CEOs' Poverty Experience and Corporate Digitalization

Abstract

This study delves into the intricate relationship between chief executive officers' (CEOs') experiences of poverty and the digital transformation of their firms. Employing comprehensive data collection on CEOs' birthplaces and leveraging advanced text analytics to quantify digitalization, our analysis encompasses a wide array of listed companies in China. The findings reveal that CEOs' impoverished backgrounds exert a detrimental influence on their firms' digital transformation efforts, primarily due to a lack of motivation and social resources necessary for such initiatives. However, this adverse effect can be ameliorated when CEOs gain access to substantial social resources in later life. Our conclusions are robust, supported by rigorous testing, and underscore not only the impact of CEOs' early life poverty on corporate digitalization but also the potential for overcoming these challenges through the acquisition of external social resources and connections in adulthood. This study contributes significantly to existing literature and offers practical implications for enhancing corporate digital transformation strategies.

Keywords: digital transformation; poverty experience; social resources

Introduction

The digital economy has emerged as a transformative force reshaping the global economic and societal landscape. Corporate digital transformation involves a strategic process wherein businesses leverage a combination of digital technologies to instigate substantial organizational changes and enhance overall operational efficiency. The pivotal role of CEOs in seizing the opportunities presented by digital transformation cannot be overstated. In a knowledge-based economy, human capital wields significant influence over corporate decision-making. As a crucial component of human capital, CEOs' ability to create and utilize intangible assets constitutes a core competency for organizations. Human factors are integral to corporate practices and are closely linked to behavioral decisions related to financing (Malmendier et al., 2011; Cronqvist et al.,

2012; Jiang & Huang, 2013), investment (Dittmar & Duchin, 2016), and social responsibility (Xu & Li, 2016). The accumulation of human capital among firm executives is profoundly influenced by their developmental environment. An individual's upbringing shapes their personality and decision-making style (Dittmar & Duchin, 2016). Notably, childhood adversity can impose both psychological hardships and a scarcity of social resources on impoverished CEOs. These early adversities persist in the subconscious and exert a profound impact on behavior in adulthood.

Regarding the inner beliefs and psychological impact of adversity on CEOs, early poverty experiences significantly shape their perspectives on wealth and risk tolerance. Initially, these CEOs may exhibit a strong desire for wealth and status, driven by the scarcity they experienced in their formative years. Once they achieve certain milestones, they tend to amplify the potential consequences of high-risk projects, harboring an intense fear of losing their hard-earned wealth and status, and thus, inadvertently reliving their childhood poverty. Additionally, CEOs with poverty backgrounds might be content with moderate success, exhibiting a lack of motivation to take further risks, which can stifle their ambition. Conversely, the experience of poverty can cultivate unique cognitive styles and behavioral patterns in individuals. It fosters more creative and flexible thinking, stronger adaptability, and enhanced problem-solving abilities, all of which are invaluable in the context of digital transformation. Furthermore, the adversity of poverty often ignites a powerful desire to alter one's circumstances. Senior executives tend to infuse their personal experiences, preferences, and inclinations into their decision-making and leadership behaviors (Boeker, 1997; Bertrand & Scholar, 2003).

For the impact of external conditions on the development of human capital, poverty fundamentally indicates a scarcity of resources in the CEOs' formative environments (Banerjee & Duflo, 2011). This resource limitation, particularly concerning social resources, can impede executives from engaging in high-risk innovative activities, such as digital transformation. Growing up in impoverished conditions necessitates that executives endure the hardship of scarce social resources to survive. Consequently, CEOs from such backgrounds often struggle to secure capital

for innovative activities, leading to a pronounced tendency toward "thriftiness" and a higher propensity for savings in corporate decision-making. Malmendier et al. (2011) found that individuals who experienced the Great Famine tend to be more cautious and less inclined to invest in risky assets. Similarly, Donaldson (1990) discovered that during economic recessions, senior executives generally exhibit risk aversion, adopting conservative corporate financial policies, avoiding external debt financing, and maintaining low leverage ratios. Faced with the scarcity of resources and social capital, CEOs who experienced poverty are more risk-sensitive and lack the necessary resilience to withstand the potential losses from R&D failures. Their aversion to exploring risky projects also stems from limited access to high-end technology and cutting-edge information, further hindering corporate innovation investments.

The digitalization drive is precipitating fundamental changes in production methodologies, societal lifestyles, and governance. Consequently, CEOs' decisions on implementing digitalization must consider several critical perspectives. Successful corporate digital transformation hinges on the collaborative support of both managers and digital technology talents (Qi & Xiao, 2020). Unlike traditional corporate decision-making in production and operations, digital transformation emphasizes the application of digital technology in actual business operations, fostering business model innovation and organizational change (Fitzgerald et al., 2014; Hanelt et al., 2021). The vision and personality of CEOs significantly influence the direction of digital technology adoption and the level of digitalization achieved. When CEOs' experiences may negatively impact the digitalization level, it is crucial to identify strategies for mitigating this potential adverse effect to ensure the company's digital development. This entails leveraging the unique strengths of digital technology talents, fostering a culture of innovation, and ensuring robust support systems and resources are in place to facilitate the digital transformation process.

Previous research on corporate digital transformation has predominantly centered on macro-level factors such as institutional landscapes, policy backing, and industry environments (Wu et al., 2021; Verhoef et al., 2021). In contrast, our paper focuses on the role of CEOs' poverty experiences, contributing to the literature in two significant

ways: first, by exploring how the characteristics of CEOs' experiences impact corporate decision-making, and second, by examining internal factors that influence corporate digital transformation. This dual focus enhances our understanding of the nuanced ways in which personal histories and internal corporate dynamics shape digital transformation efforts.

Firstly, while much of the research on the influence of executive team characteristics on digital decision-making in corporations has focused on standard traits such as gender, age, education, and early upbringing (Gephart & Campbell, 2015; Wu & Treiman, 2004), existing literature has not deeply explored the mechanisms through which these characteristics affect digital transformation. Most studies remain at the theoretical analysis level. Moreover, previous research has overlooked the impact of changes in acquired experience. The subsequent acquisition of social connections by CEOs plays a crucial role in the successful implementation of innovative activities. When CEOs are equipped with adequate social resources, their experiences of poverty can cultivate an enhanced ability to adjust strategies, seize opportunities, and promote the sustainable development of enterprises in the rapidly evolving landscape of digital transformation.

Secondly, factors influencing corporate digital transformation include the organization's willingness to take risks (Kane et al., 2015; Dremel et al., 2017) and the characteristics of the executive team (Zhang & Chen, 2021). However, there exists a gap in the literature regarding the specific external and intrinsic impacts of CEOs' experiences. Previous studies have primarily focused on CEOs' inner beliefs and mental impacts, drawing from imprint theory and upper echelons theory (Zhang & Chen, 2021; Hambrick & Mason, 1984). They have largely ignored the external conditions, particularly the scarcity of social resources, which limit the effectiveness of executives' decisions on digitalization. This oversight restricts our understanding of how poverty, as an external condition, affects the practical implementation of digital transformation initiatives.

