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Deferring cash commitments to mitigate COVID-19 impact on the service sector: a case study of a transition economy

Ömer Tuğsal Doruk
Department of Business, Finance Chair,
Adana Alparslan Turkes Science and Technology University, Adana, Turkey

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Abstract

Purpose – This study aims to use a comparative analysis to examine the channel of deferring cash commitments, which can be seen as a strategic solution to mitigate the impact of COVID-19 on Moldova's service sector.

Design/methodology/approach – This paper uses the Oaxaca–Blinder decomposition analysis. The World Bank's post-COVID-19 survey is used. The methodology takes into account heterogeneity among firms.

Findings – The results of the Oaxaca–Blinder decomposition analysis show that service firms use deferred cash commitments more than industrial firms, corporate governance and their pandemic-related strategies are also effective in the post-COVID Moldovan economy. The results are robust to different modeling alternatives.

Originality/value – COVID-19 can be considered a key source of uncertainty for firms, especially those operating in economies where financial frictions occasionally occur in a transition economy. Therefore, this study can shed new light on the impact of COVID-19 on financial strategies in a transition economy.

Keywords Oaxaca-Blinder decomposition, COVID-19, Moldavian economy, Services sector, Cash commitments, Comparative analysis

Paper type Research paper

1. Introduction

According to WHO (2020), COVID-19 is a pandemic disease and has a high baseline spread value (R0) (see Lin *et al.*, 2020). In the current literature, the impact of the pandemic can be reduced by reducing human mobility within a country (Kraemer *et al.*, 2020). However, for companies, such a reduction in mobility or closure is associated with financial problems. Firms may face cash flow shortages due to demand shocks, and such changing conditions force firms to take financial action. Service firms sell intangible goods and services, most of which are in direct contact with customers and consumers (Normann, 1984). During the COVID-19 illness, service firms are exposed to one of the most constrained sectors due to this interaction (Williams and Kayaoglu, 2020).

Therefore, this study combines three strands of current literature. First, the study addresses the relationship between financial strategy and COVID-19 disease under the influence of lockdown. This strand sheds new light on this relationship for the service sector.

JEL Classification — G15, G18, Q54

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The second strand is that this study focuses on service firms with a comparative analysis. In other words, this study provides insight into the link between financial strategy and COVID-19 by using a comparative approach. Here, the basic industry is selected as the industry sector, and we try to compare the two sectors. Third, and not least, this study focuses on a transformation economy. In the current literature, countries that separated from the Union after the collapse of the Soviet Socialist Republic are considered to be undergoing a "hard" transition from socialism to capitalism (see Kolodko, 1999). In this context, the level of financial development and the deepening of capital markets in these countries are very low (World Bank, 2020). Therefore, we also focus on a transition economy where capital market deepening and financial development levels are very weak to investigate the relationship between COVID-19 and service firms' financial strategy. We choose the item of "cash commitments" as the financial strategy for service enterprises because cash commitments are a very strict financial variable that forces enterprises to make their immediate cash debts and payments. Therefore, this study has the potential to contribute to the current literature by using these three strands, to the extent that the authors know that this study has some novelties for the current literature. First, to the best of our knowledge, this study is the first study to examine financial strategies in the post-COVID-19 period for a transition economy. Second, this study is also among the first studies to use the cash obligation channel as a financial strategy during financial turmoil for service firms. Third, this study provides a novel and comparative approach to find out how service firms differ from industrial firms during the financial turmoil.

