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Exploring the Relationship Between Self-Perceived Academic

Performance and Entrepreneurial Intention: The Moderating Roles of

Serious Leisure, Perceived Stress, and Gender

Abstract

Purpose: Drawing on a framework of conservation of resources theory, the purpose of this paper is to explore the relationship between self-perceived academic performance and individual entrepreneurial intention, and consider the potential moderating role of (a) participation in serious leisure, (b) perceived stress, and/or (c) gender.

Design/methodology/approach: 405 UK-based undergraduates completed the questionnaire, with a representative gender split of 57% women and 43% men.

Findings: The positive relationship between self-perceived academic performance and individual entrepreneurial intention was moderated by serious leisure (stronger when participation in serious leisure increased) and by perceived stress (stronger when levels of perceived stress were lower). However, contrary to our expectations, gender had no statistically significant moderating role.

Originality: The theoretical contribution comes from advancing conservation of resources theory, specifically the interaction of personal resources, resource caravans, and resource passageways.

Practical Implications: The practical contribution comes from informing policy for universities and national governments to increase individual entrepreneurial intention in undergraduates.

Keywords: Self-perceived Academic Performance, Individual Entrepreneurial Intention, Serious Leisure, Stress, Gender, Conservation of Resources.

Article Classification: Research Paper

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Introduction

Entrepreneurship can play a valuable role in economic development by raising living standards, providing financial independence, job and business creation, innovation, economic growth, and increasing Gross National Product and Per Capital Income (Emeritus, 2023). Consequently, there is a global interest in enhancing the Individual Entrepreneurial Intention (EI) of students (Mok *et al.*, 2020; Russell *et al.*, 2008), defined as "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). Students themselves are also showing an interest in pursuing entrepreneurship. A study of 267,000 students across fifty-eight countries found that 17.8 per cent of students intend to be an entrepreneur immediately after graduating, raising to 32.3 per cent within five years of graduation (Sieger *et al.*, 2021).

However, Maheshwari *et al.* (2023) found that resources influencing EI were understudied in European contexts, with over half of the studies in a systematic literature review looking at students from 2005-2022 carried out in Asia. Hueso *et al.* (2021) also highlight the need to explore the relationship between personal values and EI further. Halbesleben *et al.* (2014) define resources as "anything perceived by the individual to help attain his or her goals" (p. 1338). According to the Conservation of Resources (COR) theory, individuals are motivated to accumulate, preserve, and enhance resources (Hobfoll, 1989). The theory posits that resources cluster together, forming 'resource caravans', which can subsequently be operationalised along 'resource passageways' (Hobfoll, 2012; Hobfoll *et al.*, 2018). Yet, studies looking at the associations between academic performance and EI have tended to focus on objective measures rather than perceptions of the individual (e.g., Chandra, 2013; Israr and Saleem, 2018; Yu and Ma, 2023). To address this gap, our study considers the association between self-perceived

