

HOW (NOT) TO FAIL DURING THE ECONOMIC CRISIS: THE ROLE OF BEHAVIORAL LOGIC IN SMES SURVIVAL

Galina Shirokova, Graduate School of Management, St. Petersburg University, Russia
Anastasiia Laskovaia, Graduate School of Management, St. Petersburg University, Russia
Oleksiy Osievskyy, Haskayne School of Business, University of Calgary, Canada

ABSTRACT

Prior studies of effectuation and causation concentrated predominantly on exploring their impact on firm performance. Therefore, by now we know relatively little about their impact on firm survival; yet, firm survival is a pre-condition for long-term performance and prosperity. Considering effectuation and causation as antecedents of firm survival may, therefore, extend our knowledge of both effectuation theory and survival literature. Relying on the empirical data from 490 Russian SMEs, we study their 3-year survival rates amidst a pronounced economic crisis. Our findings demonstrate that effectuation increases the firm longevity in any environment (both dynamic and stable), while causation reduces the firm's ability to survive.

INTRODUCTION

Small- and medium-sized enterprises (SMEs) are the most vulnerable entities during the crisis times, when the speed of changes in the environment is of extremely high level and resources become scarce (Marino et al., 2008). Facing many challenges even in relatively stable conditions (Myles, 2010), during economic crises, SMEs experience much higher uncertainty and unexpectedness than big corporations. Additionally, the lack of financial resources and limited security mechanisms (Varum & Rocha, 2013) decrease small firms' chances to survive under economic turmoil. Research stated that SMEs, compared to large firms, are the least prepared for external shocks, especially economic ones, when the environment is characterized by economic decline, industrial hostility, decreasing demand and political instabilities (Bhamra, Dani, & Burnard, 2011). Small firms suffer from different types of fluctuations, including economic, technological and political, as they are very sensitive to changing customer demands due to high resource constraints (finance, technological and human) (Carlsson, 1989; Sullivan-Taylor & Branicki, 2011). Consequently, lack of financial resources, insufficient planning activities, limited investment possibilities and innovation activity are considered in the literature as primary causes of low SME survival rates (Storey, 1994).

Attempting to increase the chances of survival, firms may employ different behavioral strategies during an economic crisis, namely, effectuation and causation (Sarasvathy, 2001). Effectuation theory presents two behavioral logics that can be considered by SME managers as useful strategies to manage the challenging times and survive an economic crisis (Laskovaia et al., 2019; Yu et al., 2018). Despite a large number of studies on the relationship between effectuation/causation and performance in various contexts (e.g., Deligianni, Voudouris, & Lioukas, 2017; Eyana, Masurel, & Paas, 2018; Smolka et al., 2018), they demonstrate ambiguous results, showing positive, negative and non-significant effects of both behavioral logics. In addition, there is a growing interest in the literature towards studying of effectuation and causation impact on different firm outcomes. Basically, "we are increasing our knowledge of effectuation as a general theory of decision-making, but we know very little about outcomes" (McKelvie, DeTienne, & Chandler, 2013, p. 3). For instance, we still do not know how effectuation and causation influence firms' ability to survive in a short- and long-term, especially during tough conditions of crisis. One example of linking effectuation and venture survival is the qualitative

study by Gabrielsson and Gabrielsson (2013), who made a number of propositions on the moderating role of effectuation in the relationship between resources and entrepreneurial orientation and international new ventures survivorship. With the current study, we are trying to address the gap in the literature on the role of effectuation and causation in small and medium firms' survival during the crisis period. Moreover, effectuation theory is based on the assumption that the effectuation approach helps to manage rapidly changing and unpredictable conditions (Arend, Sarooghi, & Burkemper, 2015; Sarasvathy, 2001). Crisis periods often characterized by increasing industrial volatility and higher environmental dynamism, which add unpredictability into the functioning of small and medium firms. We believe environmental dynamism may shape the relationship between behavioral strategies of managers and SMEs survival rate. In particular, we address the following research questions: (1) *How do effectuation and causation relate to the likelihood of SMEs survival during the economic crisis?* and (2) *What is the moderating role of environmental dynamism in these relationships?*

With this study, we contribute to the two research streams: effectuation theory and firm survival literature. *First*, we extend our understanding of effectuation and causation outcomes on a firm level. Looking at the probability of SMEs' survival, we proved the important role of both behavioral logic on firms' chances to overcome crisis consequences. To the best of our knowledge, our study is the first one to consider effectuation and causation as antecedents of firm survivorship. Moreover, we identified that environmental dynamism has no effect on effectuation-survivorship relationship. It means that effectuation helps in any environment, regardless of the level of dynamism. *Second*, we demonstrate that behavioral logic acts as a significant factor influencing SMEs ability to survive. Particularly, we deepen our understanding of the mechanisms underlying firm failure in challenging environments by looking at behavioral logics applied by managers of the most vulnerable entities – small and medium firms. We identified that effectuation positively influences SMEs survival in any environment (both dynamic and stable), through allowing for fast adaptation and maintaining the fit to the environment. On the other hand, causation leads to a higher mortality rate of SMEs in the context of pronounced economic crisis.

