

A Conceptual Framework for Innovation and New Business Opportunities in the Post-Pandemic Period

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Abstract

Many companies have completed their initial COVID-19 crisis management and try to achieve new business and innovation opportunities in the post-pandemic period. To systematically identify new opportunities under these challenging conditions, a conceptual framework is developed with two major dimensions, i.e. intelligence-based transformation and value-based recalibration. The first dimension constitutes the next step in digitalization concerning a stronger use of artificial intelligence (AI). The second dimension underscores that firms additionally need to recalibrate their businesses in alignment with shifting customer values and new experience-based customer expectations. As such, this article contributes to research into innovation, strategic planning, managing AI, and entrepreneurial marketing.

Keywords: artificial intelligence, coronavirus crisis, COVID-19 pandemic, customer experience, digital transformation, growth.

Introduction

The COVID-19 pandemic has resulted in a worldwide economic crisis (Carlsson-Szlezak, Reeves, and Swartz 2020). Initially, executives and managers in many companies could only focus on immediate crisis management in an attempt to optimize their firms' business activities on a daily basis. With the lockdown of the economy in many countries, the sales activities were often dramatically affected, leading to massive losses of revenues, and it may often take months and years to recover these revenue decreases (Reeves, Lang, and Carlsson-Szlezak 2020). Beyond these revenue effects, the consequences on the supply chains in many industries have been extreme. Many companies have experienced the vulnerability of their supply chains, and they will pay growing attention to designing more resilient supply chains when they have coped with the immediate effects of the economic downturn (Ramírez, McGinley, and Churchhouse 2020; Terblanche 2009).

There are also exceptions. Some industries, such as the food sector, have not been affected a lot, or they have even benefited from the pandemic. In contrast, some other sectors, such as airlines and event management, have been hit particularly hard by the economic downturn. At the same time, some industries, such as digital communication, have enjoyed a massive boost of their businesses with companies and consumers increasingly switching to videoconferencing and other tools (Wieringa 2020). Despite some winners, however, the average effect

has been very negative, and many firms' executives had a hard time coping with the crisis and ensuring the survival and financial viability of their companies (Wunker 2020). The government programs in many countries alleviated some of the problems, but a lot of uncertainty will remain in the foreseeable future (Carlsson-Szlezak, Reeves, and Swartz 2020).

Besides this uncertainty, the initial phase of panic and activism is usually over, and most companies have entered a phase of strategic planning. Now, they need to find ways to succeed in the medium to long run beyond the crisis management plans for the next months (Reeves, Lang, and Carlsson-Szlezak 2020). In this regard, executives and managers realize that there are substantial opportunities in the post-pandemic period beyond the large number of threats. In particular, there may be new opportunities for growth in order to regain the revenue losses and to start another cycle of growing a firm's revenues and profits (Machtiger 2020). To realize some of these opportunities, many companies will have to focus on transformation activities in order to implement changes that will enable them to actually seize these new opportunities (Blair, Khan, and Iftikhar 2020; Bower 1974). The type of opportunities strongly depends on the specific industry. Nonetheless, there are some opportunities that are shared among multiple sectors.

Above all, there are many opportunities that are related to the digitalization of industries and business models (Wunker 2020). In this regard, the COVID-19 pandemic has highlighted the need for continuing or even speeding up the digitalization of business processes. Those companies that already had invested substantially in the digital transformation of their business activities often had a significant competitive advantage during the economic downturn and the beginning of the subsequent recovery. In contrast, those companies that had relatively neglected their digital transformation were particularly affected by the crisis. An illustrative example in this regard is the possibility to compensate at least partly for losses in traditional retail stores by increasing online sales during the lockdown phase (Machtiger 2020). However, the benefits of digitalization go substantially beyond online shops. In particular, they also involve a growing relevance of artificial intelligence (AI) for companies in many different industries. Nearly all companies as well as government bodies and further organizations have experienced the need for further enhancing their digitalization and AI programs over the next years (Wittbold et al. 2020).

