Fishing in muddy waters: Mergers and acquisitions during uncertainty

Abstract

Using the COVID-19 pandemic as an exogenous shock, we examine whether firms engage in opportunistic mergers and acquisitions during uncertainty. Particularly, we analyze the inorganic growth strategies of acquiring firms with disproportionate pandemic-induced opportunities. We find a significant increase in the deal completion propensity and deal size, and a decrease in the deal completion time for acquirers that are more amenable to remote working. The effect is more pronounced when both the acquirer and the target are amenable to remote working. Our findings indicate that amenable firms, which were initially reluctant to engage in opportunistic acquisitions, engaged aggressively in the subsequent quarters with an abatement in pandemic-induced uncertainty. The study provides novel insights into the behaviour of acquisitive firms during the pandemic.

1. Introduction

The COVID-19 pandemic was an unprecedented shock to the world economy. The disruptions that ensued forced firms to adapt to a new normal where virtual selling, work from home, etc., replaced the conventional workflows. Firms had to swiftly pivot their business strategies to mitigate the impact of the pandemic. Consequently, the pandemic opened up new growth opportunities for firms with an increased focus on operations that were more amenable to remote working. In such a context, it would be valuable to examine how firms engage in inorganic growth through acquisitions. In this paper, using a cross-country sample of M&A deals, we investigate how the acquisition characteristics of firms that are more amenable to remote work vary from those that are less amenable to remote work during the COVID-19 pandemic.

Anecdotal evidence suggests that firms that offered technological solutions for remote working or were more amenable to remote working were scouted for acquisitions during the uncertain phase of the COVID-19 pandemic. For instance, Salesforce acquired Slack, which helped it to consolidate the cloud-based enterprise offering by integrating a communication tool developed by Slack.[1] Similarly, Microsoft acquired Nuance, which is a pioneer in artificial intelligence-based clinical intelligence in healthcare as well as interactive voice response and virtual assistance.[2]

A survey among senior corporate executives suggested that nearly half of the surveyed firms were planning to engage in opportunistic acquisitions due to suppressed valuations and nearly one-fourth of the firms were targeting to pivot to new opportunities that brought about by the pandemic (Herndon & Bender, 2020). On the other hand, the same survey suggested that the majority preferred to 'temporarily pause' ongoing deals so as to have greater clarity on the nature of economic recovery (Herndon & Bender, 2020). Deals were stalled as a consequence of the pandemic as many acquirers invoked

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[1]https://www.cnbc.com/2020/12/01/salesforce-buys-slack-for-27point7-billion-in-cloud-companys-largest-deal.html

[2]https://www.forbes.com/sites/joecornell/2021/04/20/microsoft-announces-acquisition-of-nuance-targets-completion-in-2021/?sh=3eb2dbe15bbe

the materially adverse changes (MAC) clause in the deal agreements. For instance, the acquisition of Tiffany by LVMH was mired in a legal tangle during the quarters following the COVID-19 shock.[3]

Given the contrasting vistas that emerge from anecdotes on the deal front during the pandemic, it is valuable to investigate how deal volume, speed, and completion propensity changed during the pandemic for industries that varied on their impact from the COVID-19 pandemic. Specifically, we examine how the suitability of the acquirer and the target for remote working impact the deal characteristics with a difference-in-differences (DiD) framework and a cross-country sample of deals. The cross-country sample provides an opportunity to examine the impact of the pervasive exogenous shock, which affected most of the major economies simultaneously. If one were to examine the impact for a single country, then it is likely that the country-specific COVID-19 response such as containment efforts and the remote working capabilities of the country, would affect the results. Hence, a cross-country sample allows us to provide external validity to the impact of COVID-19 shock on deal-making.

By focusing on inorganic growth initiatives during COVID-19, the paper attempts to shed light on several broader questions related to acquisitions in the face of pandemic-induced market volatility. What drives acquisitions during episodes of unprecedented uncertainty, such as the COVID-19 pandemic? Are acquiring firms motivated by the newfound opportunities created by the pandemic, or are they reluctant to undertake deals given the uncertainty and challenges to integration and negotiation due to pandemic-induced disruptions? The examination of the impact on deal characteristics will provide deeper insights into the deal-making during uncertainty that not only disrupted the entire value chain, but also the deal-making process itself.

Uncertainty is known to have a significant impact on mergers and acquisitions. For instance, Bonaime, Gulen, and Ion (2018) find that an increase in economic and political uncertainty is associated with lower inorganic growth pursuits by firms. Particularly

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[3]https://www.wsj.com/articles/behind-the-lvmh-tiffany-deal-insults-lawsuits-and-political-intrigue-11609158490

they find that uncertainty about monetary and fiscal policies and regulation have an adverse impact. However, they find that the impact is lower for deals that have the potential to attenuate firm-level risk. Bhagwat, Dam, and Harford (2016) find that the timing and intensity of merger activity are affected by the interim uncertainty between the deal announcement and deal closing. Driven by risk management motives of firms, higher cashflow volatility is associated with a greater propensity for vertical integration (Garfinkel & Hankins, 2011).

Another stream of literature that argues an increase in the takeover activity is the merger waves, driven by industry shocks such as deregulation, change in inputs and technological changes that induce alterations in the industry structure (Andrade, Mitchell, & Stafford, 2001; Mitchell & Mulherin, 1996). Mitchell and Mulherin (1996) find that industry level heterogeneity in the fundamental shocks contribute to the merger activity around the waves. Harford (2005) argues that the industry shocks accompanied by the availability of liquidity is a necessary condition to trigger a merger wave. The COVID-19 pandemic is characterised by sudden regulatory changes (Hale et al., 2020), significant shocks to workflow and input costs (Bloom, Bunn, Mizen, Smietanka, & Thwaites, 2020), excess liquidity in the capital markets (Halling, Yu, & Zechner, 2020), and large-scale deployment of technology to enable digital working (Dingel & Neiman, 2020; Garrote Sanchez et al., 2021). Furthermore, another driver of the merger wave has been the overvaluation in the equity prices (Rhodes-Kropf, Robinson, & Viswanathan, 2004; Shleifer & Vishny, 2003), particularly, the relative overvaluation of one set of industry participants relative to others. Given that firms that are more amenable to remote working—which included technology and professional services firms—were relatively overvalued during the post-COVID-19 shock period compared to the less amenable firms could drive such acquisitions.

The COVID-19 pandemic has virtually split firms into two different categories, those that are amenable to remote working and those that are not. The former group has exhibited significant resilience in their market valuation (Dingel & Neiman, 2020). The relative strength of such firms combined with the opportunity for business growth in

industries suitable for digital working could result in an increased pace of deal completion. The deal-making could be greater particularly for targets that are amenable to remote working. It is also likely that acquires from industries amenable for remote working also increase acquisitions directed at other industries given their relative resilience in the COVID-19 hit market.

The latter group—those that are less amenable to remote working—is bereft of opportunities and are likely to be forced to pivot to new business models that are more amenable to flexible modes of working. It is unlikely that such firms will engage in deals where the target firms are less amenable to new modes of working given the pandemic-induced uncertainty. However, in search of diversification and business continuity, the less amenable cohort is likely to engage in acquisitions from the amenable cohort to facilitate operations during the pandemic. However, given that these businesses were focused on less amenable modes of working, the acquisition of more amenable firms could prove challenging. For instance, the integration of a firm from a relatively flexible mode of working could take time despite the target offering new opportunities.

In line with the divide that is likely between the two groups of firms, we observe a significant difference in the trend for deal making. In a preliminary analysis of the proportion of the nature of firms active in deals during the pre and post-COVID-19 shock period, we find a substantial increase in the proportion of WFH amenable acquirers as well as targets. The trends shown in Figure 2 indicate that proportion of WFH acquirers to total acquirers have gone up from an average of 38% in the pre-COVID-19 period to nearly 42% in the post-COVID-19 shock period. Similarly, the proportion of targets that are WFH amenable has increased from an average of 47% in the pre-COVID-19 period to about 53% in the post-COVID-19 period. A country-wise comparison of deals also show an increase in the proportion of WFH amenable firms—both acquirers and targets—engaging in deals in the pre and post-COVID-19 period (Figure 3). We investigate these trends in M&A deals during the pandemic within the DiD framework. Our key findings and their implications are as follows.

We find that compared to the pre-pandemic period, the propensity for inorganic

growth is higher for acquiring firms that are more suitable for remote working. For instance, the deal completion propensity increases for such firms by 0.029% compared to their less WFH amenable peer group during the pandemic period. We also find that the deal size and the proportion of equity acquired by WFH amenable acquirers are also relatively larger during the pandemic period. Another important deal characteristic that exhibit a significant change is the deal completion time. We document that the WFH amenable firms complete the deals within a shorter period as compared to their less amenable to remote working counterparts during the pandemic. Therefore, the WFH amenable firms carry out faster acquisitions, are willing to pay a higher premium, and complete the acquisition in a shorter-window during the COVID-19 period. Taken together, the observed changes in the deal propensity and deal characteristics suggest that firms that had more resilient workflow during the pandemic on account of their suitability for remote working engaged in more aggressive deal making.

While we observe an increase in the propensity for deal-making by the WFH amenable firms despite the uncertainty created by the pandemic, the deal propensity increases only during the third quarter of the year 2020, a period past the peak uncertainty of the pandemic. The reluctance to engage in acquisitions immediately following the onset of the pandemic suggests a preference of firms to wait for more clarity to emerge during an uncertain period. The observed impact on the propensity for acquisitions and the deal characteristics holds consistently across emerging as well as advanced economies.

Furthermore, we find that the deal characteristics are also significantly impacted by the WFH amenability of the targets. The deal propensity is higher for targets that are work from home amenable. For instance, we find that the propensity for deals involving such target firms increases by 0.10% during the pandemic relative to those involving less WFH amenable targets. Furthermore, the deal propensity increases further for acquirer-target combinations of work from home amenable firms. The magnified propensity for inorganic growth with more WFH amenable firms as targets resembles a marked increase in acquisitions driven by industry-wide shocks as documented earlier.

We also find that the deal characteristics, deal size, stake acquired and the time

taken for completion of the deal are greater for targets that more WFH amenable. The relative aggression for acquisitions directed towards targets with more flexible operations complements the change in deal characteristics involving more WFH amenable acquirers. The findings collectively suggest that the remote working suitability of a firm was a key determinant in inorganic growth strategies during the pandemic.

Next, we find that WFH amenable firms that had prior experience in engaging in deals during the global financial crisis period have exhibited greater care in engaging in deals during COVID-19. Deals initiated by such firms have a higher completion propensity, pay lower amounts, acquire more ownership, and take a longer time to complete deals during the pandemic. One can infer from the findings that such firms have

Our findings are robust to several alternative estimations. First, we test whether the observed impact holds after controlling for potential bilateral investment treaties (BITs) between countries. We find that all our results are consistent with controls for BITs. Second, we test the robustness of our baseline results with an alternative measure of WFH. The estimations with the alternative measure, which varies at a country-level, yield us consistent results for completion propensity, deal consideration, percentage acquired and the speed of acquisition. Third, we conduct a placebo estimation by selecting an estimation window during a normal period. We do not find any significant impact on the deal characteristics due to a shock, which is triggered artificially during the placebo period. Finally, we re-estimate our baseline model with a matched treatment and control group based on a propensity score matched model and find that the results are largely consistent.

Our study contributes to the literature in the following ways. First, to our knowledge, this is the first study to examine the impact of COVID-19 on deal characteristics. While several studies have examined the impact of a credit crisis on deals—for example, the global financial crisis— studies that examine the impact of a shock that emanated from the real sector on deals is sparse. The findings of our study provide insights into the acquisition characteristics of firms that engaged in deals during an uncertain period. Second, our cross-country sample of deals provides external validity to the argument that

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an industry shock can lead to a merger wave. Our findings on how the disproportionate opportunity of firms that are amenable to flexible operations impacted the inorganic growth opportunities of such firms. Given that COVID-19 shock was pervasive across countries, we are able to identify how the deal characteristics are affected by a shock to a cluster of industries and thereby provide an anatomy of a potential merger wave.

We organize the rest of the paper as follows. The next section details the data obtained for the empirical analysis and the accompanying methodology employed to examine the impact of the pandemic on mergers and acquisitions. The succeeding section discusses the key findings of our study and is followed by a set of robustness tests. The last section concludes with the implications of our findings for deal-making during extreme economic uncertainty.

