

When Does Future Work Self Predict Work Engagement: the Boundary Conditions of Person-Vocation Fit and Trust in Supervisor

Ying Xu¹, Ping Guo² and Wenxia Zhou^{1,*}

¹Renmin University of China, School of Labor and Human Resources, Beijing, 100872, China

²China Europe International Business School, Beijing, 100193, China

*Corresponding Author: Wenxia Zhou. Email: zhouwx@ruc.edu.cn

Abstract: Work engagement is a crucial positive psychological construct related to mental health. However, current self-directed and boundaryless career trend brings unprecedented challenges for organizations to foster employee engagement using traditional means. From an integrative perspective of the engagement theory and the career boundaryless theory, we built a model to test the moderating effect of person-vocation fit and trust in supervisor on the relationship between future work self and work engagement. After conducting a two-wave study with a sample of 231 employees, we found that future work-self was positively related to work engagement; and both person-vocation fit and trust in supervisor independently moderated the relationship between future work self and work engagement. Furthermore, the three-way interacting effect of future work self, person-vocation fit and trust in supervisor on work engagement was significant, and when person-vocation fit and trust in supervisor were both at high levels, future work self had a strongest positive impact on work engagement. These results provided guidance to engagement management at work from a career development perspective.

Keywords: Future work self; trust in supervisor; person-vocation fit; work engagement

1 Introduction

During the last three decades we have witnessed an increasing emphasis on employees' engagement [1,2,3]. Work engagement, defined as a positive, fulfilling, work-related state of healthy mind characterized by vigor, dedication, and absorption [4], is closely associated with not only organizational effectiveness but also individual health status of low psychological distress, less depressive symptoms and boosted job performance [5]. However, in current VUCA (volatility, uncertainty, complexity and ambiguity) era [6], to foster work engagement becomes a more complicated task for organizations. Ather et al. [7,8] pointed out that in this career boundaryless world, individuals' career paths shift more frequently across different job positions, firms and fields, resulting in individuals to take more responsibility in managing their own careers within and beyond organizations, bringing crucial challenges to traditional management practices of organizations [9]. Nevertheless, we believe that it is possible to better propel employees' work engagement if organizations could understand present employment trend more appropriately and cater to personal career development needs more accurately. In this sense, the concept of future work self could provide an insight to researchers and practitioners.

Strauss et al. [10] defined the concept of future work self as "representations of the self in the future that encapsulate individually significant hopes and aspirations in relation to work". Future work self refers to positive work-related states involving the expression of "preferred self" in one's job in the future, and thus functions as a motivational factor to trigger proactive career behaviors [11], such as proactive skill development and proactive career networking [12] and work engagement [5]. However, future work self is also proved to lead to self-oriented career planning [10], career exploration [13] and even job searching

behaviors outside the organization he/she works for [12]. Investing personal time and effort mentally and physically in current work positions is encouraged by organizations, whereas seeking future self-development by changing jobs is usually against organizational interests. Therefore, it is important to understand the boundary conditions under which future work self would drive more engagement in current work tasks and less job-seeking behaviors. However, existing research seldom investigates the boundary conditions. This study aims to fill this gap from an integrative perspective of the engagement theory and the boundaryless career theory.

According to Kahn's engagement theory [1], being psychological present is a result of the interplay of individual's attributes, including values, interests and competencies (e.g., future work self) and work characteristics at various perspectives (e.g., individual, interpersonal and organizational). Meanwhile, guided by the boundaryless career theory, current career tendency indicates a broader vocational perspective that transcends traditional organizational boundaries [7,8]. Hence, from the macro vocational perspective, if people are unable to find vocations aligned with their abilities or interests [14], or from the micro organizational perspective, if individuals fails to seek supportive and trustworthy relationship within the organization [15], they are more likely to explore other alternative ways to achieve their future work self (e.g., turnover), resulting in loss of work passion and productivity. Therefore, this study adopts person-vocation fit and trust in supervisor as two boundary conditions from the vocational and the organizational perspective respectively. Furthermore, we propose a three-way interacting model that person-vocation fit would not only moderate the relationship between future work self and work engagement directly, but also moderate the moderating effect of trust in supervisor on the relationship between future work self and work engagement. Theoretically, under the engagement theory and the career boundaryless theory, this study could reveal key boundary conditions on the relationship between future work self and work engagement and advance the understanding of both theories. From a practical perspective, this study would offer possible guidance to engagement management at work.

2 Hypotheses Development

2.1 Future Work Self and Work Engagement

Current literature has suggested that future work self is positively related to work engagement [5], but there is still other point of view that argues for the possible limitations of this beneficial effect.

Kahn's [1] engagement theory emphasizes that psychological "meaningfulness" resources could foster work engagement. Possible selves motivate individuals to pursue or avoid specific behaviors [16], whereas future work self, as a future-oriented positive possible self, motivates individuals to pursue specific positive behaviors including setting vocational goals and pave one's ways to achieve those goals [10]. Accordingly, existing literature has suggested that future work self is positively related to work engagement. Strauss et al. [10] regarded future work self as a source of internal motivation which could enhance work engagement. This relationship was further demonstrated by Lin et al. [5].

Furthermore, regarded as "meaningfulness" psychological resources, future work self can also improve individuals' work engagement when employees could identify and even remedy discrepancies between their present self and ideal future self that urge them to set specific work-related goals and behavioral plans to achieve their desired future [10]. For example, by comparing the present skills and abilities with anticipated future demands, individuals are motivated to involve in more future-oriented behaviors such as proactive skill development, active acquisition of knowledge, proactive feedback seeking and accumulation of working experiences. Therefore, whether they can get enough support to make up the present-ideal self-discrepancy would be a critical condition for employees to decide to engage in current work or not.

