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To cite this article: Fajian Liu, Fangqi Zhang, Nan Wu & Nallo Keifalla James (2023) Career barriers of hospitality and tourism management students and the impacts on their career intention, Economic Research-Ekonomiska Istraživanja, 36:2, 2129410, DOI: [10.1080/1331677X.2022.2129410](https://doi.org/10.1080/1331677X.2022.2129410)

To link to this article: <https://doi.org/10.1080/1331677X.2022.2129410>



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Published online: 12 Oct 2022.



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# Career barriers of hospitality and tourism management students and the impacts on their career intention

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## ABSTRACT

This study constructs a three-dimensions of perceived career barriers (CB) of hospitality and tourism management (HTM) students, namely personal, social and interactional career barriers, and explores their impacts on students' professional identity and intention to work in hospitality and tourism (H&T) industry. The findings based on a sample of 842 HTM students in mainland China are as follows. Firstly, the three-dimensions model could reveal the structure of HTM students' perceived career barriers and all dimensions have significantly negative effects on professional identity and career intention. Meanwhile, the predictive power of personal career barriers is strongest, interactional and social barriers followed. Secondly, students' professional identity plays a role as a mediator between career barriers and intention. Lastly, the barriers could be negotiated by major satisfaction, as it moderates the relationship of career barriers to intention partially. Managerial implications are also discussed for tourism industries and educators.

## ARTICLE HISTORY

Received 18 February 2022  
Accepted 21 September 2022

## KEYWORDS

Career barriers; career intention; professional identity; major satisfaction; hospitality and tourism management students

## JEL CODES

J24; L83; M53; Z31

## 1. Introduction

Rapid development of the H&T industries has induced a large demand for talent since the beginning of the new century. In China, not merely the number of domestic tourists has reached 6.06 billion but also approximately 3.48 million H&T institutions have been created, accounting for 542.3 million people employed with an increase of 4.5 percent year on year.<sup>1</sup> The rapid rise has not only raised the need for a larger quantity and higher quality of labour, but also has induced a great increase in HTM talent cultivation and higher education majors (Jiang & Tribe, 2009), for providing sufficient graduates and talents for these industries. However, the fact is that the degree of students' professional identity and major satisfaction is not as high as one might suppose which leads to a lower employment rate and intensive loss of talents from H&T industries (Bai et al., 2012). A serious imbalance between supply and demand of H&T talents arises all over the world. The structural contradictions may

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be a result of the career barriers of internal and external factors perceived by HTM students, which in turn lead to lower intention to work in H&T industries (Chuang & Dellmann-Jenkins, 2010). Unfortunately, it has been getting worse since the outbreak of Covid-19, as students perceived the full of uncertainties and negative emotions about the H&T industries (Benaraba et al., 2022; Birtch et al., 2021; Khan et al., 2022). Thus, the topical and critical issues that need to be urgently addressed for retaining highly qualified talents in H&T industries, call for an analysis of the perception of students' general career barriers and how these barriers impact students' intention to work in H&T industry.

Career barriers began to gain the attention of researchers in the late 1980s and became a hot topic in the studies of management (Cardoso & Moreira, 2009). Early discussions of CB primarily focussed on the career psychology of women (Kattara, 2005). In recent years, empirical studies have attempted to address the applicability of career barriers constructs to other populations (Lipshits-Brazilier & Tatar, 2012). For instance, college students, the reserve 'army' of the job market (Urbanaviciute et al., 2016). They would also be influenced by CB in the formation of occupational interests and career goals (Lindley, 2005; Lipshits-Brazilier & Tatar, 2012) as well as the whole process of making career choices and achieving career goals (Song & Chathoth, 2008).

In H&T field, the disadvantages employees encountered in their work could also be included in the career barriers category (Moore, 2018). CB have been therefore expanded in tourism and hospitality studies. Considering the characteristics of the H&T industry, Lawson et al. (2013) implicated work conditions, particularly organisational time expectations, as negative barriers that hotel managers experience. Furthermore, missed professional development opportunities were treated as barriers to small and medium tourism enterprise owner-managers (Lyons et al., 2016). More importantly, HTM students have been concerned by career barriers studies. O'Leary and Deegan (2005) surveyed the causes for the lower employment rate of HTM students in tourism industries, and included as internal and external factors. Chuang and Dellmann-Jenkins (2010) pointed out that gender differences existed in HTM students' perception of career barriers and emphasised that role of gender on career barriers and choices. Nevertheless, the studies of perceived barriers of students in colleges are still limited. Besides the need for summarising and categorising students' reasons of lower intention to begin careers in H&T industries into the structure of career barriers, It would be worth exploring the mechanism, process of their impacts on students' intention to work in H&T industries, and how to negotiate the negative effects by some variables that mediate or moderate the effects of CB on CI, such as professional identity and major satisfaction, the other factors affecting students' employment intention, which should not be ignored (Bai et al., 2012).

As there is a lack of comprehensive studies concerned with the career barriers of HTM students and thus no coherent conclusion has been reached, a systematic construction of students' career barriers and their impacts need to be developed, which is what we seek to address. The aims of this study consisted of three aspects. Firstly, we utilised and tested the theoretical framework of career barriers of HTM students, through the consideration of the characteristics of H&T industries and education, which would help to unveil the employment particularity of HTM students, as well as

validate and expand the CB studies furtherly. Secondly, we explored the impacts of CB on students' career intention in H&T industries. And lastly, we further investigated the mediation and moderation effects of professional identity and major satisfaction. Subsequently, some suggestions regarding the retention of talents in H&T industries are offered.

