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The Impacts of Task- and Relationship-oriented Personal Initiative on Entrepreneurial Intention

Lingyu Hu ¹, Jianlin Wu ^{2,*}  and Jibao Gu ²

¹ Logistics and e-Commerce College, Zhejiang Wanli University, Ningbo 315100, China; lingyuh@mail.ustc.edu.cn

² School of Management, University of Science and Technology of China, Hefei 230026, China; jibao@ustc.edu.cn

* Correspondence: wjl@ustc.edu.cn

Received: 20 August 2019; Accepted: 22 September 2019; Published: 2 October 2019



Abstract: Previous research indicates an unclear relationship between personal initiative (PI) and entrepreneurial intention. Drawing upon existing literature, this study proposes that the two forms of PI (i.e., task- and relationship-oriented PI) influence entrepreneurial intention differently, and that such effects are transited through entrepreneurial self-efficacy. An analyses of 210 employees showed that task-oriented PI is negatively related to entrepreneurial intention, whereas relationship-oriented PI is positively related to entrepreneurial intention. It was further found that the effect of relationship-oriented PI on entrepreneurial intention is mediated by entrepreneurial self-efficacy, whereas the effect of task-oriented PI on entrepreneurial intention is not. Finally, the theoretical and practical implications of our findings are discussed.

Keywords: entrepreneurial intention; personal initiative; entrepreneurial self-efficacy

1. Introduction

Personal initiative (PI) has received considerable research attention [1–3]. It refers to the work behavior of employees “characterized by its self-starting nature, its proactive approach and by being persistent in overcoming difficulties that arise in the pursuit of a goal” [4] (p. 134). Employees with initiative develop job-related skills and knowledge proactively and demonstrate high levels of work efforts and job involvement [5]. Accordingly, management scholars argued that PI is positively associated with several job-related variables, like job satisfaction and [6] organizational loyalty [7]. These findings imply that employees with initiative are usually satisfied with their current jobs and are unlikely to switch into an entrepreneurial status [8]. However, entrepreneurship scholars claimed that employees with initiative are more likely to engage in entrepreneurship [9], because such employees proactively recognize opportunities [10], actively build a social network [11], and access resources necessary for entrepreneurship [12]. These seemingly contradictory arguments pave the way to the question, do employees with high initiative intend to show high entrepreneurial intentions?

Hahn et al. [13] provided an inspiration for addressing the question. Based on the specific initiative activities that employees participate in, they conceptualized PI into two types: task- and relationship-oriented PI. Employees with high task-oriented PI usually adopt a proactive and self-starting pattern to engage in their own work, and they often exceed the expectation for fulfilling the given task. With regard to the employees with a high relationship-oriented PI, they usually adopt a proactive and self-starting pattern to expand and improve their social networks in work and business. This study argues that the dual-form of PI may account for the contradictory arguments on the relationship between PI and entrepreneurial intention. Specifically, employees with task-oriented PI possess a weak entrepreneurial intention because they are viable for promotion in and committed

to current organizations, and satisfied with their current jobs [6]. On the contrary, employees with relationship-oriented PI have strong entrepreneurial intention because they can access critical information and external resources necessary to identify business opportunities [12]. Moreover, this study proposes that entrepreneurial self-efficacy, defined as an employee's confidence in her/his capability to complete various tasks relevant to entrepreneurship [14], has a significant mediating effect in these relationships.

The present study provides three contributions on PI and entrepreneurial intention research. First, this study examines how the two forms of PI, operationalized as task- and relationship-oriented PI, differently affect the entrepreneurial intention of employees. This approach is distinct from previous studies which mainly deem PI as a unidimensional concept when documenting the effect of PI on entrepreneurship [2,9]. By doing so, a more intensive examination of the relations of task- and relationship-oriented PI is provided, as well as entrepreneurial intention, thereby answering the question whether employees with initiative are likely to be entrepreneurs or not. Second, this study applies self-efficacy theory to understand the relations between PI and entrepreneurship by exploring the mediating effects of entrepreneurial self-efficacy, consequently providing a theoretically grounded explanation of the PI-to-entrepreneurial intention mechanism. This study also responds to the recommendation from previous studies to examine the mediating mechanism in the PI—entrepreneurial intention relationships [15]. Third, a large amount of previous research on entrepreneurial intention concentrates on predicting the entrepreneurial intentions of students [16], despite the suggestion from scholars that employees of established organizations represent a major source of future employers [17]. The current study complements previous research by exploring the entrepreneurial intention of working employees. Hence, this research provides additional comprehension of the formation of entrepreneurial intentions in the work context.

2. Literature Review and Hypotheses

2.1. Personal Initiative

PI is defined as “a behavior syndrome resulting in an individual's taking an active and self-starting approach to work” [2] (p. 38). PI has three aspects: (1) Self-starting, which implies that “a person does something without being told, without receiving explicit instruction, or without explicit role requirements” [2] (p. 38); (2) proactivity, which means having “long-term focus and not waiting until one must respond to a demand” [2] (p. 38); and (3) overcoming barriers, which implies that a person overcomes setbacks and failures, such as work barriers and other people's obstructions and incompatibilities [4].

Previous studies indicate that PI is associated with several job-related outcomes. For example, PI is positively linked with organizational citizenship behavior, because employees with high initiative are more likely to engage in works that fall outside their normal duties and responsibilities, which might improve the development of their organizations [5]. Moreover, PI may facilitate organizational involvement and commitment, because employees with high initiative are more likely to recognize the crucial tendencies in the work context, which might increase the loyalty to and involvement in their organizations [18]. In addition, PI is linked to strong job and career satisfaction, because employees with initiative tend to eliminate obstacles that hinder satisfaction [19]. These findings suggest that initiative employees are unlikely to be self-employed. Studies also indicate that employees who are satisfied with and committed to their current works are less liable to consider entrepreneurship as an alternative [20].