As we delve deeper into this relationship, we find situations that may weaken this proven positive relationship. Individuals' achievement of career goals is not necessarily limited to work engagement in current organization, but including potential external chances (e.g., by cultivating career exploration) [13], especially in this boundaryless career era. Previous research indicates that individuals with salient future work self are motivated to find vocations aligned with their values and interests [17,10,12]. Future work

self drives individuals to conduct cross-boundary career behaviors such as career planning [10], job searching [17] and career consultation [12], which increased their chances of turnover.

Based on ideas above, we found that the relationship between future work self and work engagement is complicated, and contextual factors to make up the present-ideal self discrepancy are important in this relationship. Thereby, we explore two work-related boundary conditions from the macro vocational perspective (person-vocation fit) and from the micro organizational perspective (trust in supervisor) in the following part.

2.2 Future Work Self, Work Engagement and Person-Vocation Fit

According to Kahn's [1] engagement theory, work engagement is a result of the interaction between individuals' attributes and their work. It pointed out the significant influences of both individual characteristics and work environment on work engagement. However, from current boundaryless career perspective, the influence of the work environment is stimulated by a wider career perspective [7,9] and this has not been covered in related engagement research yet. Therefore, person-vocation fit is an important vocational indicator since it is defined as the congruent perspective between an individual and his/her occupation, and it indicates how well individuals' careers are in line with their interests, talents, and motives [18,14].

It is exposed that future work self promotes individuals' proactive behaviors when they recognize the present occupation as an appropriate platform for their future career development, otherwise they may leave the organization sooner or later [19]. Rooting in career boundaryless theory, getting into a proper occupation is usually a process involving self-exploration and even shifting vocations back and forth [8,7,9]. When people feel fit with their vocations and feel a sense of fulfillment of their interests and values, they are more likely to have higher work engagement and better work outcomes. When people realize that their current work positions do not fit with their interests or values, they may change their vocations in the future and engage less in current organization and position. This indicates that future work self can enhance individuals' work engagement more when they have selected more suitable vocations. Thereby we argue that person-vocation fit can moderate the relationship between future work self and work engagement.

Existing research is consisting with our argument, which proved that person-vocation fit is positively linked to higher job satisfaction, lower turnover intentions, better subjective career success and more outstanding in-role performance [20,14]. That is to say, when the person-vocation fit level is high, future work self would motivate individuals to spend more time on identifying the discrepancy between their current status and their clear future work self [19,10], resulting in enhancement of competence and higher work engagement. But when these employees find their vocation is not aligned with their interests or values, future work self will probably lead to their proactive reflection on personal vocational choices and new career plans, which weaken the meaningfulness of current work experience for their career construction and the positive effect of future work self on work engagement. On those grounds, we propose that:

Hypothesis 1: Person-vocation fit moderates the relationship between future work self and work engagement. The positive effect of future work self on work engagement could be strengthened when the employees report higher person-vocation fit.

2.3 Future Work Self, Work Engagement and Trust in Supervisor

Once individuals are at a certain level of person-vocation fit, the issues surrounding the macro vocational environment recede to a general micro organizational background, while interpersonal relationships in current organizations become more significant to them. Grounded on the engagement theory [1,3], "safety" is an important psychological condition affecting engagement. When individuals feel safe, they are more likely to expose their real selves and take risks. Therefore, work engagement could probably be promoted because employees who trust their supervisors are able to direct more of their energy and effort toward their work rather than engaging in self-protective behaviors. Trust in supervisor, representing the willingness of a subordinate to be vulnerable to the actions of his or her supervisor [21,22], is thereby regarded as a moderator on the relationship between future work self and work engagement.

Future work self, as a cognitive representation of one's ideal future, helps individuals identify the discrepancies between the current self and the ideal future self and urges them to set specific work-related goals and behavioral plans to achieve their desired future [10]. For instance, by comparing the present abilities with anticipated future demands, individuals are motivated to involve in more behaviors that are both future-oriented and current-engaged, such as proactive skill development, in-organization learning and feedback seeking. In this process, more trusted relationship with supervisors is believed the key to guide people toward those engagement activities. Since supervisors have the power to severely impact employees' work (e.g., promotions, bonus, and assignments), individuals' perceptions of trustworthiness of their supervisors become extremely significant [23]. In this situation, supportive and trusted interpersonal relations with supervisors can lead to increased willingness to fully engage in work roles.

Previous researches also showed supportive evidences in this regard [2,24,25]. More directly, higher perception of trust in supervisor is proved to be related to more willingness to take risks to develop novel ideas and to increase innovative behaviors [22]. When trust in supervisor is at high level, employees feel no fear to communicate with, learn from and consult their supervisors, and future work self can help them move toward their ideal self, which in turn fosters their work engagement. However, when people's trust in supervisor is at low level, it is possible that employees with more salient future work self would view the current interpersonal situation as an obstacle toward their further career development, thus they may reduce involvement in their current job and conduct self-career planning or even job searching behaviors instead. Therefore, we propose the following hypothesis:

Hypothesis 2: Trust in supervisor moderates the relationship between future work self and work engagement. The positive effect of future work self on work engagement will be strengthened when the employees report higher trust in supervisor.

2.4 The Three-Way Interacting Effects among Future Work Self, Person-Vocation Fit and Trust in Supervisor on Work Engagement

We argue that individual self-determination (i.e., future work self), vocational factor (i.e., person-vocation fit) and organizational factor (i.e., trust in supervisor) have a three-way interacting effect on employees' work engagement. We take a further step to elaborate an in-depth picture of the complicated relationship among these three variables, especially the relationship between two moderators of person-vocation fit and trust in supervisor.

