

## The Effect of Core Self-Evaluation on the Process of Gradual Retirement Among Middle-Aged and Older Workers

*Shih-Nien Lee*<sup>\*+</sup>

*Ton-Chu Chang*<sup>\*\*</sup>

*Shu-Huei Lin*<sup>\*\*\*</sup>

**Abstract:** *This research project aims to gain insight into the influence of gradual retirement on the fundamental self-evaluations of middle-aged and older professionals who intend to remain in their current roles while planning their careers. We put forth a model for investigation and testing, which seeks to identify the mediators and moderators associated with subjective career success and job meaning in middle-aged and older laborers. The findings indicate that core self-assessment and the meaning of one's job have a positive impact on subjective career success. Furthermore, subjective career success mediates the relationship between core self-assessment and gradual retirement. The results of this study have the potential to assist organizations in adapting job content to align with actual needs, promoting more flexible manpower utilization strategies, and utilizing suitable career content to enhance the gradual retirement intentions of middle-aged and older individuals.*

**Keywords:** Core self-evaluation; subjective career success; gradual retirement; job meaning

**JEL Classification:** J21, J23, J26, J28

### Introduction

As indicated in the comprehensive points outlined in the G20 (2019), Moddy's (2019), and IMF (2019) report, the structural problems of the working population in the labor market will be affected when one-fifth of the society's population is 65 years old and

---

\* Feng Chia University, New Taipei City, Taiwan.

+ Corresponding Author E-Mail: [nien0327@ms45.hinet.net](mailto:nien0327@ms45.hinet.net)

\*\* National Chung Cheng University, Taiwan.

\*\*\* National Chung Cheng University, Taiwan.

above. This will result in a shortage of the labor force, insufficient financial annuities, and increased funding for retirement and health care. The gradual retirement program in Sweden represents the most successful case of pension reform in the world. In response to the demographic shift towards an aging population, Sweden introduced a gradual retirement mechanism in its 1994 pension reform program, which postponed the retirement age from 55 to 65. Individuals who continued to work before the age of 65 were permitted to do so while receiving a partial annuity. Those aged 67 and above, as well as middle-aged and elderly workers, were permitted to receive a salary while continuing in employment and to accrue additional annuities. This enabled those who were gradually retiring to be willing to work (Zhang & Zhang, 2019).

All individuals are afforded the opportunity to create value and contribute to their work environment. However, research indicates that the majority of individuals do not find meaning in their work (Rosso et al., 2010). For the majority of individuals, meaningless work is defined as a lack of personal growth and a sense of confusion and lack of motivation.

In order to retain middle-aged and elderly employees, companies must treat them as customers and apply the same business strategy that they use to satisfy customers' needs and obtain customers' orders to their retention efforts. For employers, the retention of middle-aged workers is of significant value in terms of the knowledge and experience they bring to the organization (Shultz & Wang, 2011). What strategies might be employed to motivate mid-career employees to pursue continued learning, to arrest or reverse the overall decline in employment within the organization, and to enable mid-career employees to continue to achieve while working for the company?

At present, the majority of individuals are earning higher material incomes from their occupations than the average person. However, they are becoming increasingly unhappy and do not feel that they have achieved career success. Additionally, individuals tend to experience a sense of accomplishment and happiness when they subjectively perceive their career success (Abele et al., 2016). The term "career success" is used to describe the results accumulated over time in the workplace by middle-aged and older workers. These results encompass the psychological aspects of self-efficacy, the achievements accumulated with work experience, and the positive work-related outcomes. These outcomes can be divided into two main categories: subjective and objective career success components (Chen et al., 2021).

The process of occupational socialization exerts a significant influence on employees' subjective perceptions of occupational or professional work. Through career transitions, initial adaptation and development, employees gradually develop attitudes towards their work and long-term careers. Furthermore, it is closely associated with the process of adapting to one's job and exerts an influence on the career management behaviors that employees adopt once they commence their professional roles. There is a paucity of knowledge regarding the longitudinal comprehension of career development within organizational contexts and the manner in which job adaptation status

evolves. Accordingly, further investigation is required to ascertain how middle-aged and older workers perceive the meaning of their work in the context of job adaptation, and how they can sustain motivation and positive attitudes towards subjective career success during the process of establishing personal work meaning.

The work experience accumulated in the workplace differs between middle- and older-career seekers due to the discrepancy in their self-efficacy. Those with high self-efficacy are more likely to direct their attention toward identifying solutions to challenges they may face, and to reflect on the knowledge gained from the experience, regardless of the outcome. In contrast, individuals with low self-efficacy tend to exhibit a more passive response and lack self-confidence when confronted with challenges. Their perceived career success is often influenced by external factors and social norms (Yeung, 2022).

In light of the findings presented in Judge (1997), it is evident that an individual's core self-evaluation encompasses not only their own assessment but also encompasses their perceptions of the work environment, organizational system, managerial approach within the organization, and the evaluation of their colleagues. Individuals with high core self-evaluation demonstrate positive attitudes toward their work philosophy, exhibit greater confidence in their abilities, and report greater satisfaction with their work outcomes (Judge et al., 2000). Rothbard and Wilk (2011) discovered that an employee's emotional state influences their perception of their job evaluation, which, in turn, affects their personal behavior. Individuals typically describe their feelings about a given situation based on their personal experiences, which in turn shape their attitudes, behaviors, and reactions at work (Judge et al., 2009). As Robbins (1993) posited, the significance of employees' attitudes within the organizational context is underscored, with attitudes being shaped by work behaviors.

The extant literature on retirement examines the exit of middle-aged workers from the labor force. This literature focuses on retirement adjustments, early retirement incentives, and retirement planning. However, there is a paucity of knowledge regarding gradual retirement for middle-aged workers. This is an increasingly important area of study, given the significant increase in the proportion of the workforce approaching retirement due to an aging population (Wang & Shultz, 2010).

## **Literature review**

### *Core self-evaluation*

The concept of core self-evaluations (CSE) represents a fundamental assessment of an individual's self-worth and capabilities. The concept was initially formulated by Packer (1985) as "core evaluation," which denotes an individual's subconscious disposition that elicits emotional and physical discomfort when confronted with novel

or divergent experiences, or when attempting to alter established behavioral patterns. This, in turn, influences the behavioral manifestations exhibited by the individual. Chiang et al. (2014) posit that core self-evaluations are also personal self-perceptions that can motivate an individual to seek out further work-related information and knowledge, as well as internal motivation.

The explanatory variable of job satisfaction was initially operationalized in CSE-related studies (Judge et al., 1998; Bono & Judge, 2003). Individuals with high core self-evaluations demonstrate a willingness to undertake challenging and meaningful work, thereby facilitating the revitalization of their core self-evaluative traits (Showry & Sayulu, 2017). The positive correlation between job commitment and job engagement is reinforced when core self-evaluation is high (Miu et al., 2020). Additionally, Judge et al. (1998) concluded that positive core self-evaluation is a potentially significant personality trait that predicts job satisfaction and that this trait affects not only job satisfaction but also variables related to job performance.

In their 1998 study, Judge et al. found that job satisfaction is positively correlated with positive attitudes toward one's core self-evaluations, whereas job dissatisfaction is inversely correlated with these attitudes. A positive relationship between core self-evaluation and self-targeting congruence has been demonstrated to affect job and life satisfaction. A number of standardized core self-ratings have been identified that can be used to predict core characteristics associated with job satisfaction and job performance in all previous studies (Judge & Bono, 2001).

