondents (1)
A. Policy experts	
Female	0.353
Age	
Below 35 years	0.422
35-54 years	0.405
55 years or above	0.172
Education	
Less than high school	0.000
High school	0.034
University degree	0.966
Studied economics	0.336
Time employed at institution	
Below 2 years	0.379
2-5 years	0.259
5-10 years	0.147
10-20 years	0.138
20 years or longer	0.078
Relevance of long-term unemployment	
Irrelevant	0.043
Almost irrelevant	0.078
Somewhat relevant	0.259
Very relevant	0.388
Extremely relevant	0.233
Observations	116
B. Academic experts	
Female	0.274
Region	
Europe	0.690
North America	0.230
Asia	0.032
Oceania	0.040
Middle East	0.008
Working in Denmark	0.113
Years since PhD	17.74
Number of citations (Google Scholar)	4,216
h-index	18.67
Number of top-5 publications	1.07
Observations	248

Note: This table reports summary statistics for the samples of policy and academic experts. All values are percentage shares unless indicated otherwise.

Table B.5 Predictiveness of open-ended for closed-ended measures

		Selects reason in closed-ended survey question (binary)										
	Worker behavior (1)	Firm behavior (2)	Labor market (3)	System (4)	Lack of skills (5)	Skill mismatch (6)	Age (7)	Lack of experience (8)	Location (9)	Health (10)	Duration dependence (11)	Search skills (12)
Open-ended: Worker behavior	0.20*** (0.07)	-0.06 (0.07)	0.04 (0.06)	-0.12* (0.06)	0.04 (0.07)	0.02 (0.07)	0.07 (0.07)	-0.06 (0.07)	-0.09 (0.07)	0.00 (0.07)	-0.00 (0.06)	0.06 (0.07)
Open-ended: Firm behavior	-0.10 (0.07)	0.08 (0.06)	-0.09 (0.06)	0.05 (0.07)	-0.08 (0.07)	-0.02 (0.07)	0.03 (0.07)	-0.17** (0.07)	-0.02 (0.07)	0.14** (0.07)	0.01 (0.06)	-0.12* (0.07)
Open-ended: Labor market	-0.03 (0.06)	0.11* (0.06)	0.28 *** (0.05)	0.14** (0.06)	0.01 (0.06)	-0.01 (0.06)	0.03 (0.06)	0.05 (0.06)	-0.01 (0.06)	-0.01 (0.06)	0.04 (0.05)	-0.05 (0.06)
Open-ended: System	-0.06 (0.09)	0.24*** (0.07)	0.20*** (0.07)	0.28 *** (0.09)	-0.04 (0.10)	0.00 (0.09)	0.10 (0.10)	-0.03 (0.09)	-0.02 (0.09)	0.07 (0.09)	0.16** (0.07)	-0.05 (0.09)
Open-ended: Lack of skills	0.02 (0.09)	-0.03 (0.08)	-0.05 (0.08)	-0.09 (0.08)	0.18 ** (0.08)	0.15* (0.09)	0.05 (0.08)	0.08 (0.08)	-0.16** (0.07)	0.03 (0.09)	0.07 (0.08)	0.08 (0.08)
Open-ended: Skill mismatch	0.10 (0.07)	0.16** (0.07)	0.17*** (0.06)	-0.09 (0.07)	0.17** (0.07)	0.34 *** (0.07)	0.07 (0.08)	0.03 (0.07)	0.03 (0.07)	0.03 (0.08)	0.14** (0.06)	0.16** (0.08)
Open-ended: Age	-0.03 (0.15)	0.16 (0.11)	0.02 (0.15)	0.13 (0.16)	0.25 (0.16)	0.05 (0.17)	0.50 *** (0.05)	-0.16 (0.16)	0.12 (0.16)	-0.01 (0.15)	0.25*** (0.06)	-0.13 (0.15)
Open-ended: Lack of experience	-0.08 (0.08)	0.05 (0.07)	0.10 (0.07)	-0.02 (0.08)	0.12 (0.08)	0.13* (0.08)	-0.09 (0.08)	0.28 *** (0.06)	0.07 (0.08)	0.03 (0.08)	0.01 (0.08)	0.05 (0.08)
Open-ended: Location	-0.00 (0.10)	0.06 (0.09)	0.11 (0.07)	-0.08 (0.09)	0.04 (0.10)	-0.05 (0.09)	0.04 (0.10)	0.02 (0.08)	0.52 *** (0.06)	0.05 (0.10)	0.04 (0.08)	-0.14 (0.09)
Open-ended: Health	0.11 (0.07)	-0.07 (0.07)	0.02 (0.06)	0.05 (0.07)	-0.01 (0.07)	0.01 (0.07)	0.04 (0.07)	-0.10 (0.07)	-0.03 (0.07)	0.27 *** (0.07)	0.08 (0.06)	0.08 (0.07)
Open-ended: Duration dependence	0.13* (0.08)	0.19** (0.07)	0.07 (0.07)	-0.11* (0.07)	-0.06 (0.08)	0.01 (0.08)	0.13 (0.08)	0.03 (0.08)	-0.08 (0.08)	-0.03 (0.08)	0.26 *** (0.05)	0.04 (0.08)
Open-ended: Search skills	0.13 (0.09)	-0.04 (0.08)	-0.04 (0.08)	0.04 (0.08)	0.03 (0.09)	0.10 (0.08)	-0.03 (0.08)	0.08 (0.08)	0.07 (0.08)	-0.03 (0.08)	-0.04 (0.08)	0.29 *** (0.08)
Observations	290	290	290	290	290	290	290	290	290	290	290	290
Mean dep. variable	46.90	65.52	74.48	33.10	46.90	47.24	48.28	61.38	44.48	50.34	72.41	46.21

Note: This table reports correlations between narrative families based on the open-ended and close-ended measures. The dependent variables indicate whether the respondent selects a given narrative family in the close-ended question, while the explanatory variables indicate whether a factor from a narrative family is mentioned in the open-ended responses. The sample includes US job seekers in March 2026. ***/**/* indicate statistical significance at the 1%/5%/10%-level.

Table B.6 Correlations of job seekers' narratives with recent experiences

	Internal narrative (1)	External narrative (2)	Labor market (3)	Lack of skills (4)	Lack of experience (5)	Location (6)	Health (7)	Age (8)
Current unempl. spell (ref. below 6 months)								
6-11 months	-8.27*** (1.70)	3.88* (2.24)	2.54* (1.37)	1.40 (2.12)	3.43** (1.62)	-3.51*** (1.10)	-1.54 (2.02)	8.53*** (1.77)
12 months or longer	-5.45*** (1.99)	3.38 (2.49)	1.04 (1.45)	0.62 (2.42)	0.12 (1.74)	-1.32 (1.40)	-1.80 (2.23)	7.81*** (2.03)
Labor market tightness	1.57 (3.22)	-4.91 (3.18)	-5.26*** (0.89)	-1.17 (3.39)	-5.04*** (1.38)	-1.32 (1.97)	7.91** (3.57)	0.13 (2.86)
Previous high-skilled occupation	3.69 (4.07)	2.62 (4.50)	0.07 (2.40)	-9.37** (3.72)	-0.41 (2.34)	-0.05 (2.59)	1.66 (4.37)	-3.13 (4.07)
Work experience (in 10y.)	5.09** (2.01)	-4.04* (2.36)	-0.97 (1.31)	-7.90*** (2.27)	-8.18*** (1.53)	-0.55 (1.44)	5.28** (2.24)	4.97** (2.01)
Residing outside capital region	-0.01 (1.62)	0.40 (1.96)	-0.47 (1.18)	-0.99 (1.87)	0.30 (1.35)	4.79*** (0.99)	-2.17 (1.82)	-4.64*** (1.57)
Sick leave (4w+) in last 12 months	1.81 (1.93)	-1.46 (2.26)	-0.95 (1.29)	-3.45 (2.10)	-2.72* (1.42)	0.53 (1.28)	10.36*** (2.22)	-2.66 (1.89)
Age (ref. below 35 years)								
35-54 years	-6.70*** (2.24)	4.31 (2.80)	-1.62 (1.84)	-4.00 (2.64)	-10.84*** (2.18)	5.14*** (1.40)	4.64* (2.47)	6.64*** (1.64)
55 years or above	-10.00*** (2.68)	-4.04 (3.23)	-7.68*** (1.87)	3.36 (3.06)	-9.82*** (2.32)	4.10** (1.71)	-2.05 (2.93)	47.49*** (2.51)
Education (ref. below high school)								
High school	0.92 (2.53)	2.17 (2.97)	0.07 (1.61)	4.38 (2.84)	2.98* (1.62)	3.89*** (1.33)	5.19* (2.68)	7.90*** (2.71)
University	-0.30 (2.49)	5.64* (2.98)	1.22 (1.66)	7.83*** (2.84)	7.15*** (1.72)	6.53*** (1.36)	8.38*** (2.66)	5.80** (2.63)
Female	5.19*** (1.54)	-6.05*** (1.86)	-2.39** (1.11)	-2.09 (1.78)	-5.48*** (1.30)	-0.36 (1.01)	1.80 (1.70)	-3.57** (1.48)
Previous job was full-time	-0.51 (2.32)	2.34 (2.97)	2.44 (1.87)	-0.85 (2.80)	-4.37* (2.40)	0.38 (1.53)	2.60 (2.57)	-0.99 (2.08)
Previous monthly wage (log)	-0.02 (0.38)	0.10 (0.47)	-0.23 (0.32)	-1.05** (0.46)	-1.19*** (0.42)	-0.34 (0.27)	0.22 (0.37)	-0.20 (0.29)
Searching for parttime job	-0.07 (2.88)	-0.26 (3.58)	-3.27* (1.85)	-11.09*** (3.12)	-8.31*** (2.34)	-2.36 (1.65)	11.10*** (3.55)	-4.25 (2.62)
Observations	2,728	2,728	2,728	2,728	2,728	2,728	2,728	2,728
Mean dep. variable	18.88	33.65	8.76	29.33	14.59	7.11	25.59	25.66

Note: This table reports correlations between narratives and background characteristics among job seekers who were unemployed at the first survey wave in May 2024. The dependent variables indicate whether the respondent mentioned a narrative from the corresponding class or family. Robust standard errors are reported in parentheses. ***/**/* indicate statistical significance at the 1%/5%/10%-level.

Table B.7 Correlations of employed workers' narratives with recent experiences

	Internal narrative (1)	External narrative (2)	Labor market (3)	Lack of skills (4)	Lack of experience (5)	Location (6)	Health (7)	Age (8)
Left-wing voter	-16.73*** (2.53)	6.11*** (2.24)	1.57 (1.10)	3.92* (2.38)	-0.99 (1.28)	2.91* (1.66)	9.26*** (2.52)	1.22 (1.86)
Self-employed	12.22** (5.10)	-1.68 (4.22)	-0.66 (2.27)	9.65** (4.91)	-2.65 (1.62)	-1.85 (2.88)	1.82 (4.73)	-6.02** (2.67)
Labor market tightness	1.54 (4.39)	-1.90 (3.38)	1.47 (1.64)	-6.91** (2.89)	-2.83** (1.40)	0.89 (2.44)	-0.13 (4.29)	1.10 (3.29)
Previous high-skilled occupation	-2.97 (4.92)	0.36 (4.36)	2.68 (2.51)	5.36 (4.82)	0.83 (2.06)	2.30 (3.64)	0.50 (4.87)	-4.62 (3.19)
Work experience (in 10y.)	6.64** (2.90)	-0.03 (2.44)	-2.25* (1.33)	3.12 (2.45)	0.08 (1.07)	2.01 (1.61)	1.68 (2.69)	1.76 (1.83)
Residing outside capital region	-0.49 (2.75)	0.70 (2.39)	-1.18 (1.23)	0.84 (2.53)	0.30 (1.36)	3.10* (1.69)	-1.07 (2.73)	-5.39** (2.11)
Sick leave (4w+) in last 12 months	-6.81 (11.57)	20.87 (13.43)	-4.04*** (1.02)	-16.88** (6.69)	0.04 (6.21)	-9.97*** (1.41)	4.99 (12.17)	-13.59*** (1.82)
Age (ref. below 35 years)								
35-54 years	-6.43 (4.17)	1.00 (3.67)	-0.71 (2.04)	-5.89 (3.67)	-11.85*** (2.49)	-0.53 (2.30)	9.37** (3.72)	4.17* (2.36)
55 years or above	-12.32*** (4.52)	-3.35 (3.80)	-2.99 (1.89)	-7.05* (3.96)	-11.94*** (2.53)	3.43 (2.52)	9.12** (4.07)	12.04*** (2.85)
Education (ref. below high school)								
High school	-4.57 (4.33)	2.12 (3.35)	-1.44 (1.70)	0.54 (3.50)	-0.89 (1.65)	4.23* (2.31)	4.48 (3.88)	5.54** (2.81)
University	-10.69** (4.24)	7.91** (3.44)	0.52 (1.86)	9.97*** (3.57)	3.20* (1.77)	7.20*** (2.29)	8.48** (3.90)	5.41* (2.82)
Female	4.72* (2.60)	0.98 (2.27)	1.60 (1.08)	1.61 (2.38)	-3.35*** (1.27)	0.53 (1.62)	-3.12 (2.51)	-2.37 (1.86)
Observations	1,381	1,381	1,381	1,381	1,381	1,381	1,381	1,381
Mean dep. variable	33.96	20.93	4.06	23.82	6.08	9.85	28.46	12.74

Note: This table reports correlations between narratives and background characteristics among employed workers at the first survey wave in May 2024. The dependent variables indicate whether the respondent mentioned a narrative from the corresponding class or family. Robust standard errors are reported in parentheses. ***/**/* indicate statistical significance at the 1%/5%/10%-level.

