Is Kodak's collapse a closed case?

By Albéric TELLIER
Professor of Innovation Management, Paris-Dauphine University (PSL University)

Kodak's bankruptcy is generally considered to be an exemplary case of disruption. Our objective is to revisit this assertion, which has circulated widely among researchers and the general public.
A systematic analysis of company data published between September 2003 and January 2008 demonstrates that disruption theory does not fully explain Kodak's decline. In particular, our analysis highlights the role played by shareholders in rejecting the company's initial digital strategy.
Our findings demonstrate the impact of shareholder activism on disruptive innovation strategies. They also allow us to discuss the risk of circularity bias in using case studies to illustrate theoretical approaches.

Introduction

In a matter of a few years, under the influence of Clayton Christensen's work (1995, 1997, 2003), the concept of "disruption" took over the media, decision-makers' discourse, academic journals and management textbooks. The effects of disruption on business competition now seem proven and those wanting to describe and explain its mechanism keep turning to what has become an iconic example: Kodak. On the surface, it is the perfect case study, bearing all the hallmarks of disruption as it has been described by Christensen: a leading established firm thought to be invincible, a disruptive technology conducive to the entry of new firms and a business model wiped out in just a few years.

However, do the criticisms that have been levelled against the managers of the Rochester-based fallen giant stand up to the facts? Ever since Richard T. Pascale published his seminal paper on Honda (1984), the wisdom of interpreting situations through the lens of accepted theories has become a central question in strategic management. By revisiting the story of the Japanese automaker's entry into the US market, the paper shows that strategic decision-making involves complex, and sometimes even paradoxical, processes. It also demonstrates that researchers should be wary of overly "mechanistic" explanations and challenge them by closely re-examining the facts of the case. Through an in-depth chronological analysis of events, managers' decisions and positions adopted by stakeholders impacted by the shift from analogue to digital technology, our paper seeks to revisit assertions about Kodak that have circulated widely among researchers and the general public.

To this end, we carried out a systematic review of company-related announcements, press releases and articles published between September 2003 and January 2008. September 2003 is when the company unveiled its digitally-oriented strategy, while January 2008 corresponds to when Kodak's management announced that it had completed its digital transformation strategy. The latter turned out to be a failure: in 2012, the company filed for Chapter 11 bankruptcy protection under US law.

The first section of our paper introduces disruption theory and how it is used to explain Kodak's bankruptcy. The second and third sections present our methodology and findings, respectively. Although one may criticize the company's managers for belatedly realizing that a transformation was in order, not to mention their inability to handle internal pressures, our analysis demonstrates that the role played by shareholders cannot be ignored. In fact, Kodak's shareholders rejected the company's initial transformation strategy and argued for a "transition strategy" which would allow the firm to continue to leverage its legacy business model centered on film photography.

Our study reveals the conflicting imperatives of responding to a disruptive innovation with an appropriate strategy and meeting certain shareholders' expectations. In the fourth section, we present our findings, including the impact shareholder activism had on Kodak's disruptive innovation strategies.

Is Kodak an exemplary case of disruption?

After providing an overview of the literature on disruption, we will discuss the most common explanations given for Kodak's decline.

A definition of disruption

The literature on disruption is part of a body of research which aims to gain insight into technological development processes, the integration of technologies into services and the mechanisms that can lead a company to change or retain its technology. The management of technology portfolios became a subject of management science research in the 1980s, notably with the publication of works by Richard N. Foster (1986) and Pierre Dussauge and Bernard Ramanantsoa (1987). All this literature established the concept of the "technology life cycle", which helps us understand the inherent dynamics of technologies and the choices, ranging between sustaining and disruptive technologies, available to a firm. The idea that technologies have life cycles is now an accepted one. They go through four phases: research and development, growth, maturity and decline. The concept of life cycle facilitates our understanding of the dichotomy between radical and incremental innovation, and the underlying technological challenges. Incremental innovation involves extending and moving up an S-curve while radical innovation involves choosing a new technology and, in so doing, creating a new curve.

Dating back over 35 years, this literature underscores the preference that large industry leaders have for sustaining innovations and the strategic missteps that can ensue. How and why do established firms fail to meet the moment when a shift towards a new technology occurs? This is the question Christensen asks in his first works (Bower and Christensen, 1995), leading to the publication of his most well-known book, The Innovator's Dilemma (1997), in which he uses the S-curve to describe the mechanism of disruption.

Indeed, the technology life cycle curve serves as a reminder that R&D investment can have a more or less significant impact on how well the proposed technology performs. As the technology advances along the curve, progress slows down. In the maturity phase, the marginal efficiency of investment begins to decrease, while in the decline phase, progress becomes increasingly rare since the technology's inherent limits have been reached. This last phase is mainly when the "innovator's dilemma" arises: should resources be used to try to expand the limits of the technology in question or should they instead be allocated to developing and/or exploiting a new disruptive technology? On the one hand, it is easy to see why a firm that concentrates its R&D efforts exclusively on improving its existing technologies can be made vulnerable when a disruptive technology emerges. But on the other, exploring new possibilities is not an easy decision to make. In fact, in early stages of development, the new technology generally performs worse than the old technology. This key point, discussed in disruption theory, can be illustrated using the example of photography. When the first digital camera appeared in 1975, it weighed 3.5 kilos, took poor quality photos and users had to wait 23 seconds between shots. At the time, digital cameras had a very limited potential compared to film cameras.