Our paper's academic innovation lies in exploring the impact of acquired experiences of CEOs, such as elite education, political connections, and investments in

social ties. We aim to analyze the differential impact of poverty experience before and after CEOs gain access to social resources. With the support of these social ties, CEOs from impoverished backgrounds can access cutting-edge technology and resources necessary for digitalization, providing a material foundation for senior executives to infuse their own experiences, preferences, and tendencies into their decision-making and leadership behavior (Boeker, 1997). Once facilitated with social resources, CEOs' prior poverty experiences can uniquely drive digital innovation. These experiences shape their distinct thinking and behavioral patterns and stimulate a strong desire to change the status quo. This dual influence—poverty shaping initial risk aversion and subsequent social resource acquisition enabling strategic agility—offers a nuanced understanding of how personal histories and acquired experiences interplay to influence corporate digital transformation.

Building upon the aforementioned points, this study seeks to investigate how CEOs who have experienced poverty impact digital transformation decisions, addressing gaps in the existing literature regarding the role of "human" factors in digital transformation. The findings illustrate that a firm's digital transformation can be hindered by CEOs' poverty experiences, as these experiences often result in a remarkable scarcity of social ties, significantly limiting the firm's capacity for innovation. However, social ties can empower CEOs who have encountered poverty to elevate their firm's adoption of digital technologies. Social ties build a mediating bridge by strengthening resource allocation capabilities and enhancing financing opportunities for CEOs with poverty backgrounds. This support enables companies to allocate more resources towards innovation, thus overcoming the constraints imposed by the CEOs' earlier impoverished experiences.

The marginal contributions of this paper can be summarized in several aspects:

Firstly, this research delves into the relationship between the early life experiences of executives and corporate decisions, shedding light on the economic implications of executives' characteristics. Previous studies have mainly examined CEOs’ childhood experiences of economic depression (Malmendier and Nagel, 2011) and disasters (Bernile et al., 2017). Our paper contributes to this body of literature by exploring the

impact of an important characteristic: CEOs' poverty experiences. These experiences have primarily been examined for their influence on common prosperity, corporate social responsibility, and overall firm profitability (e.g., Xu & Li, 2016). However, there has been limited exploration of how these experiences shape corporate digital innovation and strategic decision-making. More importantly, our paper not only investigates how the impoverished origins of CEOs influence their early character formation (Malmendier & Nagel, 2011), but also examines whether corporate decision-making differs during the acquisitional period. This period allows CEOs to overcome the disadvantages of their impoverished backgrounds by obtaining external social resources through acquired education, upbringing, and the expansion of social connections (Benmelech & Frydman, 2015). This dual focus provides a comprehensive understanding of how early poverty experiences and subsequent social resource acquisition collectively influence corporate digital transformation.

Secondly, this study broadens the scope of research by exploring the impact of social ties or social capital on the outcomes of digital initiatives. Research in social science has consistently shown that social capital discourages opportunistic behaviors, encourages cooperation, facilitates economic transactions, and produces positive economic outcomes (Putnam, 1993; Fukuyama, 1995; Buonanno et al., 2009). Our paper contributes to this body of research by examining social capital's role within the corporate setting (e.g., Jha and Chen, 2015). Specifically, managers of corporations with a greater accumulation of social capital provide executives with more opportunities to interact with industry resources (Gawer & Cusumano, 2008), thereby mitigating the detrimental effects of CEOs' poverty experiences in fostering digital transformation (Qi & Xiao, 2020). We also contribute to the literature on the sources of dynamic change in imprint theory from the perspectives of the learning effect (Marquis and Tilcsik, 2013) and the additive effect of managerial experience (Mathias et al., 2015). In the process of social learning, managers are continually exposed to new information, which can enhance or weaken the influence of imprint theory. Additionally, subsequent experiences can build upon earlier life experiences, with experiences from different periods affecting the cognitive basis, experiential skills, and knowledge

systems of managers. By acquiring social resources in adulthood, managers can enhance their strategic vision and professional skills, thereby altering the impact of poverty experiences on their behavioral decisions.

Lastly, this study extends the exploration of factors influencing digital transformation, providing valuable empirical insights to facilitate digital transformation efforts. Existing research has largely overlooked how executive characteristics and their proficiency in leveraging digital information technology can impact changes in corporate digital innovation. Through the lens of human capital, this paper investigates the success factors of digital transformation, offering decision support for companies seeking to enhance executive governance during significant transitional phases. On one hand, drawing from theoretical frameworks established in prior studies (e.g., Bertrand & Scholar, 2003), this paper specifically examines digital transformation as a strategic choice with distinct contemporary relevance, emphasizing that CEOs' personal backgrounds play a decisive role in enterprise development. On the other hand, referencing relevant studies (e.g., Tang et al., 2022), this research provides new evidence on how CEOs' personal attributes influence corporate behavior at different development stages. This dual focus enriches discussions on the intersection of executive traits and organizational outcomes, reinforcing the contributions of this study in understanding the nuanced impacts of executive characteristics on digital transformation and corporate innovation.

Theoretical Background and Hypotheses

Despite its tremendous value to firms, digital transformation is challenging to manage due to significant uncertainties and information asymmetry (Dremel et al., 2017). Obstacles such as a lack of long-term financing resources, the unpredictability of risks associated with innovation, and the difficulty in retaining digital talents impede the digital transformation process. As a comprehensive reform, digital transformation leads to fundamental changes in a firm's organizational structure. Therefore, it requires executives to effectively utilize strategies to integrate it into the firm's culture,

leadership, and strategic vision, thereby creating new business models (Kane et al., 2015). Consequently, the strategic decisions of executives are crucial for successful digital transformation (Zhang & Chen, 2021).

Executives' poverty experiences have a profound impact on managerial style, strategic practices, and innovative initiatives (Cummings & Knott, 2018; Custódio, Ferreira, & Matos, 2019). Growing up with limited resources, these executives may develop a fear of making mistakes and losing the resources they have acquired (Thaler, 1980), leading to the adoption of conservative strategies (Gephart & Campbell, 2015). Their low willingness to take risks can discourage a firm's digital transformation efforts (Dremel et al., 2017).

The essence of poverty is the scarcity of resources (Banerjee & Duflo, 2011). Executives who grew up in poverty may overcome material deprivation, but the lack of social resources casts a long-lasting shadow. Lin (2002) posits that individuals who occupy high positions in one resource dimension often hold similar positions in other resource dimensions. Interactions among society's members are more likely to occur among individuals at similar and adjacent hierarchical levels. Social resources embedded in personal networks—such as power, wealth, and reputation—are not directly possessed by individuals but are obtained through their direct or indirect social relationships. Poverty experiences place executives at a disadvantaged starting point within social networks, thereby limiting their opportunities to acquire essential social resources (Peng and Luo, 2000).