However, an intelligence-based view of firm performance (Lichtenthaler 2019) suggests that an exclusive focus on digital transformation and AI would often be insufficient for thriving in the post-pandemic period (Ramamurti 2020). While people in many different countries are now more open towards digital solutions, they also enjoy more traditional experiences beyond the digital context. The particular type of these experiences depends more on the specific setting and industry. For the tourism industry, for example, there may be a growing interest in international travel once it is fully permitted and safe again. For many

manufacturing industries, a growing interest in personal customer services is expected in the post-COVID-19 period. These additional opportunities based on particular experiences can be spotted in many different sectors, and they are not always completely detached from digitalization and AI opportunities. For example, a more personalized service for a manufacturing firm's customers may be achieved by a smart bundling of digital service tools with personal, non-digital service experiences.

Therefore, companies will need to go beyond digitalization initiatives to achieve a long-term competitive advantage. Some additional initiatives are related to the digital arena, whereas some other opportunities are rather independent from digitalization and AI (Evan and Rivera 2020). Nonetheless, executives and managers need to systematically address these growth opportunities during the economic recovery after the coronavirus crisis. Therefore, this article uses the intelligence-based view of firm performance (Lichtenthaler 2019) as a theoretical lens to develop a conceptual framework that may provide a basis for exploring and exploiting opportunities for new business development in a structured way based on a detailed understanding of the digital and non-digital dimensions of change and transformation in the post-pandemic era. In particular, this article suggests two core dimensions for mapping new business opportunities, i.e. intelligence-based transformation and value-based recalibration. Along these dimensions, new opportunities for growth may be prioritized.

As such, this conceptual article offers several contributions. First, this article provides new insights into managing AI because it illustrates the need for combining AI solutions with additional performance drivers in order to achieve growth and competitive advantage from AI applications (Iansiti and Lakhani 2020). Second, the conceptual framework contributes to prior research about innovation and strategic planning because it enables a systematic approach to incorporating new inputs for innovating and strategizing in the post-coronavirus economy (Reeves, Lang, and Carlsson-Szlezak 2020; Mills, Weinstein, and Favato 2006; Brazdauskaite 2020). Third, this conceptual paper contributes to research into entrepreneurial marketing by highlighting the new growth opportunities at the intersection of digital transformation with industry-specific customer experiences (Warner and Wäger 2019; Lecomte 2019; Hänninen et al. 2020). These opportunities are equally relevant to founders and startups as well as innovators and intrapreneurs in established organizations. The following sections focus on the conceptual framework before discussing its implications and finally providing a conclusion and outlook.

Conceptual Framework

Even in a severe crisis like the economic downturn that has resulted from the COVID-19 pandemic, there are major opportunities. Once the initial emergency

mode of immediate crisis management is over, executives and managers may go beyond optimizing their existing businesses in order to identify opportunities for new business development and growth (Reeves, Lang, and Carlsson-Szlezak 2020; Brondum 2019). In fact, the benefits from such business development activities in a crisis may be particularly high even if they only materialize in the medium to long run. Many companies tend to cut their research and development expenditures during an economic crisis (Archibugi, Filippetti, and Frenz 2013). On the contrary, those companies that manage to continue their research and development activities and to explore new growth opportunities may strongly profit from these activities. After the financial crisis in 2008/09, McKinsey conducted a survey of more than 500 executives concerning the impact of innovation with the following result: *“[T]he most optimistic picture emerges among companies that get the greatest benefit from innovation. These high performers were much less likely to scale back activity during the height of the downturn; indeed, they appear to have used it as an opportunity to maintain – or even increase – their long-term superiority just as global economic prospects are brightening”* (Barrett, Musso, and Padhi 2010).

