

Understanding the Industry Environment and Its Implications to Strategy

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The environment is everything that isn't me—Albert Einstein

Immediately and instinctively starting to design a new strategy or identifying changes in an existing one, almost never leads to a successful and elegant solution (May 2016). It is important to start the strategy design process by understanding the environment in which the firm aims at competing from different perspectives. There exist four key perspectives to consider:

- (1) The *customers* and their jobs-to-be-done perspective.
- (2) The *industry* as a whole and its participants perspective.
- (3) The *firm* and its own capabilities perspective.
- (4) The surrounding *environmental constraints* perspective imposed by political, economic, societal, technological, legal, and environmental circumstances.

At this stage it is not necessary to consider individual competitors separately unless they occupy a dominant position. While analyzing and trying to understand these perspectives, it is important to take both a backward looking, lessons learned, and a forward looking, trends based, stance. To do so, following combinations of exploratory observing and confirmatory learning steps, ensures that the focus is put on the most relevant insights. Observing and learning focuses on understanding as a foundation for ideation and creativity. It is not aiming at statistical or theoretical proofs. The main challenge faced is not gaining too little insights but getting lost in the wealth of information available. The goal of understanding the environment is to identify smart data rather than big data. Success depends on avoiding the over-analysis fallacy found in many of the traditional strategy development approaches.

The environmental analysis, part of the foundation layer of the strategy design process, aims at framing the foundation onto which successful strategies can be built. It provides insights to

- steering the observing and designing exploratory, divergent thinking steps of the design thinking methodology,
- avoiding non-value-adding, useless, analysis, and
- providing supporting arguments at the different decision milestones of the strategy design process.

The industry environmental analysis should result in a concise document, or even better an A0 poster, that will accompany the design team throughout the whole strategy development process and serve as

- a continuous reality check, and
- a source for new ideas.

6.1 Current Environment Analysis

The *current environmental analysis* process E focuses on understanding the different dimensions impacting the strategy of the firm as of today. The goal is understanding the present, rather than predicting the future. It takes an outsider perspective to analyzing and describing the current environment. Understanding the current environment is one of the few activities in the strategy design process that can be outsourced to industry experts or consultants without having a negative impact on the overall outcome. Outsourcing may even be beneficial, as it provides a distinct and fresh perspective.

Process E—Current Environment Analysis

- E.1 Understanding customers and their jobs-to-be-done
- E.2 Getting a glimpse on the industry and its state from an outsider perspective
- E.3 Identifying the firm's unique capabilities as perceived and valued by the outside world
- E.4 Recognizing the constraints imposed by the external environment, that is, from a political, economic, societal, technological, legal, and environmental stance

6.1.1 Customers and Their Jobs-to-Be-Done

The goal of understanding customers and their jobs-to-be-done is gaining a high-level and broad understanding of who the customers in the targeted industry are, how they operate, how they define value, and how they differentiate amongst

each other. The term customer is defined in a broad sense, that is, as customers to the target industry, rather than customers to the firm. Customers also include non-customers. The focus is on understanding the present, rather than on extrapolating towards the future.

Five sets of questions and their answers are at the center of the customers and their jobs-to-be-done environmental analysis step of the strategy design process:

- (1) Which are the most important customer segments in the target industry and how large are they? Which are the characteristics defining and differentiating each of the identified customer segments? Who is not yet a customer? Who are the reluctant customers? Who can be considered an evangelist customer?
- (2) What problems are customers in each customer segment trying to solve with the current offerings available? What are the customers' rational and emotional needs? What pains do they feel? What gains are they looking for?
- (3) What key characteristics, like for example, brand, advertising, trade shows, or word of mouth, define the customer relationships with the industry participants?
- (4) How do customers evaluate opportunities before making a buying decision? What key attributes, like features, design, or price, of the offerings influence their buying decision? What emotional aspects influence their decision process?
- (5) How are decisions to buy or not to buy an offering taken? Are these decisions rational, emotional, impulsive, individual, or collective, to name just the main possible characteristics? How long does the buying decision process take and who is involved in what role (end-user, gatekeeper, adviser, decision maker, saboteurs, etc.)?

Rather than identify all possible answers to those questions, the focus should be on the three to five most relevant answers to each question, focusing on covering 80% of the customers. Secondary research, like industry reports and trade show presentations, form the basis of the exploratory phase of the analysis. Interviews with experts are relied upon during the second, the confirmatory phase, of the analysis.

