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PSL·巴黎九大高级工商管理博士学位项目

Research on the Combinatorial Innovation Management in Manufacturing Enterprises

(Thesis submitted for the degree of Executive Doctorate in Business Administration)

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ABSTRACT

Innovation is the important condition for manufacturing enterprises to survive and develop in the fierce market competition, and the key factor for enterprises to stand out in the market competition. In manufacturing enterprises, innovation is not a single product or technology innovation, but a systematic work. At the same time, a large number of studies show that as a type of systematic innovation, combinatorial innovation plays a key role in the success or failure of enterprise innovation. After World War II, the United States has lost its competitive advantages in many industrial fields because it only paid attention to product innovation and ignored process innovation. Japan and Germany has attached great importance to the coordinated development of product and process innovation, realizing not only rapid economic rise but also the leading role in manufacturing industry. At present, in the innovation management of Chinese manufacturing enterprises, most of them focus on the single product innovation management or the technological innovation, but ignore the combinatorial innovation management of products and technologies, leading to the lower added value of products in China's manufacturing enterprises. In manufacturing enterprises, it has become a key issue to strengthen the research on enterprise combinatorial innovation and choose an effective combinatorial innovation mode for enterprises. Therefore, this paper studies the management of the combinatorial innovation in manufacturing enterprises, combined with the example of such enterprises, discusses the relationship between combinatorial innovation and the elements of enterprise innovation ability and analyzes how to choose a suitable combinatorial innovation mode for manufacturing enterprises.

In the section of theory study, the paper combs, concludes and summarizes the relevant theories and references, and then analyzes the theory of combinatorial innovation. This paper analyzes the factors that affect the combinatorial innovation of enterprises from the perspective of enterprise innovation resources and entrepreneur innovation abilities, clarifies the capability elements for innovative resources in manufacturing enterprises in conducting combinatorial innovation, and based on the conclusion, discusses the relationship between the combinatorial innovation and capability elements for innovative resources in manufacturing enterprises.

In the section of empirical study, this paper analyzes several combinatorial innovation methods,

such as taking product innovation as the forerunner and process innovation as the forerunner, and expounds the realization conditions of combinatorial innovation. Based on the R & D ability, manufacturing ability, marketing ability, organizational ability and capital investment ability, this paper constructs the evaluation system of the combination innovation ability of the manufacturing enterprises, and optimizes the indicator system by using the factor analysis method through the detailed analysis of the five innovation ability elements one by one. After optimization, through the statistical analysis of the questionnaire, the match relationship between product innovation and process innovation in manufacturing enterprises is established. Finally, through the evaluation of the combinatorial innovation ability of ZG multi-functional medical fertilizer enterprises to verify the match relationship, the conclusion is that the multi-functional medical fertilizer enterprises are suitable to adopt the combinatorial innovation mode led by process innovation, which provides a new way for manufacturing enterprises to select the combinatorial innovation mode.

Key words: innovation management, technology innovation, combinatorial innovation, evaluation system

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TABLE OF CONTENTS

ABSTRACT ..... **I**
ACKNOWLEDGEMENT ..... **III**
TABLE OF CONTENTS ..... **V**
LIST OF TABLES ..... **VIII**
LIST OF FIGURES ..... **X**
Chapter I Introduction **1**
1.1 Research Background 1
1.1.1 Research Purpose 1
1.1.2 Research Significance 5
1.2 Structure of the Dissertation 6
Chapter II: Literature Review and the Theoretical Foundation **8**
2.1 Concept of the Combinatorial Innovation 8
2.2 Theories Related to Enterprise Innovation 14
2.2.1 Product Innovation Theory 14
2.2.2 Process Innovation Theory 19
2.2.3 Organizational Innovation Theory 23
2.2.4 Marketing Innovation Theory 29
2.2.5 Innovation Resources Theory 33
2.3 Literature Review 37
2.3.1 Previous Research on Combinatorial Innovation 37
2.3.2 Results of Research on Combinatorial Innovation 38
2.3.3 Literature Review 43
Chapter III The Modes, Method and Conditions for Realizing Combinatorial Innovation **45**
3.1 Modes of Combinatorial Innovation 45
3.1.1 Combination of Product and Process Innovation 45
3.1.2 Combination of Major innovation and Incremental Innovation 48
3.1.3 The Combination of Implicit Innovation Benefits and Explicit Innovation Benefits 50
3.1.4 Combination of Independent Innovation and Collaborative Innovation 51
3.2 Methods of Combinatorial Innovation 53
3.2.1 Combinatorial Innovation Led by Product Innovation 53
3.2.2 Combinatorial Innovation Led by Process Innovation 54
3.2.3 Combinatorial Innovation Led by Organizational Innovation 57
3.2.4 Combinatorial Innovation Led by Marketing Innovation 58

