

Factors Affecting Entrepreneurial Activity in an Emerging Economy in the Case of Turkey: The Role of the COVID-19 Pandemic

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Abstract: This paper seeks to study factors influencing the early stages of entrepreneurship within the context of coronavirus pandemic, specifically within an emerging country. We utilize from a unique dataset collected by Global Entrepreneurship Monitor which is the sole global research repository compiling data on entrepreneurial activities and individual entrepreneurial attributes across 50 countries worldwide. In particular, this study focuses on the GEM survey data pertaining to Turkey during the period coinciding with the COVID-19 pandemic in the year 2021. The analysis is done by binary logistic regression with dependent variable being total entrepreneurship activity. Findings indicate that opportunity-driven respondents, with high-status aspirations, possessing necessary skills and acknowledging the challenges of their entrepreneurial environment, are the ones who show a higher probability of engaging in entrepreneurial activities. While these variables have been scrutinized in existing literature, our contribution lies in examining their effects within an emerging market, a relatively understudied context, particularly in the aftermath of a global pandemic. Results suggest that the individuals reporting a substantial increase in income during the pandemic, and perceiving a harder business environment to start a new venture show elevated probabilities of becoming an entrepreneur. These two are the pandemic-related variables demonstrating statistical significance, which highlights the fact that this period created its entrepreneurs, who exploit high resilience and dynamic capacity to adapt to crisis times. They experienced a significant increase in their income, capitalized on their comparative advantage in entrepreneurial skills within an environment where starting a business is not easy and took advantage of the opportunities seeking for high status using their adaptive capacity. These findings are consistent with Theories of Resilience and Dynamic Capabilities. Finally, younger respondents are more inclined to engage in entrepreneurial activity, which is consistent with the existing literature. In light of these findings, policymakers are encouraged to invest in educational programs for potential entrepreneurs to enhance their self-efficacy, given that the necessary skills for business initiation emerge as a pivotal factor for engaging in entrepreneurial activities. Moreover, creating platforms for successful entrepreneurs to share their experiences could amplify the perceived prestige associated with entrepreneurship, which may attract potential entrepreneurs.

Keywords: Covid-19, GEM data, Total early entrepreneurial activity, Resilience theory, Dynamic capabilities

1. Introduction

Entrepreneurship, both as a process and at the individual level, involves multiple phases: from the initial gestation phase to the established phase or the discontinuation phase. An entrepreneur can be someone who is just starting a business and striving to survive in the market, or someone who has owned an established business for many years. According to Reynolds et al (2005), early stage entrepreneurs are those who are actively engaged in starting or managing a business that they own wholly or partly, and which is less than three and a half years old. Established entrepreneurs, on the other hand, are those who own and manage a business that has been paying wages or salaries for more than three and a half years (Bosma and Harding, 2007). Early-stage entrepreneurship reflects the dynamic entrepreneurial potential of a country, indicating the percentage of the population that is willing and able to embark on entrepreneurial ventures (Özdemir and Karadeniz, 2011).

Covid-19 is a crisis that can be considered as deeper than the 2008-2012 financial crisis (Liñán and Jaén, 2022). The Turkish entrepreneurial environment, like those in other countries, has been significantly impacted by the COVID-19 pandemic. Significant drops as a result of losing current clients and finding it difficult to get new ones in Turkish manufacturing output were seen in several important industries, such as clothes, textiles, and automobiles, with some companies closing. The unpredictability of the epidemic has also increased investor caution, which has an impact on start-up investment. Some venture capitalists (VCs) have moved their focus to industries like health, online education, and hygiene goods, while others have focused on sustaining existing portfolio businesses. Demand and supply have both suffered from lower consumer demand for specific products and supply chain disruptions brought on by operational halts and quarantines.

Positive advancements have occurred despite these obstacles, especially with regard to the transition to online business models. Several companies that had not previously sold products online swiftly made the transition by

creating mobile applications, providing touchless delivery option, and encouraging contactless payments. With government measures supporting TV-based distance learning, educational institutions quickly made the switch to online platforms. Through cooperative initiatives within the entrepreneurial ecosystem, new firms tackling pandemic-related problems have emerged, and creative solutions have been developed. Health-related start-ups producing critical supplies like testing kits and ventilators have received substantial governmental support, highlighting the resilience and adaptability of Turkish entrepreneurs during this crisis.