HYPOTHESES DEVELOPMENT

SMEs Survival and Behavioral Logic in Crisis Times

Firm survival can be considered as “ability to quickly recognize and seize opportunities, change direction, and avoid collisions” (McCann, 2004, p. 47). In order to survive in a long-term perspective, firms need to have a responding strategy to every unexpected event that could result from natural hazards, accidents, industrial competition or economic challenges (Herbane, 2019). It is supposed that large established firms survive better than small new firms due to their established relationship with stakeholders and access to resources (Aldrich & Auster, 1986; Singh, House, & Tucker, 1986). Liabilities of newness and smallness can be additional factors that influence higher failure rates of small firms (Lee et al., 2012). Small firms are unable to scale and have limited negotiation power with stakeholders (Aldrich & Auster, 1986), as well as a lack of financial resources that are of high importance in times of crisis. On the other hand, SMEs are perceived as more adaptive and flexible entities as they have little bureaucracy, ability to learn fast, close relationships with customers and partners, high responsiveness and rapid decision-making processes (Stokes, 2002; Vossen, 1998).

The causation approach sees the external environment as predictable and beyond the control of the decision-maker (Gabrielsson & Gabrielsson, 2013), it focuses on pre-established goals that are supposed to be achieved as a result of decision-making process. Focusing on causal behavioral logic, a firm may get stuck in the existing plans that are not aligned with fast-changing environment anymore. This, in turn, negatively influences the chances of a firm to survive by limiting adaptability to external contingencies. Effectuation, in contrast, is an action-oriented

approach to decision-making centered on available means that sees the future as unpredictable and relies on constant adaptation to the changing environments. Furthermore, effectual logic perceives the external environment as endogenous for decision-makers that is consistent with emergent and non-predictive strategies oriented towards control (Gabrielsson & Gabrielsson, 2013). Effectuation states on partnerships and co-creation of the surrounding environment with stakeholders and partners (Sarasvathy, 2001). This leads to more effective managing crises and increases the likelihood to survive in turbulent times.

We suppose firm survivorship can be explained by the level of variability of its performance, as high outcomes variability leads to a higher risk of failure particular in resource-constrained contexts (Parida, Lahti, & Wincent, 2016) such as economic crisis. Having the experimental nature of effectual behavioral logic and its focus on creative combination of scarce resources (Yu et al., 2018), we suppose it may have a negative impact on the likelihood of a firm survival during stable economic conditions as it causes higher performance variability. On the other hand, causation as a planning-based and predictability-oriented behavioral logic aims at producing stable outcomes for firms in stable conditions. However, in the crisis period we expect that effectuation will lead to higher survivorship of firms as it allows for faster adaptation to changing environment and flexible decision-making process. Causation, on the other hand, hinders firms' ability to demonstrate sustainable performance results in challenging contexts.

Based on the arguments presented, we postulate that:

H1: *Causation reduces the likelihood of firm survival during an economic crisis.*

H2: *Effectuation increases the likelihood of firm survival during an economic crisis.*

Environmental Dynamism As a Moderator in Behavioral Logic–Survival Relationship

Country-level economic crises often lead to a major downturn in an industry due to the unexpected and large-scale changes in the external environment. As a consequence, during these periods, many industries lose their ability to maintain growth (Castrogiovanni, 1991). These changes in industrial factors usually impact all the firms operating in that industry harming their productivity (Melin, 1985; Robbins & Pearce, 1992). Additionally, under such conditions, the level of dynamism in the external environment increases as the intensity of competition gets higher and customer demands change (Dess & Beard, 1984). All these factors influence the level of uncertainty in the external environment and speed of changes that both result in the inability to predict future and current outcomes of managerial decisions (Milliken, 1987).

Dynamic environments are characterized by the high intensity of changes that require fast adaptation to external forces. Coupled with the challenging nature of the economic crisis, such circumstances worsen the impact of causation as planning-oriented behavior and require the developing of creative and experimental strategies for efficient operation activities (Simerly & Li, 2000). Therefore, causal behavioral logic constrains the firm's ability to adapt and be flexible, which may adversely influence firm performance when competitive environment is highly dynamic. The effectuation approach, in turn, focuses on constant experimentation with available means to leverage any unexpected contingency and create new opportunities by adapting to environmental changes (Sarasvathy, 2001). Thus, effectuators embrace challenges generated by fast and non-predictable strategies of competitors in a firm's industry.

Following the presented arguments, we state that:

H3: *Environmental dynamism negatively moderates the association between causation and the likelihood of firm survival, so that rising levels of environmental dynamism reinforces the negative impact of causation on survival.*

H4: *Environmental dynamism positively moderates the association between effectuation and the likelihood of firm survival, so that rising levels of environmental dynamism reinforces the positive impact of effectuation on survival.*

METHOD

Our sample comes from the survey of Russian SMEs conducted during the period of pronounced economic crisis in the country. Participating firms were randomly selected based on state registration number with the usage of national database of registered entities SPARK-Interfax. The survey was conducted with the help of agency from September 2015 till February 2016. The final sample for this study consists of 490 firms.

