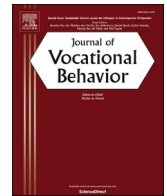




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Journal of Vocational Behavior

journal homepage: www.elsevier.com/locate/jvb

My job matters: Perceived societal usefulness buffers employee consequences of human capital-related underemployment

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ARTICLE INFO

Keywords:

Underemployment
Job satisfaction
Organizational commitment
Relative deprivation
Societal usefulness

ABSTRACT

Underemployment—referring to employment that is below a defined standard—is a salient issue in contemporary labor markets. One widespread form of underemployment is when individuals have more human capital than is required in their jobs, which can include perceived skill underutilization and perceived overqualification. Drawing on relational job design and relative deprivation theories, we explore how perceived societal usefulness—workers' perception of their job's utility and potential worth to society—moderates the relationship between human capital-related underemployment and both job satisfaction and organizational commitment as two key job attitudes. We hypothesize that perceived societal usefulness attenuates the negative relationship between underemployment and job attitudes by providing an alternative source of fulfillment and recognition. Two studies support this framework: Study 1, using nationally representative data from 38 countries, demonstrates that perceived societal usefulness attenuates the negative relationships between perceived skill underutilization and the two job attitudes. Using a two-wave dataset, Study 2 extends previous findings and reveals that perceived societal usefulness (a) correlates with a more objective operationalization of societal usefulness, and (b) moderates the indirect effect of perceived overqualification on job satisfaction, but not on organizational commitment, via relative deprivation as the underlying theoretical mechanism. By integrating relational job design and relative deprivation theories, this study suggests that perceived societal usefulness acts as an important boundary condition for previously observed effects of underemployment and that these can be partially explained by relative deprivation. These findings suggest practical implications for managers, emphasizing the importance of societally useful positions to mitigate the adverse effects of underemployment.

Unemployment is a major stressor that many individuals worldwide face, and which is associated with a host of negative well-being and health outcomes (for meta-analytic evidence, see [McKee-Ryan et al., 2005](#); [Paul et al., 2023](#); [Paul & Moser, 2009](#)). Yet, even if individuals are fortunate to have a (secure) job, they may be in a situation of *underemployment*, referring to an employment situation that is below a particular standard (e.g., [Feldman, 1996](#); [McKee-Ryan & Harvey, 2011](#)). Underemployment is a multidimensional construct that has both objective facets (such as being involuntarily engaged in part-time, temporary, or intermittent employment, or earning considerably less than in a previous job) and more subjective facets, such as when individuals feel that they are not fully

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<https://doi.org/10.1016/j.jvb.2026.104247>

Received 8 November 2024; Received in revised form 24 March 2026; Accepted 17 April 2026

Available online 21 April 2026

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utilizing their education, skills, or experience in their current jobs. These latter dimensions, capturing a human capital-related form of underemployment, are commonly assessed as perceived skill underutilization or perceived overqualification (Maynard & Feldman, 2011; McKee-Ryan & Harvey, 2011). In the modern job market, many highly skilled professionals find themselves trapped in roles that fail to harness their full potential (Gammarano, 2020; Hoteit et al., 2020; OECD, 2024). Given this, we specifically focus on forms of human capital-related underemployment in the present research, and unless otherwise noted, our use of the term underemployment refers to human capital-related underemployment throughout the remainder of the paper (see Becker, 1994; Ployhart & Moliterno, 2011 for a further discussion of human capital).

Highlighting the prevalence of this phenomenon, an analysis covering 114 countries (56% of global employment) found that 935 million workers held jobs misaligned with their education level, of which about 258 million (28%) were over-educated for their jobs (Gammarano, 2020). Moreover, roughly one quarter of workers in OECD countries report that their skills are underutilized in their current job (OECD, 2024). Further pointing to the societal relevance of the various forms of underemployment, statistics indicate that \$8 trillion was lost in 2018 due to unrealized GDP (Hoteit et al., 2020). In addition to the cost to society, research suggests that underemployment in general can result in lower levels of job satisfaction and organizational commitment among affected workers (McKee-Ryan & Harvey, 2011). Furthermore, experiencing underemployment early in a career significantly increases the likelihood of remaining underemployed later, highlighting its long-term implications for workforce stability and career progression (Acosta-Balasteros et al., 2018a; Fauser & Mooi-Reci, 2025). To mitigate these detrimental outcomes, scholars have identified various beneficial boundary conditions for underemployed individuals, pointing to the impact of person-related boundary conditions (e.g., career calling; Lobene & Meade, 2013; and status preference; Maynard & Joseph, 2008), relational boundary conditions (e.g., emotional support; Johnson & Johnson, 1997; and organizational identification; Kawai & Mohr, 2020), job-related boundary conditions (e.g., autonomy, job crafting; Debus et al., 2020; and psychological empowerment; Erdogan & Bauer, 2009), and organizational boundary conditions (e.g., organizational prestige; Gkorezis et al., 2019; and human resource practices; Wang, 2018).

However, work does not occur in a “social vacuum”; rather, individuals work within a social context, whereby they interact with others and can influence them through their work (e.g., Gersick et al., 2000; Morgeson & Campion, 2003; Rangan, 2000). Relational job design theory (Grant, 2007) targets exactly this vacuum and posits that when employees perceive their work as having a positive impact on others, they are more likely to experience a heightened sense of purpose, rooted in the belief that their efforts contribute to the well-being of others. If individuals find themselves in a situation of underemployment, their perception that their work benefits others may hence serve as an important alternative source of psychological fulfillment (Edwards et al., 1998; Wolfe & Patel, 2019). Linking the underemployment literature with relational job design theory, we thus argue that the extent to which employees perceive their job as useful to society (Wolfe & Patel, 2019) can offer a more nuanced understanding of the underemployment–outcome link.

Perceived societal usefulness, the extent to which employees believe a specific job has utility and potential worth to society (e.g., Wolfe & Patel, 2019), offers employees a unique sense of purpose that transcends the confines of traditional job roles (Dekker, 2018; Dur & van Lent, 2019). Although most jobs can reasonably be described as societally useful, for example, by providing goods or services, enabling others' work, or contributing economically, employees may nonetheless differ in how strongly they experience their own job as beneficial to society. Importantly, what counts as “useful” is not fixed; it can vary across groups and shift over time, shaped by public discourse and social recognition (e.g., the heightened visibility of “essential” work during the COVID-19 pandemic; “Clap for Carers,” BBC, 2020; Ibbetson, 2020). Accordingly, although “society” is the referent of this construct, we conceptualize perceived societal usefulness at the individual level as employees' subjective appraisal of their job's contribution.

Employees typically aspire to roles that align with their educational background and skills, but when underemployed individuals compare their circumstances with similar others, they often experience a sense of resentment and anger because they realize they do not currently occupy such positions (e.g., Feldman et al., 2002; Feldman & Turnley, 2004). Drawing on relational job design theory (Grant, 2007), we thus posit that if employees perceive their jobs as useful to society, these negative outcomes would be mitigated by the inherent fulfillment and purpose derived from an awareness of their societal impact. Taken together, the present research develops

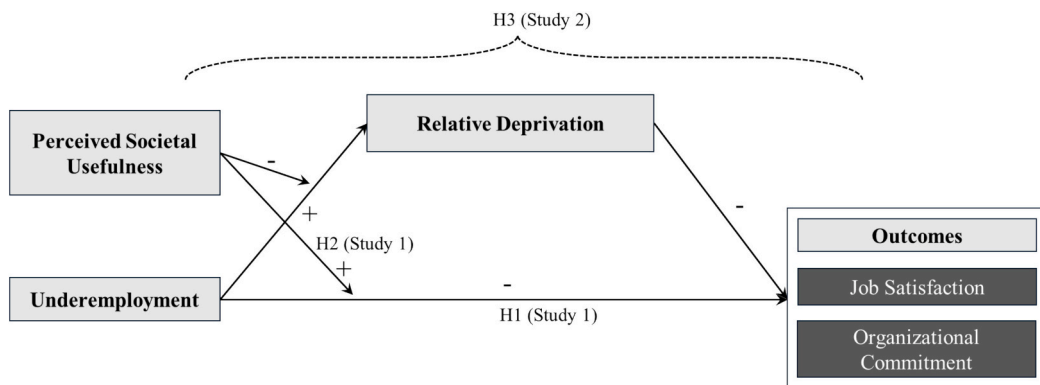


Fig. 1. Conceptual model. *Note.* H1 (Hypotheses 1a and 1b) and H2 (Hypotheses 2a and 2b) represent the direct effect of underemployment and the moderating effect of perceived societal usefulness, which were tested in Study 1. H3 (Hypotheses 3a and 3b) represents the moderated mediation of perceived societal usefulness through relative deprivation, which was tested in Study 2.

and tests a theoretical model of how *perceived societal usefulness* moderates the negative relationship between *underemployment* and *job attitudes*. Specifically, we focus on job satisfaction and organizational commitment as key job attitudes that target the job and the organization, respectively (e.g., Judge & Kammeyer-Mueller, 2012). Both job attitudes have been demonstrated to be significant outcomes of underemployment (Maynard et al., 2006; McKee-Ryan et al., 2009; McKee-Ryan & Harvey, 2011), with meta-analytic findings indicating the presence of potential moderating effects due to heterogeneity in observed effect sizes (e.g., Harari et al., 2017; Liao et al., 2025). Moreover, job satisfaction and organizational commitment predict downstream indicators of individual effectiveness, such as higher task and contextual performance and lower withdrawal (e.g., lateness, absenteeism, and turnover), and, when aggregated, important organizational outcomes such as customer satisfaction, productivity, profitability, and fewer accidents (e.g., Harrison et al., 2006; Judge & Kammeyer-Mueller, 2012; Woznyj et al., 2022).

To investigate these dynamics, we conduct two empirical studies testing aspects of our broader conceptual model as shown in Fig. 1. In Study 1, we examine whether perceived societal usefulness attenuates the negative relationship between perceived skill underutilization and the two job attitudes, using a multi-country dataset comprising nationally representative data from 19,729 individuals across 38 countries. Here, we conceptualize and measure underemployment as perceived skill underutilization, whereby individuals perceive themselves as having more skills than are required in their current position (Feldman et al., 2002). Study 2 builds upon that initial model by further exploring *relative deprivation* as a hypothesized mediator (Crosby, 1976). Thus, with an eye toward constructive replication (Köhler & Cortina, 2021) and extension, using two-wave data from 374 individuals, we develop hypotheses and test whether perceived societal usefulness attenuates the indirect effect of underemployment on the two job attitudes via relative deprivation. Here, we broaden the operationalization of underemployment to perceived overqualification, whereby employees consider themselves to possess more skills, education, and experience than required by their jobs (Maynard et al., 2006).