## **2. Theoretical foundation and hypothesis formulation**

### **2.1. HTM students' career barriers**

HTM graduates often cease to remain in the field after working in relative industries for 3 to 5 years (Teng, 2008); the high turnover rate has become a serious concern in the H&T job market, and the outbreak of COVID-19 makes it worse (Khan et al., 2022). As the potential future backbone of H&T employment, understanding HTM students' preferences and concerns is the first step in addressing the problem of talent drain, especially particular barriers in the process of career decision making (Lent & Brown, 2020; Milot-Lapointe et al., 2018).

Career barriers were considered as obstacles preventing forward movement of career development (Swanson & Woitke, 1997; Urbanaviciute et al., 2016). They refer to the existing events or conditions, either within the person or from one's environment, that make one's career progress difficult (Swanson & Woitke, 1997). Lent et al. (2000) regarded them as negative affordances that might inhibit career development. Previous literature had mainly focussed on the employees' career barriers (Cadaret et al., 2017; Michel et al., 2011). Equally, CB could similarly erode students' self-confidence and complicate their career planning processes. Recently, several studies have begun to shift towards students' perceived CB (Lent et al., 2002; Peña-Calvo et al., 2016).

To date, HTM students' perceived barriers are drawing attention as they exert a great influence on their career-related decisions (Teng, 2008). Moreover, barriers of the job search and understanding barriers on the scope of job opportunities available in tourism sectors were considered as significant obstacles for HTM students (Ramakrishnan & Macaveiu, 2019). After exploring the expectation gap about the H&T industries (Cho et al., 2006), career barrier dimensions were discussed in different perspectives and groups (Chuang & Dellmann-Jenkins, 2010; Kim et al., 2016; Richardson, 2010). For instance, the ethnic minority students majoring in HTM would perceive more discrimination, access barriers, and job search barriers (Wen & Madera, 2013).

While there were various dimensions of CB that impeded career choice (Lindley, 2005; Lipshits-Brazilier & Tatar, 2012), the systematical perceived barriers in various stages of the career choice process have not received much attention (Zeng et al., 2012). The structure, specific contents of CB related to the H&T industries are necessary to explore further, as well as the process, mechanism and magnitude of their effects on career intentions, which remain unclear.

### **2.2. Career intention and its relation with career barriers**

Career intention (CI) could be described as the willingness to choose a job voluntarily (Arnold et al., 2006). Its process may start with a psychological response to negative

situations, with a cognitive decision being made subsequently. Here, career intention specifically refers to the intention to work in H&T industry. Even though researchers have focussed on factors associated with CI, studies on career-related behaviour and intention of HTM students are less common (Chang & Tse, 2015; Chuang & Dellmann-Jenkins, 2010).

Specifically, perceived career barriers were confirmed to influence HTM students' CI (McWhirter et al., 2007; Song & Chathoth, 2008; Teng, 2008). Beyond this overall assessment, we know little about the ways in which aspects of CB affect students' intention to work in H&T industry. It is important to determine this, for if hospitality programmes and faculty can guide students into the right employment settings, it is more likely that a match between the individual and the organisation will be made (Song & Chon, 2012).

Various theoretical models have been created to explain these career development problems, such as social cognitive career theory (SCCT), which could elucidate the importance of individual agency in the process of career decision-making and explain how CB enhance or limit an individual's occupational intentions (Walsh et al., 2015). SCCT provided a comprehensive framework of self-efficacy, outcome expectations, and the goals that interact with demographic variables, contextual factors, and learning experiences (Lent et al., 2002). Those factors would influence the interest development, career choice, and performance (Lindley, 2005). SCCT has been widely applied and used to understand the career development of college students from personal and contextual factors (Lent et al., 2013). Thus, we constructed the theoretical framework and relative hypotheses based on it.

From the SCCT model, understanding the supports and barriers for a successful career was essential in determining whether a student had considered all possible academic options and to assess the effectiveness of his or her decision-making skills (Lent et al., 2002). Considering the characteristics of H&T industries, such as a stressful occupation (Lawson et al., 2013), 'face-time' culture (O'Neill & Xiao, 2010), unreasonably long working hours (Mulvaney et al., 2007), and the present situation of HTM students' lower willingness to work in H&T industries (Kim et al., 2016), this study distills and integrates the three-dimension model of CB, which consisted of personal, social, and interactional career barriers (Lent et al., 2000; Lipshits-Braziler & Tatar, 2012; Sinclair et al., 2019) in order to measure important aspects of HTM students' perceived CB.

Personal factors are important influencing indicators in career development (Sinclair et al., 2019). Many studies have shown its positive results, such as professional identity and professional commitment. Here, professional identity (PI) refers to students' attitude about certain profession or career, which would exert effects on their future career development (Diemer & Blustein, 2007; Mahmoudi-Gahrouei et al., 2016), thus we furtherly integrated PI into the influence process of CB on CI. Conversely, personal career barriers were associated with the lack of interest and confidence, fear of failure, self-esteem, negative attitude and risk perception towards work, which had the most negative effects on students' career planning (Neureiter & Traut-Mattausch, 2016; Yan et al., 2021). Thus, we suppose that:

H1a: PCB negatively affects CI.

H2a: PCB negatively affects PI.

As the expected socialisers of adolescents, parents have great influence on the formation of their self-concept of learning ability and professional ability (Sawitri et al., 2014). The attitude of family members for or against the career choices would affect students' professional identity and subsequent professional development (Hill et al., 2003). When students perceive that their career decisions are supported by their relatives and friends, and no social barriers prevent them from developing their career interests, they tend to show a strong career intention in related industries (Inda et al., 2013; Lent et al., 2013). This support would be particularly important during and after the COVID-19 pandemic (Tu et al., 2021). It is vice versa effect. So, we develop the hypothesis:

H1b: SCB negatively affects CI

H2b: SCB negatively affect PI.

