UCP Journal of Business Perspectives
Vol. 2, Issue 1 (June - December 2024)
Journal website: http://ojs.ucp.edu.pk/index.php/jbp/index

Ripple Reaction towards Corporate Social Responsibility and Profitability: A Sustainable Model for Emerging Economy

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ABSTRACT

Corporate social responsibility (CSR) plays a vital role in improving the firm performance. Much research has been done in this context, but the relationship between CSR, inflation, and performance has rarely been explored. Hence, this study aims to demonstrate how corporate social responsibility and inflation affect firm profitability in the 30 manufacturing industries of China over the period 2011 to 2023. This study checks the impact of CSR, inflation, leverage, and firm size on profitability using the bivariate regression, ordinary least square, and heterogeneous model. The study's findings indicate that CSR significantly impacts (1) firm profitability; (2) profitability is significantly impacted by inflation. Leverage and firm size also affect the firm performance. A crisis of trust can result from inflation, which seriously damages a company's relationships with its stakeholders, including employees, customers, and other parties. This is especially true at a time when a lot of people are accusing businesses of artificially boosting prices to increase profits. Companies that are interested in enhancing their profits should focus on CSR and environmental activities.

Keywords: Corporate social responsibility; Inflation; Profitability; Leverage; Size; Ordinary Least Square.

1. INTRODUCTION

Corporate Social Responsibility (CSR), from the perspective of firms in such an endeavor, has become an integral strategic tool that the firm can apply, especially in dynamic settings where the roles of society, government, and firms are consistently at odds with one another in a complex economy (Abbas, 2025). Although businesses operate on profit motives, their activities may sometimes hold environmental and social risks, especially in sectors such as mining, manufacturing, and heavy (Danilov, 2021). Environmental risks take many forms (pollution, resource depletion, and negative impact on communities). CSR initiatives should offset such negative externalities to maintain sustainable social effectiveness and health (Abbas, 2024; Hsu et al., 2022). Despite CSR being widely adopted across multiple

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organizations, there are still debates about how effective CSR policies are at increasing corporate profitability (Sachin & Rajesh, 2021).

Corporate financial sustainability keeps relying on corporate investment decisions that can be financed through the capital market. The stock price and investment attractiveness of a firm depend on its profitability, which investors measure using financial indicators like return on assets (ROA), return on equity (ROE), earnings per share (EPS), etc. (Goodwin et al., 2022; Ikpefan et al., 2021). The profitability of firms is generally divided into two components: current income (e.g., through dividends and interest payments) and capital gains (appreciation in stock value) (Orlov & Aaheim, 2017). Investors want high returns but need to trade off this goal against risk, so CSR disclosure is an important consideration when making investment decisions (Bhattacharyya, 2021).

CSR reporting has become vital to signal corporate transparency, impacting stakeholders' and investors' trust (Kong et al., 2022a). CSR does mean increasing profit, but in the long run, companies that do CSR will be better positioned to create value for their shareholders and other stakeholders such as employees, customers, and local communities (Ahmed et al., 2021). However, evidence on the CSR–profitability relationship is mixed. Others show a negative relationship, indicating that CSR reduces the firm value because it burdens the firm, creating a conflict between profits and social responsibility (Mukanjari & Sterner, 2020). On the contrary, some studies suggest that financial results do not always reflect in CSR spending, especially when companies are inclined towards their ethics and environmental contribution rather than short-term profits (Hsu et al., 2022).

In light of differing views on CSR, this study examines the effect of CSR on firm profit in the context of emerging economies, specifically, on the impacts of CSR, inflation, leverage, and firm size on the profitability of 30 manufacturing firms in China from 2011 to 2023. This study enriches the broader discussion regarding sustainable business choices, particularly in areas with corporate trust passivity and deficiencies in corporate governance, by providing empirical evidence on the relationship between CSR and financial success.

The rest of the paper is organized as follows: The first section discusses related literature on CSR and firm profitability. The next section describes the research methodology, outlining the data collection and analysis methods employed. The next section provides the empirical results, and the paper concludes with a discussion of the implications and recommendations for future research.

2. LITERATURE REVIEW

Economic profit is a strong predictor of the market value of a firm in capital markets; higher profitability leads to improved investor confidence and choice. Since the shareholders' primary goal is the firm's profitability, companies must create trust and security among investors and ensure maximum returns (Umar et al., 2021). Based on the stock price, which is a basic indicator of firm performance and firm fire for each financial year end, thus also profit) (Yaqoob et al., 2020). In-depth financial analyses can be used to project returns on company shares, and investors can expect the fastest returns possible. Meanwhile, a firm's profitability and an investor's decision-making appear to be strongly influenced by external factors like inflation (Lepitzki & Axsen, 2018).

Two main approaches can be used to analyze firm profitability: fundamental analysis and technical analysis (Olalere et al., 2021). Fundamental analysis is centered around internal information like revenue growth and dividend policy; technical analysis is focused on external factors such as economic, political, and financial trends (Mamun, 2021). Investors use financial and non-financial information to forecast stock returns (Obeidat et al., 2021). Non-financial information, frequently omitted from financial statements, can offer unique perspectives on corporate governance, sustainability, and strategic objectives. Empirical research indicates that the risk of investor sentiment and profitability expectations positively impact a firm’s financial performance (Khan et al., 2016; Qing et al., 2024). However, risk and return cannot be unentwined since higher expected returns often require greater risk acceptance by investors (Diebold & Yilmaz, 2014; Yu et al., 2024). Standard deviation, which indicates deviations from expected financial returns, is commonly used to assess risk.

In light of the recent economic turbulence concerning 2020, this research examines the pivotal function of CSR impacting firm-respected value concerning inflationary high tide. More specifically, the article analyzes U.S. firms’ stock-price responses to inflation from January 2018 to September 2022, drawing upon the theoretical framework of whether firms that have historically responded to stakeholder needs (CSR performers) sufficiently maintained stakeholder trust and financial stability during these turbulent times. In previous studies, CSR has been used as a proxy for social capital, highlighting its function in fortifying corporate resilience during economic adversity. It's worth noting that corporate attitudes toward CSR are often affected by political sentiment. Regions leaning towards the Democratic Party provide relatively higher support from its consumers and investors towards CSR-firm than the Republican side (Shang et al., 2024). Based on empirical evidence, GOP-anchored firms undergo nearly an order of magnitude weaker market price effects in reaction to CSR initiatives over periods of inflation than do firms corporately located in more liberal voting states (Aguinis & Glavas, 2019; Fu et al., 2023).

Through this study, we further add to the literature by addressing the cross-sectional consequences of inflation on firm value. Controlled for inflation using nominalization to stock prices (Zhou et al., 2023). Inflation affects firms' profitability via higher actual return requirements and lower expected earnings. Additionally, there is considerable heterogeneity in how stocks respond to inflation. Recent literature shows inflation attaching a risk premium to firm profitability, as its mean-reverting nature signals its anticipated adverse effect on real growth. However, firms with lower debt levels face more exposure to inflationary shocks, shaping the profitability dynamics (Fan et al., 2023).

Corporate governance and investor attitudes are affected by political and cultural factors. Public discontent with big companies shapes regulatory and policy preferences and is reflected in market conduct. Similar to past economic crises, perceptions of corporate behavior are a function of historical context, suggesting that consumer expectations are not static. According to studies, inflation can create lasting shifts in attitudes toward firms in society, changing how corporate valuation is conducted for decades (Abbas et al., 2023). Firms are considered opportunistic pricing entities in this scenario, and as a result, consumers may penalize firms perceived as displaying such opportunistic behavior, causing these entities to lose revenue (Jiakui et al., 2023). Moreover, employees' perceptions of corporate fairness will influence corporate morale, productivity, and turnover, impacting a firm's human capital and operational efficiency (Tong et al., 2023). Investors are willing to pay for the reputation of companies, and CSR engagement helps to build trust with consumers and employees. As a result, the financial performance improves (Wang et al., 2022). Moreover, CSR-oriented firms may enjoy enhanced access to external financing, especially when inflationary shocks tighten credit conditions (Najam et al., 2022).

Inflation, defined as an ongoing price increase, is a persistent economic occurrence that diminishes purchasing power and impacts how businesses operate. Well, might it impact firms' profitability and investment decisions (Faridi & Malik, 2020), leading to a fall in the real value of a currency owing to inflation? Therefore, the consumer price index is an important index for analyzing the influence of inflation on corporate financial health. CSR is a strategic business practice that incorporates financial and socio-economic sustainability aims. The Global Reporting Initiative (GRI) aims to ensure transparency in corporate sustainability efforts by offering a standardized framework for measuring CSR disclosure.

The standard metric for corporate profitability is net profit margin, which assesses the net income in relation to total sales (Quyen et al., 2021). According to empirical studies, CSR disclosure is not a direct mechanism for affecting investor decisions because many investors consider CSR initiatives an additional cost instead of a value-generating investment, which can be one of the reasons CSR disclosure increases asymmetric information (Pfajfar et al., 2022). Concerning cost, CSR can place financial pressure on firms, especially in the short term, which may limit its short-run accessibility. Firm size, which is often used as a control variable in profitability assessments, is measured using the natural logarithm of total assets. Firm size does not always correlate with higher returns against the widespread beliefs of investors. Previous studies show that firm size is not significantly related to profitability, meaning that profitability depends on strategic management decisions instead of an organization being very large.

During the 2014–2018 period, inflation has subsided, providing investors with opportunities that favor corporate strategic initiatives over macroeconomic uncertainty (Yao et al., 2018). The consistent inflation data given while firm profitability varies tells us that inflation is not a strong enough force on the market (Diebold & Yilmaz, 2012). As a result, investors usually discount inflationary changes when they make investment decisions. Based on above discussion, the following hypotheses are as follows;

H1: CSR has a significant impact on the profitability of Chinese Companies.

H2: Inflation has a significant impact on the profitability of Chinese Companies.

H3: Leverage has a significant impact on the profitability of Chinese Companies.

H4: Firm size has a significant impact on the profitability of Chinese Companies.

3. RESEARCH METHODOLOGY

This study takes the firm profitability and social capital as CSR. Inflation, leverage, and firm size also matter in a firm’s performance. This study was done on 30 Chinese manufacturing companies from 2011 to 2023. According to Pham et al. (2021), businesses that include CSR in their annual reports will be recognized with awards from government agencies and environmental groups (Pollak et al., 2022). This is because the CSR report demonstrates the company's quality and corporate social responsibility attitude toward its production process (Hsu et al., 2022), and it helps the public evaluate the safety and health of customers who use the company's products. This may boost the company's confidence and product sales volume. Furthermore, having a CSR report can be considered one of a company's competitive advantages because it offers information on the financial, social, and environmental aspects of the business, as well as the strategy and operations of the business, which are factors that contribute to its profitability and can be used as a basis for decision-making. stakeholder (Mamun, 2021). Businesses that conduct business in sectors related to natural resources or those that do so for profit are required to fulfill social and environmental obligations.

A widespread increase in prices, or a decline in the purchasing power of money, is referred to as inflation (Chowdhury et al., 2017). The value of money decreases with increasing price inflation. Inflation does not apply to price increases brought on by a lost harvest or increases in the cost of specific goods. The "cost of living index" or "consumer price index" is the most commonly used indicator of inflation. This index, which shows the trend of consumer spending, is based on the cost of a chosen package of items. According to (Cronin, 2014), price increases have a general and ongoing tendency. A price increase for one or two commodities alone does not qualify as inflation unless it is followed by an increase in the price of additional goods. (Tan, 2016) defined inflation as the widespread and persistent tendency for prices to rise. It is not considered inflation when the price of one or two goods rises. The prerequisites for an ongoing upward trend must also be emphasized. Price increases that are only momentary in nature, such as those brought on by seasonality, before holidays, natural calamities, etc., are not considered inflation. Inflation is measured by consumer price index and leverage actually measures the firm debt and size can be taken as natural log of total assets. The data is collected from world development indicator (WDI). The study investigated the theory regarding the beneficial impact of a company's social capital on its value in times of significant inflation.

$$\text{Profitability}_{i,t} = \alpha + \beta_1 \text{CSR}_{i,t} \times \beta_2 \text{Inflation}_{i,t} + \beta_3 \text{Leverage}_{i,t} + \beta_4 \text{Size}_{i,t} + \epsilon_{i,t}$$

4. DATA ANALYSES AND RESULTS

Table 1 shows the descriptive statistics. This table presents the minimum, maximum, standard deviation and mean values. Table 2 explains the results of correlation coefficients which indicated that CSR and Profitability are positively correlated with each other with beta value of 0.456**. Inflation has a negative impact on profitability with beta values of -0.123**. Leverage and profitability also negatively correlated with each other with beta values of -0.532*. Firm size and profitability are positively correlated with each other with beta values of 0.098**.

Table 1: *Descriptive Statistics*

	N	min	p25	Mean	p50	p75	max	sd
Profitability	274,472	-72.74	-7.47	0.42	-0.40	7.47	267.44	26.88
CSR	277,867	0.00	6.70	27.44	24.87	44.44	226.70	26.28
Inflation	277,867	-86.64	-24.70	2.42	7.77	44.48	86.27	44.66
Leverage	277,247	0.07	4.28	26.24	24.26	40.27	87.26	27.78
Firm size	276,704	-0.82	0.72	2.26	2.27	2.70	4.77	0.76

Table 2: *Correlation Coefficient*

	Profitability	CSR	Inflation	Leverage	Firm size
Profitability	1				
CSR	0.456**	1			
Inflation	-0.123**	0.443	1		
Leverage	-0.532*	0.441	0.921	1	
Firm size	0.098**	0.221	0.431	0.231	1

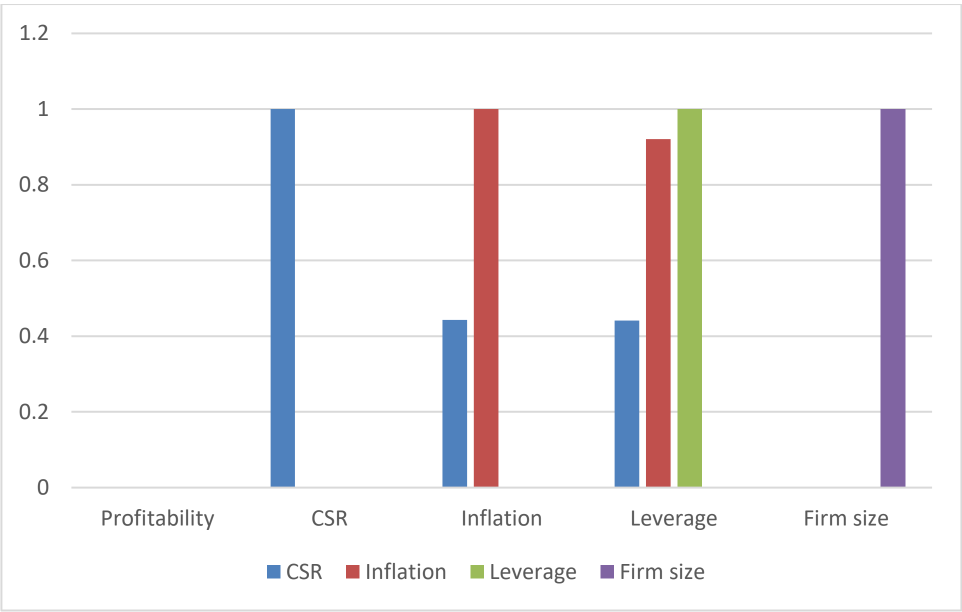

Figure 1: *Graphical Representation of the results*

Table 3 shows the results of Johansen bivariate co-integration test. This indicated that profitability and CSR have significant relationship with each other. If means if companies want to enhance their performance, they should focus on environmental activities and social performance. The significant relationship of inflation, leverage and size has been found with profitability of Chinese firms. The beta values are presented first after that test-statistics values are given.

Table 3: Johansen Bivariate Co integration test results

Λi	H0	H1	λ-max statistic	H0	H1	λ-trace statistic
(a) Profitability and CSR						
0.507	r = 0 r ≤ 1	r = 1 r = 2	33.525**	r = 0 r ≤ 1	r = 1 r = 2	12.221**
0.048			1.334			1.334
(b) Profitability and Inflation						
0.359	r = 0	r = 1	21.332	r = 0	r = 1	15.456**
0.11	r ≤ 1	r = 2	1.221	r ≤ 1	r = 2	1.221
(c) Profitability and leverage						
0.38	r = 0	r = 1	12.312**	r = 0	r = 1	17.554**
0.091	r ≤ 1	r = 2	2.554	r ≤ 1	r = 2	2.554
(d) Profitability and size						
0.325	r = 0	r = 1	11.321	r = 0	r = 1	14.321
0.076	r ≤ 1	r = 2	3.123	r ≤ 1	r = 2	3.123

Table 4: *OLS regression*

Dependent variable:	(1)	Profitability	(3)
CSR	1.35*** (13.19)	1.63*** (13.59)	1.36** (3.65)
Inflation			-1.11*** (3.66)
Leverage	-6.56*** (-33.66)		
Size	1.19*** (3.36)	1.31*** (3.56)	-1.21* (1.65)
Observations	19,565	19,565	19,565
R-squared	0.13	0.36	0.35
Firm controls	Yes	Yes	Yes
Month FE	No	Yes	Yes
Industry FE	Yes	Yes	Yes
Firm-clustered SE	Yes	Yes	Yes

Table 4 shows the findings of OLS regression. CSR has a positive significant impact on the profitability of Chinese firms in all three models with beta values of 1.35***, 1.63***, and 1.36**. Inflation has a negative impact on profitability, with a beta value of -1.11*** in model 3. Leverage negatively impacts profitability with a beta value of -6.56*** in model 1. Firm size has a positive significant relation with profitability in the first 2 models (1.19***, 1.31***), while in the last model, the relationship is negatively significant (-1.21*).

The findings imply that inflation has a significant impact on firm profitability. Firm profitability will fall in areas where inflation rises and vice versa. Investors will receive a higher return on their investments if inflation declines. This study's results demonstrate that corporate social responsibility significantly impacts firm profitability. This indicates that a company's firm profitability is positively impacted by the amount of information it provides about its corporate social responsibility (CSR). According to the report's results, investors should consider corporate social responsibility (CSR) details when making investment decisions (Umar et al., 2021). We present the findings of a series of robustness tests in this subsection. Our primary conclusion is that high CSR enterprises outperform and remain unchanged even when alternate inflation measurements and inflation awareness are considered (Kong et al., 2022b). We take into account company price responses to realized inflation rates in our primary study.

Table 5 shows the robustness findings in three different models. The change (delta) element is taken into different explanatory variables and then checked out the impact of all these factors on firm profitability of Chinese firms over the period 2011 to 2023. CSR and size are positively linked while inflation and leverage are negatively associated with firm profitability indicating from their beta values.

Table 5: Robustness test

Dependent variable:		Profitability	
	(1)		(2)
ΔCSR	0.49***	0.49***	0.07
	-(4.47)	-(4.24)	(0.45)
ΔInflation			-0.04*
			(-4.79)
ΔLeverage			-0.13
			(-0.40)
Δsize	0.25***	0.24***	0.24***
	(4.59)	(4.95)	(4.94)
Observations	409,547	409,547	409,547
R-squared	0.04	0.24	0.24
Firm controls	Yes	Yes	Yes
Month FE	No	Yes	Yes
Industry FE	Yes	Yes	Yes
Firm-clustered SE	Yes	Yes	Yes

Table 6 shows the heterogeneous test results, which indicated that CSR and profitability are positively affected by each other with a beta value of 0.44***. On the other side, inflation and profitability are negatively linked, with each showing a value of 0.43*** in model 2. The same is the case with leverage, which is negatively linked with profitability, carrying a value of 0.28***. Firm size is positively associated with profitability, and the beta value is 0.23***.

Table 6: *Heterogeneous Test*

	(1)	(2)	(3)	(4)	(5)	(6)
CSR	0.44*** (9.48)					
Inflation		-0.43*** (9.20)				
Leverage			-0.28*** (9.94)			
Size				0.23*** (9.24)		
Observations	409,648	99,944	409,648	99,944	409,648	409,342
R-squared	0.21	0.22	0.24	0.25	0.26	0.27
Firm controls	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm-clustered SE	Yes	Yes	Yes	Yes	Yes	Yes

Table 7 shows the findings of CSR and inflation dynamic situation. The insignificant findings have been found in low inflation rate while in high inflation rate, the relationship between CSR and inflation is significant. It shows the R-squared fact.

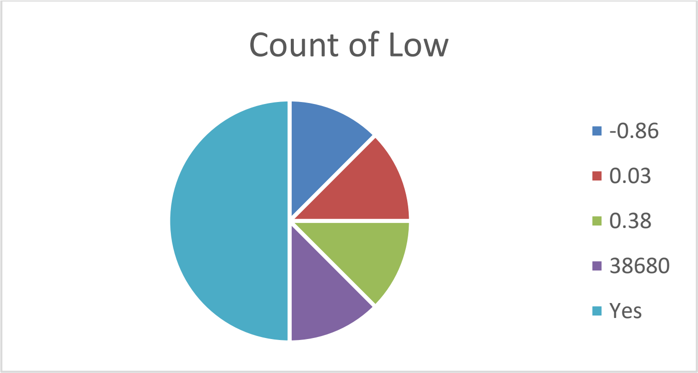

Figure 2: Count of Low Visualization

Table 7: CSR and Inflation relationship

	Low	High	Low	High	Low	High
CSR	0.38	4.08***	3.33*	3.73***	0.68*	0.64**
	(0.86)	(3.68)	(3.88)	(8.08)	(3.64)	(4.36)
Observations	38,680	38,806	36,046	36,833	36,347	36,860
R-squared	0.03	0.03	0.04	0.04	0.04	0.04
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm-clustered SE	Yes	Yes	Yes	Yes	Yes	Yes

Investors believe that the more corporate social responsibility (CSR) a company reveals, the more pressure it will face in the near and medium terms. Businesses only have to spend money on CSR when it comes to achieving the very minimum requirements of the relevant laws; in other words, information is not included in CSR that is released (Gond et al., 2017). A company's total number of CSR disclosures may not always translate into an improvement in investors' ideal firm profitability.

5. CONCLUSION AND POLICY IMPLICATIONS

CSR and inflation plays a significant role in firm’s performance. The aim of this study is to examine the impact of CSR, inflation, leverage and size on firm’s profitability of 30 Chinese manufacturing firms over the period 2011 to 2023 using the bivariate and OLS regression. The findings indicated that all three models find that corporate social responsibility has a positive and considerable impact on the profitability of Chinese businesses, with beta values of 1.35***, 1.63***, and 1.36**. In model 3, inflation has a beta value of -1.11***, which indicates that it has a negative impact on profitability. In model 1, leverage has a beta value of -6.56***, which indicates that it has a strong negative influence on profitability. In the first two models, the link between firm size and profitability is found to be significantly positive (1.19*** and 1.31***), whereas in the third model, the relationship is significantly negative (-1.21*).

According to the data, inflation and leverage has a negative impact on performance of the firms. When inflation rates grow, it will be detrimental to a company's capacity to turn a profit, and vice versa (Chowdhury et al., 2017). If there is less inflation, investors will get a greater return on the money they put into their assets. According to the findings of this study, a company's level of corporate social responsibility has a considerable effect on the profitability of the business. This suggests that the quantity of information a company discloses about its CSR has a favorable impact on the firm's profitability (Dangelico & Pujari, 2010). When deciding how to allocate their capital, investors should, according to the findings of the analysis, take into account the specifics of their companies' corporate social responsibility (CSR) programs. The study discussed the results of a number of robustness tests that were conducted. Even after taking into account alternative inflation metrics and heightened awareness of inflation, our core finding that businesses with high levels of CSR have better financial performance has not altered. In the core research that we conducted, we took into account how corporate prices responded to actual rates of inflation.

The Chinese government is continuing its efforts to increase the country's overall economic growth by preserving economic stability. Challenges involving private sector investment in the public sector, as well as efforts aimed at consolidating regional and international standards particularly in matters of environmental matters (Minh et al., 2021; Sun et al., 2021), reducing pollution and dangerous chemical emissions continue to constitute focal points, and whilst progress is being made in certain jurisdictions, evidence exists to support the fact that many developing economies still suffer from environmental consequences resulting from unsustainable economic practices. This study is limited to Chinese government while the further study can be done taking the other developed and developing countries along with more different variables.

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