

Strategy implementation: What is the failure rate?

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Abstract

It is often claimed that 50–90% of strategic initiatives fail. Although these claims have had a significant impact on management theory and practice, they are controversial. We aim to clarify why this is the case. Towards this end, an extensive review of the literature is presented, assessed, compared and discussed. We conclude that while it is widely acknowledged that the implementation of a new strategy can be a difficult task, the true rate of implementation failure remains to be determined. Most of the estimates presented in the literature are based on evidence that is outdated, fragmentary, fragile or just absent. Careful consideration is advised before using current estimates to justify changes in the theory and practice. A set of guiding principles is presented for assisting researchers to produce better estimates of the rates of failure.

Keywords: strategy implementation, business strategy, strategic change management, failure rate, success

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INTRODUCTION

The Business Policy field was founded at the start of the 20th century (Rumelt, Schendel, & Teece, 1994; Hambrick & Chen, 2008) and strategic management was formally born in the 1960s (Amitabh, 2010), when Chandler (1962), Ansoff (1965) and Learned, Christensen, Andrews, & Guth (1965) published their pioneering books. Since then, strategic management has gone through several stages (Ansoff, Declerck, & Hayes, 1976; O'Shannassy, 2001), taken many forms (Mintzberg, Ahlstrand, & Lampel, 1998) and changed profoundly. One of the most challenging and unresolved problems in this area is the 'apparently high' percentage of organisational strategies that fail, with some authors estimating a rate of failure between 50 and 90% (e.g., Kiechel, 1982, 1984; Gray, 1986; Nutt, 1999; Kaplan & Norton, 2001; Sirkin, Keenan, & Jackson, 2005). By failure we mean either a new strategy was formulated but not implemented, or it was implemented but with poor results. This is a simple definition but still consistent with the three features of a successful implementation as defined by Miller (1997): (1) *completion* of everything intended to be implemented within the expected time period; (2) *achievement* of the performance intended; and (3) *acceptability* of the method of implementation and outcomes within the organisation. It is also consistent with the planned and emergent strategy modes. In both strategy modes, strategy may or may not be completed, may achieve different degrees of performance and its acceptability may also vary.

The difficulty of successfully implementing new business strategies has long been recognised in the literature (e.g., Alexander, 1985; Wernham, 1985; Ansoff & McDonnell, 1990), and a 1989 Booz

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Allen study (cited by Zairi, 1995) concluded that most managers believe that the difficulty of implementing strategy surpasses that of formulating it. As an example, the study found that 73% of managers believed that implementation is more difficult than formulation; 72% that it takes more time; and 82% that it is the part of the strategic planning process over which managers have least control.

In order to understand the reasons behind failure and improve the success rate of implementation, several researchers have provided comprehensive sets of implementation difficulties (Alexander, 1985; Wernham, 1985; Ansoff & McDonnell, 1990; O'Toole, 1995; Beer & Eisenstat, 2000; Cândido & Morris, 2000; Hafsi, 2001; Miller, Wilson, & Hickson, 2004; Sirkin, Keenan, & Jackson, 2005; Hrebiniak, 2006; Gandolfi & Hansson, 2010, 2011; Cândido & Santos, 2011). Many researchers – some of which following on from the inspiring work of Lewin (1947/1952) – have also proposed integrated frameworks for strategy formulation and successful implementation (e.g., Ansoff & McDonnell, 1990; Gioia & Chittipeddi, 1991; Baden-Fuller & Stopford, 1994; Kotter, 1995; Hussey, 1996; Galpin, 1997; Johnson & Scholes, 1999; Calori, Baden-Fuller, & Hunt, 2000; Cândido & Morris, 2001). Some others have adopted a different approach and decided to empirically test the impact of these frameworks and of their success factors (e.g., Pinto & Prescott, 1990; Miller, 1997; Bauer, Falshaw, & Oakland, 2005; Bockmühl, König, Enders, Hungenberg, & Puck, 2011).

Several major debates in the literature (Eisenhardt & Zbaracki, 1992) have also contributed to the advancement of possible solutions to the implementation problem, namely those around the rationality of the strategy formation process (Fredrickson & Mitchell, 1984; Fredrickson & Iaquinto, 1989; Dean & Sharfman, 1993; Papadakis, Lioukas, & Chambers, 1998); the accidental, evolutionary or natural selection approaches of strategy (Alchian, 1950; Cohen, March, & Olsen, 1972; Nelson & Winter, 1974; Hannan & Freeman, 1977; Aldrich, 1979; March, 1981; Van de Ven & Poole, 1995); the rate, rhythm or pattern of organisational change (Dunphy & Stace, 1988; Weick & Quinn, 1999); the incremental or emergent additions to intended strategy (Mintzberg & Waters, 1985; Mintzberg, 1987; Quinn, 1989); the idiosyncratic nature of each individual strategic decision (Mintzberg, Raisinghani, & Théorêt, 1976; French, Kouzmin, & Kelly, 2011); the impact of top management team composition and relationships between members (Hambrick & Mason, 1984; Naranjo-Gil, Hartmann, & Maas, 2008; O'Shannassy, 2010); the alternative management styles and strategic change methods (Hart, 1992; Stace & Dunphy, 1996; Johnson & Scholes, 1999; Balogun & Hailey, 2008); the distinction and relationships between strategy process, content and context (Pettigrew, 1987; Barnett & Carroll, 1995); and also the 'less rational': political, cultural, behavioural, learned and even symbolic aspects of effective strategic change (Cyert & March, 1964; Carnall, 1986; DeGeus, 1988; Senge, 1990; Gioia & Chittipeddi, 1991; March, 1997; Nonaka, 2007; Goss, 2008).

Although remarkable progress has been made in the strategic management field, the problem of strategy implementation failure persists, and it is still an important and ongoing concern for researchers and practitioners (Mockler, 1995; Barney, 2001; Hickson, Miller, & Wilson, 2003).

Probably, one of the most important challenges in this area is to discover how to ensure successful implementation. A useful first step in this direction is to assess what the real scale of the problem is. This assessment is important for three main reasons. One important reason is that currently both researchers and practitioners seem to assume that the rates of failure are very high. Considering that some of the high estimates have been used to guide some of the research and practice on strategic management, an assessment of the extent to which they provide an accurate and up-to-date account of the problem of strategy implementation failure is required. This is particularly relevant as some of the estimates presented in the literature have played an important role on the adoption or abandonment of some management tools by practitioners, and on the choice of topics researched by academics. Therefore, a rigorous assessment of the extent of the problem can assist decision makers to make better informed decisions on strategies to adopt and on topics to research.