Table B.8 Experiment with job seekers: Summary statistics and balance tests

	Treatment status			Balance stat. (p -value)		
	Control group (1)	Worker treatment (2)	Firm treatment (3)	Worker-control (4)	Firm-control (5)	Worker-firm (6)
Female	0.559	0.574	0.569	0.227	0.409	0.698
Age						
Below 35 years	0.297	0.309	0.279	0.306	0.130	0.013
35-54 years	0.344	0.344	0.353	0.998	0.442	0.457
55 years or above	0.359	0.347	0.368	0.323	0.506	0.105
Education						
Less than high school	0.105	0.098	0.091	0.344	0.074	0.421
High school	0.309	0.318	0.324	0.492	0.219	0.606
University degree	0.585	0.584	0.584	0.945	0.935	0.991
Unemployment duration						
Less than 3 months	0.267	0.296	0.278	0.013	0.340	0.128
3-5 months	0.258	0.259	0.257	0.926	0.935	0.864
6-8 months	0.162	0.143	0.149	0.040	0.156	0.520
9-11 months	0.117	0.105	0.112	0.161	0.534	0.437
12 months or more	0.196	0.196	0.204	0.960	0.420	0.463
Last job was full-time	0.806	0.809	0.814	0.749	0.411	0.629
Previous wage (in DKK)	34,090	33,566	33,491	0.514	0.395	0.921
Previous job was high-skilled	0.048	0.044	0.050	0.498	0.762	0.336
Work experience in 10 years	0.916	0.907	0.923	0.559	0.634	0.330
Labor market tightness	0.084	0.081	0.079	0.570	0.345	0.717
Residing outside capital region	0.643	0.641	0.655	0.876	0.347	0.286
Sick leave (4w+) in last year	0.123	0.113	0.118	0.217	0.544	0.531
Searching for part-time job	0.057	0.060	0.060	0.648	0.557	0.905
Joint significance (p -value)				0.537	0.446	0.570
Observations	3,034	2,705	2,870			

Note: The table reports summary statistics for the experimental population by treatment status. All values refer to percentage shares unless indicated otherwise. The p -values in columns (4)–(6) are based on t -tests of equal means. The last row additionally reports p -values from tests of the joint significance of the listed characteristics in regressions of the treatment indicators on the full set of covariates.

C Details on coding of open-ended data

A high-level overview of our coding scheme, along with example responses, can be found in Table 1 in the main text. Table C.1 below provides a much more detailed overview of all narrative factors included in our scheme, along with their aggregation into narrative families and classes. For each narrative factor, the table provides one example response from each of our five main descriptive samples described in Section 2.1 to the extent such examples are available.

Human coding The procedure for human coding of the open-ended data from our main descriptive samples is described in Section 2.3 in the main text. The original scheme handed out to research assistants can be found under the following link: https://docs.google.com/document/d/1hLrXpdJ_AlQ1_63u8Skipd5y8ckao2WTM5wylamsw60/edit?usp=sharing¹

AI coding For the experiment with Danish job seekers described in Section 5.1, we generate a fully anonymized data set that allows us to code the open-ended data on narratives using AI methods.² We also apply AI coding for the validation survey with US job seekers described in Section 2.3 and the cross-country job seeker surveys described in Appendix D.1, which are not subject to the strict data protection guidelines at KU.

We use the GPT-4o model in September–October 2025 for the experiment with Danish job seekers and in November 2025 for the cross-country surveys, and the GPT-5.4 model in March 2026 for the validation survey. We develop a detailed prompt that includes the survey question on unemployment narratives, the full list of codes for the different narrative factors, definitions and examples for each factor, rules clarifying valid and invalid code combinations that the AI might misinterpret, as well as instructions about the specific task and the required data format. We then direct the model to generate a list of factors for each survey response.

To assess the quality of the AI in categorizing the survey responses, we randomly select 300 responses from the original data of the control group of the experiment from Section 5.1, manually categorize them using the same rules and instructions, and

¹In the original coding scheme, the skill mismatch and location narrative factors are split into three subcategories in which responsibility is attributed to job seekers, employers, or neither party. In our data, responses that explicitly assign blame to either job seekers or employers are rare. We therefore do not use these subcategories in the analysis and instead aggregate them into a single skill-mismatch factor and a single location factor.

²In particular, we generate a data set that includes the open-text responses as well as other variables needed for the analysis of first-stage effects of our treatment (e.g., demographics). Importantly, we permanently delete the personal identifiers from this data set, making it impossible to merge back the coded data to the rest of the survey data or the register data. We also make sure that the open-ended responses do not include any identifying or sensitive information. The resulting fully anonymized data set can be coded and analyzed with AI methods according to the prevailing legislation and internal data protection guidelines at the University of Copenhagen at the time.

compare them with the categories assigned by the AI. In particular, we calculate the weighted average of the conditional probabilities that the AI assigns a factor given that the human coder assigns this factor, with weights based on the relative frequency of each factor in the human-coded data. This measure reflects the probability that the AI's category assignments agree on average with those of the human coder. We also calculate the same average for each narrative *family*, since the AI's coding more often diverges from the hand-coding in cases where codes are conceptually close to one another. For example, the "Worker behavior" family includes codes that attribute unemployment to workers' attitudes toward wages, working conditions, lack of motivation, low search effort, or unrealistic demands regarding positions. The results for these two statistics are 71.89% and 80.74%, respectively, indicating a high level of accuracy in the AI's categorization. To further check the robustness of the AI-coding, we conduct the same exercise on the cross-country surveys described in Appendix D.1, all yielding results above 70% and 80%, respectively. We also perform the reverse exercise, calculating the weighted average of the conditional probabilities that the human coder assigns a category given that the AI has assigned that category, and obtain similar results. Overall, we view these results as re-assuring regarding the quality of the AI-coded data.

Table C.1 Overview of the coding scheme

Narrative class			
Narrative family			
Narrative factor	Explanation	Example	
<i>Internal narratives</i>			
<i>Worker behavior</i>			
Lack of search effort	Job seekers not searching enough. Amount/number of hours of search is insufficient.	“Passive search strategy” (<i>job seeker</i>) “Lack of commitment to job hunting” (<i>firm manager</i>) “not seriously looking” (<i>general pop.</i>) “lack of searching, lack of expanding the search radius” (<i>policy inst.</i>) “low search intensity” (<i>academic</i>)	
Lack of motivation	Job seekers not being motivated to put effort into search/to work. General reference to lack of adaptability or low willingness to search/work. Refers to cases where this is not attributed to the situation — and thus at least implicitly to the worker.	“some people are very lazy and do not want to work.” (<i>job seeker</i>) “lack of motivation to engage with the labor market” (<i>firm manager</i>) “Some people lack the motivation to find a job.” (<i>general pop.</i>) “personal motivation plays a significant role—and more specifically, how one feels about life in general.” (<i>policy inst.</i>) “lack of desire to go back to a job” (<i>academic</i>)	
Unemployment benefits	Unemployment benefits being too high. The benefit system sets the wrong incentives.	“in some cases, you can earn almost as much in unemployment benefits” (<i>job seekers</i>) “because the benefits of working rather than not working are too small” (<i>firm manager</i>) “Too little difference between unemployment benefits and salary.” (<i>general pop.</i>) “due to low potential wage levels in relation to unemployment benefit levels” (<i>policy inst.</i>) “High level of social welfare” (<i>academic</i>)	
Workers demand high salary	Mismatch between job seekers’ wage demand and firms’ wage offers. Refers to cases where job seekers are blamed for this mismatch/are explicitly mentioned.	“salary requirements” (<i>job seekers</i>) “unemployed people today have very high expectations of their future workplace, in terms of salary” (<i>firm manager</i>) “Too high expectations for salary” (<i>general pop.</i>) “unrealistic expectations for salary” (<i>policy inst.</i>) “Lack of willingness to take lower paying jobs” (<i>academic</i>)	
Workers demand amenities	Job seekers demanding specific non-wage amenities (specific hours, part-time, work from home, tasks, interesting work etc.) that employers do not offer.	“inadequate working conditions” (<i>job seekers</i>) “there is a limit to how much I can organize my staff’s working hours around their private lives” (<i>firm manager</i>) “people prioritize a good balance between work and private life” (<i>general pop.</i>) “unrealistic expectations of the job (e.g., expectations regarding content, salary, and conditions)” (<i>policy inst.</i>) “People strive to find a job that matches their intensive margin” (<i>academic</i>)	

Notes: This table provides an overview of the different codes in our coding scheme, an explanation for each code, and example responses from each of our main descriptive surveys conducted in Denmark; “job seeker” refers to the job seeker survey, “firm manager” to the firm manager survey, “general pop.” to the survey with respondents from the general population, “policy inst.” to the survey with expert practitioners working at policy institutions, and “academic” to the survey with academic experts. The table also shows how narrative factors are aggregated to narrative families and narratives classes.

Table continued on next page.

Table C.1 (continued): Overview of the coding scheme

Narrative class		
Narrative family		
Narrative factor	Explanation	Example
Workers are too picky	Job seekers being too picky regarding job offers, not referring to wage or non-wage amenities.	“Others become more thoughtful and critical and don’t just take the first job” (<i>job seekers</i>) “they are selective regarding which jobs they apply for” (<i>firm manager</i>) “Picky about position/work tasks.” (general pop.) “too selective regarding the jobs they are willing to take” (<i>policy inst.</i>) “too picky in selecting jobs.” (<i>academic</i>)
External narratives		
<i>Firm behavior</i>		
Firms offer low salary	Mismatch between job seekers’ wage demands and firms’ wage offers. Refers to cases where employers are blamed for this mismatch/are explicitly mentioned.	“there is no financial incentive to work” (job seekers) “lack of employers that pay a salary that reflects their qualifications” (<i>firm manager</i>) “and the pay is really bad.” (<i>general pop.</i>)
Firms do not offer amenities	Employers demanding specific non-wage aspects (workers working flexible hours, owning a car to use in their job, etc.) that workers do not/cannot offer.	“Inflexible work environments/conditions” (<i>job seekers</i>) “they are ‘run over’ by unhealthy corporate cultures” (<i>firm manager</i>) “the poor working conditions are there” (<i>general pop.</i>) “it can be difficult to work a 37+ hour week, which is often expected” (<i>policy inst.</i>)
Firms are too picky	Employers being too picky when hiring or following rigid hiring norms, not referring to wage or non-wage amenities.	”too high demands from employers” (<i>job seeker</i>) “employers wonder - and become uncertain about who to hire” (<i>firm manager</i>) “The employer is picky” (<i>general pop.</i>) “Workplaces are too narrow-minded in terms of the background” (<i>policy inst.</i>) “reluctancy of employers to hire some employees that seem not immediately perfect for the job” (<i>academic</i>)
Discrimination	Discrimination against certain groups by employers or job centers, e.g., against women or immigrants.	“Prejudices” (<i>job seeker</i>) “prejudice like muslim name” (<i>firm manager</i>) “It is harder to get hired if you are not ethnically Danish.” (<i>general pop.</i>) “Stigmatization” (<i>policy inst.</i>) “Discrimination if belongs to minority group” (<i>academic</i>)
<i>Labor market</i>		
Slack labor market	Few new open positions. Many applicants per position. No jobs.	“business cycles” (<i>job seeker</i>) “economic trends” (<i>firm manager</i>) “the market” (<i>general pop.</i>) “lack of jobs in general” (<i>policy inst.</i>) “insufficient number of jobs” (<i>academic</i>)
Firm closure	Unemployment as a consequence of the previous employer shutting down, going bankrupt, or moving away, and therefore laying off workers.	“due to closure of a large company” (<i>job seeker</i>) “relocation of production sites abroad” (<i>firm manager</i>) “could be people that work at workplaces that are closed now” (<i>general pop.</i>) “Example 4” (<i>policy inst.</i>) “plant closure” (<i>academic</i>)

Notes: This table provides an overview of the different codes in our coding scheme, an explanation for each code, and example responses from each of our main descriptive surveys conducted in Denmark; “job seeker” refers to the job seeker survey, “firm manager” to the firm manager survey, “general pop.” to the survey with respondents from the general population, “policy inst.” to the survey with expert practitioners working at policy institutions, and “academic” to the survey with academic experts. The table also shows how narrative factors are aggregated to narrative families and narratives classes.

Table continued on next page.

