Managerial Capital and Adverse Shocks: Evidence from the 2018 US-China Trade War

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Abstract

Executive human capital is a critical asset for firms navigating adverse shocks that disrupt normal operations. Leveraging the U.S.−China trade war in 2018 as a plausibly exogenous source of negative trade shocks, we examine how companies adjust the composition of their executive team to manage adversity. We find that firms more exposed to the trade shock hire more executives with overseas experience, especially those with marketing expertise and backgrounds in European markets. Consistent with increased demand for such expertise, these executives receive higher compensation following the onset of the trade war, especially through equity-based incentives. We provide suggestive evidence that these executives contribute to maintaining overseas revenue and expanding foreign subsidiaries. Moreover, the stock market responds more negatively to the unexpected departure of such executives during the trade conflict period. Similarly, we also document that US firms increased non-Chinese Asia-related representation on their boards. Together, our findings highlight the role of executive human capital in firms' strategic response to external shocks and underscore how firms actively restructure leadership to enhance resilience.

KEYWORDS: Management, Experience, Trade War, Human Capital, Mobility
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1. Introduction

How firms handle adverse shocks is of considerable interest to the managers, academic researchers, and policymakers. The existing literature documents a pivotal role of top executives in shaping corporate decisions (e.g., Graham and Harvey 2001; Bertrand and Schoar 2003). However, there is a paucity of work examining how firms strategically adjust the composition and compensation of their managerial human capital in response to adversity. A deeper understanding of these dynamics is essential for comprehending firms' resilience strategies and enhancing their adaptive capacity in an increasingly volatile and uncertain business landscape.

One important source of adversity for business has been the recent rise of populism and geopolitical conflicts, which have severely disrupted economic globalization (Rodrik 2021; Prasad 2023). In particular, the rapid return of trade wars has posed severe and often unanticipated challenges for firms engaged in global trade. We employ the 2018–2019 U.S.−China trade war as a source of plausibly exogenous shocks to firms' export markets in order to study whether and how firms change composition and compensation of their executive teams to cope with such shocks.

China under the trade war provides a unique environment to study the use of executive expertise to manage adverse shocks. First, the trade war between the United States and China represents one of the "largest and most abrupt" shifts in trade policy, affecting trade volumes equivalent to approximately 3.6% of U.S. GDP and 5.5% of China's GDP (Fajgelbaum and Khandelwal 2022). The U.S. government imposed tariffs on more than $350 billion worth of Chinese goods, while China retaliated by imposing tariffs on U.S. exports worth more than $170 billion. Since China became the largest trading nation in the world in 2015,[2] not surprisingly, foreign markets have accounted for a significant proportion of revenue for publicly listed companies in China.[3] Hence, tariff changes announced during the trade war hit hard for many Chinese firms, necessitating prompt strategic actions to mitigate potential

[2] Monaghan, "China surpasses US as world's largest trading nation," *Guardian* (Jan. 10, 2014). https://www.theguardian.com/business/2014/jan/10/china-surpasses-us-world-largest-trading-nation.

[3] For example, the average overseas share of total revenue was as high as 12.9% in 2017, before the trade war.

revenue losses. This provides researchers a unique setting to observe firms' responses to adversity. Second, publicly listed firms in China are mandated to disclose detailed biographies of their executives in their annual reports. This requirement enables the measurement of executives' international experience, encompassing their educational background and professional experience in foreign countries (based on where they may have studied or worked), along with other relevant characteristics and skills.

A standard workhorse heterogenous firms trade model (Melitz 2003) predicts no spillover effects from a negative shock in one foreign market, as the model assumes constant returns to scale in production. However, a rich literature (e.g., Blum, Claro, and Horstmann 2013; Almunia et al. 2021) provides evidence for spillover effects suggesting capacity constraints or decreasing returns to scale. Even in this context, how a firm would adjust managerial capital to adverse trade shocks is ambiguous, depending on whether firms retain a focus on foreign markets or choose to pivot to the domestic market. On the one hand, firms, especially those heavily dependent on foreign markets, could hire executives with foreign experience to better cope with the unfavorable environment. Executives who have studied or worked in a foreign country may have business connections and better understand the culture and legal environment, which could help firms maintain relationships, find new trade partners, or enter new export markets in the challenging environment. On the other hand, firms could shift their focus to domestic markets in the face of increased export tariffs and hence need more executives with expertise in domestic markets, potentially reducing their proportion of executives with an overseas background. Similarly, whether firms change their use of incentive compensation for their managers in the face of adverse shocks is ambiguous in general. In theory (e.g., Raith 2003), we can expect to see an increased use of incentive pay if the marginal returns from extra effort goes up sufficiently.[4]

[4] In an online theory appendix, we build a model with two export destinations and dedicated capacity for export markets. Executives help to shift out the demand curve in the destination they have prior experience in. When one market is hit by a negative demand shock (i.e., tariff shock in the US market), it is optimal for the firm to hire more executives with experience in the other market (i.e., executives with European background). The model also predicts stronger incentive pay for such executives. Both the results stem from the fact that the marginal contribution from additional number and effort of experienced executives goes up for the second market.