However, many scholars suggest that PI is essential to entrepreneurship [13]. The individuals with initiative accomplish work without receiving explicit instructions [21], develop goals independently [4], and use active planning strategies [13]. They usually adopt a long-term focus in relation to future opportunities, as well as stressors and preparations related to these in order to rapidly assemble resources to capitalize on future opportunities [22]. Furthermore, the individuals with initiative are

equipped with high persistence to confront numerous barriers and obstacles [13]. These self-starting, proactive, and persistent features are central elements to self-employment [23]. Empirically, PI has been documented to be positively correlated with entrepreneurship [10].

Note that the contradictory findings on the relationship between PI and entrepreneurial intention may be attributed to the conceptualization of PI by most researchers as a unidimensional concept. Recently, scholars proposed that PI has two forms: task- and relationship-oriented PI [13]. Task-oriented PI prompts employees to acquire task-related and job-related knowledge and skills and makes them better able to anticipate future tasks and job demands [4]. Exemplars include behaviors such as proactively organizing work, improving process or product quality, and submitting suggestions. By contrast, relationship-oriented PI reflects the ability of employees to extract benefits from work-based relationships [24]. Exemplars include behaviors such as proactively contacting clients and suppliers, and developing friendships with other entrepreneurs or governmental officials. Relationship-oriented PI supports employees to gather contextual information and resources to improve conditions at work [25] and to leverage necessary social resources to exploit opportunities [26]. This study draws on task- and relationship-oriented PI, and proposes that both forms adversely affect employee entrepreneurial intention.

2.2. Task-oriented PI and Employee Entrepreneurial Intention

This study expects that task-oriented PI is negatively related to employee entrepreneurial intention for the following reasons. Employees with high task-oriented PI are unlikely to show high entrepreneurial intentions because they have high job satisfaction and organizational involvement. Task-oriented PI is a proactive goal-directed behavior pattern that aims to obtain favorable and excellent organizational goals [4]. By removing obstacles to satisfaction, employees with high task-oriented PI are satisfied with their current jobs [27]. Additionally, task-oriented PI may provide employees with a feeling of autonomy [28] and a sense of person-job fit [29], as well as elicit gratifying skill development and occupational success [30], thereby stimulating a higher level of job satisfaction. Research further found that employees with high job satisfaction are unlikely to prefer entrepreneurial status [8]. Furthermore, employees with high task-oriented PI often feel involved in the creation and development of their organizational surroundings, thereby facilitating their organizational commitment [18]. This commitment reduces their tendency to work outside of current organizations and to engage in new ventures.

Employees with high task-oriented PI are unlikely to prefer the entrepreneur status as a career alternative because they are viable for promotion in their current organizations. Employees with task-oriented PI “engage in task-related behaviors at a level that is so far beyond minimally required or generally expected levels that it takes on a voluntary flavor” [31] (p. 524). Hence, they are liable to excel in functions within and outside their roles, for instance, these employees often work in the office for a long time (even on weekends and holidays), complete extra work without pay, and volunteer to accomplish extra-role tasks [32]. Employees who demonstrate these routine and non-routine tasks are liable to obtain a higher performance evaluation and are more likely to get a promotion than others [32]. Consequently, the prospect of a promotion makes employees with high task-oriented PI realize that employment is a successful career path for them, which may dispel their propensity to choose entrepreneurship as a career.

In addition, employees with high task-oriented PI are unlikely to choose entrepreneurship, because of the overly specific knowledge and skills they have acquired. Task-oriented PI implies that employees use an active approach to complete certain tasks and to resolve job-related issues [2]. These initiatives aim to ameliorate existing work processes and routine, and to form their basic know-how foundation to meet the challenges in future works. [33]. Task-oriented PI is also conducive to the acquisition of narrow functional knowledge and skills [34]. For example, technical staff with task-oriented PI may actively seek to obtain knowledge and skills that can help them successfully complete technical issues. Nevertheless, these knowledge and skills are particular and narrow, making them beneficial for

tackling job-related problems but insufficient for entrepreneurial purposes. This insufficiency arises from the nature of entrepreneurship which involves broad competencies and knowledge from various domains (such as marketing, financial, and management). Thus, the following hypothesis is proposed:

H1. *Task-oriented PI has a negative effect on entrepreneurial intention.*

2.3. Relationship-oriented PI and Employee Entrepreneurial Intention

Conversely, it is expected that relationship-oriented PI is positively related to employee entrepreneurial intention. In particular, employees with high relationship-oriented PI are more likely to choose entrepreneurship because they can access critical external resources. With regard to entrepreneurship, individuals must seek external supports, e.g., capital, workshop building, machinery equipment, information, etc [35]. Employees with high relationship-oriented PI are more capable of network formation, network information collection, and network contacts monitoring [12]. This capability facilitates the evaluation, procurement, and utilization of resources [36]. Moreover, employees with high relationship-oriented PI are more liable to obtain social support. Research revealed that social network and social support are important sources of the external resources required for entrepreneurship [37]. For example, maintaining a profitable relationship with the government is beneficial during entrepreneurship. In general, the government (especially in China) retains control of a large proportion of resources. Further, the government has a significant say in resources distribution and program approval [38]. In particular, the government might provide kinds of supports for entrepreneurs and their new ventures, such as office space, tax preferences, technical assistance, and financial supports [39]. Employees with high relationship-oriented PI are more likely to choose entrepreneurship because they can access critical information. This critical information is limited and is sometimes embedded in social networks [40]. Employees with high relationship-oriented PI are liable to obtain critical and asymmetrical information, because they generally maintain close relationships with both intra-organization members and outside suppliers, customers, and other partners [13]. When individuals obtain critical information which can result in potential opportunity and profits, they are likely to consider entrepreneurship [41].