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3 academic performance (henceforth AP) and EI, whereby AP refers to individuals'
4
5 knowledge and perceptions about themselves in achievement situations (Bryne, 1984). A
6
7 distinction of AP from objective academic performance is that it involves self-perceptions
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9 of normative measures of academic performance, such as comparing oneself to others in
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11 the class, rather than objective measures (Bong and Skaalvik, 2003).
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15 The individual can utilise the resources acquired within their resource caravan to
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17 navigate uncertainty and new challenges (Hobfoll *et al.*, 2018), a prominent feature of
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19 entrepreneurship. There is an emerging interest in the role that serious leisure (SL) and
20
21 perceived stress can play as resources with one's resource caravan to enable career
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23 sustainability (Nimmi and Donald, 2023; Nimmi *et al.*, 2023; Reis *et al.*, 2021). However,
24
25 their application as resources beyond the employee-employer relationship remains
26
27 lacking. The serious leisure (SL) theory posits that participation in such activities can
28
29 enable an individual to acquire personal resources through sustained commitment
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31 (Elkington and Stebbins, 2014). Additionally, perceived stress occurs when one's
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33 resources are threatened or depleted (Hobfoll, 1989). Sustained commitment to acquiring
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35 new resources via SL and managing resource threats and depletion via perceived stress
36
37 appear highly relevant to influencing the AP-EI relationship.
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43 A further dimension of interest is the role of gender, which plays a significant role
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45 in the formation of university students' attitudes towards entrepreneurship, as men exhibit
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47 higher levels of EI than women (Entrialgo and Iglesias, 2016; Haus *et al.*, 2013; Liñán
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49 and Fayolle, 2015; Mueller and Dato-On, 2008; Wilson *et al.*, 2007). These studies
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51 indicate that gender may influence the acquisition of resources and operationalisation of
52
53 such resources, particularly as women entrepreneurs remain consistently
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55 underrepresented among graduate entrepreneurs (Global Entrepreneurship Monitor,
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57 2023; Piva and Rovelli, 2022). Similarly, studies of student populations in the UK have
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2
3 shown women to have lower perceptions of their abilities, competencies, and perceived
4 employability than men (Donald *et al.*, 2018; 2019; Hughes *et al.*, 2023). Therefore,
5
6 gender offers an unexplored yet relevant dimension to consider its influence on the AP-
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8 EI relationship regarding acquiring resources within resource caravans and the perceived
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10 opportunities and risks of operationalising their resource caravans via resource
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12 passageways.
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17 Consequently, the purpose of this paper is to explore the AP-EI relationship and
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19 consider the potential moderating role of (a) participation in serious leisure, (b) perceived
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21 stress, and/or (c) gender by conceptualising and empirically testing the model with 405
22
23 UK undergraduates. The theoretical contribution comes from advancing conservation of
24
25 resources theory by exploring personal resources within a resource caravan of self-
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27 perceived academic performance, serious leisure, perceived stress, gender, and individual
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29 entrepreneurial intention in a UK-based university undergraduate population. The notion
30
31 of resource passageways is also developed to acknowledge the interplay of agentic
32
33 (perceived) and contextual (environmental) factors. The practical contribution comes
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35 from providing pragmatic strategies for UK-based universities and national governments
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37 to increase individual entrepreneurial intention in undergraduates.
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45 **Literature Review and Hypotheses Development**

46 ***Self-perceived Academic Performance (AP) and Individual Entrepreneurial Intention*** 47 48 ***(EI)***

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51 According to COR theory (Hobfoll, 1989), individuals seek to acquire personal resources
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53 whilst guarding against the loss of existing resources. Individuals collect these resources
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55 within the metaphorical notion of a resource caravan (Hobfoll, 2012; Hobfoll *et al.*,
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57 2018). One such personal resource that has two distinct components is academic
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3 performance. Objective academic performance refers to the module marks, degree and
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5 classification obtained, whilst subjective academic performance (per AP) refers to an
6
7 individual's knowledge and perceptions about themselves in achievement situations
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9 (Bryne, 1984).
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12 Based on a systematic literature review of factors affecting students' EI covering
13
14 2005-2022, Maheshwari *et al.* (2023) found several studies that focused on
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16 entrepreneurial education as a determinant of EI (e.g., Maresch *et al.*, 2016; Nowiński *et*
17
18 *al.*, 2019; Zhang *et al.*, 2014). However, looking at AP enables us to view perceptions in
19
20 the context of academic performance to understand if AP is positively associated with EI.
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22 Looking at this within the UK is also timely, given the underrepresentation of studies
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24 focusing on developing countries, particularly in Europe, when considering potential
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26 determinants of students' EI (Maheshwari *et al.*, 2023; Ma *et al.*, 2024; Wu and Wu,
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28 2017).
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33 COR theory posits that the greater one's resources within a resource caravan, the
34
35 greater the individual's ability to navigate different contexts and challenges (Hobfoll,
36
37 2012; Hobfoll *et al.*, 2018). AP, as a personal resource, has been shown to increase one's
38
39 self-perceived employability (Álvarez-González *et al.*, 2017). Additionally,
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41 entrepreneurial education has been shown to be positively associated with EI in the
42
43 context of university students in China (Sun *et al.*, 2023), Pakistan (Soomro and Shah,
44
45 2022), and Vietnam (Hoang *et al.*, 2020), whilst personal attitudes can also determine EI
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47 (Arshad *et al.*, 2016). Consequently, it would seem logical that AP could be positively
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49 related to EI. Subsequently, we propose the following:
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54 Hypothesis 1 (H1): AP is positively associated with EI.
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The Moderation Role of Serious Leisure (SL)

SL is defined 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" (Stebbins, 1992, p. 3). Moreover, SL is distinct from Casual Leisure (CL) because, according to Nimmi and Donald (2023), 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" (p. 273).