In our empirical analysis, we first focus on whether and how firms changed their use of executives with overseas experience.[5] To do so, we construct alternative measures of firm- and industry-level trade war shocks. The first measure aggregates tariff increases from the product level to the firm level using export information from customs data in the year 2016 (pre-trade war). Because firms may adjust or reclassify their products to evade high tariffs, we use an industry-level aggregate of tariff changes as our second measure.[6] As a third measure, we use cumulative abnormal returns (CAR) of a firm's stock during key escalation events during the trade war, which reflects the stock market's expectations about how badly the firm would be affected by these events and has some advantages as a trade shock measure (Greenland et al. 2022). We document a strong negative correlation between the tariff-based measures and the CAR measure, consistent with all three measures picking up materially adverse trade war-related shocks for the firms.[7]

We find that firms facing more negative trade war shocks increase the proportion of executives with an overseas background, with the effect being stronger for those firms with a higher pre–trade war share of overseas revenue. Our estimates imply that when the tariff at the industry level increased by one standard deviation (i.e., 0.070), the proportion of executives with foreign experience increased by 0.36%, which is about 6.2% of the mean proportion of executives with foreign experience. A firm with an overseas sales share in the 90th percentile (0.437) experienced an additional increase of 1.04 percentage points (which is about 17.6% of the mean) in the proportion of executives with an overseas background in response to a one standard deviation increase in the tariff level, compared to a firm at the 10th percentile (0.000).

[5] We use the words "overseas" and "foreign", as well as "background" and "experience" interchangeably. E.g., "overseas background", "overseas experience" and "foreign experience" have the same meaning.

[6] For example, an NPR report (Horsley 2019) suggests that firms avoid higher tariffs by making small changes to their products. News reports also document the reclassification of products to avoid tariffs. For example, a news story in *Forbes* (Wang 2021) reported the conviction of six companies for conspiring to avoid paying $1.8 billion in duties, by disguising aluminum extrusions to look like pallets in response to anti-dumping duties on extrusions imposed in 2011. Similarly, a *USA Today* report (Zhang 2019) discussed evidence of misclassification of product codes on Chinese imports to avoid higher tariffs imposed during the U.S.–China trade war.

[7] We also verified a strong correlation of our tariff shock measures to a firm-level trade policy uncertainty (TPU) measure, constructed following Benguria et al. (2022).

Using detailed biographic information provided in the China Stock Market and Accounting Research Database (CSMAR), we sort work experience according to four skill categories: marketing, research, management, and other. The results show that the proportion of executives with overseas background and marketing skills increases the most in response to adverse trade war shocks. Decomposing foreign experience by region, we find that firms mainly increased the proportion of those with European background, consistent with our model. Combined with our finding (using pre-trade war data) that the overseas experience of executives in specific regions helps increase exports to those specific regions, these two sets of results suggest that companies utilize the executives' specific knowledge and skills to reallocate their sales in response to shocks.

Given the evidence for increased demand, we next examine whether and how compensation of executives with overseas experience was impacted by the trade war. Using a difference-in-differences setting to compare executives with an overseas background to those without such background, we examine changes in compensation components (equity-based compensation and base salary) after the onset of the trade war. We find robust and strong evidence indicating greater equity-based compensation for executives with overseas experience, even after controlling for individual differences with executive fixed effects and employing a matching approach to address potential selection bias.[8] Our estimate suggests that following the onset of the trade war, executives with foreign experience received 35.8% more equity pay than those without such experience, which is about 39,389 RMB (or $ 5,471 dollars) or 5.37% of the average base salary at the mean. The salary results are generally positive but statistically insignificant in some specifications. Consistent with earlier results about which types of experiences are more favored, we find that the positive effect on equity-based compensation is stronger for executives with European experience and those with both foreign experience and marketing skills. The stronger effects for incentive compensation relative to base salary suggest greater returns to effort exerted by experienced executives during a time of crisis, in line with the predictions of our model.

