Female CEO Leadership: Viewing Global Strategy Through a Systems Archetype Lens

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The world is experiencing unprecedented changes and the challenges global corporations face are reshaping what it means to lead in turbulent times. Few studies have sought to look at the experiences of female chief executive officers (CEOs) relative to how they strategize corporate transformation. This study is designed to advance the knowledge of how women appointed to CEO positions navigate the responsibility of managing failing conglomerates. While ample research shows situational factors that got women to their positions, there is little research that shows what keeps them there. The problem addressed is fundamental to the development of women for CEO succession in global corporations. The central question asked is, "What are the experiences of female CEOs in transforming downward performing corporations?" To frame the central question, a systems archetype is used as a diagnostic tool for understanding the complexities present within the business environment that affect strategy formulation and performance.

Keywords: global strategy, MNE transformation, organizational resilience, women leadership

INTRODUCTION

The knowledge accumulated through scholarly research about women leadership spans more than 30 years. By definition, the glass cliff is the appointment of female CEOs ahead of similarly qualified men only when companies are in a precarious state (Bruckmüller and Branscombe, 2010). The forces that characterize the glass ceiling, personal barriers, societal barriers, and organizational barriers, reflect the changing role of women in the workplace (Ryan, Haslam, Morgenroth, Rink, Stoker, & Peters, 2016). These pressures on professional women in the workplace are captured from diverse angles.

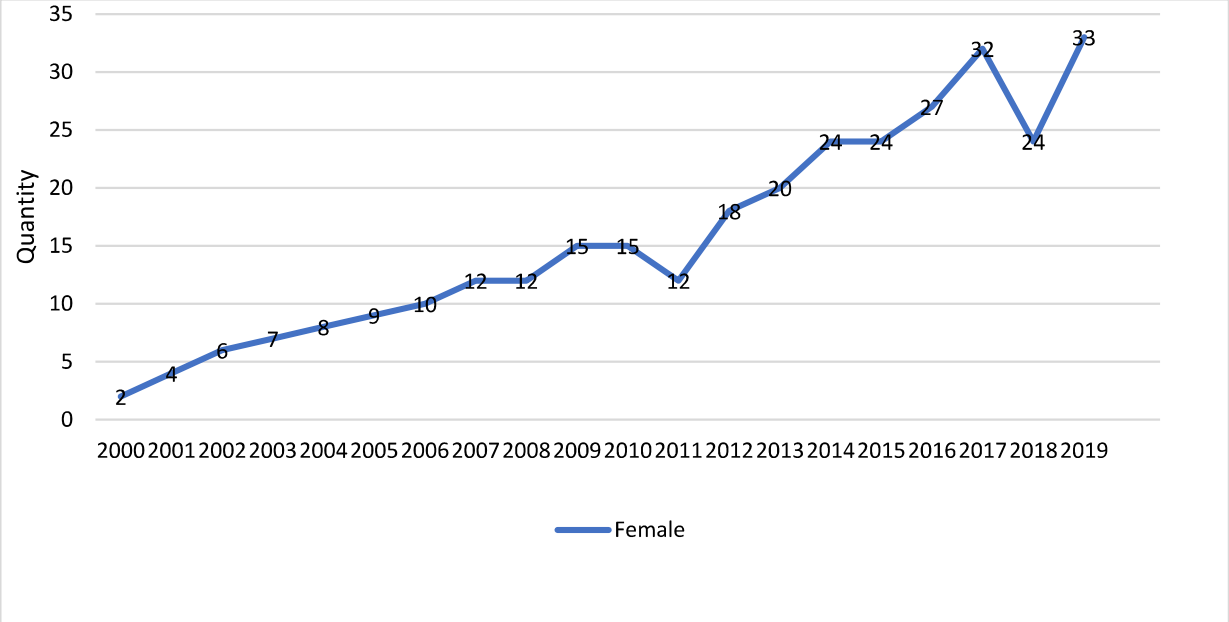
Forbes magazine (Carpenter, 2017) published a comprehensive review of historical firsts of women who broke top leadership barriers in business. In 1889, the first-ever female CEO was Anna Bissell of the Bissell floor care company. Anna Bissell acquired the position after the death of her husband. In 1972, Katherine Graham became the first-ever CEO of a Fortune 500 company, The Washington Post. At the turn of the millennium, Carly Fiorina became the first female CEO of a company listed on the Dow Jones Industrial Average – Hewlett Packard (HP) in 1999. At the height of her reign at HP, Fiorina became an icon for women leadership and a target for controversy. In her words, "Leadership is hard and controversial under the best of circumstances." (Fiorina, 2015). The double standard lesson became a resounding theme in Fiorina's experiences.

