The Impact of Covid-19 on the Alibaba Platform

Josko Lozić University North, Croatia Katerina Fotova Čiković University North, Croatia

Abstract

Purpose – this paper aims to analyse the business efficiency of the Alibaba platform at the beginning and during the COVID-19 crisis. Methodology/Design - The research is based on the official financial reports of the platform as well as on the reports of other specialized agencies that monitor the platform industry. The study focuses on an analysis of the financial indicators of the business. It compares the financial indicators with an analysis of the data on the trend of the user community on the platform. The results - the study's findings did not find a major impact of the COVID-19 pandemic on the overall business results of the Alibaba platform. The survey results confirmed changes in operating profit and net profit trends as a result of changes in the structure of operating revenues. Conclusion - Total revenues are growing at a slower pace as a result of the changes in business policy and changes in revenue structures than as a result of the impact of the COVID-19 pandemic.

Keywords: Alibaba; COVID-19; digital platform; E-commerce platform; platform economy.

JEL classification: L14, L81, L82, L86

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Introduction

Alibaba Group (hereafter referred to as Alibaba) is globally the largest online retail platform by gross merchandise turnover (Hänninen et al., 2017). Together with GMarket and Rakuten, "the central entity in the national e-commerce industry in East Asia" (Kwak et al., 2019). Alibaba founder Jack Ma first saw how the Internet worked in 1995. A friend showed him how to search the site, and Ma was disappointed that there was no Chinese beer on offer (Falcone et al., 2020). Alibaba was founded in 1999 with a vision "to provide a business-to-business portal for small and medium-sized merchants in China selling their products to global buyers" (Yip et al., 2016) and has become "the dominant e-market in China, with a market share of more than 60%" (Yun et al., 2020). In 2019, nine Chinese corporations operated globally in the platform economy model, the largest and most famous of which are Alibaba and Tencent (Jia et al., 2019). Unlike other platforms, Alibaba participates in all exchange models, i.e., the platform is a multi-channel trader of B2B, B2C, and C2C models. Online retail platforms include Alibaba.com (B2B), Taobao and Tamall (B2C), and Aliexpress (B2C) (Hänninen et al., 2017). The Alibaba platform enables interaction between users on the platform, i.e., it uses the platform economy model (Parker et al., 2016; Moazed et al., 2016).

Furthermore, Alibaba's platforms are "assessed to be the most consumer-oriented and have satisfied consumers with the user-friendly interface and technical specialties "(Kwak et al., 2019). Like other online platforms, Alibaba uses a zero marginal cost business model (Rifkin, 2015; Lozić, 2019a). Alibaba's goal was to "facilitate business" anywhere by using Internet technology to enhance the competitive advantage of SMEs, opening the door to Chinese SMEs and consumers through the creation of widely used e-commerce platforms (Seoane, 2020). Moreover, Alibaba has evolved "not only as a Chinese e-commerce platform but also as a global electronic marketplace (GEM) platform", which started with the idea to help and support millions of Chinese SME suppliers to reach out to global customers online (Yun et al., 2020). In the process of distributing goods, the platform has developed cooperation with the Cainiao Logistic Alliance and Ant Financial in the financial part of providing services (Hänninen et al., 2017). Alibaba has developed Alipay, which has become a global leader in online payment. Alipay first differed from its competitors in mobile payment services because it was free for small users; it simply acted as an "intermediary". It revolutionized the transaction market in China by using QR codes, which were popularized by most retailers in China (Casanova et al., 2021). In addition to the retail sector, Alibaba's ecosystem includes business operations related to travel, banking, cloud services, and video streaming (Hänninen et al., 2017). Alibaba is a digital platform that uses business algorithms based on big data, and altogether it belongs to the system of disruptive innovation (Falk et al., 2019). Looking ahead, "Alibaba is developing a marketing strategy called "New Retail" that aims to bridge the gap between online and offline shopping" (Jung et al., 2015). The evolution of Alibaba is now an example of a new kind of phenomenon from the Internet age, the emergence of what can be called a smart business (Leavy, 2019). The platform achieves its goals using the advantages of modern managerial practices in technology management (Lozić, 2019b). Alibaba comes from the implementation of what is called smart manufacturing (Lyu et al., 2020). The paper analyses the impact of the COVID-19 pandemic on the overall business of the platform. The crisis first started in China, and the analysis includes financial data and user trends before and after entering the crisis period caused by the pandemic.