A second reason in favour of this assessment is that it will allow to determine whether the failure rates estimated over the years show any particular pattern or trend. This can be an important finding as it might indicate important changes in the way strategies have been implemented over the years, changes in the nature of the strategies or changes in the way implementation success has been measured. Therefore, identification of clear patterns or trends in the results can open several avenues for research. In particular, it can be an important catalyst for research on the reasons behind the patterns observed.

The other main reason is that the percentage of strategies that fail to succeed is a controversial issue as no one seems to know what the real rate of failure is. By reviewing and discussing relevant literature, this research provides a clear and comprehensive understanding of the nature of this problem, so that the factors contributing to it can be identified and properly addressed. In doing so, this research exposes the need for, and lays the foundations of a clear protocol to guide researchers in the process of estimating more rigorously the rates of failure on strategy implementation. The development of this protocol is fundamental to assist managers and researchers in making better judgments of the value of strategy types, implementation approaches and management instruments.

This paper therefore aims to contribute to the discussion on the estimation of strategy implementation failure rates. In particular, we aim to show that the current state of affairs on the field of strategic management does not allow a single robust estimate of the failure rate of strategy implementation to be provided. In line with this objective, we also aim to suggest a template for a protocol that can help researchers develop better measures of strategy implementation failure rates. To this purpose, an extensive review of the literature on strategy implementation failure rates is presented and scrutinised.

In pursuit of this research agenda, the remainder of this paper is organised into several sections. It starts by discussing the research methodology and the process we have followed to address the objectives of this paper. It then addresses the issue of what the rate of strategy implementation failure is. A discussion of the literature dealing with this issue ensues and evidence is presented that supports the conclusions we have reached. The paper concludes by deriving implications for the literature and practice on strategy implementation.

METHODOLOGY: SEARCH STRATEGY AND SELECTION CRITERIA

With the objective of assessing what the rate of business strategy implementation failure/success is, we carried out an extensive review of the literature. First, we tried to identify all publications in scholarly journals at the EBSCO Host Research Databases that present estimates for this rate. Several search strings, including *strateg** and *fail**, *strateg** and *success**, *strateg** and *implement**, *transfor** and *fail** were applied to keywords, titles and abstracts of the publications. In the search strings above, the asterisk sign (*) represents wildcard characters. Second, within this first set, we identified all papers from business journals. All those publications from the list that were not actually publications in the business area even though they mentioned the search terms in the keywords, title or the abstract were omitted from further analysis. Third, we analysed the abstracts of all publications on this final list in order to assess their relevance for our research. We have considered only relevant studies that could present a percentage of failure (or of success) on business strategy execution consistent with the definition of failure presented previously. Fourth, for those publications considered to be relevant, we analysed the full text in order to determine whether an estimate of the failure rate was provided. Fifth, bibliographic references in the selected papers were also used as a source to identify papers or other evidence not captured in our electronic database search. It is relevant to note that the studies dealing with this issue have been authored by academics and practitioners, including consulting companies, and that not all of these studies have been published in academic journals. Therefore, a search strategy based exclusively on evidence documented in academic journals would be incomplete. Consequently, our sixth step consisted of additional searches carried out on the Internet search engine Google, on the

websites of major consulting companies and on several national library on-line catalogues (England, United States, Ireland, Scotland, Canada, Australia and Portugal), which allowed the identification of some additional and relevant studies. Unfortunately, however, some of these studies were not available for consultation and it was not possible for us to gain access to either a hard or an electronic copy. Interestingly, many of these unavailable studies were authored by consulting companies (Arthur D. Little, 1992; A.T. Kearney, 1992; Prospectus Strategy Consultants, 1996) and were abundantly quoted, even by reputed academic researchers. Finally, we have also contacted by e-mail the consulting companies, the individual authors of the reports, when their names were publicly available and the authors who have quoted those studies. In total, more than 45 e-mails were sent. In spite of all the efforts made to obtain copies of the studies, most of these efforts proved unfruitful. Many of the companies and authors contacted replied, but we did not succeed in obtaining the required information either because the studies were no longer available (e.g., A.T. Kearney, A.D.L., Prospectus) or because the companies were unable to assist individuals with specific research requests (e.g., B.C.G., McKinsey).

Therefore, the literature reviewed in this paper includes all the academic studies that have met the search criteria above and the consultancy studies that were relevant and available for consultation. The latter account for 45% of the studies analysed. The results of this search are presented and discussed in the next section.

STRATEGY IMPLEMENTATION FAILURE/SUCCESS RATES

Although the literature on the topic of strategy implementation failure/success is not in short supply, the existing studies are mixed in terms of their features (e.g., failure rate estimated, amount of effort involved in the estimation, complexity and quality of the methodology used, unit of analysis, criteria adopted to define success and research strategies adopted) and this requires special care in comparing their results. The most significant features of the studies considered for this research are summarised in Tables 1 and 2. Table 1 lists studies that have focused on general business strategies, and Table 2 lists studies that have focused on specific business strategies. Although the former table aims to be exhaustive, in the sense that it shows all the studies that our search strategy identified, the latter, aims to be illustrative of the variability of the available estimates.

The information in these tables is organised in five columns. The first column indicates the author(s) and year of the study and it is listed chronologically. The research method used to estimate the rates of failure/success and the variables against which such rates were assessed are described in the second and third columns, respectively. The fourth column indicates the estimated rate of failure presented by each study. Finally, the last column records some additional comments on each study.

The most appropriate conclusion that can be drawn from the analysis of Tables 1 and 2 is that it is difficult to provide accurate estimates for rates of failure of strategy implementation. The studies carried out so far by researchers and management consulting firms have obtained mixed results regarding the success and failure rates of business strategy implementation. In fact, as can be seen from the fourth column of the tables, the range of variation of the estimates is remarkable. If we first analyse the studies that focus on business strategy implementation in general, we can verify that the estimated rates of failure have ranged from 28 to 90%. When we turn to the studies that have focused on the implementation of specific business strategies this range is even wider. While some studies have obtained rates of failure as low as 7–10% (e.g., Taylor, 1997; Walsh, Hughes, & Maddox, 2002), others have obtained rates of failure as high as 80–90% (e.g., Voss, 1988, 1992; A.T. Kearney, 1992). Therefore, although it can be claimed that up to 90% of strategic initiatives fail, as this is the upper limit of the estimates provided in the literature, this is likely to be an overestimation.

