


When Does Overqualification Affect Bootlegging Positively?

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Purpose and Discussion: Individual knowledge and skills are important factors in promoting employee innovation. Research shows that a large number of employees perceive that their qualification level exceeds the formal requirements of the position. These people may spontaneously seek to change their current situation and dare to develop innovative ideas in an unconventional way. The purpose of this study is to explore the relationship between overqualification and bootlegging through the mediating effect of proactive career behavior on the basis of the human environment matching theory. This study also explored the moderating effect of a proactive personality between overqualification and bootlegging. This study shows that leaders should prioritize the potential of overqualified employees, encourage them to engage in challenging tasks, broaden the innovation channels of individuals and organizations, and monitor bootlegging activities. Highly motivated employees with overqualifications are more likely to actively plan and manage their careers, they will actively seek innovation to solve problems when encountering obstacles in their career development.

Participants and Methods: In this study, 457 questionnaires were collected from employees of many enterprises in Hunan Province and Guangdong Province of China. Partial least squares structural equation model based on variance (PLS-SEM) was used for data analysis.

Results: The results of the study reveal that there is a significant relationship between overqualification and bootlegging. In addition, proactive career behavior plays an intermediary role in the relationship between overqualification and bootlegging. Moreover, a proactive personality moderates the relationship between overqualification and bootlegging. Finally, the relationship between overqualification and bootlegging is stronger when a proactive personality is strong.

Keywords: overqualification, bootlegging, proactive career behavior, proactive personality, person-environment fit theory

Introduction

The global economic downturn has led to the slow development of Chinese enterprises in recent years, and the result is that China's employment opportunities are decreasing.¹ Simultaneously, increases in workers' education levels and the availability of unskilled work have led to a more highly educated labor force engaging in jobs requiring lower-level qualifications.² This describes the phenomenon of overqualification. According to a Global Press survey, approximately 47% of employees in the global labor market are engaged in jobs below their qualification levels; however, this figure is 84% in China.³ These findings indicate that the phenomenon of overqualification is widespread in China and elsewhere. Therefore, the concept of overqualification has attracted the attention of many researchers and enterprise managers worldwide.

Previous studies have focused on the adverse effects of overqualification, Such as, overqualification can lead to counterproductive behavior of individuals,⁴ cyberloafing⁵ and job burnout.⁶ Therefore, it is necessary to theorize on the reality of overqualification from the perspective of induced control and innovative transformation. Employees with higher education, skills, and experience tend to believe that they should secure jobs that match their qualifications.⁷ They feel they have the right to accept greater challenges, responsibilities, rewards, and job recognition.⁸ Due to this gap between expectations and reality, overqualified employees may experience negative psychological effects, such as a sense

of unfairness due to the low ratio of output to input.⁹ As a result, employees can become bored and develop negative feelings about their work, hindering an organization's sustainable development. In addition, it is difficult for overqualified employees to meet their psychological and self-realization needs through their work, leading to a loss of meaning in their work along with negative work attitudes and behaviors. In contrast, limited research has investigated the positive effects of overqualification, such as higher levels of employee performance,¹⁰ proactive behavior,³ and adaptive performance.¹¹ Moreover, overqualified employees may be given a higher status through a promotion, providing additional performance opportunities for overqualified employees.¹² Promotions may enable overqualified employees to utilize their excess skills and maintain a positive view of their work ability and efficiency. However, determining how to respond to achieve career development is a difficult challenge for individuals who perceive that they are overqualified.

Employee creativity and innovation often result from bootlegging activities in an uncontrolled and free environment. Bootlegging occurs when individuals take the initiative to work on ideas that have no formal organizational support and are often hidden from the sight of senior management, but are undertaken with the aim of producing innovations that will benefit the company.¹³ Employees' bootlegging has the dual characteristics of deviance and innovation. In essence, it is not positive or negative, but has inherent uncertainty. Within the context of bootlegging, "deviating" facilitates employees in avoiding the formal rules and bureaucracy that hamper creativity, allowing them to explore new ideas freely.¹⁴ At this time, will employees' likelihood of bootlegging be affected by overqualification?