This paper examines the factors affecting total early entrepreneurial activity in an emerging economy, Turkey, in the post-covid-19 period. Further, by comparing the effect of same variables in the pre- and post-pandemic period, the paper presents the difference between these two periods, underlying the divergence of the relationships between certain variables in the post-pandemic period. We use Global Entrepreneurship Monitor data for the periods 2018 and 2021 and aim to determine the factors affecting early entrepreneurial activity in Turkey. Our contribution to the literature is threefold; 1) studying early-stage entrepreneurial activity in an emerging economy, 2) examining the effects of covid-related variables to this activity, 3) explaining early entrepreneurial activity basing our arguments on entrepreneurs' resilience and dynamic capabilities. To the best of our knowledge, no empirical studies have directly examined the impact of the COVID-19 pandemic on early-stage entrepreneurship activity in an emerging economy with an explanation based on resilience and dynamic capabilities of entrepreneurs. Our paper aims to address this gap in the literature.

2. Theoretical Framework

2.1 Resilience and Dynamic Capabilities Theories

The COVID-19 pandemic profoundly impacted global economies, presenting businesses with unprecedented challenges. Resilience theory (RT) provides a framework for understanding how entrepreneurs identified and capitalized on new opportunities amidst uncertainty and rapidly changing market conditions. Key elements like adaptive capacity, diversity, and learning enabled entrepreneurs to identify and pursue new opportunities. Those who quickly adjusted strategies, diversified revenue streams, and learned from setbacks were more likely to succeed. Understanding and applying these principles is crucial for businesses to navigate future disruptions and thrive in a post-pandemic economy. This theory emphasizes absorbing shocks, adapting to new circumstances, and transforming systems to flourish in a changed environment. Adaptive capacity, the ability to reorganize structures, strategies, and behaviors in response to external changes while preserving core functions (Walker et al, 2004), proved critical. Entrepreneurs with strong adaptive capacity pivoted their business models to meet evolving market demands, such as transitioning to remote services or online delivery during lockdowns. Kuckertz et al (2020) highlight that startups with a digital-first approach swiftly adopted virtual communication tools and focused on online services like e-learning, telehealth, and fitness classes. Entrepreneurs with strong business skills and industry-specific knowledge rapidly pivoted their models, leveraging digital marketing, logistics, and customer engagement. Resilient, adaptable, and resourceful entrepreneurs garnered significant respect for navigating the pandemic's challenges.

Dynamic capabilities (DC) are defined as a firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments, enabling new and innovative competitive advantages (Teece et al, 1997). Emerging from strategic management literature, DCs explain how current resources can be exploited to adapt to change (Ambrosini and Bowman, 2009). In volatile and uncertain environments, DCs are crucial for integrating resources and recognizing new opportunities, generating economic value by replacing old structures with new ones (Schumpeter, 1994). Entrepreneurs' responses depend on their ability to adapt resources (Teece, 2012). Focusing on capabilities enhances understanding of firm recovery (Sullivan-Taylor and Branicki, 2011). Managerial perceptions of environmental change are crucial in utilizing DCs, leading to different capabilities deployment in similar uncertain environments (Aragon-Correa and Sharma, 2003). Post-pandemic, entrepreneurs who deploy necessary DCs can adapt to new business environments. DCs explain how entrepreneurs identify and pursue new opportunities during crises like the COVID-19 pandemic, helping businesses survive (Eisenhardt and Martin, 2000). This concept serves as a useful tool for understanding factors affecting early entrepreneurial activities.

2.2 Hypotheses

Opportunity recognition is central to entrepreneurial activity, as highlighted in the literature (Bird, 1988; Eckhardt and Shane, 2003; Shane and Venkataraman, 2000). Entrepreneurs motivated by profits, innovation, and growth are termed "opportunity-driven" (Schade & Schuhmacher, 2023). These opportunities often arise from changes in policies, socio-economic structures, technologies, or the environment (George et al, 2016; De

Massis et al, 2018). Covid-19, while challenging, also presents entrepreneurial opportunities that require acknowledgment and action. However, negative emotions in crisis conditions can hinder opportunity recognition (Chhatwani et al, 2022). Post-Covid-19, resilient individuals can leverage their entrepreneurial mindset to find opportunities (Zahra, 2020). Dynamic capabilities theory also emphasizes the importance of adapting and identifying opportunities in volatile environments (Battisti & Deakins, 2017). Combining resilience and dynamic capabilities theories suggests that recognizing opportunities quickly and effectively, especially during crises, offers a comparative advantage in entrepreneurship. Therefore, we hypothesize that;

H₁: Opportunity recognition in the post-covid-19 period positively affects being involved in TEA activities.

