Agility's Role in the Success and Sustainability of Pfizer's Operations

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In today's world, business operations are characterized by fierce competition for customers with more power than ever before. These are coupled with considerable ambiguity, uncertainty, complexity, and volatility in the business world that necessitate reinvention by adopting new operational strategies and implementing structure changes that guarantee dynamic organizational benefits in terms of flexibility and speed in the decision-making processes. Agility has transitioned into the watchword of our age. It has reintroduced strategic measures that encapsulate organizations' ability to rapidly respond to market changes without compromising their sustainability by relying on improving, rectifying, or changing the measures that would lead to their success and survival (Elali, 2021).

Why Agility Matters

Different researchers have provided distinct definitions of the agility concept based on its application in various concepts and the purpose for which it was adopted. On the one hand, in their study, Bazigos, Smet, & Gagnon (2015) applied a business process approach in defining agility as an organization's ability to apply dynamic modifications and reconfigurations in a specific business process by selecting one capable of accommodating the necessary requirements of the firm from a set of viable options. According to Carvalho et al. (2019), flexibility in business operations describes the set of capabilities or choices through which an organization can use to re-strategize and survive. Conversely, agility brings along the re-configurable aspect that would allow an organization to redesign and restructure specific business processes and components, and further combine individual tasks and capabilities in response to the environment.

On the other hand, Sajdak (2015) indicates that agility can be described through aspects: strategic and operational. Under strategic agility, Sajdak (2015) mentioned that an externally-oriented attitude is necessary for evaluating the environment and the potential effect of the current trends in a specific industry. It further involves the assessment of the competitive forces, changes in the market, market segment dynamics, and technological possibilities. The application of strategic agility prioritizes knowledge acquisition that facilitates the anticipation of changes in the market through collaboration between firms, thereby reflecting a knowledge-based and proactive approach. Contrastingly, agility under the operational level was defined as changes in the manufacturing and innovation processes within an organization. Thus, it relies on the speed and nature of the products (number and product mix) within an organization that follows the detection of changes in the market (Sajdak, 2015). Operational agility involves a flexibility-based and reactive approach. Businesses in today's world require dynamic strategies that facilitate leveraging the challenges brought by globalization, the industrial revolution, and the unforeseen effects of eventualities such as the COVID-19 pandemic on organizational opportunities. Through agility, today's organizations have fostered the integration of modern communication, computation, and information technologies into the decision-making processes. It has further facilitated the creation of an environment that promotes cooperation and empowerment and encourages a culture of creativity in overcoming and averting the risks (Ulrich & Yeung, 2019).

Agility Dimensions

Sajdak (2014) postulated that an in-depth assessment of the increase in turbulence within the environment can be categorized under four key trends. These trends include a significant increase in novel change, which translates into past experience becoming obsolete. The second trend identified entails a considerable growth in the environment's intensity, which is measurable through the resource quantity allocated to processes such as marketing and innovation operations. The third trend involves an increase in the speed of changes in the environment, exemplified through shorter periods between commercialization and the emergence of new technologies. The last trend involves a substantial growth in the environment's complexity, portrayed through the disappearance of boundaries between the environment and the enterprise, alongside interactive and synergistic effects on different areas of the organization's operations (Sajdak, 2015). These complexities result from correlations and interactions between the organization's events, activities, and processes imperative for making fundamental and strategic decisions. As a result, different researchers concur that achieving agility could lead to a direct positive impact on organizations' ability to create a competitive advantage that would foster meeting the market demands and realizing sustainability within a turbulent environment.

Based on the descriptions provided herein, coupled with the various complexities and trends that characterize turbulent environments, researchers such as Ulrich and Yeung (2019) stipulate that agility entails the current response to dynamic change. According to these authors, today's world is fast-changing and people and organizations should brace for impact by changing or adapting to remain current with the new trends. Similarly, Elali (2021) agrees that today's organizations must focus on remaining open to positively welcome new ideas. These researchers have thus categorized agility under characteristics such as the creation of a future by focusing on something new that exceeds revising or updating the past. The second characteristic entails anticipation and envisioning opportunities by focusing more on what is right and less on what is wrong or not working. Thirdly, rapid adaptation is characterized by the speed in moving quickly, acting fast, and fostering tweaks. The fourth

characteristic identified entails maintaining an always learning mentality that facilitates changing events into sustainable patterns over time (Elali, 20121).