Our research contributes to theory and practice in several ways. Theoretically, we extend underemployment research by introducing perceived societal usefulness as a boundary condition grounded in relational job design theory (Grant, 2007) that can soften the negative attitudinal consequences of underemployment. In doing so, we move attention beyond task, personal, and organizational moderators toward the broader societal impact of work (Erdogan & Bauer, 2021; Grant, 2007; McKee-Ryan & Harvey, 2011). By integrating relational job design theory with relative deprivation theory, we also clarify why this buffering occurs: when people view their work as having societal impact, they may judge underemployment as less depriving because they anchor job evaluations in contributions to beneficiaries, thereby weakening deprivation-based declines in job satisfaction (Crosby, 1976, 1984). Practically, our findings suggest that managers may identify and address underemployment through high-quality one-on-one meetings (Rogelberg, 2024). Alongside structural responses, they might strengthen perceived societal usefulness by translating the mission into concrete, beneficiary-focused narratives and supporting cognitive job crafting (Wrzesniewski & Dutton, 2001).

1. Theory and hypotheses development

1.1. Underemployment and job attitudes

Despite the multidimensionality of the underemployment construct in its wider sense, a unifying theme is the broader mismatch between labor supply and demand (e.g., Gammarrano, 2018). Consequently, underemployment functions not only as an individual-level experience but also as an indicator of systemic labor underutilization, with implications for labor market efficiency, public health, and educational policy (Acosta-Ballesteros et al., 2018b; Pratap et al., 2021). The present study focuses on human capital-related underemployment, specifically, perceived skill underutilization and the somewhat broader form of perceived overqualification. Although all forms of underemployment involve work that falls short of a desired standard, not all forms involve underuse of human capital. Consistent with prominent discussions of human capital (Becker, 1994; Ployhart & Moliterno, 2011), human capital-related underemployment arises when employees perceive that their skills, education, or experience exceed job requirements. In contrast, non-human capital-related underemployment includes, for example, involuntary part-time work or inadequate pay, which reflect time, income, or contractual constraints rather than the underuse of skills or qualifications (McKee-Ryan & Harvey, 2011).

Perceived skill underutilization and overqualification are particularly salient for forming individual outcomes, as they capture workers' subjective appraisals of their employment situations (McKee-Ryan & Harvey, 2011). Perceived underemployment is particularly appropriate when examining how employees cope with and react to underemployment in terms of attitudes and well-being, whereas more objective indicators may be more suitable for questions about selection, job search, or externally evaluated fit (Erdogan & Bauer, 2021; Maynard & Feldman, 2011). Our approach is in line with the predominant psychology and management tradition of focusing on employees' subjective perceptions of underemployment and overqualification when examining individual attitudes and related reactions (Erdogan & Bauer, 2021). Importantly, individuals' subjective experiences are often more predictive of work-related attitudinal outcomes such as job satisfaction and organizational commitment than more objective job features (Khan & Morrow, 1991; Maynard & Feldman, 2011; Perrewé & Zellars, 1999).

Concerning the underlying mechanism of the proposed negative underemployment–job attitudes link, we draw on theorizing around person–job (mis)fit (Edwards, 1991; Edwards et al., 1998; van Vianen, 2018). The fit literature suggests that the alignment between employees' attributes, such as skills, preferences, and aspirations, and the characteristics of their jobs yields positive work outcomes; this is because high person–job fit makes individuals feel capable, valued and aligned—core ingredients for positive attitudes and overall well-being at work (Jansen & Kristof-Brown, 2006; Kristof-Brown et al., 2005; Su et al., 2015). In contrast, misalignment or low person–job fit, as seen in underemployment, is a psychologically and functionally unrewarding situation that would make individuals feel nonaligned and frustrated, thus contributing to more negative job attitudes.

Meta-analytic evidence indicates that human capital-related underemployment (perceived skill underutilization and perceived overqualification) is associated with lower job satisfaction and organizational commitment (e.g., Erdogan & Bauer, 2021; Harari et al., 2017; Liao et al., 2025; Maynard & Feldman, 2011; McKee-Ryan & Harvey, 2011). Accordingly, we include the following as replication/benchmark hypotheses that establish the expected baseline relationships, which then allow us to test our focal prediction regarding boundary conditions:

Hypothesis 1a. Underemployment is negatively related to job satisfaction.

Hypothesis 1b. Underemployment is negatively related to organizational commitment.

1.2. *The moderating role of perceived societal usefulness*

While a robust body of research demonstrates that underemployment is negatively associated with both job satisfaction and organizational commitment, the heterogeneity of effect sizes indicates that these relationships vary meaningfully across studies (for meta-analytic evidence, see Harari et al., 2017; Liao et al., 2025). This heterogeneity underscores the importance of investigating boundary conditions of underemployment, which is the primary objective of the present study.

Grant's (2007) relational job design theory posits that jobs are more than a series of tasks; they are also inherently relational, connecting employees with the individuals or groups they affect. When jobs provide opportunities to impact others positively, they foster employees' awareness of their influence, which in turn cultivates motivation and meaning (see Vroom, 1964). Specifically, employees derive motivation from the perception that their work benefits beneficiaries that is, "people and groups of people whom employees believe their actions at work have the potential to positively affect" (Grant, 2007, p. 395).

Drawing on relational job design theory, we propose that perceived societal usefulness, as the extent to which a specific job has utility and potential worth to society (Wolfe & Patel, 2019), attenuates the negative relationship between underemployment and job attitudes. Perceived societal usefulness can be understood as a form of perceived impact on beneficiaries that operates at the societal level, leveraging substantially the "scope" dimension of job impact, which reflects the breadth of individuals potentially affected by one's work (Grant, 2007). Although perceived societal usefulness shares conceptual space with constructs such as meaningful work and task significance (e.g., Grant, 2008; Pratt & Ashforth, 2003), its emphasis on benefiting society at large highlights a broader and more diffuse set of beneficiaries, rather than focusing on intrapersonal meaning or discrete interpersonal effects (Rosso et al., 2010).

In essence, we suggest that perceived societal usefulness serves as a motivational resource that protects individuals against the attitudinal costs associated with underemployment. Societally useful jobs offer broader, often more visible, forms of impact, which may contribute to employees' sense of social worth and recognition and thus mitigate underemployment's relationship with unfavorable job attitudes (Brewer et al., 2000; Grant, 2007; Wolfe & Patel, 2019). That is, even when individuals feel their human capital is underutilized, perceiving that their work contributes meaningfully to society may offer an alternative source of fulfillment (Edwards et al., 1998; Wolfe & Patel, 2019). This allocentric perspective might enable employees to reinterpret their role through a societal lens. In doing so, underemployed individuals likely focus less on constrained job characteristics and more on their broader contributions to others, which may help them to maintain more positive job attitudes under conditions of underemployment. In contrast, for individuals who perceive their work as low in societal usefulness, underemployment may be especially detrimental. Lacking a compensatory sense of broader societal impact, these individuals may experience a dual deficit: not only do they feel their human capital is underutilized, but they also lack a clear vision of the utility of their jobs to society more broadly.

Although perceived societal usefulness has not previously been examined as a moderating variable, existing research supports the notion that it can boost work-related motivation and effort. For example, Siemsen et al. (2007) found that employees' motivation to share knowledge was amplified when they perceived the knowledge to be shared as useful to others, particularly in contexts where rewards were offered for knowledge sharing. Their findings suggest that usefulness perceptions can heighten individuals' willingness to exert effort and engage in work-related behaviors. Further indirect support for our proposition comes from the literature on public service motivation. Individuals high in public service motivation, typically those employed in roles perceived as contributing to the public good, have been shown to experience higher job satisfaction and organizational commitment, and display higher job performance and organizational citizenship behaviors (Homburg et al., 2015; Kim, 2006; Ritz et al., 2016). These findings further underscore the beneficial potential of perceiving one's work as useful to society. As such, we predict:

Hypothesis 2a. Perceived societal usefulness moderates the negative relationship between underemployment and job satisfaction. Specifically, when individuals perceive their work as highly useful to society, the negative relationship between underemployment and job satisfaction is weaker.

Hypothesis 2b. Perceived societal usefulness moderates the negative relationship between underemployment and organizational commitment. Specifically, when individuals perceive their work as highly useful to society, the negative relationship between underemployment and organizational commitment is weaker.

1.3. *A moderated mediation model via relative deprivation*

Relative deprivation theory (Crosby, 1976, 1984) offers a psychologically grounded framework to explain *why* underemployment in the form of perceived skill underutilization and perceived overqualification relates to adverse employee outcomes, including diminished job satisfaction and organizational commitment (Maynard & Feldman, 2011). Unlike more objective indices of underemployment (e.g., comparing one's degree to that which is required by the job), perceived skill underutilization and perceived

overqualification are inherently evaluative and subjective (McKee-Ryan & Harvey, 2011), and as such, they closely align with the core premise of relative deprivation theory in the context of underemployment: subjective perceptions of being deprived of a desired job situation (i.e., opportunities to fully utilize one's skills and qualifications), rather than objective realities, are the primary drivers of attitudinal and psychological responses to underemployment (Maynard & Feldman, 2011; McKee-Ryan & Harvey, 2011).

Relative deprivation occurs when individuals perceive a gap between what they believe they deserve and what their actual job situation is like, often in comparison to past roles, similarly qualified peers, or their own expectations (Crosby, 1976; Martin, 1981). In the context of underemployment, individuals engage in horizontal comparisons with similarly qualified peers, and, upon perceiving a mismatch between their role and their credentials, may interpret this discrepancy as unjust, eliciting negative emotions such as frustration, resentment, and dissatisfaction (Erdogan et al., 2018; Smith et al., 2012). Empirical evidence consistently links underemployment to heightened feelings of relative deprivation (Erdogan & Bauer, 2009; Feldman et al., 2002; Luksyte et al., 2022). By translating employment conditions into meaningful psychological responses, relative deprivation ultimately leads to diminished job satisfaction and organizational commitment (McKee-Ryan & Harvey, 2011). Research supports this mediational process, demonstrating that greater relative deprivation is associated with lower job satisfaction, reduced organizational commitment, and poorer overall well-being (McKee-Ryan & Harvey, 2011; Smith et al., 2012). Therefore, it can be inferred that underemployment would indirectly relate to outcomes via relative deprivation; that is, relative deprivation mediates the relationship between underemployment and its outcomes.

