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THE MEDIATING EFFECT OF RESEARCH AND DEVELOPMENT AND FINANCIAL RESOURCE ON CORPORATE SOCIAL PERFORMANCE IN ASIAN COUNTRIES COMPANIES

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Abstract

The aim of the paper is to find out the relational effect between Corporate Financial Performance (CFP) and Corporate Social Performance (CSP). This paper could facilitate a better understanding of the relationship between CFP and CSP. The mediating effect between CFP and CSP, by applying was examined regression and mediation analysis. The study found that innovation was a critical factor in the relationship between CFP and Corporate Social Performance (CSP). Therefore, the investment of financial resources in innovation initiatives is one of the most important factors, which would help increase CSP.

Keywords: Corporate Social Performance, Corporate Financial Performance, Research and Development
Jel Code: M14, G3, O3

Introduction

A responsible company should consider the social and environmental impact of its business processes and collaborate with its customers and suppliers. Besides, firms need to be supportive of its employees. The Corporate Social Performance (CSP) implies that the firms do something extra for its stakeholders beyond their usual expectations and requirements (**Doane, 2005**). CSR has become increasingly relevant for the managers at all levels and it is an attractive field of study, with a number of research questions still to be answered (**Aguinis, H 2012**). The majority of research studies have investigated the relationship between CSP and the financial performance of firms. **Williams and Siegel (2000)** proved that CSR was positively correlated with Research and Development (R&D) intensity. Few other research studies corroborates the finding that there was correlation between Research and Development and Corporate Social Performance (**Hull and Rothenberg, 2008**).

Corporate Social Responsibility as Strategic Approach

As the strategic approach to CSR, the business resources are invested to produce both financial and non-financial values to the firms. But every business needs to create value-generating investments so as to achieve socially responsible objectives. Therefore, to implement CSR activities and pursue CSP, the managers must strategically allocate financial resources. The role of innovation plays a role in the relationship between CFP and CSP, which are considered very important (**Pasquale Ruggiero and Sebastiano Cupertino, 2018**). CSR theory was mainly focused on firm's obligation and accountability to society (**Valor, 2005**). The concept of Corporate Social Performance is adopted to emphasize the outcomes of CSR activities (**Wood. D.J., 1991**). CSP is measured in terms of CSR ratings as these proxies offer the greatest credibility and transparency (**Dhanasekar et al., 2019 and Gjoberg, 2009**).

Importance of Financial Resources and Corporate Social Performance

Limited studies have examined the relationship between CFP and CSR outcomes or CSP (**Wood, D.J., 1991**). The adoption of new processes and technologies could be the way towards balancing the potential conflicts, between stakeholders and social purposes. The availability of financial resources could be among the most important conditions for investment in CSR-innovation initiatives (**Donaldson, 1995**). Besides, the achievement of higher CFP could be considered as a stimulus, that boosts the implementation of socio-environmental and ethical activities, geared towards enhancing CSP.

The studies on corporate social performance are important for the firms so as to ensure that there is no gap between social goals and business actions. **Friedman (1962)**, **Mahon (1997)** and **Ruf et al., (2001)** argued that the main responsibility of a company is to look after its performance and its shareholders' welfare. Therefore, it is considered that the expenditures for social goals, should not be in violation of management's responsibility (**Carroll, 2010**). Firms, in order to sustain their existence, highly depend on society. Therefore, firms constantly strive to pattern their activities to serve the society so that they are in congruence with the goals of the overall social system (**Sethi 1979**). Firms need to maintain legitimacy and social support, besides satisfying the expectations of its stakeholders (**Husted, 2000**). In other words, firms should concentrate on their social performance also more importantly, firms need to focus on developing indicators for measuring its social performance and to generate all relevant information on which the future actions (i.e., management initiatives) of the firms could be based on (**Warhurst, 2002**).

Global100 in Corporate Knights

The Global 100 was created by Corporate Knights Magazine in 2005. The goal of creating such index was to devise a methodology, to quantitatively compare and rank the world's largest public companies (https://en.wikipedia.org/wiki/The_Global_100). The list is compiled by Toronto-based Media and Investment Advisory Firm (www.corporateknights.com). Each year, the latest iteration of the index is announced at the World Economic Forum in Davos, Switzerland.

Review of Literature

A few select studies are reviewed briefly here. **Wood (1991)** examined the Corporate Social Performance, as essentially an organization's response to fulfill the expectations and demands of Corporate Social Responsibility. **Wang, S (2015)** identified the level of research on Corporate Social Responsibility, that has grown significantly in recent years. **Maon, F. et al. (2009)** stated that CSR is an area in which the companies are no longer merely expected to passively report the results, that are indirectly achieved through their core activities but the firms must manage CSR as a specific area of performance on its own. **Branco, M.C. and Rodrigues, L.L. (2006)** identified previous studies, that have summarized the impact of CSP on CFP, by citing firms with higher CSP, differentiating themselves from their competitors through the production of internal and external benefit. **Carroll and Shabbana (2010)** stressed that the CSR practices need to be adapted to cope up with changing social and environmental demands and such practices always reward the firms for meeting the expectations of shareholders. **Preston and O'Bannon (1997)** debated the relationship between CSP and CFP that could be positive, neutral, and negative. **Du, S. et al., (2011)** examined the external benefits of CSR, that could be related to its effect on corporate reputation, resulting in the development of better relations with external key business supporters, such as public administrations and the investors.

The earlier studies concentrated on financial resources and Corporate Social Performance. But there was gap on innovations into CSR. Therefore, this study examines the mediating effect of innovation into CSR, its financial resources and CSP of Asian companies.

Statement of the Problem

This research proposes to analyse the CSR management approach which is related to the strategy fit with other dimensions of company strategy. The CSR dimension of a strategy must necessarily fit with its financial dimension. There is need to correlate the two strategic dimensions - one is company strategy and another one is about implementation of CSR. The direct and indirect availability of adequate financial

resources is important in evaluating the feasibility of any strategy of CSR. The CSR strategy is required for proper fit with a firm’s financial situation. In other words, good CSP results are based on non-instrumental theories of CSR. It should be achieved in concomitance with good financial performance and profitability in particular. The greater profitability of a company helps to improve the financial flexibility and it strongly affects the decision-making of firms’ management. The Corporate Social Performance is a relevant research topic as it is an emerging corporate issue in Asian companies. Previous research studies focused on all the companies of Global 100 with limited data, but this study focused only on Asian companies and examined the relationship between Corporate Social Performance and Corporate Financial Performance and Innovation of the firms. Besides, exactly measuring CSP and CFP is a great challenge. Therefore, this study attempts to address the problems of measurement of CSP, CFP and Innovation of Asian firms.

Need of the Study

Some earlier studies focused only on relationship between CSP and CFP, with reference to a particular country and sector wise listed companies. But this study concentrated on Asian Companies, listed in Global 100 Ranking. Therefore, this study would fill the gap in the previous research. This study would also be helpful to all the stakeholders of corporate firms, to clearly understand the relationship and impact on Corporate Social Performance by Corporate Financial Performance and Innovation in Asian companies.

Objectives of the Study

The main objective of the study was to find out the mediating effect of (normality, relationship and impact) Financial Resources and Research and Development on the Corporate Social Performance of Asian Companies.

Hypothesis of the Study

- NH1** - There is no normality of data of Corporate Social Performance, Financial Resources and Research and Development of Asian Countries Companies.
- NH2** - There is no relationship between Corporate Social Performance, Financial Resources and Research and Development of Asian Countries Companies.
- NH3** - There is no impact on Corporate Social Performance by Financial Resources and Research and Development of Asian Countries Companies.

Research Methodology

a. Sample Selection

As pointed out earlier, the Corporate Knights research unit periodically screens about 4000 listed mid-size and large companies, to develop the annual ranking of the top 100 worldwide corporate leaders, in CSR. The sample selection of the study covers Global 100 Index Companies. Out of 100 companies, this study covered all the 16 companies of Asian Countries as follows: China (1 Company), Japan (6 Companies), Singapore (5 Companies), and South Korea (4 Companies). Finally, 16 companies were selected as the sample size. The names of sample companies are given below:

Name of the Country	Name of the company
I. China	1. Lenovo Group Ltd
II. Japan	1. Takeda Pharmaceutical Co Ltd
	2. Sysmex Corp
	3. Honda Motor Co Ltd
	4. NEC Corp
	5. Astellas Pharma Inc

III. Singapore	6. Nissan Motor Co Ltd
	1. Keppel Land
	2. City Developments
	3. CapitaLand
	4. Singapore Telecommunications Ltd
IV. South Korea	5. StarHub
	1. Posco
	2. Samsung Electronics Co Ltd
	3. LG Electronics Inc
	4. Shinhan Financial Group Co Ltd

Source: Data collected from www.corporateknights.com

b. Data Collection

The required secondary data were collected from Corporate Knights www.corporateknights.com and other reputed websites like www.asia.nikkei.com. The other required data were collected from various books, journals and magazines.

c. Period of the Study

The study covered a period of three years from 2015 to 2018.

d. Variables Used

For measuring Corporate Social Performance, one variable, namely, Global100 was used as the independent variable and for testing Financial Resource, variables such as ROA and Size were used. For measuring innovation, the variable, namely, Research and Development, was used as the dependant variable for the purpose of this study.

e. Tools used for Analysis

- **Descriptive Statistics** (for analyzing the normality of data relating to Corporate Social Performance, Financial performance and Research and Development)
- **Correlation analysis** (for finding the relationship between Corporate Social Performance, Financial Resources and Research and Development) and
- **Regression analysis** (for finding the impact on Corporate Social Performance, Financial Resources and Research and Development).

a. Normality of Corporate Social Performance, Financial Performance and Innovation in Asian companies

Table-1 shows the results of descriptive statistics, for the sample variables of Corporate Social Performance, Financial Performance and Innovation, during the study period of four years from 2015 to 2018. The normality of sample variables, using the Mean, Maximum, Minimum, Standard Deviation, Skewness and Kurtosis, was tested. To analyse CSP variable namely, Global 100, Financial Performance variables like ROA and Size and Innovation variable, Research and Development were used in this study, to examine normality of data. According to **Table – 1**, the highest mean value for CSP variable, namely, Global was recorded at 0.6216 in 2018 while the lowest value of CSP (Global) was registered at 0.5785, in 2015. The highest mean value of CFP variable, namely, ROA was recorded at 13.2832, in 2017 and the lowest value of Size was registered at 4.1793, in 2015. The highest mean value of innovation variable, namely, R&D was recorded at 0.0659 while the lowest value of R&D was at registered at 0.0483. The highest maximum value of CSP variable, namely, Global was recorded at 0.7577, in 2018 and the lowest

value of CSP variable recorded at 0.6738 in 2017. These values helped to achieve normality in CSP, CFP and Innovation. At the same time, the highest minimum value of CSP (Global) was registered at 0.5396, in 2017 while the lowest value was recorded in the year 2015, at 0.5045. The CFP variable, namely, ROA was registered at 0.0068, in 2017 and the lowest value was recorded at -33.9312, in 2015. The highest minimum value of innovation (R&D) was registered at 0.0040, in 2016 and the lowest value of R &D was at 0.0010, in 2015. Highest Standard Deviation value of CSP variable, namely, Global was recorded at 0.0647, in 2016 and the lowest value was registered at 0.418, in 2017. The uppermost value of CFP variable namely ROA was at 30.5091 in 2017 and the lowest value was at 22.3885 in 2015. The innovation variable, namely, R & D recorded the highest value in 2018, at 0.0679 while the lowest value was at 0.0560, in 2015. In the year 2017, the CSP variable, namely, Global recorded the highest value of Skewness, at 1.137 and the lowest value was at 0.577, in 2016. The highest skewed value of CFP (ROA) was registered at 3.289, in 2017 and the lowest value was recorded at 1.699, in 2015. The highest skewed value of innovation (R&D) was at 1.783, in 2017 while the lowest value was registered at 1.141, in 2018. The analysis of skewness, for all the variables, showed that the data were normally distributed during the study period. According to Kurtosis, value, greater than three, indicates high normality, which is called Leptokurtosis while value, less than three, indicates low or no normality, which is called platykurtosis. The kurtosis value for Corporate Social Performance variable, namely Global, was positive at 0.037, in 2015 and 1.167, in 2017. The positive value of kurtosis for corporate financial performance variable, namely, ROA was positive at 6.067 in 2015, at 10.616 in 2016, at 11.588 in 2017 and at 5.503 in 2018. The innovation variable, namely, Research and Development was positive during the entire study period (in 2015, the value was at 2.842, in 2016, the value was at 2.710, in 2017, the value was at 2.998 and in 2018, the value was at 0.063). In short, Corporate Social Performance, Corporate Financial Performance and Innovation achieved positive values. The positive values facilitated the achievement of normal distribution and improved the Corporate Social Performance, with the help of Financial Performance and Innovation for Asian companies. The overall analysis of Table-1 indicated that the data, for all sample variables, were normally distributed during the study period. Therefore, the null hypothesis – (NH1), **There is no normality in the CSP, CFP & innovation of Asian countries**, was rejected.

b. Relationship between Corporate Social Performance and Corporate Financial Performance, Innovation in Asian companies

The second objective of this study was to find out that the relationship between CSP, CFP and Innovation, in respect of Asian companies. The results of correlation analysis, for Asian companies, during the study period from 2015 to 2018, are displayed in **Table-2**. According to the analysis of correlation, there was positive correlation between Corporate Social Performance (Global) and Financial Performance variable, namely, Size, at 0.074 in respect of sample firms. The innovation variable, namely, R & D was negative at -0.420, in 2015. The correlation analysis revealed that in 2016, there was negative correlation between CSP and Financial Performance variables like ROA at -0.401 and Size at -0.084. The relationship between CSP and Innovation variable, namely R & D, was also negative at -0.352. In 2017, the negative relationship was registered between CSP and Financial Performance variables like ROA and Size (-0.284 and -0.090) while the correlation between CSP and Innovation variable namely, R & D recorded negative value (-0.134). In 2018, the CSP and CFP were positively correlated with the value of 0.249 for Size and positive relationship was found between CSP and Innovation variable, R and D, at 0.033. The overall correlation analysis indicated that values in 2015 and 2018, were positive. But during the period 2016 and 2017, there was negative relationship between CSP and CFP & CSP and Innovation. Therefore, the Null Hypothesis – (NH2), **There is no relationship between CSP, CFP and Innovation in Asian Countries Companies**, was partially rejected and partially accepted.

c. Impact of Corporate Social Performance, Corporate Financial Performance and Innovation in Asian Companies during the study period from 2014 to 2018

The results of regression analysis for Corporate Social Performance and Corporate Financial Performance are displayed in **Table -3**. According to the coefficient value, there was negative impact on Corporate Social Performance, created by CFP variables (namely ROA and Size) in 2015, 2016 and 2017. But the value of coefficient was positive in 2018 in respect of sample firms. Similarly the impact on CSP and Innovation variable (namely R & D) was positive in 2017 and 2018. The positive values of CSP and innovation were recorded at 0.076145 in 2017 and 0.121035 in 2018. F-statistic, p value, R-squared, Adjusted R-squared and Durbin-Waston stat were used to test the fitness of the regression model. The results of these tools are reported in Table-3. The value of F-statistic in 2015 was at 1.097780, in 2016, the value was recorded at 1.727126, in 2017, the value was registered at 0.736827 and in 2018, it was recorded at 0.326869. The analysis clearly indicated that the value of p was at 0.387801, in 2015, 0.214515, in 2016, 0.550011 in 2017 and the p value was at 0.806017, in 2018. The values of R-squared were recorded at 0.215345 in 2015, 0.301569 in 2016, 0.155553 in 2017 and 0.075544 in 2018, during the study period. All the R square values were greater than the adjusted R-squared value in 2015 (0.019181), 2016 (0.019181), 2017 (-0.055559) and 2018 (-0.155570). Further, the values of Durbin-Waston stat were recorded at 1.645837 in 2015, at 2.589589 in 2016, at 2.881766 in 2017, and at 3.044380 in 2018, during the study period. The overall analysis clearly confirmed that the model was good and the data of sample variables were independently distributed. Hence, the Null Hypothesis **(NH-3) – there is no impact of Corporate Social Performance and Corporate Financial Performance and Innovation in Asian companies**, was rejected.

Conclusion

The previous studies have already examined the relationship between CSP and CFP and revealed a mixed interaction. The findings of these studies suggest that there is need for empirical analysis of corporate social performance and corporate financial performance. But many studies supported the idea that CSR activities could help the companies to establish a competitive advantage over their rivals. Besides, these activities could enhance reputation, foster innovation, attract talents and increase customers and investors loyalty. Hence managers of firms need to adopt CSR practices and implement CSR activities. According to the correlation analysis, positive relationship was found between CFP and CSP. The continuous efforts, for a CSR-focused orientation, could lead the managers to maximize companies' profits in the long run, in order to guarantee the availability of enough resources and to satisfy both shareholders' financial expectations and other stakeholders' non-financial requests. **Andersen, M.L. Dejoy, J.S. (2011)** found the existence of a relationship between firm size and Corporate Social Performance but this study used firm size as another independent variable. Moreover, the present study focused on the capacity of firms in producing CSP by generating and allocating appropriately its financial resources, i.e., boosting innovation activities. The analysis found that the innovation is a critical factor in the relationship between CFP and CSP. In particular, the innovation played more of a mediating than moderating role between CFP and CSP. This indicated that managers, who implement CSR strategies, should enhance their level of innovation intensity, to increase the probability of achieving a higher level of CSP. Innovation may increase the firms' flexibility to better perform and respond to the requests and expectations of their stakeholders.

Limitations of the Study

- The study covered only the companies of Asian countries, listed in Global 100 (Corporate Knights Ranking).
- The study period was limited to only four years from 2015 to 2018.
- The study mainly focused on normality and relationship and Impact on CSP and CFP and Innovation in Asian companies.

Table – 1 Normality (using Descriptive Statistics) of sample variables for Corporate Social Performance, Financial Performance and Innovation from 2015 to 2018

Years	Variables		Mean	Maximum	Minimum	Std. Deviation	Skewness	Kurtosis
2015	CSP	Global	0.5785	0.7130	0.5045	0.0587	0.823	0.037
	CFP	ROA	7.7042	75.7461	-33.9312	22.3885	1.699	6.067
		Size	4.1793	5.5551	3.0960	0.7794	0.426	-0.934
	Innovation	R & D	0.0483	0.1950	0.0010	0.0560	1.780	2.842
2016	CSP	Global	0.6016	0.7183	0.5210	0.0647	0.577	-0.783
	CFP	ROA	13.2351	107.6440	-0.0051	27.2989	3.101	10.616
		Size	4.1797	5.5421	3.1376	0.7775	0.480	-0.915
	Innovation	R & D	0.0563	0.2085	0.0040	0.0583	1.714	2.710
2017	CSP	Global	0.5693	0.6738	0.5125	0.0418	1.137	1.167
	CFP	ROA	13.2832	120.5582	0.0068	30.5091	3.289	11.588
		Size	4.1797	5.5236	3.1178	0.7949	0.462	-1.012
	Innovation	R & D	0.0530	0.2027	0.0018	0.0566	1.783	2.998
2018	CSP	Global	0.6216	0.7577	0.5396	0.0628	0.599	-0.020
	CFP	ROA	12.9594	88.6229	-0.0066	24.7483	2.344	5.503
		Size	4.2004	5.5492	3.1140	0.7982	0.456	-0.970
	Innovation	R & D	0.0659	0.1957	0.0018	0.0679	1.141	0.063

Source: Data collection from www.corporateknight.com & www.nikkei.com, Computed from SPSS.

Note: CSP - Corporate Social Performance, CFP - Corporate Financial Performance, ROA - Return on Assets, R & D – Research and Development

Table -2 Relationship between sample variables (using Correlation statistics) for Corporate Social Performance, Financial Performance and Innovation from 2015 to 2018

Correlation analysis for the year of 2015						
Years	Variables		CSP	CFP		Innovation
			Global 100	ROA	Size	R & D
2015	CSP	Global 100	1	-0.215	0.074	-0.420
	CFP	ROA	-0.215	1	-0.318	0.103
		Size	0.074	-0.318	1	-0.272
	Innovation	R & D	-0.420	0.103	-0.272	1
Correlation analysis for the year of 2016						
	Variables		Global 100	ROA	Size	R & D
2016	CSP	Global 100	1	-0.401	-0.084	-0.352
	CFP	ROA	-0.401	1	-0.530	0.616
		Size	-0.084	-0.530	1	-0.301
	Innovation	R & D	-0.352	0.616	-0.301	1
Correlation analysis for the year of 2017						
	Variables		Global 100	ROA	Size	R & D
2017	CSP	Global 100	1	-0.284	-0.090	-0.134
	CFP	ROA	-0.284	1	-0.485	0.636
		Size	-0.090	-0.485	1	-0.260
	Innovation	R & D	-0.134	0.636	-0.260	1
Correlation analysis for the year of 2018						

	Variables		Global 100	ROA	Size	R & D
2018	CSP	Global 100	1	-0.092	0.249	0.033
	CFP	ROA	-0.092	1	-0.562	0.643
		Size	0.249	-0.562	1	-0.306
	Innovation	R & D	0.033	0.643	-0.306	1

Source: Data collection from www.corporateknight.com & www.nikkei.com, Computed from SPSS.

Note: **CSP** - Corporate Social Performance, **CFP** - Corporate Financial Performance, **ROA** - Return on Assets, **R & D** – Research and Development

Table -3 Results for the Impact of Corporate Social Performance, Corporate Financial Performance and Innovation in Asian Countries Companies during the study period from 2015 to 2018

Dependent Variable: GLOBAL 2015				
Variables	Coefficient	Std. Error	t-Statistic	Prob.
ROA	-0.000537	0.000707	-0.758776	0.4626
SIZE	-0.008095	0.021013	-0.385219	0.7068
R and D	-0.448328	0.278390	-1.610429	0.1333
F-statistic				1.097780
Prob(F-statistic)				0.387801
R-squared				0.215345
Adjusted R-squared				0.019181
Durbin-Watson stat				1.645837
Dependent Variable: GLOBAL 2016				
Variables	Coefficient	Std. Error	t-Statistic	Prob.
ROA	-0.001258	0.000818	-1.539303	0.1497
SIZE	-0.034248	0.023718	-1.443975	0.1743
R and D	-0.164418	0.340026	-0.483546	0.6374
F-statistic				1.727126
Prob(F-statistic)				0.214515
R-squared				0.301569
Adjusted R-squared				0.126962
Durbin-Watson stat				2.589589
Dependent Variable: GLOBAL 2017				
Variables	Coefficient	Std. Error	t-Statistic	Prob.
ROA	-0.000683	0.000521	-1.311337	0.2143
SIZE	-0.016033	0.015995	-1.002366	0.3360
R and D	0.076145	0.253961	0.299830	0.7694
F-statistic				0.736827
Prob (F-statistic)				0.550011
R-squared				0.155553
Adjusted R-squared				-0.055559
Durbin-Watson stat				2.881766
Dependent Variable: GLOBAL 2018				
Variables	Coefficient	Std. Error	t-Statistic	Prob.
ROA	-4.870005	0.001062	-0.045900	0.9641
SIZE	0.021915	0.026458	0.828279	0.4237
R and D	0.121035	0.336792	0.359375	0.7256

F-statistic	0.326869
Prob(F-statistic)	0.806017
R-squared	0.075544
Adjusted R-squared	-0.155570
Durbin-Watson stat	3.044380

Source: Data collection from www.corporateknight.com & www.nikkei.com, Computed from SPSS.

Note: **CSP** - Corporate Social Performance, **CFP** - Corporate Financial Performance, **ROA** - Return on Assets, **R & D** – Research and Development

References:

1. Aguinis, H., Glavas, A. (2012), “What We Know and Don’t Know About Corporate Social Responsibility: A Review and Research Agenda”. *Journal of Management*, 38, 932–968.
2. Andersen, M.L.; Dejoy, J.S. (2011), “Corporate Social and Financial Performance: The Role of Size, Industry, Risk, R&D and Advertising Expenses as Control Variables”. *Business and Society Review*, 116, 237–256.
3. Bernadette M. Ruf Krishnamurty Muralidhar Robert M. Brown Jay J. Janney Karen Paul (2001), “An Empirical Investigation of the Relationship Between Change in Corporate Social Performance and Financial Performance: A Stakeholder Theory Perspective”. *Journal of Business Ethics*, 32(2), 143–156.
4. Branco, M.C.; Rodrigues, L.L. (2006), “Corporate Social Responsibility and resource-based perspectives”. *Journal of Business Ethics*, 69, 111–132.
5. Carroll, A.B.; Shabana, K.M. (2010), “The Business Case for Corporate Social Responsibility: A Review of Concepts, Research and Practice”. *International Journal of Management Review*, 12, 85–105.
6. Carroll, A.B.; Shabana, K.M. (2010), “The Business Case for Corporate Social Responsibility: A Review of Concepts, Research and Practice”. *International Journal of Management Review*, 12, 85–105.
7. D. Dhanasekar, M. Selvam, P. Amrutha, (2019), “Relationship between Corporate social performance , Corporate financial performance and financial risk in Indian firms”, *International Journal of Recent Technology and Engineering*, 8 (3S3), 121-128.
8. Doane, D. (2005), “The myth of CSR-The problem with assuming that companies can do well also doing good is that markets do not really work that way”. *Stanford Social Innovation Review*, 21–29.
9. Donaldson, T.; Preston, L.E. (1995), “The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications”. *Academy of Management Review*, 20, 65–91.
10. Du, S.; Bhattacharya, C.; Sen, S. (2011), “Corporate Social Responsibility and Competitive Advantage: Overcoming the Trust Barrier”. *Management Science*, 57, 1528–1545.
11. Friedman, M. (1962), *Capitalism and freedom*. Chicago: *University of Chicago Press*.
12. Gjølborg, M. (2009), “Measuring the immeasurable? Constructing an index of CSR practices and CSR performance in 20 countries”. *Scandinavian Journal of Management*, 25, 10–12.
13. Hull, C.E.; Rothenberg, S. (2008), “Firm performance: The interactions of corporate social performance with innovation and industry differentiation”. *Strategic Management Journal*, 29, 781–789.
14. Mahon, J. F., and Griffin, J. J., (1997), The Corporate Social Performance and Corporate Financial Performance Debate : Twenty-Five Years of Incomparable Research, *Business and Society*, 36, (5), 5-31
15. Maon, F., Lindgreen, A., Swaen, V. (2009), “Designing and Implementing Corporate Social Responsibility: An Integrative Framework Grounded in Theory and Practice”. *Journal of Business and Ethics*, 87, 71–89.

16. McWilliams, A.; Siegel, D. (2000), “Corporate social responsibility and financial performance: Correlation or misspecification?.” *Strategic Management Journal*, 21, 603–609.
17. Pasquale Ruggiero and Sebastiano Cupertino, (2018), “CSR Strategic Approach, Financial Resources and Corporate Social Performance: The Mediating Effect of Innovation”, *Sustainability*, 2-22.
18. Preston, L.E.; O’Bannon, D.P. (1997), “The corporate social-financial performance relationship: A typology and analysis”. *Business and Society*, 36, 419–429.
19. Sethi, S. P. (1979), A Conceptual Framework For Environmental Analysis of Social Issues and Evaluation of Business Response Patterns”. *Academy of Management Review*, 4; 63-74.
20. Valor, C. (2005), “Corporate Social Responsibility and Corporate Citizenship: Towards Corporate Accountability”. *Business and Society Review*, 110, 191–212.
21. Wang, S. (2015), “Literature Review of Corporate Social Responsibility. In Chinese Strategic Decision-Making on CSR”. *Springer*, 7–28.
22. Warhurst, A, (2001), “Corporate citizenship and corporate social investment: drivers of tri-sector partnerships”. *Journal of Corporate Citizenship*, 1(1): 57–73.
23. Wood, D.J. (1991), “Corporate Social Performance Revisited”. *Academy of Management Review*, 16, 691–718.