The degree to which employees' behaviors are affected by interpersonal relationships depends on whether they are trying to adjust themselves into the interpersonal environment within the organization. And this decision usually comes along with employees' perception of person-vocation fit. In other words, in our proposed model, whether trust in supervisor exerts its moderating effect is subject to the degree of person-vocation fit. Under the condition of high person-vocation fit, no matter easy or hard it is for individual employees to adapt to interpersonal relationship, they are determined to work hard since their current experience can directly contribute to the achievement of their career goals. That is to say, along with high person-vocation fit, employees are willing to engage in work tasks no matter what interpersonal relationship they would encounter. Therefore, trust in supervisor becomes less effective in moderating the relationship between future work self and work engagement. As such, we argue that the positive moderating effect of trust in supervisor on the relationship between future work self and work engagement would be weakened under the condition of high person-vocation fit.

On the contrary, low person-vocation fit would strengthen people's inclination to changing vocations/jobs and wondering if current experience is still valuable. Hence, under the condition of low person-vocation fit, if trust in supervisor is high, people feel that they can still learn something from their supervisor and get career progress from current work. However, if trust in supervisor is low, people are more convinced that investing in current work is unnecessary and considering external job opportunities is more worthwhile. As such, we argue that the positive moderating effect of trust in supervisor on the relationship between future work self and work engagement would be strengthened under the condition of low person-vocation fit. Altogether, we argue that person-vocation fit functions as an antecedent of trust in

supervisor concerning their moderating roles on the relationship between future work self and work engagement. Based on these ideas, we propose the following hypothesis:

Hypothesis 3: Future work self, person-vocation fit and trust in supervisor have a three-way interacting effect on employees' work engagement. The positive moderating effect of trust in supervisor on the relationship between future work self on work engagement is strengthened when employees report low person-vocation fit.

The conceptual model is presented in Fig. 1.

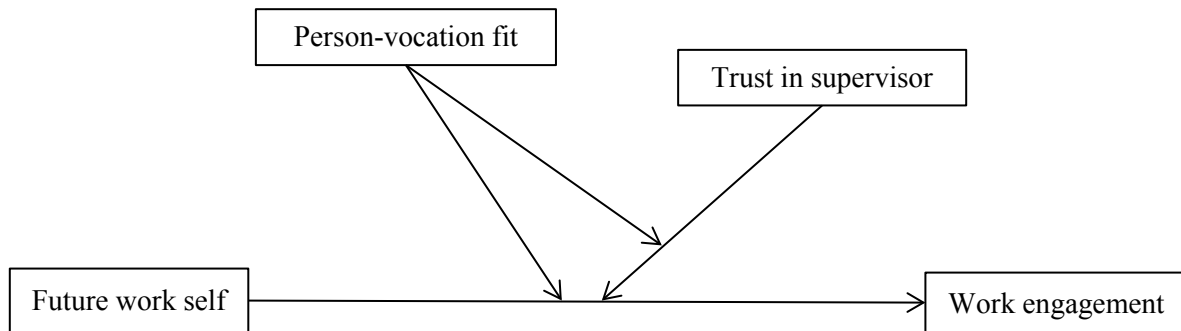


Figure 1: The proposed model

3. Method

3.1 Procedures

We used the snowball sampling method recommended by Hechathorn et al. [26] so that we collected the data with the assistance of 27 human resources managers in Beijing, Liaoning, Shandong, and Shanghai in China. They were asked to invite at least 10 employees from different departments in their organizations to take part in this study. We adopted a time-lagged research design so as to decrease common method bias [27]. To avoid randomly answers, lie detectors were set in our questionnaires [28]. In Time 1 (T1, October 2017), we sent 324 electronic questionnaires to targeted participants through a Chinese social application of Wechat. Respondents were asked to report their future work self and demographic characteristics including gender, age, education, working years and job type. We received 291 valid responses in Time 1. In Time 2 (T2, December 2017), respondents were asked to report on items concerning person-vocation fit, trust in supervisor, and work engagement. We finally received 231 valid responses.

3.2 Participants

Among the participants, 46.05% were males. 15.35% had an associate degree, 49.77% had a bachelor's degree, 32.09% had a master's degree, and 2.79% had a doctor's degree. 26.8% were in marketing jobs, 22.1% were in production jobs, 19.9% were in management jobs, 15.2% were in research jobs, and the remaining 16.0% were in other jobs (e.g., education, legal consultancy). The average age was 29.03 years old ($SD = 0.74$). The average years of working was 2.74 ($SD = 1.01$).

3.3 Measures

Participants were asked to rate all items on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). We adopted conventional translation-back translation procedure suggested by Müller [29] to ensure the translation accuracy for the scale of person-vocation fit and the scale of work engagement. For the scale of future work self and the scale of trust in supervisor, we adopted versions that have already been translated into Chinese and modified by other scholars in previous research.

Future work self. Future work self was measured with the 4-item Chinese version of this scale modified by Guan et al. [17] according to the original version developed by Strauss et al. [10]. Participants were first

asked to mentally travel to the future and imagine their future work self they hoped to become. Then participants were asked to keep that future work self-image in mind, while evaluating the salience of that image. Sample items included: “I am very clear about who and what I want to become in my future work”, and “I can easily imagine my future work self”. The Cronbach’s alpha in current research was 0.92.

Person-vocation fit. Person-vocation fit was measured by the scale developed by Vogel et al. [14]. There are 3 items in total including “There is a good fit between my personal interests and the kind of work I perform in my occupation.”, “My skills and abilities are well suited for the vocation that I am currently in.”, and “When I think about my interests, I sometimes wonder whether I chose the right occupation after all (reverse-scored).” The Cronbach’s alpha in current research is 0.79.