There are studies that examine the impact of the pandemic on corporate finance at various levels. Among these studies, corporate performance and governance studies mostly aim to mitigate the impact of the pandemic (Mathew and Sivaprasad, 2020; Patel and Patel, 2020; Sawalha, 2020; Liu *et al.*, 2020; Maritz *et al.*, 2020; Doruk *et al.*, 2021; Castro and Zermeno, 2020). At the same time, Hossain *et al.* (2022), in their literature review that includes 188 pandemic-oriented studies, find that the majority of SMEs have cash flow problems. Similarly, Felicetti *et al.* (2022) in their literature review of 193 studies mention that corporate social responsibility has come to the forefront in the context of total quality management and that there is a literature that emphasizes the role of the relationship between total quality management and CSR in strategic decision making and financial performance. Wong *et al.* (2023) analyzed 566 tourism studies and found that the majority of this literature focused on crisis management for the tourism sector, which is an important service sector. Similarly, Iyer and Simkins (2022) analyzed 81 financial studies and found that the majority of financial studies on the pandemic focused on asset prices and stock markets. Padhan and Prabheesh (2021), on the other hand, found that financial markets and macroeconomic studies stood out in the pandemic literature, according to a large-scale pandemic literature review. At the same time, Ke (2021), Zheng (2022), Huang and Farboudi Jahromi (2021), Carter *et al.* (2022), Liu *et al.* (2020), Shen *et al.* (2020), Xiong *et al.* (2020), Doruk *et al.* (2021), Hu and Zhang (2021), and Størdal *et al.* (2021) found that cash flow or leverage had significant effects on firm dynamics during the pandemic period. At the same time, Seržantė and Pakalka (2022) found in the pandemic literature on transition countries that the service sector in the Lithuanian economy was strongly affected by the pandemic based on macro indicators. Therefore, it can be stated that the existing literature shows that there are few studies in the field of corporate finance on the pandemic and most of these studies focus on issues such as strategic financing management due to the problems during the pandemic period. However, the topic of cash commitments, which is the subject of this study, is actually an old but little-researched topic. Of course, cash flow management is often an issue during the pandemic period, but it is interesting to note that, to the author's knowledge, there is no research on this topic. With this in mind, this study contributes to the existing literature by addressing firm-level obligations, such as cash commitments and bankruptcy risk increases, and by indicating that it was very

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difficult for firms to meet these cash commitments during the pandemic period. We use an efficient and useful decomposition method of Oaxaca–Blinder (see Oaxaca, 1973; Blinder, 1973) that accounts for the unobservable effects that are usually omitted in regression analysis to perform a comparative analysis. Here, we use the World Bank follow-up survey COVID-19 for the Moldovan economy, which consists of more than 200 firms. Thus, the existing literature clearly shows that the present study adds new insights to the existing literature by using the cash obligation channel.

2. Hypothesis development: dependence to internal finance that is a fundamental financial problem for the transition economies

Current literature emphasizes that institutional transformation in transition countries falls short of the desired level (see Bonin *et al.*, 2003). Therefore, given the low level of institutional transformation, the lack of financial development is still a problem for companies operating in transition countries (World Bank, 2020). In transition countries, the stock market is illiquid and not deep enough. Therefore, bank-oriented financial development is the main anchor for the financial-growth nexus (de Haas and Peeters, 2006; Estrin and Mickiewicz, 2010), and there are occasional rent-oriented (or corruption-based) transactions and informal markets in transition countries (Bonin *et al.*, 2003; Durnev *et al.*, 2004). In addition to the bank-oriented system, weak corporate governance, low market capitalization, and low investor protection indicate that the stock market has little depth (Bonin *et al.*, 2003; Pistor *et al.*, 2000). de Haas and Peeters (2006) find that the capital structure of firms in transition economies is mainly related to internal financing, and Estrin and Mickiewicz (2010) find that external financing is still a problem for firms in transition economies because of the lack of institutional development and financial deepening. During COVID-19, under these circumstances, the crucial financial strategy for enterprises is to increase or maintain their internal financing levels to mitigate the bottlenecks and liquidity problems created by COVID-19 in the Moldovan economy. Ndikumana (1999) shows that cash commitments are one of the most important constraints to firms' internal financing. Cash commitments reduce a firm's internal financing cash flow. The relationship between uncertainty and internal financing is particularly emphasized by Kalecki (1937), Keynes (1936) and Minsky (1977). Therefore, cash commitments must be reduced to maintain internal financing during periods of uncertainty, such as COVID-19. Such effects of cash commitments are also seen in the leverage-based literature (the link between leverage and cash flow). Ndikumana (1999) highlights the role of leverage in choosing financing under financial imperfections.

In addition to the financial aspects, a brief snapshot of the Moldovan economy is also necessary to understand the role of the service sector in economic development. As we emphasize that institutional transformation is an arduous task for economic development in transition countries, the problems of low specialization or lack of human capital can have an impact on the deindustrialization process in the Moldovan economy (European Training Foundation, 2011). The lack of human capital is, of course, due to population-related problems. A massive out-migration of the expatriate population, as Goerlich and Trebesch (2008) point out. Given the deindustrialization process, the service sector therefore plays an essential role in the economic performance of the Moldovan economy.

