

Effectuation Theory and The Covid-19 Pandemic

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Abstract

Coronavirus marked the year 2020 with its effect on the global economy in general and businesses in particular. Sarasvathy (2001) in her seminal piece proposed effectuation as a set of behaviors entrepreneurs use in the face of uncertainty and Berends et al. (2014) added that effectuation concerned actions under resource constraints, both defining effectuation as the model to be followed in an environment such as the COVID-19 pandemic where circumstances determine the path entrepreneurs take (Berends et al., 2014). Effectuation is a dynamic and interactive process (Sarasvathy, 2001) where entrepreneurs focus on what can be achieved in the short term with the resources at hand, utilizing pre-commitments and experimenting with new products and processes within the constraints of what the entrepreneur can afford to lose (Fisher, 2012). Anecdotal evidence from the pandemic suggest that larger organizations, organizations with significant investments in fixed assets, organizations that relied on a single customer or a single type of customer and organizations which operated in highly regulated environments found it difficult to follow the effectuation logic during the Covid-19 pandemic. While observations provide insight and help draw inferences, future studies should empirically examine the relationships proposed in this study.

Introduction

The year 2020 has been marked by Coronavirus (COVID-19) which has been declared as a pandemic by the World Health Organization. COVID-19 spread rapidly around the world as there were reported cases almost in every country by the first quarter of 2020. The pandemic brought enormous challenges for governments, citizens, employers, and employees alike (“Coronavirus”, 2020). How did some organizations survive the COVID-19 pandemic? While it will take some time for scholars to fully understand and evaluate the effect of COVID-19 on the economy in general and businesses in particular, it is important for management scholars to utilize the information at hand. Existing anecdotal evidence suggests that organizations that were able to follow the effectuation approach survived the pandemic and even benefited from it.

Effectuation theory proposes that organizations survive and succeed by experimenting with new products, methods or ways of doing business, being flexible and changing course when necessary, taking risks that are commensurate with what they can afford to lose, utilizing their pre-commitments to succeed and focusing on what is achievable in the short term with the resources at hand (Arend, Sarooghi, Burkemper, 2015; Chandler, DeTienne, McKelvie, and Mumford, 2011). Researchers have suggested that effectual approach is especially applicable in uncertain environments such as the one created by the COVID-19 pandemic. The pandemic created a turbulent environment which business owners had never experienced before with challenges ranging from decline in customer demand due to movement restrictions and unemployment, to broken supply chains (Tan, 2020; Tartar, 2020). Entrepreneurs

had to cope with significant uncertainty without an end to the pandemic in sight. Despite the challenges, some organizations found ways to survive in this landscape and even prosper during the first quarter of 2020.

In this paper, I propose that effectuation theory provides a framework to analyze and understand how and why some organizations were able to adapt, create, survive and thrive in the environment caused by the COVID-19 pandemic while others could not. The objective of this paper is to examine factors that affect the entrepreneur's ability to effectuate within the turbulent environment created by the pandemic. Organization size, customer and resource dependence, and industry regulation are proposed as factors that affect the entrepreneur's ability to effectuate. I seek to advance our understanding of the effectuation process by examining anecdotal evidence from the pandemic to gain better insight into "how and when" entrepreneurs effectuate (Arend et al. 2015). This paper extends the effectuation theory beyond its focus on the entrepreneurial decision making process by introducing contingency factors and examining their effects on the effectuation process, making it more comprehensive. Arend et al. (2015) suggests that besides lacking comprehensiveness, effectuation theory also lacks context. We address this concern by examining the theory within the COVID 19 pandemic context.

In the next section, I will provide an overview of the environment created by the pandemic followed by an overview of effectuation theory and factors that affect the ability of the entrepreneur to effectuate. Examples will be provided for a thorough examination of the effectuation theory within the COVID-19 environment.