Two major reasons support this view. First, most of the higher estimates presented in the literature come from consulting firms (e.g., Kiechel, 1982, 1984; Judson, 1991; A.T. Kearney, 1992; Prospectus

TABLE 1. STUDIES ESTIMATING GENERAL BUSINESS STRATEGY IMPLEMENTATION FAILURE RATES

Study	Method	Variable	Rate of failure	Observations
Kiechel (1982, 1984)	Interviews carried out in the period of 1979–1984 with theoreticians, corporate executives and consultants from most of the major consulting firms. Complementary analysis of case studies and of the history of the strategic management field. No research instrument explained and no other information on methodology presented	Perception of the percentage of companies that can implement a strategy successfully	90%	Kiechel (1982, 1984) is cited by researchers such as Mintzberg (1994) and Kaplan & Norton (2001). We have searched the websites of some of the companies interviewed by Kiechel (A.D.L., B.C.G., McKinsey, Bain and others), looking for any studies that the consultants interviewed might have been quoting, and have also sent e-mails to these companies asking for a copy ^b
Gray (1986) ^a and Judson (1991) ^a (Gray-Judson-Howard Inc.)	Questionnaire applied to chief executive officers, corporate planning directors and business unit heads, all with substantial experience in strategic planning in American multi-business corporations of the service and manufacturing industries and in American Government Agencies. Population and sampling method not clearly specified. Sample of 300 respondents. Further details obtained through 14 Executive Seminars of a day-and-a-half with the participation of 216 of those respondents. Descriptive statistics only	Perceived failure of strategic planning systems, because of difficulties in the implementation phase	51–90%	Based on Gray's (1986) results, we have calculated the rate of failure: $87\% \times 59\% = 51\%$. Judson (1991) quotes a rate of failure of around 90%, which was based on Gray's (1986) 87% estimate
Nutt (1987)	Case studies of 68 strategic planning projects in hospitals and other third-sector organisations from Canada and United States. Sample not random. Data collected from interviews with key executives and company documents. Additional interviews were made to secure an agreement between interviewees' recall of events, existing documents and a written description of the process prepared by the researcher. In case of lack of agreement the case was not considered. Descriptives and statistical tests	Strategic projects abandoned, rejected or shelved	30%	According to the author, the sample is not random and a 'positive bias may be present because organisations that participate voluntarily are likely to share information about practices and ideas they believe to be high quality'. This positive bias may have resulted in an underestimated rate of failure

TABLE 1. (CONTINUED)

Study	Method	Variable	Rate of failure	Observations
Prospectus Strategy Consultants (1996) ^a	na	na	70%	Quoted by Corboy & Corrbui ^a (1999). Unfortunately, we could not find a copy. We searched the Prospectus' website and on several national library on-line catalogues. We asked a copy by e-mail sent to Prospectus and also to the authors who quoted the study ^b
Charan & Colvin (1999)	'Several dozen CEO failures' observed over decades by the authors as management consultants (personal experience) and telephone call interviews with CEOs chosen by Fortune. Selection method not specified. Size of telephone calls sample: 38. Some CEOs did not agree with views expressed by the authors. Descriptive statistics only	Number of strategies that, in the authors' view, failed because of bad implementation	70%	Charan & Colvin (1999) estimated that 70% of the strategies that fail, do so, because of bad implementation. Contrary to Kaplan & Norton's (2001: 1) generalisation, they did not estimate that 70% of business strategies fail!
Nutt (1999)	Case studies of 356 decisions made by senior managers in medium to large organisations of the public, private and third sector in the United States and Canada. Data collected from interviews with key participants and company documents. Additional interviews were made to secure an agreement between interviewees' recall of events, existing documents and a written description of the decision process prepared by the researcher. In case of lack of agreement the decision was not considered	Interviewers' perceptions on how long a decision holds valid and how much of the decision holds after 2 years	50%	
Doyle et al. (2000)	Postal survey mailed in June 1998 to 83 members of the Organization Development and Change Forum in the United Kingdom, Leicester, with a request to ask up to four other management colleagues also to complete the	Perceived benefit/damage of long-term strategic changes implemented	8–22%	Two items were used to measure success/failure. For the first item, results indicate that 8% of the managers agree or strongly agree that changes have been widely damaging to the organisation. For the second item, results show that 22%

	questionnaires. A total of 415 questionnaires were sent, and 92 replies were received from managers of 14 public and 14 private-sector organisations. These included 24 senior managers and 68 middle managers with significant involvement and extensive experience in change management/implementation. Descriptive statistics only				disagree or strongly disagree that the changes introduced have been broadly beneficial
Mankins & Steele (2005) ^a (Marakon Associates)	Survey conducted by Marakon and the Economist Intelligence Unit in the fall of 2004. Sample of senior executives from 197 companies worldwide with sales exceeding USD 500 million. The sample includes very different product markets and geographies. No other information on methodology available. Descriptive statistics only	Perceived degree of achievement of the financial objectives established	33%		Failure defined for the purpose of building this table as achieving <50% of the potential financial performance of the strategic plan
Unknown, cited by Sirkin, Keenan, & Jackson, (2005) ^a (BCG)	na	na	67%		Sirkin, Keenan, & Jackson (2005) do not provide sufficient information to identify the original empirical study or studies. We asked all of the authors by e-mail to indicate the complete references for the studies ^b
McKinsey (2006) ^a	On-line survey. Sample size 796 from a worldwide panel of executives responsible for finance or strategy in organisations from a wide range of industries, each with a revenue of at least 500 million USD. No other information available on sampling and methodology. Descriptives only	Perceived effectiveness of the strategic plan	28%		
Jørgensen et al. (2008) ^a (IBM Global Business Services)	Survey of 1,532 practitioners – project leaders, sponsors, project managers and change managers – from companies of 15 different nations in the world and in 21 different industries. Sample included practitioners from companies with more than 100,000 employees (14%), between 100,000 and 1,000 employees (64%), and <1,000 employees (22%). Practitioners	Number of projects that did not miss any of the objectives (time, budget and quality goals)	59%		According to the study, 59% of the projects ‘failed to fully meet their objectives: 44% missed at least one (time, budget or quality goals), while a full 15% either missed all goals or were stopped by management’

TABLE 1. (CONTINUED)