Literature review

Alibaba Group was listed on the New York Stock Exchange on 19 Sept 2014. Following the IPO, it announced three main strategies, "e-commerce in rural areas, globalization, and big data" (Ding et al., 2018). In 2014, Alibaba went down in history by becoming the largest initial public offering on the New York Stock Exchange. In early November 2018, it had a market capitalization of approximately \$ 380 billion. These impressive figures explain why Alibaba's management claims the company is an "economy" with half a billion customers (Seoane, 2020). Using the platform economy model, Alibaba's business relies on the strength of the network effect. Granovetter (2005) emphasizes the importance of economic activities embedded in the network and the importance of the relationships of entities within the network. Network theory explains the strength of the network with the increase in the number of members, which is proportional to the growth and strength of the network effect. The primary focus of network theory is to explain how connection patterns produce better economic results and why inter-organizational networks form, collapse, succeed, or fail (Kim, 2014). Falcone et al. (2020) analyse the structure of Alibaba group business activities to determine the strength of the internal organizational network. It also explores the strength of the organizational network between partners to gain access to information, markets, resources, and innovation. Alibaba Group's Development Strategy is based on three models: a) investing in technologically advanced companies that can be useful for further market conquest, b) investing in shares of global digital platforms, c) Chinese companies are focusing on expansion in the region and countries closer to China (Jia et al., 2018). The ultimate goal of Alibaba's rural strategy is "to achieve an increase in farmers' incomes, growth of the rural economy, upgrading of agriculture and new urbanization through "popularization of the Internet" in rural areas". These principles enable guidance and direction in promoting e-commerce opportunities and digital financial services for rural residents (Ding et al., 2018). The volume of inventories and the cost of maintaining a total inventory affect the quality of Alibaba's operations. In addition to the cost of maintaining inventory, another important factor is logistical support for the distribution of inventory, in the value chain, from producers to users of goods and services. Chen et al. (2020) explore models of inventory management and distribution of goods. The amount of fixed cost determines core inventories, and inventories in the supply chain are optimized according to underlying inventories and inventory costs. Zeng (2018) highlights digital efficiency and the development of automation on a platform that better monitors customer behaviour, connecting software solutions for each operational activity and selecting the best algorithm for each business operation. Schmuck et al. (2021) emphasize that the "Alibaba B2B platform is radically changing the manufacturing sector worldwide". There are two sources of traffic: the first and most important is the traffic from the business of the data centre owner. Second, the turnover of other companies contracting data centre services. Alibaba is a leader in data centre services in China, but it also supports its Chinese customers' global activities (Jia et al., 2018). In 2017, Alibaba made a joint venture in Malaysia with its domicile bank, and in Russia, it merged with a foreign trade bank (VTB Bank). In Thailand, Alibaba bought 20% of Ascend Money 2016, a corporation that deals with online lending in Southeast Asia. In India, it acquired stakes in Paytm, the largest payment platform. In Korea, it bought stakes in Cocoa Pay (Jin et al., 2018). Alibaba has made many other investments abroad that are not driven by any particular strategy. For example, it bought 5.6% of the American company Groupon, 9.3% of the American e-commerce site Zulily and a small position in Snapchat. It also made a small investment in an American drivesharing company, Lyft. It has also invested in the