Firstly, from the perspective of institutional social resources, executives with poverty experiences have less access to social networks necessary to establish contacts with local government. As a result, they encounter greater resistance in obtaining market asymmetric information on policy interventions and miss advantageous financing opportunities or subsidies (Ozer et al., 2010), leading to a slow and sluggish digital transformation (Wu et al., 2021a). Secondly, from the perspective of business social resources, executives with poverty experiences have limited resources for sharing information with customers and industry partners (Batjargal et al., 2013). This limitation makes it harder for them to grasp customer needs or capture the dynamics of

industry market competition, thereby increasing the burden of digital transformation (Verhoef et al., 2021). Thirdly, from the perspective of technical social resources, the lower social network position of executives with poverty experiences hinders their ability to connect with technical institutions such as universities, research institutes, and industry technology associations. This challenge results in difficulties in retaining high-end technical talent (Teece, 2007), which is detrimental to digital transformation.

Therefore, the primary hypothesis of this paper can be stated as follows:

Hypothesis 1 (H1): CEO poverty experience has a negative impact on the firm's digital transformation.

When executives successfully acquire social resources, they can broaden their horizons and enhance their resource reserves. These advantages directly translate into a powerful driving force for promoting digital transformation within the company. Specifically, executives enhance their awareness and capabilities for digital transformation in the following ways:

Once executives acquire social resources, their awareness of digital transformation increases. This acquisition significantly elevates and expands their social circles, incorporating connections from a wider range of industry sectors and including key individuals with rich experience and expertise. The accumulation of social resources provides executives with more opportunities to interact with industry leaders, technology experts, and peers. By participating in industry forums, high-end summits, and roundtable discussions, they establish connections with elites from different fields (Gawer & Cusumano, 2008). Such cross-domain exchanges not only enrich their information sources but also enable them to stay updated on the latest trends, successful cases, and technological innovations in digital transformation (Qi & Xiao, 2020). Additionally, executives can use social media platforms to build broader social networks, continuously acquiring industry dynamics and cutting-edge knowledge (Leonardi, 2018). The richness of social resources drives executives to constantly

enhance their strategic vision and professional skills. They engage in professional training, attend advanced courses, or pursue higher degrees to deepen their understanding of digital transformation (Huang et al., 2020). Moreover, they actively read professional books, research papers, and industry reports, staying informed about the latest research outcomes and theoretical advancements in digital transformation. This continuous learning and self-improvement process enables executives to more accurately grasp the direction and focus of digital transformation, providing strong support for strategic decision-making.

With social resources, executives possess stronger capabilities for driving digital transformation. Financial support from social resources is crucial for advancing digital transformation. By establishing close partnerships with government bodies and financial institutions, executives can secure more policy support and financial subsidies for their companies. Access to funding allows them to allocate resources more flexibly, ensuring the smooth implementation of digital transformation projects. This financial backing enables investment in advanced digital technologies and equipment, which improves production efficiency and innovation capabilities (Leonardi, 2018). Digital transformation also requires high-quality digital talent. Executives can use funds to strengthen their digital talent pool by recruiting, training, and incentivizing top digital professionals (Warner & Wager, 2019; Karimi & Walter, 2015). Furthermore, financial resources can be used to optimize the company's organizational structure and management processes, promoting a shift towards a more flat and networked organization (Verhoef et al., 2021; Qi & Xiao, 2020). Executives focus on transforming social resources into internal advantages for the company. They advocate for an open, inclusive, and innovative corporate culture, encouraging employees to actively participate in digital transformation initiatives (Leonardi & Meyer, 2015; Fitzgerald et al., 2014). Additionally, they prioritize cultivating and introducing digital skills within the workforce, setting up special funds and providing training opportunities to stimulate employees' innovative potential and career development motivation (Warner & Wager, 2019). This dual optimization of culture and talent not only enhances the company's digital transformation capabilities but also lays a solid foundation for sustainable

development. We therefore propose the following hypothesis regarding the moderating effect:

Hypothesis 2 (H2): Social resources can mitigate the negative impact of the CEO poverty experience on the firm's digital transformation.

Methods

Data and Sample

This research utilizes a comprehensive dataset comprising 17,803 observations meticulously sourced from the China Stock Market & Accounting Research (CSMAR) Database and the Wind Economic Database, focusing specifically on publicly listed firms in China. The study period spans from 2009 to 2020, encompassing a total of 2,558 firms. To quantify the extent of digitalization, we employ a sophisticated textual analysis approach, measuring the frequency of digital-related terms within financial reports extracted from public data available via the Shanghai and Shenzhen Stock Exchanges.

The research methodology involves an in-depth analysis of the personal attributes of CEOs from publicly listed firms in China, complemented by a thorough examination of financial reports to assess the level of digital transformation. To better understand the impact of CEOs' poverty experiences, we conducted comprehensive telephone surveys to collect detailed information regarding the backgrounds of the firm's management team, including their birthplace and family economic situation. This paper employed a manual research approach to ascertain information regarding the birthplaces of CEOs, referencing the methodology outlined by Dai et al. (2016). The information-gathering process involved three primary methods: 1) Extraction from Resumes: Birthplace details of the top executives were sourced from the resumes of top executives of listed companies. 2) Internet Searches: In cases where executive resumes did not disclose birthplace information, internet searches were conducted using specific keywords such as “dialect,” “hometown,” “birthplace,” “native place,” and “compatriot” to locate the executive's birthplace details. If direct birthplace information was unavailable, the registered hometown details were utilized as a substitute. 3) Telephone Interviews: In situations where internet searches did not yield the birthplace information of the executive, telephone interviews were conducted with the securities

representatives of the listed companies to acquire the necessary information.

In evaluating the economic conditions of the CEOs' birthplaces, we obtained the list of key counties for national poverty alleviation work (referred to as “national poor counties”) from the Poverty Alleviation Office of The State Council. The compilation of this list has been overseen by The State Council Leading Group Office of Poverty Alleviation and Development. It has undergone three rounds of validation in 1994, 2001, and 2012. As of 2014, the list remained consistent, comprising 832 counties, including county-level administrative units, banners, and county-level cities. Notably, the roster of impoverished counties has exhibited remarkable stability over time.

Measurement

Dependent Variable

In the examination of Hypothesis 1, the dependent variable is *Digitalization*. We define *Digitalization* by identifying the initial appearance of digital technology-related keywords in the financial report. If keywords related to “*digital*” emerge for the first time in the company’s annual report during a given year, *Digitalization* is quantified as the number of such digital-related keywords in the annual report, signifying the company’s degree of digitalization. Otherwise, it is recorded as zero. Subsequently, we construct the dependent variable *lnDigit* by calculating the natural logarithm of one plus *Digitalization*, which helps correct the right-skewed distribution of Digitalization.