The working environment of H&T industries is continually improving, and it has been proven as an effective path in solving the lower employment rate of HTM students (Zeng et al., 2012). However, many HTM graduates are continuing to leave due to the poor working conditions and remote locations of H&T jobs. Moreover, some external constraints of the H&T industries remain and have been thought to play critical roles in students' perception, such as high stress, long working hours, lower wages, and a lack of advancement opportunities, particularly for Millennials (Egerová et al., 2021). These restrictive factors might exacerbate students' turnover rates and lower career aspirations about H&T careers (Jenkins, 2001; Kang & Gould, 2002), especially during the epidemic periods (Huang et al., 2021). Therefore, based on the extant literature, the following hypotheses are proposed:

H1c: ICB negatively affects CI.

H2c: ICB negatively affects PI.

### **2.3. Professional identity and its mediating effects**

Professional identity (PI) is an individual's attitude or sense of devotion to a profession or vocation, and it reflects his or her desire to persist in the profession and the degree of liking it (Mahmoudi-Gahrouei et al., 2016). Sometimes the force was referred to vocational identity (Diemer & Blustein, 2007; Porfeli et al., 2011). Students' PI was a crucial factor of their commitment to work, and contributed to their career development. Its significant impact on the degree of burnout has been verified (Diemer & Blustein, 2007). If students lack a professional identity, they would be more likely to leave the programme, or turnover after graduation. Thus, the lower the sense of PI someone has, the more likely it is that he or she is to experience burnout (Lu et al., 2022). Unfortunately, only a few studies in the field of H&T have explored the relationship between PI and career choice, and how it affects CI is still unclear (Bai et al., 2012).

Combined with the previous concepts (Olesen, 2001; Porfeli et al., 2011), students' PI was defined as the recognition of their major value in society and their commitments to make a certain career a lifelong personal development goal (Trede et al.,

2012). As a reserve force of future workers, students' PI was directly related to their career choice, transition, and development. Identifying their emerging identity may enable them to prepare a strategy for their career.

In the context of analysing the impact of CB on career intentions, PI might provide an additional insight on what factors obstruct committing oneself to certain careers. According to self-determination theory, PI is crucial to career intention. If students have higher PI, they will be more actively engaged in the industry related to their major, otherwise they will leave their jobs in the next five years even if they choose to work in the industry after graduation (Porfeli et al., 2011). Dimensionally, some scholars supported that PCB were also the key factors affecting students' PI, which can predict the level of career intention in turn (Wang et al., 2020). In view of this, PI not only can be seen as the outcome, but also exert indirect effects between CB and CI. But students who have higher level of PI often keep positive attitude towards the pursuit of career choices (Lent et al., 2013). Moreover, some external constraints of the H&T industries remain and have been thought to play critical roles in students' perception (Jenkins, 2001; Kang & Gould, 2002), the studies found that HTM students tend to have a lower sense of professional identity (Bai et al., 2012). With a strong sense of PI, students likely to generate a higher level of career willingness (Jackson, 2016). Thus, PI also play a role in CI by not only serving as promoter but also acting as a mediator between CB and CI, this study proposes the following hypotheses:

H3: PI positively affects CI.

H4a: PI mediates the relationship between PCB and CI.

H4b: PI mediates the relationship between SCB and CI.

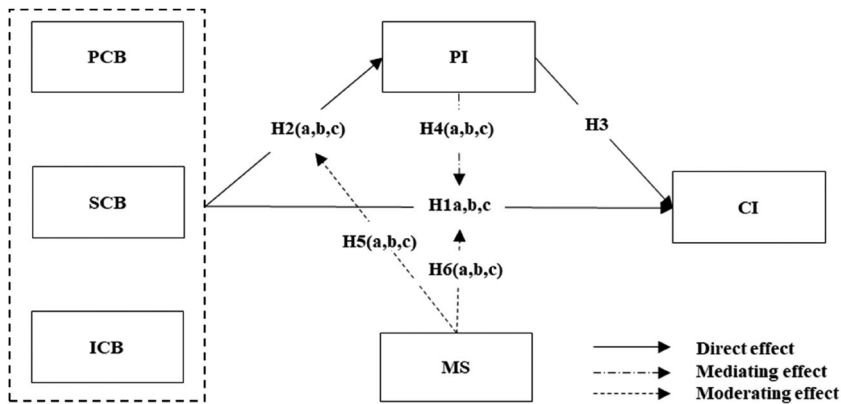
H4c: PI mediates the relationship between ICB and CI.

#### **2.4. Major satisfaction and its moderating effects**

Major satisfaction (MS) is often taken as of utmost concern given its effect on students' career intentions (Zacher, 2014). According to Lent et al. (2007), a similar concept, academic satisfaction, was defined as the 'enjoyment of one's roles or experiences as a student' (p.87). Correspondingly, MS could also be understood as the pleasurable emotional state resulting from the congruence between the actual output to the students and what they want to gain from the major (Peña-Calvo et al., 2016). As a proximal indicator of the efficacy of career decisions, MS has been linked to several positive outcomes. For example, it has been found to be positively relate to academic performance (Nauta, 2007), intrinsic motivation for career choice (Eun et al., 2013), career decision self-efficacy (Conklin et al., 2013), work volition (Jadidian & Duffy, 2012).