In a series of studies, Judge et al. (2003) developed and tested the validity of the Core Self-Evaluation Scale (CSES), a direct and relatively brief measure of traits. The results of these studies were published in a single report. The results demonstrate that the 12-item scale is reliable, exhibits a single factor structure, and is significantly correlated with job satisfaction, job performance, and life satisfaction. The CSES is a valid measure that will undoubtedly prove useful in applied psychology research.

### *Subjective career success*

The term "career success" is defined as the positive work-related outcomes or psychological fulfillment that an individual accumulates over the course of their professional life. The concept of career success is typically divided into two distinct categories: objective success and subjective success. Objective indicators of career success include total compensation, number of promotions, and other external markers of personal achievement. In contrast, subjective indicators of career success are considered to be the degree to which an individual is satisfied with their job and career development.

Subjective career success can be defined as an individual's perception of their satisfaction with the promotion, appreciation, and fulfillment they receive from their

organization. This perception enhances the individual's identification with the organization and job satisfaction, which in turn leads to greater engagement in the workplace. Subjective career success is frequently defined as a psychological state of well-being, which arises from the perception of personal pride and the accomplishment of numerous life objectives, such as the attainment of success, psychological tranquility, and familial contentment. This definition is derived from personal judgment rather than organizational judgment (Ballout, 2009; Gattiker & Larwood, 1986).

Successful careers are frequently oriented towards both the individual and the organization. Individuals in organizations frequently prioritize work-life balance in their career development, particularly those in managerial roles who must reconcile the demands of work with the responsibilities of leadership. This dynamic can influence the subjective perception of career success among these managers (Sinem & Semra, 2020). For an individual, a successful career can be defined as a state of life satisfaction and psychological well-being (Hall, 1976, 2002). Scholars have noted that a successful career is not solely contingent on the individual, but also on the organization. The success of an individual employee is inextricably linked to the success of the organization (Judge et al., 1997). The impact of familial variables on subjective career success represents a significant avenue of investigation (Awan et al., 2021).

Upon reaching retirement age, professionally successful individuals assess their desire to retire in a gradual manner, taking into account a range of factors, including health, economic, social and interpersonal relationship, and time and living arrangements. These considerations extend beyond objective career success and reflect the subjective experiences and perceptions associated with career advancement. In general, subjective career success is gauged by salary levels and promotions, whereas objective career success is determined by an individual's level of satisfaction with their chosen profession.

In addition, Ng et al. (2005) posited that career success is contingent upon four predictors: human capital, organizational sponsorship, socio-demographic status, and stable individual differences. Hannes (2014) demonstrated that concern and confidence had a positive predictive effect on the two indicators of subjective career success.

Aryee et al. (2014) demonstrated that individuals with high core self-evaluation demonstrate the following characteristics:

1. They are able to focus on their work with optimism, adhere to their beliefs, and achieve their goals.
2. Individuals with high core self-evaluation tend to exhibit positive affect and a corresponding sense of enthusiasm about their work environments. They also demonstrate a tendency to engage in positive behaviors when confronted with challenges.
3. Those with high core self-evaluation traits are able to develop positive perceptions and evaluations of their work and abilities based on their self-worth and understanding.

In their 1998 study, Judge et al. reached the conclusion that individuals with high core self-evaluations are better able to confront reality and are less fearful of challenging work. They also exhibit high self-confidence in their ability to overcome obstacles, believe they can manage unexpected situations, and display an optimistic and assertive attitude. Shorbaji et al. (2011) posited that core self-evaluation has a significant impact on the profitability and overall performance of an organization. Consequently, the analysis of the findings of the study revealed a positive correlation between subjective career success and core self-evaluation. As demonstrated by Judge et al. (2005), a positive correlation between core self-evaluation and subjective goal congruence has a significant impact on career success and satisfaction. In conclusion, the following hypothesis is proposed:

*H1: Core self-evaluation has a positive influence on subjective career success.*

### *Gradual retirement*

The examination of gradual retirement is not a novel concept. Utilizing data from the 1960s and 1970s, researchers have determined that the majority of older workers who terminated their occupational employment opted for a form of gradual retirement rather than exiting the labor force (Quinn et al., 1990). Cahill and Quinn (2020) concentrated on three distinct types of transitions: phased retirement (a reduction in the amount of time spent working in a career), transitional employment (employment with a new employer), and re-entry into the labor force after traditional retirement.

Alternatively, the final years of employment may be shortened through a reduction in remuneration. This is according to Alan and Thomas (2000), who identify the following areas of flexibility: the workplace, the content of the work, the number of hours worked, the remuneration, or the point in time at which one engages in the work. Ruhm (1990) elucidates the timing of gradual retirement as the point at which an individual can diminish their workload or hours while continuing to perform the duties of their position, or alternatively, take a sabbatical and subsequently resume their duties. Tunga and Arthur (2008) additionally propose that this encompasses instances where an individual departs from their previous employer to pursue alternative employment or to establish their own venture.

The reemployment of the elderly has emerged as a global phenomenon, with the challenges and complexities encountered by those in the workforce exhibiting notable similarities. In addition to the implementation of public policies, private enterprises must provide opportunities for lifelong learning for their employees. This allows individuals to contemplate their future after retirement and to develop a second area of expertise, thereby enhancing their competitiveness in the workplace and reinvigorating their professional lives (Lu, 2018).

As indicated by data from the Organization for Economic Cooperation and Development (OECD, 2015) spanning the period from 2007 to 2012, the current statutory

retirement age across the globe falls within the range of 60 to 65 years of age. However, the actual retirement age is observed to be considerably lower, with a mean of 55 to 70 years. The demand for work in gradual retirement is influenced by economic conditions. Chen et al. (2016) have indicated that economic conditions exert an influence on the job demands associated with different forms of gradual retirement. In general, the elderly with unstable income are more likely to consider the possibility of engaging in articulated work, while the elderly with stable income or high income are more likely to pursue the opportunity to develop a career again after retirement. The two groups of people with significant differences in economic conditions have markedly disparate circumstances in terms of their demands for gradual retirement. In terms of the demand for progressive retirement, those with high income have greater flexibility in terms of planning to remain in their original position or to continue to develop their expertise in appropriate roles.

Mittal and Kamakura (2001) posit that when an individual's identification with the organization and job satisfaction are higher, the more he or she is able to view his or her work in a positive light. This, in turn, calls for his or her intrinsic motivation to be stronger, enabling him or her to dedicate his or her life's ambition to his or her work and encouraging his or her willingness to engage in progressive retirement. Those engaged in physically demanding occupations are less likely to engage in progressive retirement. In the absence of alternative incentives, such as increased allowances, promotions, and improved financial conditions, middle-aged and elderly individuals are likely to withdraw from the labor market (Chuang, 2013).

As noted by Freund (2005), Halbesleben and Wheeler (2008), and Price (2001), there is a correlation between subjective career success and gradual retirement. In their professional endeavors, individuals who are considering retirement integrate their personal goals, interests, and benefits with the goals and work of the organization. They promote the growth and development of the organization by assisting the growth and development of the individual. A strong sense of dedication and affirmation, along with a display of professionalism, has a considerable influence on the decision to pursue gradual retirement. Secondly, when employees are able to fulfil their needs for promotion, appreciation and a sense of achievement within the organisation, and strengthen their identification with the organisation and job satisfaction, they will become more engaged in their work. This will have a significant impact on their adoption of progressive retirement. In conclusion, the following hypothesis is proposed:

*H2: The subjective perception of career success has a positive effect on the decision to gradually retire.*

In a study examining the factors influencing job satisfaction, Seashore and Taber (1975) posited that both environmental and individual factors play a role in determining an individual's level of job satisfaction. Chiang et al. (2014) further proposed that core self-evaluation is a significant predictor of job satisfaction and job performance.