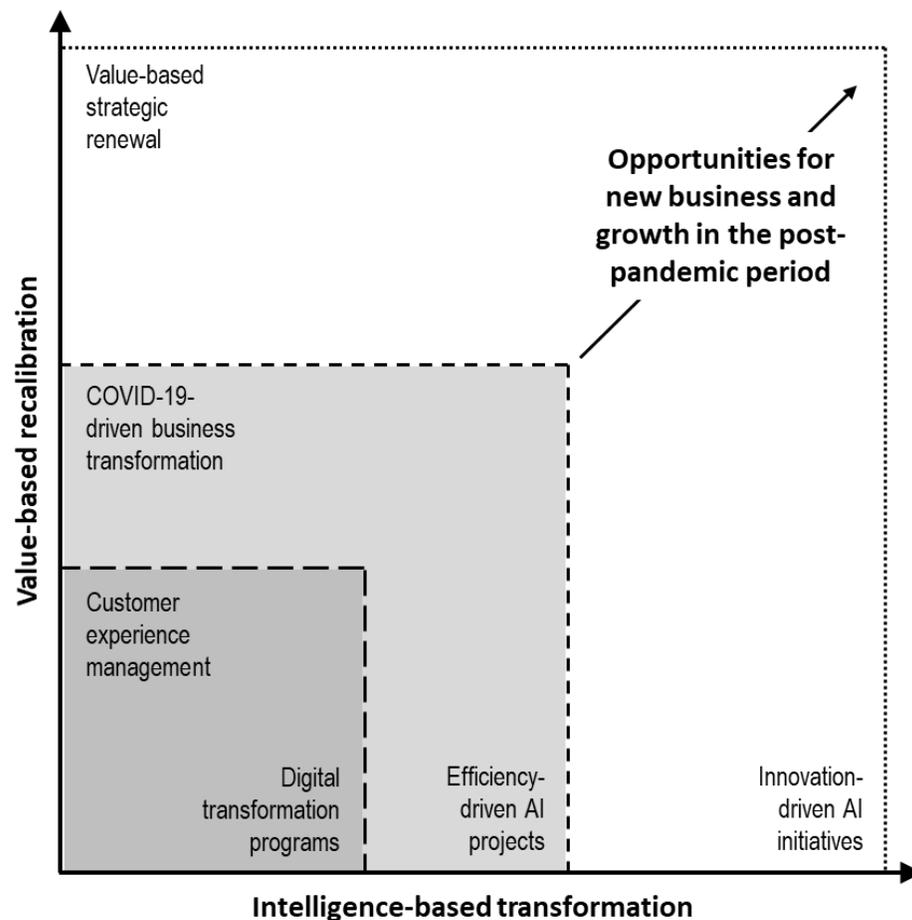


Figure 1: Conceptual Framework

Thus, companies may substantially profit from exploring and exploiting new opportunities during an economic crisis (Paunov 2012). However, managers often have difficulties to identify these opportunities in a systematic way (Evan and Rivera 2020). Therefore, a conceptual framework (Figure 1) is developed to map major possible avenues for developing new business and achieving growth beyond the crisis management and continuous optimization of the ongoing business in the aftermath of the COVID-19 crisis. Specifically, the framework builds on the intelligence-based view of firm performance (Lichtenthaler 2019), and it indicates two key dimensions for identifying new opportunities. While the particular opportunity is industry- and firm-specific, there are two major dimensions that are shared in similar ways among many companies from different sectors even if the specific trends are industry-related. The first dimension is termed intelligence-based transformation, and it describes the present digitalization initiatives with an evolution towards a strong use of AI in companies (Iansiti and Lakhani 2020; Davenport 2018; Berman 2012; Nambisan, Wright, and Feldman 2019). The second dimension is termed value-based recalibration, and it captures the non-digital transformation of business activities, which has often been accelerated by the COVID-19 crisis (Lindstrom 2020; Pfitzer, Bockstette, and Stamp 2013; Lockwood 2009; Novak, Hoffman, and Yung 2000; Lichtenthaler 2018). In the following, these two dimensions are discussed in more detail.