Notably, as a positive factor, MS can buffer or weaken this adverse effect of perceived barriers on CI and PI (Jung, 2020). In comparison, students who are more satisfied with their major should be more likely to establish a higher professional identity and keep more interest in their career choice in an encounter to career barriers. Moreover, the buffering or protective effect of MS on the relationship between CB and CI have been well demonstrated (Han & Yoon, 2015; Jung, 2020). Thus, looking at the moderating effects may give new insights into this topic, and even





**Figure 1.** Conceptual framework.  
Source: own elaboration.

provide a negotiation way to reducing the negative impact of barriers. Accordingly, the following hypotheses are proposed.

H5a: MS moderates the link between PCB and PI.

H5b: MS moderates the link between SCB and PI.

H5c: MS moderates the link between ICB and PI.

H6a: MS moderates the link between PCB and CI.

H6b: MS moderates the link between SCB and CI.

H6c: MS moderates the link between ICB and CI.

Above all, the theoretical model (Figure 1) as hypothesised is shown below.

### 3. Methodology

#### 3.1. Measurement

The constructs in the hypothesised model were measured by the scales, which derived from the literature (see Table 1), and then reworded slightly to incorporate the features of HTM students and the industries. However, the survey was conducted prior to the Covid-19. Its impact could not be considered, but that does not affect the stability and reliability of the results, as we aim to reveal the generality of HTM employment, and the mechanisms of impact remain unclear. The revised scales were evaluated by a panel of several researchers and students to assess their content validity. Then, the English measurement items were translated into Chinese and then back-translated into English by professional translators to avoid potential translation-based misunderstanding.

#### 3.2. Questionnaire and data collection

The questionnaire included two sections. Section one encompassed the measurement items for constructing the hypothesised model, with all items scored on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Respondents'



**Table 1.** Descriptive statistical results of the measurement scales and items.

Constructs and items (source)	Mean	Standard deviation	Factor loading
<b>Personal CB (McWhirter et al., 2007; Song &amp; Chathoth, 2008)</b>			
PCB1. I'm not interested in H&T related jobs.	3.58	1.222	0.868
PCB2. My ability and strength don't match the H&T industry.	3.68	1.031	0.760
PCB3. As not satisfied with the course on HTM major, I do not want to work in the H&T industry.	3.52	1.241	0.778
PCB4. In the learning process of HTM major, I can't develop a sense of achievement.	3.71	1.251	0.752
PCB5. I have no confidence towards the targets of H&T industry.	3.62	1.190	0.798
PCB6. I don't share the core values of work in H&T industry.	3.78	1.173	0.769
<b>Social CB (Same as above)</b>			
SCB1. Senior schoolmates in H&T industry suggest me not to work in this occupation.	3.60	1.220	0.812
SCB2. Many of my classmates are not going to work in H&T industry.	3.58	1.321	0.780
SCB3. My parents and relatives don't support the idea of a worker in H&T industry.	3.78	1.187	0.764
SCB4. My peers and friends advise me not to work in H&T industry.	3.48	1.172	0.798
SCB5. Working in the H&T industry is not recognised by others.	3.63	1.157	0.850
<b>Interactional CB (Same as above)</b>			
ICB1. Sex discrimination exists in the H&T industry.	3.68	1.081	0.897
ICB2. Working conditions in the H&T industry is not good.	3.76	1.058	0.832
ICB3. Most jobs in H&T industry are in remote locations.	3.76	1.035	0.768
ICB4. The career development opportunities for workers are few.	3.78	1.018	0.717
<b>Career Intention (Arnold et al., 2006; Chang &amp; Tse, 2015)</b>			
C11. I plan to be a H&T employee.	3.44	0.948	0.806
C12. I would be happy to spent my career in H&T industry.	3.38	0.943	0.825
C13. I will certainly join H&T industry after graduation.	3.41	0.924	0.728
C14. Working for H&T industry always keeps in my mind.	3.39	1.086	0.728
<b>Major satisfaction (Han &amp; Yoon, 2015; Nauta, 2007)</b>			
MS1. Generally speaking, I am satisfied with my major.	3.60	1.186	0.781
MS2. I feel good about my choice of major.	3.54	1.123	0.739
MS3. I never consider changing my major.	3.62	1.228	0.863
MS4. My decision to choose HTM major is wise.	3.54	1.177	0.827
<b>Professional Identity (Diemer &amp; Blustein, 2007; Porfeli et al., 2011)</b>			
PI1. I would recommend H&T profession to others.	3.38	0.958	0.712
PI2. H&T profession will help me achieve my personal goals.	3.39	1.069	0.698
PI3. I think H&T profession allows me to remain true values.	3.22	1.030	0.673
PI4. I am sure that H&T profession is right for me.	3.36	1.086	0.768
PI5. I think H&T profession will make my dream come true.	3.59	1.041	0.770

Note: The model fit indices of CFA are as follows: NFI = 0.967, RFI = 0.961, IFI = 0.977, TLI = 0.973, CFI = 0.977, RMSEA = 0.051.

Source: own elaboration.

sociodemographic information, including gender, grade, school, major, and hometown, was gathered in section two.

A pilot study was conducted in November, 2019. A total of 100 questionnaires were distributed to TM students within the authors' affiliation. According to the principle that Cronbach's  $\alpha$  coefficient ( $>0.7$ ), the scales had good reliability and validity, and thus no further modifications were necessary. The formal survey was conducted in five universities of Anhui Province, China, by using a web-based questionnaire tool, Sojump (Chinese Survey Monkey) in December, 2019. With the help of their teachers, questionnaires were distributed to HTM students by convenience sampling and snowball sampling. A total of 1029 online questionnaires were returned, and 842 valid responses were finally collected after excluding invalid ones. The rate of valid and reliable questionnaires was 82%.