However, even if an innovation performs worse when using traditional assessment criteria for established products, it gradually begins to align with the expectations of non-customers and fringe customers. Thanks to the support of these early adopters, the innovation can begin to move up along its S-curve: its performance continuously improves, allowing the innovation to win over an ever-growing number of customers. Accordingly, disruption can be defined as the mechanism by which an established firm will underestimate the disruption caused by a new technology, as the latter introduces new performance criteria.

Christensen's follow-up, The Innovator's Solution (2003, co-authored with Michael E. Raynor), expands on his earlier analysis. He no longer poses the "innovator's dilemma" in strictly technological terms, as he also incorporates the idea of business models. In this work, he defines disruptive innovation as a type of innovation that introduces a new business model and demonstrates how tricky it is for an established firm to change its business model. A firm's existing management team cannot see the disruptive innovation as an opportunity because it would no longer allow the firm to make use of its resources, expertise and customer base. This is described as "the tragedy of the business model" (Silberzahn, 2014a and b), as the business model is both the instrument of the firm's success and what dooms it in the event of disruption.

Kodak: a case in point?

Christensen's body of work came back into popularity with the widespread interest in startup firms, digitalization and "uberization". In many industries, the introduction of new technologies made it possible to completely overhaul "the ways of doing business". These technologies brought about new firms offering revamped products, disrupting established firms that did not immediately have the expertise and infrastructure to match their new competitors. Kodak is frequently used as a case study to illustrate all these changes.

Founded in 1881 by George Eastman, Kodak established itself as the world's leading photography company thanks to its renowned expertise in the manufacture of photographic film emulsion for amateur and professional photographers and the motion picture industry. Kodak's "golden age" lasted from the 1960s to 1980s. In 1976, 90% of camera film and 85% of cameras in the United States were produced by the firm (Silberzahn, 2014b, p. 11), which had almost 80,000 employees worldwide. But starting in 1995, digital technology began to make real inroads into the photography industry. At first, the leading global firms in the camera and film market – Kodak, Fuji, Nikon, Canon and Minolta – united their R&D efforts to launch a standard film format called the Advanced Photographic System (APS). A hybrid of both digital and film technologies, the product had the benefit of allowing these firms to preserve their business models. However, in 1996, new fully digital camera models were introduced and enabled users to store photos in memory. With these devices, pictures could be saved, retouched, inserted into a document and shared on the internet. Most of the manufacturers producing digital cameras came from outside the traditional photography world, but were digital technology experts.

Digital camera sales were growing at an impressive rate, but Kodak, the global leader, had a hard time managing the disruption. Originally specializing in chemistry, the company would have to turn its attention to electronics. Its business model, which had been based on the sale and development of film, needed a complete overhaul. To address the decline of its legacy market, Kodak became engaged in a series of restructuring programs between 2002 and 2008. Despite these efforts, its financial situation continued to deteriorate. In January 2012, the company filed for Chapter 11 bankruptcy protection under US law.

Over the years, numerous researchers have portrayed Kodak as the quintessential example of a leading incumbent wiped out by disruption. Back in 2009, Henry Lucas and Jie Mein Goh explained Kodak's decline using disruption theory. While these authors confirmed Christensen's conclusions, they also suggested deepening his theory, demonstrating how the company's culture, bureaucratic structure and middle managers prevented a swift transition towards digital technology. Subsequently, Philippe Silberzahn dedicated an entire chapter to the Rochester-based giant in his work on "the tragedy of the business model", the "challenge of disruptive innovation" and the "failures of organizations faced with disruptive innovation" (2014b)[1]. In an article from 2016 published in the *MIT Sloan Management Review*, Willy Shih also delved into Kodak's experience. The author put forward the argument that senior management was already concerned about the rise of digital photography in the 1990s, but that the firm was unable to resolve management issues preventing it from pulling off the transition from analogue to digital photography. Also in 2016, in an article appearing in the *Harvard Business Review*, Scott D. Anthony (2016) reached a similar conclusion: it was top management's inability to appropriately change its business model that led to Kodak's demise. In a similar vein, Christine Kerdellant's book *Histoire des grandes erreurs de management* (2016) explained Kodak's collapse by advancing the same theory about the company's inability to reboot its business model. The chapter in question has a particularly telling title which roughly translates as "the fear of the cannibal" (*La peur du cannibale*).

Evidently, Kodak's story seems to fit with every aspect of disruption theory as articulated by Christensen. The seemingly close connection between disruption theory and what transpired at Kodak has even led some authors to suggest the term "kodakization" as a synonym for the failure to adapt to technological change. It should be noted, however, that all this research is based on relatively inadequate data collection methods or, at the very least, unclear ones. Moreover, this research has been conducted after the fact, with researchers readily adopting Christensen's ideas as a theoretical framework to further build on them or illustrate them again, rather than comparing them to a new set of circumstances. Lastly, this research tends to focus on the decisions made by Kodak from the mid-1990s to the early 2000s, while disregarding the significant strategy the company drew up in 2003 (aside from the work of Lucas and Goh, 2009). As a result, such researchers implicitly assume that Kodak should have positioned itself as a pioneer of the digital photography market, even though the literature has demonstrated that this type of strategy is far from being a panacea (Demil, 2009). Furthermore, if Fuji, Kodak's legacy competitor, managed to survive the end of film photography, it did so by implementing a bold strategy in 2004, after film sales peaked worldwide in 2001 (Kmia, 2018). So the important question seems to be this: do the criticisms that have been levelled against Kodak's managers stand up to the facts? The research methodology Christensen used to develop his disruption theory has, after all, come under much criticism (Weeks, 2015).