Self-efficacy also significantly affects entrepreneurial intentions, actions, and behaviors (Byod and Vozikis, 1994; Chen, Greene, & Crick, 1998). Self-confidence mediates entrepreneurial intentions and is higher among entrepreneurs (Zhao, Seibert, & Hills, 2005; Tyszka et al, 2011). Early-stage entrepreneurs often exhibit overconfidence in their abilities (Koellinger, Minniti, & Schade, 2007). Higher self-efficacy also increases the likelihood of new firm creation by the unemployed (Laguna, 2013; Verheul, Uhlaner, and Thurik, 2003). During crises like the Covid-19 pandemic, entrepreneurial resilience is crucial for success, and self-efficacy strengthens this resilience (Hedner, Abouzeedan, & Klofsten, 2011; Sharma and Rautela, 2022). Self-efficacy remains a predictor of entrepreneurial intentions under uncertainty (Bergenholtz, Klyver, and Vuculescu, 2023) and in extreme conditions like war (Bullough, Renko, & Myatt, 2014). Increased self-efficacy enhances dynamic capabilities, crucial for adapting to the changing entrepreneurial environment (Kevill, Trehan, & Easterby-Smith, 2017). Thus, we hypothesize based on resilience and dynamic capabilities theories in relation to entrepreneurial self-efficacy;

H₂: Higher entrepreneurial self-efficacy in the post-covid-19 period positively affects being involved in TEA activities.

Income inequality significantly impacts entrepreneurial dynamics, activity, and motivation (Halvarsson et al, 2018; Packard and Bylund, 2018; Bruton et al, 2021). Covid-19 caused significant income losses and increased uncertainty, reducing available funds for potential entrepreneurs (Almeida et al, 2021). Low-income and low-educated individuals faced the highest income and job losses globally (Bradley et al, 2020). New venture rates dropped dramatically, akin to the 40% decline during the Great Recession. However, unlike the Great Recession, where high-income households were most affected due to real estate issues, the Covid-19 crisis hit low- and medium-income potential entrepreneurs harder due to financing difficulties (Albert et al, 2023). The 2020 GEM survey included questions about income losses due to the pandemic to understand this impact. Thus, we hypothesize;

H₃: Higher income in the post-Covid-19 period positively affects being involved in TEA activities.

The entrepreneurial environment, including regional factors, institutional factors, and regulations, significantly affects new venture entry rates (Armington and Acs, 2002). During crises, starting a new business depends on individual factors like self-efficacy and resilience (Doern et al, 2019) and contextual factors like the crisis's depth and nature (Hofer, 1980). The pandemic exemplified a severe crisis, with businesses facing unprecedented limitations. Rescue packages had marginal effects on startups, especially in emerging economies needing urgent public health support (Salamzadeh and Dana, 2021). This situation worsened for countries like Brazil, India, Iran, Russia, Mexico, and Turkey due to less systematic markets and higher investment risks (Kawamorita et al, 2020; Salamzadeh and Dana, 2021; Ojha and Shubha, 2020). Despite adverse conditions, the pandemic created new opportunities for potential entrepreneurs, leading to either faster failure or success depending on resilience and dynamic capabilities (Zahra, 2020). A favorable business environment with fair markets, reduced startup costs (Lim et al, 2010), and effective institutions (Liu and Li, 2022) stimulates entrepreneurship. Thus, we hypothesize;

H₄: Having a favorable perception on easiness to start a business in ones' country in the pre-covid-19 period positively affects being involved in TEA activities.

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Additionally, we remain the highly studied status variable that measures the high status attributed to successful entrepreneurs, and add age as control variable.

H₆: High level of status and respect attributed to successful entrepreneurs in one's country positively affects being involved in TEA activities.

H₇: Age negatively affects being involved in TEA activities.