<i>Study</i>	<i>Method</i>	<i>Variable</i>	<i>Rate of failure</i>	<i>Observations</i>
	<p>were responsible for a wide range of projects with a diverse range of objectives. Additional data collected from in-depth interviews. The University of Bonn in Germany provided statistical support. No other information on methodology available. Descriptive statistics only</p>			
McKinsey (2008) ^a	<p>Survey of 3199 executives from industries and regions around the world. No other information on methodology available. Descriptive statistics only</p>	<p>Perceived success of organisational transformations</p>	67%	
Franken et al. (2009)	<p>Questionnaire sent to organisations previously known to the researchers and composed of 50 questions regarding the business internal and external context, organisation capability for successful implementation and business performance. 93 completed questionnaires were returned from predominantly large organisations in a variety of industry sectors. A pilot was conducted with 10 organisations to ensure proper interpretation of the questions. Subsequent focus group meetings were also conducted to provide clarification and supporting insights. Descriptive statistics only</p>	<p>Perceived strategy execution performance</p>	34%	<p>Thirty-four percent of the organisations in the sample reported strategy execution performance below average</p>
Economist Intelligence Unit (2013)	<p>Survey conducted by the Economist Intelligence Unit in March 2013. Sample of 587 senior executives from 19 different industries and from North America (30%), Asia Pacific (30%), Western Europe (21%), Middle East, Africa, Latin America and</p>	<p>Perceived success of strategic initiatives in the last 3 years</p>	44%	<p>The Economist Intelligence Unit provides forecasting and analysis services based on accurate and impartial assessments of the future in order to deliver insights to decision-makers. The Economist</p>

	Eastern Europe (19%). Executives in the sample are from companies with more than US\$10 billion in annual revenue (25%), between US\$10 billion and US\$1 billion (33%), or < US\$1 billion (42%). Additional data collected from 7 in-depth interviews with senior executives and academics whose names are identified. No other information on methodology available. Descriptive statistics only			Intelligence Unit is not considered as a consulting company
Project Management Institute (2014)	Survey conducted by the Project Management Institute and the Economist Intelligence Unit in 2013–2014. Sample of over 2,500 project management leaders and practitioners from companies across North America, Asia Pacific, Europe, Middle East, Africa, Latin America and the Caribbean region. No other information on methodology available. Descriptive statistics only	Perception of strategic initiatives meeting their original goals and business intent	44%	Project Management Institute is a not-for-profit professional membership association for the project, programme and portfolio management profession. It is not considered as a consulting company

Notes. ^aStudy by a consulting firm or by authors associated with consulting companies.

^bThe study was not available on-line. We did not receive replies to our e-mails or the replies were negative. na = information not available.

TABLE 2. STUDIES ESTIMATING SPECIFIC BUSINESS STRATEGY IMPLEMENTATION FAILURE RATES

<i>Study</i>	<i>Method</i>	<i>Variable</i>	<i>Rate of failure</i>	<i>Observations</i>
Golembiewski et al. (1981, 1982) ^a and Golembiewski (1990)	Analysis of 574 case studies from the period 1945–1980, covering the private (53%) and the public sector (47%), as well as United States (83%) and non-US settings (17%). Published and unpublished data sources were both used. All cases were coded globally and for 308 individual variables. Interrater reliabilities are high, 0.78 correlation and 95%, respectively. Differences in the global codification were reconciled after reliability check	Probability of successful intervention based on researchers' codification	14% (global)–30% (multiple variables)	Golembiewski (1990) and Golembiewski et al. (1981, 1982) focus on the rate of success of Organisational Development interventions. They estimated two rates of success, one using a global assessment (86% success) and another using the codification of 308 individual variables (70% success)
Beamish (1985)	Survey. Sample of 66 joint ventures in LDCs with at least 3 years of existence; 20 joint ventures in Caribbean countries and 46 in other non-specified LDCs; 12 involving a government partner, and 54 only private partners. Limited information on sampling and methodology. Descriptives only	Multinational enterprise managerial assessment of dissatisfaction with performance	61%	Beamish (1985) is interested in joint ventures in DCs and LDCs
Harrigan (1988a, 1988b, 1988c)	Several sources of data used: archival data, field interviews, survey questionnaires, three-round delphi method questionnaire, telephone conversations, and follow-up letters. Sample size of 895 strategic alliances affecting commerce in the United States in 23 different industries (four-digit SIC codes) in de period 1924–1985, with parent companies from 19 countries. Limitations of the study derive from	Mutual agreement between perceptions of both parent firms on the success of the alliance	55%	Harrigan (1988a, 1988b) focused on strategic alliances

	subjectivity of the delphi method and from differences in industries, joint-ventures and venture partners. Descriptives and statistical tests associated with research questions				
Voss (1988, 1992)	Study over a 18-month period of 14 companies implementing advanced manufacturing technologies. A case-based approach was used, gathering data through interviews with executives and engineers in each firm. The data for each company was aggregated and examined to indicate whether there was an implementation success or failure. In the event of conflicting or inconclusive data, the case was excluded. Descriptives only. Given the sample size, rigorous conclusions were not reached	Perceived competitiveness improvement resulting from the adoption of a new manufacturing technology	86%	Voss (1988, 1982) uses four measures of success: technical success, productivity increase, other benefits realised, such as quality improvement, and competitiveness improvement. Rates of success calculated are: 100%, 86%, 57% and 14%, respectively. In the previous column of this table, the failure rate indicated is $100 - 14 = 86\%$	
Park (1991)	Analysis of 151 case studies from the period of 1978–1988. Published and unpublished sources of data. Internal documents of 45 organisations and interviews with 50 practitioners and researchers. All cases coded in terms of 30 outcomes variables. Interrater reliability of 97%, assessed for 20% of the cases. Descriptives and statistical tests	(No. of positive outcomes – no. of negative outcomes)/total no. of variables examined $\geq 50\%$	40%	Park (1991) focused on quality circles programmes. We calculated the failure rate using the data provided in the paper as the average for the public and the private organisations	
Unknown, cited by Jantz & Kendall (1991) ^a (Arthur D. Little)	na	na	90%	The rate of failure refers to the proportion of new consumer products that fail. Jantz and Kendall (1991) do not provide sufficient information to identify the original empirical study. We were unable to establish contact with Jantz or Kendall ^b	
A.T. Kearney (1992) ^a	Survey. Sample of over 100 British firms (according to The Economist, 1992)	na	80% ^c	This study has been abundantly cited, for example, The Economist (1992), Wilkinson, Redman, & Snape (1994) and Soltani et al. (2005). Unfortunately, we could not find a copy. We searched A.T. Kearney’s website, several national	

TABLE 2. (CONTINUED)