To answer this question, the relationship between bootlegging and overqualification will be explored in this current study using the person–environment fit theory. Person–environment fit theory refers to the compatibility between human characteristics and their working environment.¹⁵ The person–job fit theory is a form of the person–environment fit theory, which focuses on the degree of alignment between employees' characteristics and their job. Scholars divide the person–job fit into two types: demands-abilities fit and needs-supplies fit.¹⁶ Demands-abilities fit refers to the consistency between work demands and employee abilities, that is, the ability, experience, and education level of employees that can meet the organization's work needs. Additionally, needs-supplies fit considers the consistency between employees' needs, their goals, values, and interests, and the ability of the organization to meet them.^{17,18} Overqualification is directly reflected in the mismatch between demand and ability, that is, employees' abilities are higher than the job requirements of their positions.¹⁹ Therefore, in the person–environment fit theory, overqualification is a form of a person–job mismatch. That is to say, the maladjustment caused by cognitive overqualification belongs to the maladjustment of employees to their work and social work environment.²⁰ When employees are assigned to jobs with low challenges, their excess abilities encourage them to explore new things, thus promoting their self-innovation. Perceived that individuals with excessive qualifications have the tendency to seek opportunities outside of work and expand the scope of work. After completing the work in their roles, they still have sufficient resources and energy to design and innovate the work content outside their roles and achieve the goal of deviant innovation outside their roles. Currently, bootlegging becomes the result of overqualification.

In addition, when employees perceive overqualification, they often use initiatives to eliminate the mismatch of existing jobs.²¹ When employees think they can perform a wider range of work tasks that exceed the job requirements, they will transform the perceived overqualification into a work-based initiative,²⁰ that is, proactive career behavior. At the same time, individuals with strong initiative may be more active in planning and managing their careers. Proactive people will influence the change of the environment, seek information in their work, effectively find opportunities, and take action to change and affect the environment. Based on this, this study attempts to explore the mediating effect of proactive career behavior and the moderating effect of a proactive personality.

Most current research focuses on either overqualification or bootlegging, paying little attention to the correlation between the two. Therefore, this study aims to address two questions: First, In the context of the global economic downturn, how does overqualification affect employees' bootlegging, and through what intermediary mechanism? Second, in career management, individuals showing strong initiative may be more active in planning and managing their careers. At present, some researchers have studied the U-shaped relationship between overqualification and deviant innovation based on the person post matching theory,³ but they have not considered the positive personality and proactive care behavior. Therefore, this study will introduce person–environment fit theory and focus on the positive results of

overqualification. The study further aims to provide key insights into the potential positive consequences of overqualification and provide a new perspective on the study of overqualification and bootlegging.

Literature Review and Hypothesis Development

Overqualification and Bootlegging

Overqualification refers to a situation in which employees' education, skills, and experience exceed the job requirements, and employees' qualifications are not fully utilized at work, indicating an individual's mismatch with their job.^{22,23} Overqualification is divided into two levels: objective and subjective. Objective overqualification refers to the factual situation in which individuals have academic qualifications, knowledge, skills, and work experience that exceed the basic requirements or needs of the job.²³ By contrast, subjective overqualification reflects the extent to which individuals perceive that they have excess job qualifications or limited opportunities to develop new skills. That is, when individuals believe that they have academic qualifications, work experience, or knowledge and skills that exceed their current job requirements, they will experience perceived overqualification.²³ This belief belongs to the category of subjective assessment, where an individual experiences a psychological sense of their mismatch with the environment. Subjective assessment is more frequently used in organizational behavior research because employees, whether their perceptions of work are accurate or not, tend to engage in behavioral responses based on these perceptions.²⁴ Therefore, this study will focus on subjective overqualification.

Criscuolo et al define bootlegging as the process by which individuals take the initiative to work on ideas that have no formal organizational support and are often hidden from the sight of senior management, but are undertaken with the aim of producing innovations that will benefit the company.¹³ Researchers generally agree that this kind of innovation—implemented by individuals on their own and in secret—may bring beneficial results to the organization.¹³ It is a technological trial and error learning process along the business career path of enterprises,²⁵ which is conducive to organizational renewal and innovation, as shown in its positive correlation with the novelty of innovation portfolio.²⁶ Most of the existing literature on bootlegging focuses on individual employees, among which individual creativity,²⁷ risk affinity,^{28,29} self-efficacy^{30,31} and achievement orientation³² have been determined to be related to bootlegging.

According to the person–environment fit theory, when employees' educational level, work experience, or knowledge and skills exceed the current job requirements, the spillover effect of overqualification can broaden and enhance individual workers' efficiency. This can also encourage them to spontaneously seek change and reshape their roles, help them escape their work situation, and examine the work environment from a broader, more removed perspective. An employee may find that their coworkers cannot understand their innovative thinking within the current cognitive framework,³³ creating cognitive efficiency advantages for bootlegging outside their roles. Finally, individuals with perceived overqualification often have a high sense of confidence, superiority, and strong role orientation. These individuals may spontaneously seek to change their current situation and dare to develop innovative ideas in unconventional ways.³ To verify their judgments of their qualifications, employees may engage in bootlegging activities that meet their interests and qualification levels. For example, they may distinguish themselves through job remodeling and career exploration to achieve out-of-role innovation performance, bringing significant individual and organizational benefits.³⁴ Overqualified individuals have the resource base and cognitive advantages to engage in deviant innovation to achieve the goal of bootlegging beyond their roles. Therefore, we propose the following hypothesis:

H1: Overqualification have a positive effect on bootlegging.

