Strategies for Enhancing Entrepreneurial Intention and Wellbeing in Higher Education Students: A Cross-Cultural Analysis

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Abstract

Entrepreneurs play a crucial role in fostering innovation and fuelling economic growth. China has recently sought to increase entrepreneurial intention in university students by providing entrepreneurship education based on the model deployed by universities in Western cultures. Additionally, a longstanding challenge for universities has been the wellbeing of their students. The COVID-19 pandemic exacerbated this issue, leading to enhancing the wellbeing of university students being declared a global priority. Consequently, by drawing on a framework of conservation of resources theory, the purpose of this paper is to conceptually develop and empirically validate a model for enhancing entrepreneurial intention and wellbeing in university students. The data were collected in December 2022 and January 2023. A total of 952 undergraduate students completed the questionnaire, with 476 responses from China and 476 from the UK. Findings indicate (i) positive associations between self-perceived academic performance and individual entrepreneurial intention, whereby self-perceived employability mediates the relationship, (ii) positive associations between serious leisure and wellbeing, whereby self-perceived employability mediates the relationship, and (iii) the country moderates the association between (a) serious leisure and wellbeing, and (b) serious leisure and self-perceived employability, whereby the association is stronger for China than for the UK. The theoretical contribution comes from constructing and empirically validating a model, evidencing alignment and divergence by country concerning acquiring specific personal resources via self-perceived academic performance, serious leisure, and self-perceived employability. Practical and policy implications arise from suggesting how higher education institutions can support their students to enhance individual entrepreneurial intention and wellbeing.

Keywords

Entrepreneurial Intention, Wellbeing, Academic Performance, Serious Leisure, Self-Perceived Employability

Word Count

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Introduction

The Global Student Entrepreneurship 2021 report, based on a study of 276,000 students across fifty-eight countries, found that 17.8 per cent of students intend to be an entrepreneur immediately after graduating, rising to 32.3 per cent within five years of graduation (Sieger et al., 2021). The same report found significant variances in entrepreneurial intention by country and region, with Africa and South America having higher overall scores than Europe or North America. However, China and the United Kingdom (UK) are notable absences from the Global Student Entrepreneurship 2021 report. Comparing these two countries can offer valuable insights since, according to Hofstede's Chinese Value Survey, long-term orientation (persistence, ordering relationships by status and observing this order, thrift, and having a sense of shame), China scores 118 compared to the UK score of 25 (Hofstede, n.d.). Additionally, understanding the views from China takes on increased significance as universities in China have sought to increase levels of innovation and entrepreneurship through the provision of entrepreneurship education, forming part of a broader strategy to create entrepreneurial universities based on the model deployed by universities in Western cultures (Zhu & Yang, 2023). Concurrently, the COVID-19 pandemic exacerbated longstanding mental health issues in university student populations (Donald & Jackson, 2022), with significant rises in the Americas (Martínez et al., 2020), Asia (Zandifar & Badrfam, 2020), Oceania (Reis et al., 2021) and Europe (Jackman et al., 2022). Consequently, enhancing the wellbeing of university students has been declared a global priority (Xiong et al., 2020). Therefore, understanding ways to enhance the Individual Entrepreneurial Intention (EI) and Wellbeing (WB) of university students represents a global challenge to universities.

EI is "a conscious awareness and conviction by an individual that they intend to set up a new business venture and plan to do so" (Nabi et al., 2010, p. 538). In this current study, EI refers to opportunity-driven EI rather than necessity-driven EI (Bolton & Lane, 2012). WB, according to Diener (1984), refers to an individual's evaluation of their quality of life-based on life satisfaction (perception of one's quality of life) and emotional experience (positive and negative emotions). The subjective assessment of wellbeing encompasses three elements: high-level positive emotions, low-level negative emotions, and overall life satisfaction (Proctor, 2014). EI and WB are two determinants of employability, employment outcomes, national competitiveness, and innovation (Barba-Sánchez et al., 2022; Mei & Symaco, 2022; Nimmi & Donald, 2023). Strategies to enhance entrepreneurial intention and wellbeing can thus benefit students, universities, and national economies (Nimmi et al., 2023; Zhu & Yang, 2023). However, attempts to increase EI via entrepreneurship education in universities have had mixed results, in certain instances having the opposite effect (Nabi et al., 2018). In a study of Visegrád countries (Czech Republic, Hungary, Poland, and Slovakia), entrepreneurial education only had a positive and significant relationship with EI in Poland (Nowiński et al., 2019).

In response to these global challenges, we propose that three concepts can play an influential role in determining EI and WB outcomes. Self-perceived Academic Performance (AP) refers to an individual's knowledge and perceptions about themselves in achievement situations (Bryne, 1984), specifically in the case of our study in the context of an undergraduate degree conducted in China or the UK. AP differs from Self-Perceived Academic Self-Efficacy by focusing on one's self-perceived ability to perform a task rather than on confidence of whether one could successfully perform the task (Bong & Skaalvik, 2003). Another difference comes from self-perceptions of normative measures of academic performance rather than objective measures – for example, 'I can complete this task' versus 'I am one of the best in the class at completing this task' (Bong & Skaalvik, 2003). However, studies in career theory literature often focus on objective performance. For example, students who pay their own tuition fees in the UK had higher levels of academic performance (Bunce & Jones, 2017), and in Malaysia, academic performance was not a key determinant of securing a job after graduation based on a survey of 1107 recent graduates (Soon et al., 2020). Studies in the higher education literature have looked at the views of Chinese international students in Australia (Song, 2020; Xing et al., 2022) and their influences on the international graduate school choice of Chinese students (Yang et al., 2022). Studies that compare the performance of Chinese and UK students have also tended to favour focusing on UK universities (e.g., Crawford & Wang, 2015), whilst studies comparing Chinese and Australian students tend to favour focusing on Australian universities (e.g., God & Zhang, 2019; Tang, 2022). Our study extends such exploration to AP and comparisons of Chinese and UK students undertaking study domestically.

