The Influence of Automobile Manufacturing Service on Enterprise Performance

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Summary: At present, in order to gain the competitive advantage, manufacturing enterprises have become an effective way to service. The automobile manufacturing industry is the pillar industry of our country's economic development, and the automobile manufacturing industry begins to serve the service. The study found that the manufacturing enterprise services show a double-edged sword of the neutral impact. This paper studies the profit-making ability of the automobile manufacturing industry on the enterprises and finds that the degree of service and the profitability of enterprises are U-shaped trend, and analyze the cause of this phenomenon.

1. Introduction

After the financial crisis, the development of our country's physical manufacturing industry has been bottlenecked by the development. Innovation in manufacturing added services has received the support of numerous research results. Extending the value chain of industries and increasing service in the manufacturing industry have become one of the major tools for enhancing the development of manufacturing industries. Vandermerwe and Rada make the service innovation of enterprises become "service-oriented" in the manufacturing industry, which means to increase the value of the products by adding matching services in the process of product development and production. Revenue from such well-known companies as GE, BMW, Xerox and other famous companies accounted for 46%, 30% and 53% of the total revenue respectively. Serve for the development of manufacturing enterprises to provide a new profit growth point. Some domestic large-scale manufacturing enterprises, such as Shanghai Baosteel and FAW-Volkswagen, have also started to set up professional service companies and socialized services in such fields as finance and logistics and formed Baosteel Baosight, FAW Qiming and a number of typical manufacturing service enterprises. In theory, service is an inexhaustible motive force for the development of manufacturing enterprises, but researchers have found that the degree of service has a positive and negative effect on the performance of enterprises. This shows that there are some differences in the study of manufacturing service and business performance.

In recent years, in the theory and practice, the service has received great attention, but the domestic empirical research on service is still very limited. In this paper, the service-oriented automobile manufacturing enterprises as an empirical sample to analyze the impact of automobile manufacturing services on business performance.

2. Literature review

The term "service" was first proposed by Vandermerwe and Rada (1988) and is now widely accepted as the process by which manufacturing enterprises create value by providing additional services to their products. Although a few scholars have actively explored the field of service-oriented manufacturing enterprises, these researches are mainly based on case studies and their research focuses mainly on the ecological benefits of services rather than on the economic benefits (Cook et al., 2006). For the relationship between service and enterprise performance, the current academic conclusion of the study
there is a big difference: (1) promotion theory. Early scholars such as Vandermerwe and Rada argue that the deepening of the integration of secondary and tertiary industries is conducive to creating the competitive advantages of enterprises and promoting the improvement of the profitability of enterprises. (2) "U-shaped" theory. Such as Neely found through empirical tests, the degree of service to the manufacturer's profits exist first and foremost. (3) "saddle type" theory. In the research of scholars, it is found that manufacturing service can indeed create direct benefits for customers. However, whether the so-called combination of "manufacturing + service" can enhance the competitive advantage of enterprises and improve enterprise performance is still a controversial topic.

3. Theoretical Analysis and Research Assumptions

Agarwal, a scholar who studies the theory of industrialization, thinks that there is an important "turning point" in the industrial development of manufacturing industry. Only when the development of the industry crosses this inflection point the enterprises can obtain better development and competitive strategies Resource advantages.

Purely from the surface, car manufacturers with the deepening of the degree of service, will bring higher profits for the enterprise. However, the service elements required by the manufacturing and operation activities of the automobile manufacturing industry run through every link of the whole value chain. It takes more time and experience to service and increase the production costs of the enterprises, resulting in the decrease of the profitability of enterprises happening. However, with the cultivation of the market, some necessary facilities and equipment have been invested. Enterprises gradually enter the service-oriented track, the economic scale will gradually appear, and the enterprises will gradually realize the profit-making ability. Based on this, the following assumptions are proposed:

Hypothesis 1: The degree of service-oriented automobile manufacturing industry and corporate profitability showed a U-shaped relationship, that is, with the deepening of the degree of service, corporate profitability showed an upward trend first and then increase.

4. Research methods

4.1 Data sample source

In order to verify the hypothesis proposed in this paper, the selected samples come from some automobile manufacturing enterprises in our country with the Guotai'an database in 2010-2016. In the choice of enterprises need to consider whether the scope of business involves the service sector, business scope mainly from the business and the Cathay Pacific database business scope as well as the company's official website above describes the business scope of the enterprise. The final 36 automobile manufacturing enterprises meet the requirements of this article, kicked out the abnormal value and vacancy value, although the sample size is relatively small, but for the study of this article, it still has some mathematical rules.

4.2 Variables and model settings

Results Variables: The result of this study is related to the performance of automobile manufacturing enterprises from 2010 to 2016. This study analyzes the performance of enterprises through profitability, when measuring profitability, the most commonly used areas of research are roe and roa, and in this study, the return on total assets (roa) was chosen.

Antecedents variables: In reality, the influencing factors of business performance will be reflected in many aspects. In order to avoid some factors on the performance of enterprises, this study needs to introduce some control variables. Since there may be collinearity between too many variables, this paper mainly introduces three sets of control variables to prevent the performance of enterprises from being affected by some exogenous variables, which makes the research results of this article more reasonable.
(1) The size of the business: In the field of research, the natural logarithm of the total number of employees and the natural logarithm of the total assets of the enterprise are mainly used. In this study, the natural logarithm of the total assets of the enterprise.

(2) Assets and liabilities: In the study of the influencing factors of the enterprise performance, some scholars find that the asset-liability ratio in the enterprise will also have an impact on the performance of the enterprise. The higher the business performance of the corresponding asset-liability ratio will be relatively low. Debt to assets ratio is the total liabilities of the total assets in the proportion.

(3) Operating income growth rate: In the past on the study of business performance, business growth will have an impact on performance. Mainly because of high revenue growth companies tend to be higher performance accordingly.

<table>
<thead>
<tr>
<th>variable</th>
<th>Variable definitions</th>
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<tr>
<td>Return on total assets income (ROA)</td>
<td>Net profit / total average assets</td>
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<tr>
<td>Operating income growth rate (Grow)</td>
<td>(Current operating income - the previous period operating income balance) / last period operating income</td>
</tr>
<tr>
<td>Degree of service (Ser)</td>
<td>Non-operating income / total operating income</td>
</tr>
<tr>
<td>Enterprise size (Lnsize)</td>
<td>The natural logarithm of the total assets of the business</td>
</tr>
<tr>
<td>Assets and liabilities (DEBT)</td>
<td>Total liabilities / total assets</td>
</tr>
</tbody>
</table>

5. Empirical analysis

From the former due to the variable point of view, in the regression model of the total net asset-liability ratio as the outcome variable, It confirms the hypothesis proposed in Hypothesis 1, that is, the relationship between service-oriented automobile manufacturing and firm performance is U-shaped. With the deepening of the degree of service, the profitability of enterprises presents the first increase and then decrease. The reason for this situation, this article mainly believes that the initial stage of service-oriented enterprises have just entered the field of unfamiliar industries, or will make the business problems of service difficulties. In the early days of service start-up, even though a small group of dedicated customer groups were willing to pay a price for a range of services provided by the enterprise, the investment made by the enterprises in the service was huge and costly in all aspects. Large amounts of funds may not be able to set up a sound management and risk control system at the beginning, and will not be able to deal with the cross-border problems brought by service. This may result in a decrease in the profitability of enterprises. However, as enterprises recognize their service, their ability to cope with risks will also increase. Investment in some necessary equipment and personnel has basically been completed. Compared with the initial period of service, the investment of enterprises will decrease, at the same time, the scale of enterprises in the service industry will also be bigger and bigger, the problems caused by the service plight will also be reduced, and the profitability of enterprises will rise again. Therefore, when investing in service, enterprises should have sufficient psychological and ideological preparation for obtaining the desired level of income, and entrepreneurs must have long-term goals.

From the control variables point of view, the asset-liability ratio of a company is negatively related to the profitability of the company. It is mainly due to the fact that enterprises with relatively good operating performance and relatively low operating income rarely use their liabilities for financing (Chen ping, 2012).

The size of the business is positively related to the profitability of the company. This is the
opposite of Xiao Ting's research on manufacturing service and enterprise performance. However, it concludes with Chen Jie Xiong's empirical test of manufacturing service and business performance, the possible reason is the natural logarithm of the total assets of the enterprise used in this paper when expressing the scale of enterprises, while Xiao Ting uses the natural logarithm of the total number of employees.

The growth ability of an enterprise is positively related to its profitability. This is the same conclusion that Chen ping studied in the interaction between capital structure and firm performance. Mainly due to high revenue growth rate of business, business ability will rise.

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<th>Explanatory variables</th>
<th>Profitability</th>
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<tbody>
<tr>
<td>Ser</td>
<td>-0.944***</td>
</tr>
<tr>
<td></td>
<td>(-2.503)</td>
</tr>
<tr>
<td>Ser^2</td>
<td>2.082***</td>
</tr>
<tr>
<td></td>
<td>(2.252)</td>
</tr>
<tr>
<td>Debt</td>
<td>-0.487***</td>
</tr>
<tr>
<td></td>
<td>(-7.026)</td>
</tr>
<tr>
<td>Lnsize</td>
<td>0.411***</td>
</tr>
<tr>
<td></td>
<td>(0.235)</td>
</tr>
<tr>
<td>Growth</td>
<td>0.015*</td>
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<td></td>
<td>(6.060)</td>
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The value in parentheses is t statistic, ***, **, * respectively, 1%, 5%, 10% of the significant level.

6. Conclusion

The main conclusion drawn from this study is that the degree of service-oriented automobile manufacturing and the profitability of enterprises show a U-shaped trend. The innovation of this paper: Separately study the automobile manufacturing industry, and consider the influence of the enterprise's growth ability on the enterprise's performance. The shortcomings of this article: the selected automobile manufacturing sample data is relatively small, but the empirical analysis of the conclusions still have a significant impact, you can prove the hypothesis proposed in this article. The practical significance of the research in this article: For the strategic decision makers of enterprises, In the process of business transformation of the service business, we need to take full account of the size of the enterprise, asset-liability ratio and the growth of enterprises.

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References


