

Research on the Impact of Challenge and Hindrance Appraisals of Career Shocks on Sustainable Careers and Their Eliciting Mechanisms

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Abstract

Existing research's binary classification of career shocks—positive versus negative—overlooks the heterogeneity of subjective cognition, thereby failing to explain the paradoxical phenomenon wherein negative career shocks yield positive outcomes (or positive shocks produce negative effects). Zhang Ying et al. (2023), considering individuals' cognitive appraisal processes toward events, proposed a theoretical construct that classifies career shocks based on challenge and hindrance appraisals derived from stress cognitive appraisal theory. However, this new classification remains at the theoretical level, and empirical research is urgently needed to establish its validity. Building upon this new classification of career shocks, this study proposes to: 1) develop measurement instruments for career shocks under the new taxonomy; 2) employ latent growth models to investigate the longitudinal effects and mechanisms of the two types of career shocks on employees' sustainable careers, grounded in stress cognitive appraisal theory; 3) utilize latent transition analysis to reveal the dynamic influence mechanisms of supportive environments and employee career resilience on the new categories of career shocks.

Full Text

The Impact of Challenge and Hindrance Appraisals of Career Shocks on Sustainable Careers and Their Underlying Triggering Mechanisms

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Abstract

Existing research on career shocks has predominantly relied on a binary classification of positive versus negative valence, overlooking heterogeneity in individual cognition and thus failing to explain paradoxical phenomena where negative shocks yield positive outcomes (or vice versa). Zhang et al. (2023) addressed this limitation by proposing a theoretical reconceptualization that incorporates individuals' cognitive appraisal processes, drawing on the Transactional Model of Stress and Coping to distinguish between challenge-appraised and hindrance-appraised career shocks. However, this new classification remains at the theoretical level and urgently requires empirical validation. Building upon this reconceptualization, the present study aims to: (1) develop a measurement instrument for career shocks under the new classification framework; (2) employ latent growth modeling to investigate the longitudinal effects of these two types of career shocks on employees' sustainable careers and their underlying mechanisms based on the Transactional Model of Stress and Coping; and (3) utilize latent transition analysis to reveal how supportive environments and employee career resilience dynamically influence the classification of career shocks into these new categories.

Keywords: Challenge appraisals of career shocks, Hindrance appraisals of career shocks, Transactional Model of Stress and Coping, Sustainable careers

1. Problem Statement

“Xiao Hui, an English teacher, was forced to transition to online streaming due to the ‘double reduction’ policy, yet achieved entrepreneurial success amid his career crisis; Xiao Qi, a university faculty member, was transferred to an administrative position after failing to meet tenure requirements; Xiao An, a senior engineer, fell into career confusion following a low performance rating.” These cases collectively reveal a critical question: How do unpredictable external events reshape individuals' career trajectories?

As environmental uncertainty intensifies in the VUCA era (Feng et al., 2021; Huang & Cui, 2021), particularly with the career disruption brought by digital transformation (Xie et al., 2023; Zhou et al., 2020), career shocks have become a central concern in modern career management. Career shocks refer to major career events triggered by external uncontrollable factors that influence career development directions by prompting cognitive reconstruction about one's career (Akkermans et al., 2018; Zhang et al., 2023). Such events possess a double-edged nature—whether involving unexpected job opportunities, performance failures, or negative evaluations, they can either cause career interruptions or generate new development opportunities. Against a backdrop of escalating environmental complexity, establishing effective response mechanisms for career shocks has become crucial for organizations and individuals to achieve sustainable career development.

The *Journal of Vocational Behavior*, in its 50th anniversary special issue, re-

viewed extensive career development research and identified the impact of career shock events on people's careers as an important future research direction (Akkermans & Collings et al., 2021). Existing studies have primarily examined how career shocks affect individual career attitudes, perceptions, or behaviors. For instance, foreign scholars have investigated impacts on career success (Kraimer et al., 2019), career optimism (Hofer et al., 2021), and entrepreneurial behavior (Seibert et al., 2021). Domestic scholars have mainly reviewed the latest research progress through literature syntheses (Feng et al., 2021; Huang & Cui, 2021; Lü & Zhou, 2013), but relevant research remains exploratory with insufficient theoretical and empirical development, suffering from three key limitations:

First, the conventional positive-negative classification of career shocks is overly simplistic. How can we reclassify career shocks to address this deficiency? Most studies categorize career shocks based on their outcomes, typically dividing them into positive shocks (e.g., unexpected promotion) and negative shocks (e.g., departure of a close colleague or supervisor). Positive shocks are generally assumed to produce positive effects (e.g., promoting career success, see Mansur & Felix, 2021), while negative shocks may yield negative consequences (e.g., reducing career satisfaction, see Kraimer et al., 2019). However, emerging research reveals that this binary classification ignores heterogeneity in individual cognition, making it difficult to explain paradoxical outcomes where negative shocks produce positive results (or vice versa) (Akkermans et al., 2020; Seibert et al., 2013). For example, Seibert et al. (2021) found that some negative career shocks (e.g., unmet promotion expectations) could “activate” individuals' latent entrepreneurial identity, prompting them to explore business opportunities—demonstrating that such events are not purely negative. Thus, simple positive-negative distinctions appear inadequate (Akkermans et al., 2018; Legrand et al., 2023). Can we reclassify career shocks by considering individuals' cognitive appraisal processes? Lazarus and Folkman's (1984) Transactional Model of Stress and Coping (TMS) provides an answer. This theory emphasizes that how individuals evaluate and cope with stressors determines differential impacts of stressful events. When employees encounter career shocks, their cognitive appraisal of the event determines its consequences. Building on this, scholars have proposed reclassifying career shocks into challenge-appraised and hindrance-appraised categories based on the TMS (Zhang et al., 2023). However, this new classification remains theoretical and lacks empirical support.

Second, how do challenge-appraised and hindrance-appraised career shocks affect employees' sustainable careers? Career shock events trigger career reflection and may lead to career decision changes or transitions (Akkermans et al., 2018; Seibert et al., 2013). Ultimately, individuals' goal is to ensure sustainable career development. Existing research has focused on impacts on career attitudes or behaviors, neglecting effects on sustainable careers. Sustainable careers refer to career experiences where individuals balance health, happiness, and productivity, can cope with risks from external uncertainty, and continuously accumulate resources to promote career development over time (De Vos et

al., 2020; De Vos & Van der Heijden, 2015), representing the most cutting-edge theoretical construct in contemporary career research (Wu et al., 2023). Given China's aging population and delayed retirement policies, sustainable careers are essential for employees wishing to work into old age (De Vos et al., 2020). De Vos et al. (2020) argue that resources are central to sustainable careers, and career shocks affect career outcomes by influencing the reallocation and mobilization of career resources (Akkermans & Collings et al., 2021; Akkermans et al., 2020), thus potentially significantly impacting individual sustainable careers. However, existing research on factors influencing career sustainability has primarily examined personal characteristics or organizational factors, neglecting external events. In today's uncertain and challenging environment, investigating how career shock events affect sustainable careers can not only help Chinese practitioners manage the impact of external uncertainty on career sustainability but also empirically validate the scientific validity of the new career shock classification.

Third, what factors trigger individuals' cognitive appraisals of career shocks, leading to challenge or hindrance classifications, and how can management practices help individuals "maximize benefits and avoid harms"? Research shows that the impact of specific career shocks varies across groups, prompting calls for further investigation into their triggering mechanisms (Akkermans & Rodrigues et al., 2021). Since the distinction between challenge-appraised and hindrance-appraised career shocks is based on individuals' cognitive evaluation processes, examining factors influencing employees' appraisal of stressors can reveal the triggering mechanisms for different categories of career shocks. The TMS proposes that personal and situational factors affect cognitive appraisal processes (Jiang & Wang, 2022). This study examines supportive contexts and employee career resilience to reveal the cognitive evaluation mechanisms underlying career shock classifications and identify pathways to challenge appraisals. Furthermore, existing research on coping with career shocks has primarily explored how moderators (e.g., enhancing individual employability or providing organizational support) can mitigate negative impacts (Akkermans et al., 2015; Hofer et al., 2021), with limited effectiveness. Grounded in the TMS framework, this study reveals the differential formation mechanisms of career shock classifications, achieving a paradigm shift from passive stress response to proactive adaptation by intervening in individuals' threat-challenge appraisal patterns, offering new pathways for organizational career shock management.

In summary, this study proposes three investigations: First, based on the theoretical constructs of challenge-appraised and hindrance-appraised career shocks, we will explore content items and develop corresponding measurement tools under the new classification. Second, we will examine the effects and mechanisms of these two types of career shocks on employees' sustainable careers. Finally, we will investigate how personal and situational factors influence the classification of career shocks into challenge and hindrance appraisals.

2. Literature Review

2.1 Concept and Classification of Career Shocks

Akkermans et al. (2018) integrated research on career events (Bright et al., 2005) and turnover shocks (Lee & Mitchell, 1994) to define career shocks as “disruptive, extraordinary events caused to some extent by factors beyond an individual’s control that trigger deep reflection about one’s career. These events vary in predictability and may have positive or negative effects on career development.” Most literature (e.g., Holtom et al., 2005) has categorized career shocks as either positively or negatively valenced. Positive shocks refer to events that may bring positive career impacts, while negative shocks may produce negative career consequences. Seibert et al. (2013) noted that this distinction is important because different types of career shocks have different effects.