According to COR theory, personal resources can be developed across various contexts (Hobfoll *et al.*, 2018), referred to as lifewide learning (Cole and Coulson, 2022; Cole and Donald, 2022). Students are anticipated to engage in co-curricular and extra-curricular activities as part of their academic pursuits (Jackson, 2021). While participation in extra-curricular activities has been shown to influence EI (Maheshwari *et al.*, 2023), the role of SL still needs to be explored, particularly in Western Contexts (Nimmi and Donald, 2023). The theory of SL discusses how participation in SL enables an individual to acquire additional personal resources, leading to individual and social benefits over time (Elkington and Stebbins, 2014). Consequently, individuals participating in SL enhance the resources within their resource caravan (Hobfoll, 2012) by gaining skills and developing networks. These resources complement the resources acquired through AP, strengthening the association between AP and EI. Therefore, we propose:

Hypothesis 2 (H2): SL moderates the relationship between AP and EI in such a way that the association is stronger when participation in SL increases.

The Moderation Role of Perceived Stress

The ability to handle stress positively is a central tenant of COR theory (Hobfoll, 1989) since it enables an individual to make optimal use of their resource caravans when enabled

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3 to do so via resource passageways (Hobfoll, 2012; Hobfoll *et al.*, 2018). Time spent at
4 university can be a source of perceived stress for students (Donald and Jackson, 2023),
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6 whereby increased levels of perceived stress may have negative implications on one's AP,
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8 leading to an increased perceived threat of the loss of existing resources (Hobfoll, 1989).
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12 Entrepreneurship also involves operating in an uncertain, volatile, and stressful
13 environment, especially during the initial start-up phase (St-Jean *et al.*, 2022). Therefore,
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15 students who achieve AP with lower perceived stress may feel more suited to become
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17 entrepreneurs, strengthening the AP-EI association. This reflects the resource
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19 passageways aspect of COR (Hobfoll, 2012; Hobfoll *et al.*, 2018), whereby individuals
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21 may seek out different environments since stress is a transactional process between an
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23 individual and their environment (Folkman and Lazarus, 1985). Given this link to
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25 personal resources and the management of perceived stress levels, we propose the
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27 following:
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33 Hypothesis 3 (H3): Perceived stress levels moderate the relationship between AP
34 and EI in such a way that the association is stronger when perceived stress levels are
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36 lower.
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39 ***The Moderation Role of Gender***

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41 According to Global Entrepreneurship Monitor (2023), most countries, including the UK,
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43 have a gap between the number of men and women entrepreneurs. Van Der Sluis *et al.*
44
45 (2008) highlighted the gender gap among graduates becoming entrepreneurs. They
46
47 viewed this as a critical issue since a university education is often positioned as a driver
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49 of entrepreneurial entry. Fifteen years later, although women have increasingly become
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51 entrepreneurs, they remain "consistently underrepresented among graduate
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53 entrepreneurs" (Piva and Rovelli, 2022, p. 143).
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3 From a COR theory perspective, it is interesting to consider one's resource caravan
4 and the ability to operationalise it along resource passageways (Hobfoll, 2012; Hobfoll *et*
5 *al.*, 2018). This dynamic is captured by findings from Arshad *et al.* (2016), who found
6 that "perceived social norms have a greater effect on female attitude toward
7 entrepreneurship" (p. 318). Consequently, men are often more optimistic than women
8 about their abilities to become entrepreneurs and thrive in entrepreneurial environments
9 (Langowitz and Minniti, 2007). If we consider students pursuing traditional employment,
10 we know that in the UK, studies continually show that men have higher self-perceived
11 employability than women (e.g., Donald *et al.*, 2018; 2019; Hughes *et al.*, 2023). Taken
12 together, this might mean that women view entrepreneurial pursuits as a greater threat to
13 their existing resources. Even where they have high levels of AP, there may be concerns
14 about experiencing resource loss cycles (Hobfoll, 1989), acting as a deterrent to EI.
15 Therefore, we propose:

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17 Hypothesis 4 (H4): Gender moderates the relationship between AP and EI in such
18 a way that the association is stronger for men than for women.
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33 **Methodology**