gaming industry in Gamepind in India and Kabam in Canada. In 2017, it signed a joint venture agreement with Marriott International to improve its services to Chinese tourists. In some respects, these seemingly unrelated investments fit into the strategy of expanding joint ventures as part of the business development of the platform's business group (Jia & Kenney, 2016). Alibaba's business strategy is based on understanding postmodern societal relations and accepting modern managerial management models (Lozić et al., 2019b). Bukht et al. (2017) mapped the digital economy by classifying enterprises into three layers of different ranges: fundamental, narrow, and broad. The core is the "digital sector", including hardware manufacturina, scope telecommunications, information services, and software and information technology (IT) consulting. The narrower scope is the "digital economy", which consists of digital services, platform economy, sharing economy, and concert economy. The broader scope, called the "digitized economy," includes the core and the narrow scope; it refers to a range of large-scale digitized activities such as e-commerce, ecommerce, Industry 4.0, and the algorithmic economy (Wu et al., 2019). Alibaba has done an outstanding job of creating its ecosystem, in which e-commerce, mobile payments, retail, and other services are all interconnected and interdependent. Mobile payments in China are used for everything from buying street food to donating spare money to beggars. But as China's market is largely saturated, both Alipay and its competitor WeChat Pay are working to conquer the international market (Casanova et al., 2021). While Amazon and Alibaba started as e-commerce companies, their business models have evolved and become more complex, expanding beyond online activities (Wu et al., 2019). Seoane (2020) points out that Alibaba initiates the World Trade Platform model, enabling small and medium-sized enterprises to access the global market. In addition, it will contribute to strengthening the middle class and directly affect the more stable growth of economies. Small and medium-sized enterprises' development is expected to impact women and minorities' employment positively. Neoliberal globalization has particularly affected young men and women who will now have the opportunity to start a business. Online trade is a useful technology for improving trade at a higher level and significantly reduces the cost of trade within the national market. At the same time, it increases trade between remote market points. It alleviates spatial inequalities by a) eliminating fixed market entry costs and b) reducing the impact of spatial costs on total costs. Using unique data from China's leading e-commerce platform, we provide evidence consistent with these two features: e-commerce is less obstructed by distance compared to offline commerce, and residents of smaller and more remote cities spend most of their income online (Fan et al., 2015). Yu'e Bao is a new financial product that balances the supply and demand of funds, and thus its rate of return depends on cash (Gao et al., 2018). Zhang et al. (2018) investigate the quality of business results of Alibaba Cloud Computing, China's largest service infrastructure provider IaaS. Moreover, SMEs must establish business networks to seek resources from outside and use such a relationship to achieve better international performance. ICT plays a key role in international business. It is, therefore, important to explore the impact of digital platforms on enterprise internationalization (Jin et al., 2018). At Alibaba, the link behind the link in the value chain is modularized and reconfigured into technology-optimized networks, and most business decisionmaking is driven by algorithms (Leavy, 2019). The transformation of Alibaba into a "digital giant can be an example of the right combination of innovation and business strategy, where the company has shifted its traditional trading activity to online e-commerce using radical advances in digitalization". Alibaba is today perceived as a "representation of a data-driven disruptive innovation"(Schmuck et al., 2021).