Study	Method	Variable	Rate of failure	Observations
				library on-line catalogues (England, United States, Ireland, Scotland, Canada, Australia, Portugal), and Emerald website (editor of the TQM Magazine). We asked a copy by e-mail sent to A.T. Kearney, to Emerald and also to the authors who quoted the study ^b
Hall, Rosenthal, & Wade (1993) ^a (McKinsey)	Case study. Sample of more than a hundred companies in different industries and locations. Detailed analysis of twenty cases. Limited information on sampling and methodology. Descriptives only	Reduction in total business-unit costs. Improvement in earnings before interest and taxes	55–70%	Hall, Rosenthal, & Wade (1993) estimated the percentage of Business Process Reengineering initiatives that failed
Wilkinson, Redman, & Snape (1994)	Postal questionnaire sent to managers from all management levels and functions of public and private sector organisations of the United Kingdom and foreign owned companies. Several industries covered. Sample of 880 managers. Descriptive statistics only	Perceived overall success of QM programme	53%	
Lewy & Mée (1998a, 1998b) ^a (KPMG)	Case study. Analysis and comparison of the implementation and results obtained across seven European companies. No information on population or sampling method. No other information on methodology. Descriptives only	How many and how firmly, in researchers' opinion, were the 'ten commandments' adopted by the company	29–43%	Lewy & Mée (1998a) focused on the initiatives to implement a Balanced Scorecard. With the original study written in Dutch, we decided to use a translation with some editing, published by KPMG Consulting (Lewy & Mée, 1998b), and other additional sources that quote the study (McCunn, 1998; Smith, 2005; Woodley, 2006)
Walsh, Hughes, & Maddox (2002)	Postal questionnaires sent to the senior managers of 170 selected medium and large-sized companies in Ireland. Selection method not specified. First questionnaire: sample size $n = 72$, 51	Perceived overall success of TQM programme	7%	

	with a TQM programme. Second questionnaire: sample size $n = 28$, all of which TQM firms. Follow-up calls to clarify responses and secondary data. Descriptive statistics only			
Morisawa & Kurosaki (2003) ^a (Nomura Research Institute Ltd.)	Survey. Questionnaire conducted by the N.R.I. Ltd in June 2003 among 1,330 companies with sales of 50 billion Yen or more. No information on sampling method. Sample size $n = 189$, 35 of which with a balanced scorecard (18.5%). Other methodological information not provided. Descriptives only	Perceptual evaluation of the results of introducing the balanced scorecard	34%	Morisawa and Kurosaki (2003) focused on the implementation of the balanced scorecard
Pautler (2003)	Comparative critical analysis of 13 studies made by consulting companies on the success rate and factors contributing to effective mergers and post-merger integration. Critical review of the consulting companies' studies and comparison with academic research. Descriptives only	Raise in shareholder value relative to pre-deal levels	45–70%	Focuses on mergers and acquisitions. Concludes that in spite of the weaknesses of the studies by consulting companies, the 'broad pattern of results reported ... does not differ much from that found in the finance/business academic field'. In fact, '[f]ailure rates for mergers in the range of 35% to 60% are common in academic studies' (Pautler, 2003)
Taylor & Wright (2003)	Longitudinal study over a period of 5 years of a cohort of 109 TQM firms in Northern Ireland. Postal questionnaire mailed to CEOs or Managing Directors. Further details obtained through 25 follow-up interviews. Stratified sample representative in terms of sector and size of firm. Descriptives and statistical tests associated with research hypotheses	Perceived TQM outcome/success	41%	The rate of failure corresponds to the proportion of unsuccessful and of discontinued TQM programmes
Hackett Group (2004a, 2004b) ^a	Survey of more than 2,400 client organisations from several countries, including 93% of the Dow Jones Industrials, 80% of the Fortune 100 and 90% of the Dow Jones Global Titans Index. No other information on methodology available. The full text of the study is available only to clients of the Hackett Group	Perceived maturity degree reached by the initiative	73%	The Hackett Group focused on the development of a mature balanced scorecard. 'Mature' meaning that it does not have too many metrics, does not focus heavily on historical finance data and has enough forward-looking indicators

TABLE 2. (CONTINUED)

<i>Study</i>	<i>Method</i>	<i>Variable</i>	<i>Rate of failure</i>	<i>Observations</i>
Lawson, Stratton, & Hatch (2006, 2008) (sponsored by professional and consulting organisations) ^a	International on-line survey conducted in 44 countries and in eight different languages. Methods used to solicit survey participation were different across countries, but everyone could participate. Sample size of 382 companies, divisions and subsidiaries. Of these 382, 193 (51%) used a balanced scorecard. No non-response bias analysis available. Descriptives only	Perceived benefits to the organisation	37%	Lawson, Stratton & Hatch (2006, 2008) focused on the implementation of the balanced scorecard
Dion et al. (2007) (Hay Group and La Sorbonne) ^a	Three phase study, including (1) interviews with 200 senior European business leaders who were involved in a major merger or acquisition during the previous 3 years; (2) 'desk research' into the 100 largest mergers and acquisitions; and (3) qualitative and quantitative research amongst 300 global employees of merging organisations. Descriptive statistics only. No other information on methodology	Perceived degree to which the initial objectives of the initiative were achieved	91%	
Makino et al. (2007)	Data from an annual survey on overseas business activities conducted by a Japanese Ministry. Database includes 2,000 International Joint Ventures (IJVs) that were terminated in the period of 1996–2001, and all those that were not terminated in the same period (total na). Descriptives and statistical tests associated with research hypotheses	Number of terminated IJVs over the number of IJVs that existed in the same period	8% (LDCs); 11% (DCs)	Makino et al. (2007) focused on the intended and unintended termination of IJVs
Sila (2007)	Mail survey sent to a selected key informant of each of the 2,000 manufacturing and service companies	Perceived success of the TQM programme	14%	

randomly selected from the ASQ mailing list. Sample size: 286. Responses tested for non response bias and for scale reliability and validity. Descriptives and statistical tests associated with research hypotheses

Unknown, cited by Becer et al. (2007) ^a (Booz AllenHamilton)	na	Initiatives terminated or producing less than expected results	40%	Becer et al. (2007) focused on performance-improvement initiatives. The authors do not provide sufficient information to identify the original empirical study or studies. We contacted all of them by e-mail ^b
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Notes. ^aStudy by a consulting firm or by authors associated with consulting companies.

^bThe study was not available on-line. We did not receive replies to our e-mails or the replies were negative.