3. Data, Methodology, and Findings

We used data from Global Entrepreneurship Monitor which is originated in 1999 as a collaborative research initiative providing information regarding entrepreneurship and entrepreneurial environment in 120 countries from all over the world. We used the adult population survey data for years 2018 and 2021, which covers individual responses of 2424 and 2404 participants, respectively from Turkey. We specifically select these two years, which corresponds to the before- and after-covid period, to be able to capture the effects of pandemic on the entrepreneurial activities, in particular, early entrepreneurial activities in an emerging economy. Demographic indicators for both years are quite similar to each other. When we evaluate the basic demographic variables for 2021 in comparison with 2018; gender breakdown is almost the same, with 51% male and 49% female, for two years. Concerning age breakdown, respondents of 2021 are more clustered in 35-64 years compared to that of 2018. Hence, for the first two categories covering ages 18-34, respondents of 2018 are higher in number compared to that of 2021. Still, for both years, almost 52% of the participants fall in the 25-44 interval of age, signaling a similar distribution. Comparing the occupation answers, in 2021 we have less homemaker, unemployed, and student while have more full employed (including self-employed) and retired/disabled compared to 2018. Yet, the general breakdown is quite similar. In terms of education, first and second stage tertiary educated respondents are higher, in 2021 compared to 2018. Considering income, we divide the sample into three for both years as lowest 33% tile, middle 33% tile and upper 33% tile. In 2021, participants falling into the upper 33% tile (lower 33%) is higher (lower) than 2018 while the middle 33% tile is quite similar.

We employ a Binary Logistic Regression taking the most well-known variable of the GEM database named TEA as the dependent variable. It is a yes/no (1/0) question about whether the respondent is currently engaging in an early stage entrepreneurial activity (nascent or a new entrepreneur) or not. An early stage entrepreneurial activity corresponds to initiating a “new” business (paying salaries for at least 3 months but no more than 42 months) or actively managing enterprises that are less than 42 months old. The independent variables include entrepreneurial attitude and perceptions such as perceived capabilities, perceived opportunity, perceived high status due to entrepreneurial success, perceived easiness of starting a business. In addition, we have two variables measuring the effect of corona on individual income and on the perception about easiness of starting a new business. Opportunity perception (opport) is a yes/no (1/0) question concerning whether the respondent see good opportunities for starting a business in the next 6 months. Perceived capabilities (suskill) is a self-perception of the respondent about his/her skills and knowledge concerning starting a business, measured as 1/0 (yes/no). First pandemic variable, change in income during corona (crincome) is a 5 point scale question asking whether the coronavirus pandemic led the respondents’ household income to strongly decrease (1), or strongly increase (5). Perceived easiness of starting a business (easystart) variable is a yes/no question and indicates whether the respondent perceive that starting a new business in his/her country is easy (1) or not (0). Other corona variable measures respondents’ perception of easiness to start a business in corona times (crstart) with a 5 point scale question asking whether it is significantly easier (1) or significantly harder (5) to start a business in the respondents’ country compared to pre-covid-19 period. Perception of high status (nbstatus) indicates that if the respondent has the perception that in their country, those successful at starting a new business have a high level of status and respect (1) or not (0). Finally, we have age in 7 categories.

Figure 1 plots the responses for the effect of covid-19 pandemic on income with respect to income groups in Turkey. It is evident that pandemic comes as a negative income shock for every income group in general. Yet, we have a small group that faces an increase in their income due to pandemic. It is worth noting that a majority of those who experienced an income increase due to pandemic are from the highest income segment of the respondents. Thus, we can conclude that there is a small group of people, mostly coming from high income segment, having a positive income shock due to covid-19. This is significant as they are the ones who have a comparative advantage in terms of financial sources which may affect entrepreneurial intention and activity.