3.3 Prerequisites for Combinatorial Innovation 58
3.3.1 Correlation of Technology Innovation with Organizational and Cultural Innovation 59
3.3.2 Coordination between Technology Innovation and Organizational Innovation 61
3.3.3 Matching of Organizational Innovation and Cultural Innovation 64
3.3.4 Expanded Prerequisites for Enterprise Combinatorial Innovation 65
Chapter IV Relations between Combinatorial Innovation and Innovation Capability Factors 66
4.1 Factors of Combinatorial Innovation Capability in Manufacturing Enterprises 66
4.1.1 Resource Capability for Combinatorial Innovation in Manufacturing Enterprises 66
4.1.2 Entrepreneur Innovation Capability 71
4.1.3 Combinatorial Innovation Capability Elaborated in the Dissertation —Innovation Resources Capability in Manufacturing Enterprises 75
4.2 Relationship between Combinatorial Innovation and Innovation Resources Capability in Manufacturing Enterprises 76
Chapter V Construction of the Evaluation System on Combinatorial Innovation Capability in Manufacturing Enterprises 79
5.1 Factor Analysis for Combinatorial Innovation Capability in Manufacturing Enterprises 79
5.1.1 R&D Ability 79
5.1.2 Manufacturing Ability 80
5.1.3 Marketing Ability 81
5.1.4 Capital Investment Ability 82
5.1.5 Organizational Ability 82
5.2 Design of Evaluation Systemthe for Combinatorial Innovation Capability in Manufacturing Enterprises 84
5.2.1 Design of the Evaluation System 84
5.2.2 Optimization of the Evaluation System 87
5.3 Investigation into the Matching of Combinatorial Innovation Modes and the Innovation Factors in Manufacturing Enterprises 92
5.3.1 Questionnaire Design 92
5.3.2 Questionnaire Distribution and Data Collection 92
5.3.3 Method of Statistics 92
5.3.4 Result Statistics 94
5.3.5 Result Analysis 98
Chapter VI Case Study Concerning the Evaluation on Combinatorial Innovation Capability 101
6.1 Combinatorial Innovation Capability Evaluation -- ZG company 101
6.1.1 An Overview of ZG 101
6.1.2 Analysis on ZG's Innovation Capability 106
6.1.3 Result of Evaluation 127
6.2 Combinatorial Innovation Capability Evaluation – ZX company 129

6.2.1 An Overview of ZX 129
6.2.2 Analysis on ZX's Innovation Capability 130
6.2.3 Result of Evaluation 143
Chapter VII Conclusion & Outlook 172
7.1 Conclusion 172
7.2 Research Innovation 173
7.3 Shortcomings and Future Outlook 174
APPENDIX A Questionnaire on Combinatorial Innovation Capability Evaluation System 176
APPENDIX B Weight Survey on Technology Innovation Capability Evaluation Indicator System 180
BIBLIOGRAPHY 182
DECLARATION 190
RESUME 191

LIST OF TABLES

Table 1.1 Comparison of Product and Process Innovation Inputs in Japan, Germany, and the U.S. 2
Table 3.1 Innovation Sources of Process Combinatorial Innovation in Manufacturing Enterprises 55
Table 3.2 Comparison of Process Innovation in Manufacturing Enterprises 56
Table 3.3 Evolution of Organizational Structure and Technology Innovation of Enterprises in Developed Countries 62
(Continued)Table 3.3 Evolution of Organizational Structure and Technology Innovation of Enterprises in Developed Countries 62
Table 3.4 Culture Types of Manufacturing Enterprises in China 64
Table 3.5 Mode Selection of Cultural Innovation in Manufacturing Enterprises in China 64
(Continued)Table 3.5 Mode Selection of Cultural Innovation in Manufacturing Enterprises in China 64
Table 4.1 Innovation Modes and Corresponding Factors of Innovation Resource in Manufacturing Enterprises 69
Table 4.2 Matching Degree of Innovation Resources and Combinatorial Innovation Mode in Manufacturing Enterprises 71
Table 4.3 Analysis of the Relationship between Innovation Factors and Combinatorial Innovation 76
Table 5.1 Indicators of Capability Evaluation of Combinatorial Innovation in Manufacturing Enterprises 85
Table 5.2 Factor Analysis of Combinatorial Innovation Capability Evaluation Indicator System 87
Table 5.3 Optimized Version of Capability Evaluation Indicators on Combinatorial Innovation in Manufacturing Enterprises 90
(Continued) Table 5.3 Optimized Version of Capability Evaluation Indicators on Combinatorial Innovation in Manufacturing Enterprises 90
(Continued) Table 5.3 Optimized Version of Capability Evaluation Indicators on Combinatorial Innovation in Manufacturing Enterprises 91