The second concept is Serious Leisure (SL). The leisure studies literature offers the terms 'casual leisure' (CL) and 'serious leisure' (SL) as two distinct types of leisure (Stebbins, 1992). CL reflects opportunities for creativity and play, building networks, replenishing resources via rest and recovery, and temporarily preventing further resource depletion due to work or study demands (Stebbins, 2006). Examples of CL include watching television, reading books, and listening to music. Conversely, SL is defined by Stebbins (1992) as "the systematic pursuit of an amateur, hobbyist, or volunteer activity that participants find so substantial and interesting that, in the typical case, they launch themselves on a career centred on acquiring and expressing its special skills, knowledge and experience." (p. 3). The six characteristics that differentiate SL from CL are (i) a need to persevere at an activity, (ii) the availability of a leisure career, (iii) the need to put in the effort to gain skills and knowledge, (iv) the

realisation of various special benefits, (v) a unique ethos and social world, and (vi) an attractive personal and social identity (Stebbins, 2006). Examples of SL include participation in hobbies or volunteering activities (Stebbins, 1996). In this paper, we adopt the position of Nimmi and Donald (2023, p. 273) that SL requires "sustained and committed involvement in a substantial way to develop personal resources that can lead to career development and advancement in ways that CL might not." Our focus on SL also seeks to build on findings that higher education attainment is significant in increasing leisure as important to students (Koshy et al., 2023).

The third concept is Self-Perceived Employability (PE), defined by Forrier et al. (2015) as "the individual's perception of available employment opportunities" (p. 57), which builds on Rothwell and Arnold's (2007) definition of employability as "the individual's ability to keep the job one has, or to get the job one desires." (p. 25). At the individual level, studies have indicated that PE can be enhanced through social capital, cultural capital, psychological capital, movement capital, career ownership, and career guidance (Donald et al., 2019, 2023; Peeters et al., 2020; Pham, 2021). However, external factors can also impact PE (Clarke, 2018), acknowledging the three dimensions of a sustainable career: person, context, and time (De Vos et al., 2020).

Our paper aims to conceptually develop and empirically validate a model for enhancing EI and WB in university students by focusing on AP, SL, and PE antecedents. We believe that our study makes a timely contribution to the literature by addressing EI and WB as two global priorities for universities (Sieger et al., 2021; Xiong et al., 2020). Adopting a cross-cultural and cross-national approach by comparing China (as an example of an Eastern Context) and the UK (as an example of a Western Context), acknowledging that "cross-country comparison has emerged as an important theme in higher education research (Xie & Teo, 2020, p. 357). The theoretical contribution comes from constructing and empirically validating a model, evidencing alignment and divergence by country concerning acquiring specific personal resources via AP, SL, and PE. Practical and policy implications arise from suggesting how higher education institutions can support their students to enhance EI and WB.

The paper is structured as follows. We present the theoretical framework before providing a literature review and developing our ten hypotheses. Next, the method is presented, followed by the results and analysis. Finally, the discussion section concludes the paper by offering implications, limitations, and future research opportunities.

Theoretical Framework

The construct of EI is often explored by drawing on Ajzen's (1991) theory of planned behaviour. However, in this study, we opt for Hobfoll's (1989) Conservation of Resources (COR) theory instead due to the combination of variables under exploration. For example, COR theory has been adopted to explore PE and WB in graduates in India (Nimmi et al., 2023). The choice of COR theory as the theoretical framework also acknowledges findings from Spain whereby undergraduate students reported financial obstacles and a lack of experience or training as barriers to starting their own business, indicating a deficit of personal resources (Arranz et al., 2019). Additionally, our study complements the recent interest in identifying strategies to empower students to acquire personal resources to enhance their wellbeing during their undergraduate study (Young et al., 2022).

COR theory proposes that an individual seeks to acquire personal resources whilst guarding against the loss of existing resources (Hobfoll, 1989). The COR theory suggests that resources tend to aggregate (or fail to do so) in clusters, leading to the metaphor of a resource caravan representing the resources an individual collects to bring on their journey (Hobfoll, 2012). The framework enables us to understand how proactively taking ownership of one's career to acquire personal resources within one's resource caravan can increase desirable outcomes such as wellbeing (Nimmi et al., 2021). Nevertheless, the operationalisation of resource caravans relies on resource passageways, representing how the external environment can facilitate or hinder an individual's progress (Hobfoll et al., 2018).

In this study, the COR theory helps us to understand how universities can facilitate their students to enhance EI and WB whilst guarding against environmental demands and the associated threats to their resources. The resource passageways represent the two contexts of higher education institutions in China and the UK. We propose that AP, SL, and PE represent personal resources that can be acquired during university study via a commitment to lifewide learning, representing the opportunity for resource acquisition from various opportunities at any given time (Cole & Donald, 2022). Our attention now turns to a literature review and hypothesis development. However, for readers seeking a comprehensive overview of graduate employability in higher education, we recommend the work of Cook (2022).

Literature Review and Hypotheses Development

Self-Perceived Academic Performance (AP) and Individual Entrepreneurial Intention (EI)

AP focuses on one's self-perceived ability to perform a task via normative rather than subjective measures (Bong & Skaalvik, 2003). EI is "a conscious awareness and conviction by an individual that they intend to set up a new business venture and plan to do so" (Nabi et al., 2010, p. 538). Studies in China have found that EI scores increase significantly following participation in entrepreneurship as it influences students' behaviour (Yan et al., 2022),

with entrepreneurial education related positively to the entrepreneurial mindset and EI (Sun et al., 2023). Additionally, Pérez-Pérez et al. (2021) proposed that when considering the use of business games to enhance EI, "students' performance in the game is usually connected with their grades, implying real consequences and encouraging them to optimize their behavior" (p. 3). Counterintuitively, their findings from university students in Spain showed the opposite, whereby participants with higher AP showed lower EI after participating in the game. However, our study adopts the more dominant perspective as a hypothesis since COR theory suggests that students' perceived ability to perform tasks increases as they acquire additional resources within their resource caravans (Hobfoll, 2012). Therefore, we propose that as AP rises, students become more confident in their ability to perform entrepreneurial tasks, whereby these additional personal resources increase EI.
Hypothesis 1 (H1): AP positively predicts EI.