Example To illustrate a possible outcome of the customers and their jobs-to-be-done analysis, consider the mobile phone industry. Broadly speaking, the three most important customer segments that can be identified are

- *technologists*, that is, technology affine private individuals, whose needs for data services and being online all the time are significantly more important than for voice features,
- *traditionalists*, that is, mainly adult private customers who value the placing phone calls features, over using data-related apps, and
- *corporates*, that is corporate employees who rely on mobile phones to support their business activities.

Table 6.1 Example of a backward-looking environmental customers and jobs-to-be-done analysis of the mobile phone industry

(1)	Customer segment	Technologists	Traditionalists	Corporates
(2)	Jobs-to-be-done, needs, felt pains, sought-after gains	<ul style="list-style-type: none"> - Never miss a news - Interact through group messaging - Multimedia consumption (games, music, videos, etc.) 	<ul style="list-style-type: none"> - Place phone calls - Be reachable while on the move - Be kept carefree 	<ul style="list-style-type: none"> - Contact customers - Access company data and tools - Be reachable anytime
(3)	Relationship	<ul style="list-style-type: none"> - Brand - Design - Features 	<ul style="list-style-type: none"> - Service provider - Word of mouth - Advice and purchase in store 	<ul style="list-style-type: none"> - Buying through procurement - Best price based, given a set of features
(4)	Evaluation	<ul style="list-style-type: none"> - Friends and feedback from peers - On-line reviews 	<ul style="list-style-type: none"> - Experience with brand - Look and feel trial at point of sale - Pre-sales support in store 	<ul style="list-style-type: none"> - Request for proposal based - Required and preferred features list
(5)	Decision	<ul style="list-style-type: none"> - Peer group pressure driven - Design and features play a key role - Looking for a perceived deal 	<ul style="list-style-type: none"> - Traditional in-store sales based 	<ul style="list-style-type: none"> - Price versus features trade-off

Table 6.1 summarizes a possible outcome of the customers and jobs-to-be-done analysis.

It is important to note that the current environmental analysis does not formulate an opinion about where or how to compete in the considered industry. Its goal is defining an anchoring point onto which observations and design decisions in upcoming steps of the strategy design process can be based. It supports answering key strategic questions about how to be different from and/or better than competitors. It also helps answering the important question for which customer segments and jobs-to-be-done not to compete.

After having identified customer segments in the targeted industry, a similar analysis is performed on non-customer segments, that is, those currently not served by the industry, independent of the reason. The goal is getting a sound understanding why some individuals or corporations are not customers of the industry. The focus is on the industry and not on the individual firm. Three questions and

their answers are at the center of the non-customer part of the customers and jobs-to-be-done analysis:

- (1) Which are the most important non-customers of the industry? Which customers are very reluctant? Which non-customers have been customers and have turned their back on the industry's value proposition?
- (2) Why are the jobs-to-be-done addressed by the industry out of scope or not relevant to the identified non-customers? What traits turned former customers into non-customers?
- (3) What would have to change for non-customers to become customers of the industry?

It is important to answer the questions from today's standpoint and take an objective stance. Speculations must be avoided.

Example To better understand the analysis, consider again the mobile phone industry. One major non-customer segment are retirees spending most of their time at home. They have a well-defined daily routine and are often technology averse. Learning how to use a mobile phone is for them not worth the effort, as they would use it only rarely. A main reason for those non-customers to become mobile phone customers would be the abolishment of plain old telephones, that is, the replacement of traditional fix lines with modern voice-over-IP solutions. In this situation, a mobile phone may become a viable alternative to a voice-over-IP phone. Another non-customer segment are employees of companies that spend 100% of their time at the office and use voice-over-IP software, like Skype, to place calls directly from their computer.

6.1.2 Outsider Perspective on the Industry

After having reviewed the customer segments and their jobs-to-be-done, it is important to understand the industry as a whole, as well as the characteristics of its main participants. As with understanding the environment from a customer perspective, it is important to focus on the big picture, rather than the specificities of individual potential competitors, which may be considered at a later stage.

The industry perspective analysis starts by identifying what stage the industry participants are currently in, that is,

- *introduction stage*—low sales, high costs due to high fixed introduction costs, limited to no profits,
- *growth stage*—increasing sales, decreasing costs due to economies of scale materializing, limited profitability,
- *mature stage*—stagnating sales, focus on cost controlling, cash-cow type profitability, or
- *declining stage*—declining sales, increasing impact of fixed costs, decreasing profitability.