Regarding the specific keywords related to digitalization, we adhere to the approach employed in the prior literature (Chen et al., 2012; McAfee & Brynjolfsson, 2012; Farboodi et al., 2019). We select the keywords “ABCD technology” and “digital technology application” to form the indicator for digital transformation.

“A” for Artificial Intelligence Technology: Includes keywords like “Artificial Intelligence, Business Intelligence, Image Understanding, Investment Decision Aid Systems, Intelligent Data Analytics, Intelligent Robotics, Machine Learning, Deep Learning, Semantic Search, Biometrics, Face Recognition, Speech Recognition, Identity Verification, Autonomous Driving, Natural Language Processing.”

“B” for Blockchain Technology: Encompasses keywords such as “Blockchain, Digital Currency, Distributed Computing, Differential Privacy Technology, Smart Financial Contracts.”

“C” for Cloud Computing Technology: Comprises keywords like “Cloud Computing, Stream Computing, Graph Computing, Memory Computing, Multi-party

Secure Computing, Brain-like Computing, Green Computing, Cognitive Computing, Fusion Architecture, Million-level Concurrent, EB-level Storage, Internet of Things, Information Physical System."

"D" for Big Data Technology: Encompasses keywords including "Big Data, Data Mining, Text Mining, Data Visualization, Heterogeneous Data, Credit, Augmented Reality, Mixed Reality, Virtual Reality."

"Digital technology application" signifies the use of the internet, platforms, and other mobile software, combined with smart applications, to enhance market efficiency. It covers a wide range of areas, including "Mobile Internet, Industrial Internet, Internet Medical, E-commerce, Mobile Payment, Third-party Payment, NFC Payment, Smart Energy, B2B, B2C, C2B, C2C, O2O, Internet Connection, Smart Wearable, Smart Agriculture, Smart Transportation, Smart Medical, Intelligent Customer Service, Intelligent Home, Intelligent Investment, Intelligent Tourism, Intelligent Environmental Protection, Smart Grid, Intelligent Marketing, Digital Marketing, Unmanned Retail, Internet Finance, Digital Finance, Fintech, Financial Technology, Quantitative Finance, Open Banking." For the methodology, we utilize the Python crawler function to access the annual reports of tech ventures. We extract all textual content from these reports using the Java pdfbox library, creating a comprehensive data pool for subsequent keyword screening and analysis.

Independent Variable

The dependent variable is the CEOs' poverty experience, denoted as *Poor*CEO. This variable is assessed using two distinct metrics. From a district-level perspective, we consider indicators such as poverty county designation and population decline in counties affected by natural disasters during 1959-1961. Among these, the measurement of *Poverty County* is of primary interest. In line with Xu and Li (2016), *Poverty County* is assigned a value of 1 if the CEO was born in a national poverty-stricken county during the specified year, and 0 otherwise. Additionally, in robustness checks, we introduce *Shrink*, calculated by determining the change in the Great Famine cohort size relative to the normal cohort size in terms of the agricultural population, following the methodology described by Guo et al. (2018). The normal population is derived from the province's population data for a three-year window around the Great Famine (1956-1958, 1962-1965). Based on this, we define poverty by the extent of

population reduction in the CEOs' birth province during the Great Famine. The value of *CEOShrink* is 1 if the CEOs' birth province is one of the top 10% of the most depopulated provinces, and 0 otherwise.

To partial out potential confounding effects, we control variables of both firm characteristics and CEO attributes. Firm characteristics consist of capital intensity per employee (*CapIntensity*), firm's investment opportunities (*Q*), firm's cash flow (*CF*), firm's size (*Size*), and firm's ownership (*SOE*). We also consider CEO characteristics, including CEO Age (*CEOAge*), whether the CEO is Chairman (*ChairmanCEO*), political background of the CEO (*GOV*), business background of the CEO (*BCA*), educational background of the CEO (*ACA*) and gender of the CEO (*Gender*).

To be specific, *CapIntensity* is computed as the natural logarithm of the ratio of net property, plant, and equipment to the number of employees. *Q* is quantified using Tobin's *Q*, which is the market value of assets divided by the book value of assets. *CF* is calculated by dividing the cash flow from operations by the lagged firm size. Size is assessed as the natural logarithm of total assets. To identify state-owned enterprises, we use an indicator variable, *SOE*, which takes on the value of 1 for state-owned companies and 0 for others. *CEOAge* represents the age of the CEO, while *Chairman*CEO is an indicator variable, assuming a value of 1 when the CEO concurrently holds the position of chairman of the board, and 0 otherwise. When the CEO has served in government departments at the central, provincial, municipal, county, district, or township level, the value of *GOV* is assigned 5, 4, 3, 2, and 1, respectively. If the CEO has no such experience, the value of *GOV* is 0. BCA is measured by two dimensions: whether the CEO has experience in industry associations and whether the CEO has a finance industry background. A value of 1 is assigned if the CEO has industry association experience, and 0 otherwise. Similarly, a value of 1 is assigned if the CEO has a financial industry background, and 0 otherwise. The scores of these two dimensions are summed to obtain the measure of *BCA*. *ACA* consists of indicators in the following three dimensions: CEO education is assigned values of 5, 4, 3, 2, and 1 for doctoral, master's, undergraduate, college, and secondary school degrees, respectively. A value of 1 is assigned to those with overseas study experience, and 0 otherwise. The value of 2, 1, and 0 is assigned based on the number of teaching experiences in colleges and universities and the number of experiences in scientific research institutes. The value of *ACA* is obtained by summing these three scores. *Gender* is a dummy variable that is assigned a value of 1 if the CEO is male and 0 otherwise.

Model

To test the effect of CEO poverty experience on digital transformation, we constructed the following fixed-effects model. To account for potential confounding effects, we include control variables for both firm characteristics and CEO attributes. If α_1 is negative, then Hypothesis 1 is supported.

$$lnDigit_{i,t+1} = \alpha_0 + \alpha_1 PoorCEO_{i,t} + \gamma Controls_{i,t} + FirmFE + IndustryFE + YearFE + \varepsilon_{i,t}$$

Results

Descriptive statistics

Descriptive statistics for the key variables can be found in Table 1. Given that firm digitalization exhibits a normal distribution as a continuous variable, we utilize OLS regression to test our main hypothesis. In Table 2, Pearson's correlation coefficients are shown in the lower triangle, including the diagonal, while Spearman's rank correlations appear above the diagonal. We also include our moderator variables in both Table 1 and Table 2 to clearly observe the correlation between these variables and others, which will be discussed later in the paper.