Serious Leisure (SL) and Wellbeing (WB)

SL theory emphasises the enduring personal and social benefits individuals gain from engaging in specific leisure activities (Elkington & Stebbins, 2014). Research indicates that participation in SL leads to positive emotional experiences such as life satisfaction, meaning and purpose, happiness, quality of life, and wellness (Mansfield et al., 2020). Moreover, the opportunity to engage in SL with like-minded individuals fosters a sense of belonging that contributes to enhanced WB (Thin, 2020). Additionally, investing time and energy into SL pursuits aligns with the theoretical determinants of WB, such as perseverance (Lee & Hwang, 2018). The relationship between SL and WB has also been validated among Indian graduates, underpinned by COR theory, where participation in SL helps to manage workplace stress (Nimmi & Donald, 2023). Subsequently, we propose the following:
Hypothesis 2 (H2): SL positively predicts WB.

Self-Perceived Academic Performance (AP) and Self-Perceived Employability (PE)

Most studies examining the relationship between academic performance and PE have predominantly used objective measures of academic performance instead of subjective ones (e.g., Pinto & He, 2019). When subjective measures have been used, they have mainly examined the relationship between academic engagement and PE rather than AP and PE (Ma & Bennet, 2021). We posit that higher levels of AP can result in increased confidence and perceived competence in one's abilities, leading to a higher sense of PE. Furthermore, high objective academic performance can enhance one's chances of employment by signalling a prediction of future job performance to employers (Pinto & Ramalheira, 2017). Consequently, individuals who believe they have performed well academically may also believe they are more likely to be hired by potential employers, resulting in higher levels of PE. Subsequently, we propose the following:
Hypothesis 3 (H3): AP positively predicts PE.

Serious Leisure (SL) and Self-Perceived Employability (PE)

Participation in SL necessitates sustained and committed engagement, allowing individuals to acquire resources that yield long-term benefits (Kelly et al., 2020; Sirgy et al., 2017). These benefits include self-enrichment, self-actualisation, self-development, self-expression, self-renewal, a sense of accomplishment, enhanced self-image, and improved social interactions (Sirgy et al., 2017; Stebbins, 1992). Acquiring personal resources can also enhance PE as individuals can draw on these resources from their resource caravans (Hobfoll, 2012; Hobfoll et al., 2018). The relationship between SL and PE has recently been validated in India (Nimmi & Donald, 2023; Nimmi et al., 2023), capturing the enhancement of career self-management, social capital, cultural capital, psychological capital, identity capital, and agentic capital, serving as indicators of PE (Coetzee & Engelbrecht, 2020; Donald et al., 2019; Pham & Jackson, 2020). Subsequently, we propose the following:
Hypothesis 4 (H4): SL positively predicts PE.

Self-Perceived Employability (PE) and Individual Entrepreneurial Intention (EI)

Donald et al. (2019) posit that PE is determined by social capital, cultural capital, psychological capital, scholastic capital, market-value capital, skills capital, career ownership, and career guidance. Pham and Jackson (2020) also include identity capital and agentic capital. Therefore, it would seem reasonable to suggest that increased skills, confidence, and networks as personal resources would give students the belief that they have what it takes to succeed as an entrepreneur. The position is supported by a study of 262 college students in Zimbabwe, which found that self-efficacy has a statistically significant direct effect on the intention to pursue an entrepreneurial goal (Ndofirepi, 2022). Additionally, a study of 334 university students and 216 job seekers in West Africa showed a positive relationship between PE and EI (Atitsogbe et al., 2019). Subsequently, we propose the following:
Hypothesis 5 (H5): PE positively predicts EI.

Self-Perceived Employability (PE) and Wellbeing (WB)

COR theory explains that the accumulation of resources can lead to WB, underlining the positive effects of PE on WB (Berntson & Marklund, 2007). PE can be especially beneficial in highly competitive job markets (Zakkariya et al., 2021), as students can leverage resources from their resource caravans to overcome the psychological distress associated with competition and rejection (Vanhercke et al., 2016). Additionally, PE has been linked to enhanced

WB in a sample of 212 management graduates in India (Nimmi et al., 2022). Therefore, accumulating resources to enhance PE can prepare students for sustainable careers (Donald & Mouratidou, 2022), whereby outcomes are health, happiness, and productivity (De Vos et al., 2020). Subsequently, we propose the following:
Hypothesis 6 (H6): PE positively predicts WB.

The Mediating Role of Self-Perceived Employability (PE)

Drawing on the evidence that developed H1 (AP positively predicts EI), H3 (AP positively predicts PE), and H5 (PE positively predicts EI), we now propose that PE plays a mediating role in the AP-EI relationship. Individuals with higher AP would be more confident in their ability to perform tasks, enabling them to collect additional resources to enhance their PE (Donald et al., 2019; Pham & Jackson, 2020). These personal resources could convince students that they can succeed as entrepreneurs, portrayed via EI (Atitsogbe et al., 2019). Therefore, we propose the following:
Hypothesis 7 (H7): PE mediates the relationship between AP and EI.

Based on the evidence that developed H2 (SL positively predicts WB), H4 (SL positively predicts PE), and H6 (PE positively predicts WB), we propose that PE acts as a mediator in the AP-EI relationship. Individuals enhancing their PE are more likely to possess career self-management abilities and employability capital (Clarke, 2018; Coetzee & Engelbrecht, 2020; Donald et al., 2019; Pham & Jackson, 2020). These resources can be aggregated within their resource caravans through SL participation (Kelly, 2020), leading to increased WB (Bernston & Marklund, 2007). Therefore, we propose the following:
Hypothesis 8 (H8): PE mediates the relationship between SL and WB.

The Moderation Role of the Country of Study

A study of recent graduates in India found a strong relationship between SL-PE and SL-WB (Nimmi & Donald, 2023). Another study of 505 individuals in South Korea found that investing time and energy into SL pursuits aligns with the theoretical determinants of WB, such as perseverance (Lee & Hwang, 2018). Additionally, Hofstede's Chinese Value Survey showed that for long-term orientation (persistence, ordering relationships by status and observing this order, thrift, and having a sense of shame), the scores by country were China [118], South Korea [75], India [61], and the United Kingdom [25] (Hofstede, n.d.). Differences between China and the USA have also been shown concerning older adults undertaking CL (Yang & Li, 2022), which could also be reflected in younger adults via SL when comparing China and the UK. Cultural differences between China and the UK could act as a mechanism for the possible differences (Hofstede, n.d). Therefore, we propose the following:
Hypothesis 9 (H9): The country of study moderates the relationship between SL and PE in such a way that it is stronger for China than for the UK.
Hypothesis 10 (H10): The country of study moderates the relationship between SL and WB in such a way that it is stronger for China than for the UK.