During the period of COVID-19, we must emphasize that service companies are in a dangerous segment because they provide intangible sources to customers and closure can limit their income. According to the study COVID-19 (Boston Consulting Group, 2020) by the Boston Consulting Group (BCG), service companies are counted among the fragile companies.

This study is timely because, as we know, a global pandemic disrupts the economic cycle. Such a topic has aroused considerable interest in the service industry as well as in other industries. In the Moldovan economy, the service sector accounts for a significant share of

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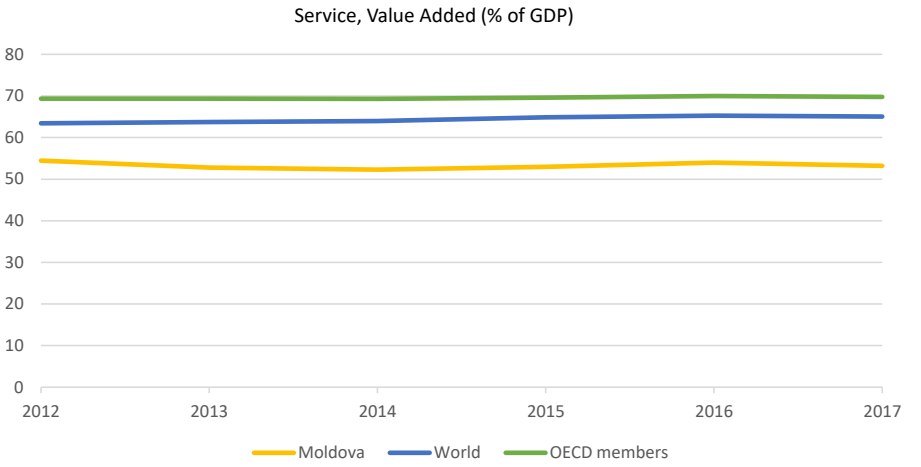
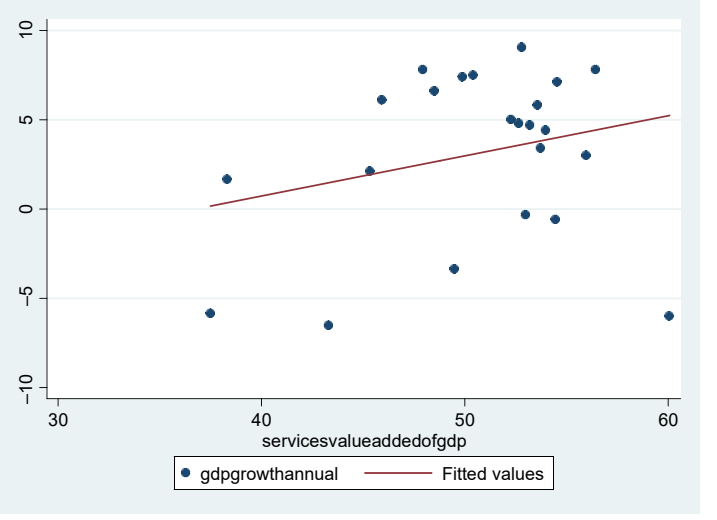


Source(s): World Bank, WDI (2020)

Figure 1.
Value-added of the services sector as of GDP (%) in Moldova with a comparison of World and OECD average

GDP. As can be seen in Figure 1, globally, the services sector accounts for more than 50% of the value added to GDP. More than half of the contribution to GDP in the Moldovan economy comes from the services sector.

Figure 2 shows the relationship between services sector value added and real GDP per capita for the Moldovan economy in 1992 and 2019.



Note(s): Servicesvaluaddedofgdp defines that the value-added of the service sector as of GDP, %. gdpgrowthannual defines that the annual real GDP growth, %

Source(s): Authors' estimations based on World Bank WDI (2020)

Figure 2.
Link between service sector and growth in the Moldavian economy, 1992–2019

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The COVID-19 financial economics literature focuses mainly on the stock market-related literature. This study, therefore, fills a significant gap in the current literature by highlighting the importance of the relationship between cash deferral and uncertainty during COVID-19 for the services sector using a comparative analysis in a transition economy.

Nearly one-fifth of businesses likely succumbed to the economic shock caused by the required set-aside in the service sector. Annual sales in the service sector have declined by an average of 53.6% compared to the same period. Companies have already deferred payments to cope with the drop in sales. More than 45% of companies have been forced to defer payments to suppliers.