Trust in supervisor. Trust in supervisor was measured by the scale proposed by Costigan et al. [30]. The modified Chinese versions excluded one cognition-based trust item, resulting in a scale consisting of 5 affect-based items and 5 cognition-based items. Since our target was to measure the trust in supervisor without taking other working peers into consideration, “supervisor” instead of “this person” was phrased in items. Sample items included: “My supervisor and I have a sharing relationship. We can both freely share our ideas, feelings, and hopes.”, “I can talk freely to my supervisor about difficulties that I am facing at work and I know that he/she will want to listen”, and “Given my supervisor’s track record, I see no reason to doubt his/her competence for the job”. The Cronbach’s alpha in current research is 0.88.

Work engagement. Work engagement was measured with a 9-item scale developed by Schaufeli et al. [4], consisting 3 dimensions of vigor, dedication and absorption. Sample items included: “When I get up in the morning, I feel like going to work” (vigor), “I’m enthusiastic about my job” (dedication), and “When I’m working, I ignore everything else around me” (absorption). Cronbach’s alphas in current study were 0.83, 0.92, 0.88 and 0.89 for subscales of vigor, dedication and absorption, and for the whole scale, respectively.

Control variables. We controlled demographic variables of gender, age and education that have been verified to be fundamentally in connection with how individual judge their future work self [10,12] as well as their corresponding job attitudes and work engagement [5]. Besides, to justify the unique impact of the two boundary factors of person-vocation fit and trust in supervisor as the choice of focal variables in our proposed model, we added another two control variables labeled as the ‘job type’ (i.e., which occupational field the individual has been engaged in) and ‘working years’ (i.e., how long the individual has been in current organization).

4. Results

4.1 Confirmatory Factor Analysis

Confirmatory factor analyses (CFA) was conducted using AMOS 7.0 to exam the factor structure of the proposed model. After freely estimating the correlations among the 4 factors of future work self, work engagement, person-vocation fit and trust in supervisor, the CFA results indicated that all factor loadings were significant ($p < 0.001$). Specifically, the goodness-of-fit indices showed acceptable fit to the data of the proposed model with $CMIN = 1397.55$, $DF = 293.00$, $CMIN/DF = 4.77$, $CFI = 0.90$, $TLI = 0.91$, $GFI = 0.89$, $IFI = 0.90$, $NFI = 0.92$, $RMSEA = 0.04$, $SRMR = 0.05$. Thereby, this proposed model could be accepted in this study to conduct further tests.

4.2 Descriptive Statistics and Correlations

Means, standard deviations, and correlation coefficients for all variables are presented in Tab. 1. As is shown, the future work self is positively correlated with work engagement ($r = 0.67$, $p < 0.01$), which is consistent with previous research findings of Lin et al. [5].

Table 1: Descriptive statistics

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender ^a	1.52	0.5	NA								
2. Edu. ^b	2.79	0.62	0.08*	NA							
3. Age	2.21	0.74	-0.07	-0.12*	NA						
4. WY	2.74	1.01	0.04*	0.06*	0.55**	NA					
5. JT	2.91	1.31	-0.07*	0.13	0.06	0.13*	NA				
6. FWS	3.41	0.73	0.04	0.17*	-0.11*	0.12	0.41**	0.92			
7. P-V fit	3.42	0.77	0.14**	0.11*	-0.06	0.23*	0.08*	0.09*	0.79		
8. TIS	2.89	0.68	0.13*	0.35**	0.05	0.58**	0.09*	0.19**	0.11*	0.88	
9. WE	3.06	0.72	0.12*	0.08	-0.21*	0.14*	0.31*	0.54**	0.49**	0.67**	0.89

Note. $N = 231$. * $p < 0.05$. ** $p < 0.01$. Reliability coefficients appear on the diagonal in bold.

WY = Working years; JT = Job type; P-V fit = Person-vocation fit; TIS = Trust in supervisor; WE = Work engagement.

^a Gender was coded "0" for males and "1" for females.

^b Edu. was "1" for associate degree, "2" for bachelor degree, "3" for master degree and "4" for doctoral degree.

4.3 The Moderating Effects of Person-Vocation Fit

The proposed moderating effects test, integrated in conditional process modeling, was a kind of statistical moderation analysis. Therefore, under the guidance of Hayes [31], we used Model 1 of Process program to test the proposed two moderating effects in our model. By setting the bootstrap times to 5000 and the confidence intervals within 95%, the moderating effects of person-vocation fit and trust in supervisor on the relationship between future work self and work engagement were listed in Tabs. 2 and 3 respectively.

Table 2: Results of the moderating effects of person-vocation fit

Variables	B	SE	T	P
Gender	-0.02	0.08	-0.26	0.79
Age	-0.04	0.06	-0.64	0.52
Education	0.01	0.06	0.11	0.91
Working years	0.03	0.04	0.63	0.53
Job type	0.10	0.03	3.26	0.00
Constant	1.34	0.36	3.76	0.00
FWS	0.68	0.05	17.05	0.00
P-V fit	0.64	0.04	15.08	0.00
FWS* P-V fit	0.15	0.04	3.74	0.00
<i>Conditional effect of FWS on WE at values of the moderator of P-V fit:</i>				
	Indirect effect	Boot SE	Boot LLCI	Boot ULCI
P-V fit (-SD)	0.53	0.06	0.41	0.64
P-V fit (+SD)	0.82	0.05	0.72	0.93

Note. $N = 231$. Bootstrap sample size = 5000. Confidence intervals = 95%. FWS = Future work self, P-V fit = Person-vocation fit, WE = Work engagement. Results were reported after controlling age, gender, education, years of working and job type.

As seen in Tab. 2, when person-vocation fit was low (one standard deviation below the mean, -SD), the effect of future work self on work engagement was significant but smaller ($effect = 0.53$, $SE = 0.06$, 95% CI = [0.41, 0.64]); when person-vocation fit was high (one standard deviation above the mean, +SD), the

effect of future work self on work engagement was significant and larger ($effect = 0.82, SE = 0.05, 95\% CI = [0.72, 0.93]$). Thereby the moderating effects at values of person-vocation fit on the relationship between future work self and work engagement (H1) was supported as presented in Fig. 2.