Moreover, employees with high relationship-oriented PI are more likely to prefer the entrepreneur status as a career alternative because they might be exposed to entrepreneur role models. Relationship-oriented PI implies that employees utilize a proactive approach to bridge and bond business-related relationships [24]. For instance, such employees might develop close relationships with successful entrepreneurs through formal meetings, informal gatherings, and other social activities. For employees with high relationship-oriented PI, close exposure to such role models can lead to osmosis and the absorption of entrepreneurial knowledge and experience from those role models. As noted by Nanda and Sørensen [42], having close relationships with entrepreneurs increased the likelihood of entrepreneurship. For these reasons, the following hypothesis is proposed:

H2. *Relationship-oriented PI has a positive effect on entrepreneurial intention.*

2.4. Mediating Role of Entrepreneurial Self-Efficacy

Self-efficacy is “an individual’s belief that they can perform tasks and fulfill roles” [43] (p. 212). According to self-efficacy theory, an individual’s self-efficacy is determined by several factors, such as enactive mastery, role models, social persuasion, and judgments of physiological states [44]. The scholars have asserted that such influences must take the efficacy determinants into the consideration, because the determinants are strongly associated with the evaluation of the individual’s available resources and potential constraints [45]. Furthermore, self-efficacy is a kind of subjective perception process in which individuals interpret, internalize, and coalesce the acquired information to form the evaluation on their ability toward a given task or subsequent behavioral intention. In this respect, many scholars suggested that self-efficacy is a crucial mediator between distal factors and entrepreneurial

intention [46]. For instance, Zhao et al. [47] documented the mediation effect of self-efficacy in demonstrating the relations among perceptions of formal learning, entrepreneurial experience, risk propensity, and entrepreneurial intention of students.

The current study emphasizes domain-specific self-efficacy, i.e., entrepreneurial self-efficacy. Entrepreneurial self-efficacy refers to the individuals' confidence in their capability in fulfilling entrepreneurship-related roles and tasks [14]. Moreover, it is an important variable in shaping entrepreneurial intention [48]. High entrepreneurial self-efficacy individuals tend to feel more capable to tackle reality relative to those with low entrepreneurial self-efficacy. Previous studies mainly documented the influences of entrepreneurial self-efficacy on entrepreneurial intention. For instance, Chen et al. [14] discovered that entrepreneurial self-efficacy has a positive influence on the entrepreneurial intention of students. Tsai et al. [49] investigated adults in Taiwan and found a positive association between entrepreneurial self-efficacy and intention.

An increasing quantity of research investigated the mediating role of entrepreneurial self-efficacy. For example, Segal et al. [50] found that certain educational initiatives successfully boosted entrepreneurial self-efficacy by strengthening the individuals' expectations of the potential for positive outcomes from entrepreneurial action. Roxas et al. [51] claimed that entrepreneurial knowledge (e.g., financial management, marketing, and human resource management) affects the entrepreneurial intention of individuals through entrepreneurial self-efficacy. Prabhu et al. [10] revealed that entrepreneurial self-efficacy is an important mediator between a proactive personality and entrepreneurial intention among students. These studies provide logical support and wisdom to examine the mediating effect of entrepreneurial self-efficacy in the PI-employee entrepreneurial intention linkage.

It has been inferred that the relationship between relationship-oriented PI and entrepreneurial intention is transmitted through entrepreneurial self-efficacy. Employees with task-oriented PI are particularly likely to be exposed to various specific tasks and to acquire knowledge and skills [52]. The mastery of these task-based knowledge and skills leads employees to feel confident about completing current tasks and jobs. Hence, employees with task-oriented PI possess high self-efficacy that successfully maintains employment. However, self-efficacies are context specific, such that employees might have low self-efficacy in one context but have high self-efficacy in another context [53]. Given that the knowledge and skills required for employment and self-employment significantly differ, mastering highly context-specific functional work tasks reduces entrepreneurial self-efficacy [54]. In addition, employees with task-oriented PI spend most of their time and energy on specific employment-related functions, hence, limited time and energy remains for acquiring knowledge, information, resources and skills for self-employment. Accordingly, the mastery of knowledge and skills is insufficient, which causes employees with task-oriented PI to demonstrate low entrepreneurial self-efficacy. Therefore, low entrepreneurial self-efficacy results in images of failure [14], a dim view of a career in self-employment [55], and a decrease in the employees' intention of entrepreneurship. For these reasons, the following hypothesis is proposed:

H3. *Entrepreneurial self-efficacy mediates the relationship between task-oriented PI and entrepreneurial intention, that is, a negative indirect effect of task-oriented PI on entrepreneurial intention exists through entrepreneurial self-efficacy.*

It has been further inferred that the relationship between relationship-oriented PI and entrepreneurial intention is also transmitted through entrepreneurial self-efficacy. Employees with relationship-oriented PI are likely to obtain social networks via proactive relationship building. The information, knowledge, and role models embedded in social networks are critical for shaping the values, attitudes, skills, and social attitudes of employees toward entrepreneurship [56]. This socialization toward entrepreneurship is a significant path in forming their entrepreneurial self-efficacy [47]. Moreover, social networks may serve as entrepreneurial social modeling, thereby generating possible emotional support, applause, affirmation, commendation, and other forms of spiritual

supports [57]. This social modeling toward entrepreneurship is central to the formation of the entrepreneurial self-efficacy perceptions of employees. Therefore, as an employee's confidence in fulfilling entrepreneurship-related tasks increases, the likelihood of starting a new venture becomes substantially greater, thereby increasing entrepreneurial intention. Thus, the following hypothesis is proposed:

H4. *Entrepreneurial self-efficacy mediates the relationship between relationship-oriented PI and entrepreneurial intention, that is, a positive indirect effect of relationship-oriented PI on entrepreneurial intention exists through entrepreneurial self-efficacy.*

3. Method

3.1. Sample and Data Collection

The questionnaire survey was conducted among working employees from China. The authors choose to conduct the survey among working employees in China for three reasons. First, China is the second largest economy and is an economic power house in the world. Recently, anxious to further promote economic transformation and upgrading, the central government has proposed mass entrepreneurship and innovation. Entrepreneurship has already become a hot phenomenon across China. An increasing number of people actively participate in starting new ventures. Thus, China provides a proper and ideal setting for conducting the survey on entrepreneurship. Second, recent studies suggest that employees of established organizations are important resources of employers as opposed to students or fresh graduates [58], because employees possess work experience and professional contacts necessary for entrepreneurship. However, existing studies on entrepreneurial intention were mostly conducted on college students. Hence, it is more reasonable to conduct the survey on working employees to reveal more objective rules on the formation of entrepreneurial intentions. Finally, almost all empirical research on PI was investigated among western backgrounds. However, Chinese culture is quite different from Western cultures. For instance, the relationship-oriented PI may be a more prominent role in shaping entrepreneurial intention in Chinese culture which is characterized by collectivism and *guanxi*. Based on the above considerations, the current study takes working employees in established organizations in China as research samples.