Government assistance programs need to expand their reach. According to the survey, only about 3% of businesses have already received or expect to receive government assistance. Twenty-seven percent of businesses believe they are not eligible for assistance, while 23% are not even aware of available business assistance programs. To date, large businesses have benefited disproportionately from government assistance. Most of the assistance to date has been in the form of tax relief – tax deferrals or tax abatements, followed by loan payment deferrals.

In November 2020, nearly 90% of businesses reported that they had experienced a decline in liquidity or cash flow since COVID-19 began, and an increasing number of businesses have had to defer payments. However, only 6% of the firms surveyed, mostly medium and large companies, have received or expect to receive government assistance since the pandemic began. Of those surveyed, 31% of firms in Moldova did not know that assistance was available, while 22% did not qualify. Although the percentage of firms receiving assistance has doubled since May 2020, it remains the lowest in Europe and Central Asia.

The COVID-19 pandemic in Moldova spread from 07 March 2020, when 2 cases were confirmed. One month later (April 14, 2020), 1,712 cases were reported, and today (January 4, 2021), there are about 145,873 cases, including 3,037 deaths (Worldometer, 2020). In light of this crisis, a public health emergency has been declared for the country until June 30, 2020, and foreigners and stateless persons have been banned from entering Moldovan territory until that date. Regular air services and intercity travel were suspended. Among other measures, the government introduced containment in four districts and some institutions/buildings in Chisinau, namely, the granting of tax breaks to businesses and individuals and the deferral of interest on loans. In addition, government grants to cover social and health insurance contributions and other taxes were announced for businesses that have ceased operations due to the pandemic, and a number of additional socioeconomic measures to support the population and businesses during the state of emergency were approved on April 21. In addition, lessons for households without Internet access were filmed and televised throughout September. On March 24, a presidential decree was signed calling on the national army to assist the police in policing public places and to provide military doctors and hospitals.

Given the above information on Moldova's economy, debt payments reduce financial sources due to obligations to a relevant counterparty. Ndikumana (1999) argues that cash commitments reduce the sustainability of investment opportunities. The firm has such obligations that can defer its cash payments if its cash flows are not sufficient to sustain its operations. Service companies may suffer from COVID-19 lockdowns as social distancing may affect the cash flows of service companies. In addition, the companies with higher debt-to-equity ratio suffer greatly from the lockdown effect. The main objective of this study is to test the hypothesis that the manufacturing and service sectors differ in their use of cash commitments to mitigate the effects of COVID-19. Although both service firms are more exposed to the lockdown effect and declining mobility than manufacturing firms, they can use deferral of their cash commitments. Since cash commitments have a significant and negative impact on cash flow, we expect service companies to defer their cash commitments.

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Thus, deferral is higher than for industrial firms because deferral may limit their personal or consumer sales. Therefore, the central hypothesis of this study can be defined as follows:

H1. Service firms defer cash commitments more than industrial firms as they mitigate the impact of the standstill due to COVID-19 in the Moldovan economy.

The sub-hypotheses of this study are presented below:

H1a. The effect of gender differences on deferring cash commitments due to COVID-19 is more influential for service firms than for manufacturing firms.

H1b. The firms that do not switch their services or products to COVID-19 postpone their cash commitments more than their manufacturing counterparts.

H1c. The firms that do not use online delivery or service line shift their cash commitments more than their industrial counterparts.

3. Data and methodology

3.1 Dataset

We use a dataset consisting of the World Bank follow-up survey on COVID-19 and the Doing Business enterprise-level survey conducted in 2019 for businesses in the Moldovan economy. The survey is part of the World Bank's renowned Business Surveys and is very useful for analyzing the impact at the enterprise level of COVID-19. The survey for the Moldovan economy consists of 360 companies. These firms are active in both industry and services. This database summarizes the main fiscal measures announced or taken by governments in selected economies in response to the COVID-19 pandemic (as of March 17, 2021). It includes COVID-19 measures since January 2020 and covers measures to be implemented in 2020, 2021 and beyond.