Zhang et al. (2023) addressed the explanatory limitations of the positive-negative distinction by considering individuals’ cognitive appraisal processes and reclassifying career shocks into challenge and hindrance types based on the TMS. This new classification emphasizes individuals’ evaluation of career shock events. However, during literature review, we found that directly using “challenge and hindrance career shocks” may not adequately highlight the cognitive appraisal process. Therefore, we uniformly use the term “challenge-appraised and hindrance-appraised career shocks.” The TMS is an appraisal-based stress theory that explains individual differences in reactions to stressful events (Liu et al., 2019). The framework emphasizes that when encountering stressors, individuals activate internal evaluation systems that directly determine coping strategy selection. Specifically, the appraisal process comprises primary and secondary dimensions, with results influenced by interactions between individual characteristics and environmental factors. In primary appraisal, individuals construct meaning, assess relevance, and categorize events as harmful (loss incurred), threatening (potential loss), or challenging (potential gain). Secondary appraisal focuses on evaluating the feasibility of coping options. These two processes are not independent but intertwined and simultaneous, jointly guiding appropriate coping strategies and ultimately influencing behavioral outcomes (Folkman et al., 1986). The theoretical model is shown in Figure 1 [Figure 1: see original paper].

Based on the TMS, individuals’ perception of career shocks can be explained through cognitive appraisal processes. The theory posits that when facing career changes, individuals conduct dual assessments of event characteristics and personal resources. In primary appraisal, individuals identify the nature of career shocks; in secondary appraisal, they evaluate the adequacy of coping resources (Lazarus & Folkman, 1984). When individuals confirm through appraisal that their capabilities and situational conditions can effectively address the event, they typically classify the career shock as a challenge stressor; conversely, if they feel resource-deficient, they perceive it as a hindrance stressor (Lazarus & Folkman, 1984). Thus, career shocks can be distinguished as challenge-appraised

or hindrance-appraised based on different cognitive judgments (Zhang et al., 2023).

2.2 Impact of Career Shocks on Sustainable Careers

De Vos et al. (2015) proposed that sustainable careers refer to continuous career development processes over time, reflecting transitions between multiple roles or social spaces, highlighting individual agency, and realizing personal value and meaning. Core elements include health, happiness, and productivity (De Vos et al., 2020; De Vos & Van der Heijden, 2015). Health comprises physical and mental well-being; happiness is primarily measured by career satisfaction and subjective career success; productivity includes job performance and employability. Research has found that personal characteristics such as gratitude affect sustainable careers (Zhou et al., 2022), and organizational factors like sustainable HRM can promote sustainable careers by providing organizational resources (Tang et al., 2017).

De Vos et al. (2015) identified three features of sustainable careers: person, time, and space. Career shock events may simultaneously encompass these dimensions—occurring at specific times, in life or work domains, and triggering personal career reflection. However, few studies have examined the impact of career shocks on sustainable careers. Pak et al. (2021) found through qualitative research that career shocks affect sustainable careers by influencing changes in employees' job demands and resources, ultimately affecting person-organization fit, using competence, motivation, and opportunity as indicators of sustainable careers.

Other studies have examined impacts on specific indicators of sustainable careers (e.g., subjective career success, job performance, or employability). For example, Burton et al. (2010) found that employees with high job embeddedness who consider leaving after negative shocks but remain may redirect energy toward beneficial activities, enhancing organizational citizenship behavior and overall job performance. Holtom et al. (2012) showed that negative affect moderates the impact of negative shocks on job performance. Based on affective events theory, individuals in negative emotional states are more likely to develop negative cognitions about unexpected events, potentially triggering reevaluation of organizational commitment and reducing positive behavioral engagement, manifested as decreased citizenship and increased counterproductive behaviors. Other research has focused on subjective career success. Kraimer et al. (2019) found that positive shocks positively affect subjective career success by increasing job engagement, while negative shocks negatively affect it by reducing engagement.

2.3 Triggering Factors of Career Shocks

Although career shocks are somewhat unpredictable by definition (Akkermans et al., 2018), some factors may make individuals more susceptible than others.

Akkermans and Rodrigues et al. (2021) argued that the salience of specific career shocks differs across groups, calling for research on triggering factors and proposing that particular environmental and personal characteristics may precipitate career shock events.

From an environmental perspective, Korotov's (2021) qualitative study of corporate managers found that managers in high-pressure environments with substantial responsibilities may be more likely to experience positive or negative career shocks. Similarly, Petrović et al. (2021) noted that humanitarian workers and volunteers operate in volatile environments where disruptive career shocks frequently occur. Thus, individuals in specific contexts may perceive and be affected differently by career shocks. Akkermans and Collings et al. (2021) suggested incorporating environmental characteristics at different levels—organizational, occupational, national, and familial—as antecedent conditions for career shocks.

From a personal characteristics perspective, Korotov et al. (2021) and Petrović et al. (2021) observed that only some managers and volunteers are affected by frequent career shocks, while others may become “accustomed” and “immune” to them. Seibert et al. (2016) proposed that individual career resilience may affect coping with career shocks, explaining why some individuals (low resilience) are more affected than others (high resilience) in turbulent environments. Wordsworth and Nilakant (2021) used in-depth interviews to explore how major extra-organizational events (e.g., earthquakes) translate into career shocks affecting individual decisions, finding that pre-shock motivational states significantly influenced divergent career decisions despite experiencing the same event. Additionally, demographic variables (e.g., gender, age, cultural background) may affect event perception and career path impacts. For example, Van Helden et al. (2023) found gender differences in classifying the same shock: male academics viewed “faster-than-expected promotion” as positive, while some female academics viewed it as negative because they felt unprepared. Nair and Chatterjee (2021) found that Indian women viewed arranged marriage as a significant shock affecting career planning, whereas this shock may be non-salient in cultures without arranged marriage.

2.4 Literature Review Summary

Career shocks represent an emerging topic in career management research. Existing studies have only captured fragmented knowledge about their content structure and mechanisms, revealing some phenomena but requiring further advancement.

First, Akkermans et al. (2018) argued that the valence of career shocks depends on individual experiences rather than inherent event properties. Zhang et al. (2023) integrated cognitive appraisal processes and reclassified career shocks based on the TMS, proposing the concepts of challenge-appraised and hindrance-appraised career shocks. However, this classification remains theoretical, lacking

empirical validation of its scientific feasibility.

Second, most career shock research has focused on impacts on career decisions (turnover, entrepreneurship) and career development (career success) (Holtom et al., 2005; Seibert et al., 2021; Kraimer et al., 2019), neglecting effects on sustainable careers. The sustainable career concept encompasses three features: person, time, and space. De Vos et al. (2020) proposed that career shock events simultaneously contain these three factors and affect sustainable careers, yet few studies have examined these relationships.

Third, the same career shock may have different salience and effects across populations. Scholars (Akkermans & Collings et al., 2021) advocate investigating career shock antecedents from person-environment interaction perspectives. What factors trigger individuals to classify career shocks as challenge or hindrance appraisals? Examining factors influencing cognitive judgment can help managers and researchers effectively address career shocks.

In summary, existing research provides foundational conditions but requires breakthroughs. The review and research directions are illustrated in Figure 2 [Figure 2: see original paper]. This study proposes to:

First, explore localized career shock content items and establish psychological measurement indicators. Existing measures are based on positive-negative distinctions, but since events lack inherent goodness or badness, this classification and measurement are incomplete (Akkermans et al., 2018; Legrand et al., 2023). The new classification considers cognitive appraisal but remains theoretical. It is necessary to integrate cognitive appraisal processes and culturally specific content items to develop measurement tools. This involves identifying career shock events in Chinese workplaces and assessing their consistency with Western items, then identifying events based on challenge/hindrance appraisals. Using grounded theory, we will identify Chinese workplace career shock events and adapt the stress appraisal scale to develop measurement tools through qualitative and quantitative research.

Second, explain the impact mechanisms of the new classification on sustainable careers. While existing research has focused on career decisions and development, this study introduces sustainable careers as a key variable. Sustainable careers encompass person, time, and space dimensions (De Vos et al., 2020). Career shocks are events occurring at specific times in specific contexts that trigger career contemplation, simultaneously containing these three factors. Examining their impact on sustainable careers allows investigation of interactions among these dimensions. Furthermore, based on the TMS, which posits that primary and secondary appraisals lead to different response patterns (emotion-focused and problem-focused) that affect outcomes (Folkman et al., 1986), this study will explore how challenge-appraised and hindrance-appraised career shocks affect sustainable careers and the underlying mechanisms.

Third, examine antecedents triggering challenge versus hindrance appraisals. Research has begun exploring why career shocks differ in salience and impact

across individuals (Akkermans & Rodrigues et al., 2021). Since the new classification is based on individuals' evaluation of events, examining personal and situational factors influencing cognitive judgment can clarify the triggering mechanisms. This study's final direction is to investigate how situational and personal factors affect cognitive appraisal processes, exploring interventions that guide individuals toward challenge appraisals and providing effective management strategies.

3. Research Conception

Guided by the Transactional Model of Stress and Coping, this study investigates the impact mechanisms and triggering factors of the new classification of career shocks. The specific research plan comprises three components: First, based on the theoretical constructs of challenge-appraised and hindrance-appraised career shocks, we will explore applicable measurement indicators in Chinese workplaces to lay a foundation for subsequent empirical research. Second, drawing on the TMS' s discussion of possible reactions to stressors, we will examine how challenge-appraised and hindrance-appraised career shocks affect employees' sustainable careers and the underlying mechanisms, clarifying whether challenge-appraised shocks positively affect sustainable careers through promotion-focused coping, while hindrance-appraised shocks negatively affect sustainable careers through prevention-focused coping. Third, if hindrance-appraised career shocks negatively impact sustainable careers, it is necessary to identify feasible interventions to reduce or prevent hindrance appraisals. The TMS also identifies individual and environmental factors affecting cognitive appraisal (Lazarus & Folkman, 1984), suggesting these factors influence how individuals understand and evaluate stressors, thereby affecting subsequent reactions. Therefore, the third component examines how situational and personal factors trigger challenge versus hindrance appraisals, providing feasible recommendations for management interventions. The overall research model is shown in Figure 3 [Figure 3: see original paper].

3.1 Scale Development for the New Classification of Career Shocks (Study 1)

This study aims to develop a measurement tool for the new classification by combining literature review, interviews, and empirical research. We will first identify content items of career shocks in the Chinese cultural context, then determine specific measurement indicators based on the new classification framework, and administer the scale in workplaces. Data will be analyzed through exploratory factor analysis, confirmatory factor analysis, and reliability and validity testing to validate the hypothesized model.

First, we will identify content items of career shocks for Chinese employees. The most widely used measure is Seibert et al.' s (2013) four-item scale, dividing career shocks into positive (e.g., "successfully completing a project that was initially very novel and challenging") and negative (e.g., "a mentor or colleague

very important to you left the company”). Other studies (Blokker et al., 2019; Mansur & Felix, 2021) have directly used or revised this scale. For example, Blokker et al. (2019) added two items for young professionals (e.g., “feeling overwhelmed when facing new responsibilities and tasks”). Seibert et al. (2016) listed general shock events including difficulty finding new jobs, important mentors leaving, not receiving expected assignments or promotions, negative performance evaluations, organizational politics, major negative organizational events, spouse’ s relocation, marriage, and childbirth. However, Seibert et al.’ s (2013) items primarily focused on graduate school application decisions, while later revisions (e.g., Blokker et al., 2019) targeted specific populations. Scholars suggest cross-cultural differences in career shock content (Nair & Chatterjee, 2021). In Chinese workplaces, influenced by unique cultural factors such as collectivism and “face” culture, do items like “receiving negative performance evaluations” remain salient? Will new items emerge (e.g., “my immediate supervisor was suddenly replaced”)? These questions require exploration. We will reference existing scales and interview data to identify culturally appropriate content items.

Second, we will develop measurement tools for challenge-appraised and hindrance-appraised career shocks. Since this classification considers cognitive appraisal processes, we will adapt the stress appraisal scale (LePine et al., 2016) to develop the new measure. The original scale includes three challenge appraisals (“I believe this event can help me improve myself,” “helps me achieve personal goals,” “helps me achieve personal accomplishments”) and three hindrance appraisals (“hinders my self-improvement,” “is not conducive to achieving personal goals,” “limits my personal accomplishments”). We will integrate each set into single evaluation items: “I believe this event will help me improve myself and achieve my personal goals and accomplishments (challenge appraisal)” and “I believe this event will hinder my self-improvement and limit my personal goals and accomplishments (hindrance appraisal).” Combined with identified Chinese career shock events, we will develop the measurement tool, as illustrated in Figure 4 [Figure 4: see original paper].

Scale development will proceed in two phases. Phase 1 involves semi-structured interviews following grounded theory procedures: theoretical sampling, open coding, selective coding, and constant comparison to identify key components of career shock events experienced by Chinese employees. Cultural factors will be considered when revising items. For example, influenced by “face culture,” “receiving negative performance evaluations” may be revised to “supervisor publicly giving me negative performance evaluations.” Phase 2 involves scale development and survey administration. Based on the stress appraisal scale (LePine et al., 2016) and identified Chinese career shock events, we will develop the measurement tool. Sample items include:

- “1. Supervisor publicly gives me negative performance evaluations.
 - a. I believe this event will help me improve myself and achieve my personal goals and accomplishments (challenge appraisal)

b. I believe this event will hinder my self-improvement and limit my personal goals and accomplishments (hindrance appraisal)”

For each event, respondents rate both appraisal dimensions using a 5-point Likert scale: 1 = did not occur; 2-5 = extent of occurrence and personal relevance. The developed scale will be administered and refined through item analysis, exploratory and confirmatory factor analyses, and reliability and validity testing.

3.2 Impact of Career Shocks on Employees’ Sustainable Careers and Mechanisms (Study 2)

This study employs multi-wave longitudinal tracking and latent growth modeling to investigate the dynamic effects of career shocks on sustainable careers and underlying mechanisms. Sustainable careers’ core elements—health, happiness, and productivity—may be significantly affected by career shocks (Akkermans et al., 2020; De Vos et al., 2020). Sudden illness or major work stress may prompt individuals to reevaluate career goals and change trajectories (Pak et al., 2021), affecting happiness, health, and productivity. Akkermans et al. (2020) suggest career shocks affect career outcomes by influencing resource reallocation, and resources are central to sustainable careers (De Vos et al., 2020). Therefore, career shocks likely significantly impact employees’ sustainable careers. Limited empirical research has examined these relationships (Pak et al., 2021). Moreover, scholars suggest career shock effects may vary over time (Akkermans et al., 2020; Morgeson et al., 2015), prompting our longitudinal investigation.

The core of sustainable careers is developing, protecting, and renewing career-related resources (De Vos & Van der Heijden, 2015). Conservation of Resources theory (Hobfoll & Stevan, 1989) proposes that individuals strive to obtain, maintain, cultivate, and protect valued resources, accumulating them over time to enhance well-being and development. The theory’s resource gain and loss spirals can explain the dynamic cumulative effects of career shocks. The gain spiral suggests initial resource acquisition facilitates further accumulation, but this spiral progresses relatively slowly because resource acquisition is weaker and slower than resource loss (Halbesleben & Wheeler, 2015). Thus, challenge-appraised career shocks may increase resources and initiate gain spirals, slowly improving health, happiness, and productivity. Conversely, the loss spiral mechanism suggests resource-depleted individuals face dual 困境: diminished resource investment efficacy and weakened defensive capabilities. This vicious cycle shows initial resource loss triggers secondary losses, with accelerating spiral processes leading to exponentially negative effects. Thus, hindrance-appraised career shocks may deplete resources, initiate loss spirals, and cause faster declines in health, happiness, and productivity. Therefore:

Proposition 1: Challenge-appraised career shocks are positively related to employees’ sustainable careers (including health, happiness, and productivity) and their positive change.

Proposition 2: Hindrance-appraised career shocks are negatively related to

employees' sustainable careers (including health, happiness, and productivity) and their negative change.

Additionally, the TMS proposes that individuals select problem-focused or emotion-focused coping based on appraisal results, revealing the psychological mechanism pathway. Problem-focused coping includes effort, persistence, seeking feedback and support, and planning; emotion-focused coping involves managing negative emotions (Jiang & Wang, 2022). Lazarus and Folkman (1984) noted that "everyone may use both problem-focused and emotion-focused coping when facing stressful situations" (p. 157). Zhang et al. (2019) advanced this by integrating regulatory focus theory, proposing promotion-focused and prevention-focused coping. Promotion-focused coping emphasizes cognitive and behavioral efforts to maximize alignment between current status and desired goals—active engagement. It includes promotion-oriented problem-focused coping (e.g., "I take direct action to solve the problem") and promotion-oriented emotion-focused coping (e.g., "I talk to someone about my feelings"). Prevention-focused coping emphasizes minimizing misalignment between current situations and duties—avoidance. It includes prevention-oriented problem-focused coping (e.g., "I make sure not to act too quickly and make things worse") and prevention-oriented emotion-focused coping (e.g., "I pretend it didn't really happen").

Integrating TMS and regulatory focus theory, challenge stressors (e.g., challenge career shocks) are perceived as opportunities for gain and growth (LePine et al., 2016), serving as environmental cues aligned with personal goals that facilitate goal achievement. Thus, challenge career shocks may motivate promotion-focused problem-solving strategies (e.g., proactive action, seeking advice). Challenge stressors are also associated with excitement (Rodell & Judge, 2009), potentially eliciting positive emotion regulation strategies (e.g., reframing difficulties as learning opportunities; Brockner & Higgins, 2001). Conversely, hindrance stressors (e.g., hindrance career shocks) are evaluated as obstacles to goal achievement (LePine et al., 2016), prompting vigilant strategies aimed at avoiding failure (e.g., delaying action, withdrawing). Hindrance stressors are associated with negative emotions (e.g., anger; Rodell & Judge, 2009), leading to prevention-oriented emotion strategies (e.g., venting, denial) to minimize emotional burden. Zhang et al.'s (2019) meta-analysis found challenge stressors positively related to promotion-focused coping ($r = .19$) and hindrance stressors positively related to prevention-focused coping ($r = .21$).

Thus, when individuals appraise career shocks as challenges and believe they can change external conditions through effort, they tend to adopt promotion-focused coping. Conversely, if appraised as hindrances with uncontrollable threats, they are more likely to adopt prevention-focused coping.

Furthermore, Zhang et al. (2019) found promotion-focused coping positively related to task performance ($r = .13$) and organizational citizenship behavior ($r = .31$), while prevention-focused coping negatively related to task performance ($r = -.05$) and citizenship behavior ($r = -.29$). Based on Conservation of Resources the-

ory, we propose that promotion-focused coping from challenge-appraised shocks is an important resource acquisition pathway that initiates gain spirals, promoting positive sustainable career changes. Prevention-focused coping from hindrance-appraised shocks triggers resource loss spirals, causing negative sustainable career changes. Therefore:

Proposition 3: Challenge-appraised career shocks promote positive changes in sustainable careers (including health, happiness, and productivity) through employees' promotion-focused coping (including problem- and emotion-focused).

Proposition 4: Hindrance-appraised career shocks cause negative changes in sustainable careers (including health, happiness, and productivity) through employees' prevention-focused coping (including problem- and emotion-focused).

Event System Theory proposes that event timing moderates the relationship between event strength and outcomes—events more aligned with current developmental needs are more likely to change behavior (Morgeson et al., 2015; Liu & Liu, 2017). Since individuals have different needs at different career stages, shocks meeting stage-specific needs may have stronger effects. Therefore, we propose that timing determines impact strength (Morgeson et al., 2015; Liu & Liu, 2017). Specifically, early-career employees typically have fewer material, human, and social resources, with higher needs, making them more susceptible to career shocks. Research confirms that development strategies differ significantly across career stages (Baltes et al., 1999). As life progresses, career goal orientation may shift from growth-oriented to maintenance or loss-prevention. Thus, employees at different career stages may respond differently to career shocks, with varying impacts on sustainable careers. We hypothesize that early-career employees, with higher resource needs and growth-oriented goals, will respond more strongly to both challenge- and hindrance-appraised shocks, experiencing greater impacts on sustainable careers than mid- or late-career employees.

Proposition 5: Career stage moderates the effects of career shocks on sustainable careers through different coping styles, with stronger effects for early-career employees than mid- or late-career employees.

3.3 Triggering Mechanisms of Challenge and Hindrance Appraisals of Career Shocks (Study 3)

This study uses field experiments and longitudinal data with latent transition analysis to explore how personal and situational factors reduce hindrance appraisals and increase challenge appraisals of career shocks. Research suggests environmental and personal characteristics may affect career shock salience across individuals (Akkermans & Rodrigues et al., 2021). Based on the TMS, challenge versus hindrance appraisals result from primary and secondary evaluations of coping capacity. Primary appraisal asks, “Am I benefiting or harmed? Is the impact current or future? How does it affect me?” and is influenced by personal and situational factors (Jiang & Wang, 2022). Secondary appraisal focuses on “What actions can I take?” and affects coping strategy selection, requiring

evaluation of feasible options and their likelihood of success, also influenced by individual and situational factors (Jiang & Wang, 2022). Therefore, we examine antecedents from both perspectives to propose intervention strategies for cognitive appraisal processes.

From a situational perspective, research has focused on leadership styles, organizational support, and participative climate (Jiang & Wang, 2022). Combining existing research on situational triggers, we focus on supportive environments from organizations and families, including organizational career management support, leader support, and family support. Organizational career management support (Sturges et al., 2002) includes six formal interventions (e.g., providing formal training for career development) and four informal interventions (e.g., introducing helpful contacts), covering planning, information, and resources for current and future development, thus promoting career sustainability. Such support constitutes important career development resources that facilitate positive appraisals of career shocks. Additionally, leader and family support means employees can obtain more resources from organizational and family contexts, enabling more positive assessments of coping potential (Hackett et al., 2018), reducing hindrance appraisals and enhancing challenge appraisals.

From a personal perspective, Jiang and Wang (2022) found that individual traits and cognitions affect primary and secondary appraisal processes. Seibert et al. (2016) proposed that career resilience affects coping with career shocks, with high-resilience individuals experiencing less negative impact. Resilience reflects adaptation under pressure, helping defend against negative stressor effects (Charney, 2004). We propose that employees' career resilience, as an important individual characteristic, affects classification evaluations. Career resilience reflects psychological adaptation in adversity, positively related to job performance and satisfaction (Li et al., 2011). This capacity enables stronger environmental adaptability, effective stressor coping, and maintained motivation. When encountering career shocks, high-resilience individuals employ unique strategies: they filter stress information and actively conduct positive appraisals, transforming shocks into development opportunities rather than obstacles. This trait enables them to better grasp opportunities from environmental changes, maintaining competitive advantages (Mitchell et al., 2019). Conversely, low-resilience employees are more likely to experience negative emotions, appraise events negatively, and make hindrance appraisals.

Therefore:

Proposition 6: High levels of supportive environment (including organizational career management support, leader support, and family support) are more likely to lead employees to appraise career shocks as challenge career shocks.

Proposition 7: Employees with high career resilience are more likely to appraise career shocks as challenge career shocks.

4. Theoretical Construction and Practical Implications

This study addresses the frontier topic of career shocks, addressing limitations of the positive-negative classification by proposing challenge-appraised and hindrance-appraised career shocks. Based on this new classification, we construct a theoretical model of the longitudinal effects of career shocks on sustainable careers and their mechanisms, and examine factors triggering these classifications from situational and personal perspectives, comprehensively analyzing both outcomes and antecedents to advance career shock research.