However, building upon this mediating effect and recalling our theorizing around relational job design theory (Grant, 2007), we hypothesize that perceived societal usefulness acts to attenuate the relationship between underemployment and relative deprivation (i.e., the a-path of the mediation chain), resulting in a moderated mediation effect. Our theorizing is that perceived societal usefulness attenuates the negative association between underemployment and relative deprivation by redirecting attention from unmet personal employment expectations to the broader societal impact of one's work. Importantly, as Crosby (1976) highlights, experiences of deprivation are not static; they are malleable and can be shaped by contextual cues. Thus, when individuals redirect their attention to broader societal impacts, this likely attenuates their feeling of deprivation resulting from underemployment; this is because being attentive to broader societal impacts likely disrupts individuals' comparative process and reduces the salience of the discrepancy that fuel relative deprivation (Crosby, 1984; Martin, 1981). In contrast, individuals with low perceived societal usefulness might focus more narrowly on personal expectations and comparisons with similarly qualified others. Without the feeling that one's work might benefit society, the perceived incongruence between one's human capital and job role may become more salient and central, amplifying feelings of deprivation. Accordingly, perceived societal usefulness would function as a contextual moderator that recalibrates how underemployment is cognitively appraised and emotionally experienced.

Hypothesis 3a. Perceived societal usefulness moderates the indirect negative effect of underemployment on job satisfaction via relative deprivation. Specifically, when individuals perceive their work as highly useful to society, the negative indirect effect is weaker.

Hypothesis 3b. Perceived societal usefulness moderates the indirect negative effect of underemployment on organizational commitment via relative deprivation. Specifically, when individuals perceive their work as highly useful to society, the negative indirect effect is weaker.

2. Overview of studies

Across two studies, we investigate job attitudes (specifically lowered job satisfaction and organizational commitment) as outcomes of underemployment, focusing on the moderating role of perceived societal usefulness and the mediating role of relative deprivation. In Study 1, we examine the direct negative relationships between underemployment (in the form of perceived skill underutilization) and both job satisfaction (H1a) and organizational commitment (H1b). Additionally, we test whether perceived societal usefulness attenuates these relationships between underemployment and both job satisfaction (H2a) and organizational commitment (H2b).

Study 2 expands upon these findings by examining a moderated mediation model, introducing relative deprivation as a mediating mechanism. Specifically, we test whether underemployment (in the form of perceived overqualification) indirectly relates to job satisfaction (H3a) and organizational commitment (H3b) through relative deprivation, while also investigating whether perceived societal usefulness moderates this mediation pathway. Together, these studies offer a comprehensive examination of how relative deprivation explains underemployment's negative outcomes and how perceived societal usefulness may mitigate these associations.

3. Study 1

3.1. Method

3.1.1. Sample and procedure

The data used in this study were derived from the International Social Survey Programme (ISSP Research Group, 2017, 2018). The ISSP is a cross-national collaboration program conducting annual surveys on diverse social science topics, with each year focusing on a different major theme (e.g., work, health, religion). We used the dataset from 2015 (focusing on the topic of work) because it measured all our variables of interest. To ensure data quality and representativeness, ISSP member countries are required to include a minimum of 1000 participants in their surveys. Moreover, the ISSP employs a rigorous, multi-stage translation and back-translation procedure to ensure conceptual and linguistic equivalence of its questionnaires across languages and cultural contexts (ISSP Research Group, 2022).

Data were available from 38 countries (i.e., Australia, Austria, Belgium, Chile, China, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Great Britain, Hungary, Iceland, India, Israel, Japan, Latvia, Lithuania, Mexico, New Zealand, Norway, Philippines, Poland, Russia, Slovak Republic, Slovenia, South Africa, Spain, Suriname, Sweden, Switzerland, Taiwan, Turkey, United States, and Venezuela).

The initial dataset included 53,203 individuals. We excluded individuals who were not working for pay ($N = 26,237$), who were self-employed ($N = 4968$) or who indicated having more than 25 years of education ($N = 557$; i.e., 2.24 SD above the mean of education; see Aguinis et al., 2013). We retained individuals who provided complete information on all our variables of interest. Following these criteria, our final sample included 19,729 participants.

In the final sample, 50.94% of respondents self-identified as women. The majority of participants (25.39%) were between 36 and 45 years old. The mean education level was 13.50 years ($SD = 3.57$ years), which corresponds to post-secondary non-tertiary education. The majority of employees (69.51%) worked 40 h per week or more, and 26.20% held a supervisory position. Participants came from a heterogeneous set of occupations, including sales assistants, teachers, clerks, heavy truck and lorry drivers, and health care assistants, according to the International Standard Classification of Occupations (ISCO) 2008 (International Labour Office, 2012).

3.1.2. Measures

3.1.2.1. Underemployment. Underemployment was assessed as perceived skill underutilization, using the question: “How much of your past work experience and/or job skills can you make use of in your present job?”. Responses ranged from 1 (*almost none*) to 4 (*almost all*). We reverse-coded the item such that higher numbers indicate higher levels of underemployment (see F. Green & McIntosh, 2007; F. Green & Zhu, 2010; Quintini, 2011 for prior usage of this single-item measure).

3.1.2.2. Perceived societal usefulness. Perceived societal usefulness was assessed with the item “My job is useful to society”, using a scale from 1 (*strongly agree*) to 5 (*strongly disagree*). The responses were reverse-coded, with higher numbers indicating greater perceived societal usefulness (for prior usage of this measure, see Dur & van Lent, 2019; Wolfe & Patel, 2019).

3.1.2.3. Job satisfaction. Job satisfaction was assessed with the item “How satisfied are you in your (main) job?”. Responses were given on a scale from 1 (*completely satisfied*) to 7 (*completely dissatisfied*). We reverse-coded the responses, with higher scores representing greater job satisfaction (for prior research validating the use of our single-item measure, see Debus et al., 2012; Gu et al., 2021; Shoss et al., 2020).

3.1.2.4. Organizational commitment. Organizational commitment was measured using two items, following the approach of Debus et al. (2012): “I am willing to work harder than I have to in order to help the firm or organization I work for succeed”, and “I am proud to be working for my firm or organization”. Responses were given on a scale from 1 (*strongly agree*) to 5 (*strongly disagree*). We reverse-coded the responses, with higher scores representing greater organizational commitment. Multilevel Cronbach's alpha¹ for this two-item measure was 0.67 at the within-country level, and 0.85 at the between-country level (see Geldhof et al., 2014).

3.1.3. Control variable: education

We selected one control variable (*education*) that, based on theory, might impact the variables in our research model (see recommendations by Becker et al., 2016; Bernerth & Aguinis, 2016; Spector, 2021). First, education has been shown to be related to both underemployment and job attitudes (e.g., Harari et al., 2017; Liao et al., 2025). Despite the general career benefits associated with higher education (Ng et al., 2005; Peiró et al., 2010), research shows that individuals with advanced degrees are more likely to experience underemployment due to the mismatch between their human capital and available job opportunities (Bashshur et al., 2011). Second, education is closely aligned with our underemployment measure (Allen & van der Velden, 2001; Desjardins & Rubenson, 2011; Feldman, 1996). Conceptually, educational attainment can be viewed as one element of broader “qualifications” (Arvan et al., 2019; Erdogan & Bauer, 2021), but it primarily reflects formal human capital (i.e., credentials; Ployhart & Moliterno, 2011). Our focal predictor, instead, captures specifically perceived underutilization of skills in the current job. Finally, regarding job attitudes, human capital theory suggests that better education can grant access to better job conditions, ultimately fostering positive job attitudes (Becker, 1994; for empirical evidence, see Woznyj et al., 2022). To maintain transparency, we conducted analyses both with and without this control variable in accordance with best practice standards. Detailed results from analyses without the control variable are available in the supplementary material; please see below for more details.

3.1.4. Analytic strategy

We used IBM SPSS Statistics 28 to prepare the data for analysis. All analyses were conducted using the R package MplusAutomation (Hallquist et al., 2024), designed to implement Mplus software in R. We used R version 4.33 and Mplus version 8.8 (Muthén & Muthén, 2017). We conducted simple slope analyses for multilevel modeling using Preacher et al.'s (2006) online tools, accessible at <https://www.quantpsy.org/interact/hlm2.htm>. Research materials, including detailed descriptions of each measure and analysis code, are available in our OSF folder at <https://doi.org/10.17605/OSF.IO/X9RGT>.

¹ Given the nested structure of the data, multilevel modeling was employed. Detailed information is provided in the “Analytic strategy” section.

To accommodate the nested data structure (i.e., individuals nested within countries), we performed a multilevel multivariate regression to test our hypotheses (Snijders & Bosker, 2011). Specifically, we applied a random-intercept model, allowing for varying intercepts across countries while maintaining consistent slopes for the predictors (Snijders & Bosker, 2011). We regressed the outcome variables—job satisfaction and organizational commitment—on the predictor (underemployment), the moderator (perceived societal usefulness), the interaction term (underemployment \times societal usefulness), and the control variable.

We group-mean centered the predictor, moderator, and control variables in line with recommendations (Enders & Tofghi, 2007; Hofmann & Gavin, 1998). Specifically, we calculated the reference mean at the country level, centering each score for the variables of interest relative to the mean of that variable within its respective country. For example, group-mean centering underemployment involved centering each individual's underemployment score using the mean underemployment level for their country (e.g., Australia, Austria, Belgium, etc.). Group-mean centering ensures that multilevel models accurately disentangle individual-level (within-group) vs. group-level (between-group) variances, which is critical for valid substantive conclusions (Enders & Tofghi, 2007; Hofmann & Gavin, 1998).

3.2. Results

3.2.1. Preliminary analyses

Means, standard deviations, and zero-order correlations are displayed in Table 1.

Prior to conducting the multilevel analysis, we examined the intraclass correlation coefficient (ICC1; Bliese, 2000; LeBreton & Senter, 2008) for each outcome to determine the variance components at the individual level (Level 1) and the country level (Level 2). The analysis revealed that between-country differences accounted for 6.4% of the total variance in job satisfaction and 11.4% of the total variance in organizational commitment, thus justifying the use of multilevel analysis (for similar numbers in other cross-cultural studies see Debus et al., 2012; Gu et al., 2022).

3.2.2. Hypotheses testing

Table 2 displays the unstandardized coefficient estimates, as well as the variance explained (R^2) in both outcomes at the individual level (Rights & Sterba, 2019).

To test Hypotheses 1a and 1b, we examined the relationships between underemployment and both job satisfaction and organizational commitment. Underemployment significantly predicted job satisfaction ($\gamma = -0.15, p < .001$) and organizational commitment ($\gamma = -0.10, p < .001$). The findings highlight the negative relationship between underemployment and both job attitudes, thus supporting Hypotheses 1a and 1b.