2. Data & Methodology

In this section, we describe the data and methodology used in the study. First, we discuss the data collection and source, sample selection and period, and variables used in the study. Next, we explain the methodology employed in our study to estimate the proposed relationship. Furthermore, we also show and discuss the parallel trends of deal-level activities in this section.

2.1. Data description

We employ data of 22,641 deals from January 2017 to June 2021, spread across 38 countries. The sample selection process is as follows. We obtain all the deal-level information from the Refinitiv Eikon database. It provides information for every deal, such as announcement date, deal purpose, deal attitude, form of the transaction, industry specification etc. The database has been extensively used in studies related to mergers and acquisitions (Arouri, Gomes, & Pukthuanthong, 2019; Caiazza, Galloppo, & Paimanova, 2021; Jost, Erben, Ottenstein, & Zülch, 2022; Mughal, Tao, Sun, & Xiang, 2021). We limit the pre-COVID-19 period from January 2017 to March 2020 to restrict the sample

to post the United States (US) Presidential elections, as the US contributes the largest number of deals in the sample.

Initially, we obtain a total of 2,55,231 deals from 2017 to 2021 from the database. We remove all the deals with the status of acquirer as private, joint venture, government, subsidiary, investor and mutual, which leaves 72,255 unique deals. We match the deals data with the financials of the acquirer firms—from the Refinitiv Eikon database—using their respective Reuters Instrument Code (RIC) (a unique identifier for each firm in the Refinitiv database) firms. Lastly, after matching, we retain the observations from countries that have deals in both the pre-COVID-19 and COVID-19 periods. It results in the final sample of 22,641 deals.

We use four dependent variables to examine the possible change in the deal-making behaviour of acquirer firms during the pandemic. The first dependent variable is *Complete*, which equals 1 if the deal is completed within the sample period and 0 otherwise. Second, we employ deal size, which is the logarithm of the total value of the consideration paid by the acquirer firm, excluding fees and expenses (in USD). The deal size, represented by the *Deal Size*, includes the amount paid for all common stock, common stock equivalents, preferred stock, debt, options, assets, warrants, and stake purchases made within six months of the announcement date of the transaction. Third, we employ the percentage of target firm acquired by the acquirer firms, which is represented by *% Acquired*. Finally, we also employ the *Completion time*, which captures the speed of the acquisition. It is calculated as the difference between the announcement date of a deal and the update stamp date of a deal if the deal is completed. Each of the dependent variables employed—which has been widely adopted in the extant literature—captures the acquisitive intensity of the deals.

Our main explanatory variable is the remote working ability of firms. We adopt the measures developed by Dingel and Neiman (2020) to capture the work-from-home (WFH) ability of firms. Their measures, *WFH amenable* captures the proportion of WFH amenable jobs in an industry and *WFH amenable wage* measures the proportion of wage of WFH amenable jobs in an industry. These measures are extensively used

in corporate finance studies related to COVID-19 (Barrios & Hochberg, 2020; Forsythe, Kahn, Lange, & Wiczer, 2020; Jones, Philippon, & Venkateswaran, 2021). We match the remote working amenability data with the deals data using the 2-digit North American Industry Classification System (NAICS) code and obtain a measure of remote working amenability for both the acquirer and target firms based on their industry affiliation.[4] An acquirer with a *WFH amenable* score above (below) the median value is classified as more (less) amenable (*WFH amenable*^{Acquirer} = 1 (0)). An analogous approach is employed to classify the target firms. Similarly, the acquirers and targets are classified based on *WFH amenable wage* measure. The industry-wise mean amenability score and the number of observations are shown in Table A2.

We employ a set of firm-level control variables for the acquirer firms that include firm size (*Size*), leverage (*Leverage*), profitability (*Profitability*) and firm age (*Age*). *Size* equals the logarithm of the total assets (in USD). *Leverage* is measured as the ratio of debt to total equity. *Profitability* equals earnings before interest, tax, depreciation and amortization (EBITDA) scaled by the total assets. *Age* is the logarithm of age (in years). To control for heterogeneity arising due to deal and industry characteristics, we employ two additional deal-level control variables, namely *Foreign deals* and *Same industry*. *Foreign deals* is a dummy variable that equals 1 for cross-border acquisitions and 0 otherwise. *Same industry* is a dummy variable that equals 1 if both the target and acquirer belong to the same industry and 0 otherwise. Table 1 provides the definition of all the variables.

Table 2 shows the summary statistics of the key variables employed in the study. The average deal completion propensity is 61%. The average deal size is USD 31 million. Our sample shows that the average equity stake acquired is 41.77%, and the average time required by acquirer firms to complete a deal is about 14.5 months. Our sample consists of approximately 38% and 50% of acquirer firms and target firms, respectively, that are high remote working. The average size of firms is 13.89. We have approximately 24% of

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[4]The data is downloaded from https://github.com/jdingel/DingelNeiman-workathome made available by the authors.

cross-border deals in our study.

We show the deals trend in Figure 1. The top panel shows the count of deals since 2017. As shown in the figure, the number of deals declined in the pandemic year as well as the following year. It is likely that the pandemic-induced uncertainty resulted in the reduction of deals (Herndon & Bender, 2020). Overall, the top panel shows a declining trend in the number of deals during the sample period. The bottom panel of Figure 1 shows the average deal size trend. The figure shows that the average deal size has increased after the COVID-19 outbreak.

Next, we show the proportion of WFH amenable deals trend in Figure 2. The top panel shows the proportion of WFH amenable deals to the total deals for the acquirer firms. As shown in the figure, the proportion has increased after the outbreak of COVID-19. The bottom panel shows the proportion of WFH amenable deals to the total deals for the target firms. It shows that this proportion has also increased during the COVID-19 period.

We show the country-wise spread of WFH amenable deals by acquirer firms in Figure 3.[5] The top panel shows the spread in the pre-COVID-19 period, and the bottom panel shows the spread during the COVID-19 period. Figure 3 shows that deals by the WFH amenable acquirers increase worldwide during the COVID-19 period relative to the pre-COVID-19 period.[6]

2.2. Parallel trends

We show the parallel trends of deal-level activities in Figure 4. The figure shows that the deal completion propensity has increased for WFH amenable acquirers compared to the less WFH amenable acquirers during COVID-19. It shows that remote working ability

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[5]We also show the country-wise spread of WFH amenable deals by target firms in Figure A2.

[6]The figure displays the proportion of deals by WFH amenable acquirers to the deals by non WFH amenable acquirers in a country. The top panel shows the proportion of deals by WFH amenable acquirers in the pre-COVID-19 period. The bottom panel shows the proportion of deals by WFH amenable acquirers in the COVID-19 period.

of firms plays an important role in firms' activities (Deloitte, 2020). The second panel of Figure 4 shows the parallel trend of time taken to complete a deal. The figure shows that the more WFH amenable firms take lower time to complete a deal relative to the less WFH amenable firms during COVID-19.

The bottom panel shows the parallel trends of deal size and % acquired. It shows that deal size has increased for more WFH amenable acquirers during the pandemic compared to the pre-COVID-19 level. However, it has increased more for the less WFH amenable acquirers also during COVID-19. As shown in the figure, the % acquired by the more WFH amenable acquirers has increased during the pandemic relative to the less WFH amenable acquirers. It shows the aggressive behaviour of more remote working firms during COVID-19 (McKinsey Digital, 2020).

2.3. Methodology

We use a difference-in-difference (DiD) method to estimate the impact of remote working ability of firms on deal-level outcomes during COVID-19 relative to the pre-COVID-19 period. We employ the following equation as our baseline estimation model:

$$Y_{i,t} = \beta_0 + \beta_1 \ X_j \times COVID-19_t + \beta_2 \ Z_{i,t-1} + \beta_3 \ Deals_{i,t} + \delta_i + \gamma_{ayq} + \alpha_{tyq} + \epsilon_{it} \quad (1)$$

In the above equation, Y represents one of the dependent variables in our study. The dependent variables employed in our study are *Complete*, *Deal Size*, *% Acquired* and *Completion time*. Our key explanatory variable is $X_j \times$ *COVID-19*, where X equals the WFH amenability of acquirer firms and COVID-19 represents the pandemic period. X represents the remote working ability (denoted by WFH amenable^{Acquirer} and WFH amenable wage^{Acquirer}) of the acquirer firm a in industry j. COVID-19 equals 1 for the period starting from April 2020 to June 2021 and 0 otherwise. We take COVID-19 equal to 1 from April 2020 onwards for two reasons: a) World Health Organisation (WHO) declared COVID-19 as the pandemic in March 2020, hence the period after March

2020 is considered as COVID-19, b) as per the Oxford COVID-19 Government Response Tracker, the stringency of lockdowns was substantially higher in the second quarter of 2020 relative to the first quarter of 2020.[7] The firm-level control variables in the study, represented by *Z*, are *Size*, *Leverage*, *Profitability* and *Age*. These variables are lagged by a quarter to control for potential endogeneity concerns. Furthermore, we also control for deal-level variables represented by *Deals* in the above equation by including dummy variables for cross-border deals and deals within the same industry.

We control for all the acquirer firm-level unobserved heterogeneity with acquirer firm fixed effects represented by δ_i in Equation 1. Furthermore, time-variant shocks at the country-level for the acquirer and the target is controlled by employing interactive fixed effect terms represented by γ_{ayq} and α_{tyq}, respectively, where a represents the acquirer firm, t represents the target firm, y represents the year and q represents the quarter. For instance, it is likely that some countries were impacted more severely than others during the pandemic. It is also likely that the government packages introduced in various countries (acquirer country or target country) affect the deal-level activities during COVID-19. These fixed effects help in controlling the omitted variable bias in our study (Gopalakrishnan, Jacob, & Mohapatra, 2021; Gormley & Matsa, 2014) and help in improved estimation of the impact of COVID-19 on deal-level activities.

We also investigate the impact of WFH amenability of both the acquirer firm and the target on deal outcomes. We ask whether WFH amenability of target firms moderates the relationship between WFH amenability of acquirer firms and the deal outcomes during the pandemic by estimating the following equation:

$$
\begin{aligned}
Y_{i,t} = \beta_0 + \beta_1\, X_{ja} \times COVID - 19_t \times Target_{jt} + \beta_2\, COVID - 19_t \times Target_{jt} + \\
\beta_3\, X_{ja} \times Target_{jt} + \beta_4\, Target_{jt} + \beta_5 Z_{i,t-1} + \beta_3\, Deals_{i,t} + \delta_i + \gamma_{ayq} + \alpha_{tyq} + \epsilon_{it}
\end{aligned}
\tag{2}
$$

Target represents the remote working ability of the target firm t in industry j. It is represented by WFH amenable^{Target} and WFH amenable wage^{Target} in our study and equals 1 for above-median WFH amenability of target firms and 0 otherwise. All the

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[7]For details, see Hale et al. (2020).

others variables are same as defined in Equation 1.

3. Findings and Discussion

In this section, we discuss the results based on Equation 1 and Equation 2. First, we present the results related to the impact of WFH amenability of acquirer firms on deal-level activities (deal completion propensity, deal size, % acquired and time to complete) in Table 3. Next, in Table 4, we show how these results differ according to the development state of the country. We also show the impact of WFH amenability of acquirer firms on the intangibles in Table 5.

3.1. Deal completion propensity and WFH amenability

Table 3 shows the impact of the remote working ability of acquirer firms on the deal-level activities during COVID-19. Columns (1)-(2) show the impact of the acquirer's remote working ability on the deal completion propensity during the pandemic. Our results show that WFH amenable acquirer firms have a higher deal completion propensity during COVID-19. The results suggest that the remote working ability of acquirer firms helps to complete 0.03% more deals during COVID-19 compared to the pre-COVID-19 period. Furthermore, the acquirer firms with high remote working wage complete 0.04% more deals during the pandemic period.

Our results suggest that acquirer firms that are able to adopt the COVID-19 induced changes, specifically WFH, are able to complete a higher proportion of deals during the pandemic. The acquirer firms become opportunistic and prepare for the growth followed by the COVID-19 induced downturn. The remote working firms acquire more firms and expand their business aggressively, given the COVID-19 induced opportunities for WFH amenable firms. These firms become more aggressive and involve themselves in activities that stimulate inorganic growth and profitability during the pandemic.