Guo and Cheng (2021) demonstrate a positive correlation between the level of job satisfaction and the willingness to opt for gradual retirement. In other words, the higher the level of job satisfaction, the higher the willingness to opt for gradual retirement. Some self-employed middle-aged and senior citizens are more likely to adopt gradual retirement because their working hours are more flexible, they can adjust their overall work content, they are less restricted by changes in the labor market, and they are less likely to end their jobs because they are more deeply committed to their jobs and have a high degree of job identity. Conversely, middle-aged and elderly individuals with low core self-assessed levels of job satisfaction tend to retire early (Kim & DeVaney, 2005; Cahill, Giandrea, & Quinn, 2006). In conclusion, the following hypotheses were derived:

*H3: The subjective success of one's career serves as a mediating factor in the relationship between one's core self-evaluation and the decision to retire gradually.*

### *Work meaningfulness*

As defined by Jane (2001), the meaning of work is the comprehension of one's role, expectations, and the capacity to direct one's own life. As defined by Eckert et al. (1999), the meaning of work is the capacity of an individual to achieve their full potential within the workplace, aligning their personal beliefs, motivations, and values with the interactions of others, including colleagues, leaders, groups, families, organizations, communities, and the environment.

The concept of work has been a topic of extensive investigation by scholars. Work meaning is a multifaceted construct that is shaped by an individual's motivation and values (Mor-Barak, 1995). It can be seen as a reflection of the benefits and outcomes that an individual can derive from their work. Lee (2019) found that the social, personal, and hereditary perceptions of work meaning have a mediating effect between age and work motivation. The age of an individual not only affects their perception of the importance of work, but also their motivation to work. The findings indicate a mediating effect, whereby age not only affects the importance of work meaning perception for the individual, but also the work motivation of middle-aged and older workers. Through the individual's perception of the meaning of work, work motivation can be enhanced, which is consistent with the results of the study by Mor-Barak (1995). These benefits and outcomes can satisfy the needs of the individual and realize the value of the individual (Fasbender et al., 2016).

The meaning of work is contingent upon an individual's capacity to discern or comprehend the objective of engaging in work-related activities (Rosso et al., 2010). Denis and Reni (2021) posit that an individual's perception of work is wholly contingent upon their individual perception. The extensive working experience accumulated by middle-aged and senior workers over the years cannot be directly replaced

by the abilities of young people (Wu & Lin, 2021). Middle-aged and senior staff members possess substantial professional work experience. If enterprises can make effective use of these individuals as internal trainers and serve as trainers or counselors for new employees, middle-aged and senior employees, and the enterprises themselves, all parties will benefit.

In her study on work meaning, work conditions, and gradual retirement, Hsieh (2017) found that work meaning was significantly related to gradual retirement. Furthermore, both work engagement and affirmation and work professionalism were significantly and positively related to gradual retirement. Mittal and Kamakura (2001) demonstrated that individuals who hold a more positive view of their work experience an intrinsic motivational drive to engage in their work, and that those who are highly engaged in their work are more likely to consider a gradual retirement.

In conclusion, the relationship between inferred work meaning and subjective career success in the context of gradual retirement offers a potential hypothesis:

*H4: The meaning of work serves to moderate the relationship between subjective career success and gradual retirement.*

## **Research methodology**

### *Measurement Instrument*

A comprehensive search of the Google academic search field was conducted for the following terms: “Core self-evaluation,” “Subjective career success,” “Meaning at Work Scale,” and “Gradual retirement scale.” The search yielded over 3,000 citations for “Core self-evaluation,” over 457 citations for “Subjective career success,” over 2,000 citations for “Meaning at Work Scale” and “Gradual retirement scale,” and a total of over 2,000 citations for the search period, which spanned from 1960 to 2023. The scales examined in the study were developed through the use of academically recognized sources, which were also utilized in relevant prior research. The scales consisted of survey questions with recognized validity and reliability. The empirical study was conducted using questionnaires to analyze the data collected. The research instrument consisted of five main sections. The first section was the Core Self-Evaluation Scale, the second section was the Subjective Career Success Scale, the third section was the Meaningfulness at Work Scale, the fourth section was the Graduated Retirement Scale, and the fifth section was the Basic Personal Information section. The aforementioned scales were based on the respondents’ personal sentiments and were self-administered by the respondents.

The Core Self-Evaluation Scale (CSES) employs the definition of “core self-evaluation” as proposed by Judge et al. (1998). This conceptualization of core self-evaluation is understood as a personality trait that encompasses an individual’s fundamental

values and self-assessment. Core self-evaluation is closely related to self-awareness and is comprised of four distinct components. These include self-esteem, generalized self-efficacy, locus of control, and emotional stability (Judge & Kammeyer, 2011). The scale was derived from a 12-item instrument developed by Judge et al. (2003) through an inductive and deductive approach.

The Subjective Career Success Scale was derived from the work of Shockley et al. (2015) and comprises a total of 24 items, which are grouped into eight factors. The aforementioned factors are as follows: recognition, quality work, meaningful work, influence, authenticity, personal life, growth and development, and satisfaction.

The Meaning at Work Scale was derived from Steger et al. (2012) Meaning at Work Questionnaire, which comprises 10 items assessing three factors: positive sense of meaning, meaning derived from the work process, and motivation to perform better.

The Gradual Retirement Scale was derived from a scale developed by Kalođerinos et al. (2015), which included four questions and two additional questions referencing the prevailing gradual retirement model in Taiwan. The total number of questions included in the Gradual Retirement Scale was thus six.

The data were collected using a six-point Likert scale, with six options ranging from “strongly agree” to “strongly disagree,” on a scale of one to six.

### *Sampling*

To prevent the data from being biased by the influence of a single industry or company and to ensure the sample was sufficiently diverse to allow for the extrapolation and application of results to related industries, the study was conducted on the basis of dispersing the data across different sectors and job levels without limiting the number of employees to any particular industry. The target population was the working population aged 55 or above. Additionally, the study concentrates on elderly workers in private enterprises who are not employed by public organizations or state-run enterprises. This encompasses individuals currently employed, approaching retirement age, or who have retired and subsequently returned to the workforce, whether in part-time roles, undertaking temporary assignments, or engaging in volunteer activities.

This study employed a quantitative methodology, whereby respondents evaluated the data collection process through self-administration. The survey was conducted using purposive sampling and snowballing techniques. The questionnaires were distributed in several formats, including paper, via hand delivery, by mail, and online.

Due to the considerable number of inquiries and to circumvent the common method variance (CMV) scenario, the process was divided into two distinct phases. In the initial phase of the study, the questionnaire included items pertaining to core self-evaluation, job meaning, and subjective career success. In the subsequent phase, the questionnaire was modified to include items pertaining to gradual retirement in-

tention. The questionnaires were distributed from late December 2022 to June 2023, with the target population comprising individuals residing in the north-central region of Taiwan.

A total of 450 questionnaires were distributed for analysis purposes. The research targets were employees from a variety of departments and positions, with no restrictions on the number of employees from different industries. In accordance with the principle of decentralization, the in-service population over the age of 55 was selected as the target population for the study. To ensure the reliability and accuracy of the data, the questionnaires were validated. The responses to the same option exhibited inconsistency, with some respondents providing answers that differed from those given before and after the questionnaires were distributed. Furthermore, a number of questionnaires were excluded from the analysis due to incomplete personal information, failure to answer three questions, and discrepancies in reported age. Following the removal of the invalid questionnaires, the final sample size comprised 379 valid responses, representing an 84.2% recovery rate.