The Covid-19 Pandemic and the Business Environment

During the COVID-19 pandemic, the US economy suffered the greatest contraction in more than a decade in the first quarter of the year ("Coronavirus", 2020), the Euro area suffered its largest contraction ever, French economy suffered its "biggest plunge" since the Second World War (Wearden, 2020) and Europe's largest economy, Germany, went into recession as its economy shrank by 2.2% in the first three months of 2020 (Schimitz, 2020). Within this framework, many local, national and international businesses were negatively affected (Bartik, Bertrand, Cullen, Glaeser, Luca, Stanton, 2020; Hansen, 2020).

According to the United Nations, restrictions on the movement of people and lockdowns negatively affected the service sector ("COVID-19 Likely to Shrink Global GDP by Almost one per cent in 2020", 2020) especially including businesses in accommodations, food service, event organization, educational services and their suppliers (Tartar, 2020; Faux, Herbling, and Munsterman, 2020; Dua, Ellingrud, Mahajan, Silberg, 2020). Hardest hit industries include retail trade, leisure and hospitality, recreation and transportation services which account for more than a quarter of all jobs in Europe and North America (Tartar, 2020). However, the effects of the pandemic were widespread, going beyond the service industry. Any non-essential business or business where physical distancing would be challenging were affected.

With school closings, travel restrictions and shelter in place orders by governments, peoples' mobility was severely restricted during the pandemic, especially during the first half of 2020. As of April 11, there was 45% decrease in mobility trends for places like restaurants, cafes, shopping centers, and movie theaters in the United States according to Google Mobility Reports (2020). With restaurants, hotels and schools closed, and many businesses asking their employees to work from home, demand for certain products fell sharply (Faux, Herbling, and Munsterman, 2020; Dua, Ellingrud, Mahajan, and Silberg, 2020). Considering that small businesses make up 99.7 percent of U.S. employer firms, 49.2 percent of private-sector employment (Frequently Asked Questions about Small Business, 2012) and 44% of US economic activity (SBA, 2019), the pandemic created a huge revenue loss for many entrepreneurs and their employees. Even after mobility restrictions were gradually lifted, business did not return back to its state before the pandemic. As of October 9, 2020, the United States economy was operating at 81% of where it was before the pandemic in early March of 2020 ("Tracking America's Recovery", 2020).

Survey of nearly 6,000 small firms in the United States revealed that 43% of the respondents temporarily closed their businesses, 40% reduced the workforce, and service sector firms reported employment reductions over 50 percent. 75% of respondents reported that the cash they had was only enough to cover expenses for two months or less (Bartik, Bertrand, Cullen, Glaeser, Luca, Stanton, 2020). Approximately 12.5 percent of the U.S. civilian labor force applied for or was receiving unemployment compensation benefits as of April 18, 2020 according to Taxfoundation.org (Walczak and VanAntwerp, 2020). More than 26 million people had filed for unemployment in the US from mid-March till the end of April ("Coronavirus: US Economy Shrinks at Fastest Rate Since 2008", 2020). According to Brookings Institute, the percentage of the workforce who filed for unemployment benefits in

the U.S. reached 14.8% in the U.S from March to April 23, 2020 (Rothwell, and Van Drie, 2020). According to the July 20 Small Business Coronavirus Impact Poll (July, 2020), 58% of small businesses worry about having to permanently close their businesses (“Small Business Coronavirus Impact Poll”, 2020).

Within this economic framework, many industries were shrinking and some were even coming to a point of extinction. As demand for many products declined, redistribution and logistics emerged as the greatest challenges of the pandemic. Many organizations were struggling to repurpose their unsold goods or change their business models. Some businesses tried to sell their goods directly to customers while others were donating their unsold goods. Some companies were able to follow the effectuation logic and re-purpose their production, processes, and or services to adjust to this turbulent environment in a short period of time, however, other businesses were suffering. Brewing companies and distilleries, for example, started producing hand-sanitizers, fashion companies started producing masks and automotive companies started producing ventilators (Thalbauer, 2020). Farmers, on the other hand, had to dump unsold milk, smash eggs and send vegetables to trash due to redistribution challenges (de Sousa, Durisin, and Jha, 2020). In the following section, I will discuss effectuation theory followed by an examination of factors that facilitate or inhibit the implementation of the effectuation logic.