34 ***Participants and Procedure***

35 Participation in this study was open to any student currently studying for an
36 undergraduate degree at any university in the UK. Ethics approval was obtained from the
37 Institutional Review Board. Based on the feedback and ethics approval, and to avoid any
38 conflicts of interest, such as collecting data from our own students, data was collected on
39 our behalf via the 3rd party, SurveySwap, in 2023. SurveySwap has a registered group of
40 university students in the UK whose student status and institution have been validated
41 during the registration process. Students also provide their gender when registering. To
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3 address our gender moderating hypothesis (H4), we adopted a stratified sampling
4 approach to ensure the representation of the undergraduate population in the UK of 57%
5 women and 43% men (Higher Education Statistics Agency, 2023). Therefore, our survey
6 was only sent to individuals who identified as women or men.
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12 For recruiting participants, SurveySwap initially sent a link to our participant
13 information form with the opportunity to ask the lead author any questions via email.
14 Individuals who provided informed consent were then presented with the online
15 questionnaire. All questionnaire fields were marked as mandatory to ensure a complete
16 dataset. However, students could opt out at any point before submitting their responses
17 without any of their data being collected. There were also three validation questions to
18 check for careless responses. Participants who did not answer these validation questions
19 correctly (i.e., did not choose the specific response required) were excluded from the
20 study.
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33 The survey was sent to 422 students, of which 405 responses were received that
34 passed the validation check questions, giving us a response rate of 95.97%, with the
35 required gender split of 57% women and 43% men. The response rate is exceptionally
36 high because SurveySwap has a dedicated pool of students who regularly complete
37 questionnaires for them. As researchers, and to conform to the ethics approval agreement,
38 we made SurveySwap a single payment in exchange for them collecting the dataset on
39 our behalf. SurveySwap subsequently paid each participant an undisclosed fee.
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51 *Measures*

52 Self-Perceived Academic Performance (AP) was assessed using a 5-item scale adapted
53 from Verner-Filion and Vallerand's (2016) Perceived Academic Performance Scale. A
54 sample item is "I perform tasks that are expected of me". The scale employs a seven-point
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3 Likert Scale (1=do not agree at all, 7=very strongly agree). The Cronbach Alpha was
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5 0.91.
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8 Individual Entrepreneurial Intention (EI) was measured using a 10-item scale
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10 from Bolton and Lane (2012). A sample item is "I like to take bold action by venturing
11
12 into the unknown". The scale employs a five-point Likert Scale (1=strongly disagree,
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14 5=strongly agree). Three items measured risk-taking, four measured innovativeness, and
15
16 three measured proactiveness. The Cronbach Alpha was 0.80.
17

18
19 Serious Leisure (SL) was assessed via an 18-item scale adapted from Gould *et al.*
20
21 (2011) and based on Gould *et al.*'s (2008) Serious Leisure Inventory and Measure (SLIM).
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23 A sample item was "My hobby has helped me improve how I think about myself". The
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25 scale employed a five-point Likert scale (1=strongly disagree, 5=strongly agree). The
26
27 Cronbach Alpha was 0.90.
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29

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31 Perceived Stress was measured using a 6-item scale developed by Cohen *et al.*
32
33 (1983). A sample item is "In the last month, how often have you been angered because of
34
35 things that were outside of your control?" The scale employs a five-point Likert scale
36
37 (0=never, 4=very often). The Cronbach Alpha was 0.89.
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41 Gender was measured using two options, male or female (per the justification in
42
43 the participants and procedures section).
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45 ***Strategy of Analysis***

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47 The study data were generated from a single source of self-reported survey data. Thus,
48
49 we needed to check for common method bias (Podsakoff *et al.*, 2003). We used Harman's
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51 single-factor test as an exploratory assessment. The factor extraction results revealed an
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53 extracted total variance of 32%, showing the absence of common method bias.
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57 Two types of Structural Equation Modelling (SEM) are used for data analysis in
58
59 social science research: CB-SEM and PLS-SEM (Hair *et al.*, 2017). The PLS-SEM
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3 approach is suitable for exploratory, confirmatory, and predictive analyses (Hair *et al.*,
4
5 2017). This research work deploys PLS-SEM because of its causal-predictive power that
6
7 permits it to balance explanation and prediction (Shmueli *et al.*, 2019).
8
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10 11 12 **Results and Analysis**

13 14 ***Descriptive Statistics***

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16 Table I shows the means, standard deviations, and correlations for the variables under
17
18 study.
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21 * INSERT TABLE I HERE *
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23 24 ***Assessment of Measurement Model***