To test Hypotheses 2a and 2b, we examined the interaction effect between underemployment and perceived societal usefulness on both job satisfaction and organizational commitment. The interaction term was significant for both job satisfaction ($\gamma = 0.04, p < .001$) and organizational commitment ($\gamma = 0.02, p = .004$). To examine the interactions in more detail, we plotted simple slopes at high (i.e., 1 *SD* above the mean) and low (i.e., 1 *SD* below the mean) levels of perceived societal usefulness (Cohen et al., 2003). First, Fig. 2 displays the simple slopes for job satisfaction. The relationships between underemployment and job satisfaction were significant at both high ($\gamma = -0.11, SE = 0.01, p < .001$) and low ($\gamma = -0.18, SE = 0.01, p < .001$) levels of perceived societal usefulness, yet the slope was less steep for individuals with high perceived societal usefulness. Thus, these findings indicate that the negative relationship between underemployment and job satisfaction is weakened by perceived societal usefulness, supporting Hypothesis 2a. Second, Fig. 3 displays the simple slopes for organizational commitment. The relationships between underemployment and organizational commitment were significant at both high ($\gamma = -0.08, SE = 0.02, p < .001$) and low ($\gamma = -0.12, SE = 0.02, p < .001$) levels of perceived societal usefulness, yet the slope was less steep for individuals with high perceived societal usefulness. These findings indicate that the negative relationship between underemployment and organizational commitment is weakened by perceived societal usefulness, thus supporting Hypothesis 2b. Our results remained consistent regardless of the inclusion of the control variable (see Table S1 and Figs. S1 and S2 in the supplementary material in the OSF folder).

3.2.3. Supplemental analyses

We conducted several supplemental analyses to evaluate the robustness of our findings. First, we re-ran the analyses including self-employed individuals (increasing the sample size to $N = 23,855$), and the results remained unchanged (see Table S2 in the supplementary material in the OSF folder). Second, we re-ran the analyses including all education years ($M = 13.58, SD = 3.87$; increasing the

Table 1

Study 1: means, standard deviations, and zero-order correlations between variables.

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Years of education	13.50	3.57	–				
2. Underemployment	2.19	1.01	–0.16***	–			
3. Perceived societal usefulness	3.94	0.95	0.10***	–0.15***	–		
4. Job satisfaction	5.27	1.16	0.05***	–0.16***	0.26***	–	
5. Organizational commitment	3.59	0.88	0.08***	–0.15***	0.25***	0.47***	–

Note. $N = 19,729$.

*** $p < .001$.

Table 2

Study 1: unstandardized coefficients of the multilevel path model with random intercepts.

Variables	Job satisfaction		Organizational commitment	
	Est.	SE	Est.	SE
Intercept	5.27	0.05	3.60	0.05
<i>Predictors</i>				
Underemployment	-0.15***	0.01	-0.10***	0.01
Perceived societal usefulness	0.26***	0.01	0.18***	0.01
<i>Interaction</i>				
Underemployment × Perceived societal usefulness	0.04***	0.01	0.02**	0.01
R ²	7.5%		7%	

Note. N = 19,729, Est. = parameter estimate, SE = standard error. R² is computed within clusters.

** p < .01.

*** p < .001.

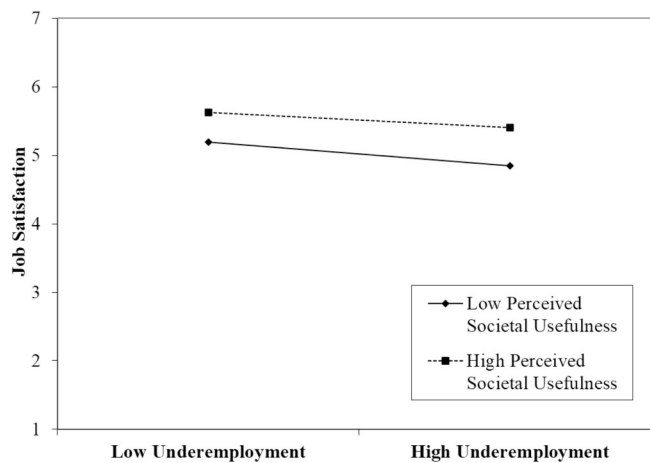


Fig. 2. Interaction of underemployment and perceived societal usefulness predicting job satisfaction (Study 1).

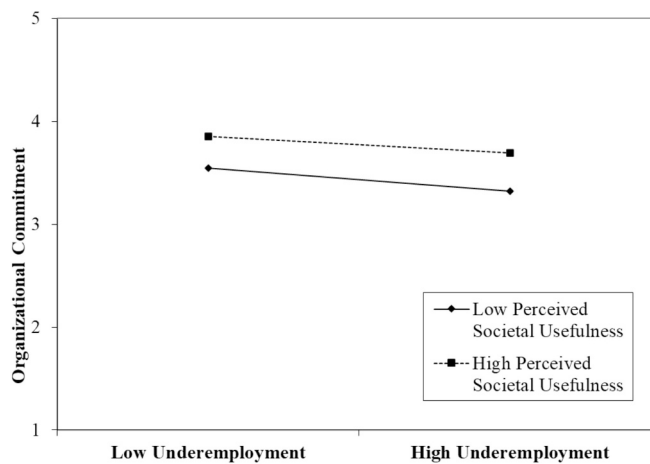


Fig. 3. Interaction of underemployment and perceived societal usefulness predicting organizational commitment (Study 1).

sample size to N = 19,807); again, the results remained consistent (see Table S3 in the supplementary material in the OSF folder). Third, we re-ran the analyses using education as an aggregated country-level variable, finding the same results (see Table S4 in the supplementary material in the OSF folder).

Fourth, research indicates that employees' work experiences can be shaped by the cultural values of the societies in which they live (Taras et al., 2010). Perceived societal usefulness, similar to other individual perceptions (e.g., social recognition; Rossier & Ouedraogo, 2021), may thus be shaped by cultural values. As cultural characteristics vary significantly (Schwartz, 1999), examining their

relationship with perceived work conditions is important (Triandis, 1995). In the context of the present study, it is conceivable that country-level individualistic values, which refer to a society's emphasis on autonomy and personal achievement (e.g., Hofstede, 2001), may affect how individuals interpret the usefulness of their work within society (Wolfe & Patel, 2019). Moreover, individualistic values have historically garnered the most attention within cross-cultural research due to their theoretical and empirical relevance (Taras et al., 2010). To examine such potential effects, we examined whether country-level individualism is related to perceived societal usefulness. To do so, we used meta-analytically derived country-level individualism scores based on Hofstede's (2001) framework (taken from Taras et al., 2012). Our results indicated that country-level individualism was positively associated with individual-level perceived societal usefulness ($\gamma = 0.190, p < .001$), suggesting that individuals residing in more individualistic countries tend, on average, to perceive their jobs as more useful to society compared to those in more collectivistic countries (see Table S5 in the supplementary material in the OSF folder).

Fifth, underemployment may be especially pertinent in economies where informal work is a substantial share of employment. Such labor markets are often segmented rather than homogeneous, divided along dimensions such as formality, skill level, and working conditions (International Labour Office, 2013). Informal employment typically occurs in small-scale, loosely organized contexts that operate outside the scope of government regulation, taxation, and oversight. Governed by social norms or personal ties, informal work arrangements generally lack legal protections, social security, and employment benefits (International Labour Office, 2013; Saxena, 2021). Hence, it is conceivable that these structural conditions may increase the likelihood of individuals working in roles misaligned with their human capital (Saxena, 2021; Thompson & Dahling, 2019). To explore this possibility, we analyzed the relationship between country-level informal work and individual-level underemployment. Specifically, we tested country-level informal work as a predictor of underemployment using the Sustainable Development Goal (SDG) indicator 8.3.1 from ILOSTAT (ILOSTAT, 2025.), which measures the percentage of informal employment within the total employment of a country. The results did not reveal a significant relationship between the country-level proportion of informal employment and the level of underemployment, $\gamma = 0.006, p = .066$ (see Table S6 in the supplementary material in the OSF folder). This finding implies that the prevalence of informal employment at the country level does not necessarily correspond to higher levels of underemployment among individuals.

4. Study 2

Study 1, using a large nationally representative multi-country dataset, provided initial evidence for the attenuating effect of perceived societal usefulness on the negative relationship between underemployment (operationalized as perceived skill underutilization) and key job attitudes, namely, job satisfaction and organizational commitment. These findings highlight the critical role that perceptions of societal usefulness play in mitigating the adverse effects of underemployment. Building on this foundation, Study 2 augments Study 1's methodological approach by using two-wave data to address the issue of common method variance and multi-item scales to enhance the precision and reliability of our findings. Moreover, Study 2 builds on the initial study by introducing two key conceptual mechanisms. First, we explore *relative deprivation* as a central mechanism to explain why underemployment (operationalized as the broader form of perceived overqualification) is associated with negative job attitudes. Second, building on relative deprivation theory, we propose that perceived societal usefulness moderates the indirect effect of underemployment on both job satisfaction (H3a) and organizational commitment (H3b), through relative deprivation, specifically mitigating the mediational link (a-path) between underemployment and relative deprivation.

4.1. Method

4.1.1. Sample and procedure

We collected data via online surveys between December 2021 and March 2022, as part of a research seminar at [University name blinded for review] using a snowball sampling approach. Students enrolled in the seminar recruited participants from their professional networks and posted study information material on several social networks. Although student-recruited sampling can raise some concerns (Highhouse & Gillespie, 2009; Hochwarter, 2014), evidence from organizational research indicates that it can be a valid and useful strategy when researchers clearly define eligibility criteria, implement data-quality procedures, and transparently report sample characteristics. In particular, meta-analytic work suggests that student-recruited samples are not meaningfully different from traditional organizational samples on key demographics and that they typically yield comparable substantive conclusions (Demerouti & Rispens, 2014; Wheeler et al., 2014). Further, because recruitment is not constrained to a single organization, student-recruited samples can increase the diversity of occupations and organizational contexts represented (Demerouti & Rispens, 2014).

We collected data at two time points separated by a two-week lag. Doing so allowed us to temporally separate all stages of effects in our hypothesized framework and to minimize the potential for common method bias (Podsakoff et al., 2012). At the same time, a two-week lag was short enough to support participant retention and to limit the influence of extraneous factors that may emerge over longer periods (Dormann & Griffin, 2015; Mostafa et al., 2021). Prior research also suggests that a two-week interval is appropriate for assessing psychological processes such as perceived overqualification and job satisfaction (Khan et al., 2022; Liu et al., 2025; Ma et al., 2021; Mostafa et al., 2021).

Consistent with guidance on handling student-recruited samples (Demerouti & Rispens, 2014; Highhouse & Gillespie, 2009; Hochwarter, 2014; Wheeler et al., 2014), we implemented eligibility criteria and screening procedures. At the beginning of the first survey (T1), participants answered screening questions and were eligible only if they were working for pay and were not students, interns, self-employed, or outside the conventional working age in Switzerland (i.e., 18–65 years, according to the Federal Administration of Switzerland, 2024a, 2024b). In the second survey (T2), we excluded participants who reported taking a vacation during the

two weeks or changing jobs during the study. To identify careless responding, we applied the page-time-index approach (Bowling et al., 2023) and removed participants who answered survey items in <4 s.