**Table 2.** Sociodemographic profile of participants.

Variables	Categories	Frequency	Percent (%)
Gender ( <i>n</i> = 807)	Male	188	23.3
	Female	619	76.7
School level ( <i>n</i> = 842)	First-class university	220	26.1
	General university	622	73.9
Grade ( <i>n</i> = 837)	Freshman	142	17.0
	Sophomore	277	33.1
	Junior	387	46.2
	Senior	31	3.7
Major ( <i>n</i> = 836)	Tourism management	620	74.2
	Hospitality management	216	25.8
	Exhibition management	0	0.0
Homeland of students ( <i>n</i> = 831)	Eastern China	22	2.6
	Central China	783	94.2
	Western China	17	2.0
	Northeastern China	9	1.1

Note: First-class universities include Anhui University, and Anhui Normal University, while General universities include Hefei College, Chizhou College, and Huangshan College.

Source: own elaboration.

Amos17.0 was first applied to conduct confirmatory factor analysis to verify the applicability of CB dimension. Then PROCESS V 3.5. was used to analyse the direct effect, mediating effect and moderating effect. We adopted the Bootstrap method to test the significance of mediating and moderating paths, whether the PCB, SCB and ICB through PI and MS on CI was significantly different from zero. The detailed mathematical formula of this method can be referred to Model 8 in Hayes (2013).

## 4. Results

### 4.1. Descriptive data analysis

Table 2 presents the sociodemographic profile of the respondents. Most of them came from general universities, which composed the main body of HTM talent training. The gender ratio (188/619) was consistent with the actual proportion of male and female students (Jiang & Tribe, 2009; Ramakrishnan & Macaveiu, 2019). It also shown that the middle grades of sophomores (33%) and juniors (46%) accounted for a large proportion of respondents, who had completed some basic professional courses and established a clearer perception of the major. Further, the respondents were from HM (26%) or TM (74%) majors. These aforementioned characteristics demonstrated that reality and the representative population sample of respondents closely resemble.

### 4.2. Measurement model

SPSS26.0 and AMOS17.0 statistical tools were used to analyse the data. Firstly, internal consistency reliability and combination reliability were used to test the scale reliability. A Cronbach's  $\alpha$  value greater than 0.7 was considered ideal, and a Composite Reliability (CR) between 0.7 and 0.9 was considered satisfactory (Fornell & Larcker, 1981). As shown in Table 3, Cronbach's  $\alpha$  values for all dimensions and variables were greater than 0.8, and all CR values were higher than 0.8. Secondly, the

**Table 3.** Reliability and validity analysis.

	Cronbach's $\alpha$	CR	AVE	Fornell-Larcker criterion						
				PCB	SCB	ICB	PI	MS	CI	
PCB	0.907	0.908	0.622	<b>0.789</b>						
SCB	0.898	0.899	0.642	0.562	<b>0.801</b>					
ICB	0.880	0.881	0.650	0.628	0.458	<b>0.806</b>				
PI	0.854	0.847	0.526	-0.121	-0.126	-0.172	<b>0.725</b>			
MS	0.878	0.879	0.646	-0.374	-0.374	-0.391	0.221	<b>0.804</b>		
CI	0.880	0.856	0.598	-0.572	-0.504	-0.544	0.331	0.525	<b>0.773</b>	

Note: The values in bold mean the square root of the AVE values of each latent variable (bolded). They were greater than the value of their correlation coefficients with other constructs, indicating good discriminant validity.

Source: own elaboration.

convergent validity of the scale was measured by factor loading and average variance extracted (AVE). All variables' factor loading (last column of Table 1) and AVE values met the criteria ( $>0.5$ ). Finally, this study used the Fornell-Larcker criterion to test the discriminant validity. The square root of the AVE values of each latent variable (bolded) were greater than the value of their correlation coefficients with other constructs, indicating good discriminant validity (see Table 3). Taken as a whole, these results showed good internal consistency, convergent validity, and discriminant validity of the scales, and that it could be used for model fitting and testing hypotheses.

The theoretical models and its three-dimensions of CB had been previously established and verified in many fields (El-Ghoroury et al., 2012; Quimby & O'Brien, 2004). In order to explore the applicability of this dimension composition, confirmatory factor analysis was adopted. After any abnormal data were removed and corrected, missing data were replaced by the sample mean. The model fit indices met the criteria of fit ( $RMSEA \leq 0.08$ . NFI, RFI, IFI, TLI and CFI  $>0.9$ ) (Hair et al., 2009), while the factor loading values of each first-level indices ranged from 0.717 to 0.897 and the second-level indices ranged from 0.72 to 0.90, which demonstrated a very ideal level (see Table 1). In addition, all of them were significant at the level of 0.1%, and thus it was reasonable to divide CB into personal, social, and interactional dimensions.

#### 4.3. Model outcomes

Since it is possible that there are common method biases caused by multiple sources such as consistency motivation and social desirability (Podsakoff et al., 2003). Before testing the hypotheses, we first implemented a complete collinearity test based on variance inflation factor (VIF) according to the procedure of Kock (2015) and Kock & Lynn (2012), which specifies that collinearity will be displayed when VIF reaches a value exceeding 3.3 threshold. The results demonstrated that all VIFs were below the recommended edge, indicating that collinearity, heteroscedasticity or endogeneity was unlikely to affect the results of this study.