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26 Following Ringle *et al.*'s (2015) recommendation, a PLS-SEM technique was applied to
27
28 test the proposed hypotheses, and IBM-SPSS was used for initial data exploration.
29
30 Indicators with standardised factor loadings above 0.50 were retained. Table II shows
31
32 each variable's Average Variance Extracted (AVE) and the Variance Inflation Factor
33
34 (VIF). The results collectively demonstrate adequate internal consistency.
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38 * INSERT TABLE II HERE *
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40 The goodness of the model fit was checked through the Average Path Coefficient
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42 (APC), Average R² (AR²), and Average Variance Inflation Factor (AVIF). Values of the
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44 APC (0.14, $p < 0.001$) and AR² (0.11, $p < 0.001$) are significant. Potential
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46 multicollinearity was also checked using the Average block VIF (AVIF) and full
47
48 collinearity Variance Inflation Factor (AFVIF). The values were 1.09 and 1.21,
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50 respectively, whereby values lower than 3.33 indicated no issues with multicollinearity.
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52 The adequacy of the hypothesised model was established using an overall goodness-of-
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54 fit (GoF) index, which was 0.29.
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Hypothesis Testing

Direct Effect

Results showed that AP is positively associated with EI (0.33, $p < 0.001$). Therefore, H1 is supported.

Moderation Analysis

H2 proposed that SL moderates the relationship between AP and EI in such a way that the association is stronger when participation in SL increases. The interaction effect was significant ($\beta = 0.12$, S.E. = 0.049, $p < 0.001$), and values of F^2 (0.02) show small effect sizes. Therefore, H2 is accepted.

H3 proposed that perceived stress levels moderate the relationship between AP and EI in such a way that the association is stronger when perceived stress levels are lower. The interaction effect was significant ($\beta = -0.09$, $p < 0.05$). Therefore, H3 is accepted.

H4 proposed that gender moderates the relationship between AP and EI in such a way that the association is stronger for men than for women. The interaction effect was insignificant ($\beta = -0.04$, ns). Therefore, H4 is rejected.

Table III summarises the hypothesis testing for H1-H4.

* INSERT TABLE III HERE *

Validation of the Model

Figure 1 shows the validation of the model.

* INSERT FIGURE 1 HERE *

Discussion and implications

Our results suggest that the positive relationship between self-perceived academic performance (AP) and entrepreneurial intention (EI) is moderated by serious leisure (SL)

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3 when participation levels are higher and by perceived stress when stress levels are lower.
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5 However, contrary to our other proposed hypothesis (H4), gender (comparing individuals
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7 who identify as women or men) did not moderate the AP-EI relationship. Our model's
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9 development and empirical validation offer several contributions to theory, practice, and
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11 policy.
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14 ***Theoretical, Practical, and Policy Implications***

15
16 COR theory captures how, when facing perceived stress, human behaviour is driven by a
17
18 desire to protect against the actual or perceived loss of existing resources while also
19
20 seeking to acquire new ones (Hobfoll, 1989). Our findings support this position,
21
22 especially given the moderating role of perceived stress. COR theory also asserts that a
23
24 resource's actual or perceived loss will have a more significant physiological impact than
25
26 gaining that resource (Hobfoll, 1991; Holmgren *et al.*, 2017). This would appear to be
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28 bad news for increasing one's EI, given the significant risk of failure and a high potential
29
30 for loss of resources, since entrepreneurship also involves operating in an uncertain,
31
32 volatile, and stressful environment, especially during the initial start-up phase (St-Jean *et*
33
34 *al.*, 2022). Yet our results counter this notion by revealing that the increase of specific
35
36 personal resources, such as academic performance (AP) and serious leisure (SL), can
37
38 amplify the association between AP and EI among undergraduates in the UK.
39
40 Consequently, acquiring specific resources within one's resource caravan (Hobfoll, 2012;
41
42 Hobfoll *et al.*, 2018) appears influential in the AP-EI relationship. The focus on the UK
43
44 is also timely, given the observation by Maheshwari *et al.* (2023) of the need to address
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46 underrepresented countries, such as the UK when considering potential determinants of
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48 students' EI. As a caveat, our study only looks at the association between AP-EI, not if
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50 AP is a determinant of EI, due to the cross-sectional nature of the data collection phase.
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3 Positioning SL as a personal resource also supports SL theory, which states that
4 participation in SL enables an individual to acquire personal resources, leading to
5 individual and social benefits over time (Elkington and Stebbins, 2014). Our focus in this
6 study on SL and perceived stress in undergraduate UK populations also advances an
7 emerging interest in looking at these variables in career theory research. For instance, as
8 evidenced by studies of graduate populations in India (e.g., Nimmi and Donald, 2023;
9 Nimmi *et al.*, 2023).