The present study used the snowball sampling technique to increase access to the samples. This technique is quite effective in conducting surveys in China, where personal contacts significantly facilitate questionnaire collection. Firstly, a respected faculty member in a leading Chinese university was contacted. With the support of the faculty member, the authors approached students in an MBA class (generally, MBA students in China are full-time employees who take classes on the weekends). Secondly, 50 students of this MBA class were invited to fill in paper questionnaires within limited time on the spot. Thirdly, the MBA students who participated in the survey were requested to seek out employees in their personal contacts (i.e., former colleagues, classmates, and relatives, among others) who would also tend to fill in the paper or online version of the questionnaires.

Initially, 250 questionnaires (i.e., 150 online questionnaires and 100 printed questionnaires) were distributed to working employees. A total of 236 responses were collected, which is equivalent to a response rate of 94.4%. Ultimately, 210 valid questionnaires (i.e., 118 online questionnaires and 92 printed questionnaires) were obtained by excluding the questionnaires with massive missing information. Table 1 presents the demographic information of the valid samples.

Table 1. Demographic profile of samples (N = 210).

Item	Category	Frequency	(%)
Gender	Male	92	43.81
	Female	118	56.19
Age	Less than 20 years old	4	1.9
	21–30 years old	109	51.9
	31–40 years old	79	37.62
	41–50 years old	17	8.1
	More than 51 years old	1	0.48
Education	Associate’s degree	38	18.1
	Bachelor’s degree	107	50.95
	Master’s degree or higher	65	30.95
Tenure	Less than 1 year	54	25.71
	2–4 years	88	41.9
	5–7 years	48	22.86
	8–10 years	11	5.24
	More than 11 years	9	4.29
Position	Ordinary employees	154	73.33
	Middle managers	48	22.86
	Senior managers	8	3.81
Organization type	State-owned enterprises	89	42.38
	Privately-owned enterprises	60	28.57
	Foreign-controlled enterprises	26	12.38
	Government agencies	35	16.67

3.2. Measures

First and foremost, on the basis of previous maturity scales, this study designed an English version questionnaire. All scales were measured by using a five-point Likert scales, in which “one” refers to “strongly disagree” and “five” refers to “strongly agree.” Secondly, a three-step revision procedure was adopted to ensure the validity of the measures [59], because all of the respondents were not native English speakers. Finally, a pre-tested survey was conducted on experts (both from working employees and scholars). Based on their feedbacks, the relative items were carefully revised to guarantee the face validity. The measurement items of the construct are shown in the Supplementary (Table S1).

Task-oriented personal initiative. This construct was measured by using the scale of Frese et.al. [52]. The scale contains 7 items, which is frequently used to measure the level of employee PI.

Relationship-oriented personal initiative. This construct was measured by adopting the scale of Zhao et al. [60]. The original scale was used to measure the entrepreneur’s relationship-oriented PI. It emphasizes the extent to which employers behave within a proactive and self-starting pattern to expand their business networks. According to the characteristics of the employees, the scale was adapted to accommodate our research.

Entrepreneurial self-efficiency. Entrepreneurial self-efficiency was measured with the 19-item scale of McGee et al. [61]. The scale contains five entrepreneurship-related aspects, including the individuals’ confidence in their ability to searching, planning, marshaling, implementing-people, and implementing-financial.

Entrepreneurial intention. Entrepreneurial intention was measured with the 5-item scale of Chen et al. [14]. This scale was frequently used to measure the individuals’ entrepreneurial intention of both employees and students.

Control variables. The employee demographics, including gender, age, education, position, and tenure, were controlled in the current study, because these status variables have been found to play a significant role in entrepreneurial intention [14].

4. Data Analysis and Results

4.1. Reliability, Validity, and Correlations

In order to guarantee the validity of the measures in current study, both reliability and validity of all constructs were tested. To be specific, Cronbach's alpha and the composite reliability were used to examine the reliability of all constructs. As Table 2 shows, the values of Cronbach's alpha were in the range of 0.82 and 0.94 (all higher than the recommended benchmark of 0.6) and the values of the composite reliability were in the range of 0.88 and 0.91 (all higher than the recommended benchmark of 0.7) [62], which indicate a good reliability.

Table 2. Reliability and validity analysis (N = 210).

	Items	Cronbach's α	Composite Reliability	AVE
Task-oriented personal initiative	7	0.85	0.88	0.52
Relationship-oriented personal initiative	5	0.87	0.91	0.66
Entrepreneurial self-efficiency	19	0.93	0.94	0.51
Entrepreneurial intention	5	0.91	0.93	0.73

Afterwards, the convergent validity and discriminant validity of all constructs also were examined. Specifically, the convergent validity was assessed by using average variance extracted (AVE). As Table 2 shows, the values of AVE were in the range of 0.52 and 0.73 (all higher than the recommended benchmark of 0.5) [62], which indicate that all constructs have good convergent validity. In addition, the discriminant validity was assessed by comparing the correlations between the variables with the square roots of AVEs. As shown in Table 3, all correlations between the variables were lower than the square roots of AVEs, thereby indicating a good discriminant validity.

Table 3. Means, standard deviations, and correlations.

	Mean	SD	1	2	3	4	5	6	7	8
1. Gender	—	—								
2. Age	—	—	−0.18 *							
3. Education	—	—	0.10	−0.15 *						
4. Position	—	—	−0.06	0.19 †	−0.10					
5. Tenure	—	—	−0.17 *	0.80 †	−0.03	0.21 †	(0.72)			
6. TPI	3.69	0.53	0.16 *	0.00	−0.03	0.07	0.07	(0.81)		
7. RPI	3.32	0.73	−0.02	−0.08	0.06	0.06	0.01	0.46 †	(0.72)	
8. ESE	3.29	0.63	−0.05	−0.05	−0.01	0.11	0.06	0.40 †	0.71 †	(0.86)
9. EI	3.06	0.92	−0.12	−0.13	0.04	0.07	−0.01	0.16 *	0.60 †	0.67 †

Note: TPI, Task-oriented personal initiative; RPI, Relationship-oriented personal initiative; ESE, Entrepreneurial self-efficiency; EI, Entrepreneurial intention. The diagonal values are the square root of AVE. * $p < 0.05$, † $p < 0.01$.