Method

Context, Sample, and Procedure

China has seen the supply of graduate labour outstrip demand in recent years leading to rising unemployment rates, whilst simultaneously, the COVID-19 pandemic restrictions have had significant economic impacts and detrimentally impacted wellbeing (Ma & Bennett, 2021). The UK has experienced over a decade of austerity politics, followed by Brexit and the COVID-19 pandemic (Donald, 2020). While demand for graduates appears to have recovered to pre-pandemic levels, there remains competition for jobs from graduates from previous cohorts, and the impacts of the pandemic on the wellbeing of students and graduates remain significant (Donald & Jackson, 2022). Consequently, enhancing EI and WB offers opportunities in both contexts to reduce unemployment and increase WB as a metric of career sustainability in graduates.

The research was conducted as a cross-sectional study whereby participants were undergraduate students currently studying at any university in China or the UK to ensure homogeneity between the samples. The data were collected using an online questionnaire in December 2022 and January 2023. Ethics approval was obtained from the Institutional Review Board, and all participants provided informed consent before participating in the study. Individuals from the UK were invited to participate via posts on Facebook, X (formerly known as Twitter), and TikTok since different individuals engage with different social media platforms. Individuals from China were invited to participate via posts on the messaging and social media platform WeChat since this is the dominant platform in China. Students in China completed the survey in Mandarin, whilst students in the UK completed the survey in English. A co-author, fluent in Mandarin and English, translated the survey from English to Mandarin and subsequently translated the responses from Mandarin to English before the analysis phase. A total of 952 students completed the questionnaire, with 476 responses from China (204 women and 272 men) and 476 from the UK (246 women and 218 men). The responses offer a 95% confidence level. a 5% margin of error, and represent the student populations in each country.

Measures

Self-Perceived Academic Performance (AP) was assessed using a 5-item scale adapted from Verner-Filion and Vallerand's (2016) Perceived Academic Performance Scale. A sample item is "*I perform tasks that are expected of me*". The scale employs a seven-point Likert Scale (1=do not agree at all, 7=very strongly agree). Cronbach's α for China was 0.93, and for the UK was 0.93.

Serious Leisure (SL) was assessed via an 18-item scale adapted from Gould et al. (2011) and based on Gould et al.'s (2008) Serious Leisure Inventory and Measure (SLIM). A sample item was "*My hobby has helped me improve how I think about myself*". The scale employed a five-point Likert scale (1=strongly disagree, 5=strongly agree). Cronbach's α for China was 0.97, and for the UK was 0.97.

Self-Perceived Employability (PE) was measured using 5 items adopted from a self-perceived employability scale by Berntson and Marklund (2007). A sample item is "*I know of organisations where I could get work*". The scale employs a five-point Likert scale (1=do not agree at all, 5=agree entirely). Cronbach's α for China was 0.94, and for the UK was 0.92.

Individual Entrepreneurial Intention (EI) was measured using a 10-item scale from Bolton and Lane (2012). A sample item is "*I like to take bold action by venturing into the unknown*". The scale employs a five-point Likert Scale (1=strongly disagree, 5=strongly agree). Three items measured risk-taking, four innovativeness, and three proactiveness. We opted for this scale over alternatives since it is focused on students in higher education (Bolton & Lane, 2012) and has been validated in different countries (e.g. Frunzaru & Cismaru, 2021). Cronbach's α for China was 0.95, and for the UK was 0.92.

Wellbeing (WB) was measured using a 5-item scale adapted from the World Health Organisation (WHO) Five Well-Being Index (1998). A sample item is "*My daily life has been filled with things that interest me*". The scale employs a six-point Likert Scale (0=at no time, 5=all the time). Cronbach's α for China was 0.96, and for the UK was 0.94.

Control Variables

Control variables for this study were gender and place of domicile, as these variables have been shown to have potential impacts on WWB (Nimmi & Donald, 2023).

Strategy of Analysis

IBM SPSS 23.0 and WarpPLS were used for data analysis. Structural Equation Modelling (SEM) was conducted to explore path coefficients of direct hypotheses using WarpPLS. Hair et al. (2017) stated that the PLS-SEM approach is suitable for exploratory, confirmatory, and predictive analyses. Mediation and moderation tests were carried out with the PROCESS macro developed by Preacher et al. (2007).

Results and Analysis

Descriptive Statistics

Table 1 shows the means, standard deviations, and correlations indicating significant correlations between the variables.

* INSERT TABLE 1 HERE *

Before evaluating the reliability and validity of the measurement items, the indicators were tested via Variance Inflation Factors (VIFs) for the assumption of constant variance, outliers, and normality. All VIFs were less than 2.43 and, therefore, considerably lower than the recommended threshold of 10.0, suggesting that multicollinearity was not a problem (Hair et al., 2017).

The study data were generated from a single source (self-reported survey data). Thus, we needed to check for common method bias (Podsakoff et al., 2003). We used Harman's single factor test as an exploratory assessment. The factor extraction results revealed an extracted total variance of 40.1%, showing the absence of common method bias.

The fit of the data with the proposed conceptual model was tested using variance-based structural equation modeling (Partial Least Squares analysis) with WarpPLS v.6.0 statistical software (Kock, 2012). Convergent Validity was assessed using Composite Reliability (CR). Here, the CR values ranged from 0.88 to 0.95 and met or exceeded the recommended level of 0.70 (Gefen et al., 2000). The Average Variance Extracted (AVE) was also in the range of 0.52–0.76, within the recommended level of above 0.50 (Hair et al. 2017). The results of the Variance Inflation Factor (VIF) were in the range of 1.12–2.13 (as evidenced in Table 2), below the recommended cut-off level of 5 (Hair et al., 2017). The tests supported the reliability and validity of the study variables.