[8] We pair each executive with overseas experience (the 'treatment' group) with a 'closest-neighbor' control executive (without overseas experience), ensuring similarity in age, gender, educational attainment, and firm size.

Next, we examine whether the presence of executives with foreign experience is related to actual firm performance during the trade war period, using two alternative approaches within the limitations of our data and time frame of analysis. First, we conduct a difference-in-differences analysis of the trade war's impact on firms' exports and foreign subsidiary creation, comparing firms with varying pre-existing (i.e., in 2017) proportions of executives with overseas backgrounds. The results indicate that companies with a higher proportion of executives with foreign experience outperformed others in overseas revenue, as well as in the number and size of foreign subsidiaries during the trade war (post-2018). The estimates imply economically significant effects. In particular, one standard deviation higher proportion of executives with overseas experience in 2017 corresponds to an additional increase in the number of foreign subsidiaries by 0.493, which is about 19.68% of the average number of overseas subsidiaries. As a second test of the value of executives with foreign experience, we employ a difference-in-differences (DID) approach to study stock market reactions to their unexpected departures during the trade war period (Borstadt 1987, Dedman and Lin 2002). We find the stock market responded more negatively to the unexpected exits of executives with an overseas background after the onset of the trade war, consistent with these executives becoming increasingly important for firm performance during this period.

Finally, we use data from Compustat and BoardEx to investigate how U.S. public companies adjusted board composition in response to retaliatory tariff increases imposed by the Chinese government. We find suggestive evidence that U.S. companies that were hit harder by China's retaliatory tariff hired more independent directors with other Asia–related (i.e., other than China) experience. This suggests that U.S. firms responded similarly to Chinese firms, consistent with leveraging directors' experience to shift sales to other Asian markets.

Related Literature

Our work relates to several strands of literature. First, our findings relate to the body of work that emphasizes the key role of top executives in shaping firm outcomes. Bertrand and Schoar (2003) is the seminal work in this literature showing the importance of manager fixed effects in a wide range of corporate decisions. Other influential work has documented how manager experiences influence their decision-making (e.g., Malmendier, Tate, and Yan 2011;

Custódio and Metzger 2014; Dittmar and Duchin 2016, Schoar and Zuo 2017).[9] Using matched employer-employee data from Germany, Bender et al. (2018) find that firm performance is disproportionately dependent on the human capital of executives rather than of the average worker. Our results show that, consistent with these papers, firms recognize the significance of managerial experience and adjust their executive composition and compensation to meet the challenges they encounter. Giannetti, Liao, and Yu (2015) leverage a supply shock in potential directors with foreign experience to document the positive effects of hiring such directors on Chinese firm performance. We find evidence that the presence of executives with foreign experience is even more valuable under the adverse conditions prevalent during the trade war.

Second, our findings relate to the body of work that emphasizes the key role of top managers in shaping firms' exporting outcomes. Mion, Opromolla, and Sforza (2022) exploit a unique setting to show that managers with specific export experience help firms enter a new market. Similarly, Labanca, Molina, and Muendler (2024) find, using Brazilian data, that firms prepare to export by recruiting workers with prior experience at other exporting firms. Davidson et al. (2023) report similar findings with Swedish data. Chen et al. (2020) show that U.S. firms appoint more outside directors with China-related experience after China's admission to the World Trade Organization (WTO).[10] We contribute to this strand of literature by exploiting one of the largest trade conflicts in history to show how firms endogenously adjust the composition and compensation of managerial human capital to deal with a crisis. The rich information on executives' biography and work history also allows us to dig deeper into which specific characteristics and skills of executives are valued in this turbulent period.

Third, this paper expands our understanding on how firms respond to foreign-market risks caused by trade conflicts. While there is a large body of literature studying the effects of the

[9] Prior studies have also highlighted the critical role of human capital in various contexts. For example, Gu et al. (2022) emphasize the importance of inventors to startup performance, while Li et al. (2025) show that firms hire specialists with supply chain management expertise to mitigate supply chain risks.

[10] Chen et al. (2020) examine a positive trade shock (tariff reduction), whereas we focus on a negative shock. Based on their findings, one might expect a decline in demand for overseas directors following adverse trade developments. However, we do not observe a reduction in U.S.-related executives. Instead, we find an increase in executives with foreign experience, especially those with European work experience and marketing skills.