The outcome variable, *firm survival*, assumes the value of 1 if the firm remained in active state (not closed/in liquidation/bankrupt) in three years, i.e., by the end of 2019. Out of 490 companies, 449 remained active in 2019; in other words, the three-year mortality rate in our sample is 8.37%.

In this study, we applied Chandler et al.'s (2011) approach for measuring *effectuation* (as a multidimensional construct) and *causation* (as a unidimensional construct). Effectuation was operationalized by the combination of affordable loss, experimentation and flexibility sub-dimensions measured with 7-point Likert scale. We used established scale for measuring our moderating variable – *environmental dynamism* (Miller & Friesen, 1982). As control variables, we used industry fixed effects, region fixed effects, company age, company size (logs of the number of employees, sales and assets in 2016), international sales, availability of human, financial and social capital, formalization and centralization levels.

RESULTS

For assessing the impact of predictors (effectuation/causation, moderator, controls) on the survival of SMEs, we employ logistic regression analysis (with 1 attributed to those firms remain active and 0 to firms that failed between 2016 and 2019).

We found causation negatively influences the likelihood of Russian SMEs survival, by increasing the failure risk for a firm: $b=-0.38$, $p=0.50$ (a unit increase in causation level reduces the odds of surviving by 32%). On the other hand, effectuation positively influences the chances of SMEs survival: $b=0.54$, $p=0.034$ (a unit increase in effectuation level increases the odds of survival by 72%). Both these findings support Hypotheses 1 and 2.

Next, we revealed the significant negative moderating effect of environmental dynamism on the link between causation and firm survival ($b=-0.29$, $p=0.014$). In other words, causation limits the adaptive ability of a firm, making it less likely to adjust to the highly dynamic environment during the time of economic crisis. This supported Hypothesis 3. At the same time, no interaction of dynamism and effectuation was detected ($b=-0.11$, $p=0.55$); hence, Hypothesis 4 is not supported.

DISCUSSION AND IMPLICATIONS

Findings

Since pioneering work on effectual principles and firm performance by Read, Song and Smit (2009) effectuation literature is trying to find appropriate dependent variables for effectuation and causation (Perry, Chandler, & Markova, 2012; McKelvie et al., 2013). Most prior studies investigated how both logics related to performance of a venture, leaving the question about long-term benefits of these behavioral strategies unanswered. For instance, McKelvie et al. (2013) found limited impact of use of effectuation and causation on new firms' long-term performance. In this study, we tried to explore more on possible long-term outcomes of both approaches. As a result, we identified that effectuation and causation not only are meaningful in longitudinal perspective but act as significant predictors of small firms' survival and/or failure.

Our findings revealed a positive influence of effectuation on SMEs survival in turbulent times of economic crisis on emerging market. It demonstrates the importance of effectual behavioral logic for long-term outcomes of small firms, especially under uncertain and challenging conditions. When the future is unpredictable, managers of SMEs try to control the surrounding environment with effectuation. We revealed that it truly works not only for performance of small and medium firms, but for even more important result for the whole economy –survival of these firms. What is more, this positive role of effectuation for firm survival does not depend on the level of perceived environmental dynamism by managers. Effectuation enhances SMEs survival chances in both low and high dynamic environments. In contrast, the level of dynamism is very important for causation-survival relationship. Causal logic, which negatively influence the likelihood of firm survival, harms SMEs even more when the level of environmental dynamism is perceived by managers as high. Thus, we proved that causation is not effective behavioral strategy in long-term perspective, particularly for small firms in challenging environments.

With these findings we add to effectuation literature confirming significant role of both behavioral logics for survivorship of small firms. Prior literature presented a number of propositions on the link between effectuation and survival of new firms' internationalization (see, Gabrielsson & Gabrielsson, 2013). Our study empirically identified the relationship between effectuation and causation and SMEs survival in unique conditions of economic crisis on emerging Russian market. Therefore, we proved that firm survival acts as one of the important dependent variables for effectuation and causation. With these findings, we contribute to effectuation theory identifying significant influence of both behavioral logics on firm survival as an important long-term organizational outcome.

Contribution

With this research, we contribute to the existing knowledge on outcomes of effectual and causal behavioral logics. Moreover, our findings show which factors may influence the overall economic development on account of increasing the amount of surviving small firms. Based on randomly formed sample, we showed that effectuation as flexible and control-oriented behavioral strategy helps SMEs to overcome deficiencies of uncertain environment of economic crisis and survive in long-term perspective regardless of the level of dynamism. At the same time, causation (planning-oriented strategy) doesn't help firms to adjust to changing environment and increase the likelihood of failure for SMEs on emerging market.

CONTACT: Anastasiia Laskovaia; a.laskovaya@gsom.spbu.ru; (T): +7951-677-0664; St. Petersburg University, Graduate School of Management, 3 Volkhovsky pereulok, St. Petersburg, 199004, Russia.