

Research on corporate performance in the Yangtze River Delta to attract Taiwan electronics Industry investment

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Abstract

This paper mainly investigates the influence of upper, middle and lower intelligent capital on the difference of net value and value of enterprises in Taiwan electronics industry from the perspective of value chain. This paper further discusses the resource integration mechanism from the perspective of value chain in today's complex environment. Whether attracting Taiwan-funded electronics industry to invest in the Yangtze River Delta will affect corporate performance is the main research direction and goal of this paper. Taiwan's electronics industry is facing rising operating costs, and the overall development in the future needs to integrate investment in the Yangtze River Delta to further improve the company's performance. We mainly investigated the listed companies in the electronics industry in Taiwan from 2006 to 2017 as samples to analyze and understand the overall corporate performance and predict the future development of the electronics industry in Taiwan through the overall performance indicators. We found that the Yangtze River Delta has the conditions of intelligent capital, which is worth Taiwan's electronics industry to invest.

Keywords: Intelligent capital 、 integration mechanism 、 Taiwan's electronics industry

INTRODUCTION

Stewart (2002) points out that the core concept of smart capital comes from a simple discovery: the tangible assets of a business (computers, land and buildings, factories and equipment, and other items in the accounting books) are less valuable than intangible assets that are not recorded in the accounting records. To understand intellectual capital, we must first understand the relationship and difference between tangible assets, intangible assets and intellectual capital. Skandia AFS (1998) believes that the main dimensions of smart capital are human capital, customer capital and organizational capital. Brooking (1998) divides smart capital into four categories, namely market assets, smart assets, equipment assets and human center assets. Edvinsson and Sullivan (1996) defined intelligent capital as knowledge that can be converted into value. Smart capital has a very important concept for the future development which is why many scholars have neglected the

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intangible assets. The analysis of the variable mechanism of smart capital will be a very interesting subject and analysis. The resource integration mechanism of smart capital can bring competitive advantages to enterprises and also enhance the performance and value of the company. There are a lot of smart capital in the Yangtze River Delta, which is also the analysis status of Taiwan electronics industry's investment in the Yangtze River Delta that this paper intends to investigate and understand, and whether the investment in the Yangtze River Delta produces its corporate performance. The Yangtze River Delta points to Jiaxing in the north, Hangzhou in the west and Ningbo in the south of Zhejiang Province. Such a block is called the Yangtze River Delta. The Yangtze River Delta has a good port, which is worth attracting Taiwan's electronics industry to invest there.

Mainly to meet the 21st century global economy into the era of low growth, enterprises respond to the external environment change, adjust the organization establishment and the working process, the enterprise internal information service unit will subsequently change, this study adopted

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quantitative research methods, on the Taiwan

status is other enterprise cannot be obtained

electronics industry middle and lower reaches of the manufacturer to collect empirical data, with wisdom capital point of view, explore the whole information and resource mechanism model. Smart capital emphasizes the complementary ability of knowledge resources to identify future development (Mouritsen, Larsen, Bukh, 2005) and focuses on the ability of organizations to identify their own intangible assets for sustainable development potential. Edvinsson and Malone (1997) provided a way to calculate variables for each capital dimension, but there was no consistent standard to evaluate the variables. Their main function was to provide an organization to track its own growth. Visible intellectual capital application range is very wide, and different scholars will distinguish intellectual capital for the different dimensions and the dimensions of the measure can be adjusted with the focus on issues of, Lin and Edvinsson (2008) once in a whole different scholars put forward dimensions including human capital, capital market, programming, update and development capital, structural capital, relational capital, technology, capital, social capital and so on, this research reference for the research on the table, choose from which can be applied to dimensions of resources integration under the background of the intellectual capital.

Taiwan's electronics industry is highly competitive, and enterprises hope to strengthen their competitiveness with low cost and quick response when operating their markets and distribution channels. "Limited resources" is an old economic adage, and resource-based theory also argues that long-term and sustainable competitive advantages can be formed through the accumulation and cultivation of resources and capabilities within an organization. Therefore, resources and capabilities can be the basis of long-term strategy and strategic thinking of a company (Grant, Wernerfelt, 1991). Through the discussion of the previous literatures, the formation and implication of resource-based theory (RBV) are firstly explained. "Resource-based theory" fully explains two basic questions in strategic management: "Why are companies different from each other?" "And" How can certain companies stay ahead of their peers and maintain their competitive edge?", the theory from the perspective of the company's internal company to acquire competitive advantage, to explain the company's main task is to create and to grasp the resources advantage of the situation, made in the context of advantages owned by the resource

directly or indirectly, the enterprise or the company in order to establish the persistence of theoretical framework of the theory of competitive advantage resources based on two basic assumptions, assuming one is: "in the same industry or strategic direction, each company is different for the control of strategic resources, and these different resources will result in the company of the differences between each other". Premise two: "These differences persist because these strategic resources are not easily imitated by other companies." Therefore, through the mechanism of resource integration between the upper, middle and lower reaches, the advantages of each other's upper, middle and lower reaches can be brought into play, and the mechanism of resource integration can further create its value and advantages.

Grant (1991) and other scholars believe that corporate "resources" are the basis of corporate profitability and also the main source of organizational "capabilities". Barney (1995) in combination with various scholars (Daft, Learned, Christensen, Andrew, Guth, Porter) after the argument of company resources is defined as: "under the control of the company, can help the company to construct and implement strategy, in order to improve company's efficiency and performance of all the basic operation ability, including the company of all assets, capabilities, organizational processes, firm attributes, information and knowledge". This chapter is designed from the perspective of the mechanism of resource integration, mainly hoping that the resource complementarity and cooperation between the upper, the middle and the lower can be achieved. The resource integration mechanism of Taiwan electronics industry can bring the resource complementarity and supportive integration for the whole industry chain.

Pfeffer and Salancik (1987) put forward the concept of resource dependence theory: (1) in the environment, many organizations need to rely on resources to survive, so organizations must actively strive for it; (2) The organization obtains resources from the outside world or other organizations through transactions, which is the most basic method for the organization to obtain resources; (3) There are many constraints in the organizational environment, so that when the organization gets resources, it will produce its uncertain factors; (4) As certain environmental restrictions are supported by certain interest groups, assuming that the organization can integrate resources or receive

support from the society, this situation will be

changed. Organizational development mainly depends on the interaction between the enterprise organization and the environment, and each enterprise can obtain these desired resources through competition. The organization development mechanism mainly relies on a set of survival rules of industrial ecology, and distinguishes the upper, middle and lower reaches through the overall Taiwan electronics industry, including that the upper, middle and lower reaches have their own advantages and resources. In this way, different resources can be applied to each other and a mechanism of resource integration can be established.

Through the human capital, innovation capital, process capital and customer capital under the smart capital, we can see the resource integration mechanism of the whole Taiwan electronic industry chain. We will illustrate the different research designs and data analysis in the following sections.

STUDY DESIGN

1.1 Sample selection and data sources

The empirical study in this chapter takes listed companies in the electronics industry in Taiwan from 2006 to 2017 as samples to investigate the mechanism by which smart capital influences the difference in net worth and value of enterprises through dynamic capabilities. In empirical research, the practice of screening, processing and use of samples.

The data sources are related to the financial data, smart capital and dynamic capability of the enterprise, and the data of the board and supervisor are from TEJ Asia Pacific Financial database or annual report of shareholders' meeting, etc.

1.2 Model setting and variable selection

The main research content of this chapter is to measure the dynamic capability of enterprises from the two dimensions of enterprise's resource integration capability and organizational development capability, and to empirically test the resource integration mechanism and organizational development mechanism of the difference between smart capital and enterprise's net worth and value.

The dynamic panel model is constructed to describe the dynamic effect of net worth and value difference, and the GMM method is used for parameter estimation to solve the endogeneity problem in the model. In order to study the action mechanism of smart capital affecting the difference

between enterprise net worth and value, this

chapter constructed the following two dynamic panel models based on the relevant empirical results:

In Equations 1-1 and 1-2, and respectively represent Tobin's Q of the current period and the lag period, which are used to measure the difference in net value and value of enterprises. Represents human capital, innovation capital, process capital and customer capital lagging 0-1 period; Represents the cross term of intelligent capital and resource integration capability, and tests the resource integration mechanism according to the sign and significance of its estimated coefficient; Represents the cross term of smart capital and organizational development capacity, and tests the organizational development mechanism according to the sign and significance of its estimated coefficient; Represents other control variables that affect the difference between the net value and the value of the enterprise; represents individual heterogeneous characteristics of the enterprise; represents random disturbance term.

Due to the endogeneity problem in the dynamic panel model, the systematic GMM method is still used in this chapter for the estimation of regression coefficients in equations 1-1 and 1-2.

The definitions and explanations of the main variables involved in the empirical research in this chapter are shown in Table 1.

EMPIRICAL RESULTS AND ANALYSIS

2.1 Check the resource integration mechanism

By constructing the cross terms of human capital, innovation capital, process capital, customer capital and resource integration ability respectively, OLS, fixed effect, random effect, GMM and other methods were used to estimate the coefficient of the cross term, and the resource integration mechanism of smart capital to Tobin's Q was tested according to the sign and significance of the estimated coefficient. The specific estimation results are shown in Table 2, 4, 6 and 8.

According to GMM estimation results in Table 2, the cross terms of the ratio of human capital to intangible assets in the current period and the lagged period do not pass the significance test. It indicates that human capital does not influence Tobin's Q through resource integration mechanism.

According to GMM estimation results in Table 4, the cross term of the ratio between innovation capital and intangible assets in the current period and the lagged period fails to pass the significance test. It indicates that the innovation capital has no influence on Tobin's Q through the resource

integration mechanism.

By constructing the cross terms of human

According to GMM estimation results in Table 6, the estimated coefficient of the cross term of the current process capital to intangible assets ratio is significantly positive at the level of 10%, and the estimated coefficient of the cross term of the lagging phase is significantly negative at the level of 1%. This indicates that process capital has a significant impact on Tobin's Q through the mechanism of resource integration, and the lag effect of this mechanism is relatively obvious.

According to GMM estimation results in Table 8, the cross term of customer capital to intangible assets ratio fails the significance test. It indicates that customer capital has no influence on Tobin's Q through resource integration mechanism.

Based on the GMM estimation results in Table 2, 4, 6 and 8, we found that among the four intelligent capital variables, only process capital had significant influence on Tobin's Q through the resource integration mechanism, while the other three variables did not influence Tobin's Q through the resource integration mechanism.

Edvinsson and Malone (1997) believed that process capital is the ability to expand or enhance the efficiency of product manufacturing or service. It can support employees, improve enterprise productivity, and also provide intelligent capital with order, stability and quality to influence the company's stock price -- taking Taiwan's high-tech industry as an example. Joia (2000) points out that process capital is the internal operating process within the organization and all external operating processes between the organization and other stakeholders. Through the above two scholars' statements, we can verify that process capital has a certain significant influence on the organization's future operation. Taiwan's electronics industry began to operate and develop in the 21st century. We began to observe its data after 2001 and collected data in 2017, showing its overall trend. The part of resource integration is significant in terms of process capital. Taiwan's electronics industry mainly focuses on the efficiency of process operation. As long as machines do not break down or cause operation problems in the process of factory operation, these are all important factors for the senior managers of Taiwan's electronics industry to pay attention to. Resource integration involves a series of operational processes, from raw material supply at the back end to providing good products to customers.

2.2 Inspection of organizational development mechanisms

capital, innovation capital, process capital, customer capital and organizational development ability respectively, OLS, fixed effect, random effect, GMM and other methods were used to estimate the coefficient of the cross term, and the organizational development mechanism of smart capital on Tobin's Q was tested according to the sign and significance of the estimated coefficient. The specific estimation results are shown in Table 10, 12, 14 and 16.

According to GMM estimation results in Table 10, the cross term of the ratio of human capital to intangible assets in the current period and the lagged period all passed the significance test at the level of 1%, and the estimated coefficient of the former was significantly positive, while that of the latter was significantly negative. It indicates that, different from the mechanism of resource integration, human capital exerts a significant influence on Tobin's Q through the mechanism of organizational development.

According to GMM estimation results in Table 12, the cross term between innovation capital and organizational development capacity of the lagging phase passed the significance test at the level of 5%, while the estimated coefficient of the cross term of the current phase was not statistically significant. It indicates that the innovation capital significantly increases the Tobin's Q of enterprises through the organizational development mechanism, but there is an obvious hysteresis.

According to GMM estimation results in Table 14, the cross terms of process capital and organizational development capacity in the current and lagging phase fail the significance test. It indicates that, different from the resource integration mechanism, process capital does not influence Tobin's Q through the organization development mechanism.

From the GMM estimates in Table 16, the cross term of the ratio of customer capital to intangible assets passes the significance test at the 1% level. This indicates that, different from the resource integration mechanism, customer capital has a significant impact on Tobin's Q through the organization development mechanism.

Based on GMM estimation results in Table 10, 12, 14 and 16, this paper finds that human capital, innovation capital and customer capital have a significant impact on Tobin's Q of an enterprise through the organizational development mechanism, while process capital does not play a role in Tobin's Q of an enterprise through the organizational development mechanism.

We can understand the organizational

influence on Tobin's Q through resource integration

development mechanism of Taiwan's electronics industry, because the overall external environment is constantly changing, such as the financial tsunami crisis in 2008, such a change and instability of the external environment, Taiwan's electronics industry companies have to think about and adjust their overall organizational mechanism. Through the analysis of the panel data of the entire Taiwan electronics industry, human capital, process capital and customer capital are significant. In terms of human capital, Taiwan's electronics industry needs to pay attention to the service year, education level and number of employees, mainly because the operation of the electronics industry needs a certain human scale and service year to ensure the sustainable operation of the electronics company. Process capital mainly on each employee productivity to have performance, accounts receivable turnover ratio to reflect the smooth, high added value to every employee, organization and high stability, high inventory turnover, we learn through this process of capital efficiency, Taiwan's electronics industry of the whole mechanism in significant Tobin's Q is a key factor. Customer capital is important for Taiwan's electronics industry, because on the electronics industry is a to the company, customer satisfaction and continuous orders for electronics industry production side, through the marketing rate, marketing intensity to observe the entire customer capital position, can directly see the organizational mechanism under the customer capital for Tobin's Q has a significant effect.

CONCLUSION

Based on the samples of listed companies in the electronics industry in Taiwan from 2006 to 2017, this chapter collects and collates the financial data, smart capital data, dynamic capability data, and board and supervisor data of listed companies by hand to study the mechanism of smart capital's influence on the difference of net value and value of enterprises. The research findings of this chapter:

First, process capital has a significant impact on Tobin's Q through the mechanism of resource integration, while the other three variables do not affect Tobin's Q through the mechanism of resource integration. Human capital does not influence Tobin's Q through resource integration mechanism. The cross term of the ratio of human capital to intangible assets in the current period and the lagged period fails to pass the significance test at the level of 10%. Innovation capital has no

mechanism. The cross term of the ratio between innovation capital and intangible assets in the current period and the lagged period fails to pass the significance test at the level of 10%. Process capital has a significant impact on Tobin's Q through the mechanism of resource integration, and the lag effect of this mechanism is relatively obvious. The estimated coefficient of the cross term of the current process capital to intangible assets ratio is significantly positive at the level of 10%, and the estimated coefficient of the cross term of the lagging phase is significantly negative at the level of 10%. Customer capital does not influence Tobin's Q through resource integration mechanism. The cross term of the ratio of customer capital to intangible assets fails the significance test at the level of 10%.

Second, human capital, innovation capital and customer capital have a significant impact on Tobin's Q of an enterprise through the organizational development mechanism, while process capital does not play a role in Tobin's Q of an enterprise through the organizational development mechanism. Human capital has a significant influence on Tobin's Q through organizational development mechanism. The cross term of the ratio of human capital to intangible assets in the current phase and the lagged phase all passed the significance test at the level of 10%, with the estimation coefficient of the former significantly positive and the latter significantly negative. Innovation capital significantly increases the Tobin's Q of enterprises through the organizational development mechanism, but there is an obvious hysteresis. The cross term of lagging innovation capital and organizational development ability passed the significance test at the level of 10%, while the estimated coefficient of the cross term of the current period was not statistically significant. Process capital does not influence Tobin's Q through organizational development mechanism; The cross term between process capital and organizational development capacity of the current phase and the lagged phase fails the significance test at the level of 10%. Customer capital has a significant influence on Tobin's Q through organizational development mechanism. The cross term of the ratio of customer capital to intangible assets passes the significance test at the level of 10%. Explanation is different from the resource integration mechanism, so it is necessary to do subsequent analysis of other variables. We know that Taiwan's electronics industry needs to adjust its organizational capabilities in recent years. Taiwan's electronics industry fusion to the

Yangtze river delta investment can promote the

performance of the organization, can the long-term layout in the twenty years of corporate performance, mainly in the Yangtze river delta overall management on the geographical position is suitable for Taiwan's electronics industry investment development, and further enhance the future of Taiwan's electronics industry company performance reflected in financial statements, for enterprise boss, shareholders and investors have certain indicators. The Yangtze River Delta has a good geographical location, including import and export of natural ports and intelligent capital resources suitable for Taiwan's electronics industry investment, which can be used for the layout of future corporate performance.

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Tables

Table 1. Variable

Variable name	Variable symbols	Variables defined
Enterprise net worth and value difference	Tobin's Q	The difference between a firm's market value and its book value
Human capital	Hu	Ln (total employees +1)
Innovation capital	in	R & D expenses/net operating income
The process of capital	pr	Net profit after tax/total number of employees
Customer capital	cu	Marketing expenses/net operating income
Resource integration	Dyn1	Intangible assets/total assets
Organizational development	Dyn2	The average growth rate of total assets, total profits, and operating income
The company size	Scale	The natural log of total assets
Enterprise age	Age	Subtract the date of incorporation from the date of the financial statement at the end of the current year
Debt ratio	Lev	The percentage of total corporate liabilities in total corporate assets
Asset growth rate	Growth	The growth rate of the original value of fixed assets
Proportion of directors and	DS	Number of shares held by the board of supervisors/total number

supervisors

of shares *100%

Table 2. Resource integration mechanism: human capital

	(1)	(2)	(3)	(4)
L.Tobin's Q	0.656*** (0.009)	0.348*** (0.012)	0.606*** (0.010)	0.479*** (0.071)
hu1	0.114*** (0.021)	0.097*** (0.023)	0.114*** (0.021)	0.406* (0.226)
L.hu1	-0.102*** (0.021)	-0.124*** (0.022)	-0.104*** (0.021)	-0.435** (0.215)
hu1_Dyn1	-1.041 (0.779)	-1.778** (0.772)	-1.132 (0.773)	-7.112 (8.159)
Lhu1_Dyn1	1.107 (0.782)	1.609** (0.776)	1.192 (0.776)	6.873 (8.150)
Scale	-0.014** (0.007)	-0.004 (0.022)	-0.013* (0.008)	0.024 (0.037)
Age	-0.056*** (0.014)	-0.296*** (0.083)	-0.075*** (0.016)	-0.111*** (0.030)
Lev	-0.268*** (0.038)	-0.237*** (0.069)	-0.302*** (0.042)	-0.458*** (0.096)
Growth	0.019 (0.013)	0.036*** (0.013)	0.021 (0.013)	-0.010 (0.021)
DS	-0.009 (0.043)	-0.001 (0.104)	-0.007 (0.049)	-0.058 (0.061)
Constant	0.829*** (0.089)	1.972*** (0.370)	0.970*** (0.101)	0.449 (0.323)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Observations	5950	5950	5950	5950
AR (1) test-p				0.000
AR (2) test-p				0.010
Hansen test-p				0.485

Note: ***, **, and * correspond to significance levels of 1%, 5%, and 10%, respectively. Figures in brackets represent the standard deviations of the estimated coefficients.

Table 3. Hausman test results

Test the model	The numerical
p	1024.18
Model selection	0.0000 Fixed effects

Table 4. Resource integration mechanism: Innovation capital

	(1)	(2)	(3)	(4)
L.Tobin's Q	0.659*** (0.009)	0.355*** (0.012)	0.581*** (0.010)	0.630* (0.359)
in1	-3.050*** (0.321)	-3.669*** (0.346)	-2.989*** (0.318)	-9.576 (6.750)
L.in1	3.459*** (0.331)	2.417*** (0.356)	3.433*** (0.326)	9.622 (7.003)
in1_Dyn1	-1.326 (9.023)	-11.622 (9.714)	-2.477 (9.046)	-26.332 (324.332)
Lin1_Dyn1	0.691 (9.281)	2.982 (10.015)	0.153 (9.295)	7.527 (316.339)
Scale	-0.002 (0.005)	-0.034* (0.020)	-0.002 (0.006)	-0.002 (0.016)
Age	-0.054*** (0.013)	-0.320*** (0.082)	-0.081*** (0.017)	-0.080 (0.101)
Lev	-0.283*** (0.038)	-0.308*** (0.069)	-0.340*** (0.045)	-0.467 (0.332)
Growth	0.033** (0.013)	0.046*** (0.013)	0.036*** (0.013)	0.014 (0.039)
DS	0.019 (0.043)	0.030 (0.101)	0.026 (0.052)	-0.083 (0.091)
Constant	0.683*** (0.084)	2.398*** (0.371)	0.915*** (0.104)	0.872 (0.975)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Observations	6006	6006	6006	6006
AR (1) test-p				0.012
AR (2) test-p				0.256
Hansen test-p				0.113

Note: ***, **, and * correspond to significance levels of 1%, 5%, and 10%, respectively. Figures in brackets represent the standard deviations of the estimated coefficients.

Table 5. Hausman test results

Test the model	The numerical
	1745.04
p	0.0000
Model selection	Fixed effects

Table 6. Resource integration mechanism: Process capital

	(1)	(2)	(3)	(4)
L.Tobin's Q	0.645*** (0.011)	0.277*** (0.016)	0.535*** (0.012)	0.423*** (0.102)
pr3	0.113*** (0.009)	0.129*** (0.010)	0.116*** (0.009)	0.080 (0.110)
L.pr3	-0.057*** (0.009)	0.016 (0.010)	-0.036*** (0.009)	0.103 (0.120)
pr3_Dyn1	0.898*** (0.334)	0.654* (0.347)	0.871*** (0.326)	8.270* (4.244)
Lpr3_Dyn1	-0.834** (0.331)	-0.732** (0.344)	-0.818** (0.324)	-7.197* (4.130)
Scale	-0.021*** (0.006)	-0.060* (0.034)	-0.031*** (0.008)	-0.078* (0.044)
Age	-0.053*** (0.016)	-0.270*** (0.104)	-0.093*** (0.021)	-0.092** (0.036)
Lev	-0.302*** (0.050)	-0.097 (0.108)	-0.339*** (0.061)	-0.398*** (0.130)
Investment	0.047*** (0.017)	0.056*** (0.017)	0.054*** (0.017)	0.050* (0.026)
DS	0.021 (0.053)	-0.053 (0.150)	0.017 (0.066)	-0.008 (0.105)
Constant	0.685*** (0.102)	1.734*** (0.533)	0.998*** (0.129)	0.526 (0.436)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Observations	4101	4101	4101	4101
AR (1) test-p				0.000
AR (2) test-p				0.178
Hansen test-p				0.652

Note: ***, **, and * correspond to significance levels of 1%, 5%, and 10%, respectively. Figures in brackets represent the standard deviations of the estimated coefficients.

Table 7. Hausman test results

Test the model	The numerical
	743.58
p	0.0000
Model selection	Fixed effects

Table 8. Resource integration mechanism: Customer capital

	(1)	(2)	(3)	(4)
L.Tobin's Q	0.664*** (0.009)	0.349*** (0.012)	0.601*** (0.010)	0.450*** (0.058)
cu1	-0.180 (0.138)	-1.719*** (0.284)	-0.277* (0.157)	-1.451* (0.754)
cu1_Dyn1	0.334 (2.722)	-8.506** (4.284)	-0.113 (2.963)	27.414 (29.603)
Scale	-0.007 (0.005)	-0.033 (0.020)	-0.008 (0.006)	-0.009 (0.011)
Age	-0.060*** (0.014)	-0.326*** (0.083)	-0.083*** (0.016)	-0.095*** (0.026)
Lev	-0.284*** (0.038)	-0.227*** (0.069)	-0.328*** (0.043)	-0.531*** (0.080)
Growth	0.027** (0.013)	0.044*** (0.013)	0.029** (0.013)	0.030** (0.013)
DS	0.009 (0.043)	0.037 (0.102)	0.012 (0.050)	-0.034 (0.062)
Constant	0.798*** (0.084)	2.419*** (0.372)	1.010*** (0.099)	1.461*** (0.237)
Year	Yes	Yes	Yes	Yes
Industry	6000	6000	6000	6000
Observations				0.000
AR (1) test-p				0.160
AR (2) test-p				0.132
Hansen test-p				0.652

Note: ***, **, and * correspond to significance levels of 1%, 5%, and 10%, respectively. Figures in brackets represent the standard deviations of the estimated coefficients.

Table 9. Hausman test results

Test the model	The numerical
p	1170.82
Model selection	0.0000
	Fixed effects

Table 10. Resource integration mechanism: Human capital

	(1)	(2)	(3)	(4)
L.Tobin's Q	0.642*** (0.009)	0.344*** (0.012)	0.564*** (0.010)	0.404*** (0.108)
hu1	0.081*** (0.019)	0.080*** (0.021)	0.084*** (0.019)	0.814*** (0.267)
L.hu1	-0.063*** (0.019)	-0.072*** (0.020)	-0.066*** (0.019)	-0.828*** (0.266)
hu1_Dyn2	0.139*** (0.026)	0.132*** (0.026)	0.140*** (0.026)	1.060*** (0.345)
Lhu1_Dyn2	-0.115*** (0.027)	-0.108*** (0.026)	-0.115*** (0.026)	-1.043*** (0.348)
Scale	-0.016** (0.007)	-0.035 (0.022)	-0.018** (0.008)	0.010 (0.029)
Age	-0.037*** (0.013)	-0.190** (0.079)	-0.063*** (0.016)	-0.064 (0.042)
Lev	-0.364*** (0.037)	-0.375*** (0.067)	-0.425*** (0.043)	-0.566*** (0.115)
Growth	-0.008 (0.013)	0.015 (0.013)	-0.002 (0.013)	-0.063** (0.030)
DS	-0.018 (0.042)	-0.071 (0.102)	-0.024 (0.050)	-0.015 (0.065)
Constant	0.784*** (0.085)	1.955*** (0.360)	1.023*** (0.103)	0.944** (0.407)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Observations	5782	5782	5782	5782
AR (1) test-p				0.000
AR (2) test-p				0.250
Hansen test-p				0.166

Note: ***, **, and * correspond to significance levels of 1%, 5%, and 10%, respectively. Figures in brackets represent the standard deviations of the estimated coefficients.

Table 11. Hausman test results

Test the model	The numerical
	1148.87
p	0.0000
Model selection	Fixed effects

Table 12. Resource integration mechanism: Innovation capital

	(1)	(2)	(3)	(4)
L.Tobin's Q	0.648*** (0.009)	0.353*** (0.012)	0.550*** (0.010)	0.613*** (0.075)
hu1	-0.561 (0.370)	-1.154*** (0.401)	-0.339 (0.366)	8.645*** (2.004)
L.hu1	1.075*** (0.362)	-0.074 (0.377)	0.870** (0.356)	-6.508*** (1.847)
hu1_Dyn2	0.013 (0.302)	0.222 (0.306)	0.174 (0.299)	-0.374 (1.486)
Lhu1_Dyn2	1.500*** (0.304)	1.221*** (0.306)	1.401*** (0.300)	3.729** (1.591)
Scale	-0.000 (0.004)	-0.043** (0.020)	-0.001 (0.006)	-0.001 (0.007)
Age	-0.040*** (0.013)	-0.242*** (0.080)	-0.071*** (0.017)	-0.014 (0.026)
Lev	-0.310*** (0.038)	-0.287*** (0.068)	-0.374*** (0.045)	-0.151* (0.077)
Investment	0.018 (0.013)	0.034*** (0.013)	0.023* (0.013)	-0.001 (0.018)
DS	0.024 (0.042)	0.086 (0.101)	0.034 (0.053)	0.075 (0.055)
Constant	0.621*** (0.081)	2.272*** (0.367)	0.909*** (0.107)	-0.171 (0.216)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Observations	5832	5832	5832	5832
AR (1) test-p				0.000
AR (2) test-p				0.265
Hansen test-p				0.207

Note: ***, **, and * correspond to significance levels of 1%, 5%, and 10%, respectively. Figures in brackets represent the standard deviations of the estimated coefficients.

Table 13. Hausman test results

Test the model	The numerical
	835.30
p	0.0000
Model selection	Fixed effects

Table 14. Resource integration mechanism: The process of capital

	(1)	(2)	(3)	(4)
L.Tobin's Q	0.626*** (0.011)	0.272*** (0.015)	0.505*** (0.012)	0.463*** (0.172)
pr3	0.058*** (0.009)	0.066*** (0.010)	0.055*** (0.009)	0.138 (0.102)
L.pr3	-0.005 (0.010)	0.089*** (0.011)	0.024** (0.010)	0.061 (0.115)
pr3_Dyn2	-0.003 (0.009)	0.017* (0.010)	0.001 (0.009)	-0.219 (0.173)
Lpr3_Dyn2	0.030*** (0.010)	0.013 (0.010)	0.028*** (0.010)	0.242 (0.168)
Scale	-0.013** (0.006)	-0.107*** (0.033)	-0.025*** (0.008)	-0.070** (0.030)
Age	-0.027* (0.016)	-0.125 (0.099)	-0.061*** (0.021)	-0.053 (0.066)
Lev	-0.476*** (0.051)	-0.379*** (0.106)	-0.547*** (0.061)	-0.489 (0.320)
Investment	0.007 (0.017)	0.026 (0.016)	0.017 (0.016)	-0.003 (0.034)
DS	0.023 (0.051)	-0.070 (0.144)	0.012 (0.066)	0.014 (0.086)
Constant	0.519*** (0.098)	1.984*** (0.512)	0.855*** (0.127)	0.000 (.)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Observations	4079	4079	4079	4079
AR (1) test-p				0.000
AR (2) test-p				0.986
Hansen test-p				0.144

Note: ***, **, and * correspond to significance levels of 1%, 5%, and 10%, respectively. Figures in brackets represent the standard deviations of the estimated coefficients.

Table 15. Hausman test results

Test the model	The numerical
	852.76
p	0.0000
Model selection	Fixed effects

Table 16. Resource integration mechanism: Customer capital

	(1)	(2)	(3)	(4)
L.Tobin's Q	0.657*** (0.009)	0.353*** (0.012)	0.574*** (0.010)	0.737*** (0.071)
cu1	0.369*** (0.126)	-0.696** (0.289)	0.318** (0.153)	-0.630 (0.849)
cu1_Dyn2	1.457*** (0.105)	1.319*** (0.111)	1.466*** (0.106)	1.284*** (0.488)
Scale	-0.002 (0.004)	-0.040** (0.020)	-0.005 (0.006)	-0.010 (0.010)
Age	-0.052*** (0.013)	-0.257*** (0.080)	-0.079*** (0.017)	-0.020 (0.027)
Lev	-0.325*** (0.037)	-0.274*** (0.068)	-0.388*** (0.044)	-0.280*** (0.082)
Growth	0.014 (0.013)	0.035*** (0.013)	0.020 (0.013)	-0.000 (0.015)
DS	-0.002 (0.042)	0.039 (0.102)	0.001 (0.052)	-0.027 (0.051)
Constant	0.702*** (0.080)	2.273*** (0.368)	0.973*** (0.100)	0.072 (0.236)
Year	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Observations	5828	5828	5828	5828
AR (1) test-p				0.000
AR (2) test-p				0.244
Hansen test-p				0.502

Note: ***, **, and * correspond to significance levels of 1%, 5%, and 10%, respectively. Figures in brackets represent the standard deviations of the estimated coefficients.

Table 1-17. Hausman test results

Test the model	The numerical
p	1077.57
Model selection	0.0000 Fixed effects