U.S.–China trade war on firm-level outcomes (e.g., Huang et al. 2023; Chor and Li 2024; He, Mau, and Xu 2021; Handley, Kamal, and Monarch 2025), cooperation among researchers (e.g., Han et al. 2020; Jia et al. 2022), and macroeconomic outcomes (e.g., Amiti, Redding, and Weinstein 2019; Fajgelbaum et al. 2020; Flaaen, Hortaçsu, Tintelnot 2020, Fajgelbaum et. al. 2024), we contribute by examining how firms adjust their managerial human capital. An emerging literature explores how firms respond by reorganizing supply chains, relocating production facilities, and adopting trade rerouting strategies (Grossman et al. 2024; Freund et al. 2024; Bollinger et al. 2024; Iyoha et al. 2024). The closest studies to ours are Jiao et al. (2022) and Cen et al. (2023). Using proprietary data about Chinese firms, Jiao et al. (2022) show that Chinese firms' exports to the United States declined significantly after tariffs increased during the trade war, while exports to non-U.S. countries, especially to European Union markets, increased. Our results complement Jiao et al. (2022) and suggest that executive human capital played a role in achieving the pivot toward European markets. Cen et al. (2023) present evidence that U.S. firms that had recruited more employees with government work experience were able to increase importing activity during the trade conflicts. Our results extend this insight to top executives, suggesting that firms actively seek managerial human capital with relevant experience to mitigate disruptions and adapt to changing trade conditions.

Finally, we contribute to the literature on the determinants of incentive portion (pay-performance sensitivity) in executive compensation. For example, Gormley, Matsa, and Milbourn (2013) document that boards reduce managers' exposure to stock price movement after the left-tail risk increases. Kuhnen and Niessen (2012) document that more negative press coverage of CEO pay leads firms to shift from option grants towards salary, with the reduction in option pay more pronounced when firms have stronger reputation concerns. Lie and Yang (2023) find that increased Chinese import penetration reduces stock grants to executives in U.S. companies, suggesting that competition mitigates agency problems and, hence, the need for incentive pay. In contrast, Cuñat and Guadalupe (2005), using appreciation of the pound as the source of variation, document an increase in pay-performance sensitivity after an increase in competition. Our findings of increased use of incentive compensation for executives with relevant experience are consistent with the latter research (as the tariff shocks could be interpreted as allowing for more competition from higher-cost rivals) and suggest a greater

return to effort of executives with relevant background and expertise when firms are attempting a pivot in their market strategy.

Our paper is structured as follows. The next section provides background on the U.S.–China trade war and develops hypotheses. Section 3 introduces the data used in this study and provides summary statistics of the main variables. Section 4 presents empirical results. Section 5 concludes.

2. Background and Hypotheses

2.1 The U.S.–China trade war

The U.S.–China trade war, which erupted in early 2018, has emerged as one of the most significant geopolitical and economic conflicts of recent times (Fajgelbaum and Khandelwal, 2022). The origins of the U.S.–China trade war can be traced back to longstanding trade imbalances, intellectual property disputes, and issues concerning market access. Over the years, China's rapid economic growth and manufacturing capabilities led to an influx of cheap Chinese goods into the United States, which increased the welfare of U.S. consumers but at the same time, widened the trade deficit and sparked concerns about the losses of American jobs (Autor, Dorn, and Hanson 2013). Additionally, U.S. companies operating in China encountered challenges related to technology transfers and intellectual property issues, further fueling tensions between the two economic giants (Brander, Cui, and Vertinsky 2017).

A turning point in this simmering dispute came on March 22, 2018, when the Trump administration issued a presidential memorandum regarding investigations under Section 301 of the Trade Act of 1974 and recommending a 25% tariff on up to $50 billion of Chinese imports, symbolizing the beginning of the U.S.–China trade war. After a few rounds of unsuccessful negotiations with the Chinese government, the White House imposed the first trade war tariffs on $34 billion worth of Chinese imports on July 6, 2018, and the Chinese government retaliated immediately. The trade war escalated on August 1, 2018, when the White House indicated that it was considering tariffs of 25% on an additional $200 billion worth of imports. The stock market in China experienced dramatic declines on the dates of the U.S. actions—for example, the Shanghai Stock Exchange Composite (SSEC) index fell by 4.21% in total between March 21 and March 23, 2018, and by 4.8% between August 1 and August 3,

2018. These significant market declines indicate that the trade war and the subsequent escalation were unexpected and had substantial impacts on expectations regarding the future performance of Chinese public firms.[11] The trade war continued into the last quarter of 2018 and 2019. Table 1 shows the dates, the number of products (using 10-digit Harmonized System (HS) product codes), the import value of these products in 2017, and the magnitude of tariff increases corresponding to key events during the trade war.