Methodology and research questions

The analysis and research of business activities of the global platform Alibaba are based on Alibaba Group Financial Report - Fiscal Year 2020. The analysis of business activities will include two groups of data: a) data on the financial results of business activities and b) the trend of users of platform services. The research will focus on two fundamental research questions:

- 1. How much has the COVID-19 crisis affected Alibaba's total revenue and net profit?
- 2. How did the crisis impact the trend in the number of users?

Selected data from the profit and loss account of the Alibaba platform published in the Financial Report will be used in the analysis of the financial statements. The analysis of the trend in the number of users of the platform will use data from the Financial Report and other specialized agencies in this area of business.

Data analysis

The research is divided into two basic parts. The first part analyzes the financial data from the profit and loss account. In the second part of the research, data on the trend in the number of users were analysed.

Financial analysis

The Alibaba platform has achieved amazing business results in a very short time. Already listed on the stock exchange in 2014, it became the largest IPO transaction. Over seven years, from 2014 to 2020, Alibaba's total revenue rose from \$ 8.46 billion to \$ 71.98 billion, up 750%. However, in the same period, the cost of revenue increased by 1750.5%. The increase in the cost of revenue above the increase in total revenue was a growth in gross profit of 490%, which is 341.6 percentage points less than the increase in total revenue. Gross profit fell from 75.4% at the beginning of the analysed period to 44.6% of the share of total revenue at the end of the analysed period, which is a decrease in the share of gross profit in total revenue of 40.2%. The average share of gross profit was 59.8%, which means that it is lower than the average in the last three analysed periods and is constantly declining. Unlike gross profit, the share of operating income is continuously growing in the analysed period. Over the seven years analysed, operating income increased from \$ 4,024 billion to \$ 12,993 billion, an increase of 222.9%. The share of operating income increase in total revenue in the last analysed period compared to the first analysed period is 56.2. The average share of operating profit in total revenue was 71.6%, which is higher than the average in the last three analysed periods. The operating profit trend is exactly the opposite of the gross profit trend. The results of the research indicate a decline in general operating expenses. Net profit has been growing continuously in the last four analysed periods but is still below the average for the analysed period, which indicates an increase in financing costs. The results of the research are presented in Table 1.

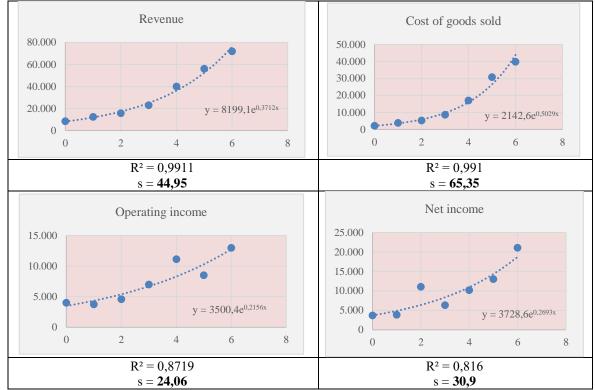
Table 1

	2014	2015	2016	2017	2018	2019	2020
Revenue	8.463	12.293	15.686	22.994	39.898	56.152	71.985
Cost of Goods Sold	2.155	3.845	5.328	8.642	17.065	30.833	39.878
Gross Profit	6.308	8.448	10.358	14.352	22.833	25.319	32.107
%	74,5%	68,7%	66,0%	62,4%	57,2%	45,1%	44,6%
Operating income	4.024	3.760	4.584	6.981	11.129	8.506	12.993
%	47,5%	30,6%	29,2%	30,4%	27,9%	15,1%	18,0%
Net income	3.720	3.896	11.083	6.345	10.201	13.053	21.080
%	44,0%	31,7%	70,7%	27,6%	25,6%	23,2%	29,3%

Source: Alibaba (2021) - own illustration

Figure 1

Financial items regression analysis



Source: Authors' illustration

Regression analysis tested selected financial indicators from the income statement. All four selected financial indicators grew at an exponential rate. Total revenue grew at an average annual cost of 44.95% per annum, with a coefficient of determination of R2 = 0.9911. The cost of goods sold grew at an average annual rate of 65.35% per year with a coefficient of determination of R2 = 0.9911. Operating income grew at an average annual rate of 24.06% with a coefficient of determination of R2 = 0.8719. Net income grew at an average annual rate of 30.9% per year with a coefficient of determination of R2 = 0.8719. Net income grew at an average annual rate of 30.9% per year with a coefficient of determination of R2 = 0.816. The coefficient of determination has a limit value (R2 > 0.8) due to the increase in profit in the third analysed period of 184.5% compared to the second analysed period. The results of the research are shown in Figure 1. The platform's total revenue has been growing steadily for the past seven years; however, the cost of good sales has been growing

faster than revenue growth. Total revenue and net profit are growing exponentially, so a large pandemic impact on the platform's operations cannot be determined.

User analysis

The analysis of the trend of users of the Alibaba platform covers six years, from 2015 to 2020. The quarterly user trend survey was conducted from the fourth quarter of 2015 to the fourth quarter of 2020. The number of users increased from 407 million to 779 million, 91.4%. The average quarterly change was 3.5% with a coefficient of determination of R2 = 0.9807, explained by the linear regression equation of the direction y = 20.29x + 376.63. Descriptive statistical analysis of the user community covers 21 quarters; Mean = 545.9048; Standard Error = 25.9326; Median = 515; Standard Deviation = 118.8381; the distribution is slightly flatter than the standard distribution Kurtosis = -1.49437; and higher values of distribution prevail, i.e., distribution is positive Skewness = 0.364156. The results of the research are shown in Figure 2.

