Research on Perceived Trust-Driven Individual Duality Based on the Informatization Background

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Abstract: In this paper, SPSS and MPLUS are used for correlation and regression analysis to systematically discuss how perceived trust drives the formation of individual ambidexterity by influencing individual social capital under the background of the information age. The results show that perceived trust can promote the formation and development of individual ambidexterity; In this process, individual social capital plays a partial intermediary role by establishing cooperative and mutually beneficial relationship between individuals and other members to promote the efficient flow of information within the organization.; The influence of perceived trust on individual duality discussed in this paper opens up ideas for economic management of enterprises, and has important reference value for enterprises to realize informatization and unique competitiveness.

Keywords: Perceived Trust; Individual Social Capital; Individual Ambidexterity

1 Introduction

Under the background of the information economy., if an enterprise wants to achieve the balance between seeking advantages (utilization) and seeking opportunities (exploration), it depends on individuals how to obtain, absorb and transform information., that is, individual ambidexterity [10]. However, because individuals identify with one way of working, they tend to explore or develop, and it is difficult to freely switch between the two modes [13], which is not conducive to the coordinated development of individual ambidexterity. Therefore, in recent years, the academic circles have carried out in-depth research on how to stimulate individual ambidexterity helping them obtain more information, and found that the internal characteristics and situations of individuals are important factors affecting individual ambidexterity [1]. However, it is still under exploration how the perception that can improve job performance and organizational citizenship behavior can be trusted can drive individual ambidexterity [16]. In addition, an individual's knowledge, interpretation and understanding of the surrounding information are based on the mutual cooperation and trust between the individual and other members, and the social capital brought by this reciprocal relationship determines the

individual's ability to process environmental information [11]. Then, will individual social capital play a connecting role in the formation of perceived trust to individual ambidexterity?

In view of this, this paper constructs a theoretical model of perceived trust driving the formation of individual ambidexterity, which adds new theoretical explanation and empirical evidence for the antecedents of individual ambidexterity, and provides targeted practical guidance for innovative enterprises to effectively improve the informatization level for enterprises.

2   Theoretical model and research hypothesis

2.1   The Impact of Perceived Trust on Individual Ambidexterity

Perceived trust is the degree to which individuals perceive that organizations are willing to take risks for them [4]. With the formation of perceived trust, it means that organizations will provide more support and information, and encourage and tolerate heterogeneous values. This lets individuals get important information about organizational decisions in the process of knowing, understanding and explaining the environment and provides support for individuals to use initiative and judgment to preserve cognitive resources [3], so that employees can be motivated to adopt different cognitive methods when facing the tasks of efficiency and variability, relax their thinking to properly handle the work pressure caused by the realization of ambidexterity. They can realize the correlation and complementarity between exploration and development ability [15]. Therefore, the hypothesis is put forward

H1: Perceived trust helps to promote individual ambidexterity.

2.2   The Intermediary Role of Individual Social Capital

Individual social capital is the relational network resource owned by individuals to achieve their own goals [18]. When an individual is in a more open and inclusive organization environment, they will get more information resources needed for development. That is, when employees feel trusted and have no worries, they can better interact with team members [7], reduce the negative feelings in the face of uncertainty, realize the exchange of resources and the formation of connections. So that they can improve the emotional interaction willingness and communication quality [6], and help employees obtain the social capital needed for individual development. Therefore, this paper puts forward the hypothesis.

H2a: When employees feel trusted, it is more helpful for them to obtain individual social capital.

When an individual is in the internal social network, the frequent interaction between employees and different units, teamwork, communication and coordination and other requirements cultivate the ability of employees to establish and manage relationships, which enables them to continually expand their work content and tasks [5]. Coupled with continuous feedback, the uncertainty and ambiguity caused by employees' simultaneous development of exploration ability and development ability are greatly reduced [2]. It provides a clear framework and specification for information exchange and knowledge sharing of individuals in the decision-making process, which contributes to freer and smoother communication and sharing [17], provides support for individuals to adapt to various role changes, and helps to promote individual ambidexterity. Therefore, the hypothesis is put forward.