Table 5.4 Weights of Capability Indicators in Combinatorial Innovation in Manufacturing Enterprises 93
Table 5.5 R&D Ability Scoring Result 95
Table 5.6 Manufacturing Ability Scoring Result..... 95
(Continued)Table 5.6 Manufacturing Ability Scoring Result 96
Table 5.7 Marketing Ability Scoring Result 96
Table 5.8 Capital Investment Ability Scoring Result 96
(Continued)Table 5.8 Capital Investment Ability Scoring Result..... 97
Table 5.9 Organizational Ability Scoring Result..... 97
(Continued)Table 5.9 Organizational Ability Scoring Result 98
Table 6.1 Document registration of ZG's multifunctional pesticide-added fertilizer granules 102
Table 6.2 Document registration of ZG's compound microbial fertilizer..... 104
Table 6.3 ZG Expenditure on Technology Innovation.....111
Table 6.4 Percentage of R&D Personnel in ZG 119
Table 6.5 List of ZG's Patents 121
Table 6.6 Projects Carried Out By ZG and Its Collaborators 124
(Continued)Table 6.6 Projects Carried Out By ZG and Its Collaborators..... 124
Table 6.7 Product Innovation Effectiveness of ZG 126
Table 6.8 Business Composition of ZX..... 130
Table 6.9 Product Innovation Effectiveness of ZX 131
Table 6.10 Number of R&D personnel in ZX..... 136

LIST OF FIGURES

Figure 1 .1 The Technical Route of This Research..... 7
Figure 2 .1 Combinatorial Innovation in Manufacturing Enterprises (Guo Bin et al, 2009) 8
Figure 2 .2 Model of Interaction between Product Innovation and Technology Innovation 34
Figure 3 .1 Schematic Diagram of Incremental Management Innovation..... 49
Figure 3 .2 Framework for Matching Innovation with Organizational and Cultural Innovation..... 59
Figure 3 .3 Matching Pattern of Organizational Structure and Cultural Type 65
Figure 4 .1 Process of Combinatorial Innovation in Manufacturing Enterprises..... 67
Figure 4 .2 Factors of Resource Capability for Combinatorial Innovation in Manufacturing
Enterprises..... 67
Figure 5 .1 Matching between the Product Innovation-led Combinatorial Innovation Mode and Combinatorial Innovation Factors..... 98
Figure 5 .2 Matching between the Process Innovation-led Combinatorial Innovation Mode and Combinatorial Innovation Factors..... 99
Figure 6 .1 ZG 2015 – 2020 Sales Revenue.....106
Figure 6 .2 Changes in Per Capita Grain Output and Fertilizer Use in China Since Its Founding.....107
Figure 6 .3 China Fertilizer Industry Output and Growth Rate from 2010 to 2019.....108
Figure 6 .4 Chart of Rotary Drum Process of Multifunctional Pesticide-added Fertilizer 112
Figure 6 .5 Chart of High Tower Process of Multifunctional Pesticide-added Fertilizer 113
Figure 6 .6 Chart of Extrusion Process of Multifunctional Pesticide-added Fertilizer .114
Figure 6 .7 Chart of Blend Process of Multifunctional Pesticide-added Fertilizer 115
Figure 6 .8 Organizational Structure of ZG's Technology Innovation 117
Figure 6 .9 R&D Spending to Sales Ratio of ZG.....119
Figure 6 .10 Factors of ZG's Combinatorial Innovation Capability.....128

Figure 6 .11 ZX Organizational Chart 133
Figure 6 .12 R&D Spending Ratio of ZX 136
Figure 6 .13 Factors of ZX's Combinatorial Innovation Capability 144