There were numerous publications (Caudron, 2003; Ginzl, 2007) about Fiorina's difficult experiences and media focus on her personality instead of her performance. By all accounts, HP was a troubled firm prior to Fiorina's arrival. Fiorina had an intense focus on high-performance learned from her rich

experiences at AT&T and Lucent Technologies. Within the first two years of her tenure, HP reported a 15% gain in both revenues and earnings for fiscal 2000. She led HP through a transformation described in three parts: 1) restructure, 2) acquisition, and 3) board governance. Fiorina also learned some tough lessons about the HP Way (*culture*) and board governance. Between 2005 and 2011,The board of HP fired three CEOs—Fiorina was one of them. Meg Whitman became CEO in 2011 and resigned in 2017. Meg Whitman earned an undergraduate degree in economics from Princeton University and an MBA from Harvard University. She resigned to head up another Silicon Valley ecommerce upstart, eBay (Rao, 2019).

The uptrend in number of females who ascended to the CEO role coincided with the financial debacle period (2007-2009) and subsequent recession (see Figure 1). The 2008 Great Recession affected firms differently by industry. Post-crisis, the vulnerability of companies rose to historic proportions. The ensuing conditions – financial fragility, uncertainty, political pressures, managerial capabilities – altered the pattern and pulse of leadership. Almost by implication, opportunities for women expanded to senior positions in top leadership.

FIGURE 1
FEMALE CEOS OF FORTUNE 500 COMPANIES



The change in number of female CEOs doubled from 15 in 2010 to 33 in 2019. Laura Alber of Williams-Sonoma leads the list of longest serving female in a CEO position with 10 consecutive years of service. Mary T. Barra became the first female CEO at a major an automobile maker, General Motors, in 2013. The common denominator of women on the Fortune 500 list (See Table 1) is a remarkable biography of accomplishments in their respective fields. The numbers of women are few, but their organizational leadership matters around the world.

LITERATURE REVIEW

Given the broad scope of the phenomenon, I reviewed the most relevant literature in context to glass cliff and strategy making in this section. A rich history of women leadership research exists and is discussed across multiple discipline boundaries using quantitative, qualitative, and mixed methods research. Women leadership is dominated by a focus on gender disparities, recruitment, and pay inequality (Ryan, Haslam, Hersby, and Bongiorno, 2011; Hunt-Earle, 2012). The categories of work and family research show the

challenges of professional women who struggle to balance work and family life. Women and career literature explain how societal views on jobs lead to different paths for women. Organizational studies about workplace culture encapsulate race and ethnicity as factors and related barriers to career advancement (Zweigengaft & Domhoff, 2010; Duffy, 2017). In a range of disciplines, the common denominator underlying these complex and contextual discussions is behavior and organizational practices (Wang, & Zhao, 2018). Fernandez and Campero (2017) offered empirical evidence about biases in external hiring practices that contribute to the glass cliff phenomenon in high-tech firms.

In consideration of the importance of the CEO's role of strategy-making, the upper echelons theory (Hambrick & Mason, 1984) emphasized strategic decisions and performance outcomes as reflections of the background characteristics of the top management team (TMT). Using upper echolons theory, Jeong and Harrison (2017) contributed practical implications to firm performance consequences represented by females in top corporate management and CEO positions. By meta-analytic techniques, they analyzed how contextual and mediating mechanisms such as risk-taking tendencies, stock return effects, and decision latitude might have affected financial performance of female representation in top corporate positions. Among their findings, short term negative stock market reactions to the announcement of female leadership were found, but no long-term evidence of performance declines were confirmed.

Zhang and Qu (2016) empirically tested the impact of CEO succession with gender change on firm performance using data from China's Shanghai and Shenzhen Stock Exchanges of publicly listed companies from the period of 1997-2010. The results of their findings highlighted the link between firm attitudes of male to female succession on post-succession performance and early departure. While not designed to test the "glass cliff" theory, their investigation complemented the argument that women tend to be appointed to CEO role under precarious circumstances.