Table C.1 (continued): Overview of the coding scheme

Narrative class			
Narrative family			
Narrative factor	Explanation	Example	
<i>System</i>			
Lack of assistance	Lack of or inadequate assistance in the job search process—e.g., from job centers—, too much pressure from the unemployment system.	“Job centers/unemployment funds focus more on the two applications that need to be sent” (<i>job seeker</i>) “Lack of help to find the right job” (<i>firm manager</i>) “job center do not communicate properly” (<i>general pop.</i>) “no proper setup of job centers” (<i>policy inst.</i>) “poor reintegration support” (<i>academic</i>)	
Blaming society	Society/capitalism/the unfairness of the system/the economic system in general causing long-term unemployment.	“poorly functioning public systems.” (<i>job seeker</i>) “societal perceptions also play a role” (<i>firm manager</i>) “we have developed a fragile society” (<i>general pop.</i>) “Social inequity” (<i>academic</i>)	
Frictions	Bureaucratic hurdles outside the benefit system that prevent matches in the labor market, e.g., employment protection or collective bargaining agreements/unions protecting wage-setting. The labor market being dysfunctional.	“the state of the job market” (<i>job seeker</i>) “Unsystematic job/employment system” (<i>firm manager</i>) “A job market that ‘does things the way we always have’ and does not” (<i>general pop.</i>) “a lot of employment protection” (<i>academic</i>)	
<i>Other narratives</i>			
<i>Lack of skills</i>			
Lack of skills	Job seekers not having enough skills for employers to hire them. Includes cognitive, non-cognitive and physical skills.	“social skills are reduced” (<i>job seeker</i>) “low skills” (<i>firm manager</i>) “Lack of skills.” (<i>general pop.</i>) “Personality is a crucial part” (<i>policy inst.</i>) “Lack of skills” (<i>academic</i>)	
Lack of education	Job seekers not having enough formal education for employers to hire them.	“Lack of qualifications” (<i>job seeker</i>) “low education level” (<i>firm manager</i>) “outdated certifications” (<i>general pop.</i>) “lack of education” (<i>policy inst.</i>) “low education” (<i>academic</i>)	
Language barriers	Language barriers.	“Language problems” (<i>job seeker</i>) “could be language barriers” (<i>firm manager</i>) “language challenges” (<i>general pop.</i>) “lack basic skills, such as language, reading and writing” (<i>policy inst.</i>) “lack of language skills” (<i>academic</i>)	
Qualifications unacknowledged	Barriers for foreign workers in terms of what qualifications are acknowledged.	“Many of us foreigners who come with education unfortunately cannot use it” (<i>job seeker</i>) “not preferring foreign degrees” (<i>firm manager</i>) “employers do not accept foreign qualifications” (<i>general pop.</i>) “acquiring certification of their skills may take time” (<i>academic</i>)	

Notes: This table provides an overview of the different codes in our coding scheme, an explanation for each code, and example responses from each of our main descriptive surveys conducted in Denmark; “job seeker” refers to the job seeker survey, “firm manager” to the firm manager survey, “general pop.” to the survey with respondents from the general population, “policy inst.” to the survey with expert practitioners working at policy institutions, and “academic” to the survey with academic experts. The table also shows how narrative factors are aggregated to narrative families and narratives classes.

Table continued on next page.

Table C.1 (continued): Overview of the coding scheme

Narrative class			
Narrative family			
	Narrative factor	Explanation	Example
<i>Skill mismatch</i>			
	Skill mismatch	Few new open positions. Many applicants per position. No jobs. Over-qualification. Lack of relevant jobs. Wrong occupation. Skills not being in demand. Career change.	<p>“may want to change industry without training” (<i>job seeker</i>)</p> <p>“Maybe a rare subject combined with only looking for something strictly subject specific” (<i>firm manager</i>)</p> <p>“the employer thinks they are overqualified for the position” (<i>general pop.</i>)</p> <p>“someones educational path is more or less in demand in the labor market” (<i>policy inst.</i>)</p> <p>“Skill mismatch.”(<i>academic</i>)</p>
<i>Age</i>			
	Age	Job seekers being too old for employers to hire them.	<p>“older people struggle” (<i>job seeker</i>)</p> <p>“firms expect that seniors require too much special needs” (<i>firm manager</i>)</p> <p>“CV should be sent without age” (<i>general pop.</i>)</p> <p>“age discrimination” (<i>policy inst.</i>)</p> <p>“Advanced age” (<i>academic</i>)</p>
<i>Lack of experience</i>			
	Lack of experience	Job seekers being too inexperienced for employers to hire them. Companies being unwilling to hire recent university graduates.	<p>“the job requires too much experience.” (<i>job seeker</i>)</p> <p>“employers are preferring someone with experience” (<i>firm manager</i>)</p> <p>“Lack of practical experience” (<i>general pop.</i>)</p> <p>“could be about relevant experience” (<i>policy inst.</i>)</p> <p>“lack of experience” (<i>academic</i>)</p>
<i>Location</i>			
	Location	Job seekers living in areas where there are no jobs. Long commuting times between where people live and where jobs exist.	<p>“That there is a lack of jobs within their field and geographical area.” (<i>job seeker</i>)</p> <p>“Where they live in the country” (<i>firm manager</i>)</p> <p>“Geography – far from the nearest meaningful job” (<i>general pop.</i>)</p> <p>“unwillingness to take a job outside one’s field or to travel further for work” (<i>policy inst.</i>)</p> <p>“They live in a location where many jobs have vanished.” (<i>academic</i>)</p>
<i>Health</i>			
	General health	Health issues making it difficult for job seekers to find a job, to engage in job search, or to work. No specific “mental health” or “physical health” mention.	<p>“unable to work, such as illness” (<i>job seeker</i>)</p> <p>“Need for a break due to an illness” (<i>firm manager</i>)</p> <p>“health problems” (<i>general pop.</i>)</p> <p>“Sickness” (<i>policy inst.</i>)</p> <p>“unable to work due to health reasons” (<i>academic</i>)</p>
	Mental health	Mental health issues making it difficult for job seekers to find a job, to engage in job search, or to work. Also includes fatigue, stress, self-doubt, low confidence, disillusionment.	<p>“struggle with mental illnesses.” (<i>job seeker</i>)</p> <p>“Problems in regard of Beliefs in their own abilities” (<i>firm manager</i>)</p> <p>“mental health” (<i>general pop.</i>)</p> <p>“psychological factors” (<i>policy inst.</i>)</p> <p>“mental problems” (<i>academic</i>)</p>

Notes: This table provides an overview of the different codes in our coding scheme, an explanation for each code, and example responses from each of our main descriptive surveys conducted in Denmark; “job seeker” refers to the job seeker survey, “firm manager” to the firm manager survey, “general pop.” to the survey with respondents from the general population, “policy inst.” to the survey with expert practitioners working at policy institutions, and “academic” to the survey with academic experts. The table also shows how narrative factors are aggregated to narrative families and narratives classes.

Table continued on next page.

Table C.1 (continued): Overview of the coding scheme

Narrative class		
Narrative family		
Narrative factor	Explanation	Example
Physical health	Physical health issues making it difficult for job seekers to find a job, to engage in job search, or to work.	“they have physical problems” (<i>job seeker</i>) “physical challenges” (<i>firm manager</i>) “physical health related challenges” (<i>general pop.</i>) “physical injuries” (<i>policy inst.</i>) “physical illnesses” (<i>academic</i>)
<i>Duration dependence</i>		
Vicious cycle	Longer unemployment durations making it more difficult to find a job, e.g., due to employers being unwilling to hire (long-term) unemployed applicants or job seekers losing confidence. Negative signaling value of unemployment.	“falling behind while being unemployed” (<i>job seeker</i>) “The longer the unemployment period, the more skeptical a new employer becomes” (<i>firm manager</i>) “You end up in a “vicious” spiral” (<i>general pop.</i>) “longer unemployment affects self-confidence” (<i>policy inst.</i>) “negative signal of long term unemployment” (<i>academic</i>)
Situation is demotivating	Job seekers not being motivated to put effort into search/to work. Lack of adaptability or low willingness to search/work. Refers to cases where this is attributed to the situation.	“desire to work automatically disappears when you are out of a job” (<i>job seeker</i>) “over time you lose motivation and energy when you don’t have a purpose to get up” (<i>firm manager</i>) “Motivation drops ” (<i>general pop.</i>) “Lack of motivation ” (<i>policy inst.</i>) “Demotivation e.g., because of unsuccessful applications” (<i>academic</i>)
Human capital depreciation	Workers’ skills or human capital depreciating with longer unemployment duration, making employers unwilling to hire them.	“mismatch between skills/abilities because the person has been out of the labor market for too long” (<i>job seeker</i>) “you cannot be away from the labor market without falling behind in the queue” (<i>firm manager</i>) “Difficult to keep their competencies” (<i>general pop.</i>) “outdated skills due to unemployment” (<i>policy inst.</i>) “skill depreciation” (<i>academic</i>)
<i>Search skills</i>		
Search skills	Poor search strategy. Lack of knowledge which positions are relevant. Reliance on the wrong sources to find job opportunities. People searching too narrowly. People not having a good network. Difficulties writing applications/preparing CV. Difficulty in navigating job interviews. Job seekers having trouble making an appearance that brings them a match.	“lack of experience regarding interviews” (<i>job seeker</i>) “Lack of networking” (<i>firm manager</i>) “Lack of scope in job search” (<i>general pop.</i>) “job searching through networks takes longer” (<i>policy inst.</i>) “Lack of networks” (<i>academic</i>)
<i>Miscellaneous</i>		
Personal circumstances	Personal circumstances/external frictions, such as having to take care of a sick relative or of a child because no child care is available. Also includes other life events, such as divorce.	“personal issues” (<i>job seeker</i>) “It could be personal reasons” (<i>firm manager</i>) “childcare” (<i>general pop.</i>) “personal circumstances” (<i>policy inst.</i>) “personal/family reasons.”(<i>academic</i>)

Notes: This table provides an overview of the different codes in our coding scheme, an explanation for each code, and example responses from each of our main descriptive surveys conducted in Denmark; “job seeker” refers to the job seeker survey, “firm manager” to the firm manager survey, “general pop.” to the survey with respondents from the general population, “policy inst.” to the survey with expert practitioners working at policy institutions, and “academic” to the survey with academic experts. The table also shows how narrative factors are aggregated to narrative families and narratives classes.

Table continued on next page.

Table C.1 (continued): Overview of the coding scheme

Narrative class			
Narrative family			
Narrative factor	Explanation	Example	
Worker profile	Personal profile. Things that cannot be changed in the short-term and are not covered by other categories, such as socioeconomic background. Poor CV.	“Bad reputation from the past” (<i>job seeker</i>) “Social inheritance” (<i>firm manager</i>) “They are of a lower social class” (<i>general pop.</i>) “socially disadvantaged” (<i>policy inst.</i>) “criminal background” (<i>academic</i>)	
No agreement salary	Mismatch between job seekers’ wage demands and firms’ wage offers. Refers to cases where neither workers nor employers are blamed for this mismatch/are explicitly mentioned.	“Lower wages” (<i>job seeker</i>) “a job that has a lower salary” (<i>firm manager</i>) “I think the pay is too low, just like in my own profession.” (<i>general pop.</i>) “Lack of financial incentives.” (<i>policy inst.</i>)	
No agreement amenities	Job seekers demanding specific non-wage amenities that employers do not offer or employers requiring specific non-wage aspects that workers do not/cannot offer. Refers to cases where neither workers nor employers are blamed for this mismatch/are explicitly mentioned.	“most jobs are part-time” (<i>job seeker</i>) “Lack of flexibility in the labor market in terms of consideration for special needs, flexible working hours” (<i>firm manager</i>) “It must be the right job that meets all relevant requirements” (<i>general pop.</i>) “a 37+ hour workweek is often the norm” (<i>policy inst.</i>) “Working conditions of jobs offered are not compatible” (<i>academic</i>)	
Job search is time-intensive	Good search taking time. Finding a good match being difficult.	“They need more time to find a job” (<i>job seeker</i>) “they are waiting for an opportunity” (<i>firm manager</i>) “You wait a long time before receiving any responses” (<i>general pop.</i>) “it takes longer to land a job” (<i>policy inst.</i>) “it takes time to find a good match” (<i>academic</i>)	
Bad luck	Some job seekers being unlucky in their applications.	“luck” (<i>job seeker</i>) “Others are just unlucky.” (<i>firm manager</i>) “it requires bad luck” (<i>general pop.</i>) “Another factor is bad luck” (<i>academic</i>)	
Artifact	Long-term unemployment being a statistical artifact, e.g., people who are officially long-term unemployed working as freelancers on the side or being in a transition phase to start their own business.	“they are waiting to start an apprenticeship” (<i>job seeker</i>) “career changes, such as from employee to self-employed will involve a period of unemployment” (<i>firm manager</i>) “work freelance” (<i>general pop.</i>) “Example 4” (<i>policy inst.</i>) “the role of definition of unemployment” (<i>academic</i>)	

Notes: This table provides an overview of the different codes in our coding scheme, an explanation for each code, and example responses from each of our main descriptive surveys conducted in Denmark; “job seeker” refers to the job seeker survey, “firm manager” to the firm manager survey, “general pop.” to the survey with respondents from the general population, “policy inst.” to the survey with expert practitioners working at policy institutions, and “academic” to the survey with academic experts. The table also shows how narrative factors are aggregated to narrative families and narratives classes.