Figure 2



Number of users (2015-2020)

Source: Authors' illustration

Table 2

Number of user regression analysis

2015 2016	407 443	n/(n-1)% 8,8%	1000 800					•	
2017 2018	515 636	16,3% 23,5%	800 600 400	 	••••••				
2019	711	11,8%	200					$99,19e^{0,139} = 0,9821$	93x
2020	779	9,6%	0	1	2	3	4	5	6

Source: Authors' illustration

Analysing users' movement according to the annual periods opens a new perspective on the research. The number of users grows linearly in the first three analysed periods; after that, the growth is digressive (see Table 2). For future research, the question arises as to how much the digressive growth in the last two analysed periods has been affected by the COVID-19 pandemic and how much this is due to the saturation of the platform to users from China and Asia. The largest increase in the number of users was in 2018, when the increase compared to the previous period was 23.5%. The increase in the number of users averaged 14.95% per

year, with a coefficient of determination of R2 = 0.9836, explained by the exponential trend equation y = 399.19e0.1393x trend. In the equation, it can be seen that the last point of inflection falls below the equation of direction. The impact of the number of platform users on the total revenues of the platform was tested with the ANOVA model. The research results proved a strong correlation between total revenues and the trend of the number of users' Multiple R = 0.988117417. The analysis covers a small number of frequencies, so Adjusted R Square was used, which is 0.97047. The research proved a great influence of the trend of the number of users on the total revenues of the platform, i.e., significance F = 0.00021 or P-value = 0.00021 at the testing level of 5% (p < 0.05).

The analysis results with the ANOVA model indicate a significant correlation between the growth of total revenues and the trend in the number of users. However, the average annual increase in revenue was 44.95%, i.e., the average annual increase in net profit was 30.9%, while the average annual increase in the number of users was 14.95%. Future research should focus on analysing the revenue structure, i.e., how much the amount of consumption per existing customers increases concerning the increase in revenue from new business models. This primarily applies to cloud revenue and the development of financial services on the platform. Curry (2021) highlights the importance of financial services revenue to Alibaba's overall business result. AliPay has more than 650 million users and has a 55% market share in China, while Tencet-owned WeChat Pay holds 39% of the market.

Furthermore, Alipay is considered the biggest contributor for Alibaba in the establishment of its market legitimacy as well as in settling the dominant position in the C2C market (Kwak et al., 2019). China has the largest increase in the use of QR codes in payments. At the same time, developed countries such as Germany and France are late with the introduction of innovations because the majority of the population has become accustomed to existing forms of payment. On top of that, Alibaba has also impacted social changes and thus enjoys social legitimacy. Namely, it has "promoted consumption for the poor but also encouraged the participation of the poverty class" in the e-commerce value chain (Kwak et al., 2019).

Conclusion

The research results indicate significant changes in business activities, which had the greatest impact on financial performance indicators. The three most significant results of the research are the following:

- As is the operating profit, total platform revenues are growing exponentially. The COVID-19 pandemic did not significantly affect these two financial parameters. However, revenue growth has been growing digressively in the last three analysed periods, which indicates the saturation of the platform's total revenue from existing business activities.
- The average annual growth in the number of users is 14.95%, which is significantly less than the increase in total revenues, but this is not reflected in total revenues and net profit.
- The analysis results with the ANOVA model indicate a strong correlation between total revenues and the trend in the number of users. The correlation coefficient indicates a strong correlation between these two data groups with digressive growth in the last three analysed periods.