Moreover, Ulrich & Yeung (2019) insist that for people's and organization's survival and for them to thrive, they should adhere to the various dimensions of agility that facilitate identifying the relevant stakeholders and areas in which the concept may be applied. The authors' sentiments have been echoed by Gagnon and Hadaya (2018) who outline the four dimensions of agility and their applicability in an organizational setting. However, the authors concur that an organization's degree of agility can vary along dimensions such as operations, strategies, research and development, and transformation. In the first dimension, operation agility, Gagnon & Hadaya (2018) define it as the organization's ability to rapidly boost or reduce the operations' throughput or shifting from the manufacture and supply of a specific product or service to a different approach that does not incur any costs on resources such as time and neither does it compromise their quality and functionality.

Under the strategy dimension, the authors describe it as an organization's ability to rapidly and effectively implement changes to its operations at the business unit or corporate level as a response to changes within the interior and exterior of an organization. An elaborate example of strategy agility, as pointed out by the authors, entails a manufacturing company's ability to rapidly and swiftly unravel opportunities in a specific geographic market it seeks to venture, and in response, adjust its product mix to adequately meet the market needs and demands of the consumers (Gagnon & Hadaya, 2018). Moreover, the research & development agility dimension represents an organization's capacity to rapidly develop and market new commodities that meet the never-ending demands of diverse consumers in terms of functionality, price, and quality. It further encompasses the organization's ability to rapidly implement changes to its R&D initiatives as response to interior and exterior events, alongside the necessary reallocation of resources. For instance, in leveraging its proven platform, the R&D agility dimension allows the organization to quickly design products or services that meet the specific requirements of a particular market in a major city (Conboy & Organ, 2011; Druedahl, Minssen, & Price, 2021). Lastly, the transformation agility dimension involves an organization's ability to rapidly and effectively implement long-term changes to the assets and functions to impact additional changes in the external

environment. It further involves the capacity to make abrupt changes to the transformation initiatives portfolio as a response to the necessary reallocation of resources (Gagnon & Hadaya, 2018). For instance, when a company utilizes its well-structured acquisition and merger capability to rapidly integrate a newly-acquired firm, it depicts adherence to the transformation agility dimension.

Pfizer's Description

Essentially, the elements described throughout this current write-up highlight the fact that an organization's agility emanates from a reactive approach aimed at meeting customers' needs by exploiting the various opportunities available in the market. The distinguishing aspect attributed to this feature entails an organization's response and reflection of the market's expectations in the quality of the products. An additional feature entails the response duration, which translates into the products' manufacturing cycle (Sarkis et al. 2021). Together, these features indicate a set of methods and technological approaches that support operational agility, including the identification of the market needs, minimizing a product's development technical cycle, and shortening the manufacturing cycle, alongside maintaining flexibility in the production system (Venkatesan et al. 2021).

Nevertheless, the majority of researchers agree that in today's market, an organization's survival and thriving capabilities necessitate more agility compared to their competitors. The sustainability of this agility further involves careful selection of the initiatives undertaken. In the case of Pfizer, the sustenance of agility in their operations followed a well-thought-out selection of the initiatives that guaranteed rapid response to demand for the virus for the widespread COVID-19 pandemic (Pfizer, 2021). Established in 1849 by two German cousins, Charles Pfizer and Charles Erhart, the organization has, over the years, grown into a market leader in the pharmaceutical industry. This growth can be attributed to the organization's emphasis on researching, developing, and marketing prescription medication for both humans and animals. As a result, the company is responsible for some of the best-known brands in medicines globally. For instance, amidst the pandemic, Pfizer

took part in the fierce race to develop and distribute of a suitable prevention option. The urgent demand for a solution that would slow viral transmission, lessen the severity of the disease, and reduce mortality propelled Pfizer to develop a suitable option in less than a year, thereby surpassing its competitors in the market (Pfizer, 2021). The accomplishment of this goal reflects Pfizer's adoption of agility initiatives throughout its clinical development processes and scaling up manufacturing and distribution.