D Additional analyses

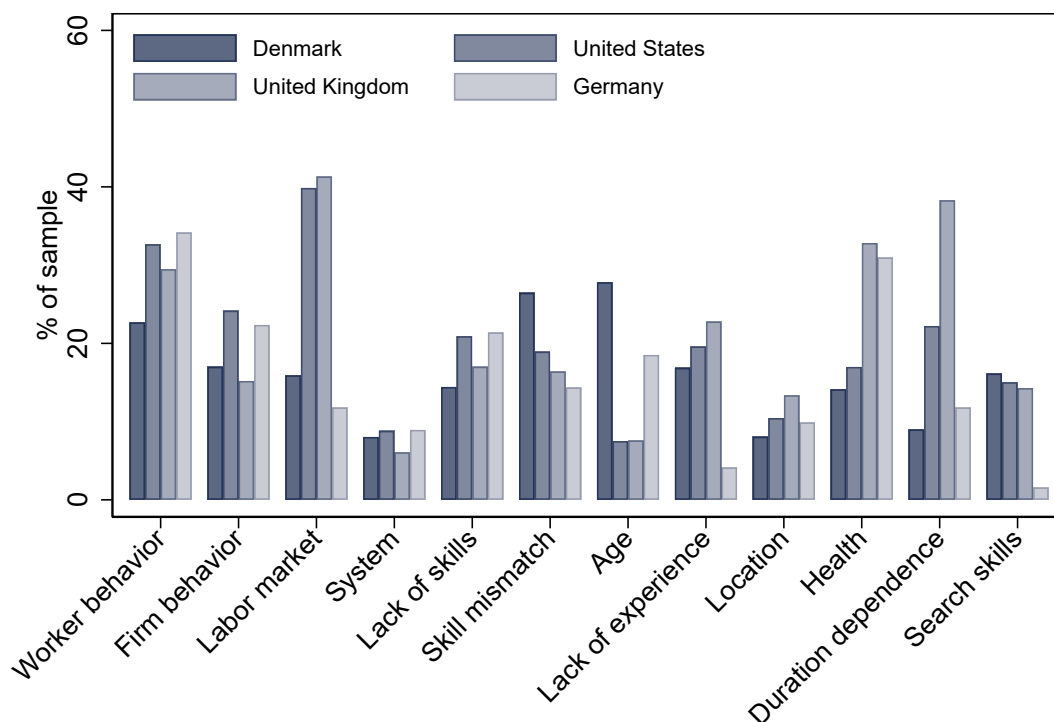
D.1 Cross-country evidence on job seekers' narratives

To examine how job seekers' narratives vary across different economic environments, we conducted additional surveys with unemployed workers in the United States, the United Kingdom, and Germany in April 2025. The surveys in the UK and the US were conducted via Prolific, while the survey in Germany was administered through the panel provider Bilendi. The survey instructions are reported in Appendix E.4. The surveys were completed by 306 (US), 329 (UK), and 313 (Germany) job seekers. We compare the narratives expressed by respondents in these surveys to those of Danish job seekers from the control group of the experiment described in Section 5.1, which was conducted at the same time as the cross-country surveys. Columns (1)–(4) of Table D.1 report summary statistics.

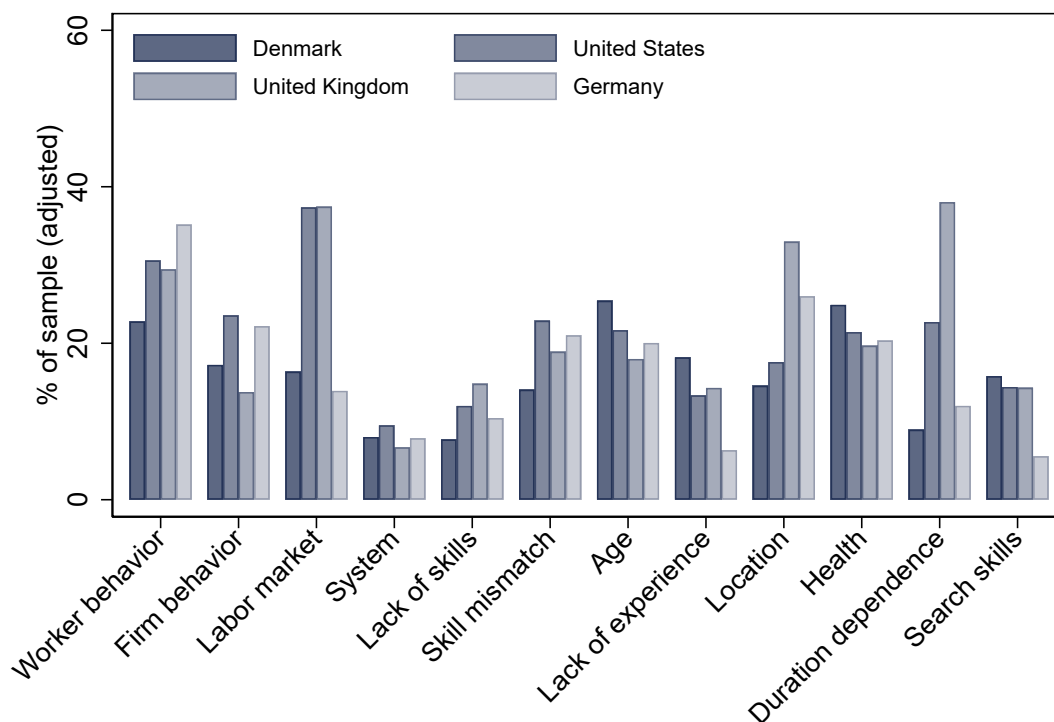
Panel A of Figure D.1 compares the distribution of narratives across countries. As in Denmark, job seekers in the US, the UK and Germany display substantial heterogeneity in their explanations for long-term unemployment. There are also some systematic differences across countries. Internal narratives, which attribute long-term unemployment to job seekers' behavior, are less frequent in Denmark (23%) than in the other countries, where at least 30% of respondents mention such explanations. Narratives emphasizing labor market conditions are more common in the US and the UK (each around 40%) than in Germany and Denmark, where the shares are less than half as large. In contrast, age-related narratives are more prevalent in Germany (18%) and Denmark (28%) than in the US and the UK (both below 10%). Narratives about duration dependence are also more frequent in the US (22%) and the UK (38%) than in Germany (11%) and Denmark (9%), while health-related narratives occur relatively often in the UK (32%) and Germany (31%).

Since the composition of job seekers differs somewhat across samples (see Table D.1), Panel B shows adjusted distributions that account for differences in observable characteristics. Specifically, we regress an indicator for mentioning a factor from a given narrative family on country indicators, controlling for gender, age, education, previous full-time employment, and the unemployment duration. We then compute predicted probabilities by country while holding observable characteristics constant. Some cross-country differences—for example in the frequency of age- and health-related narratives—become smaller after this adjustment. However, the higher prevalence of narratives emphasizing labor market conditions and duration dependence in the US and the UK persists even after accounting for observable differences.

Figure D.1 Distribution of narratives across countries
A. Unconditional distribution



B. Covariate-adjusted distribution



Note: This figure shows the distribution of narrative families across countries. Each bar represents the frequency of narrative families within the corresponding sample of job seekers in (i) Denmark ($N = 3,034$), (ii) the United States ($N = 306$), (iii) the United Kingdom ($N = 329$), and (iv) Germany ($N = 313$). All samples were interviewed in April 2025. Panel A shows unconditional frequencies, while Panel B shows adjusted frequencies based on regressions controlling for the covariates listed in Table D.1; the depicted shares correspond to predicted probabilities by country holding observable characteristics constant.

Table D.1 Summary statistics: Job seekers in different countries

	Cross-country study				Validation study
	Denmark (2025) (1)	US (2025) (2)	UK (2025) (3)	Germany (2025) (4)	US (2026) (5)
Female	0.559	0.369	0.489	0.419	0.469
Age					
Below 25 years	0.026	0.297	0.334	0.061	0.248
25-34 years	0.271	0.314	0.353	0.208	0.403
35-44 years	0.168	0.193	0.122	0.240	0.179
45-54 years	0.176	0.137	0.103	0.236	0.131
55-64 years	0.308	0.052	0.076	0.249	0.038
65 years or above	0.052	0.007	0.012	0.006	0.000
University degree	0.585	0.448	0.520	0.173	0.400
Previous job was full-time	0.806	0.539	0.517	0.591	0.552
Unemployment duration					
Below 3 months	0.267	0.229	0.191	0.176	0.169
3-5 months	0.258	0.216	0.191	0.131	0.217
6-8 months	0.162	0.127	0.137	0.112	0.138
9-11 months	0.117	0.118	0.103	0.086	0.097
12-17 months	0.105	0.131	0.128	0.080	0.117
18-23 months	0.041	0.069	0.058	0.042	0.052
24 months or longer	0.050	0.111	0.191	0.374	0.210
Searching for part-time job	0.057	0.359	0.398	0.473	0.376
Observations	3,034	306	329	313	290

Note: The table reports summary statistics for unemployed job seekers across different countries. All values are percentage shares unless indicated otherwise. Columns (1)–(4) refer to the samples used in the cross-country comparison of narratives surveyed in April 2025 (see Appendix D), while column (5) reports statistics for US job seekers used to validate open-ended responses against a close-ended question format in a survey conducted in March 2026 (see Figure A.1 and Table B.5). Column (1) includes Danish job seekers from the control group of the experiment described in Section 5.1. Columns (2)–(4) include job seekers from other countries recruited via Prolific (US and UK) and Bilendi (Germany). Column (5) includes US job seekers recruited via Prolific.

D.2 Second-hand experiences

Prominent accounts of economic narratives emphasize the role of transmission through social interactions (Shiller, 2017, 2020). Motivated by this perspective, we examine how job seekers' narratives relate to second-hand experiences of unemployment within the respondents' family. Specifically, we regress indicators for invoking narratives from different families on a dummy for whether the respondent's partner, parents, or siblings experienced unemployment in the past, controlling for our standard set of covariates. The results are reported in Table D.2.

Having second-hand experience with unemployment increases the likelihood of invoking narratives that attribute long-term unemployment to firms' hiring practices by 3.1pp ($p = 0.030$), relative to an overall prevalence of 11.4%. Similarly, second-hand experiences are associated with a 3.5pp ($p = 0.028$) higher likelihood of citing narratives centered on poor job search skills, relative to a baseline incidence of 15.9%. By contrast, narratives emphasizing a lack of skills are 3.6pp ($p = 0.055$) less frequent among respondents with second-hand unemployment experiences. We find no significant associations for other narrative families.

These findings are consistent with a role of social interactions in the transmission of unemployment narratives. Our measure of second-hand experience, however, captures only close family ties and does not include broader social networks such as friends or acquaintances. We also do not distinguish between different types of unemployment spells (e.g., due to weak labor demand, illness, or other reasons), as only about 30% of respondents report any second-hand experience, limiting the scope for a more detailed analysis of transmission mechanisms.

Table D.2 Narratives and second-hand unemployment experience

	Internal narrative (1)	External narrative (2)	Firm behavior (3)	Market (4)	System (5)	Location (6)
Second-hand unemployment experience	-2.00 (1.62)	1.43 (1.99)	3.07** (1.41)	-0.11 (1.20)	-1.66 (1.59)	-0.48 (1.05)
No. of observations	2,728	2,728	2,728	2,728	2,728	2,728
Mean dep. variable	18.88	33.65	11.40	8.76	18.22	7.11
	Lack of skills (7)	Skill mismatch (8)	Age (9)	Health (10)	Duration dependence (11)	Search skills (12)
Second-hand unemployment experience	-3.62* (1.88)	-0.32 (1.87)	0.36 (1.51)	1.62 (1.82)	-1.09 (1.32)	3.48** (1.58)
No. of observations	2,728	2,728	2,728	2,728	2,728	2,728
Mean dep. variable	29.33	28.59	25.66	25.59	11.40	15.87

Note: This table reports correlates of narratives with job seekers' second-hand unemployment experience. The sample includes individuals unemployed at the first survey wave in May 2024. The dependent variables indicate whether the respondent mentioned a narrative within the corresponding category. The variable "second-hand unemployment experience" indicates whether the individual experienced unemployment within the close family circle including their partner, father, mother and siblings. Robust standard errors are reported in parentheses. **/**/* indicate statistical significance at the 1%/5%/10%-level.

E Survey instructions

This appendix displays the instructions for our different surveys.

E.1 Main descriptive surveys in May 2024

E.1.1 Job seekers survey

Screen: Welcome page

Thank you so much for participating in this survey about your subjective views on job search – we really appreciate it! If you win a gift card, you will be notified directly in your e-Boks by August 1, 2024.