* INSERT TABLE 2 HERE *

Assessment of Measurement Model

PLS-SEM was performed using WarpPLS 6.0 to test the proposed direct hypothesis. The goodness of the model fit was checked through Average Path Coefficient (APC), Average R^2 (AR^2), and Average Variance Inflation Factor (AVIF). The values of the APC (0.25, $p < 0{,}001$) and AR^2 (0.43, $p < 0{,}001$) were significant. Potential multicollinearity was also checked using the Average block VIF (AVIF) and full collinearity Variance Inflation Factor (AFVIF). The values were lower than 3.33, indicating no issues with multicollinearity. The adequacy of the hypothesised model was established using an overall Goodness-of-Fit (GoF) index, which was 0.51. Values are provided in Table 3.

* INSERT TABLE 3 HERE *

The R^2 and cross-validated communality Q^2 were checked in line with recommendations by Fornell and Larcker (1981). The model had good prediction quality, as indicated in Table 4 since the cross-redundancy value was found to be more than zero. The discriminant validity was also approved by looking into the squared correlation between two latent constructs to their average variance extracted (AVE).

* INSERT TABLE 4 HERE *

Hypothesis Testing

Direct Effect

H1-H6 were tested, and all proved to be positive and significant. H1 AP-EI ($\beta = 0.31$, $p < 0.001$), H2 SL-WB ($\beta = 0.28$, $p < 0.001$), H3 AP-PE ($\beta = 0.37$, $p < 0.001$), H4 SL-PE ($\beta = 0.60$, $p < 0.001$), H5 PE-EI ($\beta = 0.47$, $p < 0.001$), and H6 PE-WB ($\beta = 0.51$, $p < 0.001$).

Mediation Analysis

The indirect effect of AP on EI through PE was positive and significant ($\beta = 0.13$; $p < 0.001$, SE = 0.013, CI [0.11 – 0.16]). Therefore H7 was accepted. The indirect effect of SL on WB through PE was positive and significant ($\beta = 0.26$; $p < 0.001$, SE = 0.030, CI [0.19 – 0.33). Therefore H8 was accepted.

Moderation Analysis

H9 proposed that the country of study moderates the relationship between SL and PE in such a way that it is stronger for China than for the UK. The interaction effect was significant ($\beta = 0.54^{**}$, SE = 0.06, CI [0.42–0.70]). Therefore H9 was supported, as shown in Figure 1.

* INSERT FIGURE 1 HERE*

H10 proposed that the country of study moderates the relationship between SL and WB in such a way that it is stronger for China than for the UK. The interaction effect was significant ($\beta = 0.50^{**}$, SE = 0.09, CI [0.31–0.68]). Therefore H10 was supported, as shown in Figure 2.

* INSERT FIGURE 2 HERE*

Validation of the Model

Figure 3 shows the validation of the model.

* INSERT FIGURE 3 HERE *

Discussion

Our study evidenced a positive association between AP and EI, in keeping with other studies in China showing the benefits of entrepreneurial education on mindset and EI (e.g., Sun et al., 2023; Yan et al., 2022). However, our findings did not replicate the findings from Pérez-Pérez et al. (2021), whereby university students in Spain with higher AP showed lower EI after participating in a business game. However, our study was not looking at the intervention impacts of business games. The relationship between AP and EI was moderated by PE, supporting the view that individuals with higher AP would be more confident in their ability to perform tasks, enabling them to collect additional resources to enhance their PE (Donald et al., 2019; Pham & Jackson, 2020). These personal resources could convince students that they can succeed as entrepreneurs, portrayed via EI (Atitsogbe et al., 2019).

Our study also evidenced a positive association between SL and WB, supporting previous findings from graduates in India, where SL helped to manage workplace stress (Nimmi & Donald, 2023). Our findings support the view that investing time and energy into SL pursuits aligns with the theoretical determinants of WB, such as perseverance (Lee & Hwang, 2018). The relationship between SL and WB we mediated by PE, supporting the view that individuals enhancing their PE are more likely to possess career self-management abilities and employability capital (Clarke, 2018; Coetzee & Engelbrecht, 2020; Donald et al., 2019; Pham & Jackson, 2020). These resources can be aggregated within their resource caravans through SL participation (Kelly, 2020), leading to increased WB (Bernston & Marklund, 2007).

Furthermore, our study showed that the country moderates the association between (a) SL and WB, and (b) SL and PE, whereby the association is stronger for China than for the UK. These associations have also been shown to have a strong relationship in India (Nimmi & Donald, 2023), whilst in South Korea, investing time and energy into SL pursuits increased perseverance as a theoretical determinant of WB (Lee & Hwang, 2018). The differences in values for China [118] and the UK [25] on Hofstede's Chinese Value Survey also align with our findings (Hofstede, n.d), as do differences between China and the USA looking at older adults undertaking CL (Yang & Li, 2022).

Theoretical Implications

The theoretical contribution comes from construction and empirical validation via a cross-cultural analysis of a model, evidencing aspects of alignment and divergence by country of study (China and the UK) concerning the acquisition of specific personal resources via AP, SL, and PE. Our study identifies opportunities to enhance EI and WB, representing two determinants of employability, employment outcomes, national competitiveness, and innovation (Barba-Sánchez et al., 2022; Mei & Symaco, 2022; Nimmi & Donald, 2023). While previous studies have highlighted the link between objective academic performance and PE (e.g., Pinto & He, 2019), our study also shows a link between AP and PE in two different cultural contexts (China and the UK). Additionally, our study looked at students studying in their domestic country rather than comparing the perceptions of UK and Chinese students studying in the UK (Crawford & Wang, 2015).

Moreover, in both contexts of China and the UK, AP leads to EI, with PE mediating. The country of study moderated the SL-PE and SL-WB relationships so that the relationships were stronger in China than in the UK. These contextual differences reflect the person and context dimensions of career sustainability (De Vos et al., 2020), specifically how they can lead to health, happiness, and productivity outcomes. Additionally, the moderator role of the country of study acknowledges how the operationalisation of personal resources relies upon resource passageways (Hobfoll, 2012; Hobfoll et al., 2018), which can influence the value of specific personal resources one requires to achieve desired outcomes (e.g., EI and WB).

Our focus on COR as a theoretical underpinning also complements existing research that often draws on Ajzen's (1991) theory of planned behaviour. The choice of COR enabled the development of a model whereby AP (as a subjective rather than objective measure of academic performance), SL, and PE offer opportunities to form resource clusters so that one's personal resources can enhance the outcomes of EI and WB. Our study also offered scale validations in undergraduate students in China.