3.2. Deal size and WFH amenability

In Table 3, we also show the impact of the remote working ability of acquirer firms on deal size during the pandemic period. Columns (3)-(4) show the results related to deal size during the pandemic, and columns (5)-(6) show the results related to the percentage acquired by the acquirer firms during the COVID-19 period. Our results suggest that WFH amenability of acquirer firms has a positive impact on the deal size during COVID-19. The result based on *WFH amenable wage* shows that remote working firms increase their deal size by 0.19% during the pandemic. However, we do not obtain significant result with *WFH amenable.*

Our results suggest that WFH amenable acquirer firms become opportunity seeking during the pandemic and hence, take advantage of disproportionate opportunity created for remote working firms during the COVID-19 period. They show their aggressive behaviour and increase the deal size during the pandemic. The WFH amenable firms, which are relatively less impacted by COVID-19, engage in building financial resilience by extracting synergy through M&A (Deloitte, 2022). Such firms experience a rapid increase in demand, and hence, they use M&A in order to accelerate the transformation (Deloitte, 2022).

Next, we assess the impact of WFH amenability of acquirer firms on the percentage acquired by them during the pandemic period. We study whether the remote working firms show aggressive behaviour by acquiring a higher stake in the target firm during COVID-19 period. Columns (5)-(6) in Table 3 show the results related to the % acquired by acquirer firms during the pandemic. We show that the WFH amenable acquirer firms acquire 3.17% higher stake in the target firm's business during the pandemic period. The results based on other proxy of remote working ability (WFH amenable wage) also suggests the same.

While our results show that WFH amenable acquirer firms have increased the deal size during the COVID-19 period, the results based on % acquired by the WFH amenable firms further strengthen our argument that WFH amenable acquirer firms become aggressive and increase their business activities during the COVID-19 period. The remote working

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firms increase their digital transformation through M&A in order to facilitate faster growth during the pandemic (Morgan Stanley, 2022). These firms higher stake acquisition helps in building synergy and capturing the market leadership (Deloitte, 2022).

3.3. *Deal completion time and WFH amenability*

In Table 3, columns (7)-(8) show the results related to the WFH amenability of acquirer firms and its impact on the deal completion time during COVID-19. Our results suggest that the remote working acquirer firms take significantly lesser time to complete a deal during the pandemic period. The WFH amenable acquirer firms complete a deal in 0.28% lesser time compared to the less WFH amenable firms during the COVID-19 period. However, our results with *WFH amenable wage* for the deal completion time during the pandemic period are insignificant.

The unprecedented shock created by COVID-19 underlined the importance of remote working and forced many firms to shift to the remote working culture. While many firms adopted the WFH culture, some firms find it difficult to shift to WFH culture, which makes them less resilient during the pandemic (Brynjolfsson et al., 2020). We show that higher digital resilience of acquirer firms helps in improving performance and completing deals in a shorter period of time compared to the firms with lower digital resilience. Our results show that not only these firms become opportunistic and complete higher deals during the pandemic period, but also complete deals in shorter window relative to the pre-COVID-19 period. These results are consistent with the findings of Bai, Brynjolfsson, Jin, Steffen, and Wan (2021) who show that WFH practice helped in improving firms' resilience to the COVID-19 shock. Furthermore, Barrero, Bloom, and Davis (2021) show that increased WFH culture provides further incentives to technology that supports WFH. COVID-19 induced crisis diverts technological changes in ways that improve remote working and hence, the WFH amenable firms become aggressive during the pandemic (Bloom, Davis, & Zhestkova, 2021).

3.4. Advanced vs Emerging economies

We re-estimate Equation 1 based on the development state of the acquirer firms' country and present the results in Table 4. We classify acquirer firms into advanced economies or emerging economies based on the classification provided by International Monetary Fund (IMF). IMF classifies economies into developed or emerging on the basis of their per capita income, exports of diversified goods and services, and integration into the global financial system.[8] This classification has been extensively used in literature (Cerutti, Claessens, & Laeven, 2017; Kuzucu & Kuzucu, 2019; Vicente-Molina, Fernández-Sáinz, & Izagirre-Olaizola, 2013).

In Table 4, panel-A shows the results related to advanced economies firms, and panel-B shows the results for emerging economies firms. Our results in panel-A show that WFH amenable acquirer firms in advanced economies have higher deal completion propensity during the pandemic period. The remote working acquirer firms in advanced economies have 0.03% higher deal completion propensity during the pandemic period relative to the less remote working firms in advanced economies. This result suggests that advanced economies firms have a higher potential for remote working (Lund, Madgavkar, Manyika, & Smit, 2020). The firms in such economies are likely to do better in a remote working environment compared to the firms in emerging economies due to the substantial advantage arising from their internet infrastructure (Bana, Benzell, & Solares, 2020).

In Table 4, panel-B shows the results related to WFH amenable acquirer firms in emerging economies. Our results suggest that WFH amenable acquirer firms in emerging economies have 0.05% higher deal completion propensity during the pandemic period. It shows the relative importance of technology and digital adoption during the COVID-19 period. The emerging economies' firms' are likely to be hit harder by the pandemic as these economies have shallower financial markets, less scope for remote working and there is a shortage of resources to implement fiscal policies relative to the advanced economies (Hevia, Neumeyer, et al., 2020). Our results show that high remote working firms in emerging economies are able to cope with the challenges posed by the pandemic. This

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[8]https://www.imf.org/external/pubs/ft/weo/faq.htmq4b

result is strengthened when the target firm is also remote working. However, we do not obtain significant results with *WFH amenable.*

Next, we check whether the development state of the acquirer country is likely to impact the deal size and deal completion time during the COVID-19 period. In Table 4, columns (3)-(4) show the impact of WFH amenability of acquirer firms (classified as advanced or emerging economies) on the deal size during the pandemic period. The results suggest the remote working ability of acquirer firms increases the deal size by 0.39% in emerging economies. However, it does not have any significant impact on the deal size of firms in advanced economies. We also check the impact of WFH amenability of acquirer firms on the % acquired during the pandemic in columns (5)-(6). Our results suggest that WFH amenable acquirer firms increase their % acquired during the pandemic period in advanced economies. Interestingly, our results show that WFH amenable acquirer firms in the emerging economies also increase their deal size and % acquired during the COVID-19 period. This result strengthens our findings that remote working ability help firms increase their resilience and inorganic growth during crisis period, such as COVID-19.

In Table 4, columns (7)-(8) show the results related to the impact of development state of WFH acquirer firms on the time taken to complete a deal during the pandemic period. The results show the WFH amenable acquirer firms in advanced economies complete the deals in lesser time compared to emerging economies' firms. Our results show that the remote working ability of acquirer firms in advanced economies results in 0.31% lesser deal completion time during the pandemic period. These firms experience benefits of WFH amenability due to the improved digital technology in advanced economies. On the other hand, we do not obtain any significant results for the impact of WFH amenability of firms in emerging economies on the deal completion time during the COVID-19 period.

3.5. Intangibles and WFH amenability

Previous studies show that M&A deals are used by acquirer firms for the reapportionment of the investment opportunities (Levine, 2017). Acquiring a firm brings intangible assets that provide a way for new investment and growth opportunities (Faria, 2008). M&A

helps in value creation for the acquirer firms by providing distinctive implications (Bena & Li, 2014; Levine, 2017). It allows investment opportunities to flow to the firms that are most competent of exploiting opportunities (Higgins & Rodriguez, 2006). However, firms' motive to acquire tangible or intangible assets is likely to vary across industries (Levine, 2017; Peters & Taylor, 2017). Hence, we check firms in WFH amenable industries are involved more in acquiring intangible assets during the COVID-19 period.

Table 5 shows the results related to the impact of WFH amenability of acquirer firms on their intangibles post-deal completion during the pandemic period. Our results suggest that the remote working ability of acquirer firms has a significant positive impact on the intangibles during the COVID-19 period. The WFH amenability of acquirer firms result in 0.01% higher intangibles after the deal completion during the pandemic period.

Our results suggest that not only the WFH acquirer firms become opportunistic during the COVID-19 period, but also involved in seeking productive opportunities during the pandemic. Hence, we obtain significant increase in the acquirer firms' intangibles after deal completion during the COVID-19 period. Our results are consistent with the investment opportunity-based seeds model of Levine (2017), Clausen and Hirth (2016) and Bhattacharya and Li (2020) who show that intangible assets of the target firm are an important aspect for the acquirer firms.

4. Additional analysis

In this section, we conduct additional tests based on an alternative measure of remote working ability of firms and show the results in Table 6. We also control for bilateral relationship among countries which is likely to have an impact on the deal-level activities during COVID-19. Furthermore, we also check if firms' prior experience during crisis is likely to impact the deal-level activities during the pandemic. Last, we assess the moderating role of WFH amenability of target firms on the relationship between the remote working ability of acquirer firms and the deal-level activities during COVID-19.

4.1. Alternative estimation

Table 6 shows the results using an alternative measure of the remote working ability of firms. We refer to Hatayama, Viollaz, and Winkler (2020) for the alternative measure of WFH. They develop the measure using categorical variables that describe the intensity of different tasks. This measure is based on the skill and household surveys from 53 countries which differ in the level of economic development. It allows for country-level variation in the WFH amenability index. This measure is also used by Garrote Sanchez et al. (2021); Stantcheva (2022) & Bonadio, Huo, Levchenko, and Pandalai-Nayar (2021). We refer to this measure as *Remote working* in our study. We divide the sample based on the median *Remote working*. It equals 1 for the above-median (high remote working countries) and 0 otherwise.

Our results show that firms in remote working countries have a higher deal completion propensity during the COVID-19 period. It increases by 0.09% for the remote working firms during the pandemic period. Our results also show that the WFH amenability of firms increases the % acquired by 11.20% during the COVID-19 period. These results are consistent with the findings shown in Table 3. However, we do not obtain significant results related to deal size and time taken by the acquirer firms to complete a deal during the pandemic period.

4.2. Controlling for Bilateral investment treaties

Bilateral investment treaties (BITs) are discretionary treaties between two countries designed to protect and encourage foreign investment. The idea behind BITs is to provide clear and binding rules to protect foreign investment and reduce country risks, which encourages investment. Previous studies show that BITs signed between countries have a significant impact on mergers & acquisitions. For instance, Bhagwat, Brogaard, and Julio (2021) show that BITs have a significant positive impact on the cross-border mergers. Ahern, Daminelli, and Fracassi (2015) also document similar findings on BITs. Hence, we control for BITs in our study and re-estimate Equation 1 using acquirer country-target country-year-quarter fixed effects.

Table 7 shows the results related to the impact of the remote working ability of firms on deal-level activities after controlling for BITs. Our results are consistent with the findings of Table 3. We find that deal completion propensity, deal size and % acquired have increased for the remote working firms during the pandemic period. Furthermore, the time taken by WFH amenable acquirer firms to complete a deal has also significantly declined by 0.33% during the COVID-19 period. Overall, our results are consistent even after controlling for BITs.

4.3. Role of prior experience

Next, we check whether prior crisis experience of acquirer firms impacts the relationship between WFH amenability and deal-level activities. We consider firms with prior crisis experience as firms that have acquisition experience during Global Financial Crisis (GFC).[9] We divide the sample into two groups- firms with prior crisis experience (during GFC) and firms with no prior experience.

Table 8 shows the results related to the role of prior experience. Columns (1)-(4) show the results for firms with acquisition experience during GFC and columns (5)-(8) show the results for firms with no acquisition experience during GFC. Our results show that WFH amenability increases the deal completion propensity and % acquired by 0.07% and 5.84%, respectively during the COVID-19 period for the firms with prior crisis experience. However, it does not have any significant impact on the deal completion time taken by the acquirer firms. For the firms with no prior experience, the remote working ability of firms reduces the time taken to complete a deal by 0.52% during the pandemic. However, we do not obtain significant results for other deal-level activities for firms with no prior experience during crisis.

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[9]We define GFC years as 2008-2010.

4.4. Moderating role of WFH amenability of target firms

Last, we assess the moderating role of WFH amenability of target firms on the relationship between WFH amenability of acquirer firms and deal-level activities using Equation 2 (see Table 9, Table 10 and Table 11). We find that the remote working ability of target firms positively moderates the proposed relationship in our study. Table 9 shows that WFH amenability of target firms further increases the deal completion propensity and % acquired by WFH amenable acquirer firms during COVID-19. However, we do not find any significant moderating impact of remote working targets on deal size and time taken by acquirers to complete a deal during the pandemic.

Table 10 shows the moderating role of remote working target firms on the deal-level activities and WFH amenable acquirers during the pandemic. We find that WFH amenability of target firms strengthens the relationship proposed in Equation 1. in both advanced and emerging economies. However, it negatively moderates the deal size in emerging economies firms during the COVID-19 period. We also conduct the moderation analysis for the sample, excluding observations from the US, and show the results in Table 11. Our results are consistent with the findings of Table 9. This result further strengthens our findings that WFH amenability of acquirer firms and target firms has a positive relationship with the deal-level activities during the COVID-19 period.