3.2 Methodology: Oaxaca–Blinder decomposition

In the present study, we use the Oaxaca–Blinder decomposition analysis based on Oaxaca (1973) and Blinder (1973). The main objective of the Oaxaca–Blinder decomposition analysis is to determine the mean differences between groups. The mean differences can be determined in the statistical analysis using the *T*-test (we also report the results of the *T*-test as a preliminary analysis); however, the Oaxaca–Blinder decomposition analysis does not account for observable effects of some covariates. The Oaxaca–Blinder decomposition also relaxes some limitations based on the OLS or *T*-test. Some categories or binary variables may exhibit collinearity with the regressors and are, therefore, usually excluded from the regression analysis (Oaxaca and Ransom, 1999). In the Oaxaca–Blinder decomposition analysis, two groups are generally formed to compare differences in their means.

In this study, the companies operating in the industrial sector and in the service sector were examined:

$$R = E(Y_A) - E(Y_N) \tag{1}$$

where E(Y) denotes the expected value of the outcome variable [E(Y) = the deferral of cash commitments in the present study], and the linear model can be defined as follows:

$$Y_{\in} = X'_{\in}\beta_{\in} + \varepsilon_{\in}, E(\varepsilon_{\in}) = 0, and \in (A, B) \tag{2}$$

where X denotes the covariates, and constant, β is slope parameters for covariates, and intercept, ε is the error term of the regression.

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The mean difference between the groups is expressed as follows:

$$R = E(Y_A) - E(Y_B) = E(X_A)'\beta_A - E(X_B)'\beta_B \quad (3)$$

where Y_A and Y_B are the cash commitments of services firms, and industrial firms, respectively.

In the Oaxaca–Blinder decomposition, the mean differences between the two groups are estimated into the explained part and unexplained parts. In the Oaxaca–Blinder decomposition, the unexplained part considers the unobservable predictors. The unobservable predictors are controlled by using the unexplained part estimation in the decomposition analysis.

3.3 Econometric model

For the decomposition analysis, we use the econometric model that is defined as follows:

$$Cashcom_i = \beta_0 + \beta_1 demandshock_i + \beta_2 firmage_i + \beta_3 tempclose_i + \beta_4 firmsize_i + \varepsilon_i \quad (4)$$

where Cashcom denotes the deferred cash commitments, demandshock denotes the demand shocks that the firm faces if any, firmage denotes the age of the firm, tempclose denotes the temporary close due to COVID-19 and firmsize denotes the firm size, which is measured as the natural logarithm of total employees. Cashcom is measured as if a firm defers their payments to suppliers or employees, the value takes 1, and otherwise 0. Demand shock takes 1 if a firm faces a decrease in the demand for this establishment's products and services.

We expect that $\beta_1 > 0$, $\beta_2 \leq 0$, $\beta_3 > 0$, and $\beta_4 \leq 0$.

For testing the hypotheses, we also use different firm classifications. First, we pick if a firm has a female manager 1, otherwise 0, to represent the female manager variable. Second, we also construct a dummy variable if a firm does not prefer to convert either their service line or product line. Third, we also construct a dummy variable if a firm does not prefer to use an online delivery system. The descriptive statistics are given in Table 1.

4. Estimation results

Table 2 shows the mean differences between manufacturing and service firms in terms of payment deferral according to the results of the *T*-test. We find that service firms are more likely to defer cash commitments than their manufacturing counterparts. Older firms in service firms defer their cash commitments more than their manufacturing counterparts. Female and male managers of service firms defer their cash commitments more than manufacturing firms controlled by female and male managers, respectively. In addition, the means show that firms controlled by female managers use the cash obligation channel more than firms controlled by male managers in the service sector. The results are statistically significant at the 5% statistical significance level, except for the comparison with the younger

Variable	Obs	Mean	Std. Dev	Min	Max
Cashcom	229	0.3275109	0.4703334	0	1
Firmage	359	19.45682	10.54693	3	76
Firmsize	260	3.179464	1.436165	0	7.82
Demandshock	283	0.8091873	0.3936378	0	1
Tempclose	245	0.4489796	0.4984083	0	1

Source(s): Figure by the author

Table 1.
Descriptive statistics

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Table 2.
Preliminary findings: *T*-test results for mean differences in cash deferral between manufacturing and services firms: selected channels