Practical Implications

Universities can play an influential role in contributing to society and the economy by addressing two global challenges of enhancing EI and improving the WB of their students (Xiong et al., 2020; Zhu & Yang, 2023). Enhancing levels of AP and SL has a positive benefit on PE, EI, and WB (albeit stronger in China for the SL-PE and SL-WB relationships). Therefore, universities in China and the UK should explore opportunities to modify their curriculum to foster enhanced AP in their students (e.g., authentic assessment, peer learning, or flipped learning initiatives). The approach could be supplemented by providing opportunities for all students to engage with entrepreneurs and undertake entrepreneurial pursuits, which has been shown to enhance EI (Sun et al., 2023).

Additionally, the benefits from participation in SL support ongoing calls to raise awareness of the need for students to engage in lifewide learning (Cole & Donald, 2022). Universities should ensure that students have access to career counselling services (and broader support services, including mental health support) to help them identify the personal resources they need in their resource caravans and how they can operationalise these resources via resource passageways (Hobfoll, 2012; Hobfoll et al., 2018). The approach can help to address the global priority of enhancing students' WB (Xiong et al., 2020).

Promoting AP, SL, and PE to enhance EI and WB can benefit students, universities, graduates, employers, national governments, and broader society. The perspective acknowledges these actors' interconnected and interdependent nature within career ecosystems (Baruch, 2013). Our study's moderation effect suggests that whilst acquiring the same resources benefits students in China and the UK, the interplay between and relative importance of different personal resources may vary by country. The findings also suggest that movement between countries for work and study may add complexity to an individual acquiring and operationalising their personal resources. The observation is supported by Tang (2022), who observed challenges associated with employability capital and WB facing Chinese international students in Australia. Therefore, national and individual agendas must be considered and balanced for the sustainability of career ecosystems in recognition of local, national, and global labour markets.

Limitations and Future Research

Our study shares several limitations with other published studies; (i) data were collected via a single method of questionnaires (Donald et al., 2019), (ii) participants self-reported their perceptions which may introduce social desirability or recall error bias (Zakkariya et al., 2021), and (iii) structural factors of labour market conditions and

employability outcomes fall outside the scope of this research (Vanhercke et al., 2014). We also did not collect data on the institution that an individual attended, the degree they studied, or their age.

Future research should consider the impacts of the year of study, gender, and socio-economic status of students to see whether our model holds true for different cohorts of students. Studies could also consider comparing the opportunity-driven and necessity-driven dimensions of EI. Qualitative research may offer additional insights, particularly around the cultural differences evidenced in our findings. Longitudinal studies could also offer value by comparing a) how students' perceptions of EI and WB evolve over time, and b) how their perceptions align with actual outcomes following graduation. Such studies can also validate the mediators of our model (Schreurs et al., 2022). Additionally, opportunities may exist to integrate Ajzen's (1991) theory of planned behaviour with Hobfoll's (1989) COR to offer avenues for intra- and inter-disciplinary research.

Conclusion

Our study addressed a topic of international significance to understand how higher education institutions from two cultures can support their students to enhance EI and WB. We advanced COR theory by constructing and empirically validating a model via a cross-cultural analysis, evidencing aspects of alignment and divergence by country of study concerning the value of specific personal resources. We concluded with suggestions for future research to continue to explore the topics of EI and WB due to their global significance for students, universities, graduates, employers, national governments, and broader society.

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Table 1. Descriptive Statistics and Correlations

	Variable	1	2	3	4	5	Mean	S.D
1	Academic Performance	1					5.21	1.16
2	Serious Leisure	0.46**	1				3.82	0.71
3	Perceived Employability	0.49**	0.53**	1			3.33	0.89
4	Entrepreneurial Intention	0.53**	0.62**	0.61**	1		3.59	0.72
5	Wellbeing	0.37**	0.36**	0.42**	0.39**	1	4.09	1.08

** $p<0.001$

Table 2. Descriptive Statistics, Reliability and Validity

	Type	No. of items	Composite reliability	Cronbach's alpha	Average variance extracted	Variance Inflation Factor (VIF)
Academic Performance	Reflective	5	0.94	0.92	0.76	1.72
Serious Leisure	Reflective	18	0.94	0.94	0.52	1.77
Perceived Employability	Reflective	5	0.91	0.87	0.67	1.91
Entrepreneurial Intention	Reflective	10	0.91	0.89	0.51	2.13
Wellbeing	Reflective	5	0.88	0.81	0.65	1.30

Table 3. Fit Indices

Fit Index	Value	Threshold limit
Average path coefficient (APC)	0.26 ($p<0.001$)	$p<0.001$
Average R-squared (ARS)	0.36 ($p<0.001$)	$p<0.001$
Average adjusted R-squared (AARS)	0.36 ($p<0.001$)	$p<0.001$
Average block collinearity VIF (AVIF)	1.36	acceptable if ≤ 5, ideally ≤ 3.3
Average full collinearity VIF (AFVIF)	1.59	acceptable if ≤ 5, ideally ≤ 3.3
Tenenhaus GoF (GoF)	0.51	$0.1 \leq$ small $\leq 0.25 \leq$ medium $\leq 0.36 \leq$ large
Sympson's paradox ratio (SPR)	1	acceptable if ≥ 0.7, ideally = 1
R-squared contribution ratio (RSCR)	1	acceptable if ≥ 0.9, ideally = 1
Nonlinear bivariate causality direction ratio (NLBCDR)	1	acceptable if ≥ 0.7
Statistical suppression ratio (SSR)	1	acceptable if ≥ 0.7

Table 4. Endogenous Constructs

	Perceived Employability	Entrepreneurial Intention	Wellbeing
R^2	0.40	0.46	0.21
Q^2	0.40	0.46	0.21

