

# Strategic Choice and Firm Performance during COVID-19

**Albena R. Ivanova**  
*Robert Morris University*

**Marcel C. Minutolo**  
*Robert Morris University*

This paper aims to identify successful strategies for private companies to increase liquidity during times of crisis. We define four strategic choices based on an introduction and/or discontinuation of new products or services: cannibalization, retrenchment, expansion, or entrenchment. We use a micro data set from a worldwide survey of 10,349 companies conducted between April and September 2020 by the World Bank. Our results show that for most companies liquidity during COVID-19 decreased or at best stayed the same. Due to the pandemic, firms applied one of the four strategies, with the majority of the firms applying an intrench strategy. The Chi-square test was used to assess which strategy is associated with increased liquidity during the COVID-19 pandemic. Results indicate that liquidity increased or stayed the same for the companies using the expansion strategy, followed by cannibalization, intrench, and retrench strategies. Expansion and cannibalization strategies are both associated with the introduction of new products and/or services, suggesting that innovation is the key to surviving a pandemic crisis.

Keywords: crisis, crisis management, strategic choice, innovation, COVID-19

## Introduction

Duquesnois et al. (2010) build the argument that in times of crises some firms “will disappear, others will not be affected, while others will improve their performance” (p. 251). While it may seem tautological, the statement warrants additional consideration. Managers of firms will implement strategic choices in these periods that will result in the overall survival of the institution. In times of crisis, firms have four options: cannibalizing their existing offerings, retrenchment, intrenchment, or expansion. The COVID-19 pandemic has caused firms all across the world to face difficult competitive choices given strict government policies enforced to mitigate the spread. During the peak of the quarantine policies in the United States, unemployment rose to 13 percent as a result of businesses shutting down and laying off employees (U.S. Bureau of Labor Statistics, 2021). During this period, some organizations opted to offer new products or services; some discontinued operations altogether; and, still others offered their existing products or services in new ways. Firms found

different channels to deliver their products or services while others found new means for customers to access them.

The pandemic is, as Thompson (1995) stated, a crisis that has strained businesses' capacity to respond. The COVID-19 pandemic has caused a managerial crisis that differs significantly from well-understood systems where firms produce relatively known and continuous output while minimizing distinct and undesirable events (Schulman, 2021). Regardless of the policies that governments enacted during the pandemic, firms had to decide how to react. Small and medium enterprises (SMEs), compared to large enterprises, were under more pressure to survive, requiring them to respond effectively to the crisis (Birinchi, 2022). In their work on how prepared small businesses are to manage in times of crisis, Mikušová and Horváthová (2022) note the importance of understanding the strategic orientation of small and medium-sized enterprises during the economic crisis. Under such conditions, a firm might decide to update its offerings or organization (Briciu et al., 2012), innovate (Doern, 2017), be entrepreneurial or change its market orientation (Beliaeva et al. 2020). The current research is motivated by the behaviors that firms took in response to the crises caused by the pandemic. In this article, we employ Miles et al.'s (1978) framework to test firms' strategic responses. The framework proposed uses two dimensions: exploration and exploitation, wherein firms have four strategic responses to changes in market conditions: prospect, analyze, defend, or react. A prospector creates new products (high exploration) with high technology flexibility for rapid response facilitated by administration (low exploitation). An analyzer locates new products and opportunities (high exploration) while maintaining the same customer base (high exploitation). A defender creates a stable set of existing products without new products (low exploration) and focuses on the efficiency of the current process by maintaining strict administrative control (high exploitation). A reactor has no specific business approach and thus is the most undesirable strategy (low exploitation and low exploration) (Miles et al., 1978). The particular contribution of this work is in analyzing these strategic responses amid global crises.

In the remainder of this paper, we discuss the salient literature and then present our data and our approach to consider the relationship between this strategic choice typology. After the methods section, we present the results. Finally, we present a discussion of the results and potential implications as well as follow-up research that may be of value.