Following the collection of data, a summary and description of the data were generated using the statistical software package SPSS. The gender distribution of the sample is as follows: The sample consisted of 39.8% males and 60.2% females. With regard to education level, 3.4% had completed junior high school or below, 21.4% had completed high school or middle school, 19.0% had completed college, 29.6% had completed university, and 26.6% had completed graduate school or above. The age group of the respondents was divided into three regions: the first group was 55 to 59 years old, the second group was 60 to 64 years old, and the third group was 65 years old or above. The distribution of the tested samples according to the analytical method employed was as follows: 64.6% for Group I, 28.0% for Group II, and 7.4% for Group III. Descriptive results are presented in Table 1 below.

Table 1: The distribution of the sample size is as follows:

| Basic Information | Category                      | Number | Percentage (%) | Average | Standard Deviation |
|-------------------|-------------------------------|--------|----------------|---------|--------------------|
| Gender            | Male                          | 151    | 39.8           |         |                    |
|                   | Female                        | 228    | 60.2           |         |                    |
| Education Level   | Junior high school (or below) | 13     | 3.4            |         |                    |
|                   | Higher (middle)               | 81     | 21.4           |         |                    |
|                   | Specialized                   | 72     | 19.0           |         |                    |
|                   | University                    | 112    | 29.6           |         |                    |
|                   | Graduate school or above      | 101    | 26.6           |         |                    |
| Age Group         | 55 to 59                      | 245    | 64.6           | 58.85   | 3.815              |
|                   | 60 to 64                      | 106    | 28.0           |         |                    |
|                   | 65 or above                   | 28     | 7.4            |         |                    |

### *Scale Validity and Reliability*

The results of the reliability and validity test (Confirmatory Factor Analysis, CFA) of the Core Self-Evaluation Scale (CSES) indicate that the overall construct Cronbach's  $\alpha$  was 0.931, exceeding the 0.7 threshold, thereby demonstrating satisfactory consistency among the items. In terms of the scale's validity, the  $t$ -value for each item was statistically significant ( $t > 1.96$ ), and the standardized coefficients were also significant ( $p < 0.05$ ). Furthermore, the SMCs were all greater than 0.2, thereby indicating that the scale is reliable. The CR (composite reliability) value of 0.931 exceeded the 0.6 threshold, the AVE (average variance extracted) was 0.599, and the AVE was greater than 0.36, which is still within the acceptable range (Fornell & Larcker, 1981). Furthermore, the overall convergent and discriminant validity is deemed satisfactory. Furthermore, the results of the empirical factor analysis indicate that the model is statistically significant ( $\chi^2 = 95.799$ ,  $df = 26$ ,  $\chi^2/df = 3.685$ ), with a goodness of fit index (GFI) of 0.946, a adjusted goodness of fit index (AGFI) of 0.907, a comparative fit index (CFI) of 0.969, a non-normed fit index (NNFI) of 0.959, a root mean square error of approximation (RMSEA) of 0.084, and a standardized root mean square residual (SRMR) of 0.031. This demonstrates the suitability of the values of each variable, indicating that the validity of each is acceptable.

The Cronbach's  $\alpha$  of the Subjective Career Success Scale (CFA) exhibited a range of 0.893 to 0.904, with a value exceeding 0.7 indicative of robust inter-item consistency. In terms of the scale's validity, the  $t$ -value for each item is statistically significant ( $t > 1.96$ ), and the standardized coefficients are also statistically significant ( $p < 0.05$ ). Moreover, the SMC exhibits a reliability coefficient of greater than 0.2, indicating satisfactory reliability. Moreover, the component reliability and average variance extracted from the scale indicate that the Cronbach's alpha coefficient is 0.984, which exceeds the 0.6 threshold, while the average variance extracted is 0.722, which surpasses the 0.5 benchmark. Moreover, the  $t$ -value is statistically significant, thereby ensuring that the scale exhibits the requisite convergent and discriminant validity. It can therefore be concluded that the overall convergent and discriminant validity is appropriate. The results of the confirmatory factor analysis indicated that the model exhibited an acceptable level of reliability and validity, with a  $\chi^2$  value of 540.984,  $df = 234$ ,  $\chi^2/df = 2.312$ , GFI = 0.90, CFI = 0.963, NNFI = 0.936, RMSEA = 0.059, and SRMR = 0.037.

In terms of the reliability of the Work Meaning Scale (CFA), the overall construct Cronbach's alpha is 0.958, which is greater than 0.7, indicating good inter-item consistency and, therefore, the reliability of the scale. In terms of the scale's validity, the SMCs all reached the 0.2 standard, the  $t$ -values were significant ( $t > 1.96$ ), and the standardized coefficients were highly significant. This suggests that the scale exhibits acceptable convergent validity in general. Furthermore, the composite reliability (CR) was 0.957, the average variance extracted (AVE) was 0.688, and the results of the validated factor analysis of the pertinent indicators using the component reliabil-

ity and average variance extractions demonstrated that  $\chi^2 = 113$ . The results yielded a value of 767, with a degree of freedom (df) of 30, a ratio of  $\chi^2/\text{df}$  of 3.792, a goodness-of-fit index (GFI) of 0.941, an adjusted goodness-of-fit index (AGFI) of 0.892, a comparative fit index (CFI) of 0.978, a non-normed fit index (NNFI) of 0.970, an root mean square error of approximation (RMSEA) of 0.086, and a standardized root mean square residual (SRMR) of 0.027. Although the chi-squared to degree of freedom ( $\chi^2/\text{df}$ ) and root mean square error of approximation (RMSEA) values were slightly elevated, they remained within the acceptable range. The remaining fitness indicators demonstrated favorable values. The overall validity test results were deemed to be acceptable, and the scale was determined to be reliable and valid.

The reliability and validity of the Gradual Retirement Scale (GRS) as measured by the Confidence Factor Analysis (CFA) indicated that the overall construct Cronbach's  $\alpha$  was 0.804, which exceeded the 0.7 threshold, indicating a satisfactory degree of inter-item consistency. Consequently, the scale demonstrated an acceptable level of reliability. In terms of the scale's validity, the SMCs all met the 0.2 standard, the t-values were statistically significant ( $t > 1.96$ ), and the standardized coefficients were all highly significant with acceptable convergent validity. Furthermore, the component reliability and average variance extractions yielded a CR of 0.772, an AVE of 0.383, and the results of the validated factor analysis of the relevant indicators indicated that  $\chi^2 = 21$ . The results yielded a value of 426, with a degree of freedom (df) of 6 and a Chi-square/degree of freedom ( $\chi^2/\text{df}$ ) ratio of 3.571. Additionally, the Goodness of Fit Index (GFI) and the Adjusted Goodness of Fit Index (AGFI) demonstrated values of 0.982 and 0.936, respectively. The Comparative Fit Index (CFI) and the Non-Normed Fit Index (NNFI) exhibited values of 0.980 and 0.973, respectively. The Root Mean Square Error of Approximation (RMSEA) yielded a value of 0.082, while the Standardized Root Mean Square Residual (SRMR) yielded a value of 0.980. The RMSEA, CFI, NNFI, and SRMR values were all within an acceptable range. The RMSEA was 0.082, and the SRMR was 0.038. Although the  $\chi^2/\text{df}$  and RMSEA indices were marginally elevated, they remained within the acceptable range, and the remaining fitness indicators exhibited acceptable values. Consequently, the overall validity test results were deemed acceptable, and the scale was found to be reliable and valid.