5. Robustness tests

In this section, we conduct a set of robustness tests to validate our findings. First, we re-estimate Equation 1 excluding observations from the United States (US) as it has the highest number of observations in our sample. Second, we run a quarterly analysis to check the temporal variation and its impact on the deal-level activity. Next, we re-estimate Equation 1 using a propensity score matched sample and check if we obtain consistent results. Last, we do a placebo estimation to identify if our findings are due to an artificially induced crisis.

5.1. Non-US sample

Table A1 shows the country-wise distribution of deals in our study. As shown in Table A1, the highest number of deals come from the US (approximately 28% of the sample). We check if our results hold after excluding the deal observations from the US. Hence, we exclude the observations from the US and re-estimate Equation 1 with a sub-sample. We present these results in Table A3.

Table A3 shows the results related to the impact of WFH amenability of firms on deal-level activities for the sub-sample during the pandemic. Our results show that the remote working firms have a higher deal completion propensity during COVID-19, even after excluding deal observations from the US. The results suggest that WFH amenable acquirer firms have a higher deal completion propensity (about 0.03%) during the pandemic period relative to the pre-pandemic period.

Next, we assess the impact of the remote working ability of acquirer firms on deal size and % acquired for the sub-sample during the COVID-19 period. Columns (3)-(4) and (5)-(6) of Table A3 show the results related to deal size and % acquired, respectively. Our results suggest that the WFH amenable acquirer firms increase the deal size 0.28% during the pandemic. However, the result with *WFH amenable*^{Acquirer} is insignificant. The % acquired by remote working firms has increased by 5.17% during the COVID-19 period compared to the pre-COVID-19 period. These results are consistent with the findings of Table 3. Furthermore, we also conduct a sub-sample analysis to identify the impact of remote working ability on deal completion time taken by acquirer firms during the pandemic period. In Table A3, columns (7)-(8) show the results related to the deal completion time. The time taken by WFH amenable acquirers has reduced by 0.37% during the pandemic. However, we do not obtain any significant results with *WFH amenable wage*^{Acquirer}.

5.2. Quarterly analysis

In the previous estimations, we assume that the impact of WFH amenability on the deal-level activities is constant during all stages of the COVID-19 period. However, there could

be a difference in this impact across time. Hence, we re-estimate the baseline estimation equation with a quarter-by-quarter change in the deal-level activities and present the results in Table A4. In Table A4, columns (1),(2), (3) and (4) show the results with deal completion propensity, deal size, % acquired and time taken to complete a deal, respectively as the dependent variable.

Column (1) in Table A4 shows that the deal completion propensity of WFH amenable acquirer firms is driven by the first quarter of 2021 (fourth quarter of COVID-19 period in our study). During the onset of the pandemic, the deal completion propensity declined by 0.07% for the remote working firms. The COVID-19 pandemic impacted the global economy and resulted in uncertainty worldwide (Goldstein, Koijen, & Mueller, 2021). The COVID-19 induced uncertainty led to the "temporary pause" in the deal market to assess the potential timeline for market recovery and due diligence (Herndon & Bender, 2020). Hence, our results show that deal completion propensity for the WFH amenable firms declined in the second quarter of 2020 (first quarter of COVID-19 period in our study). However, given the increased focus on remote working culture, the deal completion propensity increased subsequently for the remote working firms.

Column (2) shows the impact of WFH amenability of firms on the deal size during the pandemic. It shows that our results in Table 3 are driven by the last quarter of COVID-19 period in our study. The deal size declined for the remote working firms in the third quarter of 2020. It is likely that the new due diligence issues resulted in reduced deal size during the pandemic.[10] However, the increased remote working performance increases the deal size by 0.29% in the last quarter of the COVID-19 period in our sample. In column (3), we show the results related to the impact of remote working ability on the % acquired during the COVID-19 period. Our results show that the WFH amenable firms significantly increase their stake acquired in the target firms during the COVID-19 period. Our results shown for % acquired in Table 3 is driven by the third quarter and fourth quarter of 2020, and second quarter of 2021.

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[10]https://www.forbes.com/sites/allbusiness/2020/04/17/impact-of-coronavirus-crisis-on-mergers-and-acquisitions/?sh=28054f00200a

Column (4) of Table A4 shows the impact of WFH amenability of firms on the deal completion time taken by the acquirer firms during the pandemic. Our results suggest that the findings of Table 3 are driven by the third quarter and fourth quarter of 2020 as we obtain significant results for Q3'2020 and Q4'2020.[11]

5.3. Propensity score matching analysis

Next, we use Propensity Score Matching (PSM) to compare the deal-level activities during COVID-19 for a matched and a control sample of firms. The objective of PSM is to account for the fact that the remote working ability of firms is not random but can be a function of a firm's characteristics. For instance, firms involved more in information work are more likely to be remote working (Brynjolfsson et al., 2020). PSM helps in mitigating asymptomatic biases that emerge from endogeneity or self-selection. Accordingly, matching provides a suitable robustness test for the regression analysis (Roberts & Whited, 2013). Although this technique does not fully solve the endogeneity or self-selection biases, it helps in solving the endogeneity issues emerging out of functional form misspecifications (Shipman, Swanquist, & Whited, 2017).

We follow Al Guindy (2021) and Bharath and Dittmar (2010), and conduct PSM analysis as follows. First, we run a logistic regression to estimate the likelihood of a firm being amenable to remote working based on its characteristics (control variables used in the study). This part measures the probability or propensity of a firm being amenable to remote working. Second, we match firms that are more amenable to WFH with firms that are less amenable to WFH, but they have homogeneous firm characteristics except for remote working ability. This provides us a way to compare firms that have a similar propensity or equally likely to work remotely so that one firm is amenable to WFH and the other is not amenable to WFH.

Table A5 shows the results related to the PSM analysis. In Table A5, columns (1), (2), (3) and (4) show the results with deal completion propensity, deal size, % acquired

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[11]We show the analysis till Q4'2020 only because of data unavailability. The updated date of deals was available till 2020 only as of December, 2021.

and deal completion time, respectively, as the dependent variable. Our results suggest that WFH amenable acquirer firms have a higher deal completion propensity, greater % acquired and complete a deal in lesser time during the COVID-19 period relative to the pre-COVID-19 period. Our results are consistent with the baseline findings.

5.4. Placebo estimation

We conduct a placebo test to assess our DiD model to test the proposed relationship. We define *shock* as the pseudo-shock period starting from the first quarter of 2013 to the second quarter of 2017. It is the same period over which COVID-19 spans in our study. *Shock* equals 1 for the period starting from 2016'Q2 to 2017'Q2 for the last five quarters and 0 otherwise. The pseudo shock period is also equal to the sample period over which the treatment (COVID-19) spans in our baseline estimation model (see Equation 1). A similar approach has been followed by various corporate finance studies (Dutordoir, Strong, & Sun, 2022; Hu, Li, & Shevlin, 2021; Xu, Chen, Xu, & Chan, 2016).

Figure A1 shows the deals trend during the pseudo shock period. Table A6 shows the results related to placebo estimation. In Table A6, columns (1)-(4), (5)-(6), (7)-(8) and (9)-(10) show the results related to deal completion propensity, deal size, % acquired and time taken by acquirer firms to complete a deal, respectively, as the dependent variable. We do not find any significant results related to the impact of WFH amenability of acquirer firms on the deal completion propensity during the pseudo shock period. Furthermore, our results show that the remote working ability of target firms has a negative moderating impact on the relationship between the WFH amenability of acquirer firms and the deal completion propensity during the artificially induced crisis period. Next, we find that the remote working ability of acquirer firms has a negative impact on the deal size and % acquired during the pseudo shock period. These results are in contrast to the results shown in Table 3. However, the results related to the time taken by the remote working acquirer firms to complete a deal are not consistent. Overall, we do not find any consistent results for the impact of WFH amenability of acquirer firms on deal-level activities during the pseudo shock period. It shows that our baseline findings

are not induced by an artificially induced crisis.

5.5. Impact of WFH amenability of Cumulative Abnormal Returns

Last, we conduct analysis to test the impact of WFH amenability of the acquirer firms on their Cumulative Abnormal Returns (CAR) post the deal announcement. We calculate CAR for 5-day event window and 3-day event window for the acquirer firms. Figure A3 shows the parallel trends for 5-day event window CAR and 3-day event window CAR. As shown in Figure A3, there is an increase in the CAR during the COVID-19 period for WFH amenable acquirer firms. It is likely that the market reacts positively to the deal announcement by the WFH amenable firms during the pandemic period. We show the impact of remote working ability of acquirer firms on their CAR in Table A7. However, we do not obtain any significant results here.

6. Conclusion

We investigate the likely role played by the remote working amenability of firms in pursuing inorganic growth strategies by firms during the COVID-19 pandemic period. With cross-country data, we study the extent to which the deal completion propensity, deal size, and deal completion time are influenced by the amenability of the acquirers and targets. We find that the deal characteristics are strongly impacted by the ability of the acquirer to work remotely during the pandemic. Particularly, we find that more work from home amenable acquirers exhibit a greater propensity for deal completion, pursue larger deals and consummate the acquisition faster during the pandemic relative to the normal period. These results imply that the relative resilience of such firms during the pandemic has allowed them to pursue inorganic growth strategies more aggressively than their peers.

We also find that the deal-making turns relatively more aggressive during the pandemic period, when it involves a combination of acquirers and targets which are more suitable for remote working. The increased propensity for deal-making when it involves

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targets which face less operational constraints during the pandemic suggests a jump in opportunistic acquisitions triggered by the pandemic. We also find that acquirers with prior experience of engaging in acquisitions during a crisis have a higher propensity to complete the deal, pay lower amounts, and take more time to complete the deal compared to firms with no experience. The finding reflects how such firms have incorporated the learning from prior experience in deal consummation during periods of uncertainty. We find that our results are largely consistent across advanced and emerging market economies, are robust for a subsample that includes only non-US firms, and are consistent with the baseline after controlling for potential bilateral investment treaties between countries.

Overall, the findings suggest that acquiring firms with ex-ante amenability to remote working benefited from the pandemic-induced uncertainty by engaging in opportunistic acquisitions. The study deepens the understanding of merger waves by identifying how a certain feature of the operational preparedness of a cluster of industries has magnified acquisitions during the pandemic. In future studies, it would be valuable to examine the extent to which the surge in opportunistic deal-making during the pandemic has created shareholder wealth for the acquiring firms.

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Figure 1: Deals trend
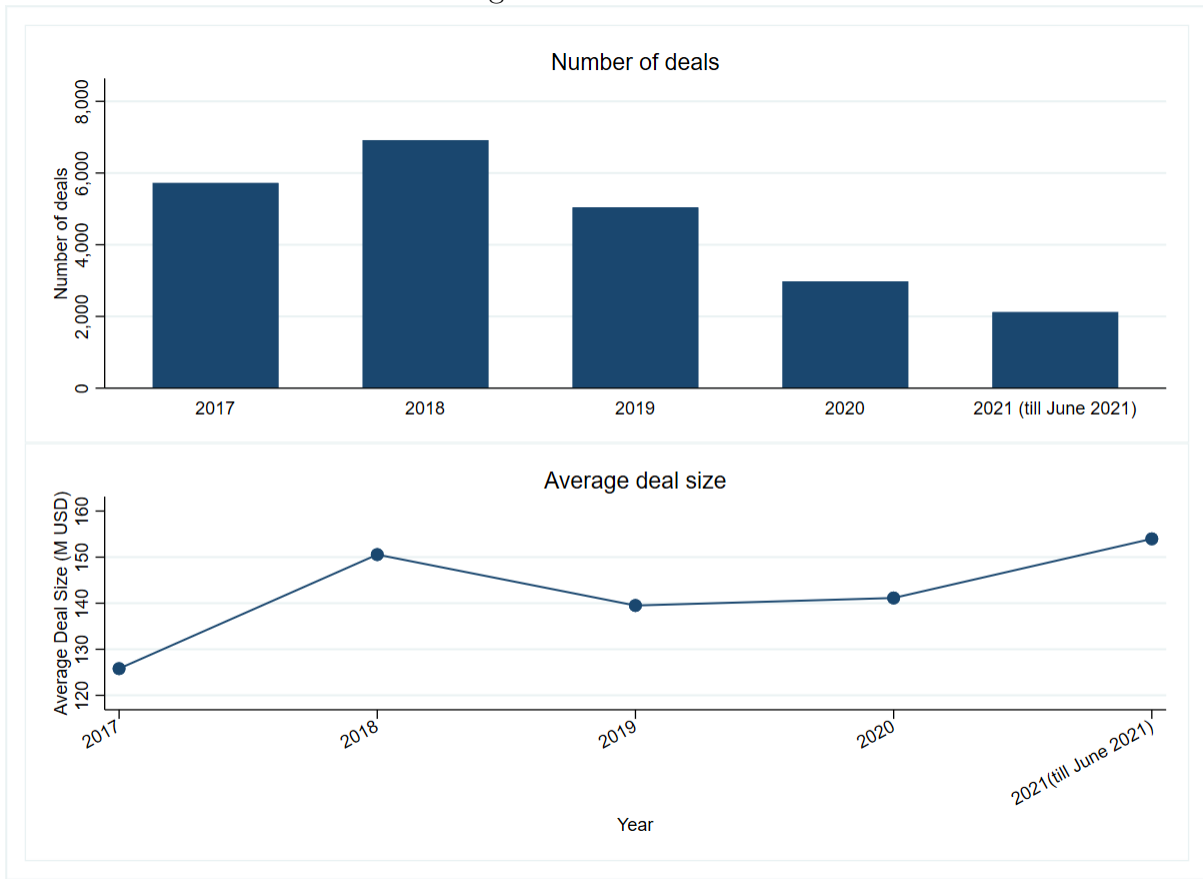
The figure displays the deals trend since 2017. The top figure shows the number of deals per year. The bottom figure shows the average size of deals per year.