## Literature Review

### Strategic Choices

The explanatory framework proposed by Miles et al. (1978) identified four strategic choices: prospect, analyze, defend, or react. The first three choices may be viewed as positively adaptive behaviors in response to market conditions whereas the fourth is maladaptive behavior. In the context of this framework, prospectors develop new products or services in response to changes in the market. Defenders' choice in response to changing conditions is to "dig in" and maintain their market position which may come in the form of cost reductions. Those firms that choose an analyze strategy focus on two activities: learning and scanning. The analyzers are taking a "wait and see" approach keeping their strategy open and waiting to see how the market responds and looking for creativity. Finally, those who merely react find themselves constantly shifting, trying to stay afloat but without gaining any stability. Some have criticized this framework as an oversimplification of the strategy-structure relationship (Conant et al., 1990) but many claim that Miles et al. (1978)'s framework remains relevant (Desarbo et al., 2005; Hambrick, 1983; Kabanoff & Brown, 2008).

In response to the strict quarantine restrictions imposed on establishments, firms had to decide (i) to offer or not to offer new products or services and (ii) to keep or discontinue existing products or services. This is illustrated in Figure 1 where we model the strategic choice space. Those firms that

continue their existing offerings while introducing new ones do so at the risk of cannibalizing their existing products. These establishments are referred to as *prospectors*. Organizations that discontinue an offering while not introducing new products are retrenching; these firms are *reactors*. Firms that do not innovate or discontinue products are intrenching; they are the *defenders*. Finally, firms that discontinue a product and introduce a new product are expanding; they are the *analyzers*.

**Figure 1 - Graphic Representation of Strategic Choice Space**

Discontinued Product	Yes	Retrench (reactor)	Cannibalization (prospector)
	No	Intrench (defender)	Expansion (analyzer)
		No	Yes
		New Product	

**Liquid Assets Theory**

Liquid assets theory states that firms need to hold large amounts of liquid assets as reserves against possible demands for payment of depositors (Nzotta, 2004). Holding short-term assets under this theory is necessary as a buffer in the face of various uncertainties in business operations and the various needs of a firm. Nzotta (2004) states that the amount of liquid assets is dependent on a firm’s perceived needs, volatility of deposits, financial market conditions, and monetary policies of the government.

The response by governments around the world during the Covid-19 pandemic resulted in a large direct shock to corporate profits (Almeida, 2021). This shock increased risk for many firms resulting in a rise in the demand for liquidity from affected firms. Chebbi et al. (2021) found that as the daily number of new cases increased, stock liquidity decreased. In response to the increase in cases, governments around the world imposed lockdown restrictions to arrest the spread. Guerini et al. (2020) found that the lockdown triggered an unprecedented increase in the share of illiquid and insolvent firms in France. Amnim et al. (2021) found that the lockdown restrictions harmed liquidity in Nigeria. Analyzing 49 countries around the world, Zaremba et al. (2021) found that business and school closures resulted in the deterioration of liquidity broadly.

In response to liquidity challenges faced by firms during the pandemic, some countries issued long-term debt to increase cash holdings (Almeida, 2021) by providing access to stimulus and capital to prop up the firms. For instance, in the United States, the government provided the Paycheck Protection Program as forgivable loans as a means to provide payroll support allowing for greater liquidity (<https://www.sba.gov/funding-programs/loans/covid-19-relief-options/paycheck-protection-program>). Nonetheless, firms still needed to find a way to respond to the changing

purchasing patterns that resulted from government health policies. As suggested above, one strategic choice was to introduce new products or services for the market or to discontinue them to reduce risk. Formalizing the hypothesized relationship between each of the strategic choices in light of liquidity theory, we propose the following:

H1. Firms that introduced new products or services (expansion and cannibalization) will report more often an increase in liquidity compared to those who did not introduce new products or services (intrench and retrench)

H2. Firms that discontinue old products or services (retrench and cannibalize) will report a decrease in liquidity more often compared to those who did not discontinue old products or services (intrench and expansion)

The response “introduce new products or services” is thought to be a proactive, offensive response to the changes in the market when there is increased solvency. Conversely, the response “discontinue old products or services” is thought to be a reactive, defensive strategy in light of increased insolvency. In the following section, we introduce the proposed relationship between the strategic choice developed in the preceding section and liquidity as developed in this section.