[1] This is also true of Silberzahn's 2015 book on disruptive innovation. Kodak is also used as a case study in a chapter of a collective volume on Christensen's body of work, published in 2016 and co-authored with Ben Mahmoud-Jouini.

Revisiting the Kodak case

To revisit Kodak's collapse, we carried out a systematic review of company-related announcements, press releases and articles published between September 2003 and late January 2008. September 2003 is when the company unveiled its digitally-oriented strategy, while January 2008 corresponds to when Kodak's management announced that it had completed its digital transformation strategy. We gathered additional information on Kodak dating up to January 2012, when the company filed for Chapter 11 bankruptcy protection under US law. However, for the 2008-2012 period, we did not identify any events that could undermine our analyses.

We sought to reconstruct a chronology of major events for the 2003-2008 period without using a pre-determined theoretical framework, in order to avoid circularity bias (Dumez, 2013). After describing our methodology, we will detail the chronology it allowed us to reconstruct. New explanations given for Kodak's collapse thus emerged gradually, as the research protocol unfolded.

Methodology

Our study is based on secondary data. It is now accepted that new knowledge can be generated using this type of data (Chabaud and Germain, 2006), if such data undergoes a rigorous selection process (Stewart, 1984). Our research protocol involved four steps:

Step 1. Data collection

We used two types of secondary data: firstly, internal secondary data, meaning documents prepared and disseminated by Kodak and compiled for the period under study. Secondly, we performed a keyword search using the Dow Jones Factiva news database for the relevant period. Various automated searches then enabled us to select and verify additional information. To ensure the reliability of the information gathered from the articles, we only retained information found in at least two different named sources. In addition, we compiled a few TV and radio documentaries covering Kodak's collapse. All this collected data made it possible to provide an account of the environment in which Kodak's management was operating in the early 2000s. In particular, we were able to retrieve data regarding the company's competitive position and sales of film cameras and digital cameras, as well as anticipated market trends. This allowed us to assess Kodak's financial situation without running the risk of being affected by choice-supportive bias.

Step 2. Reading of compiled articles

This step served two purposes. First of all, it sharpened our knowledge of the Kodak case for the period under study. Second of all, it was meant to help us identify the key events, defined here as the occasions when the management team had to make strategy decisions or, conversely, was influenced by decisions made by other actors. Six key moments were identified:

- September 2003: announcement of the digitally-oriented strategy;
- December 2003: reboot of the initial strategy;
- May 2005: Kodak's debt rating lowered to speculative-grade, leading to the CEO's replacement;
- July 2005: extension of Kodak's restructuring program;
- August 2006: new restructuring program and sale of Kodak's Health Group;
- January 2008: management's announcement of the completion of Kodak's digital revolution.

Step 3. Analysis of the key moments' impact on each phase

The identification of key moments made it possible for us to break down the period under study into phases. For each phase, we examined the impact of the company's decisions on its financial situation, financial performance, the position of the main stakeholders affected

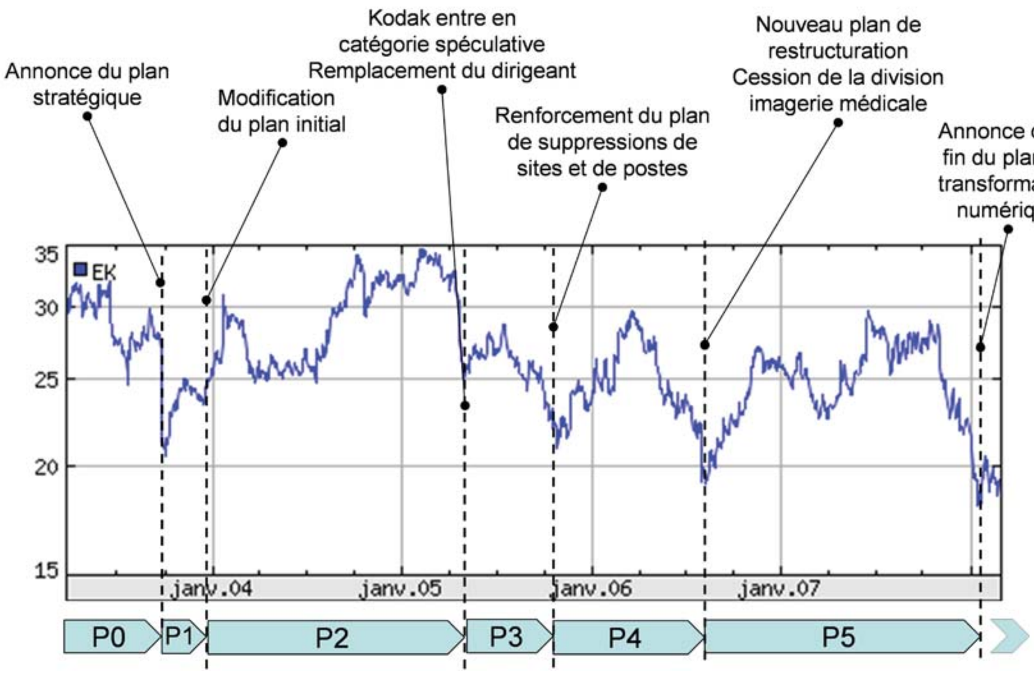

Figure 1. Identification of the key moments, breakdown into phases and changes in Kodak's share price