[page-break]

Screen: Introductory text

On the next page, you will encounter an open question in which we will ask you about your views on why some job seekers become long-term unemployed. From our experience, it can take about **2 minutes** to complete this question. This is the only mandatory question in this survey asking for a text response. Your responses are very valuable for this research project. **Therefore, please take your time to respond carefully.**

[page-break]

Screen: Narratives

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some unemployed individuals to stay unemployed for an extended period?

[Open-text box]

[page-break]

Screen: Fraction becoming long-term unemployed

Among every 100 individuals who become unemployed in a given month, how many do you think will typically still be unemployed twelve months later?

___ *[restrict responses to lie between 0 and 100]*

[page-break]

Screen: Own job search situation

We now would like to ask you some questions about your own current employment situation.

What describes your current situation best?

I am searching for a full-time job (at least 30 hours per week) [1] / I am searching for a part-time job (less than 30 hours per week) [2] / I am full-time employed or have accepted a full-time job offer (at least 30 hours per week) [3] / I am part-time employed or have accepted a part-time job offer (less than 30 hours per week) [4]

If response [3] or [4], then proceed immediately to screen: Background characteristics II.

[page-break]

Screen: Search effort

How many hours in total did you dedicate to your **job search** within the **last 7 days**?

Note: By job search we mean various activities, such as screening job ads, gathering information, writing applications, attending job interviews etc.

__ hours

How many job applications in total did you send out within the **last 4 weeks**?

__ applications

[page-break]

Screen: Explanation probabilities

In some of the following questions, we will ask you to think about the percent chance of something happening in the future. Your answers can range from 0 to 100, where 0 means there is absolutely no chance, and 100 means that it is absolutely certain.

For example, numbers like:

2 and 5 percent may indicate "almost no chance" / 18 percent or so may mean "not much chance" / 47 or 52 percent chance may be a "pretty even chance" / 83 percent or so may mean a "very good chance" / 95 or 98 percent chance may be "almost certain"

[page-break]

Screen: Perceived returns to search

Think about the type of jobs you applied to over the last weeks, or – in case you did not apply to any jobs – the types of jobs that you have been planning to apply to.

How likely is it that you will receive an offer for a job of this type **within the next 4**

weeks if you spend... ?

- ...**5 hours** per week searching: My percent chance (out of 100) of receiving an **offer for a job** of this type **within the next 4 weeks** is __ %.
- ...**15 hours** per week searching: My percent chance (out of 100) of receiving an **offer for a job** of this type **within the next 4 weeks** is __ %.

[page-break]

Screen: Expected offer wage

In the following two items, write “full-time”/“fuldtidsjob” whenever response was [1] and write “part-time”/“deltidsjob” whenever response was [2] in Screen: Own job search situation.

Imagine you were offered a **new [full-time/part-time] job within the next 4 weeks**: What do you think would be the monthly salary (before taxes, excluding pension contributions) that you would be offered?

I expect that the **offered monthly salary (before taxes, excluding pension contributions)** would be: DKK ____.

[page-break]

Screen: Reservation wage

What is the **lowest** monthly salary (before taxes, excluding pension contributions) for which **you would be willing** to accept a new **[full-time/part-time] job within the next 4 weeks**?

The **minimum monthly salary** (before taxes, excluding pension contributions) for which I would be willing to accept a **[full-time/part-time] job** is: DKK ____.

[page-break]

Screen: Willingness to make concession

When searching for a new job, one sometimes has to make certain concessions. What would you accept in order to find a job?

Would you... (Tick all that apply.) *[Randomize order with none of the above at the bottom]*

accept a long commute to work [yes-no] / accept awkward working hours [yes-no] / accept a job that is below your specialized abilities [yes-no] / take additional training or get additional education [yes-no] / accept uninteresting work [yes-no] / accept awkward working conditions (noise, dirt) [yes-no] / change your residence [yes-no] / change your profession [yes-no] / None of the above.

[page-break]

Screen: Job finding probability

We would now like you to think about your personal situation in the **next 3 months**. How likely do you think it is that you start working in a new job within this period?

My percent chance (out of 100) to start working in a new job **within the next 3 months** is __ %.

[page-break]

Screen: Background characteristics I

For how many months have you been looking for a job?

Less than 3 months / At least 3 but less than 6 months / At least 6 but less than 9 months / At least 9 but less than 12 months / At least 12 but less than 18 months / At least 18 but less than 24 months / At least 24 months

What has your last employment type been?

full-time (at least 30 hours per week) [1] / part-time (at least 10 and less than 30 hours per week) [2] / Less than 10 hours per week [3] / I have never been employed before [4]

If response [1] or [2] or [3]:

What was your monthly salary (before taxes, excluding pension contributions) in your last job before becoming unemployed?

DKK ____

[page-break]

Screen: Background characteristics II

What is your age?

24 years or younger / Between 25 and 34 years / Between 35 and 44 years / Between 45 and 54 years / Between 55 and 64 years / 65 years or older

What is your gender?

Female / Male / Other

What is the highest educational degree that you have completed?

University degree (Bachelor, Master, PhD) or **Professional bachelor education / Upper secondary education** (e.g. Gymnasium, Higher Commercial Examination Programme, Higher Technical Examination Programme, Higher Preparatory Examination Programme) or **vocational education** (e.g. Erhvervsuddannelser, Academy Profession)

degree) / **Lower secondary education** (Folkeskole, efterskole) or **preparatory basic education** (e.g. FGU)

[page-break]

Screen: Feedback

If you have any thoughts or input you would like to share with us, either regarding job search or the questionnaire you just completed, please write them in the box below:

[Open-text box]

[page-break]

Screen: Goodbye

Goodbye - Thank you for your answer.

Remember that we are giving away a total of 20 GoGift gift cards to those who complete the entire questionnaire.

These gift cards are great for many things and are very easy to use in stores and online. Each gift card is worth DKK 1000. If you win a gift card, you will be notified directly in your e-Boks by August 1, 2024.

Please close your browser to complete the questionnaire.

E.1.2 Firm manager survey

Screen: Welcome page

Thank you so much for participating in this survey about your subjective views on job search – we really appreciate it! If you win a gift card, you will be notified directly in your e-Boks by August 1, 2024.

[page-break]

Screen: Introductory text

On the next page, you will encounter an open question in which we will ask you about your views on why some job seekers become long-term unemployed. From our experience, it can take about **2 minutes** to complete this question. This is the only mandatory question in this survey asking for a text response. Your responses are very valuable for this research project. **Therefore, please take your time to respond carefully.**

[page-break]

Screen: Narratives

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some unemployed individuals to stay unemployed for an extended period?

[Open-text box]

[page-break]

Screen: Fraction becoming long-term unemployed

Among every 100 individuals who become unemployed in a given month, how many do you think will typically still be unemployed twelve months later?

__ *[restrict responses to lie between 0 and 100]*

[page-break]

Screen: Worker productivity (categorical)

Think of a job applicant for a typical position advertised by your firm. The job applicant **has already been unemployed for twelve months**. Otherwise their CV appears comparable to that of other applicants who are currently employed by other companies.

What would be your expectation about the **productivity** of this applicant if you were to

hire them?

Compared to applicants currently employed by other companies, the unemployed applicant would be. . .

much less productive / less productive / slightly less productive / equally productive / slightly more productive / more productive / much more productive

[page-break]

Screen: Worker productivity (quantitative)

Use “less productive” in case any of the three corresponding response options in Screen: Worker productivity (categorical) has been ticked. Use “more productive” in case any of the three corresponding response options in Screen: Worker productivity (categorical) has been ticked. Do not show this question in case “equally productive” has been ticked in Screen: Worker productivity (categorical).

You just indicated that you would expect a job applicant who **has already been unemployed for twelve months** to be *[less productive/more productive]* than other applicants who are currently employed by other companies with an otherwise comparable CV.

How many percent *[less productive/more productive]* would you expect such an applicant to be if you were to hire them?

if “less productive” is used, show the following:

For instance, if you expect the long-term unemployed applicant to be 10 percent less productive than currently employed applicants, enter 10 percent.

if “more productive” is used, show the following:

For instance, if you expect the long-term unemployed applicant to be 10 percent more productive than currently employed applicants, enter 10 percent.

__ percent *[in case of “less productive”, restrict this to be within [0,100]]*

[page-break]

Screen: Willingness to hire (categorical)

Please think again of a job applicant for a typical position advertised by your firm. The job applicant **has already been unemployed for twelve months**. Otherwise their CV appears comparable to that of other applicants who are currently employed by other companies.

What do you think, how likely is it that you would **make such an applicant a job offer**?

Compared to applicants currently employed by other companies, it would be...

much less likely / less likely / slightly less likely / equally likely / slightly more likely / more likely / much more likely

... that I make this applicant a job offer.

[page-break]

Screen: Wage setting (categorical)

Please think once more of a job applicant for a typical position advertised by your firm. The job applicant **has already been unemployed for twelve months**. Otherwise their CV appears comparable to that of other applicants who are currently employed by other companies.

In case you attempted to hire such an unemployed applicant, would you **offer a wage** that is . . . much lower / lower / slightly lower / equal / slightly higher / higher / much higher . . . than the wage you would offer to applicants currently employed by other companies.

[page-break]

Screen: Wage setting (quantitative)

Use "lower" in case any of the three corresponding response options in Screen: Wage setting (categorical) has been ticked. Use "higher" in case any of the three corresponding response options in Screen: Wage setting (categorical) has been ticked. Do not show this question when "equal" has been ticked in Screen: Wage setting (categorical).

You just indicated that you would offer a [lower/higher] wage if you attempted to hire a job applicant who **has already been unemployed for twelve months** than when attempting to hire applicants who are currently employed by other companies with an otherwise comparable CV.

How many percent [lower/higher] would your offered wage to such an applicant be?

if "lower" is used show the following:

For instance, if your offered wage to a long-term unemployed applicant is 10 percent lower than the wage offered to currently employed applicants, enter 10 percent.

if "higher" is used show the following:

For instance, if your offered wage to a long-term unemployed applicant is 10 percent higher than the wage offered to currently employed applicants, enter 10 percent.

__ percent [*in case of "lower", restrict this to be within [0,100]*]

[page-break]

Screen: Staff composition

When you think of **newly hired employees** at your company, **what is their typical composition?** What shares are short-term or long-term unemployed or employed at

another company just before you hire them? What share just entered the labor market?

- Short-term unemployed (less than 12 months): __ %
- Long-term unemployed (at least 12 months): __ %
- Employed at another company: __ %
- Just entered the labor market: __ %

Total: __ % [*force this to sum to 100%*]

[page-break]

Screen: Background characteristics professional

How would you describe your position in your main job? Please tick all that apply.

Owner manager / CEO or Director without ownership / Board member without ownership / Owner without being a manager/board member / Middle management: HR / Middle management: Controlling / Middle management: Accounting / Employee: HR / Employee: Controlling / Employee: Accounting / Other – Please specify

How long have you been working at the place you work at in your main job?

2 years or shorter / More than 2 but not more than 5 years / More than 5 but not more than 10 years / More than 10 but not more than 20

How much influence do you have on hiring decisions or the overall hiring strategy at the place you work at in your main job?

No influence / Little influence / Some influence / Substantial influence / A lot of influence

[page-break]

Screen: Background characteristics personal

What is your age?

24 years or younger / Between 25 and 34 years / Between 35 and 44 years / Between 45 and 54 years / Between 55 and 64 years / 65 years or older

What is your gender?

Female / Male / Other

What is the highest educational degree that you have completed?

University degree (Bachelor, Master, PhD) or **Professional bachelor education / Upper secondary education** (e.g. Gymnasium, Higher Commercial Examination Programme, Higher Technical Examination Programme, Higher Preparatory Examination

Programme) or **vocational education** (e.g. Erhvervsuddannelser, Academy Profession degree) / **Lower secondary education** (Folkeskole, efterskole) or **preparatory basic education** (e.g. FGU)

Have you studied any economics or business at the university level?

Yes/ No

[page-break]

Screen: Feedback

If you have any thoughts or input you would like to share with us, either regarding job search or the questionnaire you just completed, please write them in the box below:

[Open-text box]

[page-break]

Screen: Goodbye

Thank you for your response. Please close your browser to complete this questionnaire.

E.1.3 General population survey

Screen: Welcome page

Thank you so much for participating in this survey about your subjective views on job search – we really appreciate it! If you win a gift card, you will be notified directly in your e-Boks by August 1, 2024.

Screen: Introductory text

On the next page, you will encounter an open question in which we will ask you about your views on why some job seekers become long-term unemployed. From our experience, it can take about **2 minutes** to complete this question. This is the only mandatory question in this survey asking for a text response. Your responses are very valuable for this research project. **Therefore, please take your time to respond carefully.**

[page-break]

Screen: Narratives

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some unemployed individuals to stay unemployed for an extended period?

[Open-text box]

[page-break]

Screen: Fraction becoming long-term unemployed

Among every 100 individuals who become unemployed in a given month, how many do you think will typically still be unemployed twelve months later?