### **Proposed Relationship between Strategic Choice and Liquidity**

One may argue that strategic choice and environmental determinism represent mutually exclusive, competing explanations of organizational adaptation. This research will explore the view of Hrebiniak and Joyce (1983) that strategic choice and determinism are independent. They demonstrate that the result is a typology of firm adaption where the interaction of choice and determinism can be described as natural selection, differentiation, strategic choice, and undifferentiated choice. This typology determines the decision space of strategic choices available to the firm. This typology fits well with the Miles et al. (1978) typology and aligns with the current work. In fact, under the conditions set by the COVID-19 restrictions, environmental determinism would directly affect firm behavior. However, strategic choice suggests that firms have volition as to how they respond.

As illustrated in Figure 1, one strategic choice that a firm has in the face of environmental determinism is to expand its product or service offering while continuing to offer what it had been offering in the past. This decision is Hrebiniak and Joyce’s (1983) strategic choice, what we call expansion. Under the same environmental conditions, some firms may discontinue a product or service thereby cannibalizing their current business, a differentiation choice. This leads us to the following hypotheses:

H3: Firms that use expansion will report an increase in liquidity more often than firms that use cannibalization

H4: Firms that use expansion will report an increase in liquidity more often than firms that intrench

Building on the previous line, firms have additional choices available to them. In addition to expansion and cannibalization, as illustrated in Figure 1, firms may decide to intrench or retrench. In the case of intrenchment, firms decide to “dig in” with their current offering and wait to see what the environment will do; this amounts to an undifferentiated choice. Finally, others may decide to cut out

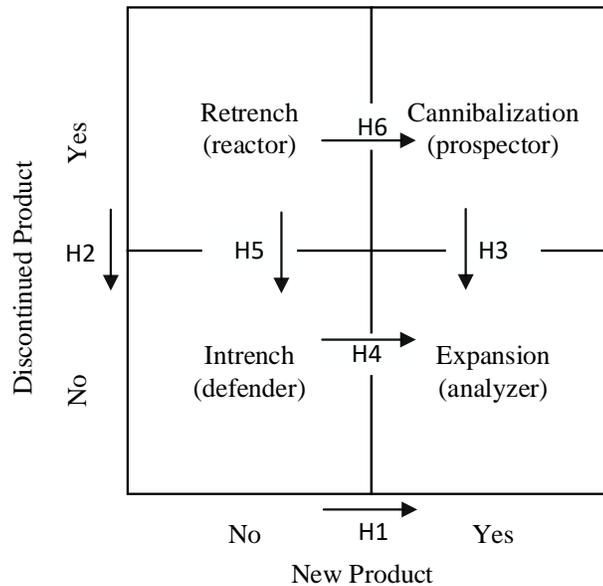
some of their offerings focusing on a small, core piece of their business. This approach amounts to retrenchment or, as Hrebiniak and Joyce (1983) state, natural selection. The cannibalization, expansion and intrench strategic choices correspond to prospector, analyzer, and defender as introduced by Miles et al. (1978). These three strategies are viewed as positively adaptive behaviors in response to market conditions, whereas the fourth strategy, retrenching (reactor) is a maladaptive behavior and thus should be avoided (Miles et al. 1978). This is a situation when the company’s top management does not have a specific business approach but rather tries to catch up with the market as the environment changes. Miles et al. (1978) suggest three reasons for this unstable strategic choice: (i) top management does not have a strategy; (ii) the organizational structure does not support the business strategy; and, (iii) top management maintains the old ways of doing things. This strategic choice is the way firms fail and will lead to the lowest performance. In line with this logic, we propose:

H5: Firms that intrench will report an increase in liquidity more often than firms that retrench

H6: Firms that cannibalize will report an increase in liquidity more often than firms that use retrench

We can expand on Figure 1 with the inclusion of the hypotheses. Figure 2 provides a summary of the hypotheses. The direction of the arrows illustrates the direction of increased liquidity.