Effectuation Theory

Effectuation was first introduced as a theory of entrepreneurship, describing a decision making approach, by Sarasvathy (2001). It suggests that when the future is not predictable and there is high uncertainty, effectuation is the suitable decision making approach in the entrepreneurship process. There are two distinct approaches describing the entrepreneurial process, namely causation and effectuation (Perry, Chandler, Markova, 2012, Sarasvathy, 2001). Causation process includes predicting the end from the beginning and maximizing expected returns through business planning and competitive analyses. Effectuation, on the other hand, accepts that the future is dynamic and unpredictable, and instead focuses on what is achievable with the resources currently available at hand. There are five principles that underlie the logic of the entrepreneur’s actions from an effectuation perspective (Sarasvathy, 2001). These principles include: 1) experimentation 2) flexibility 3) affordable loss 4) pre-commitments 5) short-term focus. Experimentation and flexibility allow entrepreneurs to explore new opportunities and change direction when necessary. Affordable loss focuses on limiting the risk that the entrepreneur takes through limiting the risk to what the entrepreneur can afford to lose. Pre-commitments allow entrepreneurs to access resources that they need to grow through their existing external partners. And finally, effectuation focuses on current means and opportunities rather than making long term plans (Andries et al., 2013, Chandler et al., 2011, Harrison et al., 2001, Sarasvathy, 2001).

Effectuation refers to the cognitive problem-solving approach the entrepreneurs take when managing in and coping with uncertainty. The uncertainty of the environment and the inability to predict the future, hence the short term focus, provide the external environmental conditions under which the entrepreneur can use the effectuation logic to find ways to survive and succeed (Arend et al., 2015). Effectuation perspective shifts attention from making calculated decisions under perfect and predictable conditions to making decisions within constraints under uncertain and dynamic conditions with imperfect information. It also shifts attention from long term planning to a focus on the present and what can be achieved within the current means of the entrepreneur. Effectuation focuses on what is achievable right now within the means of the entrepreneur (Read and Sarasvathy, 2005), in an uncertain environment. Causation, on the other hand, emphasizes setting goals first and then searching for resources to achieve the goals. The implicit assumption in causation is that the future is predictable and results are controllable via superior forecasting ability (Roach et al., 2016, Sarasvathy, 2001).

Effectuation is associated with emergent strategies whereas rational planning underlies causation (Harms & Schiele, 2012). The effectuation approach allows the entrepreneur more control and flexibility when faced with contingencies. The entrepreneur can set or change direction when conditions change by focusing on what is achievable with the existing means while keeping an eye on the loss that is affordable (Arend, 2015). Effectuation theory describes the process of entrepreneurial action especially in an uncertain and dynamic environments. The strength of this relatively new approach to entrepreneurship is its strength in realizing that entrepreneurs operate in uncertain environments (Arend, et al., 2015; 631, Sarasvathy, 2001). Effectuation theory deals with how enterprising individuals ‘make it happen’ under tremendous uncertainty and ambiguity within their existing means (Read et al., 2016).

COVID-19 pandemic created an uncertain, unpredictable and constantly changing environment which business owners had never experienced before. They had to cope with significant uncertainty and imperfect information with no end in sight to the pandemic without a vaccine or cure for the disease. Customer demand was uncertain due to increasing unemployment rates, firms going out of business or filing for bankruptcy and possible recession in the near future. How long the pandemic would last and its economic consequences were unknown. Business owners were scrambling to utilize their resources to create new opportunities. Within the uncertain environment created by the pandemic, the reasonable thing for the entrepreneur to do was to follow the effectuation logic (Arend et al., 2015).