__ *[restrict responses to lie between 0 and 100]*

[page-break]

Screen: Background characteristics

What is your age?

24 years or younger / Between 25 and 34 years / Between 35 and 44 years / Between 45 and 54 years / Between 55 and 64 years / 65 years or older

What is your gender?

Female / Male / Other

What is the highest educational degree that you have completed?

University degree (Bachelor, Master, PhD) or **Professional bachelor education / Upper secondary education** (e.g. Gymnasium, Higher Commercial Examination Programme, Higher Technical Examination Programme, Higher Preparatory Examination Programme) or **vocational education** (e.g. Erhvervsuddannelser, Academy Profession degree) / **Lower secondary education** (Folkeskole, efterskole) or **preparatory basic education** (e.g. FGU)

How would you describe your current employment status?

Full-time employed / Part-time employed / Self-employed / Unemployed / looking for a job / Out of the labor force / not looking for a job / Retired / In training or education / Other: __

Which party's position do you feel closest to?

Socialdemokratiet / Venstre, Danmarks Liberale Parti / Moderaterne / Socialistisk Folkeparti / Danmarksdemokraterne / Liberal Alliance / Det Konservative Folkeparti / Enhedslisten – De Rød-Grønne / Radikale Venstre / Dansk Folkeparti / Alternativet / Nye Borgerlige / Prefer not to say

[page-break]

Screen: Feedback

If you have any thoughts or input you would like to share with us, either regarding job search or the questionnaire you just completed, please write them in the box below:

[Open-text box]

[page-break]

Screen: Goodbye

Goodbye - Thank you for your answer.

Remember that we are giving away a total of 20 GoGift gift cards to those who complete the entire questionnaire. These gift cards are great for many things and are very easy to use in stores and online. Each gift card is worth DKK 1000. If you win a gift card, you will be notified directly in your e-Boks by August 1, 2024.

Please close your browser to complete the questionnaire.

E.1.4 Survey with experts from Danish labor market institutions

Screen: Welcome Page

Thank you so much for participating in this survey about your subjective views on job search – we really appreciate it!

Please consent to the processing of your data and our privacy policy. No conclusions about your person will be drawn. You can withdraw your consent at any time.

- Click here to display the full privacy policy.

Screen: Introductory text

On the next page, you will encounter an open question in which we will ask you about your views on why some job seekers become long-term unemployed.

From our experience, it can take about **2 minutes** to complete this question. This is the only mandatory question in this survey asking for a text response. Your responses are very valuable for this research project. **Therefore, please take your time to respond carefully.**

[page-break]

Screen: Narratives

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some unemployed individuals to stay unemployed for an extended period?

[Open-text box]

[page-break]

Screen: Fraction becoming long-term unemployed

Among every 100 individuals who become unemployed in a given month, how many do you think will typically still be unemployed twelve months later?

__ *[restrict responses to lie between 0 and 100]*

[page-break]

Screen: Background characteristics professional

In your professional role, how relevant is the topic “long-term unemployment”?

Irrelevant / Almost irrelevant / Somewhat relevant / Very relevant / Extremely relevant

For how many years have you been working at the institution you work at in your main job?

2 years or shorter / More than 2 but not more than 5 years / More than 5 but not more than 10 years / More than 10 but not more than 20 years / More than 20 years

[page-break]

Screen: Background characteristics personal

What is your age?

24 years or younger / Between 25 and 34 years / Between 35 and 44 years / Between 45 and 54 years / Between 55 and 64 years / 65 years or older

What is your gender?

Female / Male / Other

What is the highest educational degree that you have completed?

- **University degree** (Bachelor, Master, PhD) or **Professional bachelor education / Upper secondary education** (e.g. Gymnasium, Higher Commercial Examination Programme, Higher Technical Examination Programme, Higher Preparatory Examination Programme) or **vocational education** (e.g. Erhvervsuddannelser, Academy Profession degree) / **Lower secondary education** (Folkeskole, efterskole) or **preparatory basic education** (e.g. FGU)

Have you studied any economics or business at the university level?

Yes/ No

[page-break]

Screen: Feedback

If you have any thoughts or input you would like to share with us, either regarding job search or the questionnaire you just completed, please write them in the box below:

[Open-text box]

[page-break]

Screen: Goodbye

Thank you for your response.

Please close your browser to complete this questionnaire.

E.1.5 Academic expert survey

Screen: Welcome page

Thanks a lot for participating in this short survey!

Screen: Consent

Please consent to the processing of your data and our privacy policy. No conclusions about your person will be drawn. You can withdraw your consent at any time.

- Click here to display the full privacy policy.

[page-break]

Screen: About this survey

On the next page, you will encounter an open question in which we will ask you to explain the causes of long-term unemployment in Denmark.

You may not be familiar with the Danish labor market. **In that case, please respond to the questions on the basis of your expertise as a labor economist to the best of your knowledge.**

The survey focuses on Denmark because we conduct surveys with Danish job seekers in parallel to this expert survey, and want to be able to compare job seekers' survey responses with those of experts. Because of the parallel survey with job seekers, the questions in this survey were designed such that laypeople can understand them.

[page-break]

Screen: Why do some job seekers become long-term unemployed?

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some unemployed individuals to stay unemployed for an extended period?

[Open-text box]

[page-break]

Screen: What fraction of job seekers becomes long-term unemployed?

Among every 100 individuals in Denmark who become unemployed in a given month, how many do you think will still be unemployed twelve months later?

__ *[restrict responses to lie between 0 and 100]*

[page-break]

Many thanks for participating in this survey. We highly value your response.

E.2 Follow-up descriptive surveys in August 2024

E.2.1 Job seeker survey

Screen: Welcome page

Thank you so much for participating in this survey – we really appreciate it! A couple of weeks ago, you kindly completed a questionnaire about your views on the labor market. Some of the questions in the following new questionnaire will look familiar to you, but note that it is important for us to understand what your thoughts are at this point in time. The whole survey will take 5-10 minutes, and we are giving away another 10 GoGift gift cards worth DKK 1000 each among those who complete this new survey. If you win a gift card, you will be notified directly in your e-Boks by November 1, 2024.

Screen: Introductory text

On the next page, you will encounter an open question in which we will ask you about your views on why some job seekers become long-term unemployed. From our experience, it can take about **2 minutes** to complete this question. This is the only mandatory question in this survey asking for a text response. Your responses are very valuable for this research project. **Therefore, please take your time to respond carefully.**

[page-break]

Screen: Narratives

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some unemployed individuals to stay unemployed for an extended period?

[Open-text box]

[page-break]

Screen: Fraction becoming long-term unemployed

Among every 100 individuals who become unemployed in a given month, how many do you think will typically still be unemployed twelve months later?

__ *[restrict responses to lie between 0 and 100]*

[page-break]

Screen: Own job search situation

We now would like to ask you some questions about your own current employment

situation.

What describes your current situation best?

I am searching for a full-time job (at least 30 hours per week) [1] / I am searching for a part-time job (less than 30 hours per week) [2] / I am full-time employed or have accepted a full-time job offer (at least 30 hours per week) [3] / I am part-time employed or have accepted a part-time job offer (less than 30 hours per week) [4] / I am not employed and I am not searching for a job [5]

If response [3] or [4] or [5], then proceed immediately to Screen: Feedback.

[page-break]

Screen: Search effort

How many hours in total did you dedicate to your **job search** within the **last 7 days**?

Note: By job search we mean various activities, such as screening job ads, gathering information, writing applications, attending job interviews etc.

__ hours

How many job applications in total did you send out within the last 4 weeks?

__ applications

[page-break]

Screen: Explanation probabilities

In some of the following questions, we will ask you to think about the percent chance of something happening in the future. Your answers can range from 0 to 100, where 0 means there is absolutely no chance, and 100 means that it is absolutely certain.

For example, numbers like:

2 and 5 percent may indicate "almost no chance" / 18 percent or so may mean "not much chance" / 47 or 52 percent chance may be a "pretty even chance" / 83 percent or so may mean a "very good chance" / 95 or 98 percent chance may be "almost certain"

[page-break]

Screen: Perceived returns to search

Think about the type of jobs you applied to over the last weeks, or – in case you did not apply to any jobs – the types of jobs that you have been planning to apply to.

How likely is it that you will receive an offer for a job of this type **within the next 4 weeks** if you spend... ?

- ...**5 hours** per week searching: My percent chance (out of 100) of receiving an **offer for a job** of this type **within the next 4 weeks** is __ %.
- ...**15 hours** per week searching: My percent chance (out of 100) of receiving an **offer for a job** of this type **within the next 4 weeks** is __ %.

[page-break]

Screen: Expected offer wage

In the following two items, write “full-time”/“fuldtidsjob” whenever response was [1] and write “part-time”/“deltidsjob” whenever response was [2] in Screen: Own job search situation.

Imagine you were offered a new **[full-time/part-time] job within the next 4 weeks**: What do you think would be the monthly salary (before taxes, excluding pension contributions) that you would be offered?

I expect that the **offered monthly salary (before taxes, excluding pension contributions)** would be: DKK ____.

[page-break]

Screen: Reservation wage

What is the **lowest** monthly salary (before taxes, excluding pension contributions) for which **you would be willing** to accept a new **[full-time/part-time] job within the next 4 weeks**?

The **minimum monthly salary** (before taxes, excluding pension contributions) for which I would be willing to accept a **[full-time/part-time] job** is: DKK ____.

[page-break]

Screen: Willingness to make concession

When searching for a new job, one sometimes has to make certain concessions. What would you accept in order to find a job?

Would you... (Tick all that apply.) *[Randomize order with none of the above at the bottom]*

accept a long commute to work [yes-no] / accept awkward working hours [yes-no] / accept a job that is below your specialized abilities [yes-no] / take additional training or get additional education [yes-no] / accept uninteresting work [yes-no] / accept awkward working conditions (noise, dirt) [yes-no] / change your residence [yes-no] / change your profession [yes-no] / None of the above.

[page-break]

Screen: Job finding probability

We would now like you to think about your personal situation in the **next 3 months**. How likely do you think it is that you start working in a new job within this period?

My percent chance (out of 100) to start working in a new job **within the next 3 months** is __ %.

[page-break]

Screen: Feedback

If you have any thoughts or input you would like to share with us, either regarding job search or the questionnaire you just completed, please write them in the box below:

[Open-text box]

[page-break]

Screen: Goodbye

Thank you for your answer.

Remember that we are giving away a total of 10 GoGift gift cards à DKK1000 to those who complete the entire questionnaire. If you win a gift card, you will be notified directly in your e-Boks by November 1, 2024.

Feel free to close your browser window now.

E.2.2 General population survey

The instructions below are on a three-month follow-up survey that 1,176 of the 2,244 respondents from the baseline general population survey completed in May 2024, which is currently not used in the paper.

Screen: Welcome page

Thank you so much for participating in this survey – we really appreciate it! A couple of weeks ago, you kindly completed a questionnaire about your views on the labor market. Some of the questions in the following new questionnaire will look familiar to you, but note that it is important for us to understand what your thoughts are at this point in time. The whole survey will take at most 5 minutes, and we are giving away another 10 GoGift gift cards worth DKK 1000 each among those who complete this new survey. If you win a gift card, you will be notified directly in your e-Boks by November 1, 2024.

[page-break]

Screen: Introductory text

On the next page, you will encounter an open question in which we will ask you about your views on why some job seekers become long-term unemployed. From our experience, it can take about **2 minutes** to complete this question. This is the only mandatory question in this survey asking for a text response. Your responses are very valuable for this research project. **Therefore, please take your time to respond carefully.**

[page-break]

Screen: Narratives

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some unemployed individuals to stay unemployed for an extended period?

[Open-text box]

[page-break]

Screen: Fraction becoming long-term unemployed

Among every 100 individuals who become unemployed in a given month, how many do you think will typically still be unemployed twelve months later?

__ *[restrict responses to lie between 0 and 100]*

[page-break]

Screen: Background characteristics

How would you describe your current employment status?

Full-time employed / Part-time employed / Self-employed / Unemployed / looking for a job / Out of the labor force / not looking for a job / Retired / In training or education / Other: __

Screen: Feedback

If you have any thoughts or input you would like to share with us, either regarding job search or the questionnaire you just completed, please write them in the box below:

[Open-text box]

[page-break]

Screen: Goodbye

Thank you for your answer.

Remember that we are giving away a total of 10 GoGift gift cards à DKK1000 to those who complete the entire questionnaire. If you win a gift card, you will be notified directly in your e-Boks by November 1, 2024.

Feel free to close your browser window now.

E.3 Validation survey in March 2026

Screen: Welcome page

Thanks a lot for participating in this study!

The goal of this research study is to better understand how people make important economic choices and why they make their choices. Survey respondents will answer a series of questions on their views. The survey will take 5 minutes.

Your participation is completely voluntary. You can withdraw at any time, and for any reason, simply by closing your browser. However, we are only able to pay you if you complete the survey.

If you require further information, please contact wohlfart@wiso.uni-koeln.de

I have read the above and consent to take part in this study [1] / I do not wish to participate [2]

If response [2], then the survey ends.