Overqualification and Proactive Career Behavior

Proactive behavior refers to individuals' voluntary and spontaneous behavior to change and improve themselves or their environment.³⁵ Scholars proposed the proactive behavior model to explain how individual differences and background factors affect proactive behavior.³⁶ Various researchers have expanded on this model based on the idea that individual differences and work backgrounds jointly affect employees' role self-efficacy and role positioning, affecting their initiative.³⁵ Proactive career behavior, as a branch of proactive behavior, refers to the action-oriented behavior that individuals demonstrate in their careers.³⁷ When individuals perceive overqualification, they often take action to eliminate the mismatch.²¹ In other words, when employees are overqualified, they usually take measures to change the environment or engage in their own strategies to manage the situation;

this is in line with the characteristics of proactive career behavior. Overqualified employees may complete their work tasks faster and better, believing they have more resources, leading to a higher sense of role effectiveness, thus improving their proactive career behavior. Therefore, we propose the following hypothesis:

H2: Overqualification has a positive effect on proactive career behavior.

Proactive Career Behavior and Bootlegging

As noted above, proactive career behavior refers to action-oriented behavior shown by individuals in their careers.³⁷ Unlike other proactive behaviors, proactive career behavior can operate beyond fixed work boundaries and is not limited to the current work environment. In the era of borderless careers, the binding relationship between organizations and employees is greatly weakened, and employees find themselves responsible for their own careers.³⁸ Borderless career theory points out that over the course of their careers, employees accumulate professional capital in the form of abilities, experience, ideas, resources, and other important factors. Current employees increasingly prefer challenging jobs, and they pay more attention to their own career development. Additionally, increasing numbers of employees view the workplace as a place to learn rather than a basis for survival, particularly when employees perceive their own overcapacity. Several studies have summarized the four characteristics of bootlegging: (1) the behavior is carried out by individuals using their initiative; (2) the behavior is not supported by the manager; (3) individual behaviors are secret and generally not perceived by managers; and (4) the innovative behavior is expected to improve group or organization performance.¹³

Considering the bootlegging characteristics, initiative-related behavior can be observed. People who show initiative tend to make continuous efforts in the face of considerable obstacles (overqualification) and go beyond the formal ways of working.¹³ Secondly, when employees' creativity deviates from the organizational goals, proactive employees are more likely to engage in bootlegging. From the perspective of bootlegging, innovation is inherently uncertain, but innovating in bootlegging style is even more so because one also goes against formal rules.²⁸ Employees with proactive career behavior can more easily and actively identify available information and use innovative private ideas, which are more likely to violate the organizational system.³⁹ It could be argued that there is an inseparable relationship between proactive career behavior and bootlegging. Therefore, we propose the following hypothesis:

H3: Proactive career behavior has a positive effect on bootlegging.

The Mediating Effect of Proactive Career Behavior

In certain situations and fields, innovation, advice, feedback, and other behaviors belong to the category of proactive behavior.⁴⁰ Research has found that although specific proactive behaviors vary depending on the subject field, they all incorporate common motivational factors. In addition, some scholars have found that proactive career behavior belongs to a high-order dimension of proactive behavior.⁴¹ The behavior represented by this dimension goes beyond the boundaries of fixed work.^{40,42} When an overqualified employee believes their overqualification is due to poor career management, they may re-plan their careers and take more proactive career management steps to achieve better outcomes in the future.⁴³ Perceived overqualification is based on redundant intellectual capital beyond the actual education and experience necessary for the job and is conducive to efficiently completing the work within an employee's role. This helps an employee avoid the special attention of the organization, leading to more work autonomy and a relaxed environment for bootlegging.³ Therefore, we propose the following hypothesis:

H4: Proactive career behavior acts as an intermediary in the relationship between overqualification and bootlegging.

The Moderating Effect of a Proactive Personality

A proactive personality refers to an individual's stable tendency to change their environment.⁴⁴ Proactive people will influence the change in the environment, search for information in their work, effectively identify opportunities, and act to change and affect their environment. By contrast, individuals with low initiative are more likely to be shaped by their

environment.³⁶ In career management, highly active individuals are more likely to plan and manage their careers actively and seek innovative ways to solve problems when they encounter obstacles to their career development.⁴⁵

When highly motivated individuals face overqualification, they are more likely to take proactive steps to eliminate this unsatisfactory situation.²³ With their additional resources, overqualified individuals can complete work tasks more easily and contribute to more tasks outside their assigned role; however, this depends on whether they have the subjective will.⁴⁶ When overqualified people have a personality with a strong initiative, these combined traits give them more incentive to innovate.³ If this innovation is not understood by their superiors, such employees are more inclined to change their working environment, find effective uses for their qualifications, and realize breakthroughs in their careers rather than blindly escape.¹³ Thus, bootlegging can meet the self-realization needs of proactive employees, which means that employees with strong proactive personalities are more likely to engage in bootlegging. The model of proactive motivation highlights that an individual's proactive personality is generated and achieves active goals using three pathways: ability motivation, cause motivation, and energy motivation.⁴⁷ In addition, when overqualified individuals have a stronger initiative personality, they may have more motivation to carry out innovative and deviant behaviors. Therefore, we propose the following hypothesis:

H5: An increasing (decreasing) level of proactive personality strengthens (weakens) the positive relationship between overqualification and bootlegging.