Then, a multiple regression analysis was carried out to test the hypotheses. Firstly, H1a, H1b, H1c, H6a, H6b and H6c were verified in Model 1, the independent variables were career barriers (PCB, SCB, ICB), PCB\*MS, SCB\*MS, ICB\*MS were as the interaction, while CI was considered as dependent variable. Secondly, the mediator (PI) was set as dependent variable, career barriers (PCB, SCB, ICB) were perceived as independent variables in model 2, that was used to test H2a, H2b, H2c. Thirdly, in

**Table 4.** Results of the mediation effect and moderated direct effect.

	Model 1 CI	Model 2 PI	Model 3 CI
PCB	-0.480***	-0.120***	-0.400***
SCB	-0.406***	-0.113**	-0.324***
ICB	-0.434***	-0.151***	-0.394***
PI			0.284***
PCB*MS	0.128		
SCB*MS	0.802		
ICB*MS	0.927		
R <sup>2</sup>	0.391	0.024	0.370
F	179.466***	20.846***	245.891***
VIF	1.167	1.000	1.025

Note: \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

Source: own elaboration.

**Table 5.** Results of moderated indirect effects.

	Moderator (MS)	Estimate	95%CI
PCB→PI→CI	High	0.006	[-0.010; 0.020]
	Low	<b>-0.04</b>	<b>[-0.069; -0.015]</b>
SCB→PI→CI	High	0.01	[-0.007; 0.029]
	Low	<b>-0.036</b>	<b>[-0.065; -0.015]</b>
ICB→PI→CI	High	-0.005	[-0.026; 0.013]
	Low	<b>-0.036</b>	<b>[-0.065; -0.014]</b>

Note: The values in bold indicate that MS could moderate the relationships between PCB, SCB, ICB and PI significantly.

Source: own elaboration.

model 3, PI was added as independent variable, while CI was set as the outcome, H3, H4a, H4b, H4c could be verified. The results were shown in Table 4. Furthermore, moderated mediation analyses were conducted to test moderated indirect effects of H5a, H5b, H5c (see Table 5), H6a, H6b, H6c. All models were implemented by PROCESS V 3.5.

In model 1, the relationship between PCB, SCB, ICB and CI was significantly negative ( $-0.48^{***}$ ,  $-0.406^{***}$ ,  $-0.434^{***}$ ;  $p < 0.001$ ), thus, H1a, H1b, H1c were supported. Conversely, the correlation between PCB\*MS, SCB\*MS, ICB\*MS and CI was not significant because their interactions were represented by the confidence interval that included zero (95% CI =  $[-0.01; 0.08]$ ,  $[-0.04; 0.051]$ ,  $[-0.048; 0.044]$ ), which indicated H6a, H6b and H6c were not supported. In mode 2, the standardised path coefficients of PCB, SCB and ICB were  $-0.12^{***}$ ,  $-0.113^{***}$ ,  $-0.151^{***}$  ( $p < 0.001$ ). The negative impact of PCB, SCB and ICB on PI was identified, thus, H2a, H2b and H2c were supported. In mode 3, PI was positively correlated with CI ( $0.284^{***}$ ,  $p < 0.001$ ) and therefore, H3 was supported. Based on Hayes' suggestion (Hayes, 2009), 5000 bootstrap samples were used to estimate indirect effects and 95% bias-corrected confidence intervals. Significant indirect effects were represented by confidence intervals excluding the zero values. According to the results, PI mediated the link between PCB and CI ( $-0.022$ , 95% CI =  $[-0.045; -0.005]$ ), SCB and CI ( $-0.021$ , 95% CI =  $[-0.044; -0.005]$ ), ICB and CI ( $-0.03$ , 95% CI =  $[-0.056; -0.011]$ ), and therefore, H4a, H4b and H4c held. After the mediation was included, the direct path between PCB, SCB, ICB and CI remained significant (see Table 5), suggesting the partial mediating effects of PI.

In predicting PI and CI, the interaction between PCB, SCB, ICB and MS was evaluated at the same time. According to the results, MS moderated the relationships between PCB, SCB, ICB and PI (see [Table 5](#) and [Figure 2](#)), as effects were considered significant when the 95% confidence interval did not include zero. H5a, H5b and H5c were partially valid.

All results are shown in [Figure 3](#).