Variable	Obs.	Min	Median	Mean	Max	Std. Dev.
lnDigit	17803	0.000	0.000	0.546	2.303	0.690
PoorCEO	17803	0.000	0.000	0.007	1.000	0.085
CapIntensity	17803	9.458	12.440	12.448	15.570	1.106
Q	17803	0.899	1.626	2.031	8.291	1.237
CF	17803	-0.184	0.044	0.044	0.250	0.072
Size	17803	19.415	21.812	22.039	26.974	1.369
SOE	17803	0.000	0.000	0.343	1.000	0.475
CEOAge	17803	33.000	49.000	49.441	65.000	6.505
ChairmanCEO	17803	0.000	1.000	0.670	1.000	0.470
GOV	17803	0.000	0.000	0.788	5.000	1.558
BCA	17803	0.000	0.000	0.105	2.000	0.316
ACA	17803	1.000	4.000	3.622	8.000	1.061
Gender	17803	0.000	1.000	0.936	1.000	0.245
EMBA	17803	0.000	0.000	0.069	1.000	0.254
ETC	17803	0.000	0.192	0.358	62.398	1.244
Relation	17803	0.000	0.000	0.499	1.000	0.500

	lnDigit	PoorCEO	CapIntensity	Q	CF	Size	SOE	CEOAge	ChairmanCEO	GOV	BCA	ACA	Gender	EMBA	ETC	Relation
lnDigit	1	0.003	-0.249	0.188	0.003	-0.008	-0.186	-0.017	-0.144	0.026	0.075	0.102	-0.009	0.057	-0.011	-0.125
PoorCEO	0.003	1	-0.005	-0.025	0.000	0.066	0.065	-0.007	0.051	-0.019	-0.030	-0.004	0.024	-0.021	-0.012	-0.008
CapIntensity	-0.249	-0.005	1	-0.135	0.081	0.283	0.182	0.098	0.116	0.009	-0.051	-0.011	0.050	-0.075	-0.075	-0.111
Q	0.188	-0.025	-0.135	1	0.142	-0.369	-0.112	0.013	-0.070	-0.010	0.017	0.059	-0.016	-0.008	0.103	-0.095
CF	0.003	0.000	0.081	0.142	1	0.011	0.021	0.043	0.025	0.009	-0.008	0.003	-0.006	-0.013	-0.071	-0.010
Size	-0.008	0.066	0.283	-0.369	0.011	1	0.326	0.147	0.162	0.022	0.034	0.089	0.060	-0.047	-0.120	-0.262
SOE	-0.186	0.065	0.182	-0.112	0.021	0.326	1	0.098	0.346	-0.150	-0.091	0.078	0.090	-0.135	-0.017	-0.082
CEOAge	-0.017	-0.007	0.098	0.013	0.043	0.147	0.098	1	-0.145	0.083	-0.007	-0.117	0.024	-0.067	-0.030	-0.142
ChairmanCEO	-0.144	0.051	0.116	-0.070	0.025	0.162	0.346	-0.145	1	-0.270	-0.185	-0.016	-0.017	-0.103	0.004	-0.086
GOV	0.026	-0.019	0.009	-0.010	0.009	0.022	-0.150	0.083	-0.270	1	0.144	0.046	-0.066	0.054	-0.010	0.029
BCA	0.075	-0.030	-0.051	0.017	-0.008	0.034	-0.091	-0.007	-0.185	0.144	1	0.053	0.000	0.034	0.006	0.012
ACA	0.102	-0.004	-0.011	0.059	0.003	0.089	0.078	-0.117	-0.016	0.046	0.053	1	0.027	0.161	0.010	-0.035
Gender	-0.009	0.024	0.050	-0.016	-0.006	0.060	0.090	0.024	-0.017	-0.066	0.000	0.027	1	-0.008	0.011	-0.009
EMBA	0.057	-0.021	-0.075	-0.008	-0.013	-0.047	-0.135	-0.067	-0.103	0.054	0.034	0.161	-0.008	1	-0.004	0.030
ETC	-0.011	-0.012	-0.075	0.103	-0.071	-0.120	-0.017	-0.030	0.004	-0.010	0.006	0.010	0.011	-0.004	1	0.015
Relation	-0.125	-0.008	-0.111	-0.095	-0.010	-0.262	-0.082	-0.142	-0.086	0.029	0.012	-0.035	-0.009	0.030	0.015	1

Baseline results

Table 3 provides the OLS estimation results for the influence of CEOs' poverty experiences on firm digital transformation. Models 1 through 4 present tests controlling for firm fixed effects, firm and industry fixed effects, firm and year fixed effects, and all three fixed effects, respectively. Consistent with our theory, the results reveal a negative coefficient for *Poor*CEO. These results indicate that CEOs' experiences with poverty have a substantial and negative impact on firm digital transformation. These findings support Hypothesis 1.

Variables	lnDigit (Model 1)	lnDigit (Model 2)	lnDigit (Model 3)	lnDigit (Model 4)
PoorCEO	-0.158**	-0.150**	-0.132**	-0.147***
CapIntensity	-0.039***	-0.013	-0.078***	-0.053***
Q	0.051***	0.048***	0.019***	0.016***
CF	0.017	0.010	-0.038	-0.032
Size	0.259***	0.249***	0.095***	0.097***
SOE	-0.359***	-0.292***	-0.121***	-0.079***

Moderating effects

In the theory section, we propose that CEOs' poverty experiences negatively affect the firm's digital transformation because these experiences can result in a lack of sufficient social resources, which are essential for digital transformation. To verify this argument, we explore the moderating effect of social resources on the baseline result. If social resources can mitigate the negative effects of CEOs' poverty experiences on the firm's

digital transformation, then Hypothesis 2 is supported, thereby proving our argument.

We measure the magnitude of social resources from three perspectives. First, in terms of the CEOs themselves, participation in MBA or EMBA programs is considered an important way for CEOs to acquire social resources (Yang, 2011). By participating in an MBA or EMBA program, CEOs can meet and connect with members of the elite stratum who are also in the program, and they can enter the university's alumni network. This greatly expands their social network and provides access to a large number of social resources (Cohen, Frazzini, & Malloy, 2010). Based on this perspective, we design the variable *MBA*, assigning a value of 1 if the CEO has participated in an MBA or EMBA program, and 0 otherwise.

Second, we focus on the relationship between the CEO and government officials in key positions where the firm is located. Hometown relationships are considered to be important bridges in social networks (Fisman et al., 2018). If CEOs have a hometown relationship with senior government officials, such as provincial governors and provincial party secretaries, they can access a wide range of social networks at a low cost (Zhu et al., 2022) and gain access to numerous social resources. Based on this perspective, we design the variable *Relation*, which is assigned a value of 1 if the firm's CEO has a hometown relationship with the party secretary of the province where the firm has been located in the last five years, and 0 otherwise.

Third, we focus on firm-level investment in social resources. Business hospitality is a crucial way for firms to acquire social resources (Cai, Fang, & Xu, 2011). When firms allocate more money to business hospitality, they can acquire more social resources. Based on this perspective, we design the variable ETC, which indicates Entertainment and Travel Costs expenditures. ETC is calculated as an itemized subcategory of Selling, General, and Administrative Expenses (SG&A) obtained from the annual report's sales expense details. It is expressed as the ratio of these costs to income, multiplied by 100. A higher value indicates more substantial capital allocated for business hospitality in that year.