The theoretical framework is shown in Figure 1.

Methodology

Samples

In a preliminary investigation and to test our hypotheses, we spent two months conducting a questionnaire survey in four companies in Changsha, Hunan Province, and Guangzhou, Guangdong Province, China. The four companies are all engaged in the production and sales of multimedia, communication secondary, Bluetooth and other electronic devices, and their staff size is more than 500. After our preliminary investigation, we noticed that the perceived overqualification phenomenon was widespread in these four companies. In addition, these four companies had a great demand for innovation. Therefore, we collected data from these companies. Respondents were recruited using a purposive sampling technique. The purposive sampling technique allows researchers to follow their judgment and information. Firstly, the researchers contacted the companies' human resource managers to explain the purpose and procedures of the survey. The managers then informed their employees and encouraged them to participate in the study. All staff members were informed that the sole purpose of the study was to conduct academic research and that the data would be kept confidential. We also explained that the survey was voluntary and provided each respondent with a reward of RMB 5. To avoid common method bias (CMB) issues, data were collected three times over two months (Podsakoff et al). Each questionnaire was assigned a unique identifier to match participants' responses at the first time (T1), second time (T2), and third time (T3).

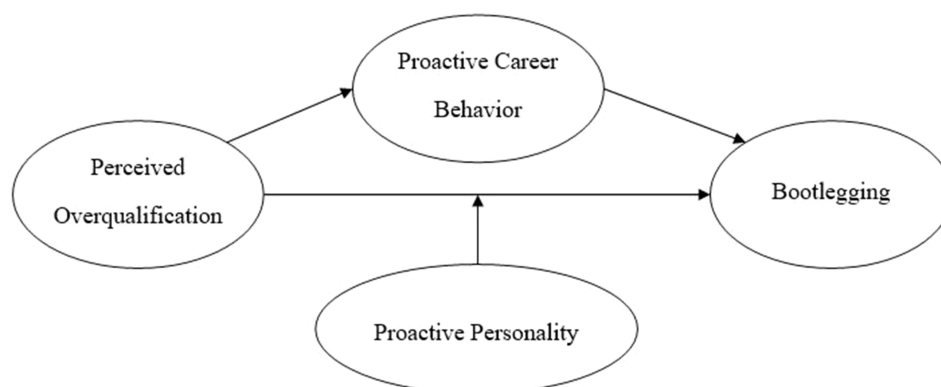


Figure 1 Conceptual Model.

The T1 questionnaire contained items aimed at collecting demographic information and used items to examine the independent variable (overqualification). At T2, the questionnaire consisted of items used to assess the mediating variable (proactive career behavior). Finally, the questionnaire completed at T3 included items that related to the dependent variable (bootlegging) and the moderating variable (proactive personality). We sent 700 questionnaires at T1 and received 553 replies. At T2, the questionnaire was distributed to those who responded to the T1 questionnaire, of which 502 responded. Finally, at T3, the questionnaire was distributed to the T2 respondents, and a total of 469 questionnaires were collected. Among these, 12 questionnaires with obvious defects were eliminated (due to continuous repetition of options, unanswered questions, etc.). The final sample size was 457. A response threshold above 50% of the distributed questionnaire was considered desirable. Among the distributed questionnaires, we achieved a 65.28% response rate, an appropriate percentage in the Asian region.^{48,49} Information on participant demographics is reported in Table 1.

Measures

We took several steps to ensure the reliability and validity of the measurement instruments. International journals were searched to identify reliable scales from studies published by authoritative sources and validated in the Chinese context. Because the scales had been developed in English-speaking contexts, we used a translation–back translation process to develop the scales used in the questionnaire. A 5-point Likert scale was used to measure the following variables in the form of a self-report, ranging from “1= strongly disagree” to “5= strongly agree.”

Perceived Overqualification

Overqualification was evaluated by the employees and measured using a nine-item overqualification scale.²³ We used this scale to measure the extent of the perceived overqualification of employees. Sample items included, “My job requires less education than I have”, and “The work experience that I have is not necessary to be successful on this job.”