FR	EN
Annonce du plan stratégique	Announcement of the digitally-oriented strategy
Modification du plan initial	Modification of the initial strategy
Kodak entre en catégorie spéculative	
Remplacement du dirigeant	Kodak rated speculative-grade
Appointment of new CEO	
Renforcement du plan de suppressions de sites et de postes	Extension of the employment and facility cost reduction program
Nouveau plan de restructuration Cession de la division imagerie médicale	New restructuring program
Sale of health imaging business	
Annonce de la fin du plan de transformation numérique	Announcement of the end of the digital transformation strategy
janv. 04, …	Jan. 04, …

by these decisions and Kodak's share price. We were able to discern the impact of these key moments on the value of Kodak shares (see Figure 1), as well as shareholders' many reactions. It was during this step that we understood the value of focusing on stakeholders.

Step 4. Analysis of the interactions between management and shareholders

Shareholders' numerous actions, which we identified in the third step, prompted us to conduct a more extensive analysis of the impact of managers' decisions on these stakeholders, and of management's reactions to some of their demands.

Kodak's decline: A chronology of events[2]

Figure 1 shows the key moments identified and their breakdown into phases, as well as the impact of these events on share price.

In the early 2000s (P0 in Figure 1), Kodak was in a precarious position, even though it still laid claim to being the world leader in photographic film. The Rochester-based giant was still generating more than two-thirds of its sales from the traditional photography market, but this market had been undergoing a major transformation ever since the emergence of digital technology in the mid-1990s. In 2002, global sales of digital cameras exceeded those of film cameras. Seemingly nothing could stop the rise of digital photography (5.5 million digital cameras were sold in 1999 and roughly 50 million in 2003), which upended the competitive environment. A number of legacy camera manufacturers were already trying to tap into the digital market and did so rather successfully, like Canon, which in 2003 sold one film camera for every three digital cameras. Furthermore, the introduction of a new technology facilitated the emergence of new competitors, with Kodak henceforth competing against computer (Hewlett-Packard) and consumer electronics firms (*e.g.* Casio, Sony and Samsung).

These technological and competitive changes encouraged Kodak's CEO, Daniel Carp, to invest in developing its digital imaging business and engage the company in a series of restructuring programs. Their measures notably included the elimination of as many as 8,400 jobs in 2002, 6,000 layoffs in 2003 and the closure of two plants in the United States and Mexico.

In April 2003, Antonio Perez was named president and COO of Kodak. After a career at Hewlett-Packard, where he was in charge of digital operations, he was tasked with accelerating Kodak's transformation. In September of that same year, the company announced a bold strategy which included plans to spend $3bn on investments and acquisitions (P1 in Figure 1). Given its high level of debt, which also totaled $3bn, Kodak had limited options for raising cash and its management announced that dividends would be reduced from 1.80 to $0.50 per share. This decrease was meant to free up cash of $1.3bn over four years, but it was insufficient. As a result, the company sought to cut costs in its traditional businesses, including ending investments in traditional film, in addition to selling and closing some of its operations to save $1bn. Management's ambitious objective was to offer a comprehensive range of digital cameras and to expand digital products in three other segments: printers, digital photo processing labs and health imaging. This undertaking to shift to high-growth segments led the company to project that it would generate sales of $16bn in 2006 (compared to $12.8bn in 2002) and $20bn in 2010.

However, many actors were very skeptical about the announced strategy. Questions were raised regarding two main aspects. Firstly, Kodak's chances of succeeding appeared very slim to certain analysts. To become a major digital player, it would have to invest massively in R&D, yet the company was already heavily in debt. In addition, the credit ratings agency Moody's expressed concern about Kodak's ability to make up its lost ground by downgrading the company's long-term debt rating and encouraging investors to closely monitor its performance. Secondly, Kodak already had a host of competitors in the photography market as well as in printers (Xerox, Hewlett-Packard, Epson, Dell) and health imaging (General Electric).

The financial community reacted swiftly to the announcement of the strategy. That same day, Kodak shares lost 18% of their value, reaching their lowest ever price in 20 years (see Figure 1). Kodak shares risked being excluded from the Dow Jones index for the first time since their inclusion in 1930. The credit ratings agency Standard & Poor's demonstrated concern over Kodak's earnings and business profile, deciding to lower the company's long-term credit rating to BBB-, putting it just one notch above a speculative-grade credit rating. Meanwhile, shareholders were not willing to accept the strategy given the planned dividend cut. In October 2003, Kodak's management was confronted with a large number of disgruntled shareholders who deemed the new strategy too risky and the dividend cut unacceptable. Some 100 dissident shareholders controlling 25% of Kodak's shares decided to form a group to increase their influence over management's strategy decisions. Its members included Bill Miller, who was running the mutual fund Legg Mason Value Trust, which was Kodak's top shareholder at the time, with a 4.5% shareholding. The group's aim was to force the company's managers to scrap its shift in strategy and to try alternative strategies that would create more shareholder value. To achieve their goals, they got behind the investment firm Providence Capital, whose specialty was this type of endeavor. Business journalists were reporting at the time that Kodak's managers were meeting once a week with representatives of the group of dissident shareholders to try to reach an agreement. Their counter proposal focused on four main points: favoring cost-cutting measures, taking advantage of the company's dominant position in film photography markets, implementing a more aggressive policy of licensing its many patents and maintaining, or even raising, dividend payouts.