H2b: Individual social capital promotes the formation of individual ambidexterity.

When individual perception is trusted, it shows that information is widely shared between the vertical and horizontal boundaries within the organization [12]. Frequent interactive communication helps to reduce the difficulty of the individual knowledge search, and allows individuals to obtain more resources in interactive learning [14]. At the same time, they can know that how others effectively handle the tension of combining development and exploration. According to the internal relationship and complementarity of development and exploration, a comprehensive solution is put forward [8], so as to improve the ability of individuals to process information between different modes of thinking and action. Therefore, put forward the hypothesis,

H2c: Individual social capital plays an intermediary role in the influence of perceiving trusted on individual ambidexterity.

To sum up, the research model of this paper is put forward, as shown in Figure 1.
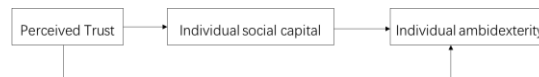

Figure 1 A theoretical model of perceived trust affecting individual ambidexterity

3   Research methods

3.1 Sample Selection and Data Collection

In order to better study the relationship between perceived trust and individual ambidexterity, this study selected manufacturing, information and communication, IT and other industries for questionnaire survey. In this survey, 740 questionnaires were distributed and 701 were collected, of which 675 were valid, with a recovery rate of 96%.

3.2 Measurement of Variables

In order to ensure internal consistency and data authenticity, this study adopts the existing maturity scales at home and abroad, and measures all vary with Likert scale of 5 (1) Perceived trust: this paper uses Ding and Liang (2018) as a reference to measure perceived trust. (2) Individual social capital: nine items proposed by Dai and Zhang (2012) are used to measure. (3) Individual ambidexterity: This paper refers to the measurement of Mom (2009) [9], including exploring and developing a scale with 9 items, and using its average value to represent the overall binary ability level (4) control variables: this study determines that the control variables are education level, position and industry to which the company belongs through difference analysis.

3.3 Reliability And Validity Test

The reliability analysis of the scale by SPSS is shown in Table 1. The α of perceived trust scale, individual social capital scale and individual ambidexterity scale are all greater than 0.7, which indicates that the scale has good reliability and the scale used is reliable.

Table 1 Reliability analysis

Variable	α	CR
Perceived Trust	0.945	0.930
Individual social capital	0.973	0.958
Individual ambidexterity	0.962	0.955

In order to study the validity of three key variables: perceived trust, individual social capital and individual ambidexterity, confirmatory factor analysis were carried out by Mplus. The results showed that the fitting index of the three-factor model was significantly better than that of other models. x^2/df=2.454, CFI=0.932, GFI=0.875, IFI=0.926, RMSEA=0.057, It shows that these three constructs have good discrimination validity.

4   Hypothesis test

4.1 Correlation of Variables

In this paper, SPSS is used to analyse the correlation among perceived trust, individual social capital and individual ambidexterity, and the mean, standard deviation and correlation coefficient of each variable are obtained, as shown in Table 2.

Table 2 Correlation analysis results

Variable	Mean value	Standard deviation	1	2	3
1.Perceived Trust	3.512	0.915	0.559		
2.Individual social capital	3.853	0.802	0.654**	0.717	
3.Individual ambidexterity	3.717	0.787	0.640**	0.509**	0.704

**. At the level of 0.01 (two tails), it is significant.

P among all variables is significant at 0.01 level, all of which are < 0.05, which indicates that there is significant correlation between two variables, and correlation analysis can't explain the influence direction and effect of variables. Therefore, regression analysis is adopted to further test the research hypothesis and a theoretical model.

4.2 Hypothesis Test

The Main Effect Test: In order to further verify the hypothesis put forward above, in this paper, taking into account the influence of the controlled variables, the stepwise regression method is adopted for linear regression analysis of the variables, and the results are shown in Table 3.