## Results and discussion

### *Related Analysis*

A correlation analysis was employed to investigate the interrelationships between CSE, SCS, WM, and GR. The results are presented in Table 2.

Table 2: Correlation Analysis

|       | Sample statistic |       |         | Pearson Correlation |         |         |         |
|-------|------------------|-------|---------|---------------------|---------|---------|---------|
|       | N                | Mean  | Std Dev | 1.CSE               | 2.SCS   | 3.WM    | 4.GR    |
| 1.CSE | 379              | 4.639 | .763    | (0.931)             |         |         |         |
| 2.SCS | 379              | 4.538 | .762    | .690**              | (0.888) |         |         |
| 3.WM  | 379              | 4.757 | .890    | .545**              | .708**  | (0.958) |         |
| 4.GR  | 379              | 3.821 | 1.106   | .163**              | .263**  | .231**  | (0.804) |

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

The results of the correlation analysis demonstrated a significant positive correlation between the variables. The initial correlation coefficient between CSE and SCS was 0.690, indicating a highly positive correlation ( $p < 0.01$ ). These findings align with those of Sinem and Semra (2020), who demonstrated that individuals with high core self-evaluation possess superior control over their ability to balance their personal and professional lives.

Secondly, the correlation coefficient between SCS and GR is 0.263, indicating a low positive relationship ( $p < 0.01$ ). The aforementioned result is contingent upon the assumption that individuals who are subjectively successful in their careers are more likely to demonstrate an enhanced proclivity to pursue gradual retirement. Moreover, they are more likely to remain in their original field of work or continue to focus on the optimal position (Chen et al., 2016).

Third, the correlation coefficient between CSE and SCS was 0.690, indicating a strong positive correlation with a statistically significant  $p$ -value of less than 0.01. The correlation coefficient between CSE and GR was 0.163, indicating a weak positive correlation with a statistically significant  $p$ -value of less than 0.01. A review of the literature reveals that Hou and Qiao (2017) empirically demonstrated that core self-evaluation not only motivates individuals to acquire more work-related knowledge but also stimulates intrinsic motivation towards work and facilitates continuous career development. A significant positive correlation between self-rated job satisfaction and subjective career success on the propensity for gradual retirement indicates that as job satisfaction in career development increases, so does the willingness for gradual retirement (Chen, 2019; Lu, 2018). In light of the aforementioned analysis, it can be posited that there is a positive correlation between core self-evaluation and subjective job success with regard to gradual retirement.

Fourth, the correlation coefficient between WM and SCS was 0.708, indicating a strong positive correlation ( $p < 0.01$ ). The correlation coefficient between WM and GR was 0.231, indicating a low positive correlation ( $p < 0.01$ ). As demonstrated by the empirical study conducted by Hsieh (2017), in the study of job significance, labor conditions, and progressive retirement, it was found that when job significance is significantly related to progressive retirement, individual job commitment and affirmation, and job professionalism are significantly and positively related to progressive retirement.

The findings suggest that work meaning is a process of career development. Individuals who are more satisfied with their jobs and whose values are more consistent are more likely to find purpose and value in their work, which in turn strengthens their desire for gradual retirement.

### *Regression Analysis*

Regression analysis is a statistical method employed to examine the relationship between two or more variables. The method allows the researcher to ascertain whether there is a correlation between the variables, to determine the direction and strength of the correlation, and to develop a mathematical model that allows the observation of specific variables in order to predict the variables of interest. The mediated effects test, as originally proposed by Baron and Kenny (1986), represents a traditional approach to testing mediation. However, this test is complex and may fail to account for the influence of indirect effects. In light of these considerations, Preacher and Hayes (2004) put forth the Sobel test as an alternative for testing mediated effects. Accordingly, this study utilized the Sobel test, as recommended by Preacher and Hayes (2004). The results of the analysis are presented in Tables 3 and 4.

Table 3: Displays the direct and total effects of subjective career success mediation.

|            | Coefficient | Standard Error | t       | Significance |
|------------|-------------|----------------|---------|--------------|
| CSE→GR     | .2362       | .0737          | 3.2061  | .0015        |
| CSE→SCS    | .6888       | .0373          | 18.4880 | .0000        |
| CSE·GR→SCS | .4178       | .0997          | 4.1927  | .0000        |
| SCS·GR→CSE | .0516       | .0995          | -.5188  | .6042        |

The results of the analysis of the total effect of the independent variables on the dependent variables of the study variables are presented herewith for your consideration. As illustrated in Table 3, the total effect of the independent variable “CSE” on the dependent variable “GR” is statistically significant and not equal to 0, with a regression coefficient of 0.2362. The significance of this effect is 0.0015 ( $p < 0.001$ ), indicating a significant positive effect. In light of the aforementioned evidence, it can be concluded that the research hypothesis H1 is supported.

The results of the analysis of the effect of the independent variables on the mediator variables are presented herewith. Table 3 indicates that the effect of the independent variable CSE on the mediator variable SCS is significant and not equal to 0. The coefficient of reciprocity is 0.6888, and the significance of this effect is 0.0000, which is a significant positive effect at the standardized level ( $p < 0.001$ ). This supports the hypothesis H2.

The results of the analysis of the effect of the mediator variable on the dependent variable, controlling for the independent variables of the study variables, are presented below. As demonstrated in Table 3, the influence of the mediator variable, SCS, on the dependent variable, GR, when controlling for the independent variable, CSE, is not null. Its coefficient of regression is 0.4178. The significance of this effect is 0.0000, which is significant at the standardized level ( $p < 0.001$ ), thereby supporting hypothesis H3.

The results of the analysis of the direct effect of the independent variables on the dependent variables, controlling for the mediating variables of the study variables, are presented herewith. As illustrated in Table 3, when the mediator variable SCS is held constant, the direct effect of the independent variable CSE on the dependent variable GR is not statistically significant.

The results of the analysis of the direct effect of the mediator variable on the dependent variable, controlling for the independent variables of the study variables, are presented below. As illustrated in Table 3, the direct effect of the mediator variable, SCS, on the dependent variable, GR, is statistically significant when the independent variable, CSE, is controlled.

Table 4: The results of the Sobel test analysis on the effectiveness of intermediation are presented herewith

| Analysis of Indirect Effects of Normal Distribution |                       |                |                 |                 |                        |                 |                 |
|---|-----------------------|----------------|-----------------|-----------------|------------------------|-----------------|-----------------|
|   | Indirect Effect Value | Standard Error | 95% lower limit | 95% upper limit | Standardized value (Z) | Significance    |                 |
| Effect  | .2878                 | .0705          | .1497           | .4259           | 4.0832                 | .0000           |                 |
| Indirect Effect Analysis of 5000 Repeated Samples   |                       |                |                 |                 |                        |                 |                 |
|   | Indirect Effect Value | average        | Standard Error  | 99% lower limit | 95% lower limit        | 95% upper limit | 99% upper limit |
| Effect  | .2878                 | .2846          | .0788           | .0816           | .1360                  | .4465           | .4980           |

This study employed a single-time sample to ensure consistency with the underlying assumptions of the normative allocation. To this end, the Sobel test method, as outlined by Preacher and Hayes (2004), was employed. To assess the potential for indirect mediation effects, 5,000 iterations of bootstrap testing were performed using the SPSS software. Table 4 presents the findings of the Sobel test analysis of the mediation effect. The results indicate that the mediation effect is statistically significant if the 95% confidence interval for the indirect effect (0.1360, 0.4465) does not include zero.