Table 1 Background Characteristics of Participants (N = 457)

Characteristics		Frequency	Percentage
Sex	Male	191	41.79
	Female	266	58.21
Age	18–29 years old	211	46.17
	30–39 years old	223	48.80
	40–49 years old	5	1.09
	>50 years old	18	3.94
Education	Junior high school and below	6	1.31
	High school	18	3.94
	Bachelor's degree	352	77.02
	Master's degree or above	81	17.72
Job tenure	<1 years	67	14.66
	1–3 years	133	29.10
	3–5 years	75	16.41
	5–10 years	111	24.29
	>10 years	71	15.54

Proactive Career Behavior

Proactive career behavior was evaluated by the employees and measured using a nine-item proactive career behavior scale.⁴⁰ We used this scale to measure the extent of the proactive career behavior of employees. Examples included, “I develop skills which may not be needed so much now, but in future positions”, and “I gain experience in a variety of areas to increase my knowledge and skills.”

Bootlegging

Bootlegging behavior was evaluated by the employees and measured using a four-item bootlegging scale.¹³ We used this scale to measure the extent of spontaneous and secret innovation behavior of employees, which is expected to be beneficial to an organization. For example, “I have the flexibility to work my way around my official work plan, digging into new potentially valuable business opportunities”, and “My work plan does not allow me the time to work on anything other than the projects I have been assigned to.”

Proactive Personality

Proactive personality was measured using an approach adapted from a study by Seibert et al,⁵⁰ with a total of ten items. Sample items include, “I am constantly on the lookout for new ways to improve my life”, and “Wherever I have been, I have been a powerful force for constructive change”.

Control Variables

Demographic variables were generally used as control variables in previous research.⁵¹ This study also controlled the demographic variables of sex, age, education, and job tenure.

Data Analysis

We use one-sample Kolmogorov–Smirnov and Shapiro–Wilk methods to test the univariate normality of data in this study. The data were not normally distributed. Because the assumption of multivariate normality of data for covariance-based structural equation modeling (CB-SEM) could not be met, we carried out variance-based partial least squares structural equation modeling (PLS-SEM) to examine the hypotheses in the study.⁵²

Results

Common Method Bias Test

We used the unmeasured latent factor model technique to investigate any common method biases in the partial least squares (PLS) model.⁵³ As shown in Table 2, the common method biases test results indicate that the average substantively explained variance of the indicators is 0.753, while the average method-based variance is 0.017. The ratio of substantive variance to method variance is about 43:1. Moreover, most method factor loadings are not significant ($p > 0.05$). Therefore, common method biases are not a serious problem in the study.

Measurement Model

Smart-PLS is used for partial least squares structural equation modeling (PLS-SEM) to investigate the hypotheses in this study. The reliability and validity testing results are presented in Table 3, which shows that all composite reliabilities of the constructs were above 0.7,⁵⁴ indicating good internal consistency. Table 3 also shows that all average variance extracted (AVE) values were above 0.5,⁵⁴ and the square root of each construct’s AVE was greater than the correlation of the construct with others. At the same time, all factor loadings was above 0.8, and the factor loadings of each potential variable were greater than the cross-loadings on other potential variables. This revealed good convergent and discriminant validity of the constructs. Moreover, Table 4 shows that all ratios of the heterotrait-monotrait ratio of correlations (HTMT) for each construct are less than 0.9,⁵⁵ indicating good discriminant validity. Hence, these statistics indicate that the study measures are valid and reliable, and we could proceed with further analysis of the proposed relationship.

Table 2 Common Method Bias Test

Construct	Indicator	Substantive Factor Loading (R1)	p	R1 ²	Method Factor Loading (R2)	P	R2 ²
POQ	POQ1	0.875	<0.001	0.766	-0.265	<0.001	0.070
	POQ2	0.915	<0.001	0.837	-0.238	<0.001	0.057
	POQ3	0.884	<0.001	0.782	-0.282	<0.001	0.080
	POQ4	0.812	<0.001	0.659	-0.038	0.556	0.001
	POQ5	0.892	<0.001	0.796	0.152	0.001	0.023
	POQ6	0.895	<0.001	0.800	0.098	0.019	0.010
	POQ7	0.861	<0.001	0.742	0.166	0.002	0.028
	POQ8	0.902	<0.001	0.814	0.196	<0.001	0.038
	POQ9	0.855	<0.001	0.731	0.199	<0.001	0.040
BL	BL1	0.860	<0.001	0.739	0.002	0.955	0.000
	BL2	0.849	<0.001	0.721	-0.046	0.234	0.002
	BL3	0.844	<0.001	0.713	0.081	0.045	0.007
	BL4	0.843	<0.001	0.711	-0.038	0.341	0.001
PCB	PCB1	0.916	<0.001	0.839	0.233	<0.001	0.054
	PCB2	0.894	<0.001	0.799	-0.145	<0.001	0.021
	PCB3	0.885	<0.001	0.783	-0.103	0.010	0.011
PP	PP1	0.870	<0.001	0.757	-0.049	0.196	0.002
	PP2	0.877	<0.001	0.769	-0.018	0.639	0.000
	PP3	0.867	<0.001	0.752	0.066	0.124	0.004
	PP4	0.854	<0.001	0.729	0.039	0.291	0.002
	PP5	0.853	<0.001	0.728	0.011	0.764	0.000
	PP6	0.810	<0.001	0.656	-0.030	0.552	0.001
	PP7	0.861	<0.001	0.741	-0.040	0.308	0.002
	PP8	0.862	<0.001	0.742	-0.021	0.610	0.000
	PP9	0.866	<0.001	0.750	0.011	0.769	0.000
	PP10	0.845	<0.001	0.714	0.031	0.411	0.001
Average		0.867		0.753	-0.001		0.017