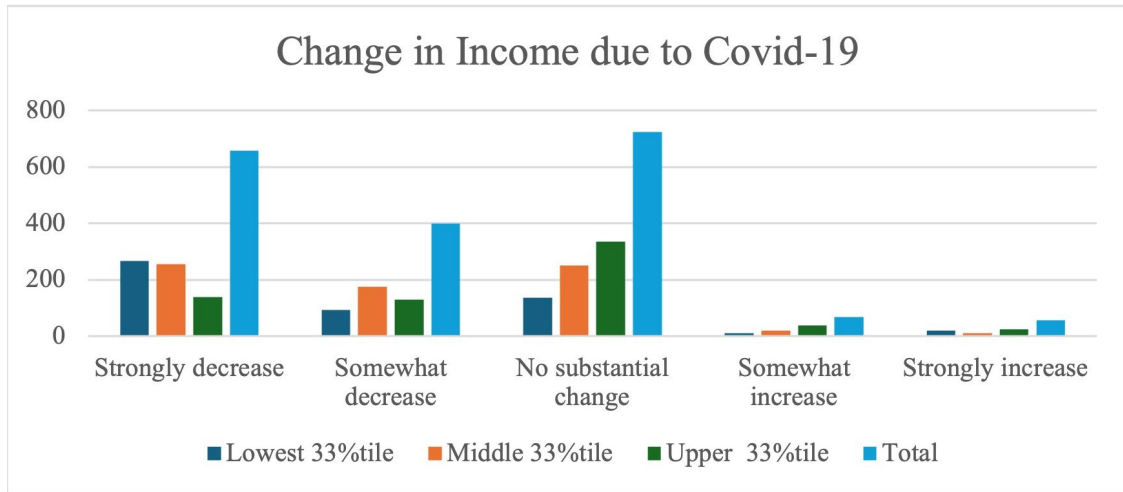


Figure 1: The effect of Covid-19 on income with respect to 3 income classes

In order to test and compare our hypotheses on core variables in the pre- and post-pandemic period, we consider 2018 and 2021 year GEM data for Turkey. We run a Binary logistic Regression taking TEA as the dependent variable and hypothesized variables; opportunity recognition (opport), self-efficacy indicating perceived skills on start-up activities (suskill), income in the post-covid-19 period (crincome), perception on easiness to start a business in the pre- and post-covid-19 period (easystart and crstart), high status attributed to successful entrepreneurs (nbstatus), and age as the independent variables for both years. Hence, following is the model we test:

$$TEA = \alpha + \beta_1 * oport + \beta_2 * suskill + \beta_3 * crincome + \beta_4 * easystart + \beta_5 * crstart + \beta_6 * nbstatus + \beta_7 * age + \epsilon$$

Although we had two sample of 2424 and 2404 respondents for 2018 and 2021 initially, our sample sizes decreased to 1574 and 17, respectively, due to missing data. Results are presented in Table I. We have good model fit, indicated by significant Chi-square values of 153.653 ($p < 0.001$) and 33.886 ($p < 0.001$) respectively. And the classification tables suggest our models predict involving in entrepreneurial activity correctly 82.8% and 69% of the time for 2018 and 2021, which are quite high accuracy rates (considering our modest sample size for the period 2021).

Results suggest that the factors influencing entrepreneurial activity changed significantly from the pre- to the post-Covid-19 period. Before the pandemic, only self-efficacy, income, and age significantly affect entrepreneurial activity. Opportunity recognition, favorable environment for start-ups, and high status associated with successful entrepreneurs are all lack explanatory power of entrepreneurial activity in the pre-Covid-19 period. However, all these three variables prove significance in the post-pandemic period.

Let us delve into the findings concerning the post-pandemic period. Literature suggests that opportunities arise from environmental shifts that create imbalances individuals can exploit (Holcombe 2003). During crises, recognizing these opportunities is expected to increase early entrepreneurial activity (Shane and Venkataraman 2000) consistent with our findings. A prevalence of necessity-driven entrepreneurs, driven by the need to meet basic needs, is expected in an emerging economy like Turkey (Estrin et al, 2019). However, our model shows that opportunity recognition positively impacts early entrepreneurial activity. Individual self-efficacy is closely linked to entrepreneurial activity and success (Krueger et al, 2000; Shane et al, 2003), which our results support. Higher income positively affects entrepreneurial intentions and early activity by reducing financial constraints confirming literature (Evans & Jovanovic, 1989). Hence, individuals who can adapt to changing entrepreneurial environment using their dynamic capabilities and adaptive capacity indicated by higher income and accumulated knowledge and skills are more probable to engage in new venture creation. Additionally, higher status perception associated with successful entrepreneurs positively influences entrepreneurial activity, particularly in individualistic economies where status provides greater utility (Liñán, Santos, and Fernández, 2011). Our findings align with this perspective.