Table 3 Results of regression analysis

variable	MA				MC	
	m1	m2	m3	m4	m5	m6
educational level	0.170^{***}	0.111^{***}	0.018	0.097^{***}	0.113^{***}	0.035
position	0.083^{***}	0.067^{***}	0.030	0.070^{***}	0.014	0.008
industry	0.071^{***}	0.069^{***}	0.021	0.062^{***}	0.020	0.018
MT		0.622^{***}		0.307^{***}		0.820^{***}
MC			0.529^{***}	0.384^{***}		
F	9.732^{***}	103.160^{***}	353.558^{***}	104.035^{***}	2.598^{***}	280.500^{***}
R^2	0.055	0.435	0.761	0.483	0.015	0.677
R^2 variation		0.380	0.606	0.048		0.662

Firstly, taking individual social capital and individual ambidexterity as dependent variables, and inputting control variables to form model 1, and on the basis of model 1, that is, considering the influence of control variables, adding perceived trust as independent variable and individual ambidexterity as dependent variable to form model 2. Combined with model 1 and model 2, the regression results show that there is a positive correlation between perceived trust and individual ambidexterity (β=0.622, P<0.001), that is, the higher employees' perceived trust, the more likely individuals are to develop stronger ambidexterity, so it is assumed that H1 is verified; Secondly, considering the influence of control variables, we add individual social capital as independent variable to form model 3. Comparing model 1 and model 3, we find that individual social capital has a positive correlation with individual ambidexterity (β=0.529, P<0.001), which indicates that individual social capital plays a positive role in promoting individual ambidexterity, assuming H2b is established. Finally, taking perceived trust as the independent variable and individual social capital as the dependent variable, models 5 and 6 are obtained. Comparing model 5 and model 6, it is found that perceived trust has a positive correlation with individual social capital (β=0.820, P<0.001), which indicates that when individuals perceive trusted, the more they can obtain individual social capital, assuming H2a can be verified.

The Test of Intermediary Effect: Considering that the perception of control variables and independent variables is trusted, taking individual ambidexterity as dependent variable and inputting individual social capital as intermediary variable, model 4 is formed to verify the intermediary role of individual social capital. By comparing the regression results of model 4 and model 2, it can be seen that after adding the individual social capital (MC) variable, the standardized regression coefficient of perceived trust (MT) to individual ambidexterity (MA) pairs changed from β=0.622 (P<0.001) to β=0.307 (P<0.001). Although the regression coefficient is still significant, the value has decreased, that is, individual social capital (MC)

plays a partial intermediary role between perceived trust (MT) and individual ambidexterity (MA), thus verifying hypothesis H2c.

5   Conclusions

5.1 Research Conclusions

This paper empirically analyses the driving effect of perceived trust on individual ambidexterity, and expounds the influence mechanism of individual social capital on individual ambidexterity through SPSS and MPLUS. The results show that: (1) When an individual can feel trusted, he or she is more likely to think that he or she has the ability to challenge various roles and tasks, and in the process of constantly knowing and understanding the environment, he or she can improve his or her systematic thinking and ability of exploration and development; (2) Individual perceived trust is to provide unique and valuable information resources for individuals by promoting their heterogeneous social networks, to enable individuals to learn to effectively balance the tension between development ability and exploration ability in the process of communicating with members, and to put forward comprehensive solutions.

5.2 Contribution And Inspiration

The contributions of this research are as follows: Firstly, due to various conditions, there is no close connection between perceived trust and individual ambidexterity. This study attempts to establish a connection between the two and construct a theoretical model of the driving effect of perceived trust on individual ambidexterity. The cross-research attempt improves the rational allocation and integration efficiency of information resources under the background of the information economy; Secondly, although there are systematic studies on individual ambidexterity in the existing articles, there is a lack of micro-deconstruction of its formation process. Aiming at this theoretical gap, the introduction of individual social capital in this study not only gives a systematic answer to the topic "How does perceived trust affect individual ambidexterity", but also provides a comprehensive guarantee for the information construction within the organization and improving the core competitiveness.

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