Abbreviations: POQ, Perceived Overqualification; BL, Bootlegging; PCB, Proactive Career Behavior; PP, Proactive Personality.

Structural Model and Hypotheses Testing

The bootstrapping method (95% bias-corrected confidence intervals, bootstrapping samples $N = 5000$) is used to calculate t-statistics and standard error. The results of the path analysis and hypotheses testing are presented in [Table 5](#). Perceived overqualification positively and significantly influenced bootlegging ($\beta=0.245$, $P<0.001$) and proactive career behavior ($\beta=0.581$, $P<0.001$), and proactive career behavior positively and significantly affected bootlegging ($\beta=0.594$, $P<0.001$), supporting hypotheses 1–3. The mediating effect of proactive career behavior between perceived

Table 3 Construct Reliability and Validity

Construct	α	CR	AVE	Discriminant Validity (Fornell-Larcker Criterion)			
				1	2	3	4
1. POQ	0.962	0.968	0.769	0.877			
2. BL	0.871	0.912	0.721	0.657	0.849		
3. PCB	0.881	0.926	0.807	0.679	0.776	0.898	
4. PP	0.960	0.965	0.734	-0.463	-0.347	-0.496	0.857

Notes: The bold value on the diagonal is the square root of AVE. Diagonal elements in the correlation of constructs matrix are the square root of AVE; for adequate discriminant validity, diagonal elements should be greater than corresponding off-diagonal elements.
Abbreviations: α , Cronbach's Alpha; CR, Composite Reliability; AVE, Average Variance Extracted; POQ, Perceived Overqualification; BL, Bootlegging; PCB, Proactive Career Behavior; PP, Proactive Personality.

Table 4 Heterotrait-Monotrait Ratio (HTMT)

Construct	1	2	3	4
1.POQ				
2.BL	0.707			
3.PCB	0.725	0.885		
4.PP	0.476	0.379	0.533	

Abbreviations: POQ, Perceived Overqualification; BL, Bootlegging; PCB, Proactive Career Behavior; PP, Proactive Personality.

Table 5 Results of Path Analysis and Hypotheses Testing

Hypotheses	Paths	β	SE	T	P	Result
H1	POQ→BL	0.245	0.039	6.316	<0.001	Supported
H2	POQ→PCB	0.581	0.031	18.690	<0.001	Supported
H3	PCB→BL	0.594	0.036	16.509	<0.001	Supported
H4	POQ→PCB→BL	0.346	0.028	12.287	<0.001	Supported
H5	POQ*PP→PCB	0.078	0.027	2.913	0.004	Supported
	PP→PCB	-0.250	0.036	6.853	<0.001	
	Sex→BL	-0.005	0.029	0.188	0.851	
	Sex→PCB	-0.059	0.033	1.810	0.070	
	Age→BL	0.009	0.034	0.277	0.782	
	Age→PCB	0.050	0.037	1.341	0.180	
	Education→BL	-0.025	0.027	0.946	0.344	
	Education→PCB	-0.040	0.032	1.245	0.213	
	Job Tenure→BL	0.049	0.036	1.356	0.175	
	Job Tenure→PCB	0.112	0.038	2.921	0.004	

Notes: PP is the moderation variable; POQ*PP is the interaction item; sex, age, education and job tenure are the control variables.
Abbreviations: β , direct effect/mediation effect/moderation effect; SE, standard error; POQ, Perceived Overqualification; BL, Bootlegging; PCB, Proactive Career Behavior; PP, Proactive Personality.