In summary, the results presented in Tables 3 and 4 support the research hypothesis H3, indicating that SCS plays a mediating role in the relationship between CSE and the dependent variable GR.

The results of the mediation effect analysis model (WM) are presented in Table 5.

Table 5: Presents the results of the mediation analysis between (WM), (SCS), and (GR).

|                        | (GR)   |          |          |          |
|------------------------|--------|----------|----------|----------|
|                        | Mode 1 | Mode 2   | Mode 3   | Mode 4   |
| Control Variables      |        |          |          |          |
| Gender                 | -.039  | -.062    | -.070    | -.072    |
| Age                    | -.001  | -.037    | -.042    | -.043    |
| Educational attainment | .145   | .110     | .100     | .100     |
| Self-variables         |        |          |          |          |
| (SCS)                  |        | .260***  | .204**   | .199**   |
| Adjustment Variables   |        |          |          |          |
| (WM)                   |        |          | .083     | .100     |
| (SCS)x(WM)             |        |          |          | .052     |
| $R^2$                  | .023   | .088***  | .092     | .094     |
| $F$                    | 2.961  | 9.056*** | 7.522*** | 6.440*** |
| $\Delta R^2$           |        | .065     | .004     | .002     |
| $\Delta F$             |        | 6.095    | 1 -1.534 | -1.082   |

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

As demonstrated in Table 5, the Model 1 regression analysis, which included the control variables of gender, age, and education, yielded a 0.23% ( $R^2 = 0.023$ ) variance in the sample data for (GR). The  $F$ -value of 2.961 was not statistically significant, indicating that the background of the sample did not exert an influence on (GR).

In Model 2, the autocovariate (SCS) was incorporated, and the regression analysis yielded 8.8% ( $R^2=0.088$ ) of the variance of (GR), with  $F=9.056$  ( $p<0.001$ ). The  $\beta$ -value of the regression coefficient was 0.260 ( $p<0.001$ ), indicating that (SCS) had a significant effect on (GR). The result of the H3 test in the present study was confirmed.

In Model 3, the introduction of the moderator variable (WM) resulted in a notable alteration in the explanatory variance of (GR) ( $\Delta R^2 = 0.004$ ). The regression coefficient  $\beta$  was 0.083, and the  $p$ -value was greater than 0.05, indicating that the influence of WM on GR was not statistically significant.

The interaction between Mode 4 and WM had an effect on GR variance ( $R^2$  change = 0.002), with a regression coefficient of  $\beta = -0.052$  and a  $p$ -value greater than 0.05. This indicates that the interaction between Mode 4 and WM had no effect on GR, thereby rejecting the hypothesis H4 of this study.

## Conclusion and further research

The findings of this study were subjected to empirical testing to ascertain their veracity. Four hypotheses were subjected to empirical testing: (1) The results of this study indicate that core self-evaluation has a positive effect on subjective career success. These findings are consistent with those of previous studies by Judge et al. (1997) and

Chen and Lin (2018), which similarly demonstrated a positive association between core self-evaluation and subjective career success. (2) Job meaning has a positive effect on subjective career success. These findings replicate those of Seibert et al. (1999), Pratt and Ashworth (2003), and Lee (2019), which confirm the positive effect of job meaning on subjective career success. (3) In addition to financial and professional achievements, individuals who are successful in their subjective career are driven by a profound passion for their work. This passion is grounded in a profound sense of self-awareness and an understanding that the value of hard work can bring about a sense of personal fulfilment and happiness. Consequently, this affords them greater flexibility, diversity, stability, and security in the process of career development. Moreover, they exhibit a proclivity for planning a gradual retirement and a gradual withdrawal from the labor market. The results of this study are consistent with those of Zhan et al. (2015) and Kuo (2016), which reaffirmed the positive mediating effect of subjective career success on core self-evaluation and gradual retirement. (4) The construct of job meaning serves as a mediator between subjective career success and the phenomenon of gradual retirement. As previously stated, the construct of subjective career success exerts a positive influence on the phenomenon of gradual retirement.

These individuals are recognized for their exemplary performance, the quality and significance of their work, and their capacity to consistently offer valuable contributions to their organizations and colleagues. Such individuals are amenable to reducing their working hours or modifying their duties with respect to various aspects of their work, including the workplace, working hours, job content, salary, or hours of work. This ultimately results in their gradual withdrawal from the labor market. The findings of scholars such as Pratt and Ashworth (2003) and Lee (2019) have consistently demonstrated that transmission represents the pinnacle of work-related meaning. Individuals may derive purpose and value from their work, which can enhance their motivation to pursue opportunities and advance their careers.

This study presents a synthesis of the findings and offers several recommendations for future research :

1. It is recommended that organizations consider the following suggestions: By modifying the job description to align with actual requirements or by reducing the criteria for hiring part-time employees, organizations can enhance their flexibility and customize their staffing utilization strategies. This approach may facilitate a greater inclination among middle-aged and senior citizens to pursue a gradual retirement plan.
2. The following list provides suggestions for potential research subjects: A notable proportion of middle-aged and senior workers, defined as those over the age of 55, have been employed by the same organization for an extended period. Despite demonstrating proficiency in the requisite skills, they are confronted with the challenge of transitioning to alternative employment, being laid off, or being

forced to retire due to the organization's consideration of manpower costs. It is thus recommended that the findings of the qualitative research be supplemented by those of the qualitative interview study in subsequent years, in addition to the qualitative findings, in order to gain a deeper understanding of the aspirations of middle-aged and elderly employees for gradual retirement. This will facilitate the development of human resource utilization strategies within the context of business organizations.

The following section outlines the limitations of this study:

1. The study's respondents were selected from a pool of middle-aged and elderly individuals seeking employment. Due to their educational background and other factors, the respondents indicated that the questionnaire questions lacked sufficient concision, necessitating additional time to comprehend their meaning. This resulted in difficulties in responding to the questionnaires. It is recommended that, in addition to the findings from this quantitative study, subsequent years should supplement these discoveries through qualitative interview research to deepen understanding of middle-aged and older employees' expectations for phased retirement. This approach will facilitate the development of human resource utilization strategies within the organizational context.
2. It would be beneficial to pursue further research into the following areas : The middle-aged and elderly workers in the labor market and the majority of business organizations are largely unacquainted with the gradual retirement system that has been promoted by the government. This lack of familiarity may have an impact on the results of the questionnaire collection.
3. The present study reveals the moderating effect of core self-evaluation on the gradual retirement process among middle-aged and older workers, with the concept of subjective occupational success exerting a positive influence on gradual retirement phenomena. Consequently, the cultivation of generational competencies among middle-aged and older employees is imperative to ensure their continued participation in the labor market, thereby enhancing organizational performance and diversity while mitigating entrepreneurial risks. The cultivation of their entrepreneurial spirit has been demonstrated to contribute to the progressive establishment of more concrete and comprehensive retirement systems by organizations.

## **Declarations/acknowledgement**

### *Funding*

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

### *Conflicts of interest/Competing interests*

There is no conflict of interest/Competing interests

### *Availability of data and material*

All data and materials were collected through a questionnaire survey. The data is highly reliable. The data supporting the conclusions of this study are publicly available.

### *Code Availability*

The computer program results are shared through the tables in the manuscript.

### *Authors' Contributions*

**Shih-Nien Lee:** Conceptualization, Formal analysis, Visualization, Writing - review and editing. **Ton-Chu Chang:** Investigation, Data curation, Writing - original draft. **Shu-Huei Lin:** Supervision, Review.