4.2. Assessment of Proposed Hypotheses

The hypotheses were examined by using the bootstrapping method of Preacher and Hayes [63]. In regard to this bootstrapping method, it could deal with the whole model which contains multiple independent variables, and further examines the direct and indirect effects. Specifically, the control variables, e.g., age, education, position, and tenure, were first entered into the procedure. No significant effect was found yet ($p > 0.05$). Secondly, two analyses were conducted for each form of PI with the entrepreneurial self-efficacy and entrepreneurial intention. Table 4 displays the results of the direct effects of task-oriented and relationship-oriented PI on employee entrepreneurial intention. Consistent with hypothesis 1, the results show that task-oriented PI is significantly negative ($\beta = -0.31$, $p < 0.01$) to employee entrepreneurial intention. Consistent with hypothesis 2, relationship-oriented PI shows a significant positive ($\beta = 0.36$, $p < 0.01$) relationship with employee entrepreneurial intention.

Table 4. Prediction of the mediating variable.

Variables	Entrepreneurial Self-Efficacy		Entrepreneurial Intention	
	Coefficient	Standard Error	Coefficient	Standard Error
Gender	−0.06	0.07	−0.15	0.10
Age	−0.08	0.06	−0.17	0.09
Education	−0.05	0.06	0.01	0.09
Position	0.04	0.04	0.02	0.06
Tenure	0.06	0.04	0.06	0.06
TPI	0.10	0.07	−0.31 [†]	0.10
RPI	0.56 [†]	0.05	0.36 [†]	0.09
ESE			0.74 [†]	0.10
Indices	$R^2 = 0.52$, $F(7202) = 30.84$, $p < 0.01$		$R^2 = 0.52$, $F(8201) = 27.16$, $p < 0.01$	

Note: TPI, Task-oriented personal initiative; RPI, Relationship-oriented personal initiative; ESE, Entrepreneurial self-efficacy; EI, Entrepreneurial intention. * $p < 0.05$, † $p < 0.01$.

The indirect effects of entrepreneurial self-efficacy were further examined by a bias-corrected bootstrapping procedure [63]. As shown in Table 5, the indirect effect of task-oriented PI on entrepreneurial intention via entrepreneurial self-efficacy was significant and negative (indirect effect = −0.24, 95% CI = −0.45 – −0.02), whereas the direct effect of task-oriented PI on entrepreneurial self-efficacy was not significant ($\beta = 0.10$, $p > 0.05$, Table 5). These findings cannot support hypothesis 3, i.e., the mediation effect of entrepreneurial self-efficacy between task-oriented PI and entrepreneurial intention did not exist. Second, in regards to relationship-oriented PI, the indirect effect on entrepreneurial intention via entrepreneurial self-efficacy was significant and positive (indirect effect = 0.78, 95% CI = 0.64–0.96). This supports hypothesis 4, i.e., the mediation effect of entrepreneurial self-efficacy between relationship-oriented PI and entrepreneurial intention did exist. The model is significant, $R^2 = 0.63$, $F(7202) = 19.02$, $p < 0.01$.

Table 5. Indirect effects of entrepreneurial self-efficacy on entrepreneurial intention.

Path	TII→ESE→EI	RPI→ESE→EI
Bootstrap-indirect effect	−0.24 [*]	0.78 [†]
SE	0.11	0.08
Lower limit 95% CI	−0.45	0.64
Upper limit 95% CI	−0.02	0.96

Note: TPI, Task-oriented personal initiative; RPI, Relationship-oriented personal initiative; ESE, Entrepreneurial self-efficacy; EI, Entrepreneurial intention. Confidence intervals are bias-corrected based on 10,000 bootstrap samples. SE, standard error. * $p < 0.05$, † $p < 0.01$.

5. Discussion

5.1. Theoretical Implications

This research offers several theoretical contributions. Firstly, our study contributes to the literature on PI. Prior literature mainly uses the unidimensional PI construct, producing ambiguous results in terms of entrepreneurship. Empirical evidence suggests that employees with initiative are unlikely to engage in entrepreneurship because of high levels of job commitment and satisfaction [7]. However, other empirical work also found that individuals with initiative are more liable to choose entrepreneurship because of their advantages in recognizing business opportunities and utilizing external resources [9]. Hahn et al. [13] claimed that PI is not a unidimensional construct and further conceptualized PI into two forms (i.e., task-oriented and relationship-oriented). This dual-form PI was adopted to empirically resolve prior ambiguous findings. Specifically, employees with task-oriented PI are less likely to choose entrepreneurship, whereas employees with relationship-oriented PI are more liable to opt for entrepreneurship. As such, the current study responds to the recent call to adopt

the dual-form PI. Furthermore, a more comprehensive perspective was provided in investigating the contradictory arguments of PI regarding employee entrepreneurial intention.

Secondly, our research extends self-efficacy theory. Previous studies suggest that self-efficacy may be valuable for studying mediating mechanisms [46]. Accordingly, entrepreneurial self-efficacy was introduced as a crucial mediator in the task- and relationship-oriented PI, as well as entrepreneurial intention relationships. Our results indicate that entrepreneurial self-efficacy mediates the positive effect of relationship-oriented PI on employee entrepreneurial intention. Nevertheless, the mediation effect of task-oriented PI on entrepreneurial intention is insignificant. Hence, the current study responds to the calls to investigate the specific mechanisms on how PI translates into entrepreneurial intention [10].

Thirdly, this study advances the literature on entrepreneurial intention. The existing literature largely focuses on groups of students, while ignoring the workforce in established organizations [16]. Recent studies suggest that employees of established organizations are important resources of employers as opposed to students or fresh graduates [58], because employees possess work experience and professional contacts necessary for entrepreneurship. Employees also have more prospects in identifying opportunities by exposing themselves to potential markets [64]. As such, scholars call for more research examining employee entrepreneurial intention [65]. Consequently, the current study reveals that employees with task-oriented PI are unlikely to start anew ventures, whereas the opposite is true for those with relationship-oriented PI.