We assessed underemployment (predictor), perceived societal usefulness (moderator), and the control variable at T1. Relative deprivation (mediator) was assessed at T2. To isolate intraindividual change in our key outcomes, job satisfaction and organizational commitment were assessed at both T1 and T2. We modelled the T2 measures of job satisfaction and organizational commitment as a function of our focal predictors while statistically controlling for their T1 counterparts. This approach allowed us to capture the residualized change in each outcome, ensuring that any effects of underemployment, perceived societal usefulness, and relative deprivation on job satisfaction and commitment reflect true change over the study interval rather than simply baseline differences (Dormann & Griffin, 2015).

The initial sample for the first wave comprised 621 participants, and the second wave included 403 participants. After matching participants from both waves and removing ineligible and careless respondents (Bowling et al., 2023), the total sample size was 374 participants. In the final sample, 78.3% of respondents self-identified as women, 21.1% as men, and 0.5% as “other”, with a mean age of 33.89 years ($SD = 10.69$). The majority of employees had full-time contracts (51.9%), and 19.5% held a supervisory position. The sample encompassed a diverse array of occupations (e.g., administrative employees, nurses, psychologists, secretaries, security guards) and industries (e.g., human health and social work; public administration; financial and insurance activities; education; manufacturing). The majority of participants held degrees from universities or universities of applied sciences (50.8%) or had general or vocational training without a high school diploma (30.2%).

4.1.2. Measures

Unless otherwise specified, constructs were assessed using a rating scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The survey was administered in French. For measures with no extant French version, we applied Brislin's (1970) translation-back translation method.

4.1.2.1. Underemployment (T1). To measure underemployment in the form of perceived overqualification, we used the 4-item measure by Johnson and Johnson (1996). An example item is, “My formal education overqualifies me for my current job”. Cronbach's alpha was 0.78.

4.1.2.2. Perceived societal usefulness (T1). Perceived societal usefulness was assessed with a single item. Given that data collection occurred during the COVID-19 pandemic, a period marked by debates on the importance and essentiality of job positions (e.g., Escárcega, 2021; Ispahani, 2021), we contextualized the construct accordingly (a common practice in organizational sciences; Heggstad et al., 2019). Importantly, the item targets respondents' general appraisal of their job's contribution to society rather than a pandemic-specific evaluation. Thus, the COVID-19 reference served as a framing device to reduce ambiguity in interpretation, not as a defining feature of the construct. The entire measure read: “During the COVID-19 pandemic, there has been much discussion about the relevance and importance of certain jobs for the functioning and maintenance of society. Now, please indicate the extent to which you agree with the following statement: My job is important to society” (for a similar approach with a different construct, see Brodsky & Amabile, 2018; Zeschke & Zacher, 2023).

Although prior research (e.g., Dur & van Lent, 2019; Wolfe & Patel, 2019) provides support for using a single item to measure perceived societal usefulness, we took an additional step to validate this critical measure by investigating the relationship between our perceived societal usefulness measure and a more objective indicator of societal usefulness. To do so, two coders coded participants' jobs based on an official document of the Swiss Federal Office of Public Health (2020). The document provided guidance on which jobs and industries were considered “societally useful” (and were thus allowed to continue their services during the pandemic) vs. “non-societally useful” (and were thus forced to close or continue their services through remote work). Jobs identified as critical to ensure the continued functioning of society and to support public health and well-being during the pandemic included working for healthcare providers, the food supply chain, public services, social services, and support and repair services (details in the supplementary material “Ordinance 2 on Measures to Combat the Coronavirus”). In cases of disagreement, the raters discussed their ratings until a consensus was reached. The final outcome was a dichotomous variable where 0 = “not useful to society” and 1 = “useful to society”. Our analysis revealed a statistically significant positive relationship between objective and perceived societal usefulness ($r = 0.30, p < .001$), providing support for the validity of our subjective measure.

4.1.2.3. Relative deprivation (T2). Relative deprivation was measured using the 4-item scale by Erdogan et al., 2018; based on Callan et al., 2011). An example item is, “I feel deprived when I compare the job I have to the one other people who have similar qualifications (education, experience, skills) as me have”. Cronbach's alpha was 0.83.

4.1.2.4. Job satisfaction (T2). Job satisfaction was assessed with the 3-item scale from Bowling and Hammond (2008). An example item is, “All in all, I am satisfied with my job”. Cronbach's alpha was 0.87.

4.1.2.5. Organizational commitment (T2). Organizational commitment was assessed with the 4-item affective commitment scale by Allen and Meyer (1996) (French translation taken from Daoud Ben Arab and Masmoudi Mardessi, 2011). An example item is, “I would be very happy to spend the rest of my career with this organization”. Cronbach's alpha was 0.84.

4.1.3. Control variable

We again controlled for *education*. Education conceptually overlaps with perceived overqualification because it represents one component of individuals' broader qualifications (Arvan et al., 2019; Erdogan & Bauer, 2021). However, our focal measure captures perceived misfit across multiple domains (i.e., education, skills, experience, and talents relative to job requirements) rather than educational attainment alone (Johnson & Johnson, 1996). Including education as a control, therefore, helps rule out the alternative explanation that observed effects are primarily attributable to absolute educational attainment (Becker et al., 2016). To maintain transparency, we again conducted analyses both with and without this control variable; results excluding education are provided in the supplementary material (see below for details).

4.1.4. Analytic strategy

We conducted a multivariate path analysis with Mplus 8.8 (Muthén & Muthén, 2017) to test the conditional indirect effects of perceived societal usefulness as stated in Hypotheses 3a and 3b. We regressed relative deprivation (mediator) measured at T2 on underemployment (predictor) measured at T1, perceived societal usefulness (moderator) measured at T1, the underemployment \times perceived societal usefulness interaction term, and education. The predictor (underemployment) and the moderator (perceived societal usefulness) were again centered (Cohen et al., 2003). We regressed the two outcome variables (i.e., job satisfaction and organizational commitment), both measured at T2, on relative deprivation (mediator) measured at T2, education, and the respective T1 measure of the outcome variables. Point estimates and confidence intervals for direct and indirect effects, reported in the text, were derived through bias-corrected bootstrapping with 20,000 iterations (following Preacher & Hayes, 2008 recommendations; see also Mallinckrodt et al., 2006).

4.2. Results

4.2.1. Descriptive statistics

Means, standard deviations, and zero-order correlations are displayed in Table 3.

4.2.2. Construct validity

We conducted confirmatory factor analyses (CFA) using robust maximum likelihood (MLR) to establish the discriminant validity of the multi-item measures for underemployment (measured at T1), relative deprivation, job satisfaction, organizational commitment (all measured at T2), and the baseline controls of job satisfaction and organizational commitment (measured at T1). The CFA results indicated that the proposed six-factor measurement model provided a superior fit to the data compared to alternative models ($\chi^2 = 374.69$, $df = 187$, $CFI = 0.95$, $TLI = 0.94$, $RMSEA = 0.05$, $SRMR = 0.07$). These results indicate that the indicators loaded on their intended latent constructs and that the constructs are empirically distinct. Full model-comparison statistics are presented in Table 4.

4.2.3. Hypotheses testing

Table 5 provides the unstandardized coefficients of the hypothesized moderated mediation path model, as well as the variance explained (R^2) in the mediator and both outcome variables.

To test Hypotheses 3a and 3b, we first examined the underemployment (T1) \times perceived societal usefulness (T1) interaction effect on relative deprivation at T2 (mediator), which was statistically significant ($\gamma = -0.06$, $p = .025$). Fig. 4 graphically displays the interaction effect. Simple slopes analysis demonstrated that underemployment was significantly related to relative deprivation for both low ($\gamma = 0.48$, $p < .001$) and high ($\gamma = 0.31$, $p < .001$) levels of perceived societal usefulness, yet the relationship was weaker when perceived societal usefulness was high. This finding provides preliminary support for our proposition that perceived societal usefulness attenuates the relationship between underemployment and relative deprivation. We then examined the indirect effects of underemployment measured at T1 on both changes in job satisfaction and organizational commitment at T2, through relative deprivation at T2, at conditional values of the moderator (i.e., at the maximum value² and 1 SD below the mean of perceived societal usefulness measured at T1). We display point estimates and the respective 95% confidence intervals for all (conditional) indirect effects in Table 6.

First, for job satisfaction, the indirect effects of underemployment on changes in job satisfaction via relative deprivation were statistically significant for both high ($\gamma = -0.048$, 95% CI $[-0.084, -0.023]$, $p = .002$) and low ($\gamma = -0.074$, 95% CI $[-0.114, -0.040]$, $p < .001$) levels of perceived societal usefulness. The difference between indirect effects was also statistically significant ($\gamma = 0.026$, 95% CI $[0.004, 0.057]$, $p = .045$). In sum, the indirect effect was weaker (vs. stronger) among high (vs. low) levels of perceived societal usefulness, thus supporting Hypothesis 3a.

Second, for organizational commitment, the indirect effects of underemployment on changes in organizational commitment via relative deprivation were not statistically significant for either high ($\gamma = -0.006$, 95% CI $[-0.034, 0.018]$, $p = .646$) or low ($\gamma = -0.009$, 95% CI $[-0.049, 0.028]$, $p = .639$) levels of perceived societal usefulness, and neither was the difference between indirect effects ($\gamma = 0.003$, 95% CI $[-0.009, 0.023]$, $p = .669$).³ Therefore, Hypothesis 3b was not supported.

² An increase of 1 SD above the mean would result in values exceeding the maximum possible range, which is why we chose the maximum value for the simple slopes as a meaningful value (Aiken et al., 1991; Cohen et al., 2003; Preacher et al., 2006).

³ We re-ran the analysis without controlling for the T1 measure of organizational commitment. In this analysis, the conditional indirect effect of underemployment on organizational commitment is statistically significant for both high ($\gamma = -0.047$, 95% CI $[-0.096, -0.013]$, $p = .024$) and low ($\gamma = -0.073$, 95% CI $[-0.136, -0.017]$, $p = .017$) levels of perceived societal usefulness. The difference between the slopes remains non-significant.

Table 3
Study 2: comparison of fit of alternative models.