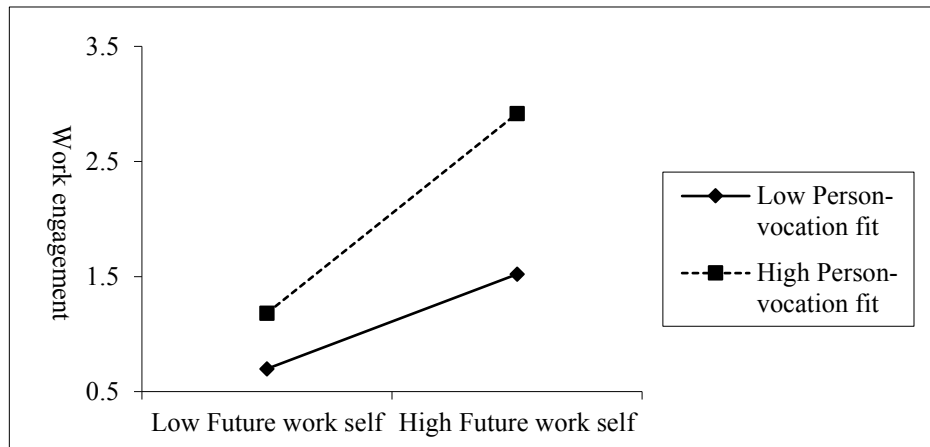


Figure 2: The moderating effects of person-vocation fit on the relationship between future work self and work engagement

4.4 The Moderating Effects of Trust in Supervisor

Table 3: Results of the moderating effects of trust in supervisor

Variables	B	SE	T	P
Gender	0.18	0.08	2.23	0.79
Age	0.06	0.06	0.99	0.32
Education	0.08	0.07	1.19	0.24
Working years	0.05	0.05	1.08	0.28
Job type	-0.06	0.03	-1.73	0.09
Constant	0.92	0.37	2.52	0.01
FWS	0.66	0.04	14.72	0.00
TIS	0.52	0.04	12.57	0.00
FWS* TIS	0.14	0.04	3.77	0.00
<i>Conditional effect of FWS on WE at values of the moderator of TIS:</i>				
	Indirect effect	Boot SE	Boot LLCI	Boot ULCI
TIS (-SD)	0.39	0.05	0.28	0.49
TIS (+SD)	0.66	0.06	0.55	0.77

Note. $N = 231$. Bootstrap sample size = 5000. Confidence intervals = 95%. FWS = Future work self, TIS = Trust in Supervisor, WE = Work engagement. Results were reported after controlling age, gender, education, years of working and job type.

As seen from Tab. 3, when trust in supervisor was low (-SD), the effect of future work self on work engagement was significant but smaller ($effect = 0.39, SE = 0.05, 95\% CI = [0.28, 0.49]$); when trust in supervisor was high (+SD), the effect of future work self on work engagement was significant and larger

($effect = 0.66$, $SE = 0.06$, $95\% CI = [0.55, 0.77]$). The moderating effects at values of trust in supervisor on the relationship between future work self and work engagement (H2) was supported as presented in Fig. 3.

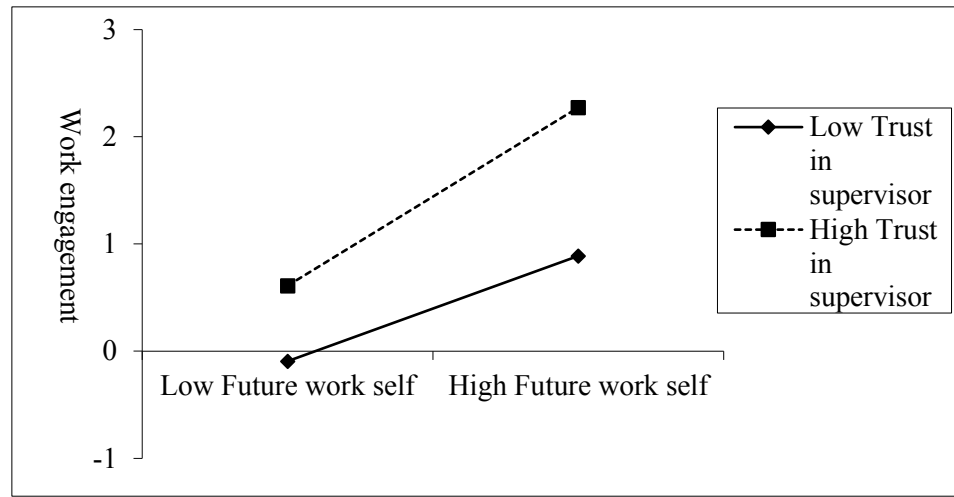


Figure 3: The moderating effect of trust in supervisor on the relationship between future work self and work engagement

4.5 The Three-Way Interacting Effects

To further examine the three-way interacting effects in one whole model, we also ran a bootstrap analysis by using Model 3 of Process in SPSS [31]. After setting bootstrapping times to 10000 and the confidence intervals within 95%, the results of the proposed model were listed in Tab. 4.