Intelligence-based Transformation

The first dimension of the framework refers to intelligence-based transformation. As such, it describes the evolution of companies towards a high relevance of digital business models and AI in the future (Agrawal, Gans, and Goldfarb 2018; Pinto-dos-Santos et al. 2018; Dellermann, Fliaster, and Kolloch 2017; Remane et al. 2017). This evolution has typically started more than ten years ago, when the trends towards digitalization and a stronger use of AI began in selected firms (Lichtenthaler 2020). At the end of this transformation processes, companies will rely on many intelligent automation tools, which allow for automating many jobs that could not be automated in the past (Winick 2018). To some degree, this full automation may also result in a very limited involvement of employees in many business operations (Daugherty and Wilson 2018). However, the intelligence-based view underscores that this transformation will have even more important effects than this next level of automation (Lichtenthaler 2019; Iansiti and Lakhani 2014; Nylén and Holmström 2015). In particular, a growing use of AI enables the development of integrated intelligence architectures in companies so that human and artificial intelligence jointly provide the basis for competitive advantage (Lichtenthaler 2020). For instance, Autodesk offers the AI-based solution Dreamcatcher to facilitate the elaboration of promising designs in the design process by considering certain

characteristics of a potential new product as given (Wilson and Daugherty 2018).

In this regard, the interplay of human and artificial intelligence may involve more fundamental transformations in companies than the substitution of human jobs through AI (Daugherty and Wilson 2018). At the end of this intelligence-based transformation, firms' business processes and decision-making processes may be quite different from today, with a strong role of AI and digital business models as the 'new normal'. This growing digitalization and use of AI has been speeded up substantially by the COVID-19 pandemic (Shah and Shah 2020). Firms across many different sectors realize that there is no alternative to embracing these new opportunities and challenges in the digital and intelligence-based arena. Those companies that were lacking behind their competitors in terms of digital transformation had more severe problems to cope with the revenue decreases in the coronavirus crisis than those companies with a superior digital business, including online shops and virtual customer service (Machtiger 2020). These tendencies could be observed in diverse industries, including retail and electronics (Evan and Rivera 2020; Carlsson-Szlezak, Reeves, and Swartz 2020). Rather than being industry-specific, the first dimension of the framework is spanning multiple sectors because an accelerating intelligence-based transformation is expected for nearly all industries in the aftermath of the COVID-19 crisis.

As such, the intelligence-based transformation constitutes the next step beyond the digital transformation programs that many companies have established in recent years (Lichtenthaler 2020). Usually, these programs have focused on responding to the growing relevance of data for a company's business processes and business models by enhancing its internal data management (Krimpmann and Stühmeier 2017; Richter et al. 2017; Bodenbender, Kurzrock, and Müller 2019). Thus, the digital transformation programs have often focused on product-related and service-related solutions in addition to a firm's well-established information technology solutions (Duan, Edwards, and Dwivedi 2019). As a result of these programs, firms now often accumulate large amounts of data, but they are often unable to fully utilize this additional data. Consequently, the results of digital transformation programs often have not met the expectations of many managers and executives (Andriole 2017; Hamilton and Sodeman 2020). The growing need for internal virtual collaboration as well as online sales and virtual customer service during the COVID-19 crisis has underscored the urgency of improving and extending the data management and digital transformation initiatives in many firms.

In response to this wake-up call, many companies currently revise and extend their digital transformation programs. In this regard, they often put particular emphasis on AI and analytics in order to leverage the existing data more comprehensively (Finlay 2017). Many companies had already started extensive AI projects before the COVID-19 pandemic, and they often redirect, intensify, and speed up these projects now. In contrast, many other companies, especially

small and medium-sized enterprises had only considered AI as a minor topic before the coronavirus crisis. For these firms, the pandemic really was a wake-up call, and AI as well as digital business models are now also on top of their strategic agendas. In this regard, many companies focus on efficiency-driven AI projects. Thus, they attempt to optimize their ongoing business processes, for example by using AI solutions to replace some human work with the aim of achieving efficiency gains (Winick 2018). While this efficiency focus of AI activities is an important strategic move, intelligence-based transformation goes beyond this optimization-related implementation of a few AI solutions.