^cIn the same year, in a study by O'Brien and Voss (1992), the authors concluded that most British organisations were having problems developing TQM. However, they noted that most UK organisations were in the early stages of developing a total approach to quality, that is, in the beginning of implementation.

DCs = developed countries; IVJs = international joint ventures; LDCs = less-developed countries; na = information not available; TQM = Total Quality Management.

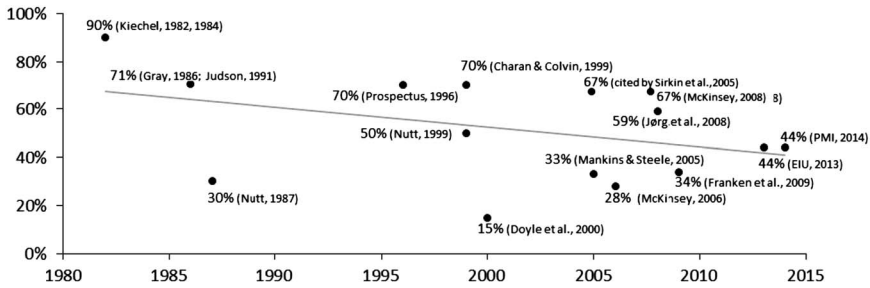


FIGURE 1. BUSINESS STRATEGY IMPLEMENTATION FAILURE RATES.

Note: For this figure, we used the rates in Table 1. When two rates were given in any one study, we used the average for the figure.

Strategy Consultants, 1996; Hackett Group, 2004a, 2004b; Dion, Allday, Lafforet, Derain, & Lahiri, 2007). Although we were unable to access the scientific rigour of some of these studies, as it was not possible to obtain details regarding the robustness of the research methodologies used and the results achieved, it has long been recognised that some overestimation may have been committed by consulting firms (Powell, 1995). Overestimated failure rates can be used to the advantage of consulting firms, namely as a marketing strategy to convince customers of the importance of adopting their services (Powell, 1995). Second, the results on the tables seem to suggest a downward trend on the estimates of failure, indicating that the percentage of strategic initiatives that fail has decreased over time (see Figure 1), a likely result of the scientific progress made in this field over the past two decades and its inclusion in business education programmes. In particular, the identification of obstacles to strategy implementation and a better understanding of the ways they interact with each other, made by both researchers and practitioners (e.g., Alexander, 1985; Ansoff & McDonnell, 1990; Kotter, 1995; Beer & Eisenstat, 2000; Kaplan & Norton, 2001) might have played an important role in improving the rates of failure over the years. Therefore, although some of the higher estimates could have been appropriate and reflect the true dimension of the problem one or two decades ago, they are likely to be outdated nowadays. This is also the case because time since adoption of a new strategy contributes to a better internalisation of the elements of that strategy and consequently to a better performance (Powell, 1995; Prajogo & Brown, 2006). Considering that some strategies and some management tools have been in practice for a long time, it is likely that familiarity with these strategies and tools has increased leading to the accumulation of knowledge and, consequently, to more successful implementations (Taylor & Wright, 2003). Several other explanations can be offered to justify the downward trend on the estimates of failure. For example, companies may follow successful early adopters, benefiting from their experience, thus resulting in the improvement of failure rates. Companies may also have become more aware of the need to carefully customise new strategies or management tools to their characteristics and to the contexts in which they operate, instead of blindly adopting general undifferentiated strategies and tools. Independently or in combination each of these factors might help explain the apparent improvement in failure rates.

It seems therefore reasonable to assume that the current rates of failure are well below some of the estimates often quoted in the literature. However, if this is the case, what is then the real percentage of strategies that fail? Although there have been several studies on this issue in the past two decades, our view is that the current state of affairs does not allow a robust estimate to be provided. Several reasons can be advanced for this.

First, the studies discussing the success/failure rate of strategy implementation vary considerably in the amount of effort put into the estimation of the rate. In some of these studies, the estimation of the rate of failure/success was their main objective (e.g., Golembiewski, 1990; Park, 1991;

Wilkinson, Redman, & Snape, 1994; Pautler, 2003; Makino, Chan, Isobe, & Beamish, 2007). In other studies, this objective was part of a broader research agenda (e.g., Beamish, 1985; Voss, 1988, 1992; Taylor, 1997; Nutt, 1999; Walsh, Hughes, & Maddox, 2002; Taylor & Wright, 2003; McKinsey, 2006), while in others the rates of success/failure were presented as complementary information in an introduction or as an aside (e.g., Gray, 1986; Harrigan, 1988a; Hall, Rosenthal, & Wade, 1993; Mohrman, Tenkasi, Lawler, & Ledford, 1995; Lewy & Mée, 1998a, 1998b; Sila, 2007). An implication of the effort put into the estimation of the rate in each study is the consequent impact on the complexity of the computational method used. In some studies, the computation is very simple (e.g., Beamish, 1985; Harrigan, 1988a; Sila, 2007), while in others it is much more complex and demanding (e.g., Golembiewski, 1990; Park, 1991).

Second, these studies are not easily comparable because the criteria used to define success/failure are very distinct and consequently, they can account for some of the differences between estimations. It is possible to distinguish between 'technical success' and 'competitive success' (Voss, 1992), between 'success as process ease' and 'success as process outcomes' (Bauer, Falshaw, & Oakland, 2005) and, similarly, between 'implementation success' and 'organisational success' (Hussey, 1996; Mellahi & Wilkinson, 2004). The higher rates of failure estimated may depend on a stricter sense of success adopted by researchers.

Estimates of technical success and success as process ease may be higher than estimates of success as process outcomes or organisational competitive success in the marketplace, since more internal and external contingencies can affect the latter types of success. In Tables 1 and 2, we have reported mainly failure rates from a 'competitive success' or an 'organisational success' perspective. Even so, the studies in the tables are not easily comparable because in some cases researchers relied on managements' perceptions to derive an estimate of success/failure (e.g., Beamish, 1985; Gray, 1986; Voss, 1988, 1992; Taylor & Wright, 2003), whereas in others, they used more objective measurements (e.g., Golembiewski, Proehl, & Sink, 1981, 1982; Golembiewski, 1990; Hall, Rosenthal, & Wade, 1993; Pautler, 2003; Makino et al., 2007). Furthermore, some studies have used a single criterion to define success/failure (e.g., Gray, 1986; Walsh, Hughes, & Maddox, 2002; Sila, 2007), whereas others have used multiple criteria (e.g., Golembiewski, 1990; Park, 1991; Wilkinson, Redman, & Snape, 1994; Mohrman et al., 1995).