In November 2003, there was a new turn of events: The American corporate raider Carl Icahn received the

[2] The paragraph that follows draws on a previously published work (Tellier, 2014).

green light from the Federal Trade Commission (FTC) to purchase $500m worth of Kodak shares, *i.e.* 7% of the company's market capitalization. Icahn had been a well-known figure in the financial world ever since gaining notoriety for the numerous corporate raids he led in the 1980s (at which time he was carrying out one raid every three months, on average) against large corporations such as Texaco, US Steel and TWA. On each occasion, he went after firms he felt were undervalued, acquired a stake in them and influenced their decisions before reselling the shares. For many investors, the circumstances were ideal for a corporate raid, as Kodak shares had lost 70% of their value since 1999 and the group of dissident shareholders was looking for allies to promote their strategy.

Icahn's raid of the company and the dissatisfaction of "legacy" shareholders forced managers to rework their initial strategy at the end of 2003 (P2 in Figure 1). In various press releases, Kodak's management said at the time that, contrary to what had been stated, they did not intend to abandon film photography and that the company would continue to be a dominant player in the traditional photography market (La Tribune, 22/12/2003). They began referring to the company's "transition" instead of its "shift".

Managers said that their goal was to continue leveraging the film market which, by their projections, would decline by 10% a year in the United States and 5% in the rest of the world. They added that they planned to take advantage of the Chinese market, where only 20% of the population had access to photography and digital cameras remained luxury items. Management had also confirmed in early 2004 that the company would continue to sell film products (film cameras, film and disposable cameras) in eastern Europe, Latin America and India.

Kodak did not scrap its initial strategy entirely, however. It entered into partnership agreements with mobile phone operators and the manufacturer Nokia to expand its service offering for mobile phone users wanting to store and print photos. In parallel, Kodak paid $500m to acquire the dental imaging company Practiceworks and $250m to purchase Scitex's digital printing division, which at the time was the world's leading manufacturer of high-speed ink-jet printing systems. Meanwhile, the company maintained its cost reduction programs. In January 2004, it announced a plan to cut 12,000 to 15,000 jobs by 2007. Management also confirmed its intention to reduce the worldwide square footage of its manufacturing facilities by one-third. All these measures would save almost $1bn a year.

Nonetheless, the company's financial performance continued to deteriorate. In 2003, it posted net earnings of $265m, representing a decrease of 66%. Shareholders seemed to be the only ones satisfied with Kodak's new direction (the share price rose again in January 2004 – see Figure 1), while analysts and industry actors were more skeptical. In addition, Kodak was ultimately removed from the Dow Jones index and the company's decisions did not have a positive effect until late 2004. In the United States, Kodak increased its digital camera market share to just under 22%, putting it close to that of the leader, Sony, while reporting sales of $13.5bn and net earnings of over $550m.

Despite these positive signs, 2005 turned out to be a particularly difficult year for Kodak. The assumptions on which its transition strategy was based were not borne out. Sales of traditional film fell much faster than expected. The company's growth in emerging countries, which was supposed to offset the decline in film sales, also fell short of expectations. Restructuring and licensing costs ballooned, and its debt exploded. Kodak's share price plummeted and the ratings agencies Standard & Poor's and Moody's downgraded Kodak to a speculative-grade credit rating (P3 in Figure 1). On 12 May 2005, Kodak announced the departure of its CEO, Daniel Carp, and the appointment of Antonio Perez as his replacement.

In July 2005, Perez announced the extension of Kodak's employment and facility cost reduction program: "Sales of our consumer traditional products are declining faster than expected, although we have been moving rapidly to get our costs down" (*AP*, 20/07/2005). 25,000 jobs were ultimately cut, more than the 15,000 originally planned in 2004. Europe, where the company had many facilities, was especially hard hit. With the financial community reassured by the program, Kodak's share price rose (P4 in Figure 1).

In January 2006, Kodak released its financial results for 2005. Sales increased significantly, reaching over $14bn, but the company nevertheless reported a net loss of $1.37bn. Perez appeared to be satisfied with these figures, stating in a press release: "We are now more than halfway through our transformation, and we have proven our ability to drive sales in digital markets and to generate the cash necessary to fund our growth" (*La Tribune*, 31/01/2006).