[Insert Table 1 Here]

2.2 Hypotheses Development

Given the potentially large effects of the trade war on firms in China as reflected in overall stock market reaction, it is natural to ask what actions these firms would take to deal with such significant adverse shocks. We focus on the composition of the top executive team, who play a vital role in important corporate decision-making that impacts firm performance (Bertrand and Schoar 2003; Bender et al. 2018). Specifically, we examine two margins of responses: quantity (i.e., the impact on demand for executives with different types of experience) and compensation (i.e., the impact on the incentive pay of experienced executives).

In the online theory appendix, we develop a formal model with specific assumptions and implied predictions; in this section we provide a broader discussion and present intuition and anecdotal motivation for the key hypotheses we will examine in our empirical analyses.

Even in a model with decreasing returns to scale or capacity constraints, the expected response of firms in terms of executive composition is unclear and depends on the significance of foreign sales in their total revenue. On the one hand, firms may increase the proportion of executives with foreign experience and leverage their expertise to help manage the crisis. Experienced executives could help to mitigate the negative demand shocks by assuaging concerns of jittery trading partners and helping persuade them to accept higher prices. Indeed, the review of the literature by Fajgelbaum and Khandelwal (2022) finds a significant pass-through of tariff costs to U.S. buyers; it is plausible that executives with relevant market experience would be able to negotiate these higher prices. Further, though not captured by our

[11] We later employ the Chinese companies' stock reactions to these two events to construct an index at the firm level, to validate other firm- and sector-level measures of trade war shocks.

model, one response to tariffs on exports by Chinese firms could be to establish or expand subsidiaries in foreign countries, to shift production away from China (e.g., Bowman 2024; Goodman 2024); executives with experience in foreign countries may help in establishing and managing these subsidiaries.

On the other hand, firms that have only recently begun exporting and generate a smaller share of their revenue from foreign markets may shift their strategy to focus on domestic markets, given the higher costs of serving the U.S. market. The literature in international trade documents such shifts toward or away from domestic markets in the presence of foreign and domestic shocks, respectively (e.g., Blum, Claro, and Horstmann 2013; Almunia et al. 2021). However, such a pivot to domestic markets may be more challenging for large Chinese firms that we study, as their export shares were substantial: the average overseas share of total revenue was as high as 12.9% in 2017. In many cases, the domestic market lacked the capacity to absorb the excess production, further complicating the transition.[12] Among public firms, those that had already built a large pool of customers in overseas markets and generated a high proportion of income from foreign sales would be even more likely to retain a focus on foreign markets, which leads to our first hypothesis.

Hypothesis 1: Assuming that Chinese firms maintain a focus on foreign markets, firms hit harder by the trade war will increase the proportion of executives with foreign experience. This response is likely to be stronger for those firms that are heavily dependent on overseas markets.

While all types of overseas experience can be valuable in managing adversity in foreign markets, firms may place particular importance on executives with marketing expertise, as they are often more effective in mitigating negative demand shocks, preserving existing buyer-supplier relationships, and developing new export markets. This forms the basis of our second hypothesis.

Hypothesis 2: In response to adverse trade shocks, firms will prefer executives with foreign experience who have marketing skills compared to those with other skills.

[12] E.g., a recent news article on the impact of U.S. restrictions on imports from China in the biotech sector notes specifically that the "Chinese market alone may not be able to absorb the production capacity that WuXi companies had ramped up for U.S. clients" (https://thebambooworks.com/u-s-rethinks-timing-of-biotech-crackdown-easing-pressure-on-wuxi/)..

Jiao et al. (2022) find that while Chinese firms' exports to the United States declined following tariff increases during the trade war, exports to non-U.S. countries, particularly to the European Union, increased moderately. Through a survey of managers from 600 exporting firms, they identify the lack of sales channels and networks as the primary barrier preventing firms from reallocating sales across different markets in response to the U.S. tariff surge. This raises an important question: how do exporting firms build new sales networks and successfully shift to alternative markets? One potential strategy is to recruit executives with prior experience in European markets, leveraging their knowledge and professional networks. Indeed, recent research has shown that executive experience in specific markets can significantly aid firms in entering and succeeding in those markets (e.g., Mion, Opromolla, and Sforza 2022; Muendler and Rauch 2018). Building on these findings, we develop a model in the online theory appendix, featuring two export destinations with dedicated capacity for export markets. The model assumes that hiring executives with experience in particular markets stimulates demand in those regions. It predicts that when one market experiences a negative demand shock (e.g., the U.S. tariff shock), it becomes optimal for firms to recruit more executives with experience in alternative markets (e.g., those with European backgrounds), leading to our third hypothesis.

