

IMPACT OF MEDIA REPORTS ON INNOVATIVE BEHAVIOURS OF PHOTOVOLTAIC ENTERPRISES: EXPERIENCE VIEW FROM CHINA

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ABSTRACT

With flourishing development of media industry, media have exerted more and more important functions in the capital market. For photovoltaic industry, which is an emerging industry, its innovative behaviours need support from the capital market. In order to investigate the influence of media reports on innovative behaviours of photovoltaic enterprises, 43 listed photovoltaic enterprises in China A-stock market were selected. 2013–2016 news reports related to photovoltaic enterprises were grabbed using Python method, and the influence mechanism of media reports on innovative behaviours of photovoltaic enterprise was explored. The results show that media reports facilitate innovative behaviours of photovoltaic enterprises. Facilitating effect of media reports on innovative behaviours of photovoltaic enterprises further strengthen with increasing business revenues of the enterprises. Policy-oriented media exert obvious effect on boosting innovative behaviours of photovoltaic enterprises, while market-oriented media have no significant influence. The conclusions contribute to further understanding of the effect exerted by media information dissemination on enterprises' innovative behaviours.

Keywords: photovoltaic enterprise, media reports, innovative behaviours

1. INTRODUCTION

As economic development has greater demand for electric energy, the acquisition of electric energy has become an important demand for sustainable socio-economic development. Solar power generation, as a clean energy, has become an important present means of compensating for the gap of electric energy. Solar photovoltaic power generation is a new technology using renewable resource – solar energy with advantages of cleanness, no pollution and renewable property, and it has played a significant role in energy development process. Nowadays solar photovoltaic power generation is one of the ideal alternative energy sources and exerts important effect on solving global energy shortage problem. Thus, photovoltaic industry has enjoyed rapid development.

For photovoltaic enterprises, innovation ability in related technologies like purification of silicon material, improvement of commercial silicon slice thickness, battery energy storage technology, design and installation of photovoltaic power generation system and purification of integrated silicon material has constituted the core enterprise competitiveness. Factors like background of management layer, economic system, legal environment and enterprise governance structure will affect implementation of technological innovation activities of photovoltaic enterprises [1–4]. With emergence of information economics, influence degree of media reports on enterprise innovative beha-

viours has been gradually deepened, especially EU conducted anti-dumping investigation on photovoltaic soda lime plate glass products with characteristics of iron content being lower than 300 ppm and solar transmittivity being over 88 % from China in 2013, which caused Sino-European photovoltaic trade dispute. Mass reports of related news media resulted in fluctuation of enterprise R&D input. Theoretical exploration shows that influence of media reports on enterprise innovative behaviours is realized mainly by three means: manager behaviours are improved through intervention of administrative and judicial departments due to news reports; corporate governance is improved by influencing reputation of enterprise management layer; management layer is influenced by market pressure mechanism [5]. Especially photovoltaic enterprises have long R&D cycle in aspects of monocrystalline silicon battery technology, polycrystalline silicon ingot casting technology, highly efficient battery technology, industrialized technology of crystalline silicon battery and special solar cell module technology, and how uncertainty of news media reports impacts innovative behaviours of photovoltaic enterprises needs further analysis.

On this basis, 2013–2016 news reports related to photovoltaic enterprises in Baidu news were grabbed using Python method as proxy variables of media reports. Proportions of total R&D expenditures of 43 photovoltaic enterprises listed in China A-stock market in business revenues were used to measure their innovative behaviours. The empirical analysis was carried out for influence mechanism of media reports on innovative behaviours of photovoltaic enterprises using a panel measurement model. The effect of media information dissemination on enterprise innovative behaviours was further revealed. The remainder of this paper is organized as follows: section 2 consists of literature review and research hypotheses, which are proposed through organizing related literatures; section 3 is data and model design; section 4 presents results analysis and discussion; section 5 draws research conclusions.

2. LITERATURE REVIEW AND RESEARCH HYPOTHESES

In terms of researches on the effect of media reports on capital market, relevant scholars have carried out discussion from corporate governance angle

of media. As important external monitoring means, media generate important influence on capital market through news reports on enterprises and facilitate improvement of enterprise management behaviours by means of administrative intervention, reputation of management layer and external pressure. As for effect of media reports on enterprises, most scholars believe that media can exert external supervising effect and facilitate improvement of enterprise governance structure [6–8]. Some scholars have drawn the conclusion that media form external pressure on enterprise management layer so as to manipulate enterprise earnings management [9]. No matter that media reports exert market supervising effect of generating market pressure. The influence of media reports on enterprise behaviours is irrefutable. Because the enterprise innovations are long-term investment behaviour full of uncertainties, it is needed the enterprise should tolerate short-term risk [10]. In terms of internal management layer of the enterprise, it is keener on investing on those projects with low risk and fast benefit gain out of consideration of its own benefit [11], and this is so-called principal-agent problem. Media reports can effectively reduce agency cost through external supervising mechanism so as to strengthen supervision of management layer, eliminate enterprise short-sighted behaviours and facilitate the management layer to enhance innovation. Therefore, hypothesis 1 is proposed:

Hypothesis 1: *Media reports will promote innovative behaviours of photovoltaic enterprises.*

In terms of technology-intensive photovoltaic enterprises, technological innovation is core competitiveness. Continuous improvement of innovation ability is an important path to improve its own core competitiveness [12]. Within the enterprise, innovation is a systematic project needing its powerful financial support as backup force, and financial support is a beneficial guarantee for innovative quality [13]. In aspect of the relationship between external capital and enterprise innovative behaviours, Brown et al. [14] discussed influence of external financing environment on enterprise innovative behaviours, and found that enterprise revenue in stock market improved its risk tolerance degree so as to enhance innovative force. Leiming et al. [15] found that enterprise innovative capital came from venture investment. Relative to bank capital or stock market, venture investment could more tolerate short-term failure and risk so as to facilitate innovation. Hui-

dong et al. [16] discussed influence of external capital on enterprise innovative behaviours from bond financing angle, and found that internal capital is of greater freedom and flexibility for enterprises. For rapidly growing photovoltaic enterprises, they can use acquired revenues to provide continuous support for enterprise innovation so as to form benign interaction between enterprise innovation and growth. Therefore, good financial status is the precondition for enterprises to conduct innovative behaviours. Hypothesis 2 is obtained:

Hypothesis 2: *Favourable business revenue growth of the enterprise exerts positive regulating effect under the precondition of media reports, namely expanding the positive influence of media reports on enterprise innovative behaviours.*

In the era of big data, diversification of information acquisition channels has become an indispensable constituent part in daily life. Content created by media information and its depth as well as transmission speed and breadth of media information play a vital role in exertion of media information effect during media “information creation – information transmission – information effect” [17]. For the print media reports, they can be divided into policy-oriented media and market-oriented media. Some scholars have carried out a large number of researches on corporate governance effects of the two-type media report. Miller [18] found that compared with policy-oriented media, market-oriented media had more significant governance effect on enterprises. Policy-oriented media served the government and its reports on enterprise behaviours would draw concern from supervision department, so it could generate supervising effect on enterprise management layer so as to improve enterprise governance effect [19]. Dongyan [20] investigated the influence on media reports on enterprise earnings management behaviours, and found that relative to policy-oriented media, market-oriented media brought about higher pressure to management layer. As for enterprise innovative behaviours, market-oriented media and policy-oriented media have different influences. For policy-oriented media, media reports on enterprises can make the enterprises obtain greater innovative capital support from governmental level so as to further facilitate enterprise innovative behaviours. For market-oriented media, its audience groups are different from those of policy-oriented media due to lack of authority, and influence of market-oriented media reports on enterprise

innovative behaviours is insignificant. Therefore, hypothesis 3 is proposed:

Hypothesis 3: *Policy-oriented media will exert facilitating effect on innovative behaviours of photovoltaic enterprises while market-oriented media have insignificant influence on innovative behaviours of photovoltaic enterprises.*

3. METHODOLOGY, DATA AND VARIABLES

3.1. Data Source and Variables

As for selection of proxy indicators of network media reports, day parting searching of Chinese listed photovoltaic enterprises in 2013–2016 Baidu news (www.news.baidu.com) was conducted using Python method, and annual news quantities containing enterprise abbreviations were selected as indicators of network media reports. In order to prevent data accuracy problem generated by change of enterprise names, abbreviations of listed photovoltaic enterprises in different years were respectively searched. In terms of selection of reports made by policy-oriented media and market-oriented media, this study referred to method of Peigong et al. [21]. China Securities Journal, Securities Daily, Securities Times and Shanghai Securities News were selected as policy-oriented media and 21st Century Business Herald, The Economic Observer, CBN Daily and China Business were selected as market-oriented media. The 8 newspapers were grabbed in “Duxiu” database. Their news reports on listed photovoltaic enterprises were summarized into corresponding policy-oriented media report quantities and market-oriented media report quantities.

As for selection of enterprise innovation indicators, total R&D expenditures and R&D expenditure proportions of the above listed enterprises were taken as proxy variables of enterprise innovation. Meanwhile with a reference to precedent experience, rate of return on total assets (ROA), enterprise size (SIZE), asset-liability ratio (LEV), salary of enterprise management layer (SALARY), growth rate of business revenue (Grow), institutional shareholding ratio (ISR) and proportion of liquid asset in total assets (Liqu) were selected as control variables to verify influence of media reports on enterprise innovative behaviours. All of the above data derived from WIND database. Due to data availability, sample cycles were selected as years from 2013 to 2016.

Table 1. Definitions and Descriptions of Variables

Variable name	Definition	Descriptions
MEDIA1	Network media reports	Stock abbreviations of listed photovoltaic enterprises in Baidu news are searched to obtain network media report quantities. MEDIA1=LN (1+ number of media reports)
MEDIA2	Policy-oriented media reports	News reports by four newspapers – China Securities Journal, Securities Daily, Securities Times and Shanghai Securities News – on listed photovoltaic enterprises are searched through the “Duxiu” database to obtain policy-oriented media report quantities. MEDIA2=LN (total report quantity of 1 +4 media)
MEDIA3	Market-oriented media reports	News reports by four newspapers-21st Century Business Herald, The Economic Observer, CBN Daily and China Business – are searched through the “Duxiu” database to obtain quantities of market-oriented media reports. MEDIA3=LN(total report quantity of 1+4 media)
BILI	Proportion of enterprise expenditure in innovation	Total R&D expenditure/business revenue
HEJI	Total enterprise expenditure in innovation	Natural logarithm of total enterprise R & D expenditure
Liqu	Asset liquidity	Liquid asset/total asset
Grow	Growth rate of business revenue	Growth of business income/total business revenue in the last quarter
LEV	Asset-liability ratio	Total liabilities/total assets
ROA	Rate of return on total assets	Net profit/average total assets
ISR	Institutional shareholding ratio	Proportion of total quarterly institutional shareholdings in tradable shares of the listed enterprise
SIZE	Enterprise’s total assets	Natural logarithm of average quarterly assets of the listed enterprise
SALARY	Salary of management layer	Total annual salary of enterprise management layer

Definitions and descriptions of the variables are shown in Table 1.

3.2. Model

According to research hypotheses, panel data models were established to analysis the influence of media reports on innovative behaviours of photovoltaic enterprises, and concrete model setting was as below:

$$HEJI_{i,t} = u_i + \beta_1 MEDIA1_{i,t} + \beta_2 ROA_{i,t} + \beta_3 ISR_{i,t} + \beta_4 Liqu_{i,t} + \beta_5 LEV_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 SALARY_{i,t} + Year + \varepsilon_{i,t} \quad (1)$$

$$HEJI_{i,t} = u_i + \beta_1 MEDIA1_{i,t} + \beta_2 MEDIA1_{i,t} \times Grow_{i,t} + \beta_3 Grow_{i,t} + \beta_4 ROA_{i,t} + \beta_5 ISR_{i,t} + \beta_6 Liqu_{i,t} + \beta_7 LEV_{i,t} + \beta_8 SIZE_{i,t} + \beta_9 SALARY_{i,t} + Year + \varepsilon_{i,t} \quad (2)$$

Table 2. Statistical Description of Variables

Variable	Number of observations	Mean	Standard deviation	Minimum	Maximum	Skewness	Kurtosis
MEDIA1	172	5.947	1.006	4.454	10.127	2.196	9.467
MEDIA2	172	1.279	0.969	0	3.871	0.096	2.031
MEDIA3	172	0.595	0.785	0	3.296	1.103	3.458
BILI	172	0.033	2.840	0	0.201	2.268	12.31
HEJI	172	15.895	5.922	0	21.139	-2.183	6.157
ROA	172	0.021	0.089	-0.645	0.182	-4.227	28.32
LEV	172	0.515	0.188	0.059	0.972	-0.138	2.959
Liqu	172	0.476	0.215	0.035	0.943	-0.291	2.429
Grow	172	0.118	0.258	-0.464	1.196	1.494	7.152
SIZE	172	22.28	1.165	20.22	26.33	0.674	3.997
ISR	172	0.466	0.170	0.047	0.865	-0.2662	2.597
SALARY	172	5.163	0.542	4.193	6.973	0.737	3.991

$$\begin{aligned}
 HEJI_{i,t} = & u_i + \beta_1 MEDIA2_{i,t} + \beta_2 Grow_{i,t} + \\
 & + \beta_3 ROA_{i,t} + \beta_4 ISR_{i,t} + \beta_5 Liqu_{i,t} + \beta_6 LEV_{i,t} + \dots \quad (3) \\
 & + \beta_7 SIZE_{i,t} + \beta_8 SALARY_{i,t} + Year + \varepsilon_{i,t}
 \end{aligned}$$

$$\begin{aligned}
 HEJI_{i,t} = & u_i + \beta_1 MEDIA3_{i,t} + \beta_2 Grow_{i,t} + \\
 & + \beta_3 ROA_{i,t} + \beta_4 ISR_{i,t} + \beta_5 Liqu_{i,t} + \beta_6 LEV_{i,t} + \dots \quad (4) \\
 & + \beta_7 SIZE_{i,t} + \beta_8 SALARY_{i,t} + Year + \varepsilon_{i,t}
 \end{aligned}$$

In the above models, model 1 was used to verify the influence of media reports on innovative behaviours of photovoltaic enterprises. Interactive terms between growth rate of enterprise business revenue and media concern were added to model 2. Model 3 was used to analyze the influence of policy-oriented media on innovative behaviours of photovoltaic enterprises. Model 4 was used to verify the influence of market-oriented media on innovative behaviours of photovoltaic enterprises. *i* represents enterprise and *t* represents year.

4. RESULTS ANALYSIS AND DISCUSSION

4.1. Descriptive Statics and Correlation Testing

Table 2 shows descriptive statistical results of variables. From media report quantities, report quan-

tity of network media was far larger than those of policy-oriented media and market-oriented media, indicating enormous influence of network media on the society. Moreover, kurtosis and skewness of all variables were small, indicating that all variables presented concentrated distribution with strong symmetry.

In order to control collinearity between variables, Pearson correlation analysis between variables was conducted. Network media report quantity represented media report and total expenditure in innovation represented innovative behaviour of photovoltaic enterprises. According to test results in Table 3, the correlation between model variables was low without multicollinearity, which guaranteed scientificity and feasibility of model setting and variable selection.

4.2. Hypothesis Testing

Table 4 describes the influence of media concern on enterprise innovation. Model 1 investigated the influence of network media reports on innovative behaviours of photovoltaic enterprises. Interactive terms between growth rate business revenue and network media reports were added to model 2 to verify regulating the effect of the receivable growth rate on innovative behaviours of photovoltaic enterprises on the precondition of media reports. Model 3 studied the influence of policy-ori-

Table 3. Correlation Test of Variables

	HEJI	MEDIA1	SALARY	ROA	ISR	Liqu	Grow	LEV	SIZE
HEJI	1.000								
MEDIA1	0.193**	1.000							
SALARY	0.239***	0.090	1.000						
ROA	0.171**	-0.026	0.282***	1.000					
ISR	0.161**	0.337***	0.135***	0.212***	1.000				
Liqu	0.396***	0.016	0.143*	-0.011**	-0.006	1.000			
Grow	0.111	0.062	0.179**	0.095	-0.002	0.184**	1.000		
LEV	-0.156**	0.109	0.060	-0.299**	0.039	-0.151**	-0.052	1.000	
SIZE	0.185**	0.287***	0.286***	0.164**	0.304***	-0.386**	-0.051	0.319***	1.000

Notes: *, ** and *** represents significance on the 10 %, 5 % and 1 % level, respectively.

ented media reports on innovative behaviours of photovoltaic enterprises. Model 4 investigated the influence of market-oriented media reports on innovative behaviours of photovoltaic enterprises. Regression results are seen in Table 4.

Model 1 verified the influence of network media reports on innovative behaviours of photovoltaic enterprises. According to results, media report coefficient was 1.635 which reached 5 % significance level, namely every time network media reports increased by 1 percentage, enterprise R & D expenditure would increase by 1.635, percentages. Results show that as network media report quantity of enterprises increases, photovoltaic enterprises will enlarge R&D input, which verifies enterprise governance effect of media, it means that media increase exposure degree of enterprises through reporting on listed photovoltaic enterprises, reduce information asymmetry of capital market and generate supervising effect on enterprise management layer. Media reports on advantages of photovoltaic power generation like cleanness, safety, universality, free maintenance, resource sufficiency and potential economic efficiency [22], which can further expand market acceptance degree of photovoltaic products. Enterprises will adopt behaviours which are more helpful for long-term enterprise development like enlarging R&D input so as to strengthen enterprise competitiveness. Hypothesis 1 was verified. Therefore, media should take full advantage of enterprise governance effect of media reports, en-

large information report and information disclosure of listed enterprises and relieve information asymmetry in the market so as to form constraint over enterprise management layer. Meanwhile, long-term supervising mechanism of media should be established so as to reinforce reports on listed photovoltaic enterprises and conduct ongoing reports on enterprise behaviours. As a result, agency cost will be reduced and short-sighted behaviours of enterprise management layer will be eliminated. Moreover, enterprises will input more capital and energy into technological research and development link so as to promote long-term healthy development [23].

Interactive terms between growth rate of enterprise business revenue and network media reports were added to model 2. It could be known from model results that network media reports presented significant positive correlation with enterprise innovative behaviours. In addition, interactive term coefficients, on which the emphasis was laid, were significant positive values, indicating that growth of business revenue had positive regulating effect on enterprise innovative behaviours: with increase of media reports, growth of enterprise business revenue further boosted promoting effect of media reports on enterprise innovation. According to previous analysis in this study, favourable financial status and development trend constituted foundation for enterprise innovation. Enterprise capital strength would be stronger with its rapid development and it would put efforts into research and develop-

Table 4. Regression Analysis Results

Variable	Model 1	Model 2	Model 3	Model 4
MEDIA1	1.635** (2.20)	1.406* (1.92)		
MEDIA2			0.962*** (2.66)	
MEDIA3				0.481 (1.03)
MEDIA1*Grow		1.666* (1.70)		
Grow		-10.875 (-1.33)	-0.674 (-0.58)	-0.616 (-0.50)
LEV	2.724 (0.68)	2.216 (0.56)	1.632 (0.41)	1.706 (0.42)
ISR	0.735 (0.16)	0.546 (0.12)	0.943 (0.21)	2.402 (0.53)
SIZE	-1.908* (-1.84)	-1.835* (-1.77)	-1.749* (-1.70)	-1.662 (-1.57)
Liqu	0.028 (0.01)	-0.078 (-0.02)	-0.464 (-0.09)	-0.688 (-0.13)
ROA	-0.097 (-0.02)	0.133 (0.03)	-0.741 (-0.19)	-1.413 (-0.35)
SALARY	-0.478 (-0.38)	-0.327 (-0.26)	-0.567 (-0.46)	0.016 (0.01)
Constant	47.75** (2.05)	45.70** (1.98)	53.858** (2.30)	49.473** (2.07)
Year	Control	Control	Control	Control
Adj R-squared	0.19	0.20	0.20	0.16
N	172	172	172	172

Notes: *, ** and *** represents significance on the 10 %, 5 % and 1 % level, respectively. Number in the brackets is the standard error (Se).

ment. Therefore, positive influence of media reports on enterprise innovative behaviours would be further reinforced with growth of enterprise business revenue, and then hypothesis 2 was verified.

Model 3 explored the influence of policy-oriented media reports on innovative behaviours of photovoltaic enterprises, and media report coefficient was 0.962 with statistical significance. This indicated that every time policy-oriented media reports increased by 1 percentage, the enterprise R&D expenditure would increase by 0.962 percent. Thus, it could be seen that enterprise innovative behaviours would be further improved with growth of report

quantity made by policy-oriented media. From the previous analysis in this study, policy-oriented media had governmental background, so their news reports were of certain authority and would generate great influence on enterprise management layer. Reports made by policy-oriented media on listed photovoltaic enterprises represented governmental voice to a considerable degree, and on the one hand, it would facilitate enterprise management layer to improve enterprise management, while on the other hand, it would enlarge governmental capital support for enterprise innovation. As a result, the enterprise would enlarge innovative R&D input.

Table 5. Robustness Test

Variable	Model 1	Model 2	Model 3	Model 4
MEDIA1	0.180** (2.47)	0.159** (2.32)		
MEDIA2			0.078** (2.35)	
MEDIA3				-0.004 (-0.08)
MEDIA1*Grow		0.232* (1.91)		
Grow		-1.909** (-2.57)	-0.497*** (-4.48)	-0.499 (-4.39)
LEV	0.234 (0.59)	0.129 (0.35)	0.048 (0.13)	0.047 (0.13)
ISR	-0.157 (-0.35)	-0.073 (-0.18)	0.069 (0.17)	0.265 (0.63)
SIZE	-0.181* (-1.78)	-0.136 (-1.45)	-0.125 (-1.31)	-0.112 (-1.15)
Liqu	-0.749 (-1.50)	-0.738 (-1.61)	-0.821* (-1.77)	-0.855* (-1.80)
ROA	0.244 (0.61)	0.373 (1.02)	0.225 (0.62)	0.146 (0.39)
SALARY	-0.027 (-0.22)	0.021 (0.19)	0.016 (0.14)	0.084 (0.72)
Constant	4.38** (1.92)	3.38 (1.61)	3.99* (1.85)	3.44 (1.56)
Year	Control	Control	Control	Control
Adj R-squared	0.17	0.32	0.29	0.26
N	172	172	172	172

Notes: *, ** and *** represents significance on the 10 %, 5 % and 1 % level, respectively. Number in the brackets is the standard error (Se).

Model 4 explored the influence of market-oriented media reports on innovative behaviours of photovoltaic enterprises. It's found that media report coefficient was not significant. This indicated increase of report quantity made by market-oriented media on photovoltaic enterprises would not generate significant influence on enterprise innovative behaviours, possibly because market-oriented media lacked constraint effect on enterprise management layer compared with policy-oriented media. Their news reports could not receive enough attention from enterprise management layer, which would not react to market-oriented media reports, so enterprise government effect of these

media could not be generated. Hypothesis 3 was verified then.

Based on analysis results, both network media reports and policy-oriented media reports have significant positive effects on enterprise innovative research and development. Therefore, media themselves will enhance their reports on photovoltaic enterprises and take full advantages of their enterprise governance effect in order to improve enterprise innovative behaviours. Market-oriented media will intensify negative reports on photovoltaic enterprises so as to form supervising effect on enterprise management layer and realize enterprise governance effect of market-oriented media.

4.3. Robustness Test

In order to verify the reliability of the above results, proportion of R&D expenditure of listed photovoltaic enterprises was taken as proxy variable of enterprise innovative behaviour while other variables were unchanged to conduct regression analysis. Results are seen in Table 5.

As seen in Table 5, network media and policy-oriented media still have positive promoting effect on enterprise innovative behaviours. But influence of market-oriented media on enterprise innovative behaviours is insignificant. As for regulating effects of enterprise business revenue on media reports and enterprise innovative behaviours, results in model 2 still show significant positive regulating effect. It means that after replacement of explained variable, model results are basically identical with previous part in this study, which verified reliability of the conclusions.

5. CONCLUSIONS

Media reports and innovative behaviours of photovoltaic enterprises were taken as research objects in this study. Network media reports, policy-oriented media reports and market-oriented media reports on photovoltaic enterprises were extracted using Python method. Panel models were established to verify the influence of media reports on enterprise innovative behaviours. The following conclusions are then obtained.

(1) Media reports exert positive promoting effect on innovative behaviours of photovoltaic enterprises.

(2) Positive promoting effect of media reports on R&D innovation of photovoltaic enterprises is further enhanced with growth of enterprise business revenue.

(3) Policy-oriented media exert obvious boosting effect on innovative behaviours of photovoltaic enterprises while influence of market-oriented media on innovative behaviours of photovoltaic enterprise is insignificant.

Besides type division, media reports can also be divided according to nature of reported contents. Total media report quantity can represent media concern, but for enterprises, influence degree of negative reports on enterprises is greater. In further research, the influence of positive and negative media reports on enterprise innovative behaviours can

be discussed through division of media report contents so as to enrich researches within this field.

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