Figure 1

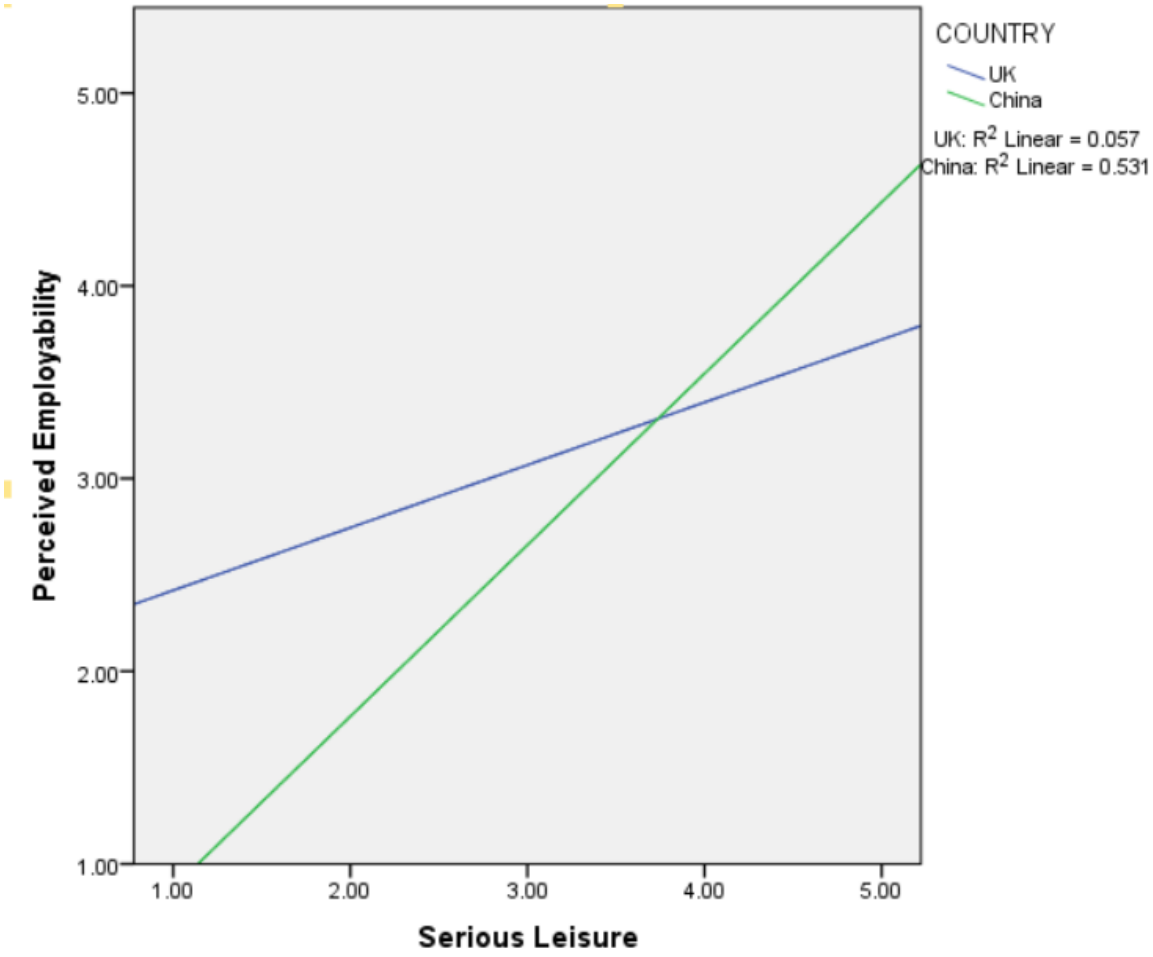
COUNTRY
UK
China
UK: R2 Linear = 0.057
China: R2 Linear = 0.531
Perceived Employability
5.00
4.00
3.00
2.00
1.00
1.00
2.00
3.00
4.00
5.00
Serious Leisure

Figure 2

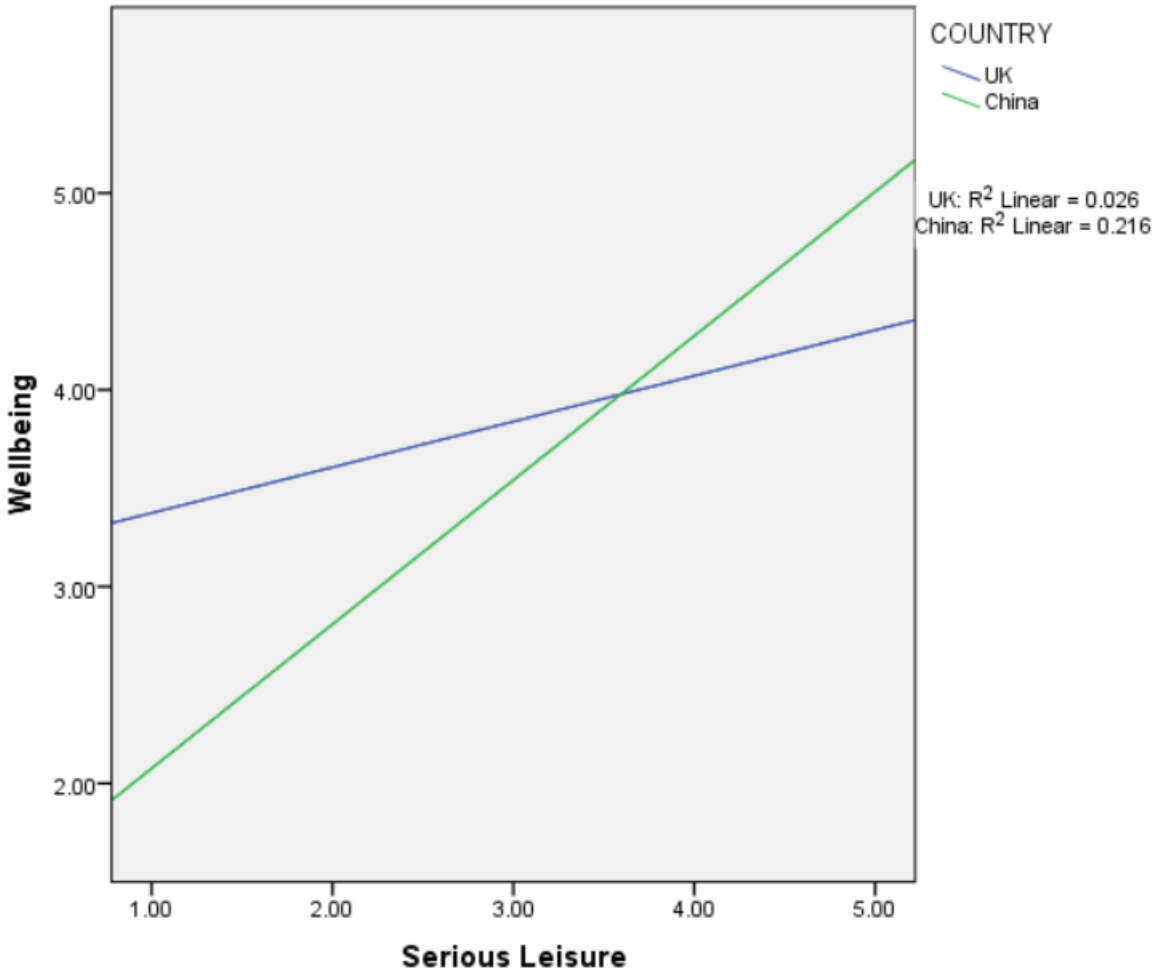
COUNTRY
UK
China
UK: R2 Linear = 0.026
China: R2 Linear = 0.216
Wellbeing
5.00
4.00
3.00
2.00
1.00
2.00
3.00
4.00
5.00
Serious Leisure