The industry stage analysis aims at supporting at a later stage ideating around how the industry life cycle may be exploited by the firm's strategy.

Once the overall maturity of the industry participants has been identified, the industry analysis focuses on three non customer-related dimensions, by answering the following three questions:

- (1) What *value propositions* and associated *products and services* offered define the industry?
- (2) Which *core capabilities*, in terms of activities, assets, labor, and skills, are at the center of delivering the identified value propositions?
- (3) Through what *revenue generating mechanisms* is the viability of the offerings ensured?

These three questions are tightly related to the desirability, feasibility, and viability questions that are at the core of any strategy (Brown 2009).

In addition to these business model related environmental questions, a fourth question needs to be addressed:

- (4) How are industry participants *differentiating themselves from each other* and what makes the different value propositions offered unique?

Although it would be possible to conduct a full-fledged five-forces analysis using Porter's framework (Porter 1979) to answer question four, the added value at this stage of the strategy design process would be limited.

Rather than answer the four industry environment analysis questions in an abstract setting, the strategy design process focuses on those specificities that matter most. Answers should relate to the industry participants with whom the firm potentially competes, that is,

- the three largest industry participants, in terms of market share,
- the three industry participants that exhibit the highest growth rate over the most recent business cycle, usually three to five years, and
- the three industry participants that show the most disruptive innovation capabilities.

If the industry is very fragmented, it may be necessary to consider more than three industry participants in each segment.

Once key players have been identified, the four questions are answered, by focusing for each question on the most prominent answers. Out of all the answers, considering commonalities, the three to six most prominent characteristics are filtered out. This leads to three documented lightweight business models, excluding customers, one per segment of industry participants, combined with competition characteristics.

6.1.3 The Firm and Its Capabilities

The goal of the firm's capabilities analysis is getting an objective high-level description of how the firm operates, what are its key traits, along the four dimensions of the lightweight business model. The analysis is not to be confused with the traditionally used SWOT analysis¹ (Barney 1991). Subjective interpretation is misguided. The capabilities analysis is fact-based backward looking, rather than speculative forward looking.

If the firm in focus is a start-up that has yet to design its first complete strategy, most of the firm's capability analysis can be ignored. In addition, firms that aim at re-inventing themselves, moving their business into a new core area (Zook 2004) or following a blue ocean strategy approach (Kim and Mauborgne 2005), gain only limited insights from a firm's capabilities analysis and thus can reduce it to minimum or ignore it altogether. For each of the following four questions, aligned with the four dimensions of the lightweight business model, the three to six predominant answers should be identified:

- (1) *Customers*. Who are the most important customer segments in terms of revenue and profitability? A 2×2 matrix, representing the revenues of the x -axis and profit on the y -axis, supports structuring the data. The focus is on customer segments, that is, customer groups that have similar needs which are satisfied by similar offerings, rather than individual customers.
- (2) *Offerings*. What are the most important offerings produced for the customer segments identified, and what is the value created for customers? A 2×2 matrix, using on the x -axis the number of units produced and, on the y -axis, its strategic relevance to the firm, allows structuring the information.
- (3) *Capabilities*. What unique capabilities, in terms of activities and processes, as well as skills and knowledge, does the firm have? The focus should be on the capabilities that are unique and critical to producing the most important offerings identified in the previous question? It is also relevant to identify capabilities that the firm possesses which are not fully exploited or not used at all. This may be un- or under-used assets, patents, unique knowledge, capital, or human resources.
- (4) *Financials*. How is the firm generating profits? The focus is on the cash-flow generating mechanisms, rather than on specific numbers.

In addition to understanding the capabilities of the firm, it is also important to identify negative aspects. This means, identifying what the firm explicitly does not characterize and understand the reasons behind the negative insights. The focus is on explicit decisions rather than random outcomes. The associated questions to answer, focusing on the firm and not the industry, are:

¹SWOT analysis is an acronym for a strengths, weaknesses, opportunities, and threats analysis and is a structured planning method that evaluates those four elements of an organization.

- (1) *Non-customers*. What customer segments is the firm explicitly not serving and why? For example, RIM does not target teenage customers using their mobile phone to play games and use social media tools. RIM defines itself as a business-to-business firm.
- (2) *Left-out offerings*. Which offerings that have been identified in the industry environment analysis, is the firm not offering and why? Although less obvious, most private banks do not offer their clients tax advice. The reasons are that third-party certified tax experts are better at providing independent tax advice and that private banks do not want to onboard the legal risk associated with tax advice.
- (3) *Missing capabilities*. What capabilities, skills, and resources, does the firm explicitly not possess? For, example, a generic drugs pharmaceutical company explicitly renounces on expensive new drug development research and development capabilities.