Another body of research emerged that directed attention to how a company's resources drive its performance. The emergence of resource-based theory highlighted a view of the relationship between firm capabilities, resources, and sources of competitive advantage (Barney & Clark, 2007). Assumptions and logic of the resource-based theory were influenced by the seminal work of Penrose (1959), Porter's (1979) Diamond model on industry analysis, and later contributions by Wernerfelt's (1984) seminal work. Arguments against resource-based theory held it inadequate to capture the global strategies and structures used to mitigate risks.

One of the most powerful insights about organizational structures is drawn from systems theory. The seminal works of economist Kenneth Boulding (1956) and biologist Ludwig Karl von Bertalanffy (1972) introduced the positioning arguments and theoretical lens about systems theory. Both philosophers elaborated the concept of organisms as open systems with complex interacting components. However, von Bertalanffy further argued that systems theory could be applied to open systems beyond the scientific realm to other disciplines. An open system is one with interrelated elements and exchanges matter with its environment. It is along these lines that contemporary scholars explored the extent to which systems thinking integrated with organizational competencies to foster knowledge development and utilization.

A different research front in management looked at global leadership in a resilience context. Sminia (2009) stimulated new thinking about strategy formation research. Resilience is more a reflection of the globalization of the world and the dynamic capabilities required of the firm to interact within it. With special reference to complex adaptive systems, Pertilla (2019) linked organizational resilience to the capability of leaders to understand business strategy, structure, and change from a systems perspective. Sabatino (2016) drew from an economic approach and used case studies involving manufacturing companies to determine how to measure a resilient enterprise. Sabatino's research offered a scheme with factors of resiliency such as: structure of costs, timeliness of business decisions, product differentiation, business culture, and geographic focus.

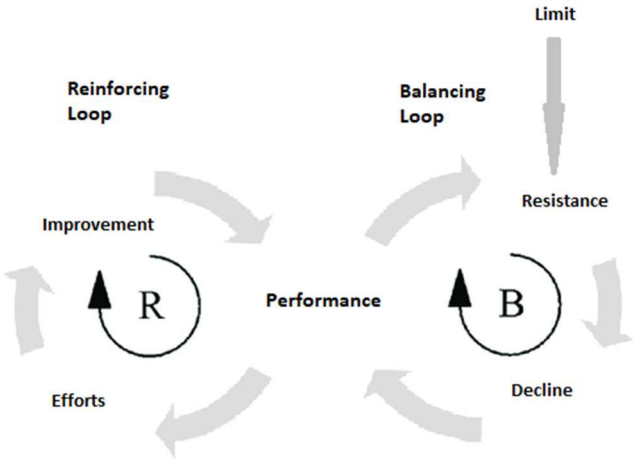
THEORETICAL FRAMEWORK

In the management discipline, Senge (1990, p.126) described systems thinking as being able to step back to "recognize patterns where others see only events and forces to react to." Senge expressed nine

systems archetypes in more business-like language than had been used in the past. Following Senge's contemporary systems thinking perspective, I adopted the systems archetype, "Limits to Growth" (a.k.a. limits to success), to align with the qualitative case study method used in this research. Contextually, an archetype may represent a situation, event, or relate to patterns of behavior. Systems archetypes are depicted by causal loop diagrams and stock and flow diagrams (see Figure 2). In terms of using the archetype, Senge emphasized seeing circles of influence rather than linear relationships to detect and trace the underlying structures that lead to problems and remove them. The linkage from concept to practice is a foremost aim for this analysis.

The archetype design (Figure 2) shows a reinforcing process set in motion to produce a desired result. As companies put in efforts to improvement, it creates a spiral of success but also creates unintended secondary effects which eventually cause resistance or halts the success. With problems of dynamic complexity, there are myriad processes that affect stability and resistance. Sometimes the information that leaders need seems fuzzy which makes it difficult to make sense of organizational circumstances. Flawed decision-making on the part of management might exploit resources (Bureš & Racz, 2016). Typically, trouble multiplies under this condition which produces delays in getting products to market and performance suffers. In times of crisis, old ways become vulnerable.