**Figure 2** – Summary of hypotheses



In the next section, we present our data and methodological approach.

## Method

### Survey and Dataset

We source our data from The World Bank Open Data database (World Bank). The World Bank developed a Follow-up COVID-19 company survey to assess the impact of the COVID-19 pandemic on the global private sector. The Follow-up COVID-19 data is part of the Enterprise Survey that The World Bank conducts. This survey is a firm-level survey of a representative sample of an economy’s private sector. The survey targets companies with five or more employees and is answered by business owners and top managers. The Follow-up COVID-19 survey was carried out in 30 countries, but the number of interviews depends on the economy’s size, from 150 in small countries to 1200–1800 in large economies (Olczyk & Kuc-Czarnecka, 2021).

The World Bank had two rounds of follow-up surveys. Our research is based on data obtained during the second completed round, between June and September 2020. The topics covered include changes in sales, demand for products or services, supply of inputs, workforce, cash flow availability, and government support. The survey was conducted using mainly computer-assisted telephone interviewing (CATI), a telephone surveying technique in which the interviewer follows a script provided by a software application. Telephone interviews are supported by email for self-administration if needed. The exceptions are three African countries (face-to-face interviews) and Russia, where an online survey was applied (Olczyk & Kuc-Czarnecka, 2021).

Respondents to the survey cover micro, small, medium, and large enterprises from 30 countries including Europe, Asia, Africa, and Central America. A representative sample of the private sector excluding agriculture and extractive industries covers companies dealing in manufacturing (49.2%), retail (20.1%), and other services (30.8%). Small and medium-sized firms account for 60% of the sample in the manufacturing sector and almost 88% in retail. We present the descriptive statistics of the sample in Table 1 where we see that the largest number of respondents come from manufacturing.

**Table 1** - Descriptive Statistics of the Variables (N = 10,288)

<b>Respondents</b>	<b>Number</b>	<b>Percentage</b>
<b>Sector</b>		
Manufacturing	5,064	49.2
Other Services	3,156	30.7
Retail Services	2,068	20.1
<b>Size (by # of employees)</b>		
Micro (less than 10)	158	30.8
Small (10-49)	4352	42.5
Medium (50-249)	2141	20.9
Large (more than 250)	599	5.8
<b>Strategic Choice</b>		
Cannibalization	917	8.9
Retrench	1,187	11.5
Expansion	1,307	12.7
Intrench	6,817	66.3

Missing	60	0.6
<b>Liquidity</b>		
Increased	970	9.4
Remained the same	3,531	34.3
Decreased	5,728	55.7
Don't Know	59	0.6
<b>Introduced New Products or Services</b>		
Yes	2,230	21.7
No	8,011	77.9
Don't Know	47	0.5
<b>Discontinued Old Products or Services</b>		
Yes	2,107	20.5
No	8,128	79
Don't Know	53	0.5

## Measures

The strategic choice was measured by combining the answer to two questions. The first question asks the respondent if the company has introduced or discontinued new products or services. The second question asks the respondent if the company has seen an increase, decrease, or no change in liquidity.

The analysis covers survey data obtained from the World Bank's Enterprise Surveys - COVID-19 Survey, Round 2 from 2021 (Enterprise Survey, 2021). The research sample includes 10,288 companies from 30 countries. However, it should be noted that not all respondents answered every question; hence, the number of observations at individual stages of the analysis may differ. The Chi-Square test was used to determine the differences between the expected and the observed values of the variables of interest for different strategic choices.