Hypothesis 3: An increase in trade costs in one destination market will increase the demand for executives with experience in other destination markets. In other words, firms will hire more executives with European experience as a response to the tariff increase in the U.S. market.

The tariff shock in the U.S. market implicitly intensifies competition from rivals, and could be considered as a negative shift in the demand curve in a key market. As discussed in Raith (2003), how a firm responds to heightened competition or a change in market size through adjustments to incentive pay is ambiguous in general. The critical factor is whether the marginal benefit of additional executive effort outweighs its costs. In our model, increased effort is costly and raises the net compensation for executives, but following a shock in one market, there is a positive effect for additional effort net of these costs for executives with experience in the alternative market. This implies the following hypothesis:

Hypothesis 4: An increase in trade costs towards one destination will increase the incentive pay rate for executives with experience in other destinations. In other words, firms will provide higher incentive pay to executives with European experience as a response to the tariff increase in the U.S. market.

3. Data, Variable Construction, and Empirical Specification

3.1 Data Sources

Our initial sample includes all firms listed in the A-share market in either the Shanghai or the Shenzhen stock exchanges from 2013 to 2021.[13] We exclude financial firms because their financial statements are compiled under different accounting standards. Our main data set is from the China Stock Market and Accounting Research Database (CSMAR), which is provided by China GTA Information Technology Co. These data have been widely used in previous studies (e.g., Giannetti, Liao, and Yu 2015; Bryson, Forth, and Zhou 2013; Cong and Howell 2021).

Enacted in 1999, the Securities Law of the People's Republic of China has required all public firms to disclose essential information about their senior management personnel—including personal details, educational background, work experience, professional qualifications, and remunerations—in the annual report. In practice, these disclosures cover the executive team, which includes the CEO, directors, and top executives.[14] We provide two

[13] Chinese firms have the flexibility to issue shares that fall into three distinct categories: A-shares, B-shares, and H-shares. A-shares represent the stocks of mainland Chinese companies traded on the Shanghai and Shenzhen Stock Exchanges, primarily denominated in the local currency, the Renminbi (RMB). Typically accessible to domestic investors and qualified foreign institutional investors through the Qualified Foreign Institutional Investor (QFII) program, A-shares serve as the primary means for investors to engage with Chinese public firms. On the other hand, B-shares, traded on the same exchanges, are denominated in foreign currencies, such as the U.S. dollar or the Hong Kong dollar. Initially introduced to grant foreign investors access to the Chinese market, these shares have been available to domestic investors as well since March 2001 (Giannetti, Liao, and Yu 2015; Allen et al. 2023). Lastly, H-shares encompass the stocks of Chinese companies listed on the Hong Kong Stock Exchange, catering to both local and international investors. Quoted in Hong Kong dollars, H-shares operate under distinct regulatory frameworks compared to their mainland counterparts. Chinese firms listed overseas are generally not concurrently listed in the domestic market (Giannetti, Liao, and Yu 2015).

[14]Article 61 of the Securities Law requires "a brief introduction to the directors, supervisors, managers and the senior management persons and information with respect to their shareholdings" (http://www.npc.gov.cn/zgrdw/englishnpc/Law/2007-12/11/content_1383569.htm). Sections 1, 2, and 3 of Article 25 in the "Notice of the China Securities Regulatory Commission (CSRC) on Promulgating the Standards

examples of available biographical information of executives in the Online Data Appendix.

Using the biographical information, the CSMAR data provider constructs variables that track the academic institutions from which executives received their degrees, whether the executive has studied or worked abroad, and the skill sets of the executives i.e., whether they have experience in marketing, production, research, law, financing, personnel management, and other areas. We consider an individual as having an overseas background if the executive studied and/or worked outside of (mainland) China. For all of our analyses, we include only firms that were present during both the pre– and post–trade war periods. After excluding companies in the financial industry, our final sample consists of 3,440 unique firms and 26,968 firm-year observations covering the years 2013−2021.