Effectuation is about creative use of existing resources and actions under resource constraints and uncertainty (Berends et al., 2014; Sarasvathy, 2001) which many entrepreneurs grappled with during the pandemic. The effectuation theory suggests being flexible and experimenting to utilize resources and pre-commitments to the fullest with a focus on keeping loss at affordable levels to create opportunities in the short term. In the next section, I will examine a small businesses which coped with the environment created by the COVID-19 pandemic using the effectuation framework, to gain a deeper understanding of effectuation theory.

Implementing the Effectuation Logic – An example. A small mom and pop bakery located in Dallas, Texas is a good example of a business that implemented the effectuation approach during the pandemic to keep its doors open and survive. Bisous Bisous is a bakery specialized in French-style pastries famous for its macarons and croissants. Most of their croissant sales were previously wholesale to other businesses before the COVID-19 pandemic. With the wholesale business diminished due to the pandemic and stay at home orders in effect, the owners had to think outside the box to recoup some of their losses and survive. Chef/owner Andrea Meyer and her husband updated their website in a few days to focus on e-commerce so that customers could order online and avoid crowds in the store. In doing so, they used their creativity and utilized resources as suggested by effectuation theory (i.e. technical knowledge and skills to build a website). They ramped up their freezer to oven offerings after some experimentation with new products. They realized that as more Americans turned to eating at home, people would prefer freezer to oven products to enjoy at home. They not only kept their existing customers but also started gaining new customers with their creative freezer to oven offerings. Also, by selling directly to the customer through their website, they avoid middle man such as UberEats, Doordash and others that take 30% of their earnings. Chef/owner Andrea Meyer says that the frozen products are keeping them busy and employees paid (Adams, 2020a; Adams, 2020b; Gubbins, 2020; Hall, 2020). They launched a kit as mother's day 2020 approached that allows people to make the caramel-pecan cinnamon rolls that they are famous for at home which is another creative solution that they came up with.

Chef/owner Andrea Meyer realized through social media that many of her customers were searching for ingredients such as sugar, flour and other baking pantry essentials during the early days of the pandemic. Since their production had been reduced, they had hundreds of pounds of those ingredients sitting in their kitchen. She started selling one pound containers of sugar, flour, bread flour, cake flour, and yeast for a small fee to recoup her costs. This is an example of utilizing resources at hand to create opportunities as suggested by effectuation theory. She gained new customers as well as strengthening her existing customers' loyalty by helping them access items that they could not find elsewhere during a difficult time. By asking her customers to share their purchases on social media with a Bisous Bisous hashtag (#) and she leveraged her customers' pre-commitments as outlined by effectuation theory. Their loyal customer base spread the word through social media and local newspapers such as The Dallas Morning News and The Dallas Observer keep them in the headlines and customers coming.

The owners of Bisous Bisous display the effectuation principles by 1) being flexible with their business model and putting more emphasis on online business, 2) experimenting with new products and being creative in offering freezer to oven products, 3) utilizing their means and resources such as building the e-commerce website, selling unused ingredients to customers, and 4) using pre-commitments such as social media, customer base, newspapers to keep them current and 5) short term focus is displayed by the fact that they had to do all this in a very short period of time with the sudden onset of the COVID-19 pandemic in the United States without existing long term plans. Bisous Bisous is an example of a small business where owners implemented all the underlying factors of the effectuation logic and kept its doors open during an uncertain time.

However, there are many other businesses in the United States that were not able to switch their businesses around mainly because they were not as flexible, they did not have opportunities to experiment and in some cases their pre-commitments turned into disadvantages rather than advantages. In the next section, I will discuss factors that affect the ability of the entrepreneur to effectuate and give examples from the Covid-19 pandemic.

