

# Analysis and Examination of the Relationship among Entrepreneurial Orientation, Organizational Learning and Firm Performance\*

## —Take Pharmaceutical Enterprises for Examples

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**Abstract** - Market characteristics such as "many, small, scattered, chaotic" and others are very obvious with China's pharmaceutical enterprises. In order to change the status quo, pharmaceutical enterprises have to be with the entrepreneurial orientation and to insist on organizational learning. Based on the pharmaceutical enterprises as the research object and through the empirical research with questionnaire, we get some important results: Firstly, the entrepreneurial orientation of pharmaceutical enterprises has a positive impact on corporate performance. Secondly, organizational learning of pharmaceutical enterprises has a positive impact on firm performance. Thirdly, the entrepreneurial orientation of pharmaceutical enterprises has a positive impact on organizational learning.

**Index Terms** - Entrepreneurial Orientation, Organizational Learning, Firm Performance, Pharmaceutical Enterprises

### 1. Introduction

Market characteristics such as "many, small, scattered, and chaotic" and others are very obvious with Chinese pharmaceutical enterprises. Excess production capacity of low-end products and technology innovation ability very weak are the general situations of pharmaceutical enterprises in china. How to change the present situation is an important subject in front of us. Some scholars have pointed out, the pharmaceutical enterprises must do a lot of things in order to avoid be eliminated in the increasingly fierce competition. Firstly, they have to strengthen their own innovation ability; secondly, they must constantly pushing new products to market; thirdly, they should focus more on the effect of entrepreneurial orientation to the enterprise strategy. And based on these, they should continue to introduce new products, adopt new methods, find new markets, use new materials, and try to obtain the new organization and management mode. And the uncertainty of today's world economic developing environment forces some organizations have to learn how to enhance their ability to adapt to dynamic environment continuously. Accordingly, organizational learning is also indispensable for the

development of pharmaceutical enterprises. At present, the government, enterprises and investors around the world have paid much attention to the pharmaceutical industry. And there are lots of valuable research results about the characteristics and rules of the industry development. However, foreign scholars had paid more attention to the universal law of industry development. While the domestic researchers focused on the basic situation and characteristics of the pharmaceutical industry in China. There is lack of system and specifically research for the relationship among the entrepreneurial orientation, organizational learning and firm performance.

### 2. Theoretical Analysis and Research Hypothesis

#### 2.1 *The relationship between entrepreneurial orientation and firm performance*

Entrepreneurial orientation is a construct about the characterization of entrepreneurial process. It is the business management process, practice and decision activities. It is the strategic decision-making practice that the enterprise to identify and engage in according to entrepreneurial activities [1]. Entrepreneurial orientation consists of grasping the opportunity, innovative ways of thinking and preference for the venture. It is an embodiment of the organizational level of attitude and the tendency [2]. Most scholars believe that the entrepreneurial orientation is very helpful in offering new products and services in the enterprise, assuming the market risk, proactive to construct their own advantages, and creating a good financial and growth performance. Therefore, entrepreneurial orientation has positive effect on firm performance. First of all, the strength of entrepreneurial orientation positive influences the financial performance of a company [3]. Secondly, entrepreneurial orientation can make small enterprises and new enterprises develop fast [4]. However, some scholars put forward, the relationship between entrepreneurial orientation and firm performance cannot be simply identified as a linear

\* This work is partially supported by from the Ministry of education. And it is a kind of humanities and social sciences research project. The project number is 10YJA630213.

relationship, but related to the enterprise's internal and external environment [5]. In this paper, we thought a positive relationship between entrepreneurial orientation and firm performance. Therefore, we put forward the hypothesis H1: The entrepreneurial orientation of pharmaceutical enterprises has positive effect on firm performance.