Overview of models	χ^2 (df)	$\Delta\chi^2$ (Δ df)	CFI	TLI	RMSEA	SRMR
M ₀ = six-factor model where underemployment T1, relative deprivation T2, job satisfaction T2, organizational commitment T2, job satisfaction T1, and organizational commitment T1 all represented distinct constructs	374.69 (187)	–	0.95	0.94	0.05	0.07
M ₁ = four-factor model where job satisfaction T1 and organizational commitment T1 were combined into a first factor, job satisfaction T2 and organizational commitment T2 were combined into a second factor, and underemployment T1 and relative deprivation T2 were treated as separate factors	668.16 (196)	293.46*** (9) ^a	0.88	0.86	0.08	0.09
M ₂ = two-factor model where T1 and T2 constructs each loaded on one factor	1281.60 (201)	906.90*** (14) ^a	0.72	0.68	0.12	0.12

Note. T1 = first wave, T2 = second wave; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean squared error of approximation; SRMR = standardized root mean squared residual. Since job satisfaction and organizational commitment were measured repeatedly at two different time points, we specified error covariances between the observed indicators in the model (Brown, 2015).

^a Model was compared to M₀.

*** $p < .001$.

Table 4
Study 2: means, standard deviations, and zero-order correlations between variables.

Variables	M	SD	1	2	3	4	5	6	7	8
1. Education T1 ^a	3.23	1.07	–							
2. Underemployment T1	4.11	1.37	0.03	–						
3. Perceived societal usefulness T1	5.80	1.43	0.14**	–0.08	–					
4. Job satisfaction T1	5.51	1.29	0.07	–0.31***	0.17***	–				
5. Organizational commitment T1	4.15	1.42	0.05	–0.17***	0.11*	0.55***	–			
6. Relative deprivation T2	2.92	1.32	–0.01	0.41***	–0.16**	–0.41***	–0.21***	–		
7. Job satisfaction T2	5.42	1.31	0.00	–0.35***	0.19***	0.80***	0.55***	–0.46***	–	
8. Organizational commitment T2	4.12	1.40	0.08	–0.26***	0.10*	0.56***	0.80***	–0.23***	0.62***	–

Note. N = 374; T1 = first wave, T2 = second wave.

^a 1 = mandatory education, 2 = general or vocational training without a high school diploma, 3 = high school diploma, 4 = university or university of applied sciences, 5 = doctorate.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 5
Study 2: unstandardized coefficients of the moderated mediation path model.

Variables	Relative deprivation T2		Job satisfaction T2		Organizational commitment T2	
	Est.	SE	Est.	SE	Est.	SE
Intercept	2.91	0.06	2.04	0.25	1.17	0.23
Education T1 ^a	–0.01	0.06	–0.06	0.04	0.06	0.04
Job satisfaction T1			0.70***	0.04		
Organizational commitment T1					0.72***	0.04
<i>Predictors</i>						
Underemployment T1	0.38***	0.05	–0.06	0.04	–0.13**	0.04
Perceived societal usefulness T1	–0.11*	0.05				
<i>Interaction</i>						
Underemployment T1 × Perceived societal usefulness T1	–0.06*	0.03				
Mediator: Relative deprivation T2			–0.16***	0.04	–0.02	0.04
R ²	19.2%		62.7%		63%	

Note. N = 374, Est. = parameter estimate, SE = standard error, T1 = first wave, T2 = second wave.

^a 1 = mandatory education, 2 = general or vocational training without a high school diploma, 3 = high school diploma, 4 = university or university of applied sciences, 5 = doctorate.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

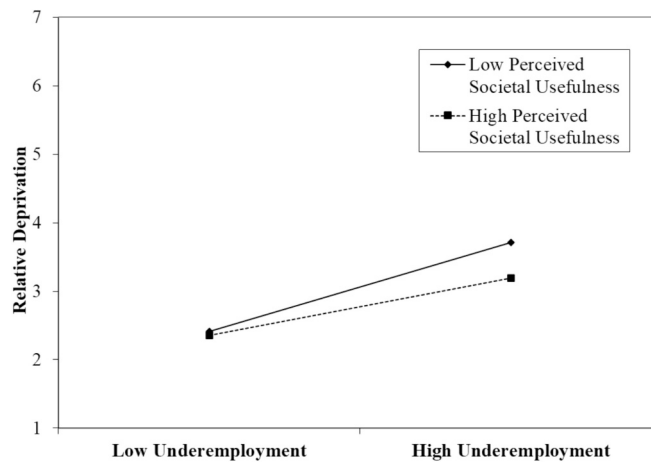


Fig. 4. Interaction of underemployment and perceived societal usefulness predicting relative deprivation (Study 2).

Table 6

Study 2: unstandardized indirect path estimates of the moderated mediation model.

Variables	Est.	95% CI [LL; UL]
Underemployment T1 → Relative Deprivation T2 → Job Satisfaction T2		
Indirect effect	−0.060	[−0.094; −0.032]
Conditional indirect effects		
High levels of perceived societal usefulness T1	−0.048	[−0.084; −0.023]
Low levels of perceived societal usefulness T1	−0.074	[−0.114; −0.040]
Difference between high and low perceived societal usefulness T1	0.026	[0.004; 0.057]
Underemployment T1 → Relative Deprivation T2 → Organizational Commitment T2		
Indirect effect	−0.007	[−0.040, 0.023]
Conditional indirect effects		
High levels of perceived societal usefulness T1	−0.006	[−0.034, 0.018]
Low levels of perceived societal usefulness T1	−0.009	[−0.049, 0.028]
Difference between high and low perceived societal usefulness T1	0.003	[−0.009, 0.023]

Note. $N = 374$, Est. = parameter estimate, T1 = first wave, T2 = second wave, 95% CI = confidence intervals derived from bias-corrected bootstrapping with 20,000 iterations, LL = lower limit, UL = upper limit. Bolded estimates indicate statistically significant effects. The “high” and “low” levels of perceived societal usefulness correspond to the maximum value and one standard deviation below the mean, respectively.

These results remained consistent regardless of the inclusion of the control variable⁴ (see Tables S7 and S8 and Fig. S3 in the supplementary material in the OSF folder).

4.2.4. Supplemental analyses

We derived the results of Study 2 from an analysis conducted in a specific country, Switzerland, whereas in Study 1, we utilized a large dataset comprising data from multiple countries. To facilitate a more meaningful comparison between the findings of Study 2 and Study 1, we conducted a post-hoc supplemental analysis. This analysis used the dataset from Study 1 but restricted the sample to a subset of countries classified as Western European (Publications Office of the European Union, 2025; United Nations Statistics Division, 2025). Given the availability of countries in our dataset, we included Austria, Belgium, France, Germany, and Switzerland. We conducted a multilevel analysis using this restricted sample ($N = 3317$). The results remained unchanged, confirming the robustness of our initial findings. Specifically, the relationships between underemployment and the two job attitudes remained significant (for job satisfaction: $\gamma = -0.18, p < .001$; for organizational commitment: $\gamma = -0.10, p < .001$). Additionally, the interaction term between underemployment and perceived societal usefulness remained significant for both job satisfaction ($\gamma = 0.06, p = .001$) and organizational commitment ($\gamma = 0.05, p < .001$). Thus, the central theoretical relationships demonstrated in Study 1 were the same even when restricting the sample to Western Europe. This suggests that the effects of underemployment and the attenuating role of perceived societal usefulness are not confined to broader cross-national variation but instead hold within a more culturally and economically homogenous context. This strengthens the generalizability of our findings to Study 2 and underscores the robustness of the proposed

⁴ To address the sample imbalance, we conducted an additional analysis wherein gender was included as an additional control variable. Specifically, a dummy variable was created to compare self-identified men and women. Unfortunately, we needed to exclude individuals who identified as “other” because the small sample size of this group ($N = 2$) led to identification issues in Mplus. All results remained the same (see Table S9 in the supplementary material in the OSF folder).

mechanisms across comparable Western European labor markets (see Table S10 in the supplementary material in the OSF folder).

5. Discussion

5.1. Summary and interpretation of results

Bridging the underemployment literature with relational job design theory (Grant, 2007) and relative deprivation theory (Crosby, 1976), we investigated the moderating role of perceived societal usefulness on the relationship between underemployment and two key job attitudes (job satisfaction and organizational commitment). Using data from nearly 20,000 employees across 38 countries, Study 1 revealed that perceived societal usefulness attenuates the negative relationship between underemployment and both job attitudes. While prior research has consistently demonstrated that underemployment is associated with lower job satisfaction and lower organizational commitment (McKee-Ryan & Harvey, 2011), our results suggest that perceiving one's job as useful to society can mitigate these adverse effects. Study 2 then sought to test one potential mediating mechanism to explain those observed effects. Specifically, using two-wave data from 374 employees, Study 2 extended the findings from Study 1 by examining a moderated mediation model, whereby relative deprivation served as a mediator of the underemployment–outcomes relationship, and perceived societal usefulness moderated the relationship between underemployment and relative deprivation. We found that when perceived societal usefulness was high (vs. low), the indirect negative effect of underemployment via relative deprivation on increases in job satisfaction was weaker. In other words, underemployed individuals who perceive their jobs as useful to society experience less relative deprivation, which in turn reduces the negative impact on changes in job satisfaction. However, the hypothesized mediating effect was not found for organizational commitment.

Interpreting our findings, the significant moderating effect of perceived societal usefulness observed in Study 1 underscores that individuals seem to derive meaning not solely from the task characteristics of their work, but also from its “relational architecture” (Grant, 2007). Specifically, when employees perceive their work as positively impacting beneficiaries, they appear to develop a broader sense of purpose rooted in the awareness that their efforts contribute to the well-being of others. Even when individuals' employment is misaligned with their human capital or expectations, the belief that their work benefits society appears to serve as an alternative source of psychological fulfillment (Edwards et al., 1998; Wolfe & Patel, 2019). Societally useful jobs offer visible and consequential forms of impact, which may bolster employees' sense of social worth and hence attenuate the negative outcomes associated with underemployment (Brewer et al., 2000; Grant, 2007; Wolfe & Patel, 2019). These insights resonate with the person–environment fit literature, which posits that misalignment between personal attributes and job characteristics typically yields adverse outcomes; these, however, can be attenuated once contextual factors counterbalance the misalignment (Jansen & Kristof-Brown, 2006; Su et al., 2015; van Vianen, 2018). Our findings suggest that the perception of societal usefulness could operate as an auxiliary psychological resource (Hobfoll, 2002), which may enable individuals to recalibrate the adverse effects of underemployment by reinstating a sense of value and purpose.