## Results

In this section, we present the results of our analysis. In each section, we test the hypothesis developed earlier using the chi-square test of homogeneity. Franke et al. (2012) state that the chi-square test of homogeneity is often used to compare two or more conditions on a categorical outcome. Given the nature of the survey and the responses of the participants, our data is categorical, and as such this test statistic is appropriate.

### New Products or Services and Liquidity

The first hypothesis (H1) states that firms that introduced new products or services, a form of innovation during the crisis, will report an increase in liquidity. The null hypothesis is that there is no relation between the introduction of new products or services and a change in liquidity. The expected counts presented in Table 2 are the counts in case the null hypothesis were valid. The observed counts (listed only as "Counts" in the table) report the actual counts of companies in each cross-tabulation category. For example, if there is no relationship between new products/service

introduction and liquidity, we would expect to have 209 companies that report an increase in liquidity, 762 will report no change in liquidity, and 1,241 will report a decrease in liquidity. However, we observe that these numbers are different. In particular, the number of companies that introduced new products and services and reported an increase in liquidity ( $n = 399$ ) was higher than the expected count ( $n = 209$ ). The number of those who introduced new products and services and did not observe a change in liquidity ( $n = 682$ ) was lower than the expected count ( $n = 762$ ). The number of those who introduced new products and services and reported a decrease in liquidity ( $n = 1126$ ) was lower than the expected count ( $n = 1241$ ). The Pearson chi-square statistic for this test is 247.50 ( $p < 0.001$ ), which leads to a rejection of the null hypothesis and the conclusion that there is a significant correlation between new products and services introduction and change in liquidity. The conclusion is that companies who introduced new products and services reported an increase in liquidity more often than expected and companies who did not introduce new products and services reported an increase in liquidity less often than expected. This provides support for Hypothesis 1.

**Table 2** - Cross Tabulation Results for New Product Introductions and Change in Liquidity

		<b>Liquidity/Cash Flow Change</b>					
			<b>Don't know</b>	<b>Increased</b>	<b>Remained the same</b>	<b>Decreased</b>	<b>Total</b>
Introduced new Products or services	Yes	Count	17	399	682	1126	2224
		Expected Count	12	209	762	1241	2224
	No	Count	37	563	2823	4581	8004
		Expected Count	42	753	2743	4466	8004
Total		Count	54	962	3505	5707	10228
		Expected Count	54	962	3505	5707	10228

Note: The Chi-Square test was significant at 0.001

### Discontinuation of Old Products or Services and Liquidity

Our second hypothesis states that firms that discontinue old products or services will report a decrease in liquidity more often as compared to those that do not. The results from the analyses presented in Table 3 reveal that the number of those who discontinued old products or services and reported a decrease in liquidity ( $n = 1512$ ) was higher than the expected count ( $n = 1176$ ). Similarly, the number of those who did not discontinue old products or services and reported a decrease in liquidity ( $n = 4201$ ) was lower than expected ( $n = 4537$ ). The Pearson chi-square statistic for this test is 342.05 ( $p < 0.001$ ), which leads to a rejection of the null hypothesis and the conclusion that there is a significant relationship between the discontinuation of old products or services and the change in liquidity. Companies who discontinued old products or services reported a decrease in liquidity more often than expected and companies who did not discontinue old products or services reported a decrease in liquidity less often than expected. This provides support for Hypothesis 2.

**Table 3** - Cross Tabulation Results for Discontinued Products or Services and Change in Liquidity

		<b>Liquidity/Cash Flow Change</b>					
			<b>Don't know</b>	<b>Increased</b>	<b>Remained the same</b>	<b>Decreased</b>	<b>Total</b>

Discontinued products or services	Yes	Count	20	202	373	1512	2107
		Expected Count	11	198	722	1176	2107
	No	Count	34	760	3133	4201	8128
		Expected Count	43	764	274	4537	8128
Total		Count	54	962	3506	5713	10235
		Expected Count	54	962	3506	5713	10235
Note: The Chi-Square test was significant at 0.001							