FIGURE 2
LIMITS TO GROWTH GENERIC ARCHETYPE



Anderson (2019, p.49) described global strategy as both emergent and deliberate as it uses resources to achieve its goals. The concepts covered here are not intended to be exhaustive. Instead, the model postulated is used to see structural patterns that provide ways to better solve complex business problems, especially in a crisis mode. The "Limits to Growth" archetype can be applied at many levels of the organization.

METHOD

A case study method was used to explore the phenomenon and advance the knowledge about real CEO experiences leading a business turnaround. Yin (2014) described the case study method and noted the conditions in which a researcher might use it as a design to better understand complex phenomena. The determination of which method to use considered (a) the research question of inquiry, (b) the level of researcher control, and (c) the focus on contemporary as opposed to historical events. Yin (p.9) conceived relevant situations to distinguish the importance of conditions to method selection. Miles and Huberman (2014) recommended the use of a conceptual framework to identify what would or would not be included in the study. I determined the case study protocol was the best selection for data collection and analysis.

A qualitative study was performed because I sought to gain a deeper understanding of the culture and dynamics of glass cliff experiences. This level of understanding could not have been achieved using a cause and effect approach characteristic of quantitative studies. A small sample size was appropriate for this case study given the total population of CEOs on the Fortune 500 list (See Table 1) who fit the case criteria. By purposeful research design. I selected three CEOs (new to the title) who worked in the same industry and had served at least 5 consecutive years in title with their respective companies.

Comprehensive searches were done to obtain available data about these companies and CEOs from academic journals, financial databases, the online editions of business magazines, public records, and industry reports to gain a complete view of the cases. I also relied on international business as a topic search to look at contextual issues beyond the race and gender narrative. This increased the range of resources to establish source validity, credibility, and transparency. The method of descriptive coding aligned with the descriptive phenomenology design for this study. I used NVIVO software to code and organize data. Themes were discovered from content analysis and then exploited to shape my focus. These systematic steps were critical to make my findings more defensible and repeatable.

TABLE 1
FORTUNE 500 (2019) LIST OF FEMALE CEOS IN 2019

Item	Company Name	Ranking	CEO Name	Term
1.	General Motors	13	Mary Barra (66th)	1/2014 - present
2.	Anthem, Inc.	33	Gail Koziara Boudreaux	11/2017 - present
3.	IBM	38	Ginni Rometty	1/2012 - 4/2020
4.	Lockheed Martin	60	Marillyn Hewson	1/2013 - present
5.	Best Buy	74	Corie Barry	6/2019 - present
6.	Oracle	81	Safra A. Catz	9/2014 - present
7.	General Dynamics	92	Phebe Novakovic	1/2013 - present
8.	Progressive	99	Tricia Griffith	7/2016 - present
9.	Rite Aid	107	Heyward Donigan	8/2019 - present
10.	Northrop Grumman	108	Kathy Warden	1/2019 - present
11.	Duke Energy	126	Lynn Good	7/2013 - present
12.	AutoNation	145	Cheryl Miller	7/2019 - present
13.	Kohl's	156	Michele Gass	5/2018 - present
14.	Occidental Petroleum	167	Vicki Hollub	4/2016 - present
15.	Synchrony Financial	173	Margaret Keane	2/2014 - present
16.	CDW	191	Christine Leahy	1/2019 - present
17.	Ross Stores	209	Barbara Rentler	6/2014 - present
18.	Land O'Lakes	212	Beth Ford	7/2018 - present

Item	Company Name	Ranking	CEO Name	Term
19.	Guardian Life Ins. Co.	244	Deanna M. Mulligan	7/2011 - present
20.	Reinsurance Group of America	251	Anna Manning	1/2017 - present
21.	J.C. Penney	261	Jill Soltau	10/2018 - present
22.	Hertz Global Holdings	331	Kathryn V. Marinello	1/2017 - present
23.	Veritiv	347	Mary Laschinger	7/2014 - present
24.	Thrivent Financial for Lutherans	351	Teresa Rasmussen	10/2018 - present
25.	Jones Financial (Edward Jones)	356	Penny Pennington	1/2019 - present
26.	Yum China Holdings	362	Joey Wat	5/2019 - present
27.	The Hershey Company	391	Michele Buck	3/2017 - present
28.	Hershey	391	Michele Buck	3/2017 - present
29.	KeyCorp	413	Beth Mooney	5/2011 - present
30.	Graybar Electric	423	Kathleen Mazzarella	6/2012 - present
31.	Celanese	426	Lori Ryerkerk	4/2019 - present
32.	CMS Energy	440	Patti Poppe	7/2016 - present
33.	Ulta Beauty	449	Mary Dillon	7/2013 - present
34.	Advanced Micro Devices	460	Lisa Su	10/2014 - present
35.	Williams-Sonoma	495	Laura Alber	5/2010 - present