Some findings merit further consideration. Of note, contrary to our expectations, perceived societal usefulness did not moderate the indirect negative effect of underemployment via relative deprivation on increases in organizational commitment. Three reasons may explain this non-significant finding. First, this finding might be due to the different foci of relative deprivation, organizational commitment, and job satisfaction. While job satisfaction stems from positive evaluations of one's job or job experiences (Bowling & Hammond, 2008; Locke, 1969), organizational commitment reflects a broader relationship between the individual and the organization (Allen & Meyer, 1996). Relative deprivation mainly pertains to the individual's perception of their current job, making it conceptually more aligned with job satisfaction (Erdogan et al., 2018). This conceptual similarity between relative deprivation and job satisfaction may account for why relative deprivation emerged as a mediator only for job satisfaction, as both constructs are job-specific (e.g., Ilies et al., 2007). Conversely, organizational commitment encompasses a wider scope by focusing on the individual–organization relationship (Allen & Meyer, 1996).

Second, it is conceivable that there may be more pertinent mediators in the underemployment–organizational commitment link, such as (lowered) *value congruence*—referring to the match between individual and organizational values (e.g., Chatman, 1989; Edwards & Cable, 2009) and (lowered) *organizational identification*—referring to the degree to which individuals define themselves in terms of their membership in an organization and feel emotionally attached to it (e.g., Ashforth et al., 2008; Ashforth & Mael, 1989). In line with person–environment (P–E) fit theory, underemployment likely undermines the congruence between employees' values and those endorsed by the organization. This is because when individuals perceive that their skills and potential are underutilized, they may feel unrecognized or disrespected, particularly for values related to competence, contribution, and responsibility (Kristof, 1996; Maynard & Feldman, 2011). Such experiences diminish value congruence, which, in turn, undermines organizational commitment by signaling a fundamental misalignment between personal and organizational values (for empirical evidence, see Kristof-Brown et al., 2005; Verquer et al., 2003). Next, underemployed individuals likely identify less with their organization because they feel unsupported or underappreciated by it (e.g., Eisenberger et al., 2020; Maynard & Feldman, 2011), which undermines their sense of belonging and reduces their emotional attachment to the organization. Lower organizational identification, in turn, reflects a weaker psychological bond and a looser connection with the organization, which reduces employees' organizational commitment (for empirical evidence, see Lee et al., 2015; Riketta, 2005).

Finally, and as a third reason, the non-significant mediating effect of relative deprivation on changes in organizational commitment may be due to a methodological reason. In our analyses, we controlled for baseline levels of organizational commitment to isolate intraindividual change. As such, our findings imply that relative deprivation was not associated with *decreases* in organizational commitment over the two-week interval utilized in our study. Indeed, it has been argued and shown that organizational commitment is

a somewhat more stable job attitude that gradually manifests over time (Mathieu & Zajac, 1990; Meyer et al., 2002). In contrast, job satisfaction has been shown to exhibit substantial short-term variability and to fluctuate across the working day (Ilies & Judge, 2004; Judge & Ilies, 2004). Supporting this interpretation, and as mentioned in ³ in the Results section, when baseline levels of organizational commitment were not controlled for, the moderated mediation model did yield a significant conditional indirect effect of underemployment on organizational commitment, through relative deprivation, at higher levels of perceived societal usefulness (see ³ in the Results section).

5.2. Theoretical and practical implications

Our findings have at least three key theoretical implications. First, our research integrates relational job design theory (Grant, 2007) with underemployment research. This contributes to the literature by suggesting that the focus of underemployed individuals on constrained personal circumstances may shift to a broader contribution to others, emphasizing the relational and prosocial dimensions of their roles. Our results empirically support the argument that perceived societal usefulness may function as a motivational resource, mitigating the negative attitudinal consequences of underemployment. Hence, unlike previous studies on underemployment that focused mainly on personality and organizational boundary conditions, or on job-related moderators concerning primarily the structure, control, or negotiated job terms, our research highlights perceived societal usefulness as a construct rooted in the inherent meaning and societal value of work, particularly in terms of its positive impact on external beneficiaries (Erdogan & Bauer, 2021; Maynard & Feldman, 2011; McKee-Ryan & Harvey, 2011). Therefore, perceived societal usefulness may offer an alternative source of fulfillment and recognition outside the internal mechanics or control of the job. Moreover, we contribute to the literature on meaningful work (e.g., Rosso et al., 2010) by distinguishing perceived societal usefulness from related constructs such as meaningful work and task significance (Grant, 2008; Pratt & Ashforth, 2003). While meaningful work and task significance emphasize the personal fulfillment derived from one's tasks, perceived societal usefulness highlights the broader societal contribution and collective impact of one's work.

Second, our study integrates relative deprivation theory and relational job design theory to provide a more nuanced understanding of the attenuating effect of perceived societal usefulness (Crosby, 1976; Grant, 2007). Our findings contribute to the literature by indicating that the perceived impact on beneficiaries may serve as a contextual factor that influences the experience of deprivation. This aligns with relational job design theory, which highlights that the impact of one's work on beneficiaries plays a crucial role in shaping employees' perceptions of their work and their attitudes and reactions (Grant, 2007). Jobs that allow individuals to have a meaningful and positive influence on others provide additional resources that employees can apply in their roles (Hobfoll, 2002; Ritz et al., 2016; Wolfe & Patel, 2019). Our results indicate that the perceived impact on beneficiaries, in our context, the societal usefulness of one's role, is associated with a weaker negative relationship between relative deprivation and overall job satisfaction. Taking this further, individuals who perceive their work as societally useful may anchor their evaluations of their job's value on its wider societal impact (see Tversky & Kahneman, 1974). Thus, perceived societal usefulness acts as a key determinant in reframing the experience of deprivation by shifting individuals' frame of reference from a purely personal perspective to a broader societal impact.

Third, the positive relationship between our measure of perceived societal usefulness and the more objective societal usefulness score, which we obtained from official government regulations, contributes to the literature by reinforcing the idea that perceived societal usefulness has a foundation in objective reality, while also allowing for personal interpretations of purpose and meaning. The strength of this correlation aligns, at least in part, with objective classifications found in psychological research on stressors (Semmer et al., 2003). For example, job stressors have been shown to be associated with systolic blood pressure between $r = 0.35$ and 0.42 (Semmer et al., 2003). Additionally, meta-analytic findings indicate similar patterns for various constructs in the organizational behavior literature, such as self-reported versus other-reported assessments (counterproductive work behavior, $r = 0.32$, Berry et al., 2012; $\rho = 0.34$, Heidemeier & Moser, 2009) and self-reported versus objective criteria (job performance, $\rho = 0.39$, Bommer et al., 1995; overqualification, $\rho = 0.40$, Harari et al., 2017; socioeconomic status, $r = 0.32$, Tan et al., 2020). Importantly, the moderate overlap between our two measures also suggests that the experience of heightened societal usefulness is not limited to individuals in specific positions. In other words, workers across a wide variety of roles, regardless of how objectively useful their work may be considered, can nonetheless perceive their jobs as useful to society.

Practically, our findings offer several implications for managers, organizations, and policymakers. First, as AI automates or selectively reallocates higher-level tasks, employees may experience AI-driven underemployment in the form of skill-task mismatch, diminished task complexity, and a sense of being "left with what's left" after automation (Pan & Froese, 2023; Rabenu & Baruch, 2024; Zhao et al., 2025). These work design shifts may co-occur with heightened AI awareness, technology anxiety, and perceived overqualification (D'Cruz et al., 2022; Pan & Froese, 2023; Rabenu & Baruch, 2024; Sanguino et al., 2025; Thompson & Dahling, 2019; Zhao et al., 2025). In response, managers and organizations should proactively monitor early indicators of these AI-related problems rather than waiting for disengagement or performance declines to emerge (Zhao et al., 2025). One actionable approach may be to institutionalize high-quality one-on-one (1:1) meetings as a recurring forum for diagnosis and sensemaking (Flinchum et al., 2023; Rogelberg, 2024). In these conversations, leaders can surface how AI is reshaping an employee's task portfolio, assess whether algorithmic tools are constraining autonomy or intensifying monitoring, and identify underutilized capabilities (Rogelberg, 2024). A consistent cadence of 1:1 s can help detect emerging underemployment and perceived overqualification before they crystallize into dissatisfaction or withdrawal (Sanguino et al., 2025; Zhao et al., 2025), while also informing targeted remedies, such as role redesign to restore task challenge, reskilling and mobility pathways, and recalibrated performance expectations, so that AI functions as an augmentation rather than an erosion of meaningful work (Pan & Froese, 2023; Rabenu & Baruch, 2024; Rogelberg, 2024; Zhao et al., 2025).

Second, our findings imply that managers and organizations should foster employees' perceptions of societal usefulness, for example, by strategically communicating the organization's mission and vision, emphasizing how employees' contributions positively impact society (Grant & Sumanth, 2009). When leaders translate abstract purpose statements into vivid narratives about beneficiaries, community-level impact metrics, and tangible examples, employees may develop a clearer understanding of how their day-to-day tasks contribute to broader social outcomes (Grant, 2007). This increased clarity may also facilitate cognitive job crafting, allowing employees to mentally reconstruct their roles to emphasize how even routine responsibilities serve the organization's societal objectives (Wrzesniewski & Dutton, 2001; see also Debus et al., 2020). However, the current findings should not be misinterpreted as grounds for employers to dismiss concerns related to underemployment by merely emphasizing the societal impact of jobs. The perceived impact on beneficiaries alone does not eliminate the structural and psychological consequences of economic stressors such as underemployment (Sinclair et al., 2024).

Third, for policymakers, our findings highlight the value of fostering environments where the societal contributions of diverse jobs are regularly and publicly acknowledged. Public recognition campaigns, such as those seen during the COVID-19 pandemic (e.g., "Clap for Carers," BBC, 2020; Ibbetson, 2020), illustrate how public acknowledgment can enhance workers' perceptions of their societal role. Governments and institutions can expand such initiatives through awareness campaigns, documentaries, and social media outreach, emphasizing that societal usefulness is not limited to roles "officially" labeled as useful to society. This broader recognition may help employees across diverse occupations perceive the societal impact of their work. For example, the federal Department of Employment and Social Development of Canada launched the next phase of its "National Skilled Trades" multimedia campaign, designed to make trades and technical occupations "first-choice careers" rather than fallback options (Employment and Social Development Canada, 2025). The program couples a nationwide advertising push (social-media spots, podcasts, connected-TV ads) with traveling, hands-on exhibits that set up in high schools and shopping centers so that young people and mid-career workers can try tools, meet apprentices, and see the importance of these roles. Efforts like these might simultaneously increase individual perceptions of societal usefulness and address underemployment as a structural issue, highlighting the need for alignment between educational curricula, workforce development, and labor market demands (Acosta-Ballesteros et al., 2018b; Becker & Huselid, 2006; McKee-Ryan & Harvey, 2011; Sinclair et al., 2024). Integrating job design principles in policy frameworks might encourage the creation of roles that are explicitly connected to societal outcomes, further enhancing perceived impact and worker motivation.