5.2. Practical Implications

The current study offers useful implications for organizations regarding various interventions that can strengthen employee selection and management. For example, organizations must be cautious in the personal assessment of an applicant's PI. A person with high relationship-oriented PI and entrepreneurial self-efficacy is likely to display a tendency toward entrepreneurship. Conversely, a person with high task-oriented PI is liable to maintain their current employment status. The assessments can be improved by setting pre-established standards for the selection procedures, which may require the commitment and involvement of top management and other senior managers. Furthermore, extant managerial literature suggests the critical role of intentional factors (e.g., entrepreneurial intentions) for explaining organizational behaviors, particularly in small companies [66]. Our results indicate the necessity of considerable attention toward creating the conditions for increasing employees' task-oriented PI within established organizations, thereby reducing their intentions of leaving. For employees with high relationship-oriented PI, organizations could continually make them cognitively aware of the process through which entrepreneurial behaviors are enacted and the manner in which entrepreneurial intentions are transformed into intrapreneurial intentions and behaviors.

Furthermore, this study is also beneficial to policymakers in facilitating entrepreneurship. The authors have highlighted how task-oriented PI and relationship-oriented PI affect the potency of entrepreneurial self-efficacy differently to enhance or weaken entrepreneurial intention. Hence, policymakers can target individuals, especially the employees in organizations for propaganda of entrepreneurship-related policies to promote their relationship-oriented PI and enhance their entrepreneurial self-efficacy level. Furthermore, relevant departments can provide individuals with an enlightened entrepreneurial environment. This may promote their confidence in pursuing self-employment as an alternative career choice. Therefore, this study can serve as a decision-making basis for policymakers and related departments to enhance entrepreneurship effectively.

5.3. Limitations and Directions for Future Research

The current study includes a few limitations that future research can resolve. First, the questionnaires were collected at the same point in time. It is difficult to reveal the dynamic processes of the development of entrepreneurial intention. Moreover, the cross-sectional data could not be used for making causal inferences. Thus, the longitudinal-designed studies are recommended in future

research. Second, only the employee entrepreneurial intention from the employees' perspective was investigated. Prior literature suggests that organizational factors (e.g., organization types, industry type, and entrepreneurial climate) crucially shape employee entrepreneurial intention [67]. Hence, future research can extend the current study by jointly considering employee and organizational factors. Third, although this study documented the mediation effect of entrepreneurial self-efficacy, the internal influencing mechanism between PI and entrepreneurial intention is quite complex. It is therefore suggested that future research expand the framework of the current study and excavate more additional mediating mechanisms. Finally, in the digital age, the value and importance of new technologies (i.e., artificial intelligence) are more and more prominent. These kinds of new technologies might shape the importance and relevance of personal initiative for entrepreneurial behavior. Thus, future research can extend the current study by considering the influences of new technologies.

Supplementary Materials: The following are available online at <http://www.mdpi.com/2071-1050/11/19/5468/s1>.

Author Contributions: L.H. proposed the theoretical framework and drafted this manuscript. J.W. developed the concept and design, collected the data, and revised the manuscript. J.G. assisted in data collection and manuscript revision.

Funding: This research is supported by a grant from Natural Science Fund of Zhejiang Province (LQ19G020005), Major Public Relations Projects in Humanities and Social Sciences of Zhenjiang Ministry Department(2018QN048), Natural Science Fund of Anhui Province(1708085MG174), National Social Science Fund of China (17BGL077), and Anhui Provincial Natural Science Foundation(1808085MG223).

Acknowledgments: The authors would like to acknowledge the assistance of Augustine A. Lado from Clarkson University in reviewing and editing.

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. Belschak, F.D.; Den Hartog, D.N. Pro-self, prosocial, and pro-organizational foci of proactive behaviour: Differential antecedents and consequences. *J. Occup. Organ. Psychol.* **2010**, *83*, 475–498. [CrossRef]
2. Frese, M.; Kring, W.; Soose, A.; Zempel, J. Personal Initiative At work: Differences between East and West Germany. *Acad. Manag. J.* **1996**, *39*, 37–63.
3. Zacher, H.; Schmitt, A.; Jimmieson, N.L.; Rudolph, C.W. Dynamic effects of personal initiative on engagement and exhaustion: The role of mood, autonomy, and support. *J. Organ. Behav.* **2019**, *40*, 38–58. [CrossRef]
4. Fay, D.; Frese, M. The concept of personal initiative: An overview of validity studies. *Hum. Perform.* **2001**, *14*, 97–124. [CrossRef]
5. Campbell, D.J. The proactive employee: Managing workplace initiative. *Acad. Manag. Perspect.* **2000**, *14*, 52–66. [CrossRef]
6. Gamboa, J.P.; Gracia, F.J.; Ripoll, P.; Peiro, J.M. Employability and personal initiative as antecedents of job satisfaction. *Span. J. Psychol.* **2009**, *12*, 632–640. [CrossRef]
7. Den Hartog, D.N.; Belschak, F.D. Personal initiative, commitment and affect at work. *J. Occup. Organ. Psychol.* **2007**, *80*, 601–622. [CrossRef]
8. Lee, L.; Wong, P.K.; Der Foo, M.; Leung, A. Entrepreneurial intentions: The influence of organizational and individual factors. *J. Bus. Ventur.* **2011**, *26*, 124–136. [CrossRef]
9. Rooks, G.; Sserwanga, A.; Frese, M. Unpacking the personal initiative–performance relationship: a multi-group analysis of innovation by Ugandan rural and urban entrepreneurs. *Appl. Psychol.* **2016**, *65*, 99–131. [CrossRef]
10. Prabhu, V.P.; McGuire, S.J.J.; Drost, E.A.; Kwong, K.K. Proactive personality and entrepreneurial intent. *Int. J. Entrep. Behav. Res.* **2012**, *18*, 559–586. [CrossRef]
11. Thompson, J.A. Proactive Personality and job performance: A social capital perspective. *J. Appl. Psychol.* **2005**, *90*, 1011–1017. [CrossRef] [PubMed]
12. Shane, S.; Nicolaou, N. Creative personality, opportunity recognition and the tendency to start businesses: A study of their genetic predispositions. *J. Bus. Ventur.* **2015**, *30*, 407–419. [CrossRef]
13. Hahn, V.C.; Frese, M.; Binnewies, C.; Schmitt, A. Happy and proactive? The role of hedonic and eudaimonic well-being in business owners' personal initiative. *Entrep. Theory Pract.* **2012**, *36*, 97–114. [CrossRef]