DISCUSSION

This case study dispels the myth of failure related to the glass cliff phenomenon (Elsaid & Ursel, 2018). The selected cases are powerful companies with credentialed CEOs who are suited to their assignments. These CEOs are resilient women who are adept at capitalizing on the talents of their people toward connecting strategy with operation. The case comparisons (Table 2) are elucidated in the succeeding company profiles.

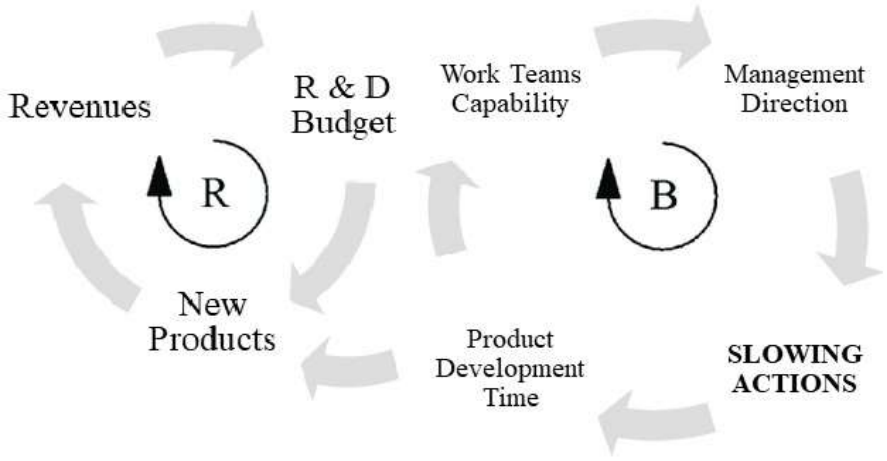
TABLE 2
CASE COMPARISONS

Description	Case 1-AMD	Case 2-IBM	Case 3- Oracle
Sector	Semiconductors	Information Technology	Internet & Software
Mission	"Vision - High Performance Computing is Transforming Our Lives"	"to lead in the creation, development, and manufacture of the industry's most advanced information technologies, including computer systems, software, networking systems, storage devices, and microelectronics…"	"Our mission is to help people see data in new ways, discover insights, unlock endless possibilities."
CEO name	Dr. Lisa T. Su	Virginia Rometty	Safra Catz
Compensation	$58.5M	$33.5M	$44.3M
CEO education	Ph.D. in electrical engineering/ M.I.T.	B.A. computer science and electrical engineering/ Northwestern Univ.	B.A.- Wharton J.D. – Univ. PA Law School
Revenues	$6.7B	$79B	$9.8B
Stock price	2014 2019 $2 $53	2012 2019 $191 $134	2014 2019 $45 $53
Characteristics	Enhanced market position in graphics segment; Sustained R&D, High debt	Industry expertise Strong global presence Patents Profitable	Robust market position Inorganic growth strategy; Strong R & D capabilities; High debt
Strategy	New product development	Move architecture to cloud, AI, and quantum computing	Acquisitions
Countries	24	96	73
Employee size	11,400	350,600	136,000
Business segments	Computing & graphics Enterprise solutions	Global solutions, services and consulting businesses	Software - licenses Services -consulting, on demand, and education

The roadmap to turnaround for each CEO was not apparent. The pivotal action that set turnaround expectations for company stakeholders, industry analysts, and media commentators was an assessment of

the state of play to get a handle on what was occurring in the enterprise. To define the courses of action, the formidable task of strategy formulation did not take the traditional strategic planning approach assumed in a stable environment. Without an explicit awareness about all variables that were a part of each companies' actual system structure, I adapted the "Limits to Growth" archetype (see Figure 7) to create a technology simulation that embodied the major components that affected streams of decisions made by these leaders.