Table 4: Results of the three-way interacting effects

Variables	B	SE	T	P
Gender	0.01	0.02	0.42	0.67
Age	0.02	0.01	1.44	0.15
Education	-0.01	0.02	-0.32	0.75
Working years	-0.01	0.01	-1.17	0.24
Job type	-0.06	0.01	-7.38	0
Constant	1.68	0.08	20.4	0
FWS	0.61	0.01	60.01	0
P-V fit	0.56	0.01	61.94	0
TIS	0.57	0.01	62.89	0
FWS*P-V fit	0.12	0.01	14.33	0
FWS*TIS	0.13	0.01	12.19	0
TIS*P-V fit	0.09	0.01	9.62	0.01
FWS*P-V fit*TIS	0.02	0.01	7.74	0.04
<i>Conditional effect of FWS on WE at values of moderators of P-V fit and TIS:</i>				
	Indirect effect	Boot SE	Boot LLCI	Boot ULCI
P-V Fit (-SD), TIS(-SD)	0.36	0.02	0.32	0.39
P-V Fit (-SD), TIS(+SD)	0.55	0.02	0.51	0.58
P-V Fit(+SD), TIS(-SD)	0.66	0.02	0.58	0.65
P-V Fit(+SD), TIS(+SD)	0.78	0.02	0.75	0.81

Note. $N = 231$. Bootstrap sample size = 10000. Confidence intervals = 95%. FWS = Future work self, P-V fit = Person-vocation fit, TIS = Trust in supervisor, WE = Work engagement. Results were reported after controlling age, gender, education, years of working and job type.

As in Tab. 4, altogether the moderating effect of trust in supervisor on the relationship between future work self and work engagement was weakened under the condition of high person-vocation fit (slope difference = 0.12) but strengthened under the condition of low person-vocation fit (slope difference = 0.19). Specifically, when both person-vocation fit and trust in supervisor were high (+SD), the effect of future work self on work engagement was significant and the largest ($effect = 0.78$, $SE = 0.02$, $95\% CI = [0.75, 0.81]$); and when person-vocation fit was high (+SD) but trust in supervisor was low(-SD), the effect of future work self on work engagement was significant but smaller ($effect = 0.66$, $SE = 0.02$, $95\% CI = [0.58, 0.65]$). In sum, when the person-vocation fit is high, the effect difference of future work self on work engagement for those with high rather than low trust in supervisor was more positive (slope difference = 0.12).

However, when person-vocation fit was low (-SD) but trust in supervisor was high (one standard deviation above the mean, +SD), the effect of future work self on work engagement was significant but smaller ($effect = 0.55$, $SE = 0.02$, $95\% CI = [0.51, 0.58]$); and when both person-vocation fit and trust in supervisor were low (one standard deviation below the mean, -SD), the effect of future work self on work engagement was significant but the smallest ($effect = 0.36$, $SE = 0.02$, $95\% CI = [0.32, 0.39]$). In sum, when the person-vocation fit is low, the effect difference of future work self on work engagement was more positive for those with high rather than low trust in supervisor (slope difference = 0.19).

Fig. 4 shows the interacting effects among future work self, person-vocation fit and trust in supervisor on work engagement.

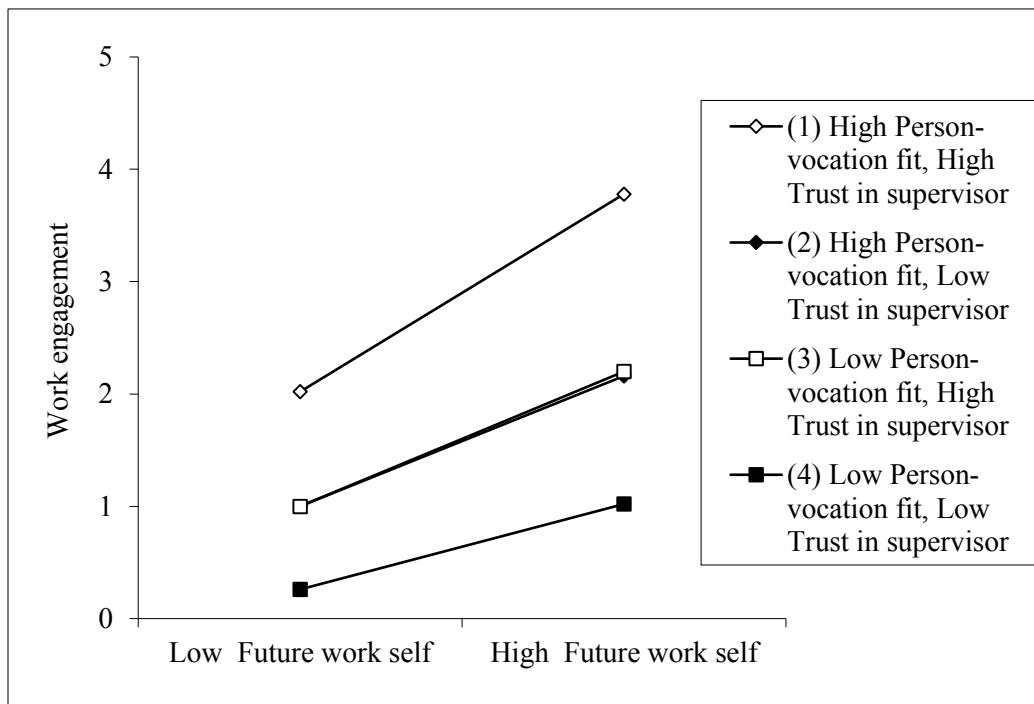


Figure 4: The interacting effects among future work self, person-vocation fit and trust in supervisor on work engagement

5. Discussion

5.1 Findings and Theoretical Contributions

Previous research supported that future work self as a motivational resource has positive effects on work engagement [5]. This study is in line with these studies. However, we expressed concerns about the overlooked boundary conditions. Hence the main contribution of this study is that we take an important exploratory step to reveal the complexity situational conditions from a macro-micro perspective that refers to not only individual factor (future work self), but also career perspective (person-vocation fit) and

organizational perspective (trust in supervisor) in shaping work engagement.