In particular, the intelligence-based transformation of companies enables new business models, which exceed the efficiency focus of many firms' current AI projects and initiatives (Daugherty and Wilson 2018; Babic et al. 2020; Lichtenthaler 2021). These innovation-driven AI initiatives may open up novel opportunities for business development and growth. Above all, these opportunities may derive from integrated intelligence rather than an isolated application of specific AI solutions. Based on an integrated intelligence architecture, firms combine human and artificial intelligence in a targeted way (Lichtenthaler 2020). On this basis, they may go beyond replacing human jobs in order to leverage the interplay of different intelligences for arriving at completely novel concepts, products, and services (Wilson and Daugherty 2018). Up to now, a minority of the companies that use AI actually leverage these opportunities for innovation and new business models. These firms, such as Amazon, may be considered as the real pioneers in profiting from AI because they attempt to leverage the entire strategy space that opens up in the context of the intelligence-based transformation of business activities across many sectors (Lichtenthaler 2020).

Value-based Recalibration

The second dimension of the framework refers to value-based recalibration. As such, it describes the non-digital transformation of business activities. These transformation processes have often started several years before the recent economic crisis, but many of these change processes have been accelerated by the COVID-19 pandemic (Choudhury 2020; Buttlerfield 2020; Rigby, Elk, and Berez 2020; Wang, Chen, and Chang 2019; Allahar 2019; Hertel and Wicmandy 2020). In particular, these recalibration processes indicate an analog transformation, which complements the digital transformation processes that have been extensively discussed in recent years. Besides the increasing importance of digital business activities, analog experiences in a non-digital context will regain high relevance (Verhoef et al. 2009; Machtiger 2020; Siemon, Becker, and Robra-Bissantz 2018). This transformation may be considered as the renaissance of more traditional drivers of business performance, which sometimes had been neglected in recent years. At the core of these trends is a

growing emphasis on values and customer experiences, which are equally important in B2B and B2C markets (Machtiger 2020; Lewrick, Link, and Leifer 2018).

In comparison with the first dimension of intelligence-based transformation, this second dimension of the framework is more industry-specific. For example, the importance of social communities in terms of personally meeting other people is expected to further grow in the aftermath of the coronavirus crisis. This trend will likely affect the business-related and leisure-related interactions with other people. However, this does not mean that videoconferencing, for example, will not continue to replace personal meetings and business travel at least to some degree (Wunker 2020; Wieringa 2020). In a similar vein, remote work in the home office will continue to be more common in the future than before the COVID-19 pandemic. When they occur, however, personal interactions and experiences will have a higher relevance. Of course, the value-based recalibration goes far beyond a high relevance of communities. Many specific trends are particular to each sector, and they include popup stores in the retail sector as well as a higher attention to local and seasonal groceries in the food industry (Machtiger 2020; Wieringa 2020). What many specific trends in various industries have in common, however, is their focus on values as a new aspect in traditional non-digital business environments.

As such, value-based recalibration constitutes the next step beyond a proficient customer experience management that many companies have implemented in recent years (Wunker 2020; Verhoef et al. 2009). Beyond a systematic understanding of the multiple digital touchpoints along the customer journey, particular emphasis is placed on non-digital interactions – and on the targeted combination of these non-digital experiences with the digital customer journey. In the music industry, for example, live concerts constitute the ultimate music experience. In a similar vein, executives and managers in all companies may go beyond their present customer experience management to consider further relevant values in the post-pandemic period (Wunker 2020). Besides social interaction, the rise of environmental concerns (Yaari, Blit-Cohen, and Savaya 2020; Newell, Manaf, and Marzuki 2019), which has been highlighted by the ‘Fridays for future’ movement, is expected to regain further importance when consumers and companies will have coped with the coronavirus crisis. As such, the growing importance of sustainability illustrates the shifting emphasis on particular values at the expense of a more traditional business logic. In this respect, the triple bottom line of financial, social, and environmental success may be addressed in a more balanced way by many companies (Elkington 2018). On this basis, the firms will often overcome a quite exclusive focus on financial performance, which nonetheless remains critical.