5.3. Limitations and directions for future research

Our research does not come without limitations. First, we used single-item measures to assess multiple constructs in both studies. In Study 1, this precluded us from testing measurement invariance, which typically requires at least three indicators per latent construct in one-factor solutions (Boer et al., 2018; Putnick & Bornstein, 2016; Vandenberg & Lance, 2000). However, the use of single-item measures was necessary to mitigate participant burden and ensure measurement efficiency, as the length of the secondary cross-national survey necessitated extremely brief assessments to prevent survey fatigue (Gabriel et al., 2019). Study 2 maintained the same single-item approach for perceived societal usefulness. While single-item measures face criticisms regarding reliability and validity, they can be effective for unidimensional constructs (Allen et al., 2022; Cronbach & Meehl, 1955; Fisher et al., 2016; Matthews et al., 2022), as is the case with perceived societal usefulness (for prior research validating the use of single-item measures used in this study, see Debus et al., 2012; Gatta et al., 2025; Gu et al., 2021; Shoss et al., 2020). Yet, future research should consider developing and validating a multi-item scale for perceived societal usefulness.

Second, across studies, we relied on data sources and sampling frames that might constrain generalizability, most notably through differences in operationalizations, the temporal specificity of available waves, and sample compositions. In Study 1, while reliance on archival data limited our ability to standardize operational definitions, measures, and methods across the studies, these same limitations allowed us to evaluate the extent to which our hypothesized effects were robust despite varied operationalizations of perceived societal usefulness and underemployment. In addition, because the ISSP Work Orientations module is fielded only about once per decade, the available wave is necessarily dated, which constrains how closely the archival evidence can track the current moment. We therefore interpret Study 1 as a test of theoretically stable psychological processes and place greater emphasis on convergence across studies rather than on any single wave's temporal specificity. As Köhler and Cortina (2021) note, constructive replication is a valuable methodological approach precisely because studies test the same hypotheses but with variations in methods, settings, populations, and measurements. By conducting multiple tests, one can strengthen the validity and generalizability of findings by reducing the impact of methodological biases associated with one approach and avoiding capitalization on chance findings (Podsakoff et al., 2012).

Whereas Study 1 is valuable for establishing the generalizability of the proposed relationships in a large, cross-national sample, Study 2 improves on Study 1 by introducing temporal separation between the predictors and moderators (assessed at T1) and the mediator and outcomes (assessed at T2), and by controlling for baseline levels of the outcomes to model residualized change. These features reduce key sources of common method bias associated with same-time measurement (Podsakoff et al., 2012, 2024) and strengthen temporal inference relative to the cross-sectional design of Study 1 (Maxwell & Cole, 2007). Nevertheless, a three-wave design would have enabled more stringent tests of longitudinal mediation, most notably by permitting explicit modeling of autoregressive processes and by providing a stronger basis for evaluating temporal assumptions that cannot be tested with two waves (Cole & Maxwell, 2003; Maxwell & Cole, 2007). Thus, although Study 2 meaningfully improves temporal ordering and confounding control, future research using three (or more) waves is needed to draw more robust conclusions about how the mediational process unfolds over time.

Regarding the sample composition of Study 2, the final sample was female-skewed (approximately 80% women). This imbalance may constrain generalizability if gender is associated with exposure to underemployment, the salience of perceived societal usefulness,

or the outcomes examined. Nonetheless, this pattern is consistent with prior survey-methods evidence showing that women tend to participate in voluntary surveys at higher rates than men across a range of modes (e.g., mail, web, and telephone), a participation gap that has been described as a persistent social phenomenon (Becker, 2022; Green, 1996; Keusch, 2015; Slauson-Blevins & Johnson, 2016). Explanations commonly emphasize gendered socialization and “helping norms,” which may make survey participation more readily construed as a prosocial, cooperative act, alongside the observation that men are often harder to recruit and, on average, less inclined to disclose personal information in survey contexts (Becker, 2022; Green, 1996; Slauson-Blevins & Johnson, 2016). Accordingly, future research should seek more gender-balanced recruitment (e.g., quota-based designs or targeted outreach to men).

Third, although our study focuses on perceived skill underutilization and perceived overqualification, two human capital-related forms of underemployment that have garnered considerable research interest, we acknowledge that this focus does not fully reflect the multidimensional nature of underemployment. Underemployment spans both objective and subjective dimensions (Gammarano, 2018; MacDonald, 2019; McKee-Ryan & Harvey, 2011), including dimensions such as job field underemployment (e.g., Burke, 1997), hours underemployment (e.g., Creed & Moore, 2006; Wilkins, 2007), and pay underemployment (e.g., Feldman, 1996). As such, our findings may not generalize across all forms of underemployment. Specifically, perceived societal usefulness is a content-aligned psychological resource that specifically reframes the “I have more to give than this job allows” dilemma inherent in perceived skill underutilization and perceived overqualification. In contrast, dimensions centered on economic, temporal, or status-related constraints may not be as readily reframed through a sense of societal usefulness. However, because our study employed subjective measures, it is plausible that other subjectively experienced forms of underemployment, such as job field underemployment, which entails working outside one’s formal education or training (e.g., Burke, 1997), may similarly be moderated by perceived societal usefulness. Future research should investigate these alternate dimensions to build a more comprehensive understanding of how perceived societal usefulness influences the broader experience of underemployment. Relatedly, future work could compare over- versus underqualification to examine whether perceived societal usefulness plays a similar role across different forms of mismatch, or whether its effects depend on the type of mismatch. For instance, perceived societal usefulness may strengthen the positive relationship between underqualification and learning-oriented behaviors (e.g., help-seeking, proactive development) while potentially attenuating the negative relationship between underqualification and learning-impairing responses (e.g., threat appraisals, envy), to the extent that societal usefulness provides a motivating rationale for closing the person–job fit gap (Koseoglu et al., 2025; Sim & Lee, 2018).

Our study opens several avenues for future research. First, we encourage future research to delve more deeply into the mechanism underlying the moderating effect of perceived societal usefulness. As alluded to in the theory section, perceived social worth (i.e., the extent to which individuals perceive that their contributions and social role are valued by others, Grant, 2008; Rothers & Cohrs, 2023) likely channels the attenuating effect of perceived societal usefulness on the underemployment–outcome relationship. Relational job design theory implies that when workers recognize the beneficiaries of their labor, they internalize the belief that they “matter” to those beneficiaries; this belief might crystallize into a stable sense of social worth as a more proximal motivational resource (Grant, 2007).

Second, future research on underemployment might investigate how volunteer activities help underemployed individuals regain a sense of lost meaning and contribute to further positive outcomes. Volunteer work often embodies a heightened sense of collective purpose—the experience of contributing to a greater good—while also offering sustained opportunities for social interaction (Selenko et al., 2020). These characteristics suggest that volunteer engagement may foster perceptions of societal usefulness and enhance individuals’ sense of contribution to a broader cause. Empirical evidence indicates that volunteering facilitates recovery from work (Mojza et al., 2010) and can buffer against the erosion of work’s non-financial benefits, such as social connection, temporal structure, and purpose, especially under economic stressors like job insecurity (Selenko et al., 2020). Extending these insights, future research could investigate whether engagement in volunteer work attenuates the relationship between underemployment and diminished well-being, by offering an alternative source of purpose and identity affirmation (Grant, 2007).

Third, the present study examined the attitudinal consequences of underemployment, that is, reduced job satisfaction and organizational commitment. As mentioned previously, underemployment reflects a form of person–environment misfit (Maynard & Feldman, 2011; McKee-Ryan & Harvey, 2011). According to person–environment fit theory, misfit is not necessarily associated with strain reactions but can also result in adaptive, self-regulatory responses aimed at restoring congruence between the individual and the work environment (Edwards, 1991; Edwards et al., 1998; van Vianen, 2018). For example, employees may engage in job crafting by altering task boundaries or work relationships, pursuing additional training or developmental opportunities to address skill mismatches, negotiating for expanded responsibilities with supervisors, or seeking feedback and support from colleagues to enhance perceived fit (Rousseau et al., 2006; van Vianen, 2018; Wrzesniewski & Dutton, 2001). While initial evidence suggests that underemployed individuals do indeed adopt such proactive strategies (Debus et al., 2020; Lin et al., 2017), future research should move beyond attitudinal outcomes to explore how underemployed workers actively engage in these adjustment strategies. Specifically, scholars should investigate the types of adaptive behaviors underemployed individuals employ, the psychological mechanisms driving these efforts, and the contextual conditions under which such strategies are most likely to emerge and prove effective.

Finally, we conducted a supplemental analysis which revealed that individuals in more individualistic cultures are, on average, more likely to perceive their jobs as useful to society compared to those in less individualistic (i.e., more collectivistic) cultures. One possible explanation for this pattern may be that individuals in individualistic cultures tend to emphasize personal achievements and uniqueness to a greater extent (e.g., Markus & Kitayama, 1991; Triandis, 1995). In contrast, countries low in individualism (i.e., high in collectivism) emphasize the group and expect individuals to fit into the collective and maintain the traditional social fabric. Societies that emphasize individualistic values expect their members to think, feel, and act for themselves, thereby promoting individual independence and self-expression (Schwartz, 1999). Therefore, the heightened self-focus present in individualistic cultures may make individuals more likely to perceive their jobs as societally impactful, as their professional roles are often closely linked to their sense of

personal accomplishment and identity (Markus & Kitayama, 1991; Triandis, 1995). Future research may more thoroughly investigate how culture impacts the extent to which perceived societal usefulness is valued or made salient in different socio-cultural contexts.

6. Conclusion

By integrating relational job design theory with underemployment research, this study significantly advances our understanding of the boundary conditions of the underemployment–job attitudes relationship. Across a multi-country dataset and a two-wave dataset, we provide evidence suggesting that perceived societal usefulness may mitigate the adverse effects of underemployment on job satisfaction and organizational commitment, partly via alleviating feelings of relative deprivation. These findings enhance relational job design theory by emphasizing the significance of an individual's job impact on beneficiaries, while also enriching the concept of relative deprivation by highlighting the role of contextual factors. From a practical perspective, our results suggest that organizations can reduce negative outcomes of underemployment by encouraging employees to reconceptualize their roles in a way that highlights their societal contributions.

CRedit authorship contribution statement

Loris Mombelli: Writing – original draft, Visualization, Validation, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Maïke E. Debus:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Tahira M. Probst:** Writing – review & editing, Validation.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

We have no conflict of interest to disclose.

Data availability

All codes, datasets, and supplementary materials are available in an OSF folder that can be accessed at <https://doi.org/10.17605/OSF.IO/X9RGT>, and are noted in-text with the prefix S (e.g., Table S1 and Fig. S1).

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