However, the company had an even worse year in 2006. In August, sales were down by 9% and the restructuring program took additional action, eliminating another 2,000 jobs. On the New York Stock Exchange, Kodak shares tumbled more than 13% to $19.20 (P5 in Figure 1). In September, management announced that it was seeking out new sources of financing to increase its digital investments and that it planned to sell its health imaging business (the sale was made official in January 2007). In parallel, Kodak closed its last remaining film labs, including in France, where the traditional film market had plunged 40% in 2006. All these decisions seemed to be delivering results. After 24 consecutive months of losses, and despite lower sales, the company finally managed to report a profitable fourth-quarter 2006. For the year, Kodak reduced its net loss to $601m, mainly attributable to sharply growing profit in the digital imaging segment (up by 275%). Perez decided after that to take up the offensive. In February 2007, the company announced 3,000 job cuts and the launch of a line of affordable printers in a bid to compete with market leaders.

Unfortunately, despite these restructuring efforts, Kodak's financial health was not improving significantly and its share price, which had remained stable in the first three quarters of 2007, fell again in September. Nevertheless, in early 2008, the company announced that its repositioning in digital imaging was now centered on its in-store digital printing business and consumer printers. On 30 January, management asserted that it had completed its digital revolution. But it came at a high price, with almost 30,000 jobs eliminated, businesses sold, facility closures and around $3.5bn lost.

However, from that point forward, the company would never report a profit again. In January 2012, Kodak filed for Chapter 11 bankruptcy protection under US law. Even though its digital business accounted for 75% of its revenue and that it had reduced its employees to 18,000, it was in a critical position. In its filing, the company listed assets of $5.1bn and a debt of $6.8bn. Its share price fell to $0.55. In gaining protection from its creditors, management hoped to be able to fund a turnaround.

Findings

What lessons can we draw from the chronological analysis that we summarized above? In the first part of this section, we will revisit the content, means and various iterations of Kodak's 2003 strategy. In the second part, we will attempt to understand what led to the relatively swift abandonment of the strategy and the difficulties that followed.

Kodak's strategy was met with firm opposition

The shift from analogue to digital technology that Daniel Carp announced in 2003 was carried out in a rather standard way. Management decided to both close facilities and do away with businesses it no longer considered as having potential. Meanwhile, the company's strategic shift was mainly conducted through external growth operations. It is now a given that mergers and acquisitions can allow firms to access new resources and expertise that it would be too difficult and time-consuming to develop internally (Lehmann-Ortega *et al*., 2016, p. 465). Through its acquisitions, Kodak sought to extensively update its business portfolio, resources and expertise with the aim of permanently changing the company's direction. This choice was all the more logical since Kodak was not keeping up with technological developments or with its competitors. However, changing direction in this way required huge financial resources, at a time when the company's debt was already enormous and its photography business appeared to have fairly low economic returns. Consequently, managers did not necessarily have many other options left. A significant dividend cut was then seen as a way to raise $1.3bn over four years. The formation of a group of some 100 dissident shareholders and the opportunistic stake taken by Carl Icahn demonstrated to what extent this decision was problematic to the company's investors.

At the end of 2003, Kodak's situation was that the directly concerned by the strategy decisions and the means used to implement them had major leverage and opposed what had been decided. As shown by Newcombe's work (2003), the strategy must be acceptable to this type of actor ("key stakeholders" in Newcombe's terminology), otherwise managers could find themselves in a situation with no resolution. So, quite logically, Kodak's leaders were going to make it their priority to retain these stakeholders' support. The strategy adjustments made starting in December 2003 can be considered as a way of regaining the support of disgruntled shareholders. This "reworked" strategy was no longer about dropping the film business, but about attempting to continue to exploit the potential of analogue technology in order to ensure the growth of digital technology. The reasons for this decision may have been based on certain figures showing that film was declining fairly slowly in western markets and growing in some other markets, like China.

The fact remains that this reworked strategy was fundamentally a response to shareholder pressure. When management confirmed in early 2004 that it would continue to sell film products in eastern Europe, Latin America and India, a spokesperson for the company said that its goal was to "focus our film investments on opportunities that provide faster and attractive returns" (*The Guardian*, 14/01/2004). This statement was undoubtedly directed at shareholders concerned about short-term profitability. Simultaneously, job cuts continued, enabling Kodak to save $1bn a year. Managers incorporated the two major demands from the dissident shareholders' counter proposal: seeking out cost-cutting measures and leveraging the company's dominance in film photography. It is also worth noting that from late 2003 to early 2004, Kodak's share price rose significantly, and even jumped 12% in January 2004 (see Figure 1).

The results of this revised and corrected strategy, which consisted of maintaining a balance between the company's old and new businesses, would turn out to be disappointing. Projections about the potential of various markets were wrong. First of all, film sales for the years 2005-2006 dropped by 30% a year, which was faster than expected, as management had projected an annual decline of 5%. Secondly, the assumption that Kodak sales would grow in emerging markets was not borne out.

Handling conflicting demands was an impossible task

Strategic management is known to be a complex process involving not just a single solution, but multiple options that reflect conflicting demands. Gérard Kœnig (1996) put forward the "security, legitimacy and competitiveness" triangle as a representation of these demands. Managers must ensure both the firm's competitiveness (its ability to withstand comparison with competitors to build and retain a customer base) and security (ensuring the firm's survival and cohesion). But they also must be able to explain the reasoning behind their decisions, particularly to boards of directors and shareholders, which relates to legitimacy.