FIGURE 2
TECHNOLOGY ARCHETYPE



Through the lens of the technology archetype, one could view the firm as a system with complex arrangements. At the macro level, the reinforcing and balancing loops display the interrelated elements that enable or constrain performance. The reinforcing loop (R) shows revenues, the budget for research and development, and new products. The balancing loop (B) shows the elements that actively participate in the internal environment and other unnamed slowing activities that influence product development, such as customer input and supply chain. Changes in the system occur in different ways. As product developers, engineers, or divisions carry out their assignments, they will invariably inform management on activity patterns and system constraints. In highly connected organizations, customers, partners, and other collaborators provide feedback to the firm. A tipping point in the threshold might occur from significant reduction of R&D, loss of market-share, or factors that might impede product development. This open network of relations shapes information flow across boundaries as the dynamic processes of feedback and implementation are put into action. System-oriented inquiry revealed meaningful themes related to performance capacity. Three distinct themes were derived from the cases in point:

A. Theme 1: Foundational resilience is embedded in human capital.
   Each CEO led from a position of strength—practical, competent, decisive—to direct the courses of action needed to revive and transform their respective companies. There was reasonable assumption that the learning curve for female CEOs is nonexistent in glass cliff situations. The archetype model prompted inquiry such as:
   - How is the enterprise organized to execute its intended function?
   - What type of expertise comprises teams/divisions?
   - What is the new CEO's international background?

   Whereas the CEO is the architect of the enterprise, the ranks of senior leadership teams require a broad range of knowledge, tremendous experience, and shared commitment to innovation in the daily operations of these hyperconnected companies.
B. Theme 2: Business process is channeled by clear mission.

Consistent within each firm was the strategy of technological dominance in a market or product niche. This aim led to questions such as:

- What should be our business?
- How will we compete in the future marketplace?
- How do we divest from low-margin markets/products/services?

C. Theme 3: Ecosystem interaction and feedback influences business strategy.

The ecosystem has spontaneous and reflective capabilities that are useful when setting strategic direction for a firm. This theme prompted a line of inquiry concerning the scope of activities surrounding customers, national governments, legal protections, and emergent aspects of doing business across borders. I asked these questions:

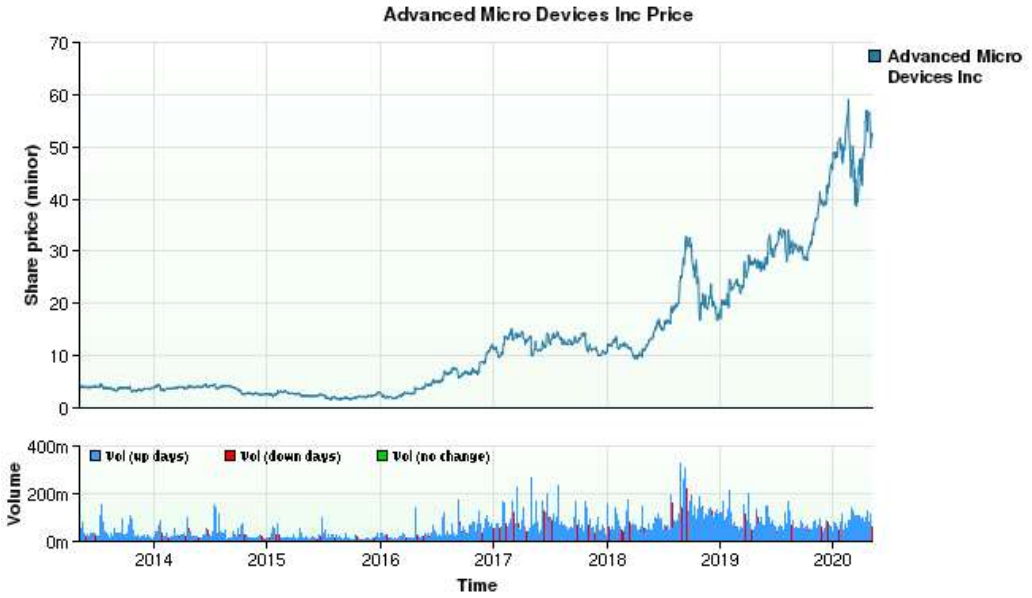
- What are the operational complexities in foreign settings?
- How are intercontinental networks activated in response to local events and catastrophes?
- How do high tech companies align with their ecosystem to achieve resilience?

The CEOs in this case analysis focused tasks with a sense of urgency, good management, and decision-making skills. These are keys to building resilient organizations (Pertilla, 2019).

Company Profile 1. Advanced Micro Devices (AMD)

AMD is one of the most prominent semiconductor companies in the world. Industry market reports (Acquisdata, 2019; Mergent, 2020) describe semiconductors as the enabling technology of the information era. The current CEO, Dr. Lisa T. Su, has served in that title since 2014. Su orchestrated strategy to bring AMD from the brink of ruin at a $2 per share stock price to the thriving company it is today at around $59 per share (See Figure 3).

FIGURE 3
AMD STOCK PERFORMANCE. RETRIEVED FROM MERGENT ONLINE

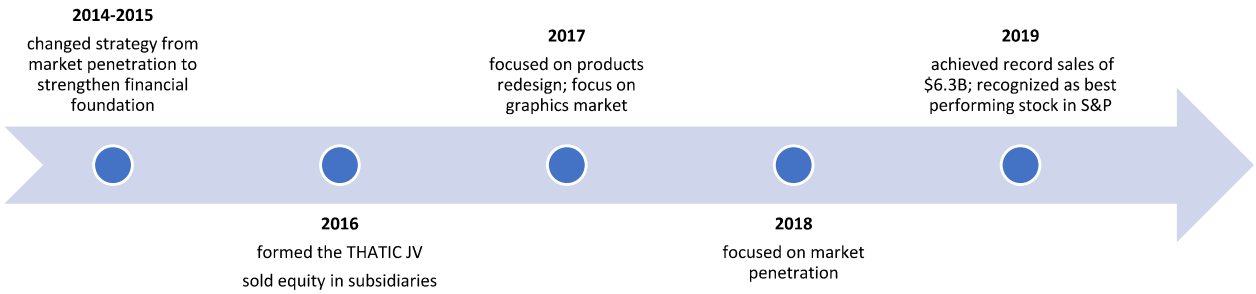


AMD's initial model included business units responsible for the design, market, and manufacture of microchips. Microchips are used in countless applications such as automobiles, computers, and smartphones. AMD's portfolio consists of many proprietary technologies (Mergent, 2020). From its inception, AMD embodied distinctive characteristics—ideation, building things, and mindset of success for

everyone—common to the culture of the ecosystem of the silicon-chip companies clustered in Silicon Valley. AMD gained industry prominence with the rise of personal computing and the Internet. The company's value proposition was built on price—"being a cheaper Brand X" (King, 2019). While Read got credit for stabilizing the company, financial performance fell short of the AMD board's expectations. With a more technical background, Dr. Lisa T. Su was appointed as President, CEO, at 44 years of age when she assumed responsibility for this company in crisis, otherwise known as the glass cliff. Su's credentials proved as impressive as any candidate for the CEO job with degrees in engineering from Massachusetts Institute of Technology.

In summary, Su's strategy paid off and she survived the glass cliff. Her pragmatic leadership facilitated company adaptation and innovation for competitive advantage. Su figured out how to do some things differently in the risky business of semiconductors (Moorehead, 2016). She opted for an agile plan with clear definitions for success outlined in three priorities: 1) build great products, 2) deepen customer relationships, and 3) simply what they do. Su leveraged her technical competency by interacting with engineers to accelerate action and cooperation which also helped to develop a performance and accountability culture. Now, the company is well positioned to take on the challenges of a new era.

FIGURE 4
AMD STRATEGIC TARGETS TIMELINE 2014-2019



Company Profile 2. International Business Machines (IBM)

IBM is an American multinational technology and consulting company that provides a spectrum of hardware and software offerings. The company's headquarters is in Armonk, New York with operations worldwide. Frequently known as "Big Blue," IBM prospered as a provider of mainframe hardware solutions before venturing into its cloud computing strategy. IBM is also renowned for its artificial intelligence infrastructure using "Watson," a machine learning accelerator (IBM, n.d.).

The first female CEO of IBM was Virginia "Ginni" Rometty who served as CEO from from January 2012 to April 2020. Within her 36-year tenure, she held executive positions in global sales, marketing, and strategy after initial entry to the organization as an engineer in 1981. Rometty earned a bachelor's degree in electrical engineering from the Northwestern University's Robert R. McCormick School of Engineering in 1979. Initially, Rometty adopted her predecessor's goal to double IBM'S per-share earnings (EPS) within five years. After two years at the helm as CEO, Rometty made a pivotal decision to change her predecessor's goal when she realized the EPS strategy would become a barrier to the company's financial health and transformation. She believed that IBM, a 106-year-old technology company, had the means to transform and sought to build a resilient business for a new era (Ignatius, 2017).

The transformation plan did not happen without challenge. Rometty's vision of IBM as a cloud-based solutions business drove the company's future strategy. She invested significant sums of money in innovative technologies to support the transformation goal. Rometty's leadership helped IBM achieve important milestones through a decade of transformation. Some key milestones were credited to her leadership: 1) the acquisition and integration of Pricewaterhouse Coopers (PwC) IT consulting business in 2002, 2) the debut of Watson in 2011 and commercialization of this artificial intelligence platform in 2013, and 3) in 2014

the company divested its low margin businesses such as the x86 server to Lenovo and microelectronics manufacturing to Global Foundries. Rometty had the backing of the company's board of directors along the way, even amidst several consecutive periods of stock price decline (See Figure 5). Despite stock performance, IBM is still a profitable firm according to their financial statements (IBM, n.d.).

FIGURE 5.
IBM STOCK PERFORMANCE

Retrieved from Mergent Online

Company Profile 3. Oracle Corporation

Oracle's strategy to reinvent itself centered on company acquisitions. Oracle's product mix includes cloud applications, autonomous database, and cloud infrastructure. The current CEO, Safra A. Catz, is credited as the driving force behind over 100 acquisitions (Lashinski, 2009). Catz shared the CEO title with Mark Hurd until a month before his death on October 18, 2019. Hurd led sales, marketing, and service. Catz led legal, financials, and operations of the company. Her background was ideally suited to successfully help Oracle execute its acquisition strategy. She proved her ability to work collaboratively alongside male executives such as Mark Hurd and Larry Ellison, Oracle co-founder and executive chair. Ellison is considered a statesman in the industry. Catz attained law degrees from The University of Pennsylvania Law School and Juris Doctor from Harvard Law School. After law school, she joined the investment banking firm of Donaldson, Lufkin & Jenrette in 1997 where she gained governance, mergers and acquisition experiences. Catz joined Oracle as a senior vice president in 1999 and was appointed to the board of directors in 2001. She also served as chief financial officer from 2005 to 2008 and from 2011 to 2014. Then, Catz served as president of Oracle from 2005 to 2014 (Oracle, n.d.). Catz has been recognized in publications such as Forbes 2016 list of "The World's Most Powerful Business Women" and Bloomberg (2015) "Highest Paid Female Executive." Indicative of her core competence, Catz worked to restore profitability and growth (See Figure 6) at Oracle even amidst controversy and debacles.

FIGURE 6
ORACLE CORPORATION. STOCK PERFORMANCE

Retrieved from Mergent Online

Implications

This case study answered the research question set forth as the beginning of the study. It recognized the historical and current experiences of women CEOs, yielded practical insights into how they ascended to the position, and shed light on aspects of how they led within the glass cliff environment. One of the implications of strategy formulation is that use of a diagnostic tool, such as the technology archetype, might be a more effective way to determine true company assets and align them to break suboptimal performance. Another implication is that leaders in any industry could use this meta-capability to create solutions to meet market demands. Themes clustered in three areas: 1) foundational resilience, 2) business process, and 3) ecosystem interaction. Consistent with earlier research (Elsaid & Ursel, 2018), I found parallels between strategy and capabilities, and between high margin products and firm profitability in this case.

Limitations and Directions for Future Research

This case study contributes to the knowledge of the strategic capabilities and performance of female CEO leadership. There may be criticisms on the small sample size used to assess the phenomenon. My sample was restricted to new CEOs in high technology industries headquartered in the United States. I sacrificed the generalization associated with quantitative research to satisfy qualitative attention to details. Future research might use a quantitative method of inquiry to test strategy formulation and performance for companies in times of crisis led by male and female CEOs.

CONCLUSION

In sum, the path to CEO leadership is rarely a direct route. No one can ever have complete knowledge of how the environment will change and therefore, must operate in a somewhat uncertain environment. Innovations in today's digital world have disrupted the methods, systems, and practices of organizations. The process of complex decision making in setting global strategy can be affected by bounded rationality. The level of formality may remain a question, but there is no doubt that successful performance is bound up with business strategy.

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