## REFERENCES

- Abele, A. E., Hagmaier, T., & Spurk, D. (2016). Does career success make you happy? The mediating role of multiple subjective success evaluations. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 17(4), 1615–1633. <https://doi.org/10.1007/s10902-015-9662-4>
- Alan Gustman & Thomas L Steinmeier.(2000).Retirement in dual-career families: a structural model. *Journal of Labor Economics*, 2000, vol. 18, issue 3, 503-45.
- Aryee, M. J., Jaffe, A. E., Corrada-Bravo, H., Ladd-Acosta, C., Feinberg, A. P., Hansen, K. D., et al. (2014). Minfi: a flexible and comprehensive Bioconductor package for the analysis of Infinium DNA Methylation microarrays. *Bioinformatics* 30, 1363–1369. doi: 10.1093/bioinformatics/btu049
- Awan, K., Ahmad, N., Naveed, R. T., Scholz, M., Adnan, M., & Han, H. (2021). The impact of work-family enrichment on subjective career success through job engagement: A case of banking sector. *Sustainability*, 13(16), 8872.
- Ballout, H. I. (2009). Career commitment and career success: moderating role of self-efficacy. *Career Development International*, 14(7), 655-670.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bono, J. & Judge,T.(2003) . Self-concordance at work: Toward understanding the motivational effects of transformational leadership. *Academy of Management Journal*, 46:554-571.

- Cahill, K. E., & Quinn, J. F. (2020). The importance of gradual retirement in America today. *Public Policy & Aging Report*, 30(3), 107-112.
- Cahill, K. E., Giandrea, M. D., & Quinn, J. F. (2006). Retirement Patterns from Career Employment. *The Gerontologist*, 46(4), 514–523. <https://doi.org/10.1093/geront/46.4.514>
- Chen, Chun-Hsi & Lin, Chiu- Hui.(2018). Proactive Personality and Career Success: The Mediating Effect of Achievement Striving. *East Coast Management Review*; Vol 20, Issue 1 (2018 / 07 / 01) , P97 - 130.
- Chen, Ganghua., Shi Huimin., Zhao, Lijun., & Huang Songshan. (2021). Are Backpackers Unique? A Comparative Analysis of the Core Self-evaluation between Chinese Backpackers and Mass Tourists. *Tourism Tribune / Lyou Xuekan*; 2021, Vol. 36 Issue 10, p125-139, 15p
- Chen, Kuanjeng., Wan-Chun Chuang., & Chingli Yang. (2015). “Factors Influencing Gradual Retirement among Middle-Aged and Older Workers in Taiwan,” *Journal of Human Resource Management* ,15(1): 87-108.
- Chen, Wei-Chou (2019). *A Study on the Relationships between Job Embeddedness and Turnover Intention of Employee in Taiwan Technology Industry: The Moderating Role of Job Satisfaction*. (Master’s thesis. Fu Jen Catholic University).<https://hdl.handle.net/11296/ct53bq>
- Chiang, Y. H. Hsu, C. C. & Hung, K. P. (2014). Core self-evaluation and workplace creativity. *Journal Of Business Research*,67,1405-1413.
- Chuang, S. C. (2013). Time pressure and the endowment effect. *Journal of Applied Social Psychology*, 43, 4313-4323.
- Denis Waitley, Reni L. Witt. (2021). *The joy of working: The 30 day system to success, Wealth, and Happiness on the Job*. Commonwealth Publishing Co., Ltd..
- Eckert, K. J., Cox, D., & Morgan, L. A. (1999). The meaning of family-like care among operators of small board and care homes. *Journal of Aging Studies*, 13, 333-347.
- Fasbender, U., Wang, M., Voltmer, J.-B., & Deller, J. (2016). The meaning of work for post-retirement employment decisions. *Work, Aging and Retirement*, 2, 12–23. <https://doi.org/10.1093/work-ar/wav015>.
- Freund, A. (2005). Commitment and Job Satisfaction as Predictors’ Turnover Intentions among Welfare Workers. *Administration in Social Work*, 29, 5-21.[http://dx.doi.org/10.1300/J147v29n02\\_02](http://dx.doi.org/10.1300/J147v29n02_02)
- G20 (2019) “Framework Working Group Summary Document on Macroeconomic: Implications of Population Aging,” May 31; IMF(2019), “Macroeconomics of Aging and Policy Implications,” G-20 Background Note, Jun. 5.
- Gattiker, U. E., & Larwood, L. (1986). Subjective career success: a study of managers and support personnel. *Journal of Business and Psychology*, 1(2), 78-94.
- Guo, Jia-yue., & Cheng, Yao-chung. (2021). Research on the Relationship between Job Satisfaction and the Intention to Stay in Various Industrial and Occupational Categories in Taiwan. *Journal of National Quemoy University*.Volume 9(2), 2021.10, 97-120
- Halbesleben, J.R.B. & Wheeler, A.R. (2008). The Relative Roles of Engagement and Embeddedness in Predicting Job Performance and Intention to Leave. *Work & Stress*, 22, 242-256.<http://dx.doi.org/10.1080/02678370802383962>
- Hall, D. T. (1976). *Careers in organizations*. Glenview, IL: Scott, Foresman.
- Hall, D. T. (2002). *Careers in and out of organizations*. Thousand Oaks, CA: Sage Publications.
- Hannes, Z. (2014). Career adaptability predicts subjective career success above and beyond personality traits and core self-evaluations. *Journal of Vocational Behavior*. Volume 84, Issue 1, February 2014, Pages 21-30
- Hou, Dianmu, & Qiao, Congcong. (2017). Exploring the relationship between core self-evaluation and job satisfaction. *Management Insights* (18), 4. DOI: CNKI:SUN:GLKW.0.2017-18-019