Table 1: Binary Logistic Regression Variable Results for 2018-2021

	2018			2021		
	B	p-value	Exp(B)	B	p-value	Exp(B)
oport	0.206	0.160	1.229	1.206	0.006	3.339
suskill	1.602	<0.001	4.961	1.005	0.048	2.733
income/crincome	0.202	<0.001	1.224	0.357	0.048	1.429
easystart	0.148	0.337	1.159	-1.071	0.012	0.343
crstart				0.299	0.043	1.349
nbstatus	0.183	0.238	1.200	0.945	0.023	2.572
age	-0.204	<0.001	0.816	-0.243	0.096	0.784
Constant	-3.307	<0.001	0.037	-2.539	0.033	0.079
N	1579			171		
Omnibus Chi-square	153.653 (p_value<0.001)			33.886 (p-value<0.001)		

On the contrary, perception of a favorable start-up environment in the country proves significance but with a negative sign. In a similar vein, pandemic variable, measuring the perception of easiness of starting a new venture compared to pre-pandemic period, proves significance with a positive sign, meaning perception of increased difficulty in starting a new business has positive effect on entrepreneurial activities. Combining these two variables, our findings suggest that individuals who think that it is not easy to start a new venture in their country and gets even more difficult in the post-pandemic period are the ones who show higher probabilities to engage in early entrepreneurial activities. These findings does not support our hypotheses and they also contradict with the vast literature suggesting a favorable business environment would have fostering effects on entrepreneurial activities (Amorós, Bosma and Levie, 2013; Kaufmann, Kraay and Mastruzzi, 2006; Klapper, Laeven and Rajan, 2006). However, these results are supported by Djankov et al (2002) which demonstrates that startup activity is generally higher when the regulatory requirements for entry are more stringent, meaning when the easiness to start a business is lower. This can also be explained by Theories of Resilience and Dynamic Capabilities as individuals with high resilient and dynamic capacity can consider such hard times as an opportunity where they can use their comparative advantage over low-income and low-skilled entrepreneurs to become successful. This may be the case for Turkey where individuals perceiving a difficult start-up environment are more probable to engage in early entrepreneurial activity. Hence, in highly challenging times of post pandemic period, opportunity-driven individuals who enjoy high resilient capacity and dynamic capabilities, supported by high self-efficacy and elevated income during this period are more probable to engage in entrepreneurial activity.

4. Discussion and Conclusion

This paper studies the factors affecting total entrepreneurial activity in an emerging economy in the post-covid-19 period. Results show that opportunity recognition, individual self-efficacy, higher income in the post-covid-19 period, and perception of higher status attributed to successful entrepreneurs positively affect the probability of engaging in total early entrepreneurial activities in the post-pandemic period. Thus, although existing literature would anticipate of Turkey as dominated by necessity-driven entrepreneurs, our results suggest that opportunity driven individuals are more probable to engage in entrepreneurial activities in the post-covid-19 period.

On the other hand, individuals who perceive a difficult entry environment for start-ups are more probable to engage in early entrepreneurial activity. Combining these results, we can infer that pandemic act as a contextual factor creating its own type of potential entrepreneurs. They recognize new opportunities and rely on their increased income in the post-pandemic period and high self-efficacy in exploiting these new opportunities in an environment where starting a new business is harder compared to pre-pandemic period. Theory of Resilience and Dynamic Capabilities can shed a light on why they are eager to exploit opportunities in challenging times. These new type of potential entrepreneurs rely on their dynamic capabilities and high resilience which enable

them to adapt to changing environments. Their high skills, knowledge, and increased income during crisis times feed their adaptive capacity and hence they show higher probabilities of engaging in new venture creation.

In light of these findings, policymakers are encouraged to invest in educational programs for potential entrepreneurs to enhance their self-efficacy, given that the necessary skills for business initiation emerge as a pivotal factor for engaging in entrepreneurial activities. It may even overcome the effect of fear of failure in a post-crisis period, in this case a global pandemic. Moreover, creating platforms for successful entrepreneurs to share their experiences could amplify the perceived prestige associated with entrepreneurship, which may attract potential entrepreneurs. Finally, increasing availability of financial funds to potential entrepreneurs can support them in their start-up activities. In the past twenty years, the significance of venture capital and similar financing methods (such as angel financing) in promoting the growth of new firms has significantly increased, both in the United States and globally, encompassing developed and emerging economies (Chemmanur and Fulghieri, 2014).

There are certain limitations to this study. First of all, this study takes only one emerging economy as sample of interest. Further studies can add other emerging countries, and can come to more generalizable conclusions, or make comparisons among them. In addition, since we could attain only 1 year data in the post-pandemic period, we could run our analysis considering only 1 year of data. Future studies can add time variation in the data and can make conclusions about the effect of recovering on total early entrepreneurial activity. Finally, due to missing data in specifically the pandemic-related question, our ending sample size is quite modest in this study. Increasing sample size would entail to more generalizable conclusions.

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