To identify the country in which the executive studied or worked, we extract individuals who are identified as having foreign experience and dig deep into their biography using an automated textual analysis process (explained in more detail in the Online Data Appendix).[15] To deal with incomplete biography information in the CSMAR, we utilize Tianyancha as a supplementary data source with biographical information. Tianyancha is a comprehensive database on Chinese firms that draws information from official and public records, and has been used extensively in recent academic work (e.g., Beraja, Yang, and Yuchtman 2023; Colonnelli, Li, and Liu 2024).[16] At the executive level, our final sample includes 17,770 unique executives and 107,424 individual-year observations.

We gather detailed information on tariffs imposed by the U.S. government at the 10-digit

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Concerning the Contents and Formats of Information Disclosure by Companies Offering Securities to the Public No. 2 — Contents and Formats of Annual Reports" (initially issued by the CSRC on December 10, 2001, revised in 2007, https://en.pkulaw.cn/display.aspx?cgid=05e073042a6ebbb9bdfb&lib=law) require publicly listed firms to disclose essential information about their senior management personnel, including "personal details, educational background, work experience, professional qualifications, and remunerations in the annual report." While the term "senior management" is not explicitly defined in the Securities Law, Article 216 of Chinese Company Law defines a "senior officer" as "the manager, deputy manager and person in charge of financial affairs of a company and, in the case of a listed company, the secretary to the board of directors and other personnel specified in the articles of association" (https://fdi.mofcom.gov.cn/EN/come-falvfagui-con.html?id=10499).

[15] We screened the biographies of 11,143 individuals and 71,992 individual-year observations in total.

[16] Tianyancha database covers not only publicly listed firms but also non-public firms in China. The primary source of firm-level information for this database is the National Enterprise Credit Information Publicity System, maintained by China's State Administration for Industry and Commerce.

HS code level up to April 2019 from Fajgelbaum et al. (2020). To extend the data to the end of 2021, we use detailed information from Bown (2021). To aggregate the product-level tariffs to the firm level, we employ firm-shipment-level Chinese customs data, which include export and import information at the firm-product level. Because the most recent available year of Chinese customs data is 2016, we utilize the value and HS code of products that China's publicly listed firms exported to the United States in 2016 to construct firm-level tariffs. The construction process is described in more detail in the next section.

In addition, we aggregate product-level tariffs to the industry level. To do so, we employ a crosswalk between the HS codes and China's Industrial Classification (CIC) system codes at the four-digit level from Brandt et al. (2017). Since the guidance provided by the China Securities Regulatory Commission (CSRC) in 2012 only requires public companies to disclose the first two digits of the CIC code, we aggregate the product-level tariffs to the two-digit CIC industry level using each product's total value of export to the U.S. from 2013 to 2017 as the weight.[17]

We start with a crosswalk provided in Brandt et al. (2017) between the HS code in the year 2002 and the CIC code in 2003. However, the product-level tariff data in Fajgelbaum et al. (2020) uses the 2012 version of the HS code for years before 2017 and the 2017 version of the HS code for years after (and including) 2017. Hence, we also utilize the crosswalks between different versions of the HS code from the United Nations website and between different versions of the CIC code from the website of the Ministry of Civil Affairs of the People's Republic of China.[18]

Figure 1 shows the trends in average tariff at the product level for a few months before and after the start of the trade war. The average tariff rate imposed by the U.S. government increased from 2.50% to 16.48% in September 2019 and then decreased moderately to 14.88%.

[17] There are 90 industries in total using the two-digit CIC code (which is close to the three-digit NAICS code), including four industries in finance and insurance (66– 69). In our main sample, we exclude the finance and insurance sectors.

[18] The link to the United Nations' website that provides the crosswalk between different versions of the HS code is https://unstats.un.org/unsd/classifications/Econ; the crosswalk between different versions of the CIC code is https://www.mca.gov.cn/images3/www/file/201711/1509495881341.pdf.

[Insert Figure I Here]

Although we focus mainly on Chinese firms' responses to the trade war, in Section 4.4, we briefly examine whether and how U.S. publicly listed companies changed executive or board composition in response to the trade war. For this part of the study, we combine Compustat (mainly balance-sheet data) with the BoardEx data set (mainly information about directors) to construct the relevant variables following previous studies (e.g., Chen et al. 2020; Xu 2023).