In this regard, the business transformations that have occurred in response to the COVID-19 pandemic only constitute a starting point for further evolutions in the years to come (Jacobides and Reeves 2020; Shih 2020). Besides

strengthening the online business, for example, many retailers have redesigned non-digital customer interactions in order to be able to offer personal customer service even despite the pandemic (Wunker 2020). In 2020, Google announced the acquisition of the Irish startup Pointy, which develops hardware and software to enable physical retailers who lack an online shop for their in-store products to market their goods online with very limited extra effort (Lunden 2020). Customers may identify products online and then visit a local store in order to buy potentially even more. In a similar way, delivery services of local retailers strongly increased during the coronavirus crisis, and this localization trend is expected to continue far beyond the aftermath of the crisis. Thus, the specific trend may differ among various sectors, but the general value-based and experience-based direction of these trends, such as a growing emphasis on social interaction, regional food, and local retail, is similar across sectors.

Overall, there may be a value-based renewal of business strategies in many companies. Partly, this strategic reorientation is a reactive response to shifting customer expectations in B2B and B2C markets. Partly, however, this value-based recalibration is a proactive strategic move of companies in order to address additional opportunities and to develop entirely new markets. On this basis, the value-based realignment of strategies and value drivers may also highlight the concept of creating shared value, which underscores the interactions of a company's performance and competitiveness with the health of the communities and environment in which the firm is embedded (Porter and Kramer 2011). Thus, there may be particular benefits from combining economic and societal progress (Pfitzer, Bockstette, and Stamp 2013). Achieving financial performance by addressing specific values that are shifting in the aftermath of the coronavirus crisis is essential for successful strategizing over the next years. This value-based strategic renewal in the non-digital context offers major opportunities for new business development in the post-pandemic period.

Integrative Perspective

The conceptual framework with the two dimensions of intelligence-based transformation and value-based recalibration shows that there are major opportunities for new business development and growth in the post-pandemic period. Each of the two dimensions comprises a variety of trends that contribute either to intelligence-based transformation or value-value recalibration. These two dimensions are separate evolutions. However, they will both become increasingly relevant after the COVID-19 crisis although the underlying trends already emerged before the coronavirus crisis. The existing evolution of digital transformation programs in firms will translate into innovation-driven AI initiatives (Daugherty and Wilson 2018), whereas the ongoing customer experience management will advance towards value-based strategic renewal (Wunker 2020; Machtiger 2020). The specific trends may differ significantly

across sectors, but the two general dimensions of the framework match with the opportunities and challenges of many firms from a variety of industries.

A key insight of the framework is the combination of the digital dimension with the analog, non-digital dimension. In many current discussions, there is a strong focus on the need for accelerating the digital transformation in the aftermath of the COVID-19 crisis (Shah and Shah 2020; Wittbold et al. 2020). However, the intelligence-based view of firm performance (Lichtenthaler 2019) indicates that an exclusive focus on enhanced data management, digitalization, and AI will not be sufficient for competitive advantage in the post-pandemic period. Rather, executives and managers need to consider the post-digital era as the 'new normal'. This does not mean that digital transformation and AI initiatives are not important anymore. Rather, the framework illustrates that this digital dimension is only part of a more complex evolution, which has been intensified due to the economic crisis. Without considering analog transformation as an additional dimension besides digital transformation, many digitalization and AI initiatives will fail to achieve their objectives. While this need for considering digital and non-digital performance determinants was already important before the crisis, it will be key for successful strategic planning and strategy implementation in the post-pandemic period (Wunker 2020; Lichtenthaler 2020).