Organizational Size and Effectuation during the COVID-19 Pandemic

Organizational size in relation to effectuation has been mostly examined, although in a limited number of studies, within the framework of innovation. Firm size has been identified as one of the factors that determine whether an effectual or causational approach is employed to innovation (Prajogo and McDermott, 2014, Roach et al., 2016). Grimm and Amatucci (2013) state that applying the causation approach is logical in established markets and corporate settings where incremental innovations are developed. Berends et al.'s (2014) study, on the other hand, showed that the effectual approach suited the small firm characteristics because small firms do not follow the same processes that the more formalized larger organizations follow in product development. They also found that product innovation was resource-driven in small firms and they enjoyed greater flexibility as suggested by effectuation theory (Berends et al., 2014; Van de Vrande, De Jong, Vanhaverbeke, and De Rochemont, 2009; Yap and Souder, 1994). El Hanchi and Kerzazi (2020) suggest that new ventures may switch from effectuation to causation approach as they grow and start emphasizing planning, standardization, and structure. Hence, small firms are more likely than large firms to follow the effectuation logic.

Anecdotal evidence from the COVID-19 pandemic shows that organization size may have been a reason why some organizations were not flexible enough to change their business plans or operations and adapt. Compared to Bisous Bisous, a mom and pop shop discussed above, many food producers are larger organizations. It is not as easy for large organizations to change their operations as it is for small organizations. For example, firms in the dairy industry could not shift their distribution from businesses to individual consumers because in some cases, selling food directly to consumers required reconfiguring complex supply chains and dealing with new storage and distribution requirements (de Sousa, Durisin, and Jha, 2020). In many dairy processing plants, machines are designed to package dairy products such as shredded cheese in large bags intended for wholesale and sale to restaurants. Switching packaging from wholesale to retail friendly containers in a short period of time is difficult if not impossible and requires million dollars of investment (Yaffe-Bellany and Corkery, 2020). The sheer size of the operation makes the switch to alternative business models difficult and costly. As one of the farmers states, some companies are too big to respond to "disruptions to the supply chain" (Splitter, 2020). If we turn our attention to Shay Myers, a third-generation onion farmer in Oregon and Idaho, he started redistributing onions from 50-pound sacks into smaller bags that could be sold in grocery stores. He also started freezing as much of his product for future sale as his limited cold-storage capacity allowed. Despite these efforts, he still had to let tens of thousands of pounds of onions to decompose in waste. He says "There is no way to redistribute the quantities that we are talking about," (Yaffe-Bellany and Corkery, 2020). Therefore, larger organizations don't have the flexibility smaller organizations have to shift their systems and experiment with new models. In addition, due to the sheer volume of the operation, they have more to lose than smaller organizations. Therefore, effectuation approach is more difficult to implement for larger organizations than smaller organizations.

Proposal 1: There is a significant negative relationship between firm size and effectuation.

Dynamic Capabilities and Effectuation During the COVID-19 Pandemic

Fine and Freund (1990) suggest that when organizational manufacturing capacity is not flexible, firm's ability to respond to changing customer demands diminishes. Research suggests that firms that build rigid and highly specialized resources reduce their flexibility (Volberda, 1996). Resource-based view suggests that dynamic capabilities increase a firm's responsiveness especially in dynamic environments and organizational structures may facilitate or debilitate the firm's ability to respond (Singh & Del Giudice, 2019). Dynamic capability reflects the ability of firms to reconfigure its resources to survive and thrive in dynamic business environments (Teece 2007, Eisenhardt and Martin 2000). Teece (2009) found that established, fixed assets had a negative relationship with flexibility of the firm as well as the radicalness of the innovations of the firm. Therefore, the larger the fixed assets, the lower will be flexibility.

Dynamic capabilities of the firm are likely to enhance its ability to respond to the COVID-19 pandemic. Anecdotal evidence suggest that organizations with fixed, non-flexible resources had difficulty changing course or switching to a different business plan and follow the effectuation approach. Transitioning from a manufacturing for wholesale model to manufacturing for retail, for example, or switching from depending on a distribution network to directly selling to customers require different business models and realigning and reallocating resources to support the new business model. The existing resource base of the firm may become a “competency trap” or the firm becomes “a prisoner of its existing product-centered business model” if the resources are not flexible (Huikkola, Kohtamäki, Rabetino 2016).