Figure 3

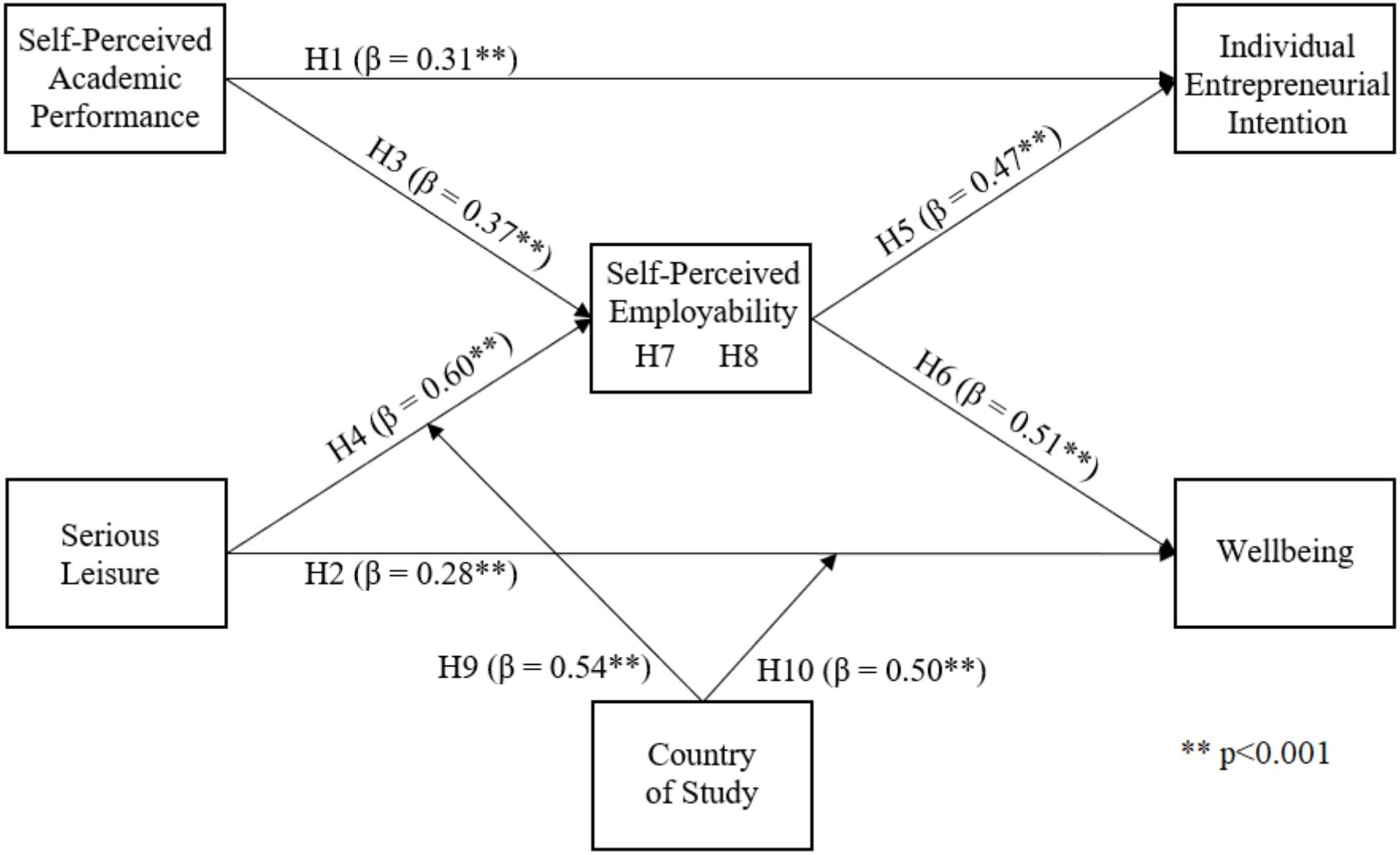
Self-Perceived Academic Performance
H1 (β = 0.31**)
Individual Entrepreneurial Intention
H3 (β = 0.37**)
H5 (β = 0.47**)
Self-Perceived Employability
H7 H8
H4 (β = 0.60**)
H6 (β = 0.51**)
Serious Leisure
H2 (β = 0.28**)
Wellbeing
H9 (β = 0.54**)
H10 (β = 0.50**)
Country of Study
** p<0.001

Figure Captions

Figure 1 evidences the moderation graph for the moderating role of the country of study on the relationship between serious leisure and perceived employability. Note: Using standardized values of variables gave the same effect on the results as well as visualization with UK R^2 Linear = 0.057 and China = 0.532

Figure 2 evidences the moderation graph for the moderating role of the country of study on the relationship between serious leisure and wellbeing. Note: Using standardized values of variables gave the same effect on the results as well as visualization with UK R^2 Linear = 0.026 and China = 0.211

Figure 3 evidences the empirically validated model.