### 2.2 The relationship between organizational learning and firm performance

Organizational learning is the organization to change or re design itself to adapt to changes in the environment which in the ongoing internal and external information exchange process [6]. Organizational learning is a continuous process. Through a variety of ways and means the organization was able to enhance their own strength and bring the behaviour or performance improvement. The ways including unceasing acquisition of knowledge, knowledge transfer within the organization and create new knowledge. Organizations which are good at learning can often obtain excess profit. While information access, information sharing, solutions proposition, trial error and other activities are the natural learning process within the enterprise. Through organizational learning enterprises are ultimately improving the performance. Therefore, we put forward hypothesis H2: organizational learning of pharmaceutical enterprise has a positive impact on enterprise performance.

### 2.3 The relationship between entrepreneurial orientation and organizational learning

Entrepreneurial orientation will communicate, flow, and diffuse knowledge. And it will promote the organization's exploratory learning and experiential learning. The strong atmosphere of innovation will have a positive impact on organizational learning, and it is advantageous for the enterprise to plan, implement and control efficiency. The enterprises with entrepreneurial orientation can enhance the organizational learning among the various functional departments and in some departments. Entrepreneurial orientation, with the characteristics of adhere to innovation, proactiveness and risk taking, can make the organization members go to the battle-front without any burden, and promote internal information and knowledge communication [7]. Entrepreneurial orientation is very eager to fill the required resource for entrepreneurial behaviour (Lin Yun, 2009)[8]. Therefore, we put forward hypothesis H3: Entrepreneurial orientation of pharmaceutical enterprises have positive effect on organizational learning.

Based on the above analysis and research hypotheses, we get the theoretical framework. As shown in figure 1.

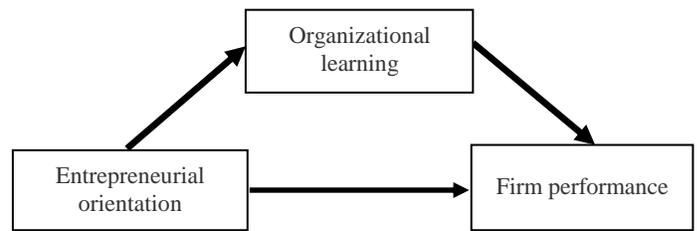


Fig.1 Framework of the paper

## 3. Scale Development and Questionnaire

### 3.1 scale development

The scale of entrepreneurial orientation are based on five dimensional views of scholars, Lumpkin & Dess(2005) [3] , Liu Jingjiang (2009) [9] and Lumpkin et al. (2009) [10]. The scale includes five dimensions: proactiveness, innovative, competitive initiative, risk-taking, and autonomy. Scale of organizational learning is based on the research of Garvin, Edmondson and Gino (2008) [11]. The organizational learning is divided into five dimensions: experiment, information collection, information analysis, and training and information transmission. Scale of firm performance is based on the research of Covin and Slevin (2005) [5], Li Dan (2007) [12]. We divided firm performance into two dimensions: the profitability and growth. We use Likert Scale of five points.

### 3.2 Questionnaire investigation

In order to ensure the research rigorously, we conducted a pre-test and formal survey. In the pre-test, we selected more than 20 pharmaceutical manufacturers and pharmaceutical circulation enterprises in Jilin Province. We sending questionnaires by email and clerks were randomly selected from each medicine enterprise to all levels of management personnel. A total of 150 questionnaires were sending out, recycling 92 copies, of which 76 valid questionnaires were collected, with 82.6% efficiency. According to the questionnaire data, the author analysed each scale item, and the reliability and validity of the scale were tested. Weed out unqualified items, we modified the scales. A formal investigation was conducted by the electronic questionnaires and paper questionnaires. Investigation objects covered the general staff to the management staff of pharmaceutical enterprises in three provinces in the northeast part of China. A total of 347 questionnaires were sending out, 268 questionnaires were recycled, of which 258 valid questionnaires were collected, with 96.3% efficiency.

