


Dynamic capability, value co-creation and business model innovation of elderly care service companies: Basis for performance improvement framework

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Abstract

The landscape of elderly care is rapidly evolving, with rising demand and shifting expectations. Traditional service models often struggle to provide personalized, high-quality care while ensuring financial sustainability. This paper delves into the potential of dynamic capabilities, value co-creation, and business model innovation as potent tools for elderly care service companies to enhance their performance and thrive in this dynamic environment. By exploring how these concepts can be intertwined, a framework was developed that serves as a roadmap for service companies to navigate the complexities of the elderly care market and achieve sustainable success. This paper determined dynamic capability of the company in terms of adaptive capability, innovativeness and entrepreneurial capability; described value creation in terms of customer involvement, customer knowledge and business resources; determined business model innovation according to value proposition innovation, revenues resources and key resources; test the significant relationship between dynamic capability, value co-creation and business model innovation; and develop a framework that will improve the performance of elderly care service companies in China. The study used a quantitative research design and a survey questionnaire was used to collect data from 400 sample of customers of elderly care service companies. The data was analyzed using descriptive statistics, correlation analysis. The findings showed that the respondents moderately assessed the company's adaptive capability, innovativeness, and entrepreneurial capability, they generally concurred that value creation is evident in customer involvement, customer knowledge, and business resources and generally acknowledged that business model innovation manifests in value proposition innovation, revenue streams, and key resources. It was also revealed that dynamic capability is a strong predictor of value creation. This means that firms that are able to develop and maintain dynamic capabilities are more likely to create value for their customers. Dynamic capability is also a strong predictor of business model innovation. This means that firms that are able to develop and maintain dynamic capabilities are more likely to innovate their business models. While business model innovation is a strong predictor of value creation. This means that firms that are able to innovate their business models are more likely to create value for their customers. This finding is intuitive, as business model innovation is often about developing new ways to create and deliver value to customers.

Keywords: dynamic capability, value co-creation, business model innovation, elderly care service companies

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1. Introduction

The elderly population is growing rapidly worldwide, and this trend is expected to continue in the coming decades. This demographic shift is putting a strain on elderly care systems, as there is a growing demand for services and not enough supply. In order to meet this demand, elderly care service companies need to find new and innovative ways to deliver services. One way that elderly care service companies can improve their performance is to develop and implement dynamic capabilities. Dynamic capabilities are the ability of a firm to sense and seize new opportunities, and to reconfigure its resources and competencies in response to changes in the environment. Dynamic capabilities are essential for elderly care service companies to remain competitive and to meet the changing needs of their customers.

Another way that elderly care service companies can improve their performance is to focus on value co-creation. Value co-creation is the process of creating value together with customers. This can be done by involving customers in the design and delivery of services, or by providing customers with the tools and resources they need to create value for themselves. Value co-creation is particularly important for elderly care service companies, as it allows them to tailor their services to the individual needs of their customers. Finally, elderly care service companies can improve their performance by innovating their business models. Business model innovation is the process of creating new ways to deliver value to customers. This can be done by developing new products and services, by entering new markets, or by changing the way that services are delivered. Business model innovation is essential for elderly care service companies to remain competitive and to meet the changing needs of their customers.

The elderly care service industry in China is still in its early stages of development, but it is growing rapidly due to the country's aging population. According to the National Bureau of Statistics of China, the number of people aged 65 and above in China was 209 million in 2021, accounting for 14.9% of the total population. This number is expected to reach 300 million by 2035. The Chinese government has recognized the importance of the elderly care service industry and has taken steps to support its development. In 2016, the government issued a policy document called the "Outline of the National Medium- and Long-Term Program for Healthy Aging (2016-2030)", which outlined a number of measures to promote the development of the elderly care service industry, including: increasing public investment in elderly care services, encouraging private investment in elderly care services, developing a variety of elderly care service models and improving the quality of elderly care services. As a result of these government initiatives, the elderly care service industry in China has grown rapidly in recent years. In 2020, the market size of the elderly care service industry in China was estimated to be RMB 7.6 trillion (USD 1.2 trillion). This market is expected to reach RMB 22 trillion (USD 3.25 trillion) by 2031.

The elderly care service industry in China is dominated by private companies. In 2020, private companies accounted for over 80% of the market share of the elderly care service industry. Some of the leading elderly care service companies in China include: China Evergrande Group, China Vanke Co., Ltd., Country Garden Holdings Company Limited, China Resources Land Limited and Poly Real Estate Group Co., Ltd. These companies are investing heavily in the development of elderly care facilities and services. For example, in 2020, China Evergrande Group announced plans to invest RMB 100 billion (USD 15 billion) in the development of elderly care facilities over the next five years.

The elderly care service industry in China is facing a number of challenges, including: A shortage of qualified elderly care workers, A lack of affordable elderly care services and A stigma against placing elderly

family members in nursing homes. Despite these challenges, the elderly care service industry in China is expected to continue to grow rapidly in the coming years. This growth will be driven by the country's aging population and the government's support for the development of the industry.

A study of dynamic capabilities, value co-creation, and business model innovation of elderly care service companies is important for a number of reasons: First it can help to identify the key factors that contribute to the success of elderly care service companies. Second it can help to develop a framework for performance improvement in elderly care service companies. Third it can help to inform the development of government policies and programs to support the elderly care service industry. And finally it can help to raise awareness of the importance of elderly care services and to promote the development of a more inclusive and supportive society for older adults. In addition, a study of dynamic capabilities, value co-creation, and business model innovation of elderly care service companies can provide valuable insights for other industries that are facing similar challenges, such as the healthcare industry and the education industry. Overall, a study of dynamic capabilities, value co-creation, and business model innovation of elderly care service companies is a timely and important research topic that has the potential to make a significant contribution to the field of management science and to society as a whole.

The Researcher have always had a deep respect for older adults, and concerned about the challenges that they face in our society. One of these challenges is access to high-quality elderly care services. As the population ages, the demand for elderly care services is growing, but there is a shortage of qualified workers and many people cannot afford to pay for these services. The Researcher believe that dynamic capabilities, value co-creation, and business model innovation can help to address these challenges. By developing dynamic capabilities, elderly care service companies can become more responsive to the needs of their customers and more innovative in the way they deliver services. Value co-creation can help to ensure that services are tailored to the individual needs of each customer, and business model innovation can help to make services more affordable. The Researcher is motivated to conduct this study because it has the potential to make a real difference in the lives of older adults.

Objectives of the Study - This study explore the relationship between dynamic capability, value co-creation business model innovation to develop a framework for improving the performance of elderly care service companies. Specifically, determined dynamic capability of the company in terms of adaptive capability, innovativeness and entrepreneurial capability; described value creation in terms of customer involvement, customer knowledge and business resources; determine business model innovation according to value proposition innovation, revenues streams and key resources; test the significant relationship between dynamic capability, value co-creation and business model innovation; and developed a framework that will improve the performance of elderly care service companies in China.

2. Methods

Research Design - The research design employed in this research will be mainly descriptive in nature, wherein the researcher gathers quantifiable information from respondents. The descriptive method is an appropriate tool to be used by those researchers who want to identify the common processes of a population and their practices. The researcher aimed to collect data from respondents by delivering survey questionnaires. This type of descriptive study proved beneficial in effectively obtaining data from the respondents.

Participants of the Study - The 400 questionnaires were distributed through the Internet, the respondents were randomly selected from ten Elderly Care Service Companies in five Chinese provinces (Henan, Shandong, Guangdong, Hubei and Jiangsu), each of which were randomly draw 40 managers and other staff members. According to Sharma (2017), sampling techniques are only considered when testing all the individuals is impossible considering the time, cost, and convenience. For this reason, the researcher used convenience sampling in this study primarily because they are available, willing, and accessible in the time of data gathering.

Instrument of the Study - The questionnaire was submitted to experts for validation and approval in relation to the present study. After the approval the researcher conducted a dry- run procedure in one of the elderly care service companies. There are 20 respondents randomly selected and submitted to statistician for reliability statistics with the Cronbach's Alpha value of .90 above. Based on the table of reliability statistics, the remarks suggested that questionnaires are considered good and excellent. This ensures that the instrument items were consistent and reliable before they were distributed to the participants. At the same time, a survey-based methodology was employed through questionnaires to elicit the views of senior care services employees towards dynamic capabilities, value co-creation and business model innovation. The researcher provided a hard copy and link in Google form for the questionnaire to give options for respondents. It has three sets of questionnaires to evaluate dynamic capabilities, value co-creation and business model innovation of elderly care service companies. This study follows the multi-item measurement principle, that is, no less than 5 questions per dimension to measure its concept, and the research measurements are all based on the Likert scale. Numbers 1-4 indicate respondents' agreement on the problem item. A higher number indicates that the respondent's opinion is more consistent with the content of the question. Specific Likert scales: 1 - strongly disagree, 2 - disagree, 3 - agree, 4 - strongly agree. From the reliability test results of the questionnaire, all variables are valid. As shown in Table 1. The reliability monitoring results show that the Cronbach α of dynamic capability (0.908), value co-creation (0.910), and business model innovation (0.911) indicates that these items have excellent internal consistency.

Table 1*Reliability Results*

Variables	No. of Items	α value	Interpretation
Dynamic Capabilities			
Adaptive Capability	5	0.910	Excellent
Innovativeness	5	0.906	Excellent
Entrepreneurial Capability	5	0.908	Excellent
Overall	15	0.908	Excellent
Value Co-creation			
Customer Involvement	5	0.912	Excellent
Customer Knowledge	5	0.902	Excellent
Business Resources	5	0.917	Excellent
Overall	15	0.910	Excellent
Business Model Innovation			
Value Proposition Innovation	5	0.914	Excellent
Business Resources	5	0.920	Excellent
Key Resources	5	0.899	good
Overall	15	0.911	Excellent

Legend > 0.9 =Excellent; >0.8=Good; >0.7=Acceptable; >0.6=Questionable; >0.5=Poor; <0.5=Unacceptable

Data Gathering Procedure - Upon the approval of the title, the researcher pursued first the authorization of the head of the organization and other approving authorities to conduct dry-run and the actual data gathering. As approved, the researcher distributed the questionnaire via Google form and hard copies, assuring respondents that their personalities would be kept anonymous and that the data they provided would be kept confidential and used only for academic and professional publication or presentation. The researcher allowed respondents enough time to fill out the questionnaire without sacrificing the deadline of this paper. When the questionnaires were retrieved and handled statistically, the researcher used them to interpret and analyze the data. All entries were double checked to ensure the accuracy and reliability of the results.

Data Analysis - The desired documents and figures were tallied, encoded, and analyzed using various statistical measures. Frequency percentage, ranking, weighted mean, and verbal interpretation were used in interpreting the knowledge management practices, employee work engagement, and balance scorecard perspective in the organization. In addition, Multiple Correlations- Pearson R was used to test and measure the strength and direction of the linear relationships of knowledge management practices and employee work engagement to balance scorecard. At the university, all data were run through the SPSS package as necessary.

Ethical Considerations - In compliance with the Code of Ethics, the researcher safeguarded that all information acquired from respondents were given freely and voluntarily by providing a short notice attached to each questionnaire. Thus, the researchers ensured that respondents were treated with respect and their integrity valued to elicit an effective answer. Besides, the research was done in accordance with the Data Privacy Act of 2012, which stated that it will protect and safeguard personal information from respondents.

3. Results and discussion

Table 2

Summary Table on Dynamic Capability of the Company

Key Result Areas	Composite Mean	VI	Rank
Adaptive Capability	3.04	Agree	2.5
Innovativeness	3.04	Agree	2.5
Entrepreneurial Capability	3.14	Agree	1
Grand Composite Mean	3.07	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

Table 2 presents the summary of dynamic capability of the company with an overall mean of 3.07 (agree). Entrepreneurial capability topped the ranking with a weighted mean of 3.14. This was followed by adaptive capability and innovativeness which obtained same weighted mean of 3.04. The result suggests that the firm has a strong foundation for success in today's dynamic and competitive business environment.

Adaptive capability is the ability of a firm to sense and respond to changes in the external environment. This includes the ability to identify new opportunities and threats, and to develop and implement new strategies in response to these changes. Innovativeness is the ability of a firm to generate and implement new ideas. This includes the ability to develop new products and services, new business models, and new ways of doing things. Entrepreneurial capability is the ability of a firm to identify and exploit new opportunities. This includes the ability to identify new markets, new technologies, and new ways of creating value for customers. Firms with strong dynamic capabilities are well-positioned to adapt to change, innovate, and capitalize on new opportunities. This gives them a competitive advantage in today's dynamic and competitive business environment.

New venture firms that have a more diverse international portfolio are more likely to learn new technologies and develop new products and services. This is because exposure to different markets and cultures can help firms to identify new opportunities and to learn from the best practices of other firms (Zahra ET AL., 2015). The study's findings have a number of implications for new venture firms that are considering expanding internationally. First, the findings suggest that international diversity can be a source of competitive advantage for new venture firms. Second, the findings suggest that wholly owned subsidiaries may be the best mode of entry for new venture firms that are serious about learning new technologies and developing new products and services. Third, the findings suggest that new venture firms should invest in research and development in order to learn new technologies and develop new products and services.

Table 3

Summary Table on Value Creation

Key Result Areas	Composite Mean	VI	Rank
Customer Involvement	3.15	Agree	1
Customer Knowledge	3.08	Agree	3
Business Resources	3.14	Agree	2
Grand Composite Mean	3.12	Agree	

Legend: 3.50-4.00=Strongly Agree; 2.50-3.49=Agree; 1.50-2.49=Disagree; 1.00-1.49=Strongly Disagree

All the dimensions of value creation, which are customer involvement, customer knowledge, and business resources, are all agreed upon by the respondents, it implies that they all recognize the importance of these dimensions to creating value for customers. This is a positive sign, as it suggests that there is a consensus among

stakeholders about what is important for creating value.

Here are some of the implications if all the dimensions of value creation are agreed upon: Organizations will be more likely to focus on all three dimensions of value creation. In the past, organizations may have focused on one dimension more than the others. For example, some organizations may have focused primarily on developing and selling products and services, without paying as much attention to customer involvement or customer knowledge. However, if there is a consensus that all three dimensions are important, organizations are more likely to focus on all of them. Customers will be more likely to feel valued. When organizations focus on all three dimensions of value creation, they are more likely to develop and deliver products and services that meet the needs and wants of their customers. This can lead to increased customer satisfaction and loyalty. Organizations will be more likely to be successful in the long term. In a competitive environment, organizations that focus on all three dimensions of value creation are more likely to be successful in the long term. This is because they are more likely to be able to develop and deliver products and services that customers value. Overall, it is a positive sign if all the dimensions of value creation are agreed upon by the respondents. This suggests that there is a consensus among stakeholders about what is important for creating value, and it is likely to lead to organizations that are more successful in the long term.

Chen, et. al., (2022) examines the relationship between customer involvement, customer knowledge, business resources, and value creation. The authors conducted a survey of 200 executives from a variety of industries and found that all three dimensions are positively and significantly correlated with value creation. The authors also found that customer involvement and customer knowledge mediate the relationship between business resources and value creation. According to the study of Lee & Yang (2019) which examine the role of customer involvement, customer knowledge, and business resources in value creation in the manufacturing sector, using the pharmaceutical industry as a case study. They find out that all three dimensions have a positive and significant impact on value creation. The authors also find that product innovation capability mediates the relationship between customer involvement, customer knowledge, and business resources and value creation.

Table 4

Summary Table on Business Model Innovation

Key Result Areas	Composite Mean	VI	Rank
Value Proposition Innovation	3.03	Agree	3
Revenues Resources	3.15	Agree	1
Key Resources	3.09	Agree	2
Grand Composite Mean	3.09	Agree	

Legend:3.50-4.00=Strongly Agree;2.50-3.49=Agree;1.50-2.49=Disagree;1.00-1.49=Strongly Disagree

Table 4 presents the summary of the business model innovation of the company having a composite mean of 3.09, verbally interpreted as agree. Revenue resources topped the ranking with a weighted mean of 3.03. This was followed by key resources with a weighted mean of 3.09 and revenue resources which obtained a weighted mean of 3.03.

The result suggests a strong consensus among stakeholders regarding the firm's innovative approach to creating, delivering, and capturing value. This alignment of perspectives indicates a shared understanding of the firm's strategic direction and the importance of BMI in achieving its goals. The agreement among stakeholders fosters a cohesive and focused approach to BMI implementation, ensuring that all efforts are aligned towards a common goal. This clarity of purpose can lead to more efficient and effective resource allocation, increasing the likelihood of success. Shared understanding among stakeholders facilitates better communication and collaboration throughout the BMI process. This open exchange of ideas and perspectives can lead to more innovative solutions and a higher likelihood of identifying opportunities for growth and improvement. When stakeholders are in agreement about the importance of BMI, they are more likely to support and invest in such initiatives. This increased support can provide the necessary resources and momentum to successfully implement and sustain BMI efforts. A shared understanding of BMI can help firms adapt to changing market conditions and

customer needs more effectively. By regularly revisiting and refining their BMI strategies, firms can maintain their competitive edge and navigate disruptive innovations. When stakeholders are involved in the BMI process and their perspectives are valued, they are more likely to be satisfied with the firm's strategic direction and overall performance. This satisfaction can lead to stronger relationships, increased brand loyalty, and improved access to resources. Overall, the agreement among stakeholders regarding the importance of all three dimensions of BMI: VPI, RR, and KR, is a positive indicator of a firm's commitment to innovation and its potential for success in the competitive marketplace. By fostering a shared understanding of BMI and aligning stakeholder perspectives, firms can create a more favorable environment for achieving their strategic goals.

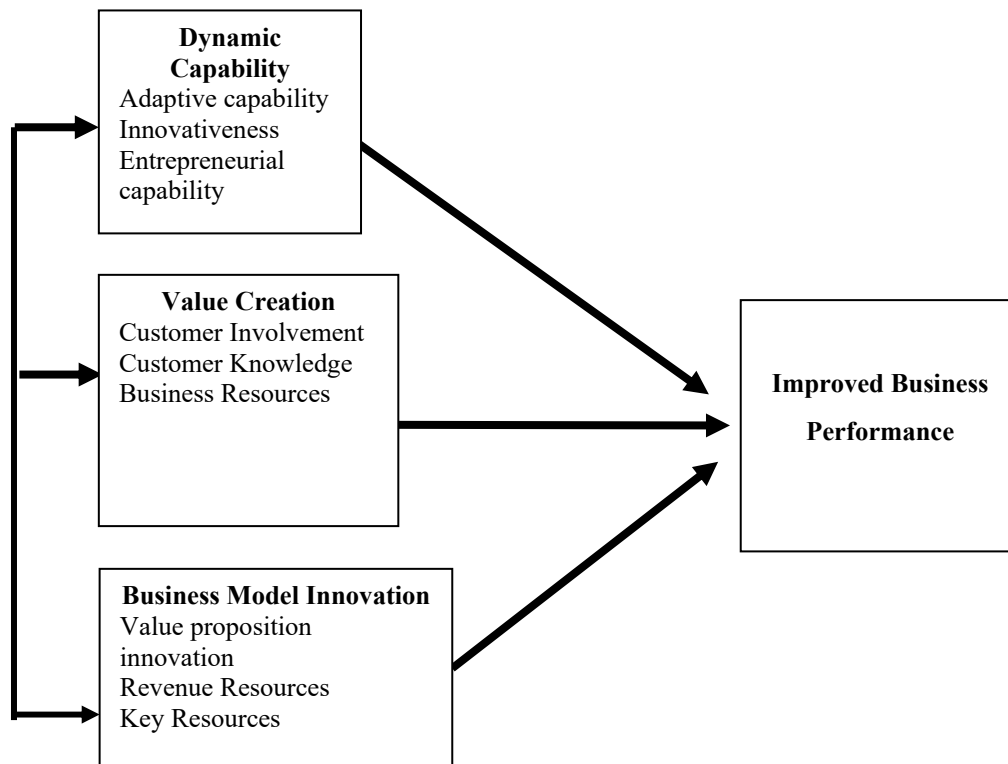


Figure 1. Framework for improvement business performance of senior elderly care providers

The framework shows high relationships among all indicators of organizational equity, employee productivity, and work-life balance, suggesting a strong interconnected system, it paints a promising picture for improved business performance in several ways: Employees perceiving fairness in decision-making, rewards, and treatment are more likely to be motivated, engaged, and committed, leading to enhanced productivity and quality of work. Higher productivity directly translates to increased output, efficiency, and goal achievement, contributing to business growth and profitability. Balanced employees experience less stress and burnout, allowing them to recover, recharge, and return to work with renewed energy and focus, further boosting productivity and creativity.

The high relationships can create a positive feedback loop: Organizational equity fosters engagement and productivity, leading to better business outcomes. High productivity further strengthens the perception of equity (e.g., rewards align with performance), reinforcing engagement. Improved work-life balance due to fair practices enhances focus and reduces stress, promoting continued productivity and business success. Higher productivity, efficiency, and employee satisfaction can lead to increased sales, market share, and profitability. Engaged and balanced employees are more likely to think creatively and develop innovative solutions, fueling business growth and competitive advantage. Fair practices and a focus on employee well-being attract and retain top talent, contributing to a strong employer brand and positive organizational culture. Increased engagement and work-life balance can lead to lower absenteeism, turnover, and recruitment costs, further boosting business

performance.

4. Conclusion and recommendation

The respondents moderately assessed the company's adaptive capability, innovativeness, and entrepreneurial capability. The respondents generally concurred that value creation is evident in customer involvement, customer knowledge, and business resources. The respondents generally acknowledged that business model innovation manifests in value proposition innovation, revenue streams, and key resources. The findings revealed that there is highly significant relationship between dynamic capability, value co-creation and business model innovation; and A framework has been designed specifically to improve the business performance of senior care providers in China. Senior care providers may use a variety of methods to involve customers in service innovation. Senior care providers may create a culture that is supportive of customer involvement in service innovation. The framework maybe adopted to improve the performance of senior care providers in China. Future researchers may use other variables like organizational structure and culture, technology and human capital in their future study.

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