In the context of the first research question, the results showed no strong impact of the COVID-19 pandemic on the platform's total revenue and net profit. In the first four analysed periods, total revenues grew significantly and digressively. Net profit generates variable rates, which indicates changes in business models and the development of new forms of financing and profit. In the context of the second research question, the trend in the number of users has the same growth model as the increase in total revenues. The increase in the first four analysed periods is exponential; after that, it is digressive. The number of users follows the trend in total revenues, so the pandemic's greater impact on the platform's business results cannot be determined. Several open questions remain for future research, the most important being: a) how much the change in the business model will affect the growth of total revenues and b) how much the slowdown in the growth of the number of users will affect the net profit of the platform. The development of business models and the growth of revenues from clouds and financial services will bring the platform a new quality of business and stability of the network effect.

The scientific and practical contributions of this paper are several. First, it covers the Alibaba Group platform and explores the evolution of the platform business model, which is still a relatively scarce research topic. Second, it analyses the impact the COVID-19 pandemic had on Alibaba. Thirdly, this study provides managerial implications and could provide practical guidance to industrial practitioners and policymakers.

In future research, the authors plan to focus on the analysis of the revenue structure of Alibaba, i.e., how much the amount of consumption per existing customers increases concerning the increase in revenue from new business models, and the authors plan to compare Alibaba business model with other platform business models and draw conclusions that would be of great significance to researchers, academia, regulatory bodies, and the public.

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About the authors

Joško Lozić, Ph.D., is employed at the University of North as Assistant Professor. He graduated from the Faculty of Economics in Split in the Management Department with excellent results. In 2002, he graduated with a master's in Business Marketing Management. In 2007, he graduated with a Scientific Postgraduate Study in Organization and Management. The paper entitled "Small Enterprises and the Strategy of Their Development" was defended under the mentorship of the head of studies, Pero Sikavica. In the master's thesis, for the first time, the topics of the development of small and medium enterprises have been critically investigated, and the paradigm of the need to invest in research and development in small and medium enterprises is critically treated. In 2016, he received his Ph.D. from the University of Rijeka, Faculty of Philosophy in Rijeka, at the University Postgraduate (Doctoral) Study - "Publishing and Media". The doctoral thesis entitled "Croatian Newspaper Publishing in the Context of Global Media Trends" is based on research on the relationship between postmodern trends in contemporary society and the changes that have affected publishing and the media in that period. In his scientific work, he deals with research and the impact of modern technology on management models. He is the author of the scientific monograph Platform Economics Management, created due to his scientific research. In his scientific work, he has published a university textbook, "Management", as an independent author and more than fifty scientific and professional papers in full authorship and coauthorship. The author can be contacted at email: jlozic@unin.hr.

Katerina Fotova Čiković, MBA, Ph.D., is a lecturer at the University North in Koprivnica, Republic of Croatia. She graduated from the Faculty of Economics – Skopje as one of the best students of her generation in 2009. She studied Marketing as her main subject. During her undergraduate studies (in 2007/2008), she received the famous German DAAD scholarship for studying for two semesters at the University of Saarland in Germany and spent two semesters in Germany. In 2011, she obtained her Master of Science Degree in Monetary Economics, Finance, and Banking at the Faculty of Economics - Skopje. In 2013, she received a full scholarship for the MBA program at the Cotrugli Business School in Zagreb, Croatia. She received her MBA as the best student of the generation (among 60 students from 7 countries) with the Dean's award for special recognition. Her doctoral dissertation titled: "Effects of mergers and acquisitions (M&A) on bank performance: the case of the Republic of Macedonia" was successfully defended on 09.07.2017 at the Faculty of Economics -Skopje, which enabled her to get the scientific level of Ph.D. in the Economic sciences. Katerina Fotova Čiković held one public lecture in May 2020 at the Međimurje University College in Čakovec, Republic of Croatia. She is the co-author of three published books: "Insurance", "Economic-financial lexicon", and "Financial management" and the author/co-author of 20 scientific papers. She has participated in numerous national and international seminars, workshops, and conferences that have impacted her professional development and passion for research. Her areas of scientific interest are Finance, Banking, Marketing, Digital Marketing Branding, and Mathematical programming (DEA). The author can be contacted at email: kcikovic@unin.hr.