10
11
12 The interconnected nature of AP-EI and the moderating influences of SL and
13 perceived stress also support calls for a holistic approach to preparing students for
14 graduate life (Benati and Fischer, 2020), termed lifewide learning (Cole and Coulson,
15 2022; Cole and Donald, 2022). The view also acknowledges the relative value of
16 curricular, co-curricular, and extra-curricular learning to develop personal resources
17 (Jackson and Bridgstock, 2021). Given the lack of gender moderation in the AP-EI
18 relationship, we call on universities to provide opportunities for all students to participate
19 in SL (e.g., via clubs, societies, and volunteering). However, such strategies need to
20 consider how to provide students with SL opportunities who may not otherwise possess
21 the means or opportunities (e.g., lack of time due to work or care responsibilities, needing
22 more resources to pay for equipment, etc.). This further highlights the challenges
23 individuals face in acquiring additional resources while safeguarding against losing
24 existing resources (Holmgren *et al.*, 2017).

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26
27 The previous part of our discussion offered contributions about how students can
28 develop resources to establish a resource caravan (Hobfoll, 2012). Now, we focus on how
29 our findings can inform theory, practice, and policy from the perspective of resource
30 passageways to operationalise one's resource caravan (Hobfoll, 2012; Hobfoll *et al.*,
31 2018). Resource caravan passageways reflect that "people's resources exist in ecological
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3 conditions that either foster and nurture or limit and block certain resource creation and
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5 sustenance” (Hobfoll *et al.*, 2018, p. 106). However, our findings indicate that while
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7 resource passageways are often positioned as being determined by contextual
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9 (environmental) aspects, agentic (perceptions) may also interplay and influence their
10
11 availability to a certain extent.
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15 For instance, although our findings show no moderation of gender in the AP-EI
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17 relationship, this perhaps highlights the interplay of such contextual and agentic
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19 dimensions. An example of contextual influence is gender discrimination from broader
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21 society that influences perceptions, including those identified in workplace settings (e.g.,
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23 Dubbelt *et al.*, 2016). An example of agentic influence is how perceived social norms
24
25 have been shown to impact women’s attitudes to entrepreneurship more than men’s
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27 (Arshad *et al.*, 2016). In other words, even if a resource passageway is available to a
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29 student (contextual/environmental), whether or not it can be used to operationalise one’s
30
31 resource caravan still relies on the individual (agentic/perceptions) as to whether the
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33 resource passageway is considered available. This may help to explain the gap between
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35 the number of women and men entrepreneurs (Global Entrepreneurship Monitor, 2023)
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37 despite the same resources being of equal significance to men and women in developing
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39 their resource caravans.
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45 Managing the flow of talent from universities into the labour market is essential
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47 to ensure graduates can navigate uncertain and volatile situations for the sustainability of
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49 career ecosystems (Baruch *et al.*, 2023). Recognising this becomes imperative to increase
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51 students' perceptions of their entrepreneurial intentions, particularly given that 17.8 per
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53 cent of students aspire to be entrepreneurs immediately after graduation, a figure that
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55 raises to 32.3 per cent within five years of completing their studies (Sieger *et al.*, 2021).
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57 To address this, we propose interventions at the university and government levels and
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3 suggest the adoption of an entrepreneurial university model which not only supports
4 entrepreneurship programs but also integrates business incubators for students, thereby
5 facilitating the establishment of their own ventures and contributing to the economic and
6 employment capacity of the local region (Etzkowitz, 2016).
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12 Additionally, promoting entrepreneurial opportunities via initiatives like career fairs,
13 professional networking gatherings, mentorship schemes, and workplace-based
14 education, including placements and internships, can be helpful since such environments
15 help to cultivate students' social capital, professional networks, and skills (Bridgstock and
16 Jackson, 2019).
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24 We support calls to provide all students with access to career support (including
25 entrepreneurship paths), mental health, and well-being opportunities (Donald and
26 Jackson, 2023) to help them develop their resource caravans. However, government
27 initiatives to encourage individuals to become entrepreneurs (including influencing their
28 perceptions of operationalising resource caravans) may need to be targeted at women. For
29 instance, Au *et al.* (2021) found that government support in Malaysia increased the
30 likelihood of women entering and staying in an entrepreneurship path. Khattar and
31 Agarwal (2023) also found that for women in India, “entrepreneurial identity was a
32 developmental process influenced by various episodes in different life stages-childhood,
33 adolescence, marriage and motherhood” (p. 277). This perhaps also explains some of the
34 conflicting findings in the literature around the role of gender as a moderator between
35 different variables across various countries and regions. However, more research is
36 necessary to investigate these proposed claims and avoid overclaiming our study's
37 implications.
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Limitations and Future Research

Our study shares several limitations with other published studies (provided in brackets).