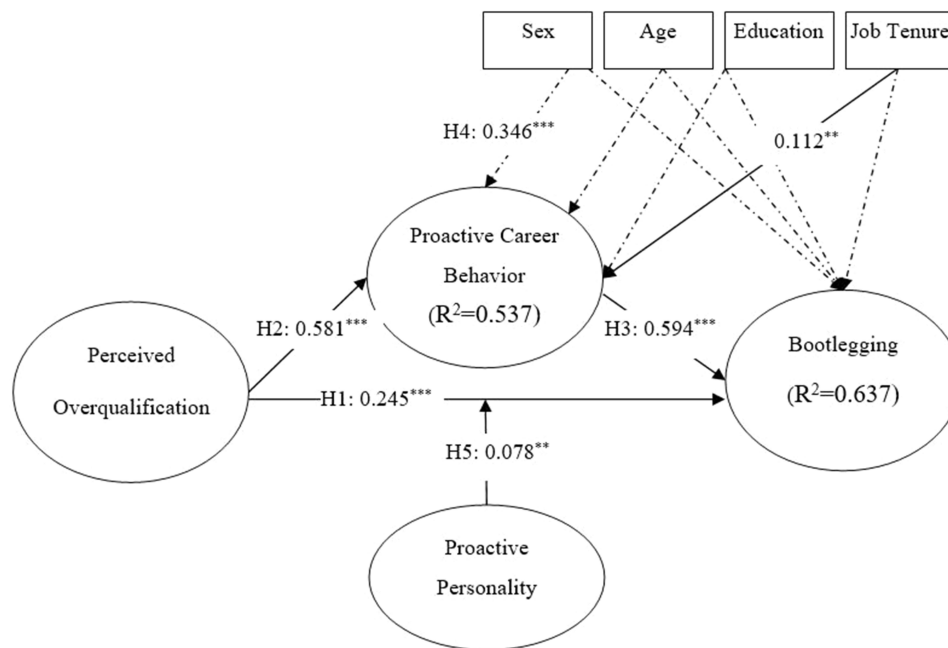


Figure 2 Structural Model with Moderator Variable.

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

overqualification and bootlegging was significant ($\beta = 0.346$, $P < 0.001$), supporting hypotheses 4. The moderating effect of proactive personality between perceived overqualification and bootlegging was significant ($\beta = 0.078$, $P < 0.05$), supporting hypotheses 5.

The variance accounted for (VAF) value for proactive career behavior is 58.54%, indicating that proactive career behavior partially mediates the relationship between perceived overqualification and bootlegging. Figure 2 presents the results of the structural model with the moderator variable of proactive personality for the relationship between perceived overqualification and proactive career behavior. As shown in Figure 2, the structural model explains 53.7% of the variance in proactive career behavior and 63.7% of the variance in bootlegging.

Discussion

Based on person–environment fit theory, this study explores the relationship between overqualification and bootlegging. The mediating effect of proactive career behavior and the moderating effect of proactive personality were also tested.

Theoretical Contribution

The research described in this paper had three aims: first, to empirically analyze the relationship between overqualification and bootlegging; second, to investigate the mediating role of proactive career behavior between overqualification and bootlegging; and third, to discuss the moderating role of proactive personality in the relationship between overqualification and bootlegging. The proposed hypotheses were investigated and tested, and the following conclusions were reached.

First, we open the “black box” of the relationship between overqualification and bootlegging, enriching the consequences of overqualification and the antecedents of bootlegging. Previous studies have mostly focused on the negative impact of overqualification on employees,^{56–59} including the near end results such as employees’ cognitive feelings and emotional experiences, and the far end results such as employees’ attitudes, behaviors, performance and physical and mental health. The positive effects of overqualification are rarely examined. However, this study found that overqualification will have a positive impact on proactive career behavior and bootlegging. That is, highly qualified employees are more active in planning their careers and using their advantages to innovate, thus changing the impact of

their employment and excessive qualifications. According to the person–environment fit theory, the sense of overqualification is directly reflected in the mismatch between demand and ability. Employees who perceive overqualification will engage in more breakthrough and unconventional behaviors, thus showing more bootlegging behaviors. These findings extend the conclusions of a study by Stephen (2006) about the relationship between overqualification and innovation.⁷ The findings enrich the person–environment fit theory with regard to identifying the relationship between overqualification and bootlegging for the first time. Previous research mainly discussed the impact on employees' bootlegging from the perspective of self-efficacy, self-identity, achievement demand, etc. The research in this paper further enhanced our understanding of the antecedents of bootlegging and promoted more reasonable management of employees' bootlegging behavior.

Second, our research found that employees' individual characteristics strengthened the relationship between overqualification and bootlegging, thus promoting the need for further research in the field of overqualification. Despite a growing interest in research on overqualification and bootlegging in the field of psychology, the existing literature fails to unveil the internal mechanism of this relationship.²⁴ Therefore, we proposed a moderated mediation model and tested the moderating effect of proactive personality on overqualification and bootlegging. As previous studies have not tested the boundary conditions of the emergence of bootlegging,⁶⁰ this study considers the critical factor of employees' proactive personalities, thereby enhancing the understanding of the relationship between overqualification and bootlegging and also provides a reference point and guidance for workplace managers. Specifically, the proactive personality of employees will affect the effect of overqualification and it is an important factor that affects employees' attitudes and behaviors related to innovation. As such, this study shows that a proactive personality moderates the relationship between overqualification and bootlegging, and when the proactive personality is stronger, the relationship between overqualification and bootlegging is also stronger. These findings provide a boundary condition for the complex relationship between overqualification and bootlegging and expand the theoretical application.