There is no doubt that individuals play a key role in engaging in or withdrawing from their current work positions. In addition to self-determining factors, Kahn [1] also asserted that individuals' engagement is affected by different perspectives of factors swirling intersected of various contextual influences. Our model adopts the engagement theory [1] as the basis, as well as the career boundaryless perspective [8,7] to explore broader occupational influences. As such, excepting for previous chosen factors in five identified perspectives of individual, interpersonal, group, intergroup, and organization proposed in the engagement theory [1], we extend potential antecedents to the career perspective. Therefore, it contributes to a further development of the engagement theory.

From the organizational perspective, this study adds to the knowledge about future work self and work engagement in a view of personal-organizational interaction. Moreover, an engagement review conducted by Bakker, Albrecht et al. [32] has concluded that job and personal resources are the main predictors of engagement; and accordingly, our research highlighted the outstanding contributions of the individual-supervisor relationship at this point.

5.2 Practical Implications

Given the fact that individuals' career development is beyond organizational boundaries [7], our study is designed to find out how to improve individual work engagement by combining their self-development demands with organizational performance and productivity needs. Thus, the findings should offer practical guidance for organizations' engagement management. In specific, we make practical recommendations on each influence factor in our proposed model respectively and further explain how to weigh and balance those three factorial contributions altogether.

Future work self plays a significant motivating role in driving employees' self-regulatory behaviors to devoted work behaviors so that the practical effects can never be underestimated. From this point of view, "what is your dream" is not only a gimmick in talent shows, but also has a practical management sense. Relevant information collection concerning employees' future work self is suggested in management activities, such as recruitment, training, self-evaluation, and performance assessments, so as to take employees' future expectations in following up managerial arrangements, like task assignment, team building, job assignment, promotion and so on, into specific consideration.

Although person-vocation fit is a career perspective factor, we believe organizational guidance does provide certain help at this point. The nature of person-vocation fit is neither set in stone all the time nor one hundred percent self-determined [18,14]. Individuals' understanding of their vocation with their own characters, interests and abilities are generally not all fixed from the very beginning of career development, conversely the understandings will continue to deepen as individuals' working experience deepens, in which process organizations can play an important intervention role. We firstly suggest organizations to take person-vocation fit into account in recruitment because it aids organizations to find fitting people, instead of hiring employees with excellent capability but unfit values or interests. All in all, in the contemporary era "hiring" is not the same as "will not turnover". Apart from recruitment, organizations are recommended to pay attention to the broader management activities, such as job placement, rotation design, and skill trainings, to further advance individual career recognition of how they fit with their career. Share resources and open information are also strongly recommended because those practices are closely connected with employees' current work condition in promoting inter-organizational support-appealing.

The importance of trust in supervisor in this study discloses the necessity of building high-qualified supervisor-subordinate relationships. We recommend managers to adopt more flexible and humanized management methods in supervisor assignment, to value post-team constructions and to establish relationship feedback channels in order to enhance employee's trust to their supervisors. We also recommend organizations to establish a bidirectional selection mechanism that allows both employees and supervisors to choose their work partners based on their personal interests, traits and abilities.

Compared with all three factors interacting in a high perspective (with the effect of 0.78), the other

two situations that two factors interacting in a high perspective as Hypothesis 1 and Hypothesis 2 revealed are also significant. It is obvious that the best practice of organizational engagement management strategy is to take all the factors into account at the same time. Nevertheless, limited by reality, it is unrealistic to request every single organization to achieve the ideal. Fortunately, the results of two-factor interacting effects as Hypothesis 1 and Hypothesis 2 exposed are not underestimated, as such if organizations cannot handle all boundary factors, it is also practical to grasp one, but to pay attention that organizations should treat individuals' future work self with priority at least at present.

5.3 Limitations and Future Research Directions

Despite the important implications outlined above, our study has several limitations. First, the methodological limitation lies in self-report data that may rise concerns about common method bias, even we adopted a two-wave survey. Heterogeneous and diversified data sources are suggested to improve the persuasiveness of research results in future studies.

Despite important practical implications that organizations could integrate measures of future work self into selection process and training programs, future work self is a more pre-determined factor that may not simply altered during these processes so that organizational intervention may not play a determine role for individual evaluation of their future work self. We need to specify that although organizations could improve employees' work engagement, they cannot determine the level of work engagement of employees. Organizations should understand their managemental limitations in current borderless career trend.

Additionally, although the proposed trust in supervisor is driven by strong theoretical foundations of which interpersonal relationships affect people's psychological conditions more than other physical factors, and for employees, the key interpersonal influence on work comes from their supervisors, we need to accept other interpersonal relationships (e.g., colleague, work partner, team members) that may also affect working attitudes pending further testing. This research serves as the first step to examine the joint effect of individual-related factor (future work self) and job-related factors (i.e., trust in supervisor and person-vocation fit) on work engagement. While we tested three perspectives, factors at other perspectives such as team or inter-group perspective [1] are waiting for further investigate in future research so as to offer boarder perspectives to the future work self and work engagement issues.

In spite of the limitations discussed above, we conducted a heuristic study with two new boundary effects verified in the relationship between future work self and work engagement. The results of the three-way interacting effects tested in our model comprehensively unmasked complex interaction mechanism among individual (future work self), vocational (person-vocation fit) and organizational interpersonal (trust in supervisor) factors to employee engagement.

Acknowledgment: We would like to thank our 27 HR manager friends for their valuable help to collect the data of this research as well as the other 231 anonymous respondents for their enthusiasm and honesty feedback on the questionnaire. Without their support, we could not finish this paper.

Conflicts of Interest: There is no conflict of interest was reported by the authors for this study.

Funding Statement: This work was supported by the National Natural Science Foundation of China [14BJL072].