As for other analysis, the focus should be on the three to five most relevant answers. The classical Pareto principle² or 80-20 rule applies.

To successfully perform a firm's capabilities analysis, two traits need to be considered. First, senior managers and decision makers covering all areas of the firm must be involved. This means, individuals with knowledge in marketing, sales, customer relationship management, product development and management, production, operations, support services, finance, human resources, as well as legal and compliance, need to provide input data. Second, to avoid a biased outcome, the analysis process should be led by an external facilitator. Rather than perform individual analyses, covering the different elements of the firm's value chain, best results are achieved by running three workshop sessions structured as follows:

- (1) A first exploratory session is run with a diverse team of representatives from all areas of the value chain to identify possible answers to the four positive and three negative questions. A holistic view of the firm, considering the different areas of expertise, is taken.
- (2) A second confirmatory session aims at identifying and selecting the most critical answers. To allow reflection, it is best practice to separate the exploratory and the confirmatory workshops by one to two weeks. Rather than rely on abstract analytics to prioritize the gained insights, using support of a moderator offers best results.
- (3) Although not strictly necessary, the outcomes of the confirmatory session should be reviewed and validated in a third session with the firm's board of directors, executive or management teams. In addition to getting validation feedback, this third session supports buy-in through fostering a shared understanding.

²The Pareto principle (also known as the 80/20 rule) states that, roughly 80% of the effects come from 20% of the causes.

6.1.4 Environmental Constraints

Most strategy practitioners consider the fourth perspective, the surrounding environmental constraints analysis as the least rewarding one. It extracts constraints that limit the strategy design freedom. And, who likes to be constrained. But, understanding constraints and their *raison d'être* can lead to new opportunities and differentiators.

There exist different frameworks for scanning the external environment for constraints. One of the most popular approaches is the PESTLE framework³ (Aguilar 1967). Although designed to be a part of traditional analytical strategy development processes, understanding its six factors is relevant in any strategy design process.

6.1.4.1 Political

The political factor supports understanding the relationship between the government, the legislator, and the industry. Key insights are free trade agreements, market access, taxes, tariffs, and labor laws, to state the most important ones. Understanding the stability of the government, as well as its democratic structures, especially the judiciary one, are important.

Example The taxi disrupting firm Uber faced challenges with its business model in numerous jurisdictions because it failed to understand the difference between independent contractors and employees from a tax and social security contributions perspective (assuming this was not an intentional business model design decision). This led Uber to being fined and having to pay arrears that limited the profitability of the strategy being a technology ecosystem platform for drivers, rather than a taxi or transportation company.

6.1.4.2 Economic

Rather than focus on an individual or a specific industry, the economic factor identifies key parameters common to all market participants. The most important parameters are interest rates, inflation expectations, real economic growth, wage growth, consumer confidence, unemployment rates, and foreign exchange rates. They determine, amongst others, the cost of capital, and as such, the viability of capital intense strategies. The environmental constraints analysis focuses on the dependencies between the industry as a whole and the firm in particular and key economic variables. If cross-border activities are relevant, for example, because of imported raw materials, the relative strengths of involved industries, in terms of purchasing power, need to be considered.

Example When developing a business model for a low-cost airline, one of the key economic challenges to be identified and addressed is the variability of kerosene prices. Poorly understanding and managing the economic driving forces behind oil prices may lead to a non-sustainable strategy.

³The PESTLE analysis (political, economic, socio-cultural, technological, legal, and ecological) is a framework based on macro-environmental factors used for scanning the environment.

6.1.4.3 Societal

The societal or socio-cultural factor identifies relationships between the society as a whole as well as its members and the value propositions offered. For example, the industry value proposition may require a certain degree of education or a specific mindset, like safety awareness, to be considered. Religious and cultural aspects that play a role should also be identified during the societal environmental analysis.

Example A typical observation related to the societal environment is the aging population of western societies. But more important, in terms of strategy insights, is the degree of unwillingness of young people to finance the retirements of the older generation through current pay-as-you-go systems. Another societal challenge observable is the increasing fear towards globalization and the perceived loss of control.

Although many societal trends have a negative co-notation, it is the goal of the strategy designers to re-interpret them in a neutral context rather than look at them as threats.