Practical Implications

We should emphasize several practical implications based on the current findings. First, managers should monitor those employees with overqualifications because they are more likely to engage in bootlegging. At present, the supply of the labor market exceeds the demand, making it inevitable for employees with overqualifications to enter roles for which they are overqualified. Enterprises should match their qualifications by enriching tasks, challenges, and other measures. Managers should also direct attention toward employees who may have a sense of overqualification. Even if they have “committed” bootlegging, managers should maintain a moderate attitude and avoid taking drastic and tough measures. Providing overqualified employees with opportunities and platforms to display their talents could help guide them toward openly, honestly, and formally discussing innovation. In addition, because individuals with overqualifications often have skills, knowledge, and creativity beyond their role's remit, they are more likely to generate new working methods and suggestions. Leaders should prioritize the potential of overqualified employees, encourage them to engage in challenging tasks, broaden the innovation channels of individuals and organizations, and monitor the bootlegging activities implemented by overqualified employees.

Second, enterprises should try to select highly motivated candidates when recruiting employees with overqualifications. Because highly motivated employees with overqualifications are more likely to actively plan and manage their careers, they will actively seek innovation to solve problems when encountering obstacles in their career development. Moreover, even if employees perceive overqualifications, highly motivated employees tend to believe in their abilities and make full use of them to enhance autonomy in work. However, overqualified employees with lower initiative are likely to show a more negative working attitude, which will affect the development of the organization.

Finally, managers should be aware of who is more likely to participate in piracy activities (overqualified employees). If they find out, they should first understand the employees' psychological perception. Even if the bootlegging activities is exposed, the manager should also adhere to a moderate attitude and avoid taking drastic and tough measures. Then, they should provide them with opportunities and platforms to show their talents and assign challenging innovation tasks, to guide them to innovate openly and honestly in a formal way. This will not only enable the organization to obtain

greater benefits, but also reduce the uncertainty risk brought by employees' bootlegging activities. This organizational atmosphere not only provides new employees with a way to generate positive ideas in the organization, but also conveys to them that such behavior is encouraged and accepted. In this way, employees will naturally see themselves as part of the company. Therefore, even if employees feel that they are overqualified, they may take the initiative to play their own advantages.

Limitations and Future Directions

This study also has some limitations. First, although the data collection utilized time lags, it is difficult to infer causality in this study. Although the research provides a good theoretical basis for the hypothesized model, future studies should investigate the current model through a longitudinal design to provide a more substantial causal interpretation of the current research model. Second, proactive career behavior was measured as a single dimension. The literature identifies four types of proactive career behavior: career planning, proactive skill development, career consultation, and network building.⁴⁰ Therefore, future studies may wish to consider these four dimensions along with other outcomes. Third, the data collected for this study used employee self-reporting measures. We used a common method bias test to investigate any common method biases in the partial least squares (PLS) model.⁵³ Therefore, further research could use alternative methods, such as textual analysis or an experimental design, to examine the relationship between overqualification and bootlegging to obtain more reliable conclusions. Finally, based on the person–environment fit theory, this paper concludes that overqualification positively impacts bootlegging. At present, the positive perspective of the theory of overqualification also includes self-categorization theory,⁶¹ self-verification theory,⁶² and self-regulation theory,⁶³ which discuss the impact of overqualification on bootlegging from three perspectives. With the continuous development of the research on the phenomenon of overqualification, in the future, we can explore the boundary conditions between overqualification and bootlegging from a more complete theoretical perspective to verify under what circumstances, the positive role of overqualification is stronger.

Conclusion

Based on the person–environment fit theory, this study explored the consequences of overqualification and the antecedents of bootlegging, and revealed the relationship between overqualification, proactive career behavior, proactive personality, and bootlegging. This study draws the following conclusions through the empirical study on the overqualification and bootlegging: First, the overqualification has a positive impact on the bootlegging of employees. Second, proactive career behavior plays a mediating effect between overqualification and bootlegging. Finally, through the moderating effect of a proactive personality, overqualification will have a positive impact on bootlegging.

Data Sharing Statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics Statement

The studies involving human participants were reviewed and approved by Departmental Ethical Committee, Hunan Normal University, China. The patients/participants provided their written informed consent to participate in this study.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors report no conflicts of interest in this work.

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