Figure 2: Proportion of WFH amenable deals
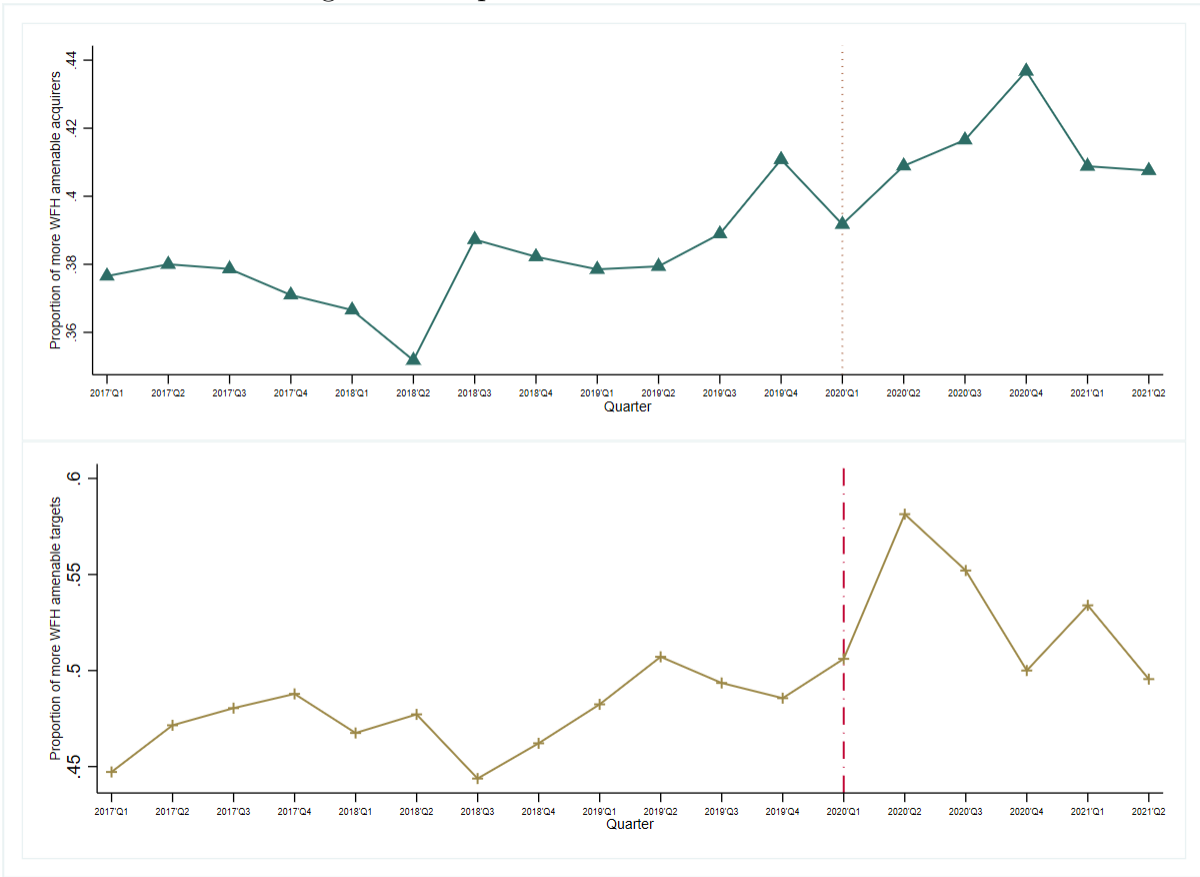
The figure displays the trend of WFH amenable deals as a proportion of total deals. The top panel shows the proportion of WFH amenable acquirer firms. The bottom panel shows the proportion of WFH amenable target firms.

Figure 3: Country-wise proportion of WFH amenable deals

WFH amenable deals in pre-COVID-19 period
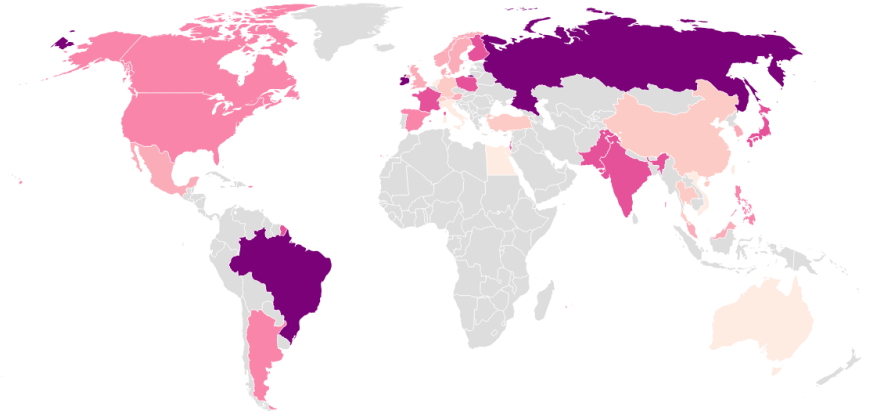
WFH amenable deals in the-COVID-19 period
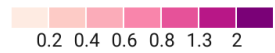
Figure 4: Parallel trends of deal-level activities during COVID-19
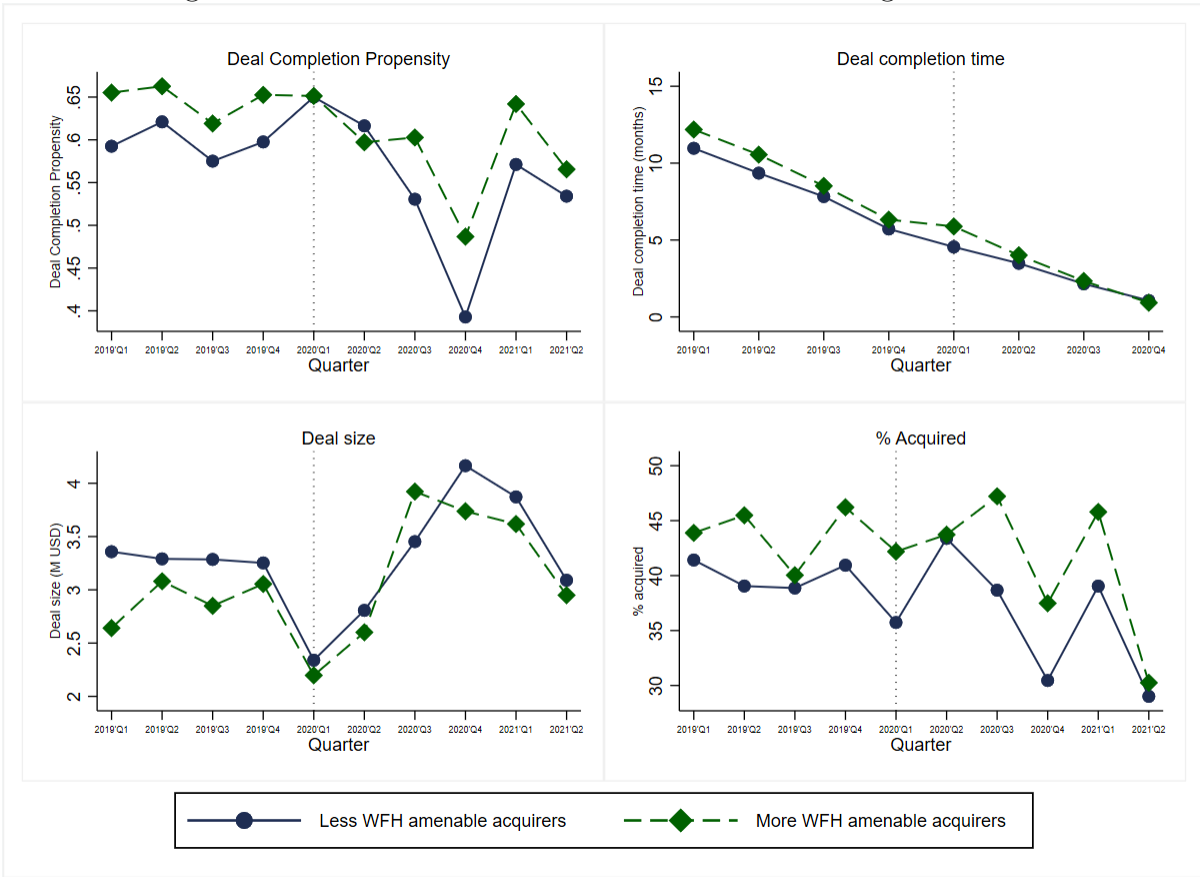
The figure displays the parallel trends of deal-level activities of WFH amenable acquirers for last ten quarters. The description of all variables is presented in Table 1.

Table 1: Variable definitions and data sources

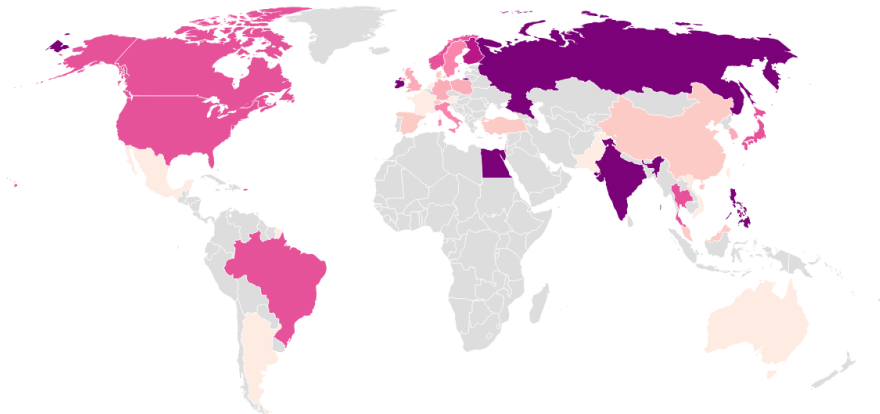| Variable	Definition and construction	Data source
Deal-level variables		
Complete	A dummy variable that equals 1 for completed deals and 0 otherwise	Refinitiv Eikon
Deal size	Logarithm of the total value of consideration paid by the acquirer, excluding fees and expenses (USD)	Refinitiv Eikon
% Acquired	Percentage of target firm acquired by the acquirer firm	Refinitiv Eikon
Completion time	Logarithm of number of months taken to complete a deal	Refinitiv Eikon
Foreign deals	A dummy variable that equals 1 for cross-border deals and 0 otherwise	Refinitiv Eikon
Firm-level variables		
Size	Logarithm of total assets of the firm (USD)	Refinitiv Eikon
Leverage	Debt scaled by total equity of the firm	Refinitiv Eikon
Profitability	Earnings before interest, tax, depreciation and amortization (EBITDA) scaled by total assets of the firm	Refinitiv Eikon
Age	Logarithm of age of firm (years)	Refinitiv Eikon
Industry-level variables		
WFH amenable^{Acquirer}	A dummy variable that equals 1 for above-median teleworkable employment score for the acquirer firms and 0 otherwise	Dingel and Neiman (2020)
WFH amenable wage^{Acquirer}	A dummy variable that equals 1 for above-median teleworkable wage score for the acquirer firms and 0 otherwise	Dingel and Neiman (2020)
WFH amenable^{Target}	A dummy variable that equals 1 for above-median teleworkable employment score for the target firms and 0 otherwise	Dingel and Neiman (2020)
WFH amenable wage^{Target}	A dummy variable that equals 1 for above-median teleworkable wage score for the target firms and 0 otherwise	Dingel and Neiman (2020)
Same industry	A dummy variable that equals 1 if both acquirer and target firm belong to same industry and 0 otherwise	Refinitiv Eikon
Country-level variables		
Developed	A dummy variable that equals 1 for acquirer firms in developed economies and 0 for acquirer firms in emerging economies	International Monetary Fund