6.1.4.4 Technological

Technology plays a key role in certain industries to deliver upon the promised value proposition. For example, lithium battery technology is a key technology in the electrical car industry. During the technological environmental analysis, the focus should be set of those technologies that support the industry, rather than define it. Recent innovations and their impact on quality, risk, and costs, should be identified. The technological analysis should include missing and immature technologies. When identifying the technology environment, it is key to primarily focus on existing technologies that may or may not yet have a business application. At this stage, the focus should be on the technology itself rather than its application.

Example Typical technologies stemming from the IT side are the blockchain general ledger, smart contracts, cloud computing, internet-of-things, and robots. The technological analysis should go beyond pure software and hardware technologies. It should also include, depending on the target industry identified in the strategy brief, technologies like gene technology or energy transformation, transportation, and storage technologies.

The challenge with the technological environment analysis, as is the case with the other analysis, is getting the breadth and depth of the analysis right. Strategy designers must learn from experience how to most effectively deploy their analysis resources. Often, less is more.

6.1.4.5 Legal

The legal factor identifies those laws and regulations that impact what value proposition, to whom, and how it can be offered, how it can be produced, and how it can be priced. During the legal environmental analysis, all four dimensions of the lightweight business model need to be covered. Experience has shown that the legal analysis is the largest and most critical part of the environmental analysis. Key dimensions are safety, health, and industry-specific regulations, as well as customer protection laws. Most, if not all industries, are affected in one way or the other. In

contrast with common belief, Murray (Cross 2011) regards regulations as a fundamental necessity to innovation.

Example Strategists focusing on the financial services industry must understand the MiFID regulations and their implications on the customer segments served, the offered value proposition, the handling of the customer relationship, as well as the chosen customer delivery approach. Although, for example, EU regulations allow funds registered in one country to be sold in all other EU countries using the so-called passporting rule, some jurisdictions provide advantageous options, for example with respect to tax treatment, that others do not.

Example Another example from the legal environment category is the adherence to standards, like sanitary standards when professionally renting rooms, as does Airbnb.

Example A typical legal challenge that many internet-based firms face is correctly accounting for VAT and other sales taxes. A sound understanding may allow finding a cost- and resource-efficient set-up.

6.1.4.6 Ecological

The last but not least important environmental topic is the ecological topic. Key aspects of the ecological analysis are identifying factors, like CO₂ emissions, available sunlight, or days of rain, that have a material impact on the success of the value proposition offered by the industry. Ecology goes way beyond the Paris climate accord.

Example An outdoor tourist attraction company needs to understand the weather in the region it operates to tailor its value proposition.

Example A tire manufacturer must understand how temperatures evolve over time and identify the implications on the tire treads.

Collins (2010) has introduced a graphical framework, called the PESTLE-WebTM, illustrating not only the findings from the environmental analysis, but also exhibiting the relationships amongst them. This framework can easily be combined with the lightweight business model as used during the jobs-to-be-done and industry analysis.

Example Figure 6.1 illustrates a subset of a possible environmental analysis of the retail lending industry, a segment of the financial services industry.

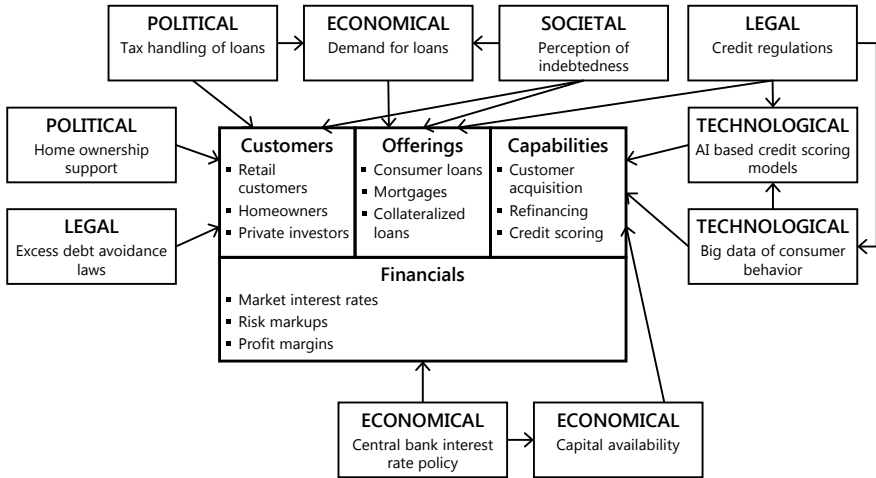


Fig. 6.1 Environmental analysis of the retail lending industry based on the PESTLEWeb™ framework