Apart from considering the duality of digital and analog transformation, many growth opportunities specifically arise at the intersection of the two dimensions. Here, the core question for managers and executives is how they may leverage AI and other digital technologies in order to offer unique customer value in the non-digital context (Wunker 2020; Machtiger 2020). For instance, the COVID-19 pandemic has led to a growing popularity of food boxes with meal kits, such as Hello Fresh. These meal kits can conveniently be ordered online, and they often comprise high-quality ingredients. At the same time, they provide an easy-to-do and fun cooking experience. While this example only includes an online shop, similar approaches in other sectors can easily be extended by means of more advanced digital technologies, such as virtual reality, augmented reality, and selected AI applications (Machtiger 2020). Together, these digital tools may provide the basis for unique virtual and analog user experiences that combine some elements of intelligence-based transformation with value-based recalibration.

According to an intelligence-based perspective on firm performance (Lichtenthaler 2019), competitive advantage may then emerge at the intersection of digital solutions and analog experiences. In this regard, the coronavirus crisis has further increased the need for a thorough understanding of a firm's customers and their underlying values (Wunker 2020). In particular, companies need to consider potentially shifting customer values over time. Digital business is an important part of the 'new normal' in the post-pandemic period, but it is not more than just a part. Therefore, a pure focus on digital transformation and AI will often be insufficient for achieving a sustainable

competitive advantage even if an isolated application of advanced analytics solutions includes the latest technology (Lichtenthaler 2020). In light of the highly dynamic technological evolution in AI and related fields, such as augmented reality and virtual reality, competitors will catch up quite quickly. In contrast, if a company is able to interlink its digital solutions with particular non-digital customer experiences, it will be much more difficult for competitors to match these combinations in the short to medium term.

Up to now, many companies have started digital transformation and customer experience management programs (Verhoef et al. 2009; Westerman and Bonnet 2015). While these programs may be considered the baseline across firms in many sectors, there is also a significant number of companies that have started efficiency-driven AI programs and have transformed their business in response to the COVID-19 pandemic. In contrast, the number of companies that has systematically tapped into the white space of opportunities for new business development and growth in Figure 1 is very limited in most industries. Therefore, executives and managers may achieve a sustainable competitive advantage for their companies in these fields. The specific aspects of the two dimensions may depend on the industry, especially concerning the second dimension, i.e. value-based recalibration. However, the underlying logic of the framework with regard to combining digital and non-digital solutions and experiences in order to develop new business and to achieve growth can be applied in firms from many different sectors.

Discussion

The conceptual framework and the new conceptual arguments have several implications for academics as well as practitioners. First, the conceptual discussions offer new knowledge about the intelligence-based view and the management of AI (Iansiti and Lakhani 2020; Lichtenthaler 2019). So far, many organizations have focused on implementing specific AI solutions in a relatively independent way, which usually concentrates on replacing human work. In contrast, the conceptual framework illustrates the need for combining AI solutions with additional performance drivers, such as particular customer experiences (Lichtenthaler 2020). While the focus on an isolated application of selected AI solutions may offer optimization benefits, the combination of AI with other parts of a firm's intelligence is critical for achieving benefits related to new business models, growth, and sustainable competitive advantage (Daugherty and Wilson 2018). Accordingly, the value-based recalibration is an evolution that highlights the relevance of an integrated intelligence architecture (Lichtenthaler 2020) in the post-pandemic period. The COVID-19 crisis has underscored the need for digital business models and AI (Shih 2020; Buttlerfield 2020). At the same, the pandemic has increased many customers' expectations concerning superior experiences and values in business activities across many industries.