Table 2: Summary statistics of key variables

Variable	N	Mean	SD	Min	P10	P50	P90	Max
Complete	22641	0.612	0.487	0.000	0.000	1.000	1.000	1.000
Deal size	13918	3.201	2.299	-2.659	1.587	4.806	6.292	8.066
% Acquired	22641	41.773	45.603	0.000	0.000	100.000	100.000	100.000
Completion time	20524	14.488	12.391	0.000	2.992	24.000	32.910	47.901
Intangibles	19859	0.077	0.105	0.000	0.011	0.095	0.206	0.581
WFH amenable^{Acquirer}	22641	0.387	0.487	0.000	0.000	1.000	1.000	1.000
WFH amenable wage^{Acquirer}	22641	0.836	0.371	0.000	1.000	1.000	1.000	1.000
WFH amenable^{Target}	22641	0.485	0.500	0.000	0.000	1.000	1.000	1.000
WFH amenable wage^{Target}	22641	0.548	0.498	0.000	0.000	1.000	1.000	1.000
Size	22641	13.902	2.364	6.384	12.288	15.528	17.048	19.188
Leverage	22641	0.734	1.267	-2.899	0.118	0.936	1.818	8.038
Profitability	22641	0.011	0.078	-0.710	0.008	0.034	0.050	0.106
Age	22641	3.152	0.844	0.693	2.708	3.784	4.248	4.762
Same industry	22641	0.296	0.457	0.000	0.000	1.000	1.000	1.000
Foreign deals	22641	0.236	0.425	0.000	0.000	0.000	1.000	1.000
Developed	22641	0.715	0.451	0.000	0.000	1.000	1.000	1.000

Notes: Table 1 presents the description of all the variables. N stands for the number of observations. Min. & Max. show the minimum and maximum value of each variable respectively. SD and P represent the standard deviation and percentile respectively.

Table 3: Impact of WFH amenability of acquirer firms on deal-level activities

	Complete		Deal size		% Acquired		Time to complete	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WFH amenable^{Acquirer} × COVID-19	0.029**		0.118		3.162***		-0.284***	
	(0.014)		(0.120)		(0.929)		(0.085)	
WFH amenable wage^{Acquirer} × COVID-19		0.040**		0.194**		7.045***		0.201
		(0.016)		(0.095)		(1.610)		(0.294)
Size	0.007	0.009	0.299***	0.307***	0.540	0.802	-0.080	-0.085
	(0.028)	(0.028)	(0.049)	(0.049)	(2.556)	(2.473)	(0.057)	(0.054)
Leverage	-0.002	-0.002	-0.033	-0.032	-0.288	-0.272	0.018**	0.016**
	(0.004)	(0.004)	(0.032)	(0.032)	(0.263)	(0.276)	(0.008)	(0.007)
Profitability	-0.022	-0.024	-0.606	-0.622	-6.152	-6.597	0.550**	0.537**
	(0.079)	(0.079)	(0.628)	(0.631)	(13.425)	(13.447)	(0.249)	(0.264)
Age	-0.116**	-0.105**	-0.718**	-0.687**	-10.821**	-9.237**	-0.565***	-0.587***
	(0.049)	(0.049)	(0.275)	(0.288)	(4.405)	(4.307)	(0.174)	(0.181)
Same industry	-0.035	-0.035	0.272***	0.272***	-3.993***	-3.976***	0.020	0.019
	(0.025)	(0.025)	(0.066)	(0.066)	(1.164)	(1.168)	(0.026)	(0.025)
Foreign deals	0.079***	0.080***	-0.110	-0.107	7.842***	7.891***	0.071**	0.068**
	(0.015)	(0.015)	(0.070)	(0.070)	(1.245)	(1.257)	(0.027)	(0.026)
Observations	22,641	22,641	12,688	12,688	22,641	22,641	11,030	11,030
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.232	0.232	0.589	0.589	0.321	0.321	0.599	0.599

Notes: The dependent variable in columns (1)-(2), (3)-(4), (5)-(6) & (7)-(8) is deal completion propensity, deal size, % acquired and time taken by the acquirer firm to complete a deal. *WFH amenable^{Acquirer}* refers to acquirer firms in industries that have above-median WFH amenable score. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table 4: WFH amenability and deal-level activities: Advanced vs Emerging economies

	Complete		Deal size		% Acquired		Time to complete	
Panel A - Advanced economies								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$WFH\ amenable^{Acquirer} \times COVID\text{-}19$	0.032*		0.043		2.921**		-0.314***	
	(0.017)		(0.144)		(1.303)		(0.092)	
$WFH\ amenable\ wage^{Acquirer} \times COVID\text{-}19$		0.036*		0.128		7.355***		0.210
		(0.021)		(0.136)		(2.022)		(0.321)
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	16,113	16,113	7,954	7,954	16,113	16,113	8,734	8,734
Adjusted R^2	0.181	0.181	0.651	0.651	0.280	0.280	0.597	0.597
Panel B - Emerging economies								
$WFH\ amenable^{Acquirer} \times COVID\text{-}19$	0.042		0.228		5.475***		-0.055	
	(0.044)		(0.181)		(1.762)		(0.214)	
$WFH\ amenable\ wage^{Acquirer} \times COVID\text{-}19$		0.058**		0.397**		6.202**		0.183
		(0.021)		(0.152)		(2.380)		(0.435)
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,288	6,288	4,568	4,568	6,288	6,288	2,131	2,131
Adjusted R^2	0.269	0.269	0.411	0.411	0.325	0.325	0.655	0.655

Notes: The dependent variable in columns (1)-(2), (3)-(4) & (5)-(6), (7)-(8) is deal completion propensity, deal size, % acquired and time taken by the acquirer firm to complete a deal. Panel A shows the results for advanced economies firms and Panel B shows the results for emerging economies firms. *WFH amenable*^{Acquirer} refers to acquirer firms in industries that have above-median WFH amenable score. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table 5: Impact of WFH amenability of acquirer firms on intangibles

	(1)	(2)	(3)	(4)
WFH amenable^{Acquirer} $\times$ COVID-19	-0.000		0.003	
	(0.002)		(0.005)	
WFH amenable wage^{Acquirer} $\times$ COVID-19		0.010**		0.018**
		(0.005)		(0.008)
WFH amenable^{Acquirer}			0.017***	
			(0.005)	
WFH amenable wage^{Acquirer}				0.012
				(0.009)
Size	0.016**	0.017**	0.003*	0.003*
	(0.007)	(0.007)	(0.002)	(0.002)
Leverage	0.001	0.001	0.003**	0.004**
	(0.001)	(0.001)	(0.002)	(0.002)
Profitability	0.034	0.034	-0.134***	-0.137***
	(0.036)	(0.036)	(0.029)	(0.031)
Age	-0.018*	-0.016*	-0.013**	-0.016***
	(0.009)	(0.009)	(0.005)	(0.006)
Same industry	-0.001	-0.001	0.021*	0.017
	(0.001)	(0.001)	(0.012)	(0.011)
Foreign deals	0.001	0.001	0.007**	0.006
	(0.001)	(0.001)	(0.003)	(0.004)
Observations	10,945	10,945	13,644	13,644
Firm fixed effects	Yes	Yes	No	No
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.913	0.943	0.254	0.254

Notes: The dependent variable in all the models is intangibles of acquirer firms in the quarter following deal completion. *WFH amenable^{Acquirer}* refers to acquirer firms in industries that have above-median WFH amenable score. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table 6: WFH amenability and deal activity: Alternative measure

	(1)	(2)	(3)	(4)
Remote working × COVID-19	0.096**	0.278	11.205***	-0.024
	(0.038)	(0.222)	(3.885)	(0.205)
Remote working	0.072***	1.313***	8.440***	-0.370***
	(0.013)	(0.091)	(1.046)	(0.042)
Size	0.005	0.434***	1.706	0.054
	(0.010)	(0.121)	(1.246)	(0.084)
Leverage	-0.003	-0.011	-0.074	-0.001
	(0.004)	(0.031)	(0.336)	(0.019)
Profitability	-0.019	-0.692*	-4.632	0.425
	(0.084)	(0.376)	(10.245)	(0.322)
Age	-0.070	-0.033	-7.793	-0.089
	(0.076)	(0.218)	(9.103)	(0.304)
Same industry	-0.063***	0.443***	-4.829***	0.043*
	(0.006)	(0.092)	(0.943)	(0.022)
Foreign deals	0.097***	-0.033	9.183***	0.090
	(0.020)	(0.103)	(1.916)	(0.075)
Observations	15,975	7,432	15,975	8,830
Firm fixed effects	Yes	Yes	Yes	Yes
Acquirer industry-Year-Quarter fixed effects	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.191	0.662	0.286	0.626

Notes: The dependent variable in model (1), (2), (3) & (4) is deal completion propensity, deal size, % acquired and deal completion time, respectively. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer industry level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table 7: WFH amenability and deal activity: Controlling for Bilateral relationships

	Complete		Deal size		% Acquired		Time to complete	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WFH amenable^{Acquirer} × COVID-19	0.023*		0.086		2.410***		-0.339***	
	(0.012)		(0.106)		(0.885)		(0.091)	
WFH amenable wage^{Acquirer} × COVID-19		0.044***		0.188*		7.713***		0.255
		(0.014)		(0.099)		(1.431)		(0.300)
Size	-0.003	-0.001	0.279***	0.286***	-0.663	-0.412	-0.085	-0.088
	(0.025)	(0.025)	(0.051)	(0.051)	(2.229)	(2.170)	(0.067)	(0.065)
Leverage	-0.002	-0.002	-0.030	-0.029	-0.210	-0.189	0.006	0.006
	(0.004)	(0.004)	(0.033)	(0.033)	(0.251)	(0.261)	(0.010)	(0.010)
Profitability	0.035	0.032	-0.627	-0.643	-3.822	-4.303	0.339*	0.340**
	(0.071)	(0.071)	(0.587)	(0.591)	(12.817)	(12.895)	(0.172)	(0.165)
Age	-0.129***	-0.118***	-0.744**	-0.724**	-13.682***	-12.198***	-0.410*	-0.427**
	(0.042)	(0.041)	(0.278)	(0.293)	(4.375)	(4.272)	(0.205)	(0.207)
Same industry	-0.039	-0.039	0.281***	0.282***	-4.381***	-4.366***	0.023	0.021
	(0.026)	(0.026)	(0.062)	(0.062)	(1.081)	(1.083)	(0.025)	(0.024)
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer country-Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	20,920	20,920	11,746	11,746	20,920	20,920	9,977	9,977
Adjusted R^2	0.249	0.249	0.597	0.597	0.339	0.339	0.616	0.616

Notes: The dependent variable in model (1) & (2) is deal completion propensity, (5) & (6) is deal size, (7) & (8) is % acquired and in (9) & (10) is deal completion time. *WFH amenable^{Acquirer}* refers to acquirer firms in industries that have above-median WFH amenable score. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table 8: WFH amenability and deal-level activity: Role of prior experience