[page-break]

Screen: Warning

Please note: Using bots or artificial intelligence (such as ChatGPT or Google Bard) is prohibited and will lead to a rejection of the submission.

[page-break]

Screen: Attention 1

The next question is about the following problem. In questionnaires like ours, sometimes there are participants who do not carefully read the questions and just quickly click through the survey. This compromises the results of research studies. **To show that you are reading the survey carefully, please choose both "Very strongly interested" and "Not at all interested" as your answer to the next question.**

Given the above, how interested are you in politics?

Very strongly interested [1] / Very interested [2] / A little bit interested [3] / Not very interested [4] / Not at all interested [5]

If response not both [1] and [5], then the survey ends.

[page-break]

Screen: Attention 2

A mini challenge

Please recall the following four numbers and the order in which they appear.

[page-break]

Each number (2, 9, 5, 7) will be displayed individually for 3 seconds.

[page-break]

Please enter the four numbers in the exact order they were shown.

[Open-text box]

[page-break]

Screen: Attention 3

Two final questions before we start

Finally, please explain: What is your opinion about the yearly switch to daylight saving time? Do you like or dislike it? Please use about 15-30 words.

[Open-text box]

[page-break]

Screen: Own job search situation

We now would like to ask you some questions about your own current employment situation.

What describes your current situation best?

I am searching for a full-time job (at least 30 hours per week) [1] / I am searching for a part-time job (less than 30 hours per week) [2] / I am full-time employed or have accepted a full-time job offer (at least 30 hours per week) [3] / I am part-time employed or have accepted a part-time job offer (less than 30 hours per week) [4] / I am not working and not looking for a job either [5]

If response [3] or [4] or [5], then the survey ends.

[page-break]

Screen: Introductory text

On the next page, you will encounter an open question in which we will ask you about your views on why some job seekers become long-term unemployed. From our experience, it can take about **2 minutes** to complete this question. This is the only mandatory question in this survey asking for a text response. Your responses are very valuable for this research project. **Therefore, please take your time to respond carefully.**

[page-break]

Screen: Narratives (open-ended)

Think of individuals in the US who become unemployed and have not found a job twelve months after becoming unemployed.

In your opinion, what factors lead to some unemployed people remaining unemployed for a long time?

[Open-text box]

[page-break]

Screen: Narratives (closed-ended)

Please think once more about individuals in the US who become unemployed and have not found a new job twelve months after becoming unemployed.

In your opinion, what factors lead to some unemployed people remaining unemployed for a long time?

This time, please tick all options that apply in your opinion. *[Randomize order with none of the above at the bottom]*

The behavior of job seekers: low motivation, low search effort, or being overly selective about which jobs to accept. [yes-no] / **The behavior of employers:** being overly selective about applicants, low pay or benefits, or discriminatory hiring practices. [yes-no] / **Weak labor market:** not enough open positions. [yes-no] / **Legislation and institutions:** Government regulations and bureaucracy, inadequate assistance to support job seekers. [yes-no] / **Lack of skills:** low educational attainment, qualifications not acknowledged. [yes-no] / **Skill mismatch:** a mismatch between workers' skills and the skills required for available jobs. [yes-no] / **Age:** Unwillingness of employers to hire older job seekers. [yes-no] / **Lack of experience:** Lack of (formal) work experience. [yes-no] / **Location mismatch:** people living in other regions than where jobs are located. [yes-no] / **Health:** physical or mental health problems that limit people's ability to work or search for jobs. [yes-no] / **Vicious cycle:** the longer one is unemployed, the more difficult it becomes to find a job. [yes-no] / **Search skills:** lack of knowledge on how to find job openings, apply, or navigate job interviews. [yes-no] / **Personal situation:** Personal or family circumstances (e.g., caregiving responsibilities or other life constraints). [yes-no] / None of the above. [yes-no]

[page-break]

Screen: Background characteristics I

For how many months have you been looking for a job?

Less than 3 months / At least 3 but less than 6 months / At least 6 but less than 9 months / At least 9 but less than 12 months / At least 12 but less than 18 months / At least 18 but less than 24 months / At least 24 months

What has your last employment type been?

full-time (at least 30 hours per week) [1] / part-time (at least 10 and less than 30 hours per week) [2] / Less than 10 hours per week [3] / I have never been employed before [4]

If response [1] or [2] or [3]:

What was your monthly salary (before taxes, excluding pension contributions) in your last job before becoming unemployed?

___ USD.

[page-break]

Screen: Background characteristics II

What is your age?

24 years or younger / Between 25 and 34 years / Between 35 and 44 years / Between 45 and 54 years / Between 55 and 64 years / 65 years or older

What is your gender?

Female / Male / Other

What is the highest educational degree that you have completed?

12th grade or less / Graduated high school or equivalent / Some college, no degree / Associate degree / Bachelor's degree / Post-graduate degree

[page-break]

Screen: Feedback

If you have any thoughts or input you would like to share with us, either regarding job search or the questionnaire you just completed, please write them in the box below:

[Open-text box]

E.4 Cross-country surveys in April 2025

The instructions below are for our surveys with job seekers from the US, the UK, and Germany. Only very few questions differ between these three surveys, which are indicated below.

Screen: Welcome page

Thanks a lot for participating in this study!

The goal of this research study is to better understand how people make important economic choices and why they make their choices. Survey respondents will answer a series of questions on their views. The survey will take 5 minutes.

Your participation is completely voluntary. You can withdraw at any time, and for any reason, simply by closing your browser. However, we are only able to pay you if you complete the survey.

If you require further information, please contact wohlfart@wiso.uni-koeln.de

I have read the above and consent to take part in this study [1] / I do not wish to participate [2]

If response [2], then the survey ends.

[page-break]

Screen: Attention

The next question is about the following problem. In questionnaires like ours, sometimes there are participants who do not carefully read the questions and just quickly click through the survey. This compromises the results of research studies. **To show that you are reading the survey carefully, please choose both "Very strongly interested" and "Not at all interested" as your answer to the next question.**

Given the above, how interested are you in politics?

Very strongly interested [1] / Very interested [2] / A little bit interested [3] / Not very interested [4] / Not at all interested [5]

If response not both [1] and [5], then the survey ends.

[page-break]

Screen: Warning

Please note: Using bots or artificial intelligence (such as ChatGPT or Google Bard) is prohibited and will lead to a rejection of the submission.

[page-break]

Screen: Own job search situation

We now would like to ask you some questions about your own current employment situation.

What describes your current situation best?

I am searching for a full-time job (at least 30 hours per week) [1] / I am searching for a part-time job (less than 30 hours per week) [2] / I am full-time employed or have accepted a full-time job offer (at least 30 hours per week) [3] / I am part-time employed or have accepted a part-time job offer (less than 30 hours per week) [4] / I am not employed and I am not searching for a job [5]

If response [3] or [4] or [5], then the survey ends.

[page-break]

Screen: Introductory text

On the next page, you will encounter an open question in which we will ask you about your views on why some job seekers become long-term unemployed. From our experience, it can take about **2 minutes** to complete this question. This is the only mandatory question in this survey asking for a text response. Your responses are very valuable for this research project. **Therefore, please take your time to respond carefully.**

[page-break]

Screen: Narratives

Think of individuals in **the US** who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some unemployed individuals to stay unemployed for an extended period?

**the UK*, *Germany* for the UK and Germany surveys.*

[Open-text box]

[page-break]

Screen: Fraction becoming long-term unemployed

Among every 100 individuals who become unemployed in a given month, how many do you think will typically still be unemployed twelve months later?

__ *[restrict responses to lie between 0 and 100]*

[page-break]

Screen: Search effort

How many hours in total did you dedicate to your **job search** within the **last 7 days**?

Note: By job search we mean various activities, such as screening job ads, gathering information, writing applications, attending job interviews etc.

__ hours

How many job applications in total did you send out within the **last 4 weeks**?

__ applications

[page-break]

Screen: Explanation probabilities

In some of the following questions, we will ask you to think about the percent chance of something happening in the future. Your answers can range from 0 to 100, where 0 means there is absolutely no chance, and 100 means that it is absolutely certain.

For example, numbers like:

2 and 5 percent may indicate "almost no chance" / 18 percent or so may mean "not much chance" / 47 or 52 percent chance may be a "pretty even chance" / 83 percent or so may mean a "very good chance" / 95 or 98 percent chance may be "almost certain"

[page-break]

Screen: Perceived returns to search

Think about the type of jobs you applied to over the last weeks, or – in case you did not apply to any jobs – the types of jobs that you have been planning to apply to.

How likely is it that you will receive an offer for a job of this type **within the next 4 weeks** if you spend. . . ?

- ...**5 hours** per week searching: My percent chance (out of 100) of receiving an **offer for a job** of this type **within the next 4 weeks** is __ %.
- ...**15 hours** per week searching: My percent chance (out of 100) of receiving an **offer for a job** of this type **within the next 4 weeks** is __ %.

[page-break]

Screen: Expected offer wage

In the following two items, write "full-time" whenever response was [1], and write "part-time" whenever response was [2] in Screen: Own job search situation.

Imagine you were offered a new **[full-time/part-time] job within the next 4 weeks**:

what do you think would be the monthly salary (before taxes, excluding pension contributions) that you would be offered?

I expect that the **offered monthly salary (before taxes, excluding pension contributions)** would be: ___ *USD*.

£, *EUR* for the UK and Germany surveys.

[page-break]

Screen: Reservation wage

What is the **lowest** monthly salary (before taxes, excluding pension contributions) for which **you would be willing** to accept a new **[full-time/part-time] job within the next 4 weeks?**

The **minimum monthly salary** (before taxes, excluding pension contributions) for which I would be willing to accept a new **[full-time/part-time] job** is: ___ *USD*.

£, *EUR* for the UK and Germany surveys.

[page-break]

Screen: Willingness to make concession

When searching for a new job, one sometimes has to make certain concessions. What would you accept in order to find a job?

Would you... (Tick all that apply.) *[Randomize order with none of the above at the bottom]*

accept a long commute to work [yes-no] / accept uncomfortable working hours [yes-no] / accept a job that is below your specialized abilities [yes-no] / take additional training or get additional education [yes-no] / accept uninteresting work [yes-no] / accept uncomfortable working conditions [yes-no] / accept exhausting work [yes-no] / change your residence [yes-no] / change your profession [yes-no] / None of the above.

[page-break]

Screen: Job finding probability

We would now like you to think about your personal situation in the **next 3 months**. How likely do you think it is that you start working in a new job within this period?

My percent chance (out of 100) to start working in a new job **within the next 3 months** is ___ %.

[page-break]

Screen: Background characteristics I

For how many months have you been looking for a job?

Less than 3 months / At least 3 but less than 6 months / At least 6 but less than 9 months / At least 9 but less than 12 months / At least 12 but less than 18 months / At least 18 but less than 24 months / At least 24 months

What has your last employment type been?

full-time (at least 30 hours per week) [1] / part-time (at least 10 and less than 30 hours per week) [2] / Less than 10 hours per week [3] / I have never been employed before [4]

If response [1] or [2] or [3], show the following:

What was your monthly salary (before taxes, excluding pension contributions) in your last job before becoming unemployed?

_____ *USD*.

£, *EUR* for the UK and Germany surveys.

[page-break]

Screen: Background characteristics II

What is your age?

24 years or younger / Between 25 and 34 years / Between 35 and 44 years / Between 45 and 54 years / Between 55 and 64 years / 65 years or older

What is your gender?

Female / Male / Other

For the participants in the US survey:

What is the highest educational degree that you have completed?

12th grade or less / Graduated high school or equivalent / Some college, no degree / Associate degree / Bachelor's degree / Post-graduate degree

For the participants in the UK survey:

What is the highest educational degree that you have completed?

No formal qualifications / GCSEs or equivalent (or equivalent, e.g., O-Levels, NVQ Level 1-2) / A-Levels (or equivalent, e.g., NVQ Level 3, BTEC National Diploma) / Some university, no degree / Foundation degree or HND/HNC / Bachelor's degree / Post-graduate degree

For the participants in Germany survey:

What is the highest educational degree that you have completed?

No school diploma / Lower secondary school diploma (Hauptschulabschluss) / Inter-

mediate secondary school diploma (e.g. Realschulabschluss) / (Specialized) university entrance qualification (e.g., Fachabitur or Abitur, or equivalent) / Completed vocational training / Diploma (University of Applied Sciences/University) / Bachelor's degree (University of Applied Sciences/University) / Master's degree (University of Applied Sciences/University) or higher (e.g., PhD)

[page-break]

Screen: Feedback

If you have any thoughts or input you would like to share with us, either regarding job search or the questionnaire you just completed, please write them in the box below:

[Open-text box]

[page-break]

Please close your browser to complete the questionnaire.

E.5 Experiment with job seekers in April 2025

E.5.1 Main survey

Participants are randomly assigned in equal proportions to one of three groups: 33% to treatment Group 1 (worker behavior), 33% to treatment Group 2 (firm behavior), and 33% to the control group.

Screen: Welcome page

Thank you so much for participating in this survey about your subjective views on job search – we really appreciate it!