All the complexity of the strategic management process lies in the difficulty of reconciling these three demands at once, and Kodak's case demonstrates this anew

(Tellier, 2014). Management's initially planned strategy unquestionably conveys competitiveness-related demands. The industry experienced a technological disruption, the company fell behind in exploiting digital technology and became surpassed by competitors. Adapting was imperative if it hoped to be number one in the world again. But to navigate this shift as best as possible, the company would have to let go of its traditional businesses and ramp up its investments. If it were to fail, its very survival would be in jeopardy. The company's security would be threatened if profitability were to be deemed inadequate and debt huge (it was roughly $3bn in 2003). These risks were highlighted by ratings agencies when they decided to downgrade Kodak's long-term debt rating. There were, as we can see, conflicting tensions between competitiveness- and security-related demands.

However, a "competitiveness/legitimacy" paradox can also be identified. A decision is said to be legitimate when it is considered fair and desirable. Kœnig (1996) notes that legitimacy is directly related to a firm's stated mission. Daniel Carp sought to restore Kodak's position as number one in the world, but this time in the digital photography market. Nonetheless, a number of analysts stressed that the company was highly unlikely to reach in the digital space the dominant position it had occupied in its traditional businesses and have the same levels of profitability. Yet, clearly, for many, Kodak's primary objective was to maximize shareholder value. It is important to note that Kodak shares had long been considered "high-yield securities" by Wall Street. Its successive managers favored a very generous dividend payout policy and, in 2002, Kodak shares were still the most "attractive" on the Dow Jones with 66% of the net profit distributed to shareholders. The dividend cut decided in 2003 was therefore unprecedented in the company's history. Furthermore, many analysts highlighted the fact that it was the first time since 1902, when Kodak paid out its first dividend, that such a decision had been made. It is readily apparent that the "180° shift" strategy devised by managers to ensure competitiveness suffered from a substantial legitimacy deficit from the outset, due to how they chose to proceed with it.

When the strategy was announced in September 2003, Kodak's managers believed they had plenty of leeway to force through such a dividend cut. For one, share ownership was highly fragmented; the main shareholder (the mutual fund Legg Mason) owned "as little as" a 4.5% stake (the tenth-largest Kodak shareholder then owned a shareholding of less than 0.7%). In this situation, the stakeholders most affected by the cut had relatively little power. However, the formation of a group of some 100 dissident shareholders would shift the balance of power. Controlling 25% of Kodak shares, the group could exert pressure on management to compel them to negotiate and ultimately push them to amend their initial strategy. The focus of the strategy was then changed and no longer about dropping the film business, but about continuing to exploit its potential in order to ensure the growth of digital technology. As we have seen previously, these adjustments were generally well received by the financial community. Managers ultimately suggested significant changes to the initial strategy, probably in order to make up for a legitimacy deficit and to find a solution to the "legitimacy/competitiveness" paradox, coming up with the "transition" strategy which was based on a very gradual withdrawal from film photography. However, the assumptions on which the strategy was based were not borne out.

Discussion and conclusion

Our paper seeks to revisit Kodak's collapse, which occurred in connection with the growth of digital technology. The analysis we conducted prompts us to qualify the widely circulated assertion in the literature according to which the company's managers fell victim to disruption, a concept popularized by Christensen.

Factors behind Kodak's strategy going unimplemented

Following his appointment as CEO of Kodak in 2000, Daniel Carp seemed persuaded of the need to embrace digital technology. Back then, two-thirds of the company's R&D investments were allocated to this technology. This unprecedented effort would go on to enable Kodak to build an impressive digital patent portfolio, one that would be sold off incrementally to avoid bankruptcy. Weissmann (2012) reminds us that Kodak made just under $2bn "between 2008 and 2010 through licensing and litigation over its IP [intellectual property]". This is further proof of the resources the company had developed in the digital arena.

The strategy devised in 2003 thus attests to Kodak's desire to operate a major technological shift, but this particular strategy was never actually implemented. As we saw before, the positions of various stakeholders and, most notably, the dispute with shareholders, prevented the strategy developed by Mr Carp and his team from being implemented. If we wish to understand why the Rochester-based giant went bankrupt, we have to take into account all factors, such as the company's shareholder structure, initial financial state and failed "reworked" strategy.

On this point, our conclusions support and add to the findings of Benner (2010), who analyzed the reports on Kodak written by securities analysts from five investment banks (Morgan Stanley, Prudential, Salomon-Smith Barney, Paine Webber and Crédit Suisse First Boston) over the 1990-2001 period (*i.e.* prior to the 2003 strategy). Benner's research shows that during this span of time that ushered in digital technology and the beginning of the decline of film photography, analysts' reports generally contained positive statements about Kodak. They mainly focused on Kodak's legacy business (mentioning film photography 2,821 times) and perceived managers' decisions to cut costs as appropriate. By contrast, analysts mentioned digital technology much less often (only 158 times) and were often critical of managers' first digital initiatives. Barthélemy (2016, p. 135) draws attention to the conclusions of one Prudential analyst that perfectly distil the financial community's initial reluctance towards Kodak's entry into digital photography and the importance accorded to shareholder interests: "[TRANSLATION] We are curious to see how shareholders are going to react when they realize how much money is being wasted on digital. What nonsense!"

In Barthélemy's view, such a comment is characteristic of the priority financial analysts give to strategies that maximize short-term profitability and underscores just how difficult it is for management to convince stakeholders to accept a strategy that breaks with past decisions. The challenge was all the greater for managers of a company with a history of paying out very generous dividends.