	Prior experience				No prior experience			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WFH amenable^{Acquirer} × COVID-19	0.071**	-0.367*	5.849**	0.072	0.020	0.169	1.947	-0.524***
	(0.030)	(0.205)	(2.866)	(0.086)	(0.020)	(0.145)	(1.603)	(0.116)
Size	-0.070***	0.809***	-0.823	-0.037	0.021	0.223***	0.775	-0.055
	(0.020)	(0.196)	(2.505)	(0.061)	(0.029)	(0.043)	(2.580)	(0.056)
Leverage	0.013***	0.036*	1.597***	0.011	-0.008	-0.043	-1.079***	0.007
	(0.005)	(0.020)	(0.330)	(0.018)	(0.007)	(0.042)	(0.302)	(0.014)
Profitability	-1.493***	0.886	-100.904***	0.182	0.013	-0.649	-7.396	0.436**
	(0.243)	(1.721)	(27.198)	(2.071)	(0.086)	(0.724)	(13.987)	(0.169)
Age	-0.151	-1.509	-17.756*	1.093**	-0.124**	-0.734	-11.367*	-1.062***
	(0.139)	(1.138)	(9.513)	(0.459)	(0.057)	(0.461)	(6.134)	(0.333)
Same industry	-0.084***	0.313**	-7.531***	0.024	-0.011	0.279***	-2.161**	0.010
	(0.026)	(0.118)	(1.481)	(0.027)	(0.027)	(0.052)	(0.947)	(0.037)
Foreign deals	0.145***	-0.552**	12.862***	0.059	0.063***	0.076	7.202***	0.059*
	(0.014)	(0.232)	(2.313)	(0.043)	(0.017)	(0.071)	(0.781)	(0.034)
Observations	6,918	2,910	6,918	3,787	15,273	9,286	15,273	6,782
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer industry-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.227	0.587	0.326	0.630	0.236	0.554	0.319	0.601

Notes: The dependent variable in model (1) & (5), (2) & (6), (3) & (7), (4) & (8) is deal completion propensity, deal size, % acquired and deal completion time, respectively. Columns (1)-(4) show the results for acquirer firms with prior acquisition experience during GFC and columns (5)-(8) show the results for acquirer firms with no prior acquisition experience during GFC period. COVID-19 is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer industry level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table 9: Moderating role of WFH amenability of target firms on deal-level activities

	Complete		Deal size		% Acquired		Time to complete	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WFH amenable^{Acquirer} × COVID-19 × WFH amenable^{Target}	0.031		0.114		7.458***		-0.104	
	(0.028)		(0.216)		(2.228)		(0.259)	
WFH amenable wage^{Acquirer} × COVID-19 × WFH amenable wage^{Target}		0.102***		-0.228		6.089*		-0.289
		(0.032)		(0.372)		(3.185)		(0.277)
Observations	22,641	22,641	12,688	12,688	22,641	22,641	11,030	11,030
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.232	0.232	0.590	0.590	0.322	0.322	0.612	0.612

Notes: The dependent variable in columns (1)-(2), (3)-(4), (5)-(6) & (7)-(8) is deal completion propensity, deal size, % acquired and time taken by the acquirer firm. *WFH amenable^{Acquirer}* refers to acquirer firms in industries that have above-median WFH amenable score. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table 10: Moderating role of WFH amenability of target firms on deal-level activities: Advanced vs Emerging economies

	Complete		Deal size		% Acquired		Time to complete	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A - Advanced economies								
$WFH\ amenable^{Acquirer} \times COVID\text{-}19 \times WFH\ amenable^{Target}$	0.061**		-0.086		9.130***		-0.005	
	(0.027)		(0.219)		(2.317)		(0.107)	
$WFH\ amenable\ wage^{Acquirer} \times COVID\text{-}19 \times WFH\ amenable\ wage^{Target}$		0.059**		0.248		1.539		-0.325*
		(0.025)		(0.264)		(2.851)		(0.160)
Observations	16,113	16,113	7,954	7,954	16,113	16,113	8,734	8,734
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.181	0.181	0.652	0.652	0.281	0.281	0.598	0.598
Panel B - Emerging economies								
$WFH\ amenable^{Acquirer} \times COVID\text{-}19 \times WFH\ amenable^{Target}$	-0.040		0.365		4.041		-1.108***	
	(0.054)		(0.371)		(3.297)		(0.300)	
$WFH\ amenable\ wage^{Acquirer} \times COVID\text{-}19 \times WFH\ amenable\ wage^{Target}$		0.200***		-1.006***		14.945		-1.158***
		(0.063)		(0.283)		(9.729)		(0.346)
Observations	6,288	6,288	4,568	4,568	6,288	6,288	2,131	2,131
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.271	0.271	0.414	0.414	0.322	0.322	0.714	0.714

Notes: The dependent variable in columns (1)-(2), (3)-(4), (5)-(6) & (7)-(8) is deal completion propensity, deal size, % acquired and time taken by the acquirer firm. *WFH amenable^{Acquirer}* refers to acquirer firms in industries that have above-median WFH amenable score. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table 11: Moderating role of WFH amenability of target firms on deal-level activities: Non US firms

	Complete		Deal size		% Acquired		Time to complete	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WFH amenable^{Acquirer} $\times$ COVID-19 $\times$ WFH amenable^{Target}	0.017		0.393***		5.111**		-0.257	
	(0.029)		(0.122)		(1.962)		(0.387)	
WFH amenable wage^{Acquirer} $\times$ COVID-19 $\times$ WFH amenable wage^{Target}		0.107**		-0.411		7.365*		-0.623**
		(0.043)		(0.401)		(4.348)		(0.256)
Observations	16,252	16,252	9,746	9,746	16,252	16,252	7,133	7,133
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.243	0.243	0.500	0.499	0.298	0.298	0.630	0.631

Notes: The dependent variable in columns (1)-(2), (3)-(4), (5)-(6) & (7)-(8) is deal completion propensity, deal size, % acquired and time taken by the acquirer firm. *WFH amenable^{Acquirer}* refers to acquirer firms in industries that have above-median WFH amenable score. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

A. Appendix

Figure A1: Deals trend during the Placebo estimation period
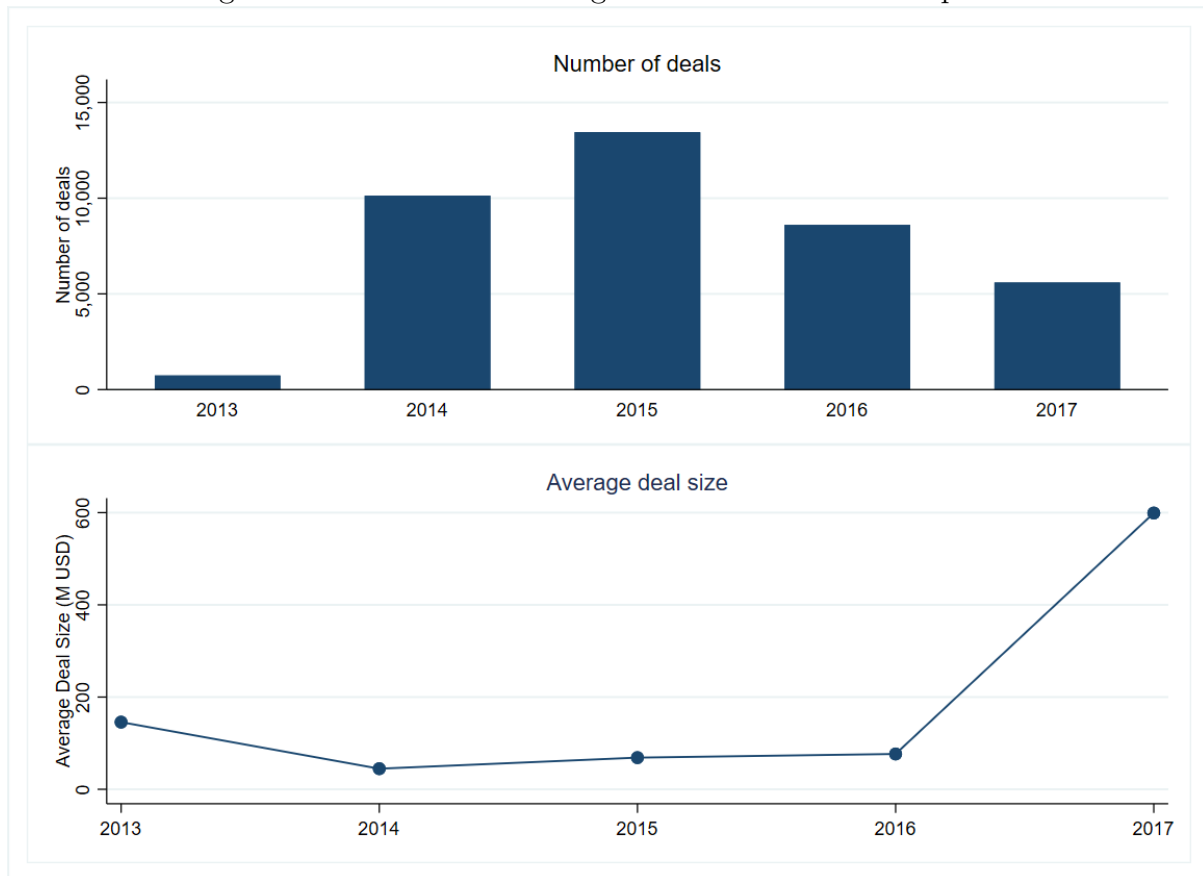
The figure displays the deals trend during the placebo estimation period. It starts from 2013'Q1 to 2017'Q2. The top figure shows the number of deals per year. The bottom figure shows the average size of deals per year.

Figure A2: Country-wise proportion of WFH amenable deals for target firms

WFH amenable targets in pre-COVID-19 period

0.2 0.4 0.6 0.8 1.3 2
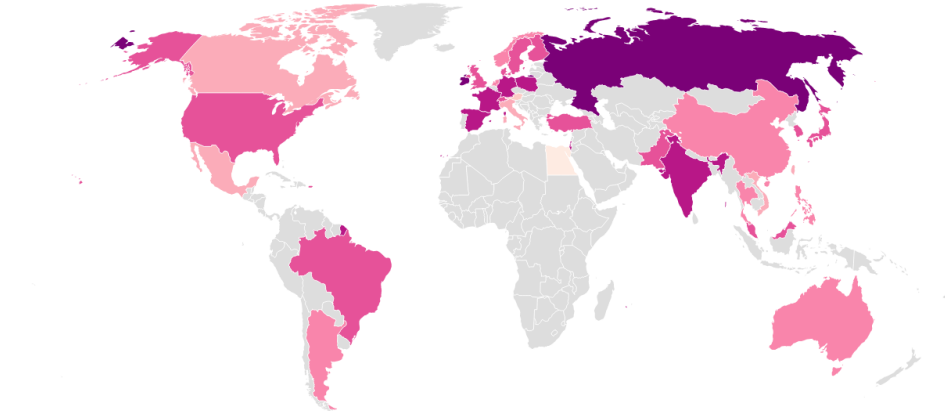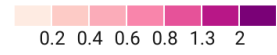
Created with Datawrapper

WFH amenable targets in the COVID-19 period

0.2 0.4 0.6 0.8 1.3 2
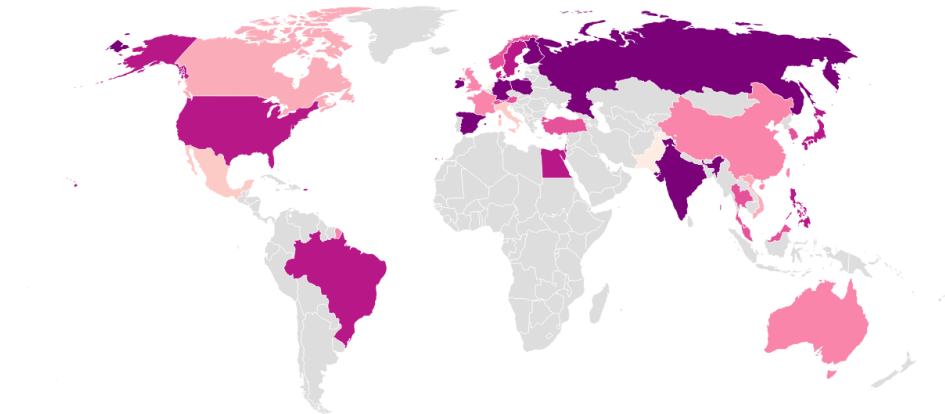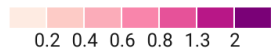
Created with Datawrapper

Figure A3: Parallel trends of Cumulative Abnormal Returns (CAR) during COVID-19

The figure displays the parallel trends of CAR of WFH amenable acquirers for the last ten quarters. The top panel shows 5-day CAR parallel trends and bottom panel shows 3-day CAR parallel trends.