The cheese and onion producers discussed above had higher fixed investments in machinery, land and animals compared to Bisous Bisous, the small mom and pop bakery shop. For example, although Starbuck’s order of milk from Dairymens processing plant in Cleveland was down to 1/9 of the amount it used to be before the pandemic, cows still need to be milked multiple times a day whether there were buyers or not. Whether the onion farmer could sell its onions or not, he still had to keep the land (Yaffe-Bellany and Corkery, 2020). Fixed resources that cannot be repurposed or reallocated to other areas limit the flexibility of the firm and also require long term plans since, for example, investing in land and equipment is a long term commitment. Therefore:

Proposal 2: There is a positive relationship between dynamic capabilities and effectuation.

Buyer Dependence and Effectuation During the COVID-19 Pandemic

Resource dependence theorists have argued that organizations who depend on one customer are highly vulnerable to economic and policy shifts of the single customer (Thompson 1967; Pfeffer 1982; Venkataraman et al., 1990). Dependence on a single customer or a single type of customer make firms especially vulnerable to shifts in the strategies and priorities of their buyers (Venkataraman et al., 1990). As outlined by Michael Porter’s 5 forces analysis, powerful buyers with clout impose their expectations on the supplier. This means that firm’s competitive advantage may erode when problems arise not only for them but also for their customer (Porter, 1985). When businesses design their systems to serve a single customer, they will not have the flexibility to serve other customers, as was the case during the COVID-19 pandemic, unless they make significant investments to change their operations or business models. Even if they do, it will take time to make these changes.

Plambeck and Taylor (2007) examined a case where a manufacturer built capacity for a single buyer. When buyer faced poor market conditions, the buyer’s demand fell and the supplier was left with the extra capacity as was the case for many businesses during the COVID-19 pandemic. Businesses serving a single type of customer whose processes are designed around that customer base will face similar challenges and their flexibility will be limited. For example, the dairy producer whose main customer was Starbucks and the cheese maker who sold to wholesalers in bulk quantities which in turn sold to restaurants were left with food they did not know what to do with (Yaffe-Bellany and Corkery, 2020).

Contrary to hog farmers who were facing a crisis and planning to euthanize millions of pigs due to meatpacking plant closures, Chris Newman’s business, Sylvanaqua Farms, was thriving. It is a small permaculture operation that sells and delivers directly to consumers as well as restaurants and wholesale. Newman, a former software engineer, had set up his website for direct orders of meat and eggs earlier on while also selling to wholesalers. As soon as social isolation began, his online orders increased rapidly (Mak, 2020). Megan Brown, another boutique farmer was also doing remarkably well (Yaffe-Bellany and Corkery, 2020). What these two farmers have in common is a diverse customer base and online presence. During this pandemic, farmers who sell directly to households (i.e. multiple customers) or both households and businesses were faring better than farmers whose customers are a few businesses, predominantly restaurants or food service operations.

In previous studies, dependence on single customer resulted in lower profits especially in turbulent environments (Arbaugh & Sexton, 1997). Therefore, besides limiting flexibility, dependence on a small number of customers puts strong pressure on the profitability of the business making it more vulnerable especially during difficult economic times and limits its ability to grow (Hewitt-Dundas & Roper, 1999). Effectuation involves calculating affordable loss and not committing to more than the entrepreneur can afford to lose. With lower profit margins, entrepreneurs are limited in terms of what they can afford to lose, and, therefore, how much they can effectuate. The examples of dairy farmer who did not know what to do with the milk after Starbuck’s order disappeared, the farmer who did not know what to do with the cheese after restaurants closed expose the vulnerability of businesses

that rely on a single business and a single type of business. The size and diversity of the customer base may be the determining factor in whether the entrepreneur can effectuate. Effectuation approach focuses on flexibility and making use of existing resources in a short period of time. With limited flexibility and resources devoted to one type of customer and inability to move quickly, organizations that depend on a single customer will not be able to follow the effectuation process. In addition, with low profit margins, they will be limited in what they can afford to lose while following the effectuation logic. Therefore,

Proposal 3: Having a single customer or a single type of customer is negatively related to effectuation.