**Expansion Versus Cannibalization and Liquidity**

Our third hypothesis states that firms that use expansion will report an increase in liquidity more often than firms that use cannibalization. The results from the analyses presented in Table 4 reveal that the number of those who chose expansion and reported an increase in liquidity (n = 252) was higher than the expected count (n = 235). Similarly, the number of those who chose cannibalization and reported an increase in liquidity (n = 147) was lower than expected (n = 165). The Pearson chi-square statistic for this test is 105.21 ( $p < 0.001$ ), which leads to a rejection of the null hypothesis and the conclusion that there is a significant correlation between expansion and cannibalization, and the change in liquidity. Companies who chose expansion reported an increase in liquidity more often than expected and companies who chose cannibalization reported an increase in liquidity less often than expected. This provides support for Hypothesis 3.

**Table 3 - Cross Tabulation Results for Cannibalization and Expansion and Change in Liquidity**

			Liquidity/Cash Flow Change				
			Don't know	Increased	Remained the same	Decreased	Total
Strategic Scope	Cannibalization	Count	11	147	186	573	917
		Expected Count	7	165	281	464	917
	Expansion	Count	6	252	496	553	1307
		Expected Count	10	235	401	662	1307
Total		Count	17	399	682	1126	2224
		Expected Count	17	399	682	1126	2224
Note: The Chi-Square test was significant at 0.001							

**Intrench Versus Expansion and Liquidity**

Our fourth hypothesis states that firms that use expansion will report an increase in liquidity more often than firms that use intrench. The results from the analyses presented in Table 5 reveal that the number of those who chose an expansion and reported an increase in liquidity (n = 252) was higher than the expected count (n = 122). Similarly, the number of those who intrenched and reported an increase in liquidity (n = 508) was lower than expected (n = 638). The Pearson Chi-square statistic for this test is 190.67 ( $p < 0.001$ ), which leads to a rejection of the null hypothesis and the conclusion that there is a significant correlation between expansion and intrench and the change in liquidity. Companies who chose expansion reported an increase in liquidity more often than expected and companies who intrenched reported an increase in liquidity less often than expected. This provides support for Hypothesis 4.

**Table 5** - Cross Tabulation and Chi-square Results for Expansion and Intrench and Change in Liquidity

		<b>Liquidity/Cash Flow Change</b>					
			<b>Don't know</b>	<b>Increased</b>	<b>Remained the same</b>	<b>Decreased</b>	<b>Total</b>
Strategic Scope	Expansion	Count	6	252	496	553	1307
		Expected Count	6	122	504	675	1307
	Intrench	Count	28	508	2636	3645	6817
		Expected Count	29	638	2628	3523	6817
Total		Count	34	760	3132	4198	8124
		Expected Count	34	760	3132	4198	8124

Note: The Chi-Square test was significant at 0.001

### **Intrench Versus Retrench and Liquidity**

Our fifth hypothesis states that firms that intrench will report an increase in liquidity more often than firms that retrench. The results from the analyses presented in Table 6 reveal that the number of those who intrenched and reported an increase in liquidity ( $n = 508$ ) was higher than the expected count ( $n = 480$ ). Similarly, the number of those who retrenched and reported an increase in liquidity ( $n = 55$ ) was lower than expected ( $n = 84$ ). The Pearson Chi-square statistic for this test is 278.38 ( $p < 0.001$ ), which leads to a rejection of the null hypothesis and the conclusion that there is a significant correlation between intrench and retrench and the change in liquidity. Companies who intrenched reported an increase in liquidity more often than expected and companies who retrenched reported an increase in liquidity less often than expected. This provides support for Hypothesis 5.