Table A1: Country-wise distribution of deals

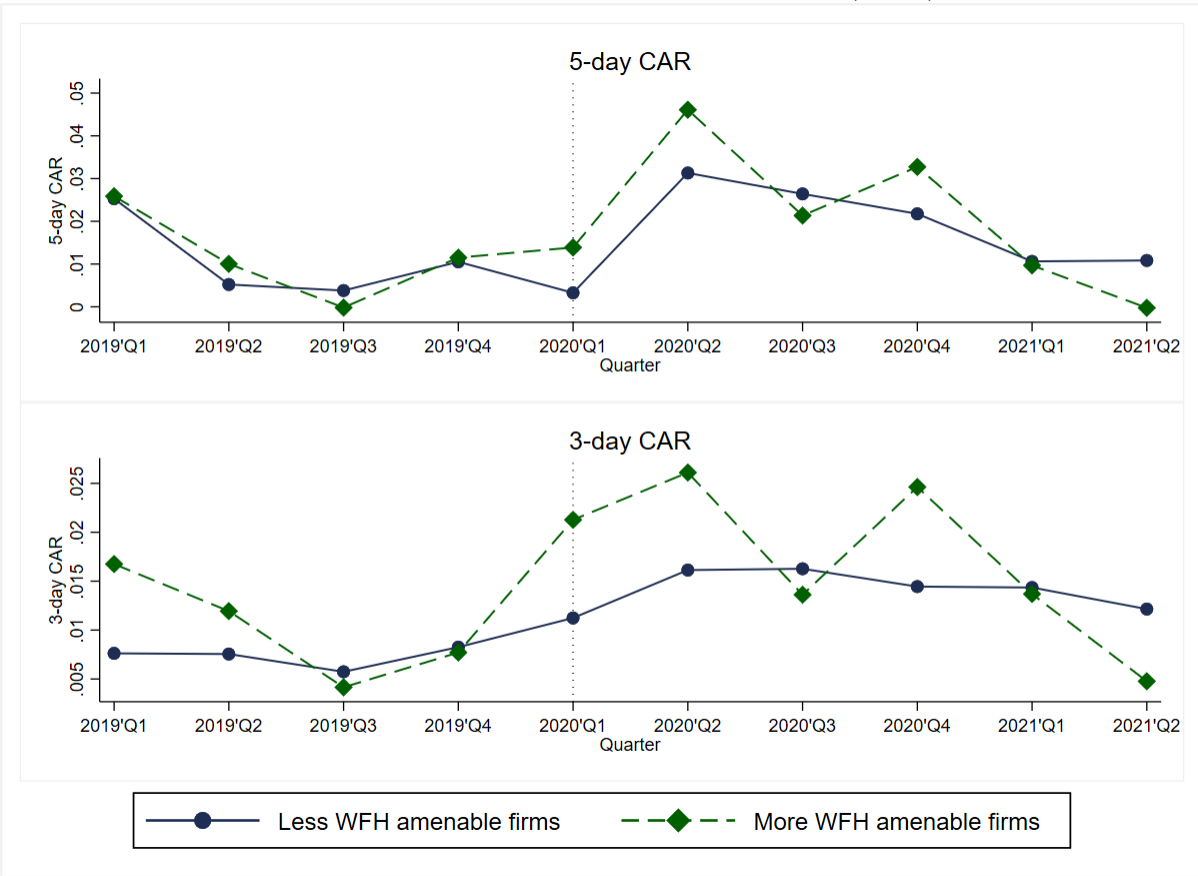| Country	Observations	Country	Observations
Argentina	12	Malaysia	298
Australia	71	Mexico	47
Austria	51	Netherlands	84
Bermuda	11	Norway	169
Brazil	336	Pakistan	13
Canada	1,968	Philippines	138
China (Mainland)	4,675	Poland	247
Denmark	93	Russia	50
Egypt	12	Singapore	140
Finland	159	South Korea	1,212
France	64	Spain	71
Germany	152	Sweden	231
Hong Kong	30	Switzerland	68
India	244	Taiwan	493
Ireland	147	Thailand	199
Israel	86	Turkey	68
Italy	15	United Kingdom	172
Japan	4,352	United States	6,327
Luxembourg	33	Vietnam	103
		Total	22,641

Table A2: Industry-wise distribution

Industry	WFH amenability	No. of firms
Accommodation and Food Services	0.056	299
Agriculture, Forestry, Fishing and Hunting	0.086	21
Other Services (except Public Administration)	0.150	99
Construction	0.214	1,016
Retail Trade	0.225	1,141
Transportation and Warehousing	0.230	672
Health Care and Social Assistance	0.243	467
Manufacturing	0.265	10,636
Mining, Quarrying, and Oil and Gas Extraction	0.277	845
Administrative & Support & Waste Management & Remediation Services	0.300	531
Arts, Entertainment, and Recreation	0.321	139
Utilities	0.370	574
Wholesale Trade	0.489	980
Information	0.787	2,753
Professional, Scientific, and Technical Services	0.803	2,207
Educational Services	0.826	160

Table A3: Impact of WFH amenability of acquirer firms on deal size, % acquired and time to complete (Non US firms)

	Complete		Deal size		% Acquired		Time to complete	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WFH amenable^{Acquirer} × COVID-19	0.033*		0.195		2.163		-0.379***	
	(0.019)		(0.130)		(1.282)		(0.137)	
WFH amenable wage^{Acquirer} × COVID-19		0.024		0.284***		5.170***		0.523
		(0.018)		(0.069)		(1.783)		(0.505)
Size	0.041***	0.043***	0.276***	0.289***	3.692***	3.856***	-0.089	-0.094
	(0.015)	(0.015)	(0.060)	(0.062)	(1.226)	(1.202)	(0.112)	(0.106)
Leverage	0.005	0.005	-0.081	-0.083	-0.490	-0.502	0.030	0.029
	(0.006)	(0.006)	(0.073)	(0.073)	(0.693)	(0.691)	(0.025)	(0.024)
Profitability	-0.102**	-0.104**	-0.992**	-1.015**	-19.504***	-19.932***	0.241	0.189
	(0.044)	(0.044)	(0.459)	(0.453)	(5.435)	(5.360)	(0.222)	(0.214)
Age	-0.141	-0.133	-0.624*	-0.595	-11.564	-11.237	-0.297**	-0.355**
	(0.093)	(0.093)	(0.355)	(0.384)	(7.474)	(7.389)	(0.145)	(0.163)
Same industry	-0.014	-0.014	0.248***	0.247***	-3.050***	-3.037***	-0.010	-0.008
	(0.025)	(0.025)	(0.083)	(0.082)	(1.077)	(1.077)	(0.028)	(0.029)
Foreign deals	0.016	0.016	-0.129	-0.124	5.794***	5.835***	0.104	0.103
	(0.031)	(0.031)	(0.209)	(0.207)	(1.793)	(1.789)	(0.066)	(0.066)
Observations	16,252	16,252	9,746	9,746	16,252	16,252	7,133	7,133
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.242	0.242	0.498	0.498	0.298	0.298	0.609	0.609

Notes: The dependent variable in columns (1)-(2), (3)-(4), (5)-(6) & (7)-(8) is deal completion propensity, deal size, % acquired and time taken by the acquirer firm. *WFH amenable^{Acquirer}* refers to acquirer firms in industries that have above-median WFH amenable score. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table A4: Quarter-wise analysis results

	Complete	Deal size	% Acquired	Time
	(1)	(2)	(3)	(4)
WFH amenable^{Acquirer} × Q2'2020	-0.074*	0.087	-3.802	-0.198
	(0.043)	(0.276)	(4.829)	(0.167)
WFH amenable^{Acquirer} × Q3'2020	0.072	-0.008	8.711**	-0.364**
	(0.049)	(0.179)	(3.533)	(0.177)
WFH amenable^{Acquirer} × Q4'2020	0.030	0.161	4.045*	-0.279**
	(0.027)	(0.194)	(2.090)	(0.126)
WFH amenable^{Acquirer} × Q1'2021	0.024	0.038	0.115	
	(0.036)	(0.186)	(1.900)	
WFH amenable^{Acquirer} × Q2'2021	0.061	0.295*	6.927***	
	(0.048)	(0.155)	(1.951)	
Firm-level control variables	Yes	Yes	Yes	Yes
Observations	22,641	12,688	22,641	11,030
Firm fixed effects	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.232	0.589	0.322	0.613

Notes: The dependent variable in model (1), (2), (3) & (4) is deal completion propensity, deal size, % acquired and deal completion time, respectively. *WFH amenable^{Acquirer}* refers to acquirer firms in industries that have above-median WFH amenable score. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table A5: Propensity score matching analysis

	(1)	(2)	(3)	(4)
WFH amenable^{Acquirer} × *COVID-19*	0.028**	0.118	3.140***	-0.284***
	(0.014)	(0.120)	(0.936)	(0.085)
Size	0.007	0.300***	0.552	-0.080
	(0.028)	(0.049)	(2.559)	(0.057)
Leverage	-0.003	-0.033	-0.338	0.018**
	(0.004)	(0.032)	(0.280)	(0.008)
Profitability	-0.019	-0.612	-5.915	0.550**
	(0.080)	(0.632)	(13.533)	(0.249)
Age	-0.118**	-0.719**	-11.056**	-0.565***
	(0.051)	(0.275)	(4.471)	(0.174)
Same industry	-0.035	0.272***	-3.993***	0.020
	(0.025)	(0.066)	(1.166)	(0.026)
Foreign deals	0.080***	-0.110	7.909***	0.071**
	(0.015)	(0.070)	(1.255)	(0.027)
Observations	22,635	12,686	22,635	11,030
Firm fixed effects	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.232	0.589	0.322	0.613

Notes: The dependent variable in model (1), (2), (3) & (4) is deal completion propensity, deal size, % acquired and deal completion time, respectively. The classification of *WFH amenable^{Acquirer}* is based on propensity score matching analysis. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table A6: WFH amenability and deal activity: Placebo estimations

	Deal Completion				Deal size		% Acquired		Time to complete	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
$WFH\ amenable^{Acquirer} \times Shock$	-0.002		0.051**		-0.181*		-2.405*		-1.112*	
	(0.027)		(0.021)		(0.104)		(1.286)		(0.543)	
$WFH\ amenable\ wage^{Acquirer} \times Shock$		-0.037		0.015		-0.058		-1.789		1.393***
		(0.061)		(0.042)		(0.075)		(3.351)		(0.451)
$WFH\ amenable^{Acquirer} \times Shock \times WFH\ amenable^{Target}$			-0.123***							
			(0.024)							
$WFH\ amenable\ wage^{Acquirer} \times Shock \times WFH\ amenable\ wage^{Target}$				-0.165**						
				(0.079)						
Firm-level controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	38,517	38,517	38,517	38,517	16,840	16,840	38,517	38,517	29,562	29,562
Adjusted R^2	0.665	0.665	0.666	0.666	0.822	0.822	0.769	0.769	0.948	0.948

Notes: The dependent variable in model (1), (2), (3) & (4) is deal completion propensity, (5) & (6) is deal size, (7) & (8) is % acquired and in (9) & (10) is deal completion time. *Shock* starts from 2013 Q1 to 2017 Q'2. *It* is defined as 1 for the period starting from 2016 Q'2 to 2017 Q'2 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.

Table A7: Impact of WFH amenability of acquirer firms on CAR

	3-day CAR		5-day CAR	
	(1)	(2)	(3)	(4)
WFH amenable^{Acquirer} × COVID-19	-0.002		-0.004	
	(0.003)		(0.004)	
WFH amenable wage^{Acquirer} × COVID-19		-0.004		-0.007
		(0.004)		(0.006)
Size	-0.004	-0.004	-0.003	-0.003
	(0.003)	(0.003)	(0.003)	(0.003)
Leverage	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Profitability	-0.025	-0.025	0.007	0.008
	(0.029)	(0.029)	(0.065)	(0.065)
Age	0.014**	0.014**	0.017	0.016
	(0.006)	(0.006)	(0.011)	(0.011)
Same industry	0.000	0.000	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Foreign deals	-0.001	-0.001	0.002	0.002
	(0.002)	(0.002)	(0.002)	(0.002)
Observations	20,201	20,201	20,166	20,166
Firm fixed effects	Yes	Yes	Yes	Yes
Acquirer country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes
Target country-Year-Quarter fixed effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.229	0.229	0.179	0.179

Notes: The dependent variable in model (1)-(2) & (3)-(4) is 3-day CAR and 5-day CAR, respectively. *WFH amenable target* refers to target firms in industries that have above-median WFH amenable score. *COVID-19* is defined as 1 for the period April 2020-June 2021 and 0 otherwise. Table 1 presents the description of all the variables. The robust standard errors are displayed in brackets which are clustered at the firm and acquirer country level. ***,**,* denote significance level at 1%, 5% and 10% respectively.