Industry Regulations and Effectuation During the Covid-19 Pandemic

It is well known that external environmental factors affect the success and failure of firms. Environment offers opportunities and challenges to the entrepreneur and may be favorable or unfavorable for the entrepreneur to succeed in (Ansoff, 1987; Wiltbank et al., 2006; Zahra, 1993). However, we still don't know much about how environmental factors affect the effectuation process (Arend et al., 2015). There have been calls from researchers to examine the role of environmental conditions in the effectuation processes, however, studies have been scarce (George et al., 2016; Urban, 2018). The anecdotal evidence from the COVID-19 pandemic once again highlights the importance of studying the effect of external environmental factors on effectuation.

Existing research suggests that strict regulation creates a hostile business environment (Damanpour and Schneider, 2006; Urban, 2018). Industry regulation appears to limit the operation of businesses during the pandemic. For example, livestock farmers are required to process their meat at USDA-inspected facilities (Splitter, 2020). The number of USDA-approved facilities are few in some states and in addition, many have been closed due to spread of COVID-19 among workers and inspectors. Therefore, livestock farmers were negatively affected by these regulations. Another example is the Food and Drug Administration (FDA) regulating hand sanitizer as over-the-counter drugs. With the onset of the COVID-19 pandemic in the United States, hand sanitizer was in short supply in hospitals, healthcare facilities as well as households which provided an opportunity for producers of distilled alcoholic beverages. Although making hand sanitizer is simple, it is dangerous and distilleries are equipped and trained to handle alcohol in a safe manner (Friedlander, 2020). Some distilleries began producing sanitizer, however, this was only possible after the Food and Drug Administration (FDA) announcement on March 27th. FDA announced that "entities not currently regulated as drug manufacturers can produce hand sanitizer if they follow an FDA-dictated approach" (Lammi, 2020). The Alcohol and Tobacco Tax and Trade Bureau (TTB) also issued a guidance that reduced regulatory requirements and some taxes. Distilleries were only able to switch their operations and take advantage of this opportunity after at least some restrictions were lifted and FDA guidance was revised.

FDA regulations also applied to ventilators that were in short supply and in high demand during the pandemic. On March 22nd 2020, FDA announced that they would work with manufacturers. FDA "implemented drastic regulatory changes to allow automakers and other non-medical manufacturers" to start producing ventilators. In a similar vein, short term rental bans "across the entire states of Florida, Pennsylvania, Georgia, Delaware, Maine and Vermont" and some counties and cities have left very little option for short term rental owners (Rodrigues, 2020). In an industry based short term vacation rentals which relies on a single type of customer base vacationing typically 3 days to a week, owners find it difficult to find renter to stay 30 days or longer.

In highly regulated environments, effectuation is difficult to implement since entrepreneurs are subject to strict rules and regulations that govern their operations. Entrepreneurs operating in regulated environments will not have the flexibility and the ability to experiment. Especially implementing short term plans becomes problematic as entrepreneurs may have time consuming procedures to follow. Therefore:

Proposal 4: Industry regulation has a negative significant relationship with entrepreneur's ability to effectuate.

Conclusion

According to Sarasvathy (2001), effectual logic is likely to be more effective in settings characterized by uncertainty as in the case of the COVID-19 pandemic. An entrepreneur following the effectuation logic begins with a set of available means, focuses on affordable loss and strategic alliances while trying to find ways of exploiting contingencies to survive in an unpredictable environment. Effectuation focuses on use of existing resources especially when firms face resource constraints. It leaves multiple paths open for entrepreneurs to follow

allowing entrepreneurs to change direction based on circumstances (Berends et al., 2014). Many firms faced resource constraints during the pandemic due to financial hardship caused by increasing unemployment and declining demand, lack of customers or workers due to movement restraints, and resource scarcity due to broken supply chains, closed factories and disrupted import/export operations. Effectuation is a means driven approach to entrepreneurship and focuses on what can be done with existing resources (Magalhaes and Abouzeid, 2018) which most entrepreneurs had to follow during the Covid 19 pandemic to survive and succeed.