Therefore, the pandemic has strengthened the relevance of the notion of integrated intelligence rather than an isolated application of analytics tools and smart algorithms (Lichtenthaler 2020; Harris 2019).

Second, the conceptual framework has major implications for innovation and strategic planning research and practice (Reeves, Lang, and Carlsson-Szlezak 2020). Specifically, our arguments enable a systematic approach to strategizing in the post-pandemic period by means of integrating novel strategic inputs and insights. The initial phase of crisis management during the COVID-19 pandemic is over, and managers and executives now face the challenge of preparing their organizations for the 'new normal' in a proactive as well as reactive way (Wunker 2020; Jacobides and Reeves 2020). In this respect, the understanding of the two dimensions of intelligence-based transformation and value-based recalibration offers a useful conceptual framework, which enables companies to broaden their strategy space while still providing guidance in order to avoid an excessive number of strategic options as well as information overload. In particular, the comparison of multiple alternatives along the two dimensions of the framework may provide an initial starting point for prioritizing some initiatives and projects, whereas some other concepts and programs are deemphasized or abandoned (Jacobides and Reeves 2020; Shih 2020).

Third, the conceptual framework has major implications for entrepreneurial marketing research and practice because it indicates additional growth opportunities at the intersection of digital transformation with industry-specific customer experiences (Warner and Wäger 2019). Many entrepreneurs and innovators are currently trying to identify new growth opportunities and the 'next big thing' in terms of technological developments and market trends in their sectors and ecosystems (Lewrick, Link, and Leifer 2018; Jacobides and Reeves 2020). In a similar vein, many managers and executives in established companies currently face the challenge of returning to a growth mode after completing some major initial stages of COVID-19 crisis management (Rigby, Elk, and Berez 2020; Buttlerfield 2020). With regard to the conceptual framework, hardly any company has fully leveraged the strategy space deriving from the two dimensions of intelligence-based transformation and value-based recalibration yet. At the intersection of these two dimensions, there is a huge potential for entrepreneurial marketing, and this potential is equally relevant for founders and startups as well as for innovators and intrapreneurs in established companies.

Conclusion and Outlook

Many companies have completed the initial phases of crisis management in response to the COVID-19 pandemic. After stabilizing their ongoing business activities, executives and managers now need to cope with the challenge of compensating for lost revenues and getting back on track with regard to new

business development and growth. However, large and medium-sized companies as well as startups and entrepreneurs face the challenge of systematically identifying opportunities for new business development and growth in the post-pandemic period. Therefore, a conceptual framework has been developed which may help managers and executives to explore and exploit these opportunities in a structured way. Specifically, the framework has highlighted the key role of two major transformations. These trends, i.e. intelligence-based transformation and value-based recalibration, have started before the coronavirus crisis, but their importance further increases in the aftermath of the pandemic. The first dimension of intelligence-based transformation constitutes a next step in the digitalization of business processes and business models. While this topic has been relatively often discussed throughout the COVID-19 crisis, the second dimension of value-based recalibration has often been neglected.

However, a pure focus on speeding up the digital transformation of companies and the application of AI solutions will often be insufficient for returning to the growth track. Instead, the intelligence-based view (Lichtenthaler 2019) and the conceptual arguments in this paper emphasize the need for complementing digital transformation and AI initiatives with analog transformation and non-digital experiences to satisfy existing customers and to gain new customers in the aftermath of the COVID-19 crisis. The specific evolutions of the two dimensions are industry-specific, but their general relevance will most likely increase in the years to come. While an effective digital transformation and application of AI already constitute a major challenge, managers and executives need to go a step further in order to actually recalibrate their firms' business activities in alignment with shifting customer values and new experience-based customer expectations. This evolution will require a substantial transformation of many companies' business models, and it will considerably exceed an independent application of specific AI solutions. Often, however, there is no alternative to this transformation if established firms, startups, and entrepreneurs aim at realizing the new business development and growth opportunities in the post-pandemic period.

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