6.2 Industry Trends

Up to now, the focus of the environmental analysis has been on understanding the current industry environment from four different perspectives. The analysis would not be complete without looking into the future and identifying key industry trends. Whereas the current environment analysis is objective, the industry trends review introduces a subjective bias. This is not per se good or bad. To avoid unproductive hypothesis testing of identified industry trends, the trends should only be considered, if they may be related to the firm’s lightweight business model and thus being relevant during the designing process of the strategy design process, both at the foundation as well as at the business model layer. Identified trends may be complementary, or event inconsistent with each other, as they are subjective forecasts of the future.

The industry trends analysis of the strategy design process follows a similar structure as the environmental analysis does. It focuses on four complementary steps, targeting customers, the industry, technologies, and the external environment.

Process T—Industry Trends Analysis

- T.1 Identifying changes in customer segments and recognizing unmet needs, both rational and emotional ones, new pains, and new sought-after gains
- T.2 Determining changes in the industry structure, e.g., customers, competitors, suppliers, substitutes, regulators, influences, or saboteurs
- T.3 Understanding trends in innovation and technology that may be relevant to the targeted industry and customers
- T.4 Grasping potential impacts on industries, the industry, competition, and customer behavior

6.2.1 Customers

Key questions to be addressed during the customer trends analysis are:

- (1) How are customer needs expected to evolve and change in the future?
- (2) What will be the impact of demographics, education, environmental, societal, or political changes on customers and their jobs-to-be-done?
- (3) What are the driving forces that will make the industry change based on customer expectations?

The goal of the forecasts is extrapolating the customer journey of today into the future. The environmental analysis may serve as a starting point.

6.2.2 Industry Structure

During the industry structure analysis, changes in the industry structure are identified:

- (1) Will the industry be growing or shrinking in the future? Towards what maturity stage, that is, introductory stage, growth stage, consolidating stage, or declining stage will the industry evolve? What are the reasons behind the expected changes? How will the *J*-curve evolve (Bradley et al. 2011)?
- (2) How will the core value propositions that are currently offered change over time? Is the industry becoming broader or narrower?
- (3) How is price sensitivity expected to change? Is the industry moving towards commoditization?

6.2.3 Innovation and Technology

Although innovation is often used as a buzzword, the innovation trends analysis aims at identifying how the maturity of the industry is expected to evolve:

- (1) What are key innovations in recent years that may have a significant impact on the industry in the future? What trends are academic researchers currently following-up upon?
- (2) How innovative, in terms of quality and quantity of innovations, has the industry been? Were innovations rather incremental or more of a disruptive nature?
- (3) What impacts is the industry expecting from generic technology trends, like artificial intelligence, robotics, or internet-of-things?

6.2.4 Externalities

Key trends with respect to externalities can be identified by answering the following questions:

- (1) How is the industry impacted by globalization?
- (2) Which regulatory changes are expected in the future?
- (3) What changes in the society, like aging population, that are expected, will have a material impact on the industry?
- (4) How will the value chain of the industry change over time and which deconstructing trends can be identified?
- (5) What political trends and policies are expected to change the industry?

References

- Aguilar, F. J. (1967). *Scanning the business environment*. New York, NY: The Macmillan Company.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Bradley, C., Hirt, M., & Smit, S. (2011). Have you tested your strategy lately? *McKinsey Quarterly*.
- Brown, T. (2009). *Change by design: How design thinking transforms organizations and inspires innovation*. New York, NY: HarperCollins Publishers.
- Collins, R. J. (2010). *Is there a better way to analyse the business environment*. Masters Thesis, Reading, United Kingdom: University of Reading. http://users.ox.ac.uk/~kell0956/docs/pestleweb_thesis.pdf.
- Cross, N. (2011). *Design thinking*. London, United Kingdom: Bloomsbury Academy.
- Kim, W. C., & Mauborgne, R. (2005). *Blue ocean strategy: How to create uncontested market space and make the competition irrelevant*. Boston, MA: Harvard Business School Press.
- May, M. E. (2016). *Winning the brain game*. New York, NY: McGraw Hill.
- Porter, M. E. (1979). How competitive forces shape strategy. *Harvard Business Review*, 57(2), 137–145.
- Zook, C. (2004). *Beyond the core: Expand your market without abandoning your roots*. Boston, MA: Harvard Business Review Press.