3.2 Variable Construction

We construct two tariff-based indices to analyze the effects of trade war shocks. The first measures the weighted average tariffs at the firm level. We combine information on the product-level value of exports for each company in 2016 (from shipment-level customs data) with product-level tariff data (Fajgelbaum et al. 2020; Bown 2021), and employ the following formula to compute the weighted average tariff level faced by each company:

$$\text{Firm-level Tariff}_{it} = \left[\sum_{p \in J_i^e} \ln\left[1 + \left(\frac{X_{ip,2016}}{\sum_{s \in J_i^e} X_{is,2016}} \cdot \tau_{pt}\right)\right]\right] \times \left[\frac{\sum_{s \in J_i^e} X_{is,2016}}{\text{Revenue}_{i,2016}}\right] \quad (1)$$

where $X_{ip,2016}$ represents the value of product p that firm i exported to the United States in year 2016; J_i^e indicates the set of products that firm i exported to the United States in 2016; and τ_{pt} indexes the statutory tariff level imposed by the U.S. government in year t on product p. The second part of this formula ($\sum_{s \in J_i^e} X_{is,2016} / \text{Revenue}_{i,2016}$) indicates the ratio of firm i's exports to the United States to its total operating revenue in 2016. Note that this measure captures both the extent of tariffs and whether or not the firm relies on exports. In particular, after the onset of the trade war, this measure would increase the most for those firms that (a) faced large tariff increases on products that accounted for a significant share of their exports to the U.S. and (b) whose exports to the United States were a large share of total revenue.

The second measure is the tariff level at the industry level. As mentioned in the previous section, this measure aggregates the product-level tariffs to the two-digit CIC industry level using the following formula:

$$\text{Industry Tariff}_{jt} = \sum_{p \in E_j^e} \left[\frac{X_{jp,5}}{\sum_{s \in E_j^e} X_{js,5}} \cdot \tau_{pt} \right] \quad (2)$$

where $X_{jp,5}$ indexes product p's total export value to the United States in industry j over the last five years before the trade war (i.e., 2013−2017); E_j^e indicates the set of products that were exported to the United States in industry j; τ_{pt} is the level of tariff for product p at time t.

As a third measure for trade shocks, we use the Cumulative Abnormal Returns (CAR) for each firm during the two largest trade escalation events (March 22, 2018, and August 1, 2018). Previous studies have shown that stock market reactions to important events capture the stock market expectations of the impact on each firm well (Chang, Dasgupta, and Gilles 2010; Huang et al. 2023). The CAR measure also arguably adjusts for differences between firms in the ability to pass on cost increases (due to variation in market power), so long as this is anticipated by the market. Indeed, in recent work, Greenland et al. (2022) argue that using equity-market reactions to identify exposure to trade policy has several advantages, including that it captures all avenues of exposure, covers service producers, yields a firm-level measure, and can capture hard-to-measure nontariff barriers. Consistent with the unexpected nature of key announcements, investors appear to take time to digest such big news as Chinese stock markets declined even two days after the events. Accordingly, we employ the CAR over the five-day window as a baseline measure of firm-level trade war shock. We follow previous studies (e.g., Liu, Shu, and Wei 2017) and use a market model to estimate abnormal returns (AR) based on the following regression:

$$\text{Ret}_{it} = a_i + \beta_i R_{mt} + \varepsilon_{it} \quad (3)$$

where Ret_{it} is the stock return for firm i on day t, and R_{mt} is the valued-weighted or equal-weighted market return on day t. The model is estimated for each firm using an 11-month (i.e., -12 month to -1 month) period with a minimum of 100 trading days before the event day. To mitigate possible confounding effects related to stock prices for newly listed firms, we exclude firms listed within two years before the first trade war event. We also drop firms with any trading suspension during the five-day window centered on the event day to ensure that impacts of the event are fully incorporated into stock prices. Based on the estimated coefficients, we measure abnormal returns (AR) as the difference between firms' realized stock returns and

their predicted returns. The CAR-based measure (or CAR index) of the trade shock for each firm i is defined as:

$$CAR_i = \left[\sum_{t=-2}^{+2} AR_{it}\right]_{\text{t0 = Mar.22,2018}} + \left[\sum_{t=-2}^{+2} AR_{it}\right]_{\text{t0 = Aug.1,2018}} \quad (4)$$

While this measure has the strong advantage of reflecting only the "unexpected" component of the adverse impact of the trade war on each firm, one potential disadvantage is that if the mitigation of adverse effects through the ability to hire experienced workers was anticipated by the market, then the results using this measure could be biased downward (toward zero).[19]

We undertake two sets of checks related to our trade shock measures. First, to verify that the two tariff-based measures indeed capture actual firm-level adversity from the trade war, we test the correlation between these measures and a "trade policy uncertainty" (TPU) measure constructed using the firms' own annual reports. Specifically, we follow Benguria et al. (2022) and count instances in which trade policy–related words (e.g., tariff, protectