

The Experience of the Great Famine and Corporate Social Responsibility Performance

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Abstract: This study utilized the data of Chinese A-share listed companies from 2009 to 2022 to explore the impact of the experiences of chief executive officers (CEOs) during the Great Famine on their corporate social responsibility (CSR) performance. The research results indicated that there was a negative correlation between the CSR performance of enterprises and the experiences of CEOs during the Great Famine. That is, these CEOs exhibited higher levels of insecurity and resource control awareness, prioritizing immediate interests. Therefore, they tended to make short-term investments, which might be inconsistent with socially beneficial activities, resulting in poor CSR performance of the enterprises, thereby reinforcing the self-centered motives of the CEOs. These conclusions remained robust after a series of rigorous tests.

1. Introduction

The performance of an enterprise's social responsibility, especially the relationship between the enterprise and the human living environment, represents a fundamental requirement of the human sustainable development strategy [1](Martinez Ferrero , 2015). In recent years, ecological and environmental issues have become increasingly prominent, and unethical business practices have had adverse effects on society. Studies have shown that responsible enterprise behavior is a strategic decision that can enhance the resilience of the enterprise during crises or periods of uncertainty, and at the same time help enterprises mitigate any adverse impacts on society or the environment when responding to the pandemic, thereby promoting the sustainable development of the enterprise[2] (Epstein, 2008,).

In this study, we incorporated a psychological perspective to investigate the impact of the famine experiences during the childhood of chief executives on the corporate social responsibility (CSR) performance of their enterprises. Unlike previous top-level studies that mainly focused on how work experiences influence the strategic decisions of chief executives[3][4] (Campbell et al., 2019), our research shifted the focus to the childhood experiences that the chief executives had before their

careers. Unlike them, we adopted a completely new perspective and drew on the theory of post-traumatic stress disorder (PTSD) in psychology. The empirical results showed that chief executives who experienced childhood famine were associated with lower CSR performance of their enterprises.

This study makes three main theoretical contributions. Firstly, it combines the post-traumatic stress disorder (PTSD) in psychology with the corporate social responsibility (CSR) performance in business management, forming a cross-disciplinary perspective. Secondly, the study reveals the significant role that the personal traits and experiences of the chief executive officer play in shaping the company's decisions and behaviors. Moreover, the research results are of great significance to policy makers and business executives.

The process of this research is as follows: Section 2 is for theoretical analysis and hypothesis formulation. Section 3 introduces our sample, data and empirical model. Section 4 reports our empirical results. Section 5 draws conclusions.

2. Theoretical analysis and hypothesis development

2.1. Hypothesis development — the main prediction

Based on the symptoms of Post-Traumatic Stress Disorder (PTSD), a CEO who has experienced a major famine may show greater sensitivity to risks and challenges, which could lead them to adopt overly cautious and vigilant attitudes in corporate decision-making. In the context of Corporate Social Responsibility (CSR), this excessive risk awareness may cause the CEO to tend to avoid any risks that might have negative consequences, resulting in a more conservative attitude towards CSR projects and initiatives rather than adopting innovative and generous approaches[5] (Girani,2023). A CEO who has experienced a major famine may experience decision-making flashbacks during the corporate decision-making process, unintentionally recalling the hardships and challenges of the famine period. These memories may cause emotional disturbances and psychological stress, affecting their objectivity and calmness in CSR decision-making [6](Fulmer and Barry, 2009). Therefore, the CEO may be influenced by past experiences and make CSR decisions based on emotions and personal drives rather than objective business considerations. Therefore, we propose Hypothesis H1:

Hypothesis 1: If a CEO has experienced a major famine, the corporate CSR performance of the enterprise will be worse.

2.2. Hypothesis development — cross-sectional variation

The Hu Huanxiong Line reveals the east-west disparity in China's population and economic development: the southeastern region has a dense population and a developed economy, while the northwestern region is vast in area with sparse population, fragile ecology and limited resources. The scarcity of resources poses challenges for companies in allocating adequate resources for fulfilling social responsibilities, particularly for CEOs who experienced severe famine in their childhood and retain vivid memories of resource scarcity [7](Xu et al., 2024). This disparity imposes stronger resource constraints on enterprises in the west, which may strengthen the resource scarcity awareness of executives (those who have experienced famine), thus making them more inclined to avoid non-core investments such as CSR; while the resource and infrastructure advantages of enterprises in the east provide more favorable conditions for CSR. We therefore hypothesize that companies west of the line, especially under famine-affected CEOs, are less likely to prioritize CSR. Therefore, we propose Hypothesis H2:

Hypothesis 2: With other factors remaining unchanged, in the regions west of the Huhaiyong

Line, the impact of CEOs who experienced a major famine on reducing the performance of corporate social responsibility (CSR) is more significant.

Low concentration of shareholding implies that the decision-making power within the company is more dispersed, and there is no situation where a single major shareholder can unilaterally decide on major company affairs [8][9][10](Schmalz, 2018; Kunatski, 2013; Avadashova, 2009). In such cases, the chief executive officer may encounter different opinions and resistance from multiple shareholders when promoting corporate social responsibility (CSR) activities. The dispersion of ownership also weakens the role of major shareholders in supervising the company; due to the low shareholding ratio, major shareholders may lack sufficient motivation to actively participate in the daily management and supervision of the company, including supervising CSR activities [11][12][13][14](Song, 2013; Desender, 2013; Xu and Wang, 1999; Chen, 2001). The cautious and conservative psychological traits of chief executives who experienced severe famines in their childhoods are in line with the decision-making environment of companies with low shareholding concentration. Therefore, we propose Hypothesis H3:

Hypothesis 3: With other factors remaining unchanged, in companies with a lower concentration of shareholding, those chief executives who have experienced severe famines have a more significant impact on reducing the performance of corporate social responsibility (CSR).

3. Research design and sample

3.1. Sample selection and data source

Our sample includes the data of A-share companies listed on the Shanghai Stock Exchange and the Shenzhen Stock Exchange from 2009 to 2022. We excluded financial service companies, those that were delisted during the sample period, companies with missing control variable information, and companies receiving special treatment. We manually collected the scientific information of the company's chief executive officer, which came from the company's annual reports. All other financial and corporate governance information in this paper was obtained from the CSMAR and Wind databases. To mitigate the excessive influence of outliers, we truncated all continuous variables at the 1% quantiles at the highest and lowest ends.

3.2. Main empirical model

To investigate the correlation between CEOs' exposure to the Great Famine and a firm's CSR performance, we utilize an Ordered Logit (OLOGIT) model, given that both the independent and dependent variables are multivariate ordinal variables:

$$CSR_{i,t} = \alpha_0 + \alpha_1 CEOFAMINE_{i,t} + \alpha_n Firm_Controls_{i,t} + \alpha_n CEO_Controls_{i,t} + \sum Industry + \sum Year + \varepsilon_{i,t} \quad (1)$$

To examine the additional impact of CEOFAMINE, we considered various determinants of corporate social responsibility performance as identified in the existing literature. This set of corporate social responsibility determinants includes CEO characteristics variables. We controlled for the CEO's shareholding ratio (CEOHoldR) and the CEO's gender (CEOGENDER). Consistent with our initial hypothesis, we expected the coefficient of CEOFAMINE to be significantly negative, indicating that there is evidence suggesting a negative correlation between the CEO's experience of a major famine and corporate social responsibility performance.

To enhance the robustness of the conclusion, in the sensitivity analysis, we also included other

variables related to the personal characteristics of the chief executive officers. The detailed definitions of these variables can be found in Table 1.

Table 1 Variable Definition Table

Variable Type	Variable Symbol	Description of the variable
Dependent variables	CSR	The data is sourced from the CSR rating scores provided byCSMAR.
Independent variable	CEOFAMINE	A dummy variable equals 1 if CEO has “Great Famine” Experience and 0 otherwise.
Moderating variable	Huhuanyongline	A dummy variable equals 1 if a given firm is located east of the Huhuanyong line, and 0 otherwise.
	Top1	A dummy variable takes the value of 1 when the corporate equity concentration is high (greater than the median), and 0 otherwise.
	SA	A dummy variable equals 1 if the firm has high financial constraints, defined as being below the median of the firm-level financing constraints SA index, and 0 otherwise.
Control variables	Size	An indicator that takes the natural logarithm of the company's total assets at the end of the year.
	Lev	liability-to-asset ratio
	ROA	Net income scaled by the beginning balance of total assets.
	Cashflow	The ratio of net cash flow from operating activities to total assets.
	Growth	Sales growth, measured as the sales change between year t and t-1 divided by the sales in year t.
	Board	The natural logarithm of the number of directors.
	Indep	The ratio of independent directors on the board.
	Dual	A dummy variable equals to 1 if the CEO is also the chairperson and 0 otherwise.
	Firmage	The natural logarithm of the number of years of establishment.
	Mshare	The shareholding ratio of management.
	CEOHoldR	CEO shareholding percentage.
	CEOGENDER	CEOGENDER is a dummy variable equal to 1 if the CEO is male, and 0 otherwise.

4. Empirical results

4.1. Baseline regression analyses

Table 2 presents the regression results for Hypothesis 1, which aims to investigate the impact of

the "famine experience" of the chief executive on the corporate social responsibility performance.

Table 2 Baseline regressions

Variable	(1)	(2)
	CSR	CSR
CEOFAMINE	-0.528***	-0.184**
	(-6.02)	(-2.02)
Mshare		-0.004***
		(-4.33)
CEOHoldR		-0.001
		(-0.74)
CEOGENDER		0.005
		(0.13)
Industry	no	yes
Year	no	yes
Observations	19,666	19,666
Pseudo R2	0.0004	0.0719

Robust t-statistics in parentheses, *** p<0.01, ** p<0.05, * p<0.1

4.1.1. Huhuanyongline – Tests of H2

In our study, Hypothesis 2 (H2) posits that the impact of CEOs who have experienced severe famine on Corporate Social Responsibility (CSR) is more significant in the regions west of Hu Hu Yong Line. To verify this hypothesis, we divided the sample into two groups: one group is located east of Hu Hu Yong Line, and the other group is located west of Hu Hu Yong Line. Subsequently, we conducted a cross-sectional analysis of H2 using the Hu Hu Yong Line indicator variable. This indicator variable was assigned a value of 1 for companies located east of Hu Hu Yong Line and 0 for companies located west of Hu Hu Yong Line. Our research results indicate that this effect is particularly pronounced among companies in the western regions of Hu Hu Yong Line in China, thereby confirming the consistency of these results with Hypothesis 2. The results of the regression analysis are shown in Table 3.

Table 3 Huhuanyongline

Variable	Huhuanyongline=1	Huhuanyongline=0
	(1)	(2)
	CSR	CSR
CEOFAMINE	-0.155*	-3.480***
	(-1.69)	(-3.01)
Mshare	-0.004***	0.018
	(-4.41)	(1.07)
CEOHoldR	-0.001	-0.017
	(-0.84)	(-0.32)
CEOGENDER	0.001	-0.458
	(0.03)	(-0.95)
Industry	yes	yes
Year	yes	yes
Observations	19,453	213

Pseudo R2	0.0722	0.2222
Difference	3.325	
P-Value	0.012 **	

4.1.2. Top1 – Tests of H3

H3 holds that the impact of a chief executive who has experienced a major famine on the corporate social responsibility performance is more significant in companies with dispersed ownership. To test this hypothesis, we divided the sample into two categories: companies with concentrated ownership and those with dispersed ownership. Subsequently, we conducted a cross-sectional analysis using the "Top1" indicator variable. If the variable indicates that the company has concentrated ownership (higher than the sample median), it is assigned a value of 1; otherwise, it is assigned a value of 0. These findings indicate that the adverse impact of a chief executive who has experienced a major famine on the corporate social responsibility performance is more pronounced in companies with dispersed ownership, thereby supporting H3's viewpoint. The results of the regression analysis are shown in Table 4.

Table 4 CEO's "Great Famine" Experience and corporate social responsibility—Top1

Variable	Top1=1	Top1=0
	(1)	(2)
	CSR	CSR
CEOFAMINE	-0.001	-0.603***
	(-0.01)	(-4.40)
Mshare	-0.006***	-0.001
	(-4.57)	(-0.93)
CEOHoldR	0.002	-0.008**
	(0.80)	(-2.49)
CEOGENDER	0.032	-0.026
	(0.60)	(-0.51)
Industry	yes	yes
Year	yes	yes
Observations	9,833	9,833
Pseudo R2	0.0815	0.0695
Difference	0.602	
P-Value	0.004 ***	

4.2. Robustness test

4.2.1. Replace the independent variable

The regression analysis using childhood and adolescence as proxy variables revealed that the CEO's famine experiences had a significant negative impact on the corporate social responsibility performance (with a coefficient of -0.184). This result once again strongly supported the research hypothesis H1.

4.2.2. PSM method

The emergence of those chief executive officers (CEOFAMINE) who experienced the severe

famine may be influenced by the differences between the enterprises that controlled the CEOFAMINE status (where CEOFAMINE equals 1) and the enterprises that did not (where CEOFAMINE equals 0). We employed the propensity score matching (PSM) method to ensure the consistency of the characteristics of these two groups, using nearest neighbor matching, radius matching, and kernel matching respectively.

4.2.3. Excluded municipalities sample

The sample does not include the municipalities directly under the jurisdiction of the central government (Beijing, Tianjin, Shanghai, and Chongqing). These four municipalities belong to provincial administrative regions. If the observation data of these four cities were included in the research, it might lead to deviations in the research results.

5. Conclusion

The research results indicate that the performance of corporate social responsibility is negatively correlated with the experiences of the chief executive officer during the "Great Famine" period. This study is also of great significance for companies that attach importance to the performance of corporate social responsibility. On one hand, the selection of the chief executive officer is crucial for the company's development. When selecting and evaluating the chief executive officer, considering their social background and early experiences can help improve the effectiveness of executive appointment. On the other hand, the research also provides suggestions for improving the corporate governance mechanism. When motivating the chief executive officer, attention should be paid to the influence of their early experiences on personal beliefs and preferences. Ignoring this factor may lead to poor incentive effects, ultimately affecting corporate decision-making and policy implementation.

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