First, data were collected via a cross-sectional research design and a single method of questionnaires (Bennett *et al.*, 2022). Second, participants' self-reported data and other EI drivers were not investigated (Nowiński *et al.*, 2019). Third, structural factors such as labour market conditions are outside the scope of this research (Nimmi *et al.*, 2021). Fourth, since our study focused on undergraduates in the UK, the findings may not be generalisable to postgraduates in the UK, students in other countries, or non-university student populations (Donald *et al.*, 2019).

Future research should develop our model to consider and test mediators. For example, could the HERO elements (**H**ope, **S**elf-Efficacy, **R**esilience, **O**ptimism) of psychological capital, self-perceived employability, and/or wellbeing mediate the AP-EI relationship, given the interaction of these variables positioned as personal resources in studies of management graduates in India (Nimmi *et al.*, 2021; 2022).

Additionally, we echo calls by Maheshwari *et al.* (2023) for further research in developed countries, such as those across Europe, to understand EI better since entrepreneurship remains a less common pathway following graduation than working for an employer. Such studies may look at individual countries or cross-comparison between countries (e.g., Nikitina *et al.*, 2023) or compare students from different degree programs (e.g., Duong, 2022). Longitudinal studies may also be of value to see how personal perceptions evolve over time (e.g., with each subsequent year of university study) and whether the outcomes of graduates align or diverge with their perceptions as students. Intersectional studies may also be beneficial to explore the potential compounding impacts of different moderators on the AP-EI relationship.

Conclusion

Our study addressed global issues of AP and EI within university settings. Using undergraduates in the UK as a case, we found that SL (when levels of participation are higher) and perceived stress (when levels of perceived stress are lower) moderate the positive AP-EI relationship. However, contrary to our proposed hypothesis, gender (comparing individuals who identify as women or men) did not moderate the AP-EI relationship. The theoretical contribution comes from advancing COR theory by exploring personal resources within a resource caravan of AP, SL, perceived stress, gender, and EI in a UK-based university undergraduate population. The notion of resource passageways is also developed to acknowledge the interplay of agentic (perceived) and contextual (environmental) factors. The practical contribution comes from providing pragmatic strategies for UK-based universities and national governments to increase individual entrepreneurial intention in undergraduates. Our findings offer initial insights into a better understanding of EI within developed countries, using the UK as a case. Opportunities for future research include longitudinal studies and considering potential mediator variables.

Declaration of Interest Statements

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Disclosure Statement

The authors report there are no competing interests to declare.

Access to the Dataset

Access to the dataset is not possible due to ethical approval restrictions.

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Table I: Descriptive Statistics and Correlations

| | Variable | 1 | 2 | 3 | 4 | 5 | Mean | S.D |
|---|-----------------------------|----------|-----------|----------|----------|----------|-------------|------------|
| 1 | Academic Performance | 1 | | | | | 5.55 | 1.11 |
| 2 | Entrepreneurial Orientation | 0.34** | 1 | | | | 3.50 | 0.58 |
| 3 | Serious Leisure | 0.28** | 0.35** | 1 | | | 3.71 | 0.58 |
| 4 | Perceived Stress | -0.26** | -0.66(ns) | -0.59** | 1 | | 3.12 | 0.90 |
| 5 | Gender | 0.19(ns) | 0.15** | 0.13** | -0.09** | 1 | n/a | n/a |

Note: ** = $p < 0.001$, ns = non significant.

Source: Authors Own

Table II: Reliability and Validity

| Variable | No. of items | Composite reliability | Average variance extracted (AVE) | Variance Inflation Factor (VIF) |
|--------------------------------------|---------------------|------------------------------|---|--|
| Self-Perceived Academic Performance | 5 | 0.93 | 0.75 | 1.68 |
| Individual Entrepreneurial Intention | 10 | 0.85 | 4.98 | 1.21 |
| Serious Leisure | 18 | 0.92 | 0.51 | 1.2 |
| Perceived Stress | 6 | 0.92 | 0.65 | 1.11 |