**Table 6** - Cross Tabulation Results for Retrench and Intrench and Change in Liquidity

		<b>Liquidity/Cash Flow Change</b>					
			<b>Don't know</b>	<b>Increased</b>	<b>Remained the same</b>	<b>Decreased</b>	<b>Total</b>
Strategic Scope	Retrench	Count	9	55	187	936	1187
		Expected Count	6	84	419	679	1187
	Intrench	Count	28	508	2636	3645	6817
		Expected Count	32	480	2404	3902	6817
Total		Count	37	563	2823	4581	8004
		Expected Count	37	563	2823	4581	8004

Note: The Chi-Square test was significant at 0.001

### **Retrench Versus Cannibalization and Liquidity**

Our sixth hypothesis states that firms that use cannibalization will report an increase in liquidity more often than firms that retrench. The results from the analyses presented in Table 7 reveal that the number of those who chose cannibalization and reported an increase in liquidity ( $n = 147$ ) was higher than the expected count ( $n = 88$ ). Similarly, the number of those who retrenched and

reported an increase in liquidity (n = 55) was lower than expected (n = 114). The Pearson Chi-square statistic for this test is 96.36 ( $p < 0.001$ ), which leads to a rejection of the null hypothesis and the conclusion that there is a significant correlation between cannibalization and retrench and the change in liquidity. Companies who chose cannibalization reported an increase in liquidity more often than expected and companies who retrenched reported an increase in liquidity less often than expected. This provides support for Hypothesis 6.

**Table 4** - Cross Tabulation Results for Cannibalization and Retrench and Change in Liquidity

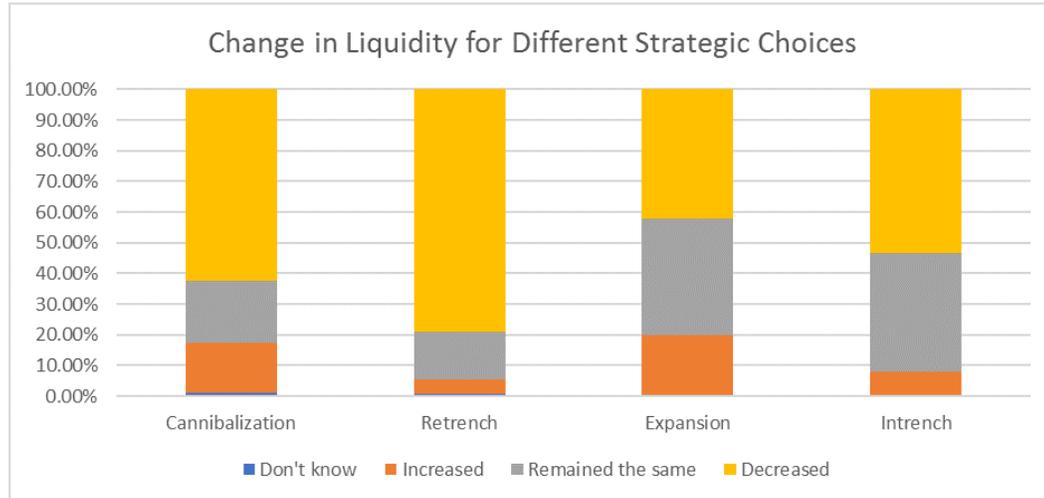
		<b>Liquidity/Cash Flow Change</b>					
			<b>Don't know</b>	<b>Increased</b>	<b>Remained the same</b>	<b>Decreased</b>	<b>Total</b>
Strategic Scope	Cannibalization	Count	11	147	186	573	917
		Expected Count	9	88	163	658	917
	Retrench	Count	9	55	187	936	1187
		Expected Count	11	114	210	851	1187
Total		Count	20	202	373	1509	2104
		Expected Count	20	202	373	1509	2104

Note: The Chi-Square test was significant at 0.001

## Results

Results suggest that, overall, expansion is the best strategic choice during a pandemic crisis. The results from the analysis provide a comparison of the four strategic choices and their impact on liquidity. As illustrated in Figure 2, expansion was associated with the highest percentage increase in liquidity and the lowest percentage decrease in liquidity. Combination of “Remained the Same” and “Increased”, the two best outcomes during a crisis, is highest in the expansion. While firms may want to grow, during a time of crisis they may satisfice with at least not declining. Hence, the best strategic choice overall is expansion. On the other hand, the retrench choice was associated with the lowest percentage increase in liquidity and the highest percentage decrease in liquidity. The combined total of “Increased” and “Stayed the Same” for the intrrench strategy was lowest across the board. Therefore, digging one’s feet in is not a good choice given the results here.