Grimm and Amatucci (2013) propose effectuation as a “powerful alternative to expensive, time consuming planning process which may inhibit quick responses to temporary windows of opportunity that require immediate attention” (pg. 59). Anecdotal evidence from the COVID-19 pandemic support this view and suggest that entrepreneurs who could respond quickly to the changing dynamics in the environment and effectuate survived and even benefited from the pandemic. This study suggests effectuation as a process that is particularly suitable for smaller businesses that don’t rely on a single customer, have dynamic capabilities and are not subject to government rules and regulations.

Smaller firms use different processes than larger firms and they don’t follow the structured processes that larger firms do. Therefore, they are more flexibility and have greater ability to experiment. Also, they are more means and resources driven as suggested by the effectuation logic (Magalhaes and Abouzeid, 2018). Firms that have dynamic capabilities are a better fit for turbulent environments (Teece, 2009), such as the pandemic environment, compared to firms with rigid, specialized resources which limit flexibility and experimentation. In a similar vein, buyer dependence requires significant investment in one buyer and the buyer’s customers, reducing flexibility and profitability (Hewitt-Dundas & Roper, 1999; Pfeffer 1982; Thompson 1967; Venkataraman et al., 1990). Having multiple buyers provide firms greater options and more room to be flexible and experiment. In addition, having multiple buyers means greater cooperation among stakeholders as suggested by effectuation theory. Industry regulation is another factor that limits the entrepreneur’s ability to effectuate by reducing flexibility and experimentation (Damanpour and Schneider, 2006; Urban, 2018). Rules and regulations require long term planning and limit the firm’s ability to change course when opportunities or threats arise and limit flexibility. They also limit the entrepreneur’s ability to experiment because entrepreneurs should operate within the boundaries of the rules and regulations.

This study proposes contingency factors that facilitate or debilitate the entrepreneur’s ability to effectuate. I examine these relationships within the COVID-19 pandemic framework and propose relationships. This study is not without limitations. Due to the newness of the Covid-19 pandemic, empirical data is limited, if not non-existent. The anecdotal approach followed in this study provides valuable information to draw inferences and offer propositions, however, future studies should empirically test the proposed relationships.

Directions for future Research and Limitations

According to Arend et al. (2015), effectuation theory “appears to be missing several units” and comprehensiveness (pg. 639). This study contributes to the literature by utilizing the information at hand to advance our understanding of the effectuation process. Although confirmation bias is a limitation of the anecdotal method (Evans, 1993), the objective of this study is to propose relationships to be tested. The Covid 19 pandemic provides a unique opportunity to examine effectuation theory in a real, turbulent environmental setting. As suggested by Arend et al. (2015), effectuation theory is “difficult to test as a stand along conceptualization” since “respondents are unlikely to comprehend the subtleties involved” (pg. 642). The observation approach allows the researcher to gain a wider perspective and draw inferences.

This paper extends the focus of effectuation theory beyond the individual by examining contingency factors as they relate to the environment in which effectuation takes place (i.e. COVID 19) as suggested by Arend et al. (2015). This study also has important implications for practitioners. Most textbooks in management focus on the rational decision making process and making long term plans. Effectuation theory, on the other hand, proposes a different approach to decision making in the entrepreneurial process. This study suggests that depending on the contingency factors effectuation theory may be the best approach for the entrepreneur to follow. Although previous research has emphasized the importance of having multiple options and letting circumstances determine the path (Berends et al., 2014), no study to date has examined the effect of the circumstances on effectuation to my

knowledge. We don't have data to test the relationships proposed in this study due to the regency of the pandemic. Future research should empirically test the proposed relationships in this study.

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