Third, different studies have used different research strategies to estimate the rate of success/failure of strategy implementation. Some researchers have adopted a case study approach (e.g., Voss, 1988, 1992; Hall, Rosenthal, & Wade, 1993; Lewy & Mée, 1998a, 1998b; Nutt, 1999). Others have employed a survey method (e.g., Beamish, 1985; Wilkinson, Redman, & Snape, 1994; Mohrman et al., 1995; Walsh, Hughes, & Maddox, 2002; McKinsey, 2006; Makino et al., 2007; Sila, 2007), while still others have used a combination of methods (e.g., Gray, 1986; Harrigan, 1988a; Charan & Colvin, 1999; Taylor & Wright, 2003). It is well known that, while some research strategies allow statistical generalisations to be made, others, like case-based research, only allow analytical generalisations.

Fourth, the unit of analysis varies considerably from one study to another. Some researchers have considered as their unit of analysis a single project, such as developing a new product or launching quality circles, which may be seen as part of wider strategic initiatives (e.g., Nutt, 1987, 1999; Voss, 1988, 1992; Park, 1991; Lewy & Mée, 1998a, 1998b; Hackett Group, 2004a, 2004b; Lawson, Stratton, & Hatch, 2006, 2008). Other researchers have focused on business-wide strategic initiatives, which may in turn be decomposed into several smaller projects (e.g., Kiechel, 1982, 1984; Harrigan, 1988a, 1988b, 1988c; Mohrman et al., 1995; Walsh, Hughes, & Maddox, 2002; Pautler, 2003; McKinsey, 2006; Sila, 2007).

Fifth, some studies prove very difficult to obtain/access, in particular those undertaken by some management consulting firms such as A.T. Kearney, Arthur D. Little, McKinsey, Prospectus and Booz Allen Hamilton. Therefore, any conclusions taken from the estimates they have produced without a proper understanding of the context, methodology and results obtained might lack legitimacy and

scientific rigour. In spite of this, it is common to find researchers (e.g., Holder & Walker, 1993; Mintzberg, 1994: 25, 284; Smith, Tranfield, Foster, & Whittle, 1994; Zairi, 1995; Dow, Samson, & Ford, 1999; Korukonda, Watson, & Rajkumar, 1999; Kaplan & Norton, 2001: 1; Walsh, Hughes, & Maddox, 2002; Sterling, 2003) that quote the results of these studies not because they have read the original work but because these estimates have been quoted by other researchers or in well-known journals such as *The Economist* or *The Wall Street Journal*. Unfortunately, this has led some of these studies to be widely misquoted and misunderstood (Taylor, 1997).

Finally, it is not always easy to distinguish what is fact and what is fiction in some of the estimates offered in the literature. In particular, there seems to be no scientific grounds behind some of the estimates. For example, Mintzberg (1994: 25, 284), Kaplan & Norton (2001: 1), Burnes (2004, 2005), Raps (2005) and Sila (2007) quote several sources for the rates of failure they mention in their papers (e.g., Kiechel, 1982, 1984; Judson, 1991; Dooyoung, Kalinowski, & El-Enein, 1998; Beer & Nohria, 2000; Waclawski, 2002; Sirkin, Keenan, & Jackson, 2005). However, a detailed analysis of these sources shows that they did not carry out an estimation of the quoted rates of failure. They claim their estimates were based on 'Interviews', 'Studies', 'Experience', 'The Literature' or 'Popular Management Press', rather than on solid empirical evidence. On other occasions, the sources of the estimates are incorrectly interpreted (e.g., Kaplan & Norton, 2001, in interpreting the findings of Charan & Colvin, 1999). We also found evidence of studies incorrectly identifying their sources (e.g., Dyason & Kaye, 1997) and studies not identifying their sources at all (e.g., Jantz & Kendall, 1991; Neely & Bourne, 2000; Becer, Hage, McKenna, & Wilczynski, 2007).

Unless these factors are accounted for, any attempts to present estimates for the real success/failure rates of strategy implementation are doomed to fail or are of little practical value.

Independently of the 'real' success/failure rate, and despite success rates that seem to have improved over time, it is reasonable to conclude that the number of strategic initiatives that fail is still considerably higher than would be desirable. This suggests that organisations either need better implementation guidelines or need to make better use of the existing ones. The need for better implementation processes has been widely acknowledged by researchers (e.g., Dean & Bowen, 1994; Mockler, 1995; Barney, 2001; Hickson, Miller, & Wilson, 2003) and research on how to avoid implementation obstacles and improve implementation has been underway for many years (e.g., Stanislao & Stanislao, 1983; Alexander, 1985; Ansoff & McDonnell, 1990; Kotter, 1995; Beer & Eisenstat, 2000; Miller, Wilson, & Hickson, 2004; Stadler & Hinterhuber, 2005). It is, therefore, imperative to assess the extent to which these guidelines account for some of the improvements achieved as well as to understand the reasons why so many initiatives still fail.

Although efforts should be made to reduce failure rates, it is important to emphasise that failure can be seen as an important part of the strategic learning process within organisations (e.g., Mintzberg, 1987; Krogh & Vicari, 1993; Sitkin, Sutcliffe, & Schroeder, 1994; Edmondson, 2011). Unintended past mistakes and deliberate strategic experiments can both generate useful lessons (Wilkinson & Mellahi, 2005), which may prove highly advantageous in the marketplace (Krogh & Vicari, 1993).

CONCLUSION

Business strategy implementation has long attracted the interest of researchers and practitioners. In spite of being often quoted that 50–90% of strategic initiatives fail (e.g., Mintzberg, 1994: 25, 284; Kaplan & Norton, 2001: 1), an exhaustive analysis of the literature on strategy formulation and implementation seems to suggest that some of the evidence supporting these figures is outdated, fragmentary, lacks scientific rigour or is just absent. Much of the uncertainty relating to this issue is also due to the fact that different studies have obtained mixed results. These findings are important to the field of strategy and change management in two different ways. First, they add to the discussion of the

appropriateness of the failure rates proposed by some studies, which has attracted interest in recent years but on which much remains to be done. As far as we know, there are only two studies, which explicitly address this issue. A paper by Cândido and Santos (2011), which focuses on total quality management rates of failure, and a paper by Hughes (2011), which questions the assertion that '70 per cent of all organisational change initiatives really fail'. Our research presents, however, important departures from these previous studies. While the former study focused on the implementation of a specific business strategy (i.e., total quality management) and the latter focused its analysis exclusively on five selected papers, none of which presenting evidence to support the claim they had made, our study is much broader in focus and comprehensive in the analysis. We scrutinise both the implementation of general and specific business strategies and carry out an extensive review of all the studies that discuss strategy implementation failure rates. In so doing, we have found out that the range of variation of the estimates is remarkable, spanning from a rate of failure as low as 7 to one as high as 90%. Several factors can help explain why there is such variation in the estimates produced including possible overestimation, exposure of organisations to different contextual and environmental factors and differences in the concepts used to define success/failure and in the samples and methodologies adopted. These differences can be attributed to several factors, one of the most important being the lack of a comprehensive review of the relevant literature by some of the studies. This has prevented the authors of these studies from becoming aware of the state of the art on the topic and, consequently, adopting concepts and methods consistent with previous research. Another important explanation for the differences mentioned above relates to the fact that the research objectives vary considerably between studies. Some studies have established the estimation of the rate of failure as their main goal, whereas in others, the estimation of this rate has assumed a less important role. This has had various implications for the higher or lower sophistication of the methodology and of the criteria adopted for the calculations. A third factor explaining the differences in the criteria and methods used to estimate failure rates relates to the use that is intended for these rates. While academic researchers are likely to be more interested in the study of a particular type of implementation approach/tactic, strategy, or even management instrument (such as balanced scorecard or total quality management), practitioners are likely to be more interested in the promotion of a specific kind of consulting service. Finally, the fact that the literature does not offer a clear research protocol to be followed when the objective is to estimate the rate of failure in the implementation of strategic initiatives, also plays a fundamental role in explaining the differences between studies. Given the exceptionally broad range of estimates produced as a result of the factors mentioned above, their quotation in generic terms may have little more than academic value. This conclusion should also be seen as a warning against the use of the current higher estimates of rates of failure (70–90%) to justify any course of action, whether in research or in management practice.

Another important contribution of this research to the literature is that it exposes the need for and lays the foundations of a protocol that guides researchers in the process of estimating strategy implementation failure rates. This is a distinctive feature from the two studies previously discussed. In what follows, we propose a template for such a protocol, which is aimed at enhancing the comparability between estimates and increasing their predictive capability. This protocol should be regarded, however, as a starting point for discussion rather than as a complete proposal. As discussed in what follows, when the objective is to estimate strategy implementation failure rates, there are five principal aspects of the protocol.

First, it is important to accurately characterise the context of the study. In particular, it is fundamental that relevant organisational factors (e.g., firm size, sector of operation, ownership, management style) and environmental variables (e.g., economic, social and cultural context) that might impact on the degree of success or failure of a strategy are clearly identified and discussed. It is well known that some contingency factors might impact on the success or failure of a strategic initiative, and therefore,

knowing them is important to enhance comparability between estimates and to design tailor-made guidelines for implementation.

Second, once the context has been established, the actual types of the business strategies being assessed must be carefully detailed. Considering that the process of implementing different strategies can have quite different outcomes within the same organisational and/or environmental context, it is critical to clarify which type of strategy is being analysed. Besides this, it is important to clarify whether the study is assessing the success/failure of modifications of existing strategies or the implementation of whole new strategies and whether it is focused on transactional or transformational changes.

Third, it is fundamental to establish a clear and consistent definition of 'failure' or of 'success'. Although a universally acceptable definition of strategy implementation failure is not compulsory, a clear definition is nonetheless important for methodological consistency as it will ensure a common understanding of what is being assessed and enhance comparability between studies. As part of this definition, it is fundamental to specify the intended outcomes of the implementation process, the measurable indicators of these outcomes and the specific target levels to be attained for these indicators in order for an implementation to qualify as a success (or as a failure).

Fourth, the research methodology used to estimate the rate of failure has to be clearly discussed. Considering that a crucial aspect in estimating the degree of success/failure of strategy implementation is the ability to identify and quantify the outcomes of the process, and that different research strategies have often distinctly different methods for data collection and analysis, it is important that these methods and their assumptions are properly discussed. Information regarding the reliability and validity of the measurement instruments must also be provided to allow for an independent assessment of their methodological rigour and consistency.

Finally, as in any carefully done research, weaknesses of the analysis, which may limit the ability to generalise its conclusions to other contexts, must be identified and characterised. The identification of these weaknesses and the provision of suggestions on how to address them is a key step towards improvement.

Adherence to this protocol is imperative for a better understanding of the reasons behind the different estimates produced and to derive more robust estimates for the rates of strategy implementation failure. Only in this way will we be able to identify the real scale of the problem and plan appropriate corrective actions. Unless it is properly understood whether there are strategic initiatives more difficult to implement than others, whether there are sectors or areas of activity where strategies are more difficult to implement and whether there are cultural issues and other contextual factors that explain the differences on the estimates produced, the mere quotation of these estimates will be of little practical value.

It is important to acknowledge, however, that considerable progress has been made on this topic in the last two decades, and that the lower failure rates recently estimated by some researchers might be a consequence of these advances. However, while progress has been achieved there are still a number of issues that need further understanding to better guide research and practice on this issue.

First, it is important to understand whether the rates of failure are context-dependent. The fact that the estimates produced are so different might suggest context-dependence, indicating that implementation should be tailored in accordance to the characteristics of the organisations and/or of their environment.

Second, it is important to understand whether the apparent improvement in the rates of success is in fact a verified tendency and the extent to which each of the possible explanations advanced here have contributed to this improvement (e.g., scientific progress in the fields of strategy implementation and change management, better management education programmes, time since adoption of a strategy and familiarity with it, accumulation of knowledge, particularly from the experience of early adopters and customisation of general strategies). The identification of best practices, resulting from this line of research, might also play an important role in further promoting successful implementation.

Third, whenever strategy implementation initiatives culminate in failure, it is important to understand what the main causes for the failure were in order to identify if there are causes more important and frequent than others.

Finally, there seems to be, in some sectors of the literature reviewed, the view that some ‘types’ of strategic initiatives are easier to implement and succeed than others. While this view might be correct, it is important to bear in mind that it is not uncommon to find different studies comparing the success rates of the same types of strategic initiatives, which derive considerably different estimates, suggesting that factors other than the type of strategy might play an important role in their success or failure.

Overall, while the real rate of strategy implementation failure might be difficult to determine with certainty, in-depth studies on these issues might shed some light on the matter, and help us understand why so many strategy implementation initiatives fail.

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