The impact of shareholder activism on disruptive innovation

Our analysis highlights the role played by shareholders in rejecting Kodak's initial strategy and developing a transition strategy which would allow the company to continue to leverage its legacy business model centered on film photography. Two points are worth being made here.

Firstly, Kodak can be considered as a typical case of shareholder-value-oriented governance. In 2007, 91% of the company's shares were held by institutional investors and investment funds (at that time, its ten largest shareholders were funds known for their activism, including Legg Mason Value Trust, Templeton Value Fund, Fidelity Value Fund and Vanguard/Prime Cap Fund). Nevertheless, as the Notat-Senard report (2018, p. 19) asserts, shareholder-value-oriented governance and the resulting short-termist thinking have a negative impact on R&D investments and innovation (Brossard *et al*., 2013). In the same vein, Asker *et al*. (2015) found that listed firms in the United States invest less than their unlisted counterparts and that listed firms with more institutional investors invest less than other listed firms.

Secondly, during the study period, Kodak's management was faced with strongly activist legacy shareholders as well as the corporate raider Carl Icahn. Our study shows that strong opposition from these powerful stakeholders led managers to be overly preoccupied with their expectations. These findings are consistent with those of Antioco (2011), who found that the failure of Blockbuster, the DVD rental giant facing the rise of Netflix, was due to opposition from activist shareholders. Similarly, a study carried out by Desjardine and Durand (2020) on hedge fund activism demonstrated how these types of stakeholders prioritize short-term returns and profitability.

Our work thus underscores the conflicting imperatives of responding to a disruptive innovation with an appropriate strategy (which involves a change in technology and business model) and meeting certain shareholders' expectations. However, it must be said that the impact of shareholder activism on innovation is still poorly understood. The findings of the few research studies that have been conducted were consistent with our observations. A study by Brav *et al.* (2018) on activist hedge funds (like Carl Icahn's) shows that target firms' R&D spending tends to drop, along with their R&D-related assets, and that a favored strategy is to refocus firms towards their core expertise. Vacher *et al*. (2020) reach similar conclusions, as they observe that hedge funds push mature firms to refocus on their core expertise (in Kodak's case, film photography).

However, these studies do not astutely touch on the types of innovation in question (particularly the distinction between disruptive and sustaining innovation) and concentrate on R&D investments and patent filings to measure innovation efforts. Clearly, our case study calls for future research to better understand the impact of shareholder activism (and more broadly the financialization of the economy) on disruptive innovation strategies. Kodak's case shows us that managers of certain large established firms must face conflicting demands: they have to highlight the innovation efforts their firms have undertaken in order to reassure the financial community as to their competitiveness in today's fast-moving environment, while being careful to preserve shareholder value.

A call for proceeding with "caution" when using cases in point

Our analysis demonstrates the importance of taking into account governance issues when examining management-level decisions regarding innovation. These aspects have not been covered in the literature on disruption, particularly in analyses of Kodak's collapse. Yet, already in 1989, Baden-Fuller signaled the significance of conflicts between managers, shareholders and creditors in gaining acceptance for and ensuring the success of attempts to transform, especially in undiversified firms.

Accordingly, this reinterpretation of Kodak's collapse should prompt caution in using "cases in point" to illustrate or support theoretical approaches. Our aim of maintaining a very fine "level of granularity" in this study allowed us to identify factors that had hitherto gone unnoticed.

In qualitative research, the risk of circularity (Dumez, 2013, p. 17) is often high. Whereas the material collected by the researcher is diverse and inevitably incomplete, the theories underpinning the work are general and decontextualized. This being so, the researcher can, even unconsciously, select data that confirms the theory and set aside all data that could lead them to nuance their position. We have attempted to avoid this circularity bias by establishing a detailed chronology of events without using a pre-determined theoretical framework.

Our analysis does not call into question the value of Christensen's work or, more broadly, research that highlights the dangers threatening management teams having to confront rapid and far-reaching changes in their business environment. In particular, the work of Silberzahn (2014a and b) clearly demonstrates the business model incompatibility issues facing a firm undertaking a technological transition. Other case studies have also demonstrated the explanatory value of Christensen's theory and the useful advice it offers for managers (such as Intel's launch of the Celeron family of processors: Ben Mahmoud-Jouini and Silberzahn, 2016). Moreover, it is naturally impossible to ascertain whether the 2003 strategy would have been successful. The fact remains that it is problematic for certain explanations for a firm's success or failure to be circulated rapidly and widely. Kodak has become such a famous "case in point" that it is sometimes used in an oversimplified way to discuss the dangers of disruption and how to avoid them.

The findings conveyed in this paper should serve to remind us of the limitations of explanations of the "it's as if" sort. Indeed, a swift interpretation of Kodak's decline could lead one to believe that the managers seemingly had fallen victim to the mechanism of disruption described by Christensen and his disciples. Our analysis shows that the company's decline was also due to causes that are not covered in the author's work. Rosenzweig (2009) has sounded the alarm on the tendency we can have to infer one or another specific characteristic based on a general impression, and the Kodak case is a fresh reminder of this. How established firms can/should respond to technological disruptions is a highly complex question, but the challenge of the researcher who moves to reconstruct and understand these responses is to confront complexity and avoid succumbing to the temptation of a "ready-made" explanation.

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