We design the following models to test the moderating effect. *lnDigit*, *Poor*CEO, and *Controls* are all defined in the same way as in the main regression model, and M

represents either MBA, *Relation, or ETC*. The coefficient we are interested in is β_3. If β_3 takes a positive value, indicating that social resources can mitigate the negative effect of CEOs' poverty experiences on the firm's digital transformation, then we can support our argument that it is the lack of social resources that causes the negative effect of CEO poverty experience on the digital transformation of the firm.

$$lnDigit_{i,t+1} = \beta_0 + \beta_1 PoorCEO_{i,t} + \beta_2 M_{i,t} + \beta_3 PoorCEO_{i,t} \times M_{i,t} + \theta Controls_{i,t} + FirmFE + IndustryFE + YearFE + \varepsilon_{i,t}$$

The results of the moderating effects tests are shown in Table 4. Model 1 to 3 test the moderating effects of *MBA*, *Relation*, and *ETC* as moderating variables, respectively. The results in all three columns demonstrate the effectiveness of social resources in mitigating the negative effect of CEOs' poverty experiences on the digital transformation of the firm, thereby supporting Hypothesis 2. These findings reinforce our theory that the lack of social resources is indeed a significant reason why CEOs' poverty experiences negatively impact digital transformation.

Variables	lnDigit (Model 1)	lnDigit (Model 2)	lnDigit (Model 3)
PoorCEO	-0.154***	-0.236***	-0.177*
PoorCEO×MBA	0.324***		
PoorCEO×Relation		0.191**	
PoorCEO×ETC			0.577**

Robustness Check

This study conducts robustness checks to further verify the consistency of the results by changing the definition of independent variables and performing an entropy balancing test.

In the baseline results, we define *Poor*CEO based on the most recent version of the list of poor counties. Since this list has undergone several updates, we define counties that are listed in both the latest and the oldest versions as poor counties in our robustness test. The results of this robustness test are shown in Model 1 in Table 5, and they are consistent with the main regression results.

Further, we introduce an alternative definition of executive poverty, quantified by the extent of population reduction in the executives' birth provinces during the Great Famine (1959-1961), denoted as *Shrink*. Specifically, Shrink is calculated as the change in the Great Famine cohort size relative to the normal cohort size in terms of agricultural population, following the methodology of Guo et al. (2018). We then apply an indicator variable, *CEOShrink*. If the CEO's birth province experienced one of the most significant population reductions during the Great Famine, *CEOShrink* is assigned a value of 1; otherwise, it is assigned 0. Model 2 in Table 5 illustrates that when using *CEOShrink* to measure executive poverty, we continue to observe a significantly negative correlation between executive poverty and digital transformation, consistent with the primary analysis results.

In conclusion, these alternative definitions of executive poverty bolster the robustness of our findings, reaffirming the negative correlation between executive poverty and digital transformation.

Variables	lnDigit (Model 1)	lnDigit (Model 2)
PoorCEO	-0.187**	
CEOShrink		-0.068**

In the sample, there is a relatively small percentage of observations with a value of 1 for *Poor*CEO. To address concerns that this distributional bias may interfere with the results, we conduct an entropy balancing test to check the robustness of our findings (Hainmueller, 2012). Specifically, we select all the control variables in the main regression model as characteristic variables and use the entropy balancing method to calculate weights. These weights ensure that the characteristic variables of samples with CEOs who have poverty experience and those without are not significantly different in terms of mean, variance, and skewness. We then conduct a weighted regression. The results of this test are shown in Table 6, and they continue to indicate that CEOs' poverty experiences negatively affect the firm's digital transformation. This further reinforces the robustness of our findings.

Variables	lnDigit	PoorCEO
PoorCEO	-0.182***	
Controls	Yes	Yes
Firm F.E.	Yes	Yes
Year F.E.	Yes	Yes
Industry F.E.	Yes	Yes

Instrumental variable test

To mitigate the impact of possible omitted variables on the regression results of this paper, we conduct an instrumental variable test. Specifically, we refer to Hoi et al. (2019) and Zhang (2019), using district genealogical diversity as the instrumental variable. Genealogical diversity is calculated by first determining the ratio of the number of genealogies for each surname in the district to the total number of genealogies in the district. Then, we calculate the sum of the squares of these ratios and subtract this sum from one. The greater this value, the higher the genealogical diversity of the district. Higher genealogical diversity indicates greater population mobility and fuller economic development in the district (Hoi et al., 2019; Zhang, 2019), which reduces the likelihood of experiencing poverty in the district. This satisfies the correlation requirement of the instrumental variable. Additionally, the diversity of genealogies in the district is unlikely to affect the firm's digital transformation through factors other than the individual executives, thus satisfying the exogeneity requirement of the instrumental variable.

The results of the two-stage regression with district genealogical diversity as the instrumental variable are shown in Table 7. The underidentification test reports the Kleibergen-Paap rk LM statistic with a value of 56.487, rejecting the null hypothesis that the instrumental variable is underidentified at the 1% level. The weak identification test reports the Cragg-Donald Wald F statistic with a value of 56.109, which is greater than the critical value of the Stock-Yogo weak instrumental variable identification test at the 10% significance level, thus rejecting the null hypothesis of weak instrumental variables. In the first stage, the instrumental variable shows a strong correlation with

the explanatory variable. The second stage results are consistent with the baseline results of this paper, further supporting the robustness of our findings.

Variables	PoorCEO (Stage 1)	lnDigit (Stage 2)
PoorCEO		-1.629**
IV	-1.053***	

Discussion

In this study, we explore the complex relationship between CEOs' experiences of poverty and corporate digital transformation. Our findings contribute new insights to the growing literature on human factors, particularly the influence of executive backgrounds on strategic decisions within companies. We examine how CEOs' personal adversities shape their attitudes towards risk and innovation, ultimately influencing their willingness to engage in digital transformation.

Firstly, our research supplements the literature by demonstrating that CEOs' experiences of poverty negatively impact firms' adoption of digital technologies. This finding aligns with previous arguments suggesting that CEOs who have experienced poverty may lack the social resources necessary for engaging in high-risk innovative activities such as digital transformation (Banerjee & Duflo, 2011). Their risk aversion, stemming from early-life resource scarcity, often leads to conservative strategies and reluctance to invest in cutting-edge technologies (Malmendier et al., 2011). Our empirical evidence strongly supports this theoretical framework, indicating that CEOs from poverty backgrounds exhibit significant reluctance to adopt digital technologies, thereby hindering their firms' transformation efforts.

Secondly, we expand the research by examining the moderating role of social resources in mitigating the negative impact of CEO poverty experiences on digital transformation. Our results indicate that social resources, including participation in MBA or EMBA programs, hometown relationships, and firm-level investments in social capital, empower executives from poverty backgrounds to better seize digital transformation opportunities. These resources broaden their perspectives, enhance their resource reserves, and provide pathways to access cutting-edge technologies and

information, thereby facilitating the digital transformation process. This finding underscores the importance of social capital in alleviating the adverse effects of poverty experiences on corporate strategic decisions.

Our findings have significant implications for organizations and policymakers. For organizations, understanding the impact of CEOs' personal experiences on strategic decision-making is crucial. Recognizing how CEOs' poverty backgrounds may hinder their drive for digital transformation allows companies to take proactive measures to address these limitations. This may involve providing additional training, guidance, or resources to CEOs from poverty backgrounds to help them overcome hesitancies and seize opportunities presented by digital technologies. Additionally, our results highlight the necessity for companies to invest in building and maintaining social capital. By establishing relationships with industry leaders, policymakers, and other stakeholders, companies can access valuable resources and information essential for accelerating digital transformation efforts. This could include increased expenditures on business receptions, strategic networking initiatives, or targeted outreach programs aimed at establishing strong connections with key influencers.

While our study provides valuable insights into the relationship between CEOs' poverty experiences and digital transformation, there are limitations. One potential limitation is the reliance on proxy variables to measure poverty experiences and digital transformation. Although rigorous methods were used to construct these variables, future research could explore more direct measurement approaches to capture nuances in these constructs. Additionally, our study focused solely on listed companies in China. While this context provided a rich environment for our research questions, the findings may not generalize to companies in other regions or industries. Future research could explore whether similar patterns emerge in different contexts and investigate cross-cultural differences in the impact of CEOs' poverty experiences on digital transformation. Furthermore, our study primarily focused on the impact of poverty experiences and social resources on digital transformation. Future research could delve deeper into the specific mechanisms through which these factors influence strategic decision-making, exploring the mediating roles of cognitive biases, emotional

responses, and other psychological factors in the relationship between personal history and strategic outcomes.

Our research reveals that CEOs' experiences of poverty may hinder their drive for digital transformation, but this negative impact can be mitigated through access to social resources. These findings are crucial for both theory and practice, emphasizing the critical role of human factors in shaping corporate strategic decisions. As the digital economy continues to evolve, businesses must increasingly recognize the influence of leaders' personal experiences and invest in building social capital to enable them to seize opportunities presented by digital technologies.

Conclusion

Amid the rapid evolution of information technology, our economy and society are undergoing profound digital transformations. This study focuses on exploring how a background of poverty influences CEOs' capability and inclination to utilize digital technologies. We investigate the influence of CEOs' social class origins, particularly earlier poverty experiences, on a firm's propensity for digitalization. Additionally, we examine the moderating effects of social resource acquisition on CEOs' subsequent experiences, including MBA/EMBA education, political connections, and social capital acquisition. Our theory and findings highlight that social class origins have a lasting and varying impact on individual preferences, affecting executives' tendencies towards digital transformation. The social resources that CEOs acquire can further influence the success and effectiveness of digital transformation initiatives. By examining this novel managerial characteristic, we offer important implications for social class and upper echelons theory, particularly in uncovering the impact of CEOs' personal backgrounds and experiences on corporate strategic decision-making before and after they are equipped with social resources.

This study reveals that CEOs with early experiences of poverty often miss opportunities to embrace change and access information, leading to challenges in achieving digital transformation. However, once these CEOs gain access to a wealth of information resources and social ties, they can overcome these initial disadvantages. They begin to emphasize the importance of digital technology within their enterprises

and secure additional financing from their expanded social networks in the external industry chain, thereby enhancing the external conditions for digitalization. This transition demonstrates that CEOs with poverty experiences can develop a heightened ability to leverage digital technology. The specific mechanism primarily lies in their robust transformative thinking and enhanced external resource management abilities once they are equipped with social resources. This study underscores the potential for CEOs from impoverished backgrounds to effectively lead digital transformation efforts when supported by adequate social capital.

The insights drawn from this research underscore the critical need for organizations and enterprise management to acknowledge the profound influence of CEOs' personal experiences, particularly those related to poverty. The experience of poverty significantly shapes a CEO's leadership style, subsequently impacting the effectiveness of digital transformation within an enterprise. In the landscape of the digital economy, social resources are pivotal in steering changes in enterprise management. Social ties can support CEOs from impoverished backgrounds in adapting and driving transformation. This not only influences corporate objectives and governance structures but also initiates changes in internal management models. Enterprises should recognize and fully leverage the pivotal role of CEOs with poverty experiences by providing them with greater access to social resources, thereby mitigating the external constraints on digital transformation. This approach can help these CEOs to shape the organization and management paradigms effectively, leading to successful digital transformation.

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Table 1. Descriptive statistics

	Obs.	Min	Median	Mean	Max	Std. Dev.
lnDigit	17803	0.000	0.000	0.546	2.303	0.690
PoorCEO	17803	0.000	0.000	0.007	1.000	0.085

CapIntensity	17803	9.458	12.440	12.448	15.570	1.106
Q	17803	0.899	1.626	2.031	8.291	1.237
CF	17803	-0.184	0.044	0.044	0.250	0.072
Size	17803	19.415	21.812	22.039	26.974	1.369
SOE	17803	0.000	0.000	0.343	1.000	0.475
CEOAge	17803	33.000	49.000	49.441	65.000	6.505
ChairmanCEO	17803	0.000	1.000	0.670	1.000	0.470
GOV	17803	0.000	0.000	0.788	5.000	1.558
BCA	17803	0.000	0.000	0.105	2.000	0.316
ACA	17803	1.000	4.000	3.622	8.000	1.061
Gender	17803	0.000	1.000	0.936	1.000	0.245
EMBA	17803	0.000	0.000	0.069	1.000	0.254
ETC	17803	0.000	0.192	0.358	62.398	1.244
Relation	17803	0.000	0.000	0.499	1.000	0.500

Table 2. Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
lnDigit	1	0.001	-0.232	0.217	0.004	-0.012	-0.188	-0.017	-0.145	0.032	0.084	0.1	-0.015	0.059	0.02	-0.123
PoorCEO	0.003	1	-0.011	-0.044	-0.001	0.058	0.065	-0.008	0.051	-0.016	-0.031	-0.003	0.024	-0.021	-0.028	-0.008
CapIntensity	-0.249	-0.005	1	-0.168	0.078	0.268	0.158	0.098	0.107	0.012	-0.056	-0.009	0.039	-0.066	-0.154	-0.115
Q	0.188	-0.025	-0.135	1	0.147	-0.42	-0.169	0.008	-0.107	0.001	0.009	0.045	-0.025	0.01	0.175	-0.095
CF	0.003	0	0.081	0.142	1	0.022	0.013	0.043	0.021	0.026	0	0.009	-0.011	-0.015	-0.051	-0.008
Size	-0.008	0.066	0.283	-0.369	0.011	1	0.316	0.143	0.169	0.004	0.003	0.077	0.057	-0.044	-0.349	-0.293
SOE	-0.186	0.065	0.182	-0.112	0.021	0.326	1	0.1	0.346	-0.162	-0.093	0.079	0.09	-0.135	-0.141	-0.082
CEOAge	-0.017	-0.007	0.098	0.013	0.043	0.147	0.098	1	-0.145	0.059	-0.021	-0.109	0.019	-0.068	-0.082	-0.155
ChairmanCEO	-0.144	0.051	0.116	-0.07	0.025	0.162	0.346	-0.16	1	-0.254	-0.185	-0.011	-0.017	-0.103	-0.036	-0.086
GOV	0.026	-0.019	0.009	-0.01	0.009	0.022	-0.15	0.083	-0.27	1	0.148	0.022	-0.074	0.057	0.013	0.036
BCA	0.075	-0.03	-0.051	0.017	-0.008	0.034	-0.091	-0.007	-0.185	0.144	1	0.055	-0.002	0.031	0.022	0.013
ACA	0.102	-0.004	-0.011	0.059	0.003	0.089	0.078	-0.117	-0.016	0.046	0.053	1	0.028	0.195	0.003	-0.036
Gender	-0.009	0.024	0.05	-0.016	-0.006	0.06	0.09	0.024	-0.017	-0.066	0	0.027	1	-0.008	0	-0.009
EMBA	0.057	-0.021	-0.075	-0.008	-0.013	-0.047	-0.135	-0.067	-0.103	0.054	0.034	0.161	-0.008	1	0.032	0.03
ETC	-0.011	-0.012	-0.075	0.103	-0.071	-0.12	-0.017	-0.03	0.004	-0.01	0.006	0.01	0.011	-0.004	1	0.129
Relation	-0.125	-0.008	-0.111	-0.095	-0.01	-0.262	-0.082	-0.142	-0.086	0.029	0.012	-0.035	-0.009	0.03	0.015	1

Table 3. Baseline results

Variables	*lnDigit*	*lnDigit*	*lnDigit*	*lnDigit*
	Model 1	*Model 2*	*Model 3*	*Model 4*
PoorCEO	-0.158**	-0.150**	-0.132**	-0.147***
	(-2.072)	(-2.225)	(-2.119)	(-2.740)
CapIntensity	-0.039***	-0.013	-0.078***	-0.053***
	(-4.418)	(-1.597)	(-10.25)	(-7.429)
Q	0.051***	0.048***	0.019***	0.016***
	(11.66)	(10.96)	(3.733)	(3.304)
CF	0.017	0.010	-0.038	-0.032
	(0.296)	(0.181)	(-0.709)	(-0.605)
Size	0.259***	0.249***	0.095***	0.097***
	(27.75)	(29.09)	(11.17)	(12.65)
SOE	-0.359***	-0.292***	-0.121***	-0.079***
	(-13.29)	(-13.23)	(-5.554)	(-4.488)
CEOAge	0.015***	0.013***	0.001	-0.001
	(10.79)	(10.47)	(0.001)	(-0.393)
ChairmanCEO	-0.044**	-0.036**	-0.031*	-0.022
	(-2.380)	(-2.085)	(-1.940)	(-1.508)
GOV	-0.032***	-0.027***	-0.005	-0.002
	(-5.198)	(-4.925)	(-0.922)	(-0.428)
BCA	0.039	0.045*	0.041*	0.029
	(1.485)	(1.876)	(1.741)	(1.338)
ACA	0.044***	0.032***	0.016**	0.009
	(5.193)	(4.158)	(2.187)	(1.419)
Gender	0.005	-0.007	0.014	0.004
	(0.140)	(-0.189)	(0.431)	(0.153)
Constant	-5.447***	-5.540***	-0.912***	-1.377***
	(-27.89)	(-28.07)	(-4.803)	(-7.433)
Firm F.E.	Y	Y	Y	Y
Year F.E.	N	N	Y	Y
Industry F.E.	N	Y	N	Y
Obs.	17,803	17,803	17,803	17,803
R^2	0.0850	0.364	0.269	0.508

Notes: * p < 0.10, **p < 0.05, *** p < 0.01. The t statistics are shown in the parenthesis, calculated by the robust standard error.

Table 4. Moderating effects

Variables	*lnDigit*	*lnDigit*	*lnDigit*
	Model 1	*Model 2*	*Model 3*
PoorCEO	-0.154***	-0.236***	-0.177*

	(-2.833)	(-3.072)	(-1.865)
PoorCEO×MBA	0.324***		
	(5.032)		
MBA	-0.009		
	(-0.382)		
PoorCEO×Relation		0.191**	
		(2.268)	
Relation		-0.012	
		(-1.090)	
PoorCEO×ETC			0.577**
			(2.552)
ETC			-0.022
			(-1.211)
Controls	Y	Y	Y
Firm F.E.	Y	Y	Y
Year F.E.	Y	Y	Y
Industry F.E.	Y	Y	Y
Obs.	17,803	17,803	17,803
R^2	0.508	0.508	0.456

Notes: * p < 0.10, **p < 0.05, *** p < 0.01. The t statistics are shown in the parenthesis, calculated by the robust standard error.

Table 5. Robustness tests with alternative definitions of executive poverty

Variables	***lnDigit***	***lnDigit***
	Model 1	***Model 2***
PoorCEO	-0.187**	
	(-2.251)	
CEOShrink		-0.068**
		(-2.240)
Controls	Y	Y
Firm F.E.	Y	Y
Year F.E.	Y	Y
Industry F.E.	Y	Y
Obs.	17,803	17,803
R^2	0.508	0.513

Notes: * p < 0.10, **p < 0.05, *** p < 0.01. The t statistics are shown in the parenthesis, calculated by the robust standard error.

Table 6. Entropy balancing test

Variables	***lnDigit***
PoorCEO	-0.182***
	(0.059)

Controls	Y
Firm F.E.	Y
Year F.E.	Y
Industry F.E.	Y
Obs.	17,803
R^2	0.823

Notes: * p < 0.10, **p < 0.05, *** p < 0.01. The t statistics are shown in the parenthesis, calculated by the robust standard error.

Table 7. Instrumental variable test

Variables	***PoorCEO***	***lnDigit***
	Stage 1	***Stage 2***
PoorCEO		-1.629**
		(0.737)
IV	-1.053***	
	(0.041)	
Controls	Y	Y
Firm F.E.	Y	Y
Year F.E.	Y	Y
Industry F.E.	Y	Y
Obs.	17,803	17,803
R^2	0.0182	0.506
Underidentification test	56.487	
P value	0.0000	
Weak identification test	56.109	
Stock-Yogo critical value	16.38	

Notes: * p < 0.10, **p < 0.05, *** p < 0.01. The t statistics are shown in the parenthesis, calculated by the robust standard error.