Leveraging Technology to Demonstrate Agility

In today's world, advancements in technology and innovation have significantly reshaped the pharmaceutical landscape by necessitating the restructuring of the research and development (R&D) operating models to survive and thrive. Specifically, pharmaceutical companies' survival in today's world necessitates rapid restructuring that would guarantee the development and marketing of new and improved products that meet the evolving needs of the consumers in terms of price, quality, and functionality (Birkinshaw, Zimmermann, & Raisch, 2016). As an organization with a proven platform, Pfizer leveraged its operation by advancing its Research and Development (R&D) portfolio initiatives to rapidly design a COVID-19 vaccine that specifically addressed society needs. Moreover, it shifted its R&D efforts to a product that utilized new technology to better meet market demands. When other pharmaceutical organizations, alongside the medical community, were struggling to learn more about the contagious virus, Pfizer utilized the emergency use authorization (EUA) for monoclonal antibody therapy as a potential treatment option (Browne, 2020). As a result, Pfizer's product, BioNTech (BNT162b), developed in phase III of the clinical trials, received the emergence use approval by the Food and Drug Administration (FDA) in December 2020. Subsequently, the virus gained approval in the United Kingdom while two other products from competing countries were paused due to safety concerns. These eventualities highlighted strategic responses following heightened interest in accelerated development. Pharmaceutical companies, including Pfizer, moved rapidly to develop a vaccine that facilitated minimizing the

spread of the virus, exemplifying their alignment with the R&D agility dimension (Burgos et al. 2021; Cooper, 2021).

Partnering to Expand R&D Impact

Besides reflecting its alignment with the R&D agility dimension, Pfizer partnered with different organizations to manufacture the COVID-19 virus. The partnership involved BioNTech, a German pharmaceutical company established in 2008 at Mainz city by Ugur Sahin and Ozlen Tureci, husband and wife. Amid the pandemic, the two companies partnered and devoted their resources to tackling the virus. Initially, BioNTech had been working with Pfizer on a flu vaccine, but in March 2020, they publicly declared their partnership in co-developing and distributing a potential vaccine for COVID-19. Based on its specialization in T-cell, a vital component of the immune system, BioNTech handled the manufacture of the clinical trial batches (Browne, 2020). It evaluated the T-cell immune response for the vaccine they developed. On its part, Pfizer handled the clinical trials in the United States and further executed the global late-stage trial that contributed to the 90% efficacy revelation of the vaccine. The partnership fostered the development of well-structured logistical tools and plans that supported effective transportation, storage, and continuous temperature monitoring of the vaccine. As a result, it boosted Pfizer's visibility in the global market, thereby securing it a place as one of the leading pharmaceutical companies (Sarkis, Bernardi, Shah, & Papathanasiou, 2021).

Collaboration

Undeniably, collaboration in all phases within an organization plays a fundamental role in facilitating coordinated teamwork that leads to timeliness in the completion of tasks, effectiveness, and improved performance, among other benefits. Externally, collaboration and partnerships with other firms lead to benefits such as increased access to specific expertise and reduced infrastructure buildup, especially in situations involving a portfolio that spreads across multiple modalities. Since the emergence of the COVID-19 pandemic, different organizations have presented highly virtualized biotech that eliminates the need for laboratories and

clinical practices within an organization (Venkatesan et al. 2021). For instance, based on its partnership with entities such as BioNTech and Eurofarma, Pfizer complemented its 10 in-house research units to develop the highly-demanded virus. This partnership brought along a more expansive approach to the organization's R&D portfolio initiatives, which fostered a connection of the assets, resources, capabilities, and sectors of the two companies that resulted in the development of new medication (Puślecki, Dąbrowski, & Puślecki, 2021; Pfizer, 2021).

Since all partnerships are characterized by benefits and challenges, including anticipated and unforeseen adversaries, organizations must determine ways of delivering a project on time. The attainment of such objectives, coupled with effectiveness in overcoming the challenges, necessitates agility and the acquisition of resources that guarantee rapid response and recovery from any setbacks (Burgos et al. 2021; Druedahl, Minssen, & Price, 2021). In this case, the adoption of agility has facilitated the recognition of the significance of collaboration and open science to the medical and technological race to curb COVID-19 spread. The expansion in these areas has been promoted by initiatives such as resource sharing, partnerships in the development and research areas, and the prioritization of common goals (Druedahl, Minssen, & Price, 2021).