Cash deferral	Manufacturing firms		Service firms		*T*-test	
	Average	St. dev	Average	St. dev	Diff	Prob
Service firms vs manufacturing firms	0.18	0.004	0.41	0.04	−0.23	0.00
Young service firms vs young manufacturing firms	0.27	0.14	0.44	0.009	−0.17	0.16
Older/Well established service firms vs Older/Well established manufacturing firms	0.16	0.04	0.41	0.04	−0.24	0.00
Small size service firms vs small size manufacturing firms	0.10	0.05	0.51	0.06	−0.40	0.00
Large size service firms vs large size manufacturing firms	0.21	0.05	0.34	0.05	−0.12	0.05
Female manager-controlled service firms vs Female manager-controlled manufacturing firms	0.09	0.09	0.51	0.09	−0.42	0.00
Male manager-controlled service firms vs Male manager-controlled manufacturing firms	0.19	0.04	0.39	0.04	−0.19	0.00

Source(s): Figure by the author

companies in the service sector and those in the industrial sector. Based on the results of the *T*-test, we can conclude that service firms defer their cash commitments more than manufacturing firms in almost all comparisons. However, more reliable results can be obtained if the Oaxaca–Blinder decomposition is used.

Table 3 shows the results of the Oaxaca–Blinder decomposition. The first model shows the main comparative result for manufacturing and services cash liabilities.

The results of Model 1 show that service firms in the Moldovan economy defer their cash commitments more than their counterparts in industry. Model 1 shows that there is a significant difference between industrial and service firms in terms of deferring cash commitments. These results show that the effect of predictors significantly explains the mean difference in deferring cash commitments, and the leading predictor is firm size. The second model compares firms in two industries according to which firms have a female executive. However, the difference is more significant than that of the base model. It appears that female managers are more likely than their male counterparts to resort to cash deferral in times of pandemic in the service sector. The third model compares two industries according to whether they cannot switch their products to COVID-19-related products (medical devices) to maintain their business. The results show that the firms that do not switch their operations or services to COVID-19-related products defer more cash in the service sector than their counterparts in the industry. Model 4 compares whether firms in two industries prefer to defer their payment obligations if they do not use online delivery or service offerings that are compatible with COVID-19 terms. The results show that firms that do not use online deliveries or services use deferral of payment obligations more in the service sector than their counterparts in the industry. All in all, the unexplained parts of the econometric models are statistically significant at a statistical significance level of %95. The results of the econometric models also show that the fragility of the service sector is associated with the channel of deferring payment obligations. Finally, the relationship between bankruptcies and the deferral of cash commitments is very strong. Such a relationship is examined for service firms on a comparative basis as further evidence. The results are reported in the fifth column. The results show that the relationship between expected bankruptcy and deferral of cash commitments is stronger for service firms than for their industry counterparts in the period after COVID-19.