References

1. Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724.
2. May, D. R., Gilson, R. L., Harter, L. M. (2004). The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational & Organizational Psychology*, 77(1), 11–37.
3. Rich, B. L., Lepine, J. A., Crawford, E. R. (2010). Job engagement: antecedents and effects on job performance. *Academy of Management Journal*, 53(3), 617–635.
4. Schaufeli, W. B., Bakker, A. B., Salanova, M. (2006). The measurement of work engagement with a short questionnaire: a cross-national study. *Educational and Psychological Measurement*, 66(4), 701–716.
5. Lin, W., Lei, W., Bamberger, P. A., Qi, Z., Wang, H. et al. (2016). Leading future orientations for current effectiveness: the role of engagement and supervisor coaching in linking future work self salience to job performance. *Journal of Vocational Behavior*, 92(4), 145–156.
6. Cousins, B. (2018). Design thinking: organizational learning in VUCA environments. *Academy of Strategic Management Journal*.
7. Arthur, M. B. (2014). The boundaryless career at 20: where do we stand, and where can we go? *Career Development International*, 19(6), 627–640.
8. Arthur, M. B., Rousseau, D. M. (1996). A career lexicon for the 21st century. *Academy of Management Executive (1993-2005)*, 10(4), 28–39.
9. Uy, M. A., Chan, K. Y., Sam, Y. L., Ho, M. H. R., Chernyshenko, O. S. (2015). Proactivity, adaptability and boundaryless career attitudes: the mediating role of entrepreneurial alertness. *Journal of Vocational Behavior*, 86, 115–123.
10. Strauss, K., Griffin, M. A., Parker, S. K. (2012). Future work selves: how salient hoped-for identities motivate proactive career behaviors. *Journal of Applied Psychology*, 97(3), 580.
11. Parker, S. K., Bindl, U. K., Strauss, K. (2010). Making things happen: a model of proactive motivation. *Journal of Management*, 36(4), 827–856.
12. Taber, B. J., Blankemeyer, M. (2015). Future work self and career adaptability in the prediction of proactive career behaviors. *Journal of Vocational Behavior*, 86, 20–27.
13. Guan, Y., Zhuang, M., Cai, Z., Ding, Y., Wang, Y. et al. (2017). Modeling dynamics in career construction: reciprocal relationship between future work self and career exploration. *Journal of Vocational Behavior*, 101, 21–31.
14. Vogel, R. M., Feldman, D. C. (2009). Integrating the levels of person-environment fit: the roles of vocational fit and group fit. *Journal of Vocational Behavior*, 75(1), 68–81.
15. Lewicki, R. J., McAllister, D. J., Bies, R. J. (1998). Trust and distrust: new relationships and realities. *Academy of Management Review*, 23(3), 438–458.
16. Markus, H., Nurius, P. (1987). Possible selves: the interface between motivation and the self-concept. *Self & Identity*, 157–172.
17. Guan, Y., Guo, Y., Bond, M. H., Cai, Z., Zhou, X. et al. (2014). New job market entrants' future work self, career adaptability and job search outcomes: examining mediating and moderating models. *Journal of Vocational Behavior*, 85(1), 136–145.
18. Xiao, W., Zhou, L., Wu, Q., Zhang, Y., Miao, D. et al. (2014). Effects of person-vocation fit and core self-evaluation on career commitment of medical university students: the mediator roles of anxiety and career satisfaction. *International Journal of Mental Health Systems*, 8(1), 8.
19. Cai, Z., Guan, Y., Li, H., Shi, W., Guo, K. et al. (2015). Self-esteem and proactive personality as predictors of future work self and career adaptability: an examination of mediating and moderating processes. *Journal of Vocational Behavior*, 86, 86–94.
20. Tranberg, M., Slane, S., Ekeberg, S. E. (1993). The relation between interest congruence and satisfaction: a metaanalysis. *Journal of Vocational behavior*, 42(3), 253–264.
21. Rousseau, D. M., Sitkin, S. B., Burt, R. S., Camerer, C. (1998). Introduction to special topic forum: not so different after all: a cross-discipline view of trust. *Academy of Management Review*, 23(3), 393–404.
22. Tan, H. H., Tan, C. S. (2000). Toward the differentiation of trust in supervisor and trust in organization. *Genet*

Soc Gen Psychol Monogr, 126(2), 241–260.

23. Williams Jr, R., Raffo, D. M., Clark, L. A. (2018). Charisma as an attribute of transformational leaders: what about credibility? *Journal of Management Development*, 37(6), 512–524.
24. Wang, D. S., Hsieh, C. C. (2013). The effect of authentic leadership on employee trust and employee engagement. *Social Behavior and Personality: An International Journal*, 41(4), 613–624.
25. Ugwu, F. O., Onyishi, I. E., Rodríguez-Sánchez, A. M. (2014). Linking organizational trust with employee engagement: the role of psychological empowerment. *Personnel Review*, 43(3), 377–400.
26. Heckathorn, D. D., Cameron, C. J. (2017). Network sampling: from snowball and multiplicity to respondent-driven sampling. *Annual Review of Sociology*, 43, 101–119.
27. Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.
28. Vrij, A., Graham, S. (1997). Individual differences between liars and the ability to detect lies. *Expert Evidence*, 5(4), 144–148.
29. Müller, M. (2007). What's in a word? Problematizing translation between languages. *Area*, 39(2), 206–213.
30. Costigan, R. D., Iiter, S. S., Berman, J. J. (1998). A multi-dimensional study of trust in organizations. *Journal of Managerial Issues*, 303–317.
31. Hayes, A. F. (2012). PROCESS: a versatile computational tool for observed variable mediation, moderation, and conditional process modeling.
32. Bakker, A. B., Albrecht, S. L., Leiter, M. P. (2011). Key questions regarding work engagement. *European Journal of Work and Organizational Psychology*, 20(1), 4–2.