As a thank you for your time, we're giving away a total of **20 GoGift gift cards** to those who complete the entire survey (it takes about 10 minutes). These gift cards are good for many things and are very easy to use in stores and online. Each gift card is worth 1000 kr.

If you win one gift card, you will be notified directly in your e-Boks.

[page-break]

Screen: Own job search situation

We now would like to ask you some questions about your own current employment situation.

What describes your current situation best?

I am searching for a full-time job (at least 30 hours per week) [1] / I am searching for a part-time job (less than 30 hours per week) [2] / I am full-time employed or have accepted a full-time job offer (at least 30 hours per week) [3] / I am part-time employed or have accepted a part-time job offer (less than 30 hours per week) [4] / I am not working and not looking for a job either [5]

If response [3] or [4] or [5], then proceed immediately to Screen: Background characteristics II.

[page-break]

Screen: Worker behavior treatment

Only show the participants assigned to treatment group 1 and force people to stay on the screen for at least 10 seconds.

Why do some job seekers become long-term unemployed?

Please read the following information carefully. On the next page, we will ask you a question about the text below, so please read everything carefully.

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

We recently surveyed economic experts who study labor markets. We asked them which factors cause some unemployed individuals to stay unemployed for an extended period. These experts emphasized that **the behavior of job seekers** is an important reason for why some job seekers become long-term unemployed.

According to this explanation, long-term unemployment arises because some job seekers **find it difficult to motivate themselves** to take up new jobs. They do not put enough **effort** into their job search, failing to pursue opportunities actively or to explore alternatives. Additionally, they tend to be **overly selective**, preferring to wait for positions that perfectly match their expectations in terms of salary, job type, or working conditions. As a result, they struggle to find suitable jobs and remain unemployed for extended periods.

Here are some example explanations from our expert survey:

- It may be a choice, the unemployed person has other things to attend to and a job is not very high on his/her priority.
- Workers do choose what jobs they apply for and how hard to search. If they are more picky this will reduce their chances to find a job. With a relatively generous benefit system some may be quite selective and pass the 12 month line because of that.
- Overoptimistic expectations about what kind of match will be found leads to low acceptance rates of job offers early in the search process.

[page-break]

Screen: Worker behavior treatment summary

Only show the participants assigned to treatment group 1.

As you just read on the last page, experts emphasize that the behavior of job seekers is an important cause for long-term unemployment.

Please describe in your own words how the behavior of job seekers can lead to long-term unemployment.

[Open-text box]

Screen: Firm behavior treatment

Only show the participants assigned to treatment group 2 and force participants to stay on the screen for at least 10 seconds.

Why do some job seekers become long-term unemployed?

Please read the following information carefully. On the next page, we will ask you a question about the text below, so please read everything carefully.

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

We recently surveyed economic experts who study labor markets. We asked them which factors cause some unemployed individuals to stay unemployed for an extended period.

These experts emphasized that **the behavior and biases of employers** are an important reason for why some job seekers become long-term unemployed.

According to this explanation, long-term unemployment arises because employers tend to be **overly selective**, preferring to wait for candidates that perfectly match their expectations. They may hesitate to consider older applicants, those with limited experience, or individuals from certain groups, sometimes due to **biases or discriminatory practices**. This reluctance narrows opportunities for many job seekers, making it harder for them to secure employment. As a result, they struggle to find suitable jobs and remain unemployed for extended periods.

Here are some example explanations from our expert survey:

- Reluctance of employers to hire some employees that seem not immediately perfect for the job, to look broader, to hire older workers or people with a partial disability, who come from a different profession or have an immigration background.
- For older workers, there may be age discrimination.
- It may be the result of discrimination, so that employers hold negative views on certain attributes (age, gender, race...).

[page-break]

Screen: Firm behavior treatment summary

Only show the participants assigned to treatment group 2.

As you just read on the last page, experts emphasize that the behavior and biases of employers are an important cause for long-term unemployment.

Please describe in your own words how the behavior and biases of employers can lead to long-term unemployment.

[Open-text box]

[page-break]

Screen: Search effort

How many hours in total do you plan to dedicate to your **job search** within the **next 7 days**?

Note: By job search we mean various activities, such as screening job ads, gathering information, writing applications, attending job interviews etc.

__ hours

How many jobs do you plan to apply for within the next seven days?

__ applications

[page-break]

Screen: Explanation probabilities

In some of the following questions, we will ask you to think about the percent chance of something happening in the future. Your answers can range from 0 to 100, where 0 means there is absolutely no chance, and 100 means that it is absolutely certain.

For example, numbers like:

2 and 5 percent may indicate "almost no chance" / 18 percent or so may mean "not much chance" / 47 or 52 percent chance may be a "pretty even chance" / 83 percent or so may mean a "very good chance" / 95 or 98 percent chance may be "almost certain"

[page-break]

Screen: Perceived returns to search

Think about the type of jobs you applied to over the last weeks, or – in case you did not apply to any jobs – the types of jobs that you have been planning to apply to.

How likely is it that you will receive an offer for a job of this type **within the next 4 weeks** if you spend... ?

- ...**5 hours** per week searching: My percent chance (out of 100) of receiving an **offer for a job** of this type **within the next 4 weeks** is ___ %.
- ...**15 hours** per week searching: My percent chance (out of 100) of receiving an **offer for a job** of this type **within the next 4 weeks** is ___ %.

[page-break]

Screen: Expected offer wage

In the following two items, write "full-time"/"fuldtidsjob" whenever response was [1] and write "part-time"/"deltidsjob" whenever response was [2] in Screen: Own job search situation.

Imagine you were offered a **new [full-time/part-time] job within the next 4 weeks**: what do you think would be the monthly salary (before taxes, excluding pension contributions) that you would be offered?

I expect that the **offered monthly salary (before taxes, excluding pension contributions)** would be: DKK ___.

[page-break]

Screen: Reservation wage

What is the **lowest** monthly salary (before taxes, excluding pension contributions) for which **you would be willing** to accept a new **[full-time/part-time] job within the**

next 4 weeks?

The **minimum monthly salary** (before taxes, excluding pension contributions) for which I would be willing to accept a new **[full-time/part-time] job** is: DKK ___.

[page-break]

Screen: Willingness to make concession

When searching for a new job, one sometimes has to make certain concessions. What would you accept in order to find a job?

Would you... (Tick all that apply.) *[Randomize order with none of the above at the bottom]*

accept a long commute to work [yes-no] / accept awkward working hours [yes-no] / accept a job that is below your specialized abilities [yes-no] / take additional training or get additional education [yes-no] / accept uninteresting work [yes-no] / accept awkward working conditions (noise, dirt) [yes-no] / accept exhausting work [yes-no] / change your residence [yes-no] / change your profession [yes-no] / None of the above.

[page-break]

Screen: Situation in the next three months

We would now like you to think about your personal situation in the **next 3 months**. How likely do you think it is that you start working in a new job within this period?

My percent chance (out of 100) to start working in a new job **within the next 3 months** is ___ %.

[page-break]

Screen: Narratives

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some unemployed individuals to stay unemployed for an extended period? Please write 2-3 sentences to share your thoughts.

[Open-text box]

[page-break]

Screen: Fraction becoming long-term unemployed

Among every 100 individuals who become unemployed in a given month, how many do you think will typically still be unemployed twelve months later?

___ *[restrict responses to lie between 0 and 100]*

[page-break]

Screen: Background characteristics I

For how many months have you been looking for a job?

Less than 3 months / At least 3 but less than 6 months / At least 6 but less than 9 months / At least 9 but less than 12 months / At least 12 but less than 18 months / At least 18 but less than 24 months / At least 24 months

What has your last employment type been?

full-time (at least 30 hours per week) [1] / part-time (at least 10 and less than 30 hours per week) [2] / Less than 10 hours per week [3] / I have never been employed before [4]

If response [1] or [2] or [3]:

What was your monthly salary (before taxes, excluding pension contributions) in your last job before becoming unemployed?

DKK ____.

[page-break]

Screen: Background characteristics II

What is your age?

24 years or younger / Between 25 and 34 years / Between 35 and 44 years / Between 45 and 54 years / Between 55 and 64 years / 65 years or older

What is your gender?

Female / Male / Other

What is the highest educational degree that you have completed?

University degree (Bachelor, Master, PhD) or **Professional bachelor education** / **Upper secondary education** (e.g. Gymnasium, Higher Commercial Examination Programme, Higher Technical Examination Programme, Higher Preparatory Examination Programme) or **vocational education** (e.g. Erhvervsuddannelser, Academy Profession degree) / **Lower secondary education** (Folkeskole, efterskole) or **preparatory basic education** (e.g. FGU)

[page-break]

Screen: Feedback

If you have any thoughts or input you would like to share with us, either regarding job

search or the questionnaire you just completed, please write them in the box below:
[Open-text box]

[page-break]

Screen: Goodbye

Thank you for your answer.

Please close your browser to complete the questionnaire. If you win a gift card, you will be notified directly in your e-Boks.

E.5.2 Follow-up survey

Screen: Welcome page

Thank you very much for participating in this survey! This is a follow-up survey to one you answered last week. (Again, thank you for sharing your valuable opinions and thoughts with us last week!) Some of the questions you will find in this survey are similar to the ones you answered in the previous survey, while others are different.

Once again, as a token of our appreciation for your time, we are giving away a total of **10 GoGift gift cards** among those who complete the entire questionnaire. (It takes around **5 minutes** to complete.) The gift cards can be used for many things and are very easy to use both in stores and online. Each gift card is worth **1000 DKK**.

If you win a gift card, you will receive a direct notification in your e-Boks.

[page-break]

Screen: Own job search situation

We now would like to ask you some questions about your current employment situation.

What describes your current situation best?

I am searching for a full-time job (at least 30 hours per week) [1] / I am searching for a part-time job (less than 30 hours per week) [2] / I am full-time employed or have accepted a full-time job offer (at least 30 hours per week) [3] / I am part-time employed or have accepted a part-time job offer (less than 30 hours per week) [4] / I am not working and not looking for a job either [5]

[page-break]

Screen: Narratives

Think of individuals in Denmark who become unemployed and have not found a job twelve months after becoming unemployed.

What factors do you think cause some unemployed individuals to stay unemployed for an extended period? Please write 2-3 sentences to share your thoughts.

[Open-text box]

[page-break]

Screen: Explanation probabilities

Show if answer to the question in Screen: Own job search situation was [1] or [2].

In some of the following questions, we will ask you to think about the percent chance of something happening in the future. Your answers can range from 0 to 100, where 0 means there is absolutely no chance, and 100 means that it is absolutely certain.

For example, numbers like:

2 and 5 percent may indicate "almost no chance" / 18 percent or so may mean "not much chance" / 47 or 52 percent chance may be a "pretty even chance" / 83 percent or so may mean a "very good chance" / 95 or 98 percent chance may be "almost certain"

[page-break]

Screen: Perceived returns to search

Show if answer to the question in Screen: Own job search situation was [1] or [2].

Think about the type of jobs you applied to over the last weeks, or – in case you did not apply to any jobs – the types of jobs that you have been planning to apply to.

How likely is it that you will receive an offer for a job of this type **within the next 4 weeks** if you spend... ?

- ...**5 hours** per week searching: My percent chance (out of 100) of receiving an **offer for a job** of this type **within the next 4 weeks** is __ %.
- ...**15 hours** per week searching: My percent chance (out of 100) of receiving an **offer for a job** of this type **within the next 4 weeks** is __ %.

[page-break]

Screen: Expected offer wage

Show if answer to the question in Screen: Own job search situation was [1] or [2].

In the following two items, write "full-time"/"fuldtidsjob" whenever response was [1] and write "part-time"/"deltidsjob" whenever response was [2] in Screen: Own job search situation.

Imagine you were offered a **new [full-time/part-time] job within the next 4 weeks**: what do you think would be the monthly salary (before taxes, excluding pension contributions) that you would be offered?

I expect that the **offered monthly salary (before taxes, excluding pension contributions)** would be: DKK ___.

[page-break]

Screen: Reservation wage

Show if answer to the question in Screen: Own job search situation was [1] or [2].

What is the **lowest** monthly salary (before taxes, excluding pension contributions) for which **you would be willing** to accept a new **[full-time/part-time] job within the next 4 weeks**?

The **minimum monthly salary** (before taxes, excluding pension contributions) for

which I would be willing to accept a new **[full-time/part-time] job** is: DKK ____.

[page-break]

Screen: Situation in the next three months

Show if answer to the question in Screen: Own job search situation was [1] or [2].

We would now like you to think about your personal situation in the **next 3 months**. How likely do you think it is that you start working in a new job within this period? My percent chance (out of 100) to start working in a new job **within the next 3 months** is __ %.

[page-break]

Screen: Feedback

If you have any thoughts or input you would like to share with us, either regarding job search or the questionnaire you just completed, please write them in the box below:

[Open-text box]

[page-break]

Screen: Goodbye

Thank you for your answer.

Please close your browser to complete the questionnaire. If you win a gift card, you will be notified directly in your e-Boks.