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	(1) Cashcom Services sector vs Industrial sector Main results	(2) Cashcom Services sector vs Industrial sector Main results Female manager	(3) Cashcom Services sector vs Industrial sector Main results The firms cannot convert their products to medical products etc.	(4) Cashcom Services sector vs Industrial sector Main results The firms that do not use online delivery or service line	(5) Cashcom Possible bankruptcy. The deferral of cash commitments and the possible bankruptcy relation
Overall					
Industrial sector	0.179***	0.143	0.176**	0.180**	0.226**
	(3.68)	(0.97)	(3.16)	(3.15)	(2.79)
Service sector	0.431***	0.522***	0.455***	0.465***	0.574***
	(8.89)	(4.50)	(8.34)	(7.59)	(8.16)
Difference	−0.252***	−0.379*	−0.278***	−0.285***	−0.348**
	(−3.67)	(−2.02)	(−3.56)	(−3.40)	(−3.25)
Endowments	−0.0550	0.0472	−0.0512	−0.0458	−0.0391
	(−1.50)	(0.17)	(−1.20)	(−1.16)	(−0.71)
Coefficients	−0.275***	−0.0751	−0.322***	−0.312***	−0.353**
	(−4.00)	(−0.47)	(−3.88)	(−3.57)	(−3.07)
Interaction	0.0775	−0.351	0.0947	0.0729	0.0436
	(1.74)	(−1.05)	(1.53)	(1.34)	(0.47)
Endowments					
Firmage	−0.00818	−0.0520	−0.00788	0.000493	−0.000265
	(−0.64)	(−0.66)	(−0.54)	(0.13)	(−0.01)
Firmsize	−0.0598*	0.0302	−0.0545	−0.0452	−0.0604
	(−1.96)	(0.13)	(−1.59)	(−1.34)	(−1.30)
Demandshock	0.00117	0.118	0.00310	0.00268	0.00724
	(0.27)	(0.84)	(0.31)	(0.32)	(0.46)
Tempclose	0.0119	−0.0492	0.00808	−0.00375	0.0143
	(0.84)	(−0.70)	(0.36)	(−0.22)	(0.66)
Coefficients					
Firmage	0.0521	−0.748	−0.0525	−0.0338	−0.183
	(0.49)	(−1.93)	(−0.38)	(−0.20)	(−1.21)
Firmsize	0.351**	−0.374	0.516**	0.450*	0.750**
	(2.65)	(−1.39)	(3.05)	(2.52)	(2.97)
Demandshock	0.00270	0.374	0.00242	0.116	0.141
	(0.01)	(0.99)	(0.01)	(0.48)	(0.54)
Tempclose	0.0827	0.176	0.190*	0.107	0.170
	(1.14)	(1.35)	(2.32)	(1.30)	(1.52)
Constant	−0.763**	0.497	−0.978**	−0.951**	−1.232**
	(−3.20)	(0.81)	(−3.05)	(−2.77)	(−3.16)
Interaction					
Firmage	0.00390	0.136	−0.00523	0.000916	−0.0406
	(0.41)	(1.00)	(−0.35)	(0.16)	(−0.83)
Firmsize	0.0856*	−0.335	0.112*	0.0701	0.125
	(2.06)	(−1.28)	(1.97)	(1.43)	(1.43)
Demandshock	−0.0000737	−0.0814	−0.000147	−0.00275	−0.00799
	(−0.01)	(−0.71)	(−0.01)	(−0.29)	(−0.41)
Tempclose	−0.0119	−0.0707	−0.0118	0.00472	−0.0325
	(−0.74)	(−0.76)	(−0.36)	(0.22)	(−0.76)

(*continued*)

Table 3. Oaxaca–Blinder decomposition results

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	(1)	(2)	(3)	(4)	(5)
	Cashcom Services sector vs Industrial sector Main results	Cashcom Services sector vs Industrial sector Main results Female manager	Cashcom Services sector vs Industrial sector Main results The firms cannot convert their products to medical products etc.	Cashcom Services sector vs Industrial sector Main results The firms that do not use online delivery or service line	Cashcom Possible bankruptcy. The deferral of cash commitments and the possible bankruptcy relation
N	176	30	139	121	85
Industrial Firms	67	7	51	50	54
Services firms	109	23	88	71	31

Note(s): *t* statistics in parentheses. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$
Source(s): Figure by the author

Table 3.

4.1 Robustness checks

Another analysis examines whether small and large service firms differ from each other. The results suggest that service sector firms use the channel of deferring cash commitments more than their industrial counterparts. In addition, small firms defer cash commitments more than their large service sector counterparts. This difference may be due to different levels of access to financial sources among small and large firms. The results are shown in Table 4.

4.2 Discussion

In this paper, we examine the mitigating effects of the COVID-19 pandemic on the service sector in transition economies using the cash commitment shift channel. Given the evidence, it is reasonable for the service industry to defer cash commitments to get rid of the impact of the global pandemic. However, caution should be exercised when generalizing the findings to industries other than the service sector. This is because service sector firms differ from manufacturing firms in their specific characteristics such as intangibility, the inseparability of production and consumption, variability (or heterogeneity) and perishability (Zeithaml *et al.*, 1985). As a result of the new COVID-19, these characteristics may impose a financial obligation on the service industry. In particular, the perishability of services, which unlike manufacturing cannot be stored for later sale, can be expected to affect service firms more severely (Sasser, 1976).

A comparative analysis of the results of this work will enlighten and clarify the understanding of the changing state of the economy in times of a pandemic. When there is a lack of government support, as is the case in most developing countries (our sample also shows that the proportion of firms receiving government support is very low), firms need immediate solutions for their financial stability. The results of the Oaxaca–Blinder decomposition analysis show that the importance of cash commitments is greater in the services sector than in manufacturing. Such an effect holds for firms controlled by female managers, for firms that do not convert their products and services to COVID-19 and for firms that do not use online delivery channels. The results of the study support the hypothesis that service firms defer cash commitments compared to manufacturing firms. Table 5 shows the link between the main results and the hypotheses of the present study.