**Figure 3 - Changes in Liquidity by Strategic Choice**



When comparing cannibalization and intrench choices, we observe an interesting phenomenon. Cannibalization is associated with both a higher percentage increase in liquidity and a higher percentage decrease in liquidity at the same time. This implies that some companies that chose a cannibalization strategy can increase their liquidity, whereas others failed in execution. With cannibalization, the company discontinues an old product and introduces a new product. As there is a risk associated with this decision, two outcomes are possible. The first possibility is for the new product to be successful, in which case the company will increase its liquidity. The second possibility is for the new product to fail, in which case the company will decrease its liquidity. As there is no support from the old production, the company takes the risk of possible failure. Thus, cannibalization is a risk-taking strategic choice.

In intrench, the company continues the production of the old product, without introducing any new products. The percentage of companies reporting an increase or decrease in liquidity is smaller compared to cannibalization. The percentage of companies reporting no change in liquidity is higher compared to cannibalization. This is the risk-averse strategic choice.

### Conclusions

The findings of the study provide support for all six of the hypotheses provided earlier in the article. The findings indicate that the company’s strategic choice during the COVID-19 pandemic impacts performance as measured by liquidity. Companies that chose the proactive response to COVID-19 by introducing new products or services outperformed those that did not (consistent with Hypothesis 1). Companies that chose a reactive response to Covid-19 by discontinuing old products decreased their liquidity compared to those who did not discontinue old products (Hypothesis 2). Further, companies who decide to introduce new products and keep the old production/service lines – expansion – reported more often an increase in liquidity compared to those who introduce new products but discontinue the old products/services – cannibalization (Hypothesis 3). Similarly, companies who decide to keep old products/services and to introduce new products – expansion – report more often an increase in liquidity compared to those who kept the old products/services and did not introduce new products/services - intrench (Hypothesis 4). In addition, companies who decided to keep old products/services and not introduce new products – intrench – report more often

an increase in liquidity compared to those who discontinued old products/services and did not introduce new products/services - intrench (Hypothesis 5) Finally, companies who decide to discontinue the old products/services and to introduce new products - cannibalization, report more often increase in liquidity compared to those who discontinue the old products/services and did not introduce new products/services – retrench (Hypothesis 6).

Our study provides empirical evidence to test the framework proposed by Miles et al. (1978). The results show that a proactive approach to market changes is in general associated more often with improved firm performance, compared to a reactive approach. New products or service introduction is associated with an increase in liquidity in general; however, there is a risk when trying to be proactive, without having the support of the old products and services, in which case liquidity may decrease. The findings of this study resonate with the claims of Desarbo et. al (2005) and Kabanoff and Brown (2008) that the proposed framework is still relevant.

There are some limitations related to the research. The survey does not include countries from the United States, Canada, Western European countries, and Japan, which are all high-income, developed countries. For this reason, we cannot compare the performance of the firms in developed and developing countries. It is also not possible to evaluate the performance of firms in specific sectors, which may impact performance as well as the strategic choice of a firm. Additionally, we use cross-sectional data and cannot evaluate performance over time. COVID-19 restrictions went through different stages over time with temporarily lifting the restrictions in late spring 2020 and re-introducing them again during the second COVID-19 wave in the fall of 2020, followed by a third wave in the spring of 2021. Finally, as noted by Mikušová & Horváthová (2020), restrictions were not imposed uniformly around the world. Therefore, further research is needed to evaluate the longitudinal impact of COVID-19 on firms' strategic choices and performance with respect to sanctions. A follow-up study in the future could provide evidence of the validity of the model in a post-pandemic environment.

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