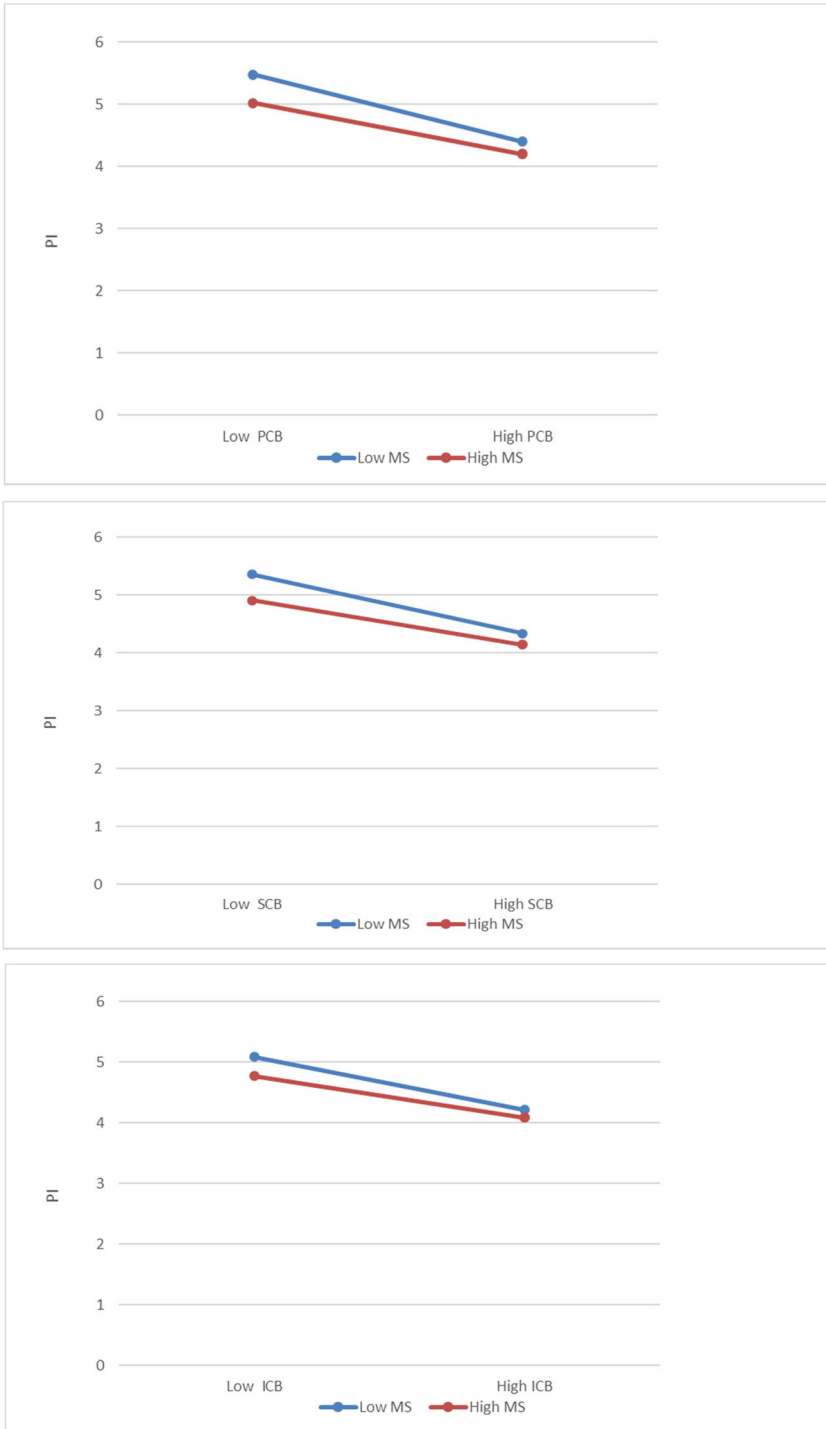
## 5. Discussion

This current study demonstrated the construct of HTM students' perceptions of career barriers and their relationship with other variables, such as intention to work in H&T industries and major satisfaction, professional identity, and their negotiation effects on CB. The results yielded several insights.

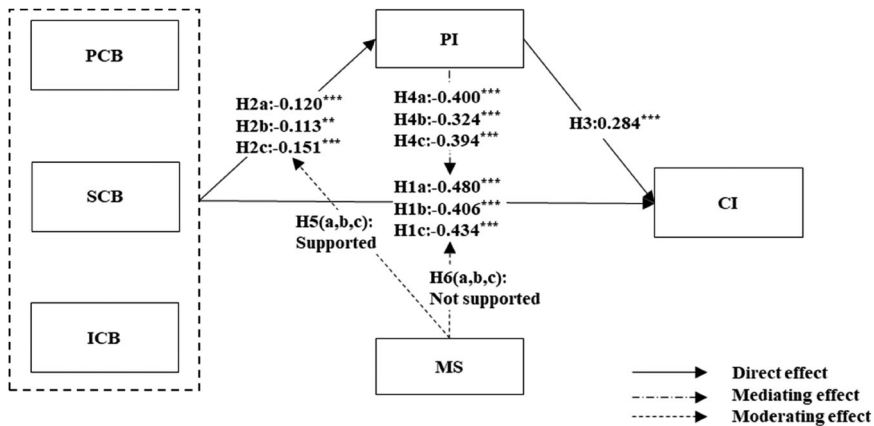
Firstly, CB similarly exists in the early stage of HTM students' career awareness and exert effects on their career growth. It is rational and constructive to form its structure to reveal this impact. By combing and summarising the literatures, HTM education and tourism development in China, this study presents and confirms the three-dimensions of personal, social and interactional CB for evaluating HTM students' CB, which have been tested previously (Lipshits-Braziler & Tatar, 2012). The results showed that all dimensions of CB negatively predicted students' CI, and the significant effects of these barriers were in accordance with previous research results (Ng & Feldman, 2014). The perceived CB provides an efficient way to explain the employment issues of HTM students.

Secondly, as H1(a, b, c) revealed, CB were significantly negatively correlated with students' career perceptions and decisions. Students' interests concerning majors and confidence in their abilities had been proved to influence CI into H&T industries (Duffy et al., 2016; Yan et al., 2013). The PCB's negative effects on CI confirmed those results here. Concurrently, if parents and relatives encourage students into H&T industry, it will increase their intention to choose relative work. Otherwise, students perceive low acceptance from society and low support from other important people in their lives, and in turn may be less willing to pursue career development in H&T. The validation of H1b highlights and confirms the important roles of social pressure in students' career preparation (Clarke, 2018). What's more, some factors such as gender discrimination, working conditions, and remote locations, also have an adverse influence on students' CI. The poor working environment and the poor images that left, have implications for students' CI (King & Hang, 2011). Those results are equally validated. Herein, from the opposite direction, we prove that the negative influence of social, personal and interactional factors is also exerted when these are lacking. Therefore, it appears that identifying effective ways of decreasing the barriers in order to sustain students' CI is necessary.