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	(1) Cashcom Older firms Services vs industrial firms	(2) Cashcom Younger firms services vs industrial firms
Overall		
Industrial sector	0.153**	0.375
	(3.12)	(1.85)
Service sector	0.400***	0.579***
	(7.55)	(4.40)
Difference	−0.247***	−0.204
	(−3.43)	(−0.84)
Endowments	−0.0595	−0.0731
	(−1.48)	(−0.48)
Coefficients	−0.258***	−0.0720
	(−3.42)	(−0.30)
Interaction	0.0696	−0.0588
	(1.52)	(−0.23)
Endowments		
Firmage	−0.00196	0.000638
	(−0.27)	(0.04)
Firmsize	−0.0650	0.0283
	(−1.80)	(0.30)
Demandshock	0.000391	−0.0297
	(0.13)	(−0.36)
Tempclose	0.00701	−0.0724
	(0.42)	(−0.58)
Coefficients		
Firmage	0.0503	−0.0741
	(0.29)	(−0.12)
Firmsize	0.302	0.238
	(1.95)	(0.49)
Demandshock	0.0706	−0.605
	(0.36)	(−1.04)
Tempclose	0.0548	0.378
	(0.74)	(1.30)
Constant	−0.735*	−0.00857
	(−2.28)	(−0.01)
Interaction		
Firmage	0.00166	0.00235
	(0.23)	(0.10)
Firmsize	0.0725	0.0556
	(1.63)	(0.45)
Demandshock	−0.000599	0.0979
	(−0.13)	(0.64)
Tempclose	−0.00392	−0.215
	(−0.37)	(−1.04)
N	149	27
Services firms	90	19
Industrial firms	59	8

Note(s): t statistics in parentheses. $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$
Source(s): Figure by the author

Table 4.
Cash commitments deferral: services vs industrial firms according to firm age classifications

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5. Conclusion

This study examines the impact of COVID-19 on the service sector using the deferral channel for cash commitments in a transition economy: Moldova. In the Moldovan economy, the service sector plays a crucial role in economic performance, as low human capital is still a problem. Moreover, institutional quality in the Moldovan economy is still low and the economy has a lack of financial deepening. Moreover, COVID-19 can be considered as a black swan in economies, so such uncertainty is unpredictable and actors cannot overcome it. Therefore, the service sector is a precarious sector that can face such uncertainty COVID-19 in the Moldovan economy, whose financial deepening and institutional quality is below the world average. Therefore, the deferral of cash commitments is beneficial to try to manage the problematic financial assets of service companies. In this context, the impact of COVID-19 on transition economies needs to be examined. To this end, this study uses a novel Oaxaca–Blinder decomposition method to examine the impact of COVID-19 on the service sector, which defers financial obligations (or cash commitments). The evidence obtained shows that there is a significant difference for service sector companies in the deferral strategy of cash commitments with a comparative analysis. Our results show that in the period of COVID-19 the companies of the service sector defer their cash commitments more than their counterparts from the industry in the Moldovan economy. Also, the companies that do not shift their products and services to medical products and services defer more cash commitments than the companies in the industrial sector. In addition, service firms without online delivery and service-related problems defer more cash commitments than industrial firms without online delivery and product problems.

The results cannot be generalized because the sample of this study consists of a transition economy, Moldova. This limitation of the current study needs to be explored in future studies. Nevertheless, our results are relevant for the development of financial strategies in times of financial turmoil. Moreover, each sector needs to take different precautions due to its specific characteristics. This study has addressed this gap between the service and manufacturing sectors. This study represents one of the first attempts to examine the financial strategy of the service and manufacturing sectors in the context of COVID-19.

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Table 5.
Link between expected results and findings according to the hypotheses

Hypothesis	Expected results	Findings
H1: The deferring cash commitment due to COVID-19 stronger for service firms than for manufacturing firms	+	+
H1a: The effect of gender disparity on deferring cash commitment due to COVID-19 more substantial for service firms than for manufacturing firms	+	+
H1b: The firms that do not convert their services or products to COVID-19 may defer cash commitments more than their industrial counterparts	+	+
H1c: The firms that do not use online delivery or service line may defer cash commitments more than their industrial counterparts	+	+

Source(s): Figure by the author

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Corresponding author

Ömer Tuğsal Doruk can be contacted at: otdoruk@atu.edu.tr

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