Source: Authors Own

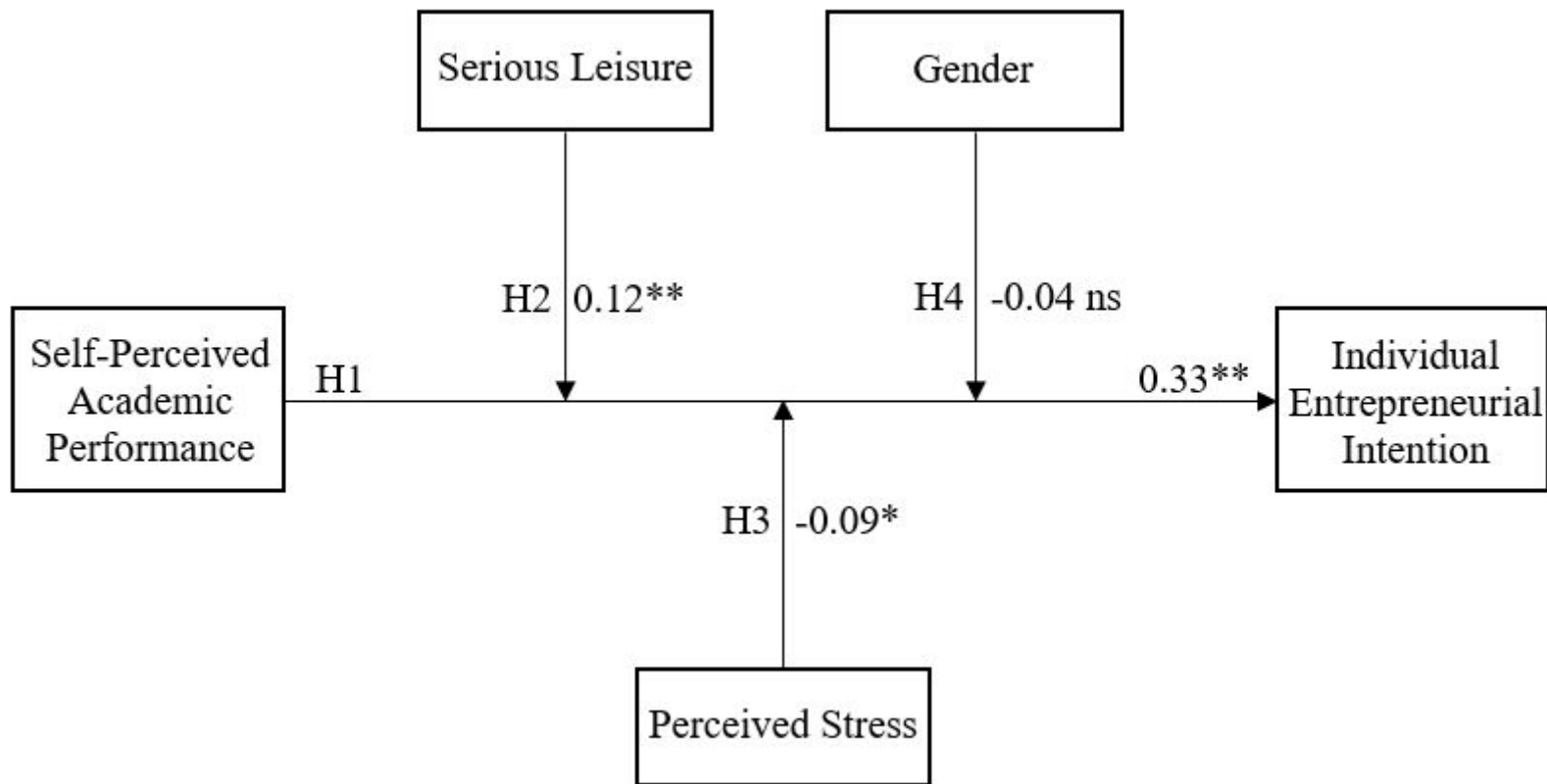
Table III: Hypothesis Testing

| | Outcome Variable |
|---|---|
| | Individual entrepreneurial Intention (IEI) |
| Direct effects | |
| H1. Self-Perceived Academic Performance (SAP) | 0.33** |
| Moderating effect | |
| H2. SAP x Serious Leisure | 0.12** |
| H3. SAP x Stress | -0.09* |
| H4. SAP x Gender | -0.04(ns) |

Note: ** = $p < 0.001$, * = $p < 0.05$, ns = non significant.

Source: Authors Own

Figure 1



Caption: Figure 1 evidences the empirically validated model.

Note: ** = $p < 0.001$, * = $p < 0.05$, ns = non-significant (hypothesis rejected). Source: Authors Own.