Three sub-studies support this theoretical construction. Study 1 will develop measurement tools for the new classification by identifying culturally appropriate content items in Chinese workplaces. Existing items were developed in Western contexts; Chinese items may differ. Since the new classification is based on the TMS and cognitive appraisal, incorporating appraisal processes into measurement tool development will establish valid indicators. Study 2 will use multi-wave longitudinal tracking and latent growth modeling to examine dynamic effects on sustainable careers. Career shocks trigger reflection and may cause decision changes or transitions (Akkermans et al., 2018). Since individuals' ultimate goal is sustainable career development, examining impacts on career sustainability while considering temporal factors and using the TMS to explore dual response pathways can effectively answer how and why career shocks affect sustainable careers. Study 3 will use field experiments and longitudinal data with latent transition analysis to explore how personal and situational factors reduce hindrance appraisals and increase challenge appraisals. Scholars suggest environmental and personal factors affect career shock salience and impact (Akkermans & Collings et al., 2021). Based on the TMS, these factors may affect primary and secondary appraisals, influencing classification outcomes. Examining supportive contexts and career resilience can provide effective intervention strategies.

This study's innovations include:

First, advancing empirical research on the new classification and providing new perspectives for career shock research. The conventional positive-negative classification has shown limitations as negative shocks can have positive effects. The new classification incorporating cognitive appraisal effectively addresses this deficiency. By identifying culturally relevant content items and developing measurement tools that incorporate cognitive appraisal processes (challenge vs. hindrance), this study not only compensates for explanatory gaps but also provides new perspectives for understanding career shock effects, helping managers and researchers better comprehend their impacts and offering new directions for future research.

Second, constructing a dual-pathway model of how the new classification affects sustainable careers, revealing career shock dynamics. While existing research has focused on career decisions and development, this study examines impacts on sustainable careers—the ultimate goal of career decisions. By considering tem-

poral factors and using latent growth modeling to examine longitudinal effects, we comprehensively depict the dynamic processes of career shock impacts, providing new perspectives on longitudinal influences. Moreover, whereas past research examined mechanisms based on positive-negative distinctions, this study builds a dual-pathway model grounded in the TMS, helping validate the new classification and explaining differential impacts from a stress appraisal perspective, offering entry points for organizational management and extending TMS applications.

Third, examining antecedents of challenge versus hindrance appraisals and proposing coping strategies from supportive context and career resilience perspectives. While career shocks are considered unpredictable, scholars suggest they are influenced by environmental and personal factors, with differential salience and impacts across groups (Akkermans & Rodrigues et al., 2021). This study innovatively examines antecedents of classification, identifying what triggers challenge versus hindrance appraisals. This provides evidence for career shock antecedent research and offers effective coping strategies from a triggering mechanism perspective, with important implications for both antecedent and coping research.

Practically, this study offers significant value. **For employees**, recognizing different categories of career shocks and their potential impacts is the first step in career self-management. The reclassification helps individuals understand that uncertain career events are inherently neutral, and their cognitive appraisal determines classification and consequences. Therefore, seeking situational support and enhancing personal career resilience can help better cope with career shocks, mitigating negative effects and enhancing positive ones. **For organizations**, providing supportive environments and developing employee resilience through training can help employees effectively manage career shocks and achieve sustainable careers. **For government and society**, establishing robust emergency response mechanisms and enhancing systematic risk prevention capabilities is essential. Although career shocks are “unpredictable” by definition, preparedness can guide enterprises and employees toward long-term stable development in uncertain environments.

In summary, this study examines the longitudinal effects of challenge-appraised and hindrance-appraised career shocks on sustainable careers and their mechanisms, and explores factors triggering these classifications from situational and personal perspectives. However, most propositions remain theoretical and require further empirical support. Specifically, Study 3 only examines career resilience and supportive environments as influencing factors, which may be incomplete. Future research should incorporate more personal traits, cognitions, and emotions (e.g., proactive personality, emotional intelligence) and broader organizational contextual factors (e.g., organizational culture, leadership styles). For example, Ni et al. (2020) found that proactive personality leads to more positive stress appraisals, suggesting high-proactivity employees may appraise career shocks as challenges. LePine et al. (2016) proposed that charismatic

leaders help subordinates cope with stressors by transmitting positive emotions and providing resources, potentially facilitating challenge appraisals. Future research should empirically examine these factors. Additionally, considering current contexts like artificial intelligence and digitalization, future studies could incorporate these backgrounds into career shock content. For example, China's first AI pediatrician began practicing in February 2025, collaborating with 13 pediatric experts on a difficult case, significantly impacting healthcare. Investigating whether AI introduction constitutes a career shock for employees could enrich career shock content items.

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