- Hsieh Mei-O. (2017). Understanding Factors Affecting Homecare Workers' Job Retention Willingness. *Soochow journal of social work*, Vol. 33 , 27 – 62.
- IMF (2019), "Macroeconomics of Aging and Policy Implications," G-20 Background Note, Jun. 5.
- Jane E. Dutton (2001). Crafting a job: Revisioning employees as active crafters of their work. *The Academy of Management Review*, 26(2), 179-201. DOI:10.2307/259118
- Judge TA, Locke EA, Durham CC. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior*, 19, 151-188.
- Judge, T. A. Locke, E.A. & Durham, C.C. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal Of Applied Psychology*, 83(1):17-34.
- Judge, T. A. Locke, E.A. & Durham, C.C. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal Of Applied Psychology*, 83(1):17-34.
- Judge, T. A., & Kammeyer-Mueller, J. D. (2011). Implications of core self-evaluations for a changing organizational context. *Human Resource Management Review*, 21(4), 331-341.
- Judge, T. A., Bono, J. E., Erez, A., & Locke, E. A. (2005). Core self-evaluations and job and life satisfaction: The role of self-concordance and goal attainment. *Journal of Applied Psychology*, 90(2), 257–268. <https://doi.org/10.1037/0021-9010.90.2.257>
- Judge, T. A., Bono, J. y Locke, E. (2000). Personality and job satisfaction: The mediating role of job characteristics. *Journal of Applied Psychology*, 85, 237-249. <https://doi.org/10.1037//0021-9010.85.2.237>
- Judge, T. A., Cable, D., (1997). Applicant personality, organizational culture, and organization attraction. *Personnel psychology*. 50(2), 359-394.
- Judge, T. A., Erez, A., Bono, J. E., & Thoresen, Carl J. (2003). The core self-evaluations scale: Development of a measure. *Personnel Psychology*, 56.303-331.
- Judge, T. A., Woolf, E. F., & Hurst, C. (2009). Is emotional labor more difficult for some than for others? A multilevel, experience-sampling study. *Personnel Psychology*, 62(1), 57–88. <https://doi.org/10.1111/j.1744-6570.2008.01129.x>
- Judge, T.A. & Bono, J. E. (2001). Relationship of core self-evaluation traits-self-esteem, generalized self-efficacy, locus of control, and emotional stability-with job satisfaction and job performance: A meta-analysis. *Journal Of Applied Psychology*, 86(1), 80-92.
- Kalokerinos, E. K., von Hippel, C., & Henry, J. D. (2015). Job attitudes are differentially associated with bridge employment and phased retirement among older Australian employees. *Work, Aging and Retirement*, 1(2), 190-201.
- Kim, H., DeVaney, .A. (2005). The Selection of Partial or Full Retirement by Older Workers. *J Fam Econ Iss* 26, 371–394 (2005). <https://doi.org/10.1007/s10834-005-5903-8>
- Kuo, Z. C. (2016). Evaluation and Implications of the Fixed Employment Rate System for the Middle-aged and Senior Citizens in Japan and South Korea, *New Social Policy*, 48, 66-70.
- Lee, Kuan-Ju (2019). Research of the relation between aging employees age and working motivation-Discussion of the mediate effect of the meaning of work. Master's Thesis, Institute of Human Resource Management, National Central University (NCU)
- Lu, Huei-Chung (2018), "To Be a Typical or an Atypical Worker? Decision Modes and Determinants of Employment Patterns for Male and Married Female Laborers in Taiwan", *Taipei Economic Inquiry*, 5(2): 119-189. (in Chinese)
- Lu, Sian-Bo (2018). *A Confirmatory Study on the Relationship Between Job Stress and Job Satisfaction on Turnover Intention – Taking the personnel of ASE's Kaohsiung Factory Production Line as an Example*. (Master's thesis. Shu-Te University of Science and Technology, <https://hdl.handle.net/11296/t84jr5>
- Mittal, V., & Kamakura, W. A. (2001). Satisfaction, repurchase intent, and repurchase behavior: Investigating the moderating effect of customer characteristics. *Journal of Marketing Research*, 38(1), 131–142. <https://doi.org/10.1509/jmkr.38.1.131.18832>

- Miu IV, Rozyłowicz L, Popescu VD, Anastasiu P. (2020). Identification of areas of very high biodiversity value to achieve the EU Biodiversity Strategy for 2030 key commitments. *PeerJ* 8:e10067 <https://doi.org/10.7717/peerj.10067>
- Moddy's (2019), "Government of Taiwan – Aa3 stable: Annual Credit Analysis," Jul. 2
- Mor-Barak, M. E. (1995). The meaning of work for older adults seeking employment: The generativity factor. *The International Journal of Aging and Human Development*, 41(4), 325–344.
- Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology*, 58, 367–408.
- OECD (2015), Enabling the next production revolution, OECD Publishing, Paris. of a theory, *Organizational Behavior and Human Performance*, August 1976 pp.
- Packer Edith (1985), Understanding the subconscious, The Jefferson School of Philosophy, *Economics & Psychology* (1 Oct. 1985), 16 pages
- Pratt, M. G., & Ashforth, B. E. (2003). Fostering meaningfulness in working and at work. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship: Foundations of a New Discipline* (pp. 309–327). San Francisco, CA: Berrett-Koehler.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments & Computers*, 36(4), 717–731. <https://doi.org/10.3758/BF03206553>
- Price, J.L. (2001) Reflections on the Determinants of Voluntary Turnover. *International Journal of Manpower*, 22, 600–624. <https://doi.org/10.1108/EUM00000000006233>
- Quinn, J., Burkhauser, R., & Myers, D. (1990). *Passing the torch: The influence of economic incentives on work and retirement*. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.
- Robbins, S. (1993). *Organizational behavior*. Prentice hall, Englewood cliffs judge.
- Rosso, B. D., Dekas, K. H., & Wrzesniewski, A. (2010). On the meaning of work: A theoretical integration and review. *Research in organizational behavior*, 30, 91–127.
- Rosso, B. D., Dekas, K. H., & Wrzesniewski, A. (2010). On the meaning of work: A theoretical integration and review. *Research in Organizational Behavior*, 30, 91–127.
- Rothbard, N. P., & Wilk, S. L. (2011). Waking up on the right or wrong side of the bed: Start-of-work-day mood, work events, employee affect, and performance. *Academy of Management Journal*, 54(5), 959–980. <https://doi.org/10.5465/amj.2007.0056>
- Ruhm, C. (1990). Bridge jobs and partial retirement. *Journal of Labor Economics*, Vol. 8(4): 482–501.
- Seashore, S. E., & Taber, T. D., (1975). Job Satisfaction Indicators and their Correlates. *American Behavioral Scientists*, 18, 347.
- Seibert, S. E., J. M. Crant, & M. L. Kraimer. (1999). Proactive personality and career success. *Journal of Applied Psychology*, 84(3), 416–427.
- Shockley, K. M., Ureksoy, H., Rodopman, O. B., Poteat, L., F., & Dullaghan, T. R. (2015). Development of a new scale to measure subjective career success: A mixed-methods study. *Journal of Organizational Behavior*, 37(1), 128–153.
- Shorbaji, R. Messarra, D. L. & Karkoulian, D.S. (2011). Core-self-evaluation: Predictor of employee engagement. *The Business Review*, 17(1).
- Showry, M., & Sayulu, K. (2017). The impact of core self-evaluation on attrition in IT Industry. *IUP Journal of Soft Skills*, 11(4), 7–22.
- Shultz, K. S., & Wang, M. (2011). Psychological perspectives on the changing nature of retirement. *American Psychology*, 66, 170–179.
- Sinem, K., Semra, K. (2020). The determinants of subjective career success among managers: a moderating effect of the lifestyle anchor. In RIMHE: Interdisciplinary Review Management, *Man & Business* 2020/2 (n° 39, vol. 9), pages 51 to 78

- Steger, M. F., B. J. Dik, & R. D. Duffy.(2012). Measuring meaningful work: The work and meaning inventory (WAMI), *Journal of Career Assessment*, 20,322-37.
- Tunga Kantarcı & Arthur van Soest (2008). Gradual Retirement: Preferences and Limitations. *De Economist*, 2008, vol. 156, issue 2, 113-144.
- Wang, M., & Shultz, K. S. (2010). Employee retirement: A review and recommendations for future investigation. *Journal of Management*, 36, 172–206.
- Wu, Chung-Yu, and Lin, Ka-Huei (2021). Impacts and Challenges of the Labor Market in an Ultra-Ageing Society, *Semi-annual Journal of Employment Security*, June Issue, Jun, 2021.
- Yeung Karen (2022). Low Self-Efficacy? You need to know the four keys of “self-efficacy” | Behaviorism 5-4 | [*Mindfulness Psychology Classroom #30*], Enlightenment Culture, September 2, 2022.
- Zhan Huosheng, Xin Binglong, Huang Lixuan, & Huang Minjuan (2015). *Study on the Feasibility Scenario of Delayed Retirement*, Ministry of Labor Commissioned Research Project PG10409-0042. Taipei: Ministry of Labor.
- Zhang, C. Y., & Zhang, M. H.. (2019). Analysis of the impact of delayed retirement policy on employment rate. *East China Economic Management*, 33(9), 8.