## 4. Data Analysis and Hypothesis Test

### 4.1 Statistical analysis of the basic information for survey enterprises

From the nature of enterprises, number of employees, corporate life and enterprise development stage, we found the respondents were more uniform, and the sample is representative. As shown in Table 1

TABLE 1 Basic information of survey respondents

Classification criteria	Category	Frequency	Percentage
nature of enterprises	Pharmaceutical manufacturing enterprises	84	32.6
	Pharmaceutical wholesale enterprises	85	32.9
	Pharmaceutical retail enterprises	53	20.5
	Comprehensive pharmaceutical enterprise	36	14.0
number of employees	1-50	20	7.8
	51-100	70	27.1
	101-500	95	36.8
	500-1000	29	11.2
	More than 1000	44	17.1
corporate life	Less than 1 year	64	24.8
	1-5 years	75	29.1
	6-10 years	73	28.3
	More than 10 years	56	21.7
development stage	initial stage of pioneering	70	27.1
	Growth stage	88	34.1
	maturity stage	73	28.3
	transformation stage	27	10.5
Total		258	100.0

#### 4.2 Analysis of reliability and validity of the scale in the formal investigation

We used Cronbach's  $\alpha$  as the reliability test index and used the SPSS software. After the test, we got  $\alpha$  of entrepreneurial orientation scale is 0.915,  $\alpha$  of organizational learning scale is 0.911, and  $\alpha$  of firm performance scale is 0.786, all above the criterion for judgement of 0.6. We used confirmatory factor analysis of structural equation model to test the validity of scales by AMOS7.0 software. We test the items of each scale by  $R^2$ , composite reliability of each factor, and the average variances extracted (AVE), and the correlation coefficient between each two factors. After the test we know the scales had good convergent validity and discriminant validity, and the goodness of fit is ideal.

#### 4.3 Hypothesis testing

(1) testing the effect of entrepreneurial orientation on firm performance

We took the entrepreneurial orientation as independent variable and the firm performance as the dependent variable. Through the regression analysis by SPSS17.0 software we got the results: the  $R^2$  value is 0.311, adjusted  $R^2$  value is 0.308,  $\beta$  value is 0.584,  $t$  value is 10.726, and  $F$  value is 115.044,  $P < 0.01$ . That means entrepreneurial orientation has significant positive influences on firm performance and H1 has been verified.

(2) testing the effect of organizational learning on firm performance

We took the organizational learning as independent variable and the firm performance as the dependent variable. Through the regression analysis by SPSS17.0 software we got the results: the  $R^2$  value is 0.273, adjusted  $R^2$  value is 0.271,  $\beta$  value is 0.502,  $t$  value is 9.815, and  $F$  value is 96.325,  $P < 0.01$ . That means organizational learning has significant positive influences on firm performance and H2 has been verified.

(3) testing the effect of entrepreneurial orientation on organizational learning

We took the entrepreneurial orientation as independent variable and the organizational learning as the dependent variable. Through the regression analysis by SPSS17.0 software we got the results: the  $R^2$  value is 0.628, adjusted  $R^2$  value is 0.627,  $\beta$  value is 0.866,  $t$  value is 20.756, and  $F$  value is 430.798,  $P < 0.01$ . That means entrepreneurial orientation has significant positive influences on organizational learning and H3 has been verified.

## 5. Conclusions

In this paper, through empirical research we tested the hypothesis. And the results showed that the three hypotheses are supported. In general, we got the following conclusions:

Firstly, the entrepreneurial orientation of pharmaceutical enterprises has a positive impact on firm performance. Pharmaceutical enterprises are striving for survival and development in the increasingly competitive environment. They should actively support the new things, new ideas, new

products, new services and an experimental or new technology. If they can insist on entrepreneurial orientation, to create good financial performance and growth performance are expected.

Secondly, the organizational learning of pharmaceutical enterprises has a positive impact on firm performance. Chinese pharmaceutical enterprises only through organizational learning, they can continue to have new thinking. Organizational learning is helpful to pharmaceutical enterprises to sum up the experience and lessons of the past, to guide future action. Organizational learning can change employees' thoughts and behaviours, and then enhance the adaptability and competitiveness.

Thirdly, the entrepreneurial orientation of pharmaceutical enterprises has a positive impact on organizational learning. The analysis based on structural equation model showed that, different dimension of entrepreneurial orientation has different impact on the dimensions of organizational learning.

**Acknowledgment**

This paper has obtained support from the Ministry of education. And it is a kind of humanities and social sciences research project. The project number is 10YJA630213.

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