Pfizer in the Global Pandemic Context

As established earlier, the partnership between Pfizer and BioNTech helped the former in the development and distribution of the vaccine based on agility in its operations and R&D portfolio initiatives. Before then, BioNTech entailed a little-known biotechnology company, but the arrival of the COVID-19 pandemic changed its fate in the world. When Pfizer, a renowned drug-making company in the United States, announced its intentions to delve into the analysis of its coronavirus vaccine, by collaborating with BioNTech, the news was considered a significant milestone, given the race to deliver a vaccine that could end or prevent the spread of the virus. Specifically, the partnership led to the development of a 90% effective vaccine when other companies had delivered 50% and 60% effective solutions that would have been acceptable considering the dire need for a

suitable treatment option at the time (Browne, 2020). Even though the two companies were already working together on developing a flu vaccine, the emergence of the COVID-19 pandemic propelled their collaboration towards the co-development and distribution of the coronavirus vaccine.

As next-generation pharmaceutical and immunotherapy companies, the firms used messenger RNA technology that incorporated German candidates. By incorporating agility in their operations and R&D portfolio initiatives, both companies benefited from the increased access to assets and resources brought along by each firm. Specifically, Pfizer handled clinical trials in the United States, alongside the execution of global last-stage trials that significantly contributed to the revelation of the 90% effective vaccine (Browne, 2020; Pfizer, 2021). On the other hand, BioNTech handled the manufacture of the clinical trial batches based on its specialization in T-cell. BioNTech further conducted investigations on T-cell immune responses for the vaccine in Germany. These milestones highlighted the significance of agility in fostering rapid response to the situation by shifting its R&D efforts to a product that utilized new technologies to meet the population's needs. Besides, the company's proven record and being a renowned drug-maker, Pfizer leveraged its platform to rapidly develop a vaccine aimed at meeting the specific requirements of the world (Browne, 2020). Most fundamentally, these elements helped Pfizer to activate its manufacturing network in the United States and Europe, by including thousands of highly skilled workers in multiple states and localities. They further fostered adequate preparation for the production of the COVID-19 vaccine due to the development of elaborate logistical plans and the utilization of tools that supported effective transportation, storage, and continuous temperature monitoring of the vaccine. The logistical plans were established in the distribution phase due to flexibility in the just-in-time system that shipped frozen vials to the vaccination point (Birkinshaw, Zimmermann, & Raisch, 2016: Carvalho et al. 2019).

Through the pandemic, since its onset to the period the vaccine was developed, Pfizer worked hand-in-hand with the United States government on several fronts. On the one hand, Pfizer, alongside other entities, collaborated with the government, in the Operation Warp Speed team to offer any support across areas such as establishing a direct ship distribution strategy that minimized the transportation time for their facility to the point of use (Pfizer, 2021; Cooper, 2021). Additionally, Pfizer's partnership with BioNTech, Eurofarma, and

the government facilitated the synchronization of the vaccine shipments, alongside the delivery of an ancillary kit that contained supplies necessary for administering the vaccine and a second dose inventory management system. Similarly, in these accomplishments, Pfizer's integration of agility is reflected through the combination of Operation Warp Speed (OWS) logistics and strategic manufacturing and distribution expertise, which provided a solid foundation for success (Puślecki, Dąbrowski, & Puślecki, 2021; Venkatesan et al. 2021).

As a proven and reliable vaccine producer, Pfizer has supplied the product to approximately 165 countries, coupled with the manufacture of more than 200 million doses annually, today, it is one of the largest sterile injectable suppliers globally that produces more than one billion units annually (Pfizer, 2021). As a result, Pfizer's use of agility boosted the experience in supply and cold chain management by accelerating the development of innovative technologies to advance their capabilities. Besides, the track record generated through the development of the vaccine boosted the organization's confidence in its ability to rapidly scale, manufacture, and distribute large quantities of high-quality products, thereby leveraging numerous sites globally (Ulrich & Young, 2019).

Conclusion

Indeed, businesses in today's world, are faced with a significant challenge characterized by fierce competition for customers with more power than ever before and other entities seeking to dominate the market. The review on agility and its role in Pfizer's success has facilitated determination for the organization to survive and throve, they should focus on re-inventing their operations by adopting new operational modalities and structural changes that guarantee dynamic organizational demarches in terms of flexibility and speed in the decision-making processes. In the case of Pfizer, agility has reintroduced strategic measures that encapsulate organizations' ability to rapidly respond to market changes without compromising their sustainability by relying on improving, rectifying, or changing the measures that would lead to their success and survival.

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