Thirdly, similar to what previous studies have found that CB was detrimental to students' PI (O'Leary & Deegan, 2005). The negative associations between dimensions of CB and PI, as H2(a, b, c) confirmed, are in consistence with them. Meanwhile, students with a high degree of PI believe that they can realise their self-worth and social value and so they choose a career into H&T industries without hesitation (H3



**Figure 2.** Interaction between PCB, SCB, ICB and MS in PI prediction.  
Source: own elaboration.



**Figure 3.** Results of the conceptual model.

Note: \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Source: own elaboration.

demonstrated). More importantly, as far as H4(a, b, c) concerned, PI partially mediated the link between CB and CI. That is to say, students' perception of their abilities, support from parents, teachers, as well as other significant people, and the work environment had been proved to influence their intentions to work in H&T industries (Tan et al., 2017), while it would be reduced by the establishment of PI. Their confidence in H&T industries could negotiate the negative impact of CB.

Notably, although major satisfaction did not moderate the direct relationship between CB and CI in this study (see H6a, H6b, H6c) which seemed to relate to prior hypothesis that the students' intention to work in their chosen profession may be mainly due to the decrease in PI (Wang et al., 2017), there were differences in the outcomes of CB among different levels of MS, that partly support our hypothesis. The moderation effects were salient when MS was at lower level (see H5a, H5b, H5c). When encountering the personal, social and interactional barriers, lower MS seems to be the cause of lower PI and CI. The high level of MS would increase students' aspiration to join in H&T industry, which was proved in Morris' (2014) findings that MS could bring a range of positive effects on students' employment intention. Our current findings largely complement these findings. Specifically, students who had lower MS, they were more likely to exhibit lower PI when faced with personal, social and interactional barriers. This means that when the value of MS is not high, individuals tend to perceive PCB, SCB and ICB as detrimental, which may exaggerate the vocational misfit, while it is not the case under the condition of efficient value (Urbanaviciute et al., 2016). MS is further factors that would have a negotiation effect on the pathway of CB to CI.

## 6. Conclusion and implication

Career barriers are helpful variables and devices used to explain the vocational behaviours from the opposite view (Lent et al., 2000; Lipshits-Braziler & Tatar, 2012). This study tries to extend perceived CB into the study of HTM students and subsequently establishes a hypothesis model, which is based on SCCT, to investigate how CB



influence CI, and the negotiation effects of PI and MS. After having proposed and validated the theoretic structure of three-dimensions of CB, this study tested the relationships of the variables. It is concluded that, PCB, SCB and ICB all have dominant negative effects on CI, especially PCB negatively influences CI mostly. Meanwhile, PI and MS could possess partial negotiation effect to reduce these impacts, as the mediator and moderator separately.

Based on above conclusions, we propose some recommendations for H&T higher education sectors and industries regarding recruiting and maintaining talents. First, HTM education providers should actively provide industry guidance in students' career planning process, which could help them get a better sense of whether their skills match the needs of the industries. At the same time, the H&T industries also needs to improve working conditions, as unreasonable working hours and remote location make them unattractive to the students. Meanwhile, insufficient support from parents and friends, as SCB represented, could also reduce students' employment intention in H&T industries, and thus cause dissatisfaction with their major. It is necessary to involve all sectors of society in recognising their importance and perspective. In addition, they should actively coordinate with schools to accomplish this goal.

Most importantly, considering the mediation of PI and the moderation of MS on CI, the key to solving the lower employment rate in tourism industries may be start from improving HTM students' PI and MS. Schools should pay more attention to the design of professional courses, focus on the cultivation of students' practical abilities, so as to increase the level of PI and MS. Equally, H&T industries should also better themselves by improving the working environment, establishing fair salary and benefits, providing more flexible working hours, etc. Moreover, the society should actively create a good industry image and atmosphere for H&T, in order to improve students' PI and MS.

This study also suffers from some shortcomings. First, we used general structure and inventory of CB, and started the research and data collection before the Covid-19 shocked, its impacts had not reflected in the survey. This study tries to unveil the systematical impacts of CB, but fail to consider the shock of this pandemic. In one sense, the impacts could be regarded as the reinforcer or a new type of barriers. Assumingly, the influence of Covid-19 has been considered in H&T students' career behaviours (Birtch et al., 2021). Yet, whether the impacts could explain and integrate into the framework of career barriers needs to be examined furtherly. Second, this study speaks to a specific time, place, and fails to use longitudinal and multi-regional investigation to test the causal relationship exactly. Future studies could expand on different regions and time periods to demonstrate CB' effects on the dynamic process of career decision, and compare the difference between various regions of China, even other areas of the world. Finally, it would be worthwhile to extend the study of career barriers to students of junior college or vocational college, remain to be compared, as to reveal the differences between educational levels and process of career development.

## Notes

1. Ministry of Culture and Tourism of the People's Republic of China about cultural and tourism development statistical Bulletin 2019. [https://zwgk.mct.gov.cn/zfxxgkml/tjxx/202012/t20201204\\_906491.html](https://zwgk.mct.gov.cn/zfxxgkml/tjxx/202012/t20201204_906491.html).

## Disclosure statement

No potential conflict of interest was reported by the authors.

## Funding

This work was supported by National Natural Science Foundation of China under Grant (42071196); Education and Teaching Research Project of Anhui University (2022-418).

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