14. Chen, C.C.; Greene, P.G.; Crick, A. Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *J. Bus. Ventur.* **1998**, *13*, 295–316. [\[CrossRef\]](#)
15. Brown, D.J.; Cober, R.T.; Kane, K.; Levy, P.E.; Shalhoop, J. Proactive personality and the successful job search: A field investigation with college graduates. *J. Appl. Psychol.* **2006**, *91*, 717–726. [\[CrossRef\]](#) [\[PubMed\]](#)
16. Saeed, S.; Yousafzai, S.; Yanidesoriano, M.; Muffatto, M. The role of perceived university support in the formation of students' entrepreneurial intention. *J. Small Bus. Manag.* **2015**, *53*, 1127–1145. [\[CrossRef\]](#)
17. Campbell, B.A.; Ganco, M.; Franco, A.; Agarwal, R. Who leaves, where to, and why worry? Employee mobility, entrepreneurship and effects on source firm performance. *Strateg. Manag. J.* **2012**, *33*, 65–87. [\[CrossRef\]](#)
18. Thomas, J.; Whitman, D.S.; Viswesvaran, C. Employee proactivity in organizations: A comparative Meta-Analysis of Emergent Proactive Constructs. *J. Occup. Organ. Psychol.* **2010**, *83*, 275–300. [\[CrossRef\]](#)
19. Ng, T.W.H.; Eby, L.T.; Sorensen, K.L.; Feldman, D.C. Predictors of objective and subjective career success: A meta-analysis. *Pers. Psychol.* **2005**, *58*, 367–408. [\[CrossRef\]](#)
20. Hatak, I.; Harms, R.; Fink, M. Age, job identification, and entrepreneurial intention. *J. Manag. Psychol.* **2015**, *30*, 38–53. [\[CrossRef\]](#)
21. Frese, M.; Garst, H.; Fay, D. Making things happen: Reciprocal relationships between work characteristics and personal initiative in a four-wave longitudinal structural equation model. *J. Appl. Psychol.* **2007**, *92*, 1084–1102. [\[CrossRef\]](#) [\[PubMed\]](#)
22. Dimov, D. Beyond the single-person, single-insight attribution in understanding entrepreneurial opportunities. *Entrep. Theory Pract.* **2007**, *31*, 713–731. [\[CrossRef\]](#)
23. Glaub, M.; Frese, M.; Fischer, S.; Hoppe, M. Increasing personal initiative in small business managers or owners leads to entrepreneurial success: A theory-based controlled randomized field intervention for evidence-based management. *Acad. Manag. Learn. Edu.* **2014**, *13*, 354–379. [\[CrossRef\]](#)
24. Davidsson, P.; Honig, B. The role of social and human capital among nascent entrepreneurs. *J. Bus. Ventur.* **2003**, *18*, 301–331. [\[CrossRef\]](#)
25. Fuller, J.B.; Marler, L.E.; Hester, K. Promoting felt responsibility for constructive change and proactive behavior: Exploring aspects of an elaborated model of work design. *J. Organ. Behav.* **2006**, *27*, 1089–1120. [\[CrossRef\]](#)
26. Ferris, G.R.; Russ, G.S.; Fandt, P.M. *Politics in Organizations*; Lawrence Erlbaum Associates, Inc.: Hillsdale, NJ, USA, 1989.
27. Erdogan, B.; Bauer, T.N. Enhancing career benefits of employee proactive personality: The role of fit with jobs and organizations. *Personnel Psychol.* **2005**, *58*, 859–891. [\[CrossRef\]](#)
28. Kristofbrown, A.L.; Zimmerman, R.D.; Johnson, E.C. Consequences of individual's fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychol.* **2005**, *58*, 281–342. [\[CrossRef\]](#)
29. Hackman, J.R.; Oldham, G.R. Development of the job diagnostic survey. *J. Appl. Psychol.* **1975**, *60*, 159–170. [\[CrossRef\]](#)
30. Eby, L.T.; Butts, M.M.; Lockwood, A. Predictors of success in the era of the boundaryless career. *J. Organ. Behav.* **2003**, *24*, 689–708. [\[CrossRef\]](#)
31. Podsakoff, P.M.; Mackenzie, S.B.; Paine, J.B.; Bachrach, D.G. Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *J. Manag.* **2000**, *26*, 513–563. [\[CrossRef\]](#)
32. Bolino, M.C.; Turnley, W.H. The personal costs of citizenship behavior: The relationship between individual initiative and role overload, job stress, and work-family conflict. *J. Appl. Psychol.* **2005**, *90*, 740–748. [\[CrossRef\]](#)
33. Sonnentag, S. Recovery, work engagement, and proactive behavior: A new look at the interface between nonwork and work. *J. Appl. Psychol.* **2003**, *88*, 518–528. [\[CrossRef\]](#) [\[PubMed\]](#)
34. Frese, M.; Fay, D. 4. Personal initiative: An active performance concept for work in the 21st century. *Res. Organ. Behav.* **2001**, *23*, 133–187. [\[CrossRef\]](#)
35. Zimmer, C.; Aldrich, H.E. Resource mobilization through ethnic networks: Kinship and friendship ties of shopkeepers in England. *Sociol. Perspect.* **1987**, *30*, 422–445. [\[CrossRef\]](#)
36. Stuart, T.E.; Hoang, H.; Hybels, R.C. Interorganizational endorsements and the performance of entrepreneurial ventures. *Adm. Sci. Q.* **1999**, *44*, 315–349. [\[CrossRef\]](#)

37. Barbieri, P. Social capital and self-employment: A network analysis experiment and several considerations. *Int. Sociol.* **2003**, *18*, 681–701. [\[CrossRef\]](#)
38. Li, H.; Zhang, Y. The role of managers' political networking and functional experience in new venture performance: Evidence from China's transition economy. *Strateg. Manag. J.* **2007**, *28*, 791–804. [\[CrossRef\]](#)
39. Li, M. China's leap into the information age: Innovation and organisation in the computer industry. *Acad. Manag. Rev.* **2001**, *26*, 313–316. [\[CrossRef\]](#)
40. Putnam, R.D. Bowling alone: America's declining social capital. *J. Democr.* **1995**, *6*, 65–78. [\[CrossRef\]](#)
41. Shane, S.; Venkataraman, S. The promise of entrepreneurship as a field of research. *Acad. Manag. Rev.* **2000**, *25*, 217–226. [\[CrossRef\]](#)
42. Nanda, R.; Sorensen, J.B. Workplace peers and entrepreneurship. *Manag. Sci.* **2010**, *56*, 1116–1126. [\[CrossRef\]](#)
43. Bandura, A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychol. Rev.* **1977**, *84*, 191–215. [\[CrossRef\]](#) [\[PubMed\]](#)
44. Bandura, A. The explanatory and predictive scope of self-efficacy theory. *J. Soci. Clin. Psychol.* **1986**, *4*, 359–373. [\[CrossRef\]](#)
45. Gist, M.E.; Mitchell, T.R. Self-efficacy: A theoretical analysis of its determinants and malleability. *Acad. Manag. Rev.* **1992**, *17*, 183–211. [\[CrossRef\]](#)
46. Rauch, A.; Frese, M. Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *Eur. J. Work Organ. Psychol.* **2007**, *16*, 353–385. [\[CrossRef\]](#)
47. Zhao, H.; Seibert, S.E.; Hills, G.E. The mediating role of self-efficacy in the development of entrepreneurial intentions. *J. Appl. Psychol.* **2005**, *90*, 1265–1272. [\[CrossRef\]](#) [\[PubMed\]](#)
48. Boyd, N.G.; Vozikis, G.S. The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrep. Theory Pract.* **1994**, *18*, 63–77. [\[CrossRef\]](#)
49. Tsai, K.; Chang, H.; Peng, C. Extending the link between entrepreneurial self-efficacy and intention: A moderated mediation model. *Int. Entrep. Manag. J.* **2016**, *12*, 445–463. [\[CrossRef\]](#)
50. Segal, G.; Borgia, D.J.; Schoenfeld, J. Using social cognitive career theory to predict self-employment goals. *N. Engl. J. Entrep.* **2002**, *5*, 47–56. [\[CrossRef\]](#)
51. Roxas, B.; Cayocapanizales, R.; De Jesus, R.M. Entrepreneurial knowledge and its effects on entrepreneurial intentions: Development of a conceptual framework. *Asia-Pacif. Soci. Sci. Rev.* **2009**, *8*, 61–77. [\[CrossRef\]](#)
52. Frese, M.; Fay, D.; Hilburger, T.; Leng, K.; Tag, A. The concept of personal initiative: Operationalization, reliability and validity in two German samples. *J. Occup. Organ. Psychol.* **1997**, *70*, 139–161. [\[CrossRef\]](#)
53. Bandura, A.; Locke, E.A. Negative self-Efficacy and goal effects revisited. *J. Appl. Psychol.* **2003**, *88*, 87–99. [\[CrossRef\]](#)
54. Andersson, G. Using the internet to provide cognitive behaviour therapy. *Behav. Res. Ther.* **2009**, *47*, 175–180. [\[CrossRef\]](#) [\[PubMed\]](#)
55. Schlaegel, C.; Koenig, M. Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. *Entrep. Theory Pract.* **2014**, *38*, 291–332. [\[CrossRef\]](#)
56. Birley, S.; Norburn, D. Small vs. large companies: The entrepreneurial conundrum. *J. Bus. Strateg.* **1985**, *6*, 81–87. [\[CrossRef\]](#)
57. Linan, F.; Santos, F.J. Does Social Capital Affect Entrepreneurial Intentions. *Int. Adv. Eco. Res.* **2007**, *13*, 443–453. [\[CrossRef\]](#)
58. Zapkau, F.B.; Schwens, C.; Steinmetz, H.; Kabst, R. Disentangling the effect of prior entrepreneurial exposure on entrepreneurial intention. *J. Bus. Res.* **2015**, *68*, 639–653. [\[CrossRef\]](#)
59. Leung, K. *Methods and Data Analysis for Cross-Cultural Research*; Sage: Thousand Oaks, CA, USA, 1997.
60. Zhao, X.; Frese, M.; Giardini, A. Business owners' network size and business growth in China: The role of comprehensive social competency. *Entrep. Reg. Dev.* **2010**, *22*, 675–705. [\[CrossRef\]](#)
61. McGee, J.E.; Peterson, M.; Mueller, S.L.; Sequeira, J.M. Entrepreneurial self-efficacy: Refining the measure. *Entrep. Theory Pract.* **2009**, *33*, 965–988. [\[CrossRef\]](#)
62. Fornell, C.; Larcker, D.F. Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **1981**, *18*, 39–50. [\[CrossRef\]](#)
63. Preacher, K.J.; Hayes, A.F. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behav. Res. Methods* **2008**, *40*, 879–891. [\[CrossRef\]](#) [\[PubMed\]](#)

64. Agarwal, R.; Echambadi, R.; Franco, A.; Sarkar, M.B. Knowledge transfer through inheritance: Spinout generation, development and survival. *Acad. Manag. J.* **2004**, *47*, 501–522.
65. Gambardella, A.; Panico, C.; Valentini, G. Strategic incentives to human capital. *Strateg. Manag. J.* **2015**, *36*, 37–52. [[CrossRef](#)]
66. Bird, B.J. Implementing entrepreneurial ideas: The case for intention. *Acad. Manag. Rev.* **1988**, *13*, 442–453. [[CrossRef](#)]
67. Gambardella, A.; Giarratana, M.S. Localized knowledge spillovers and skill-biased performance. *Strateg. Entrep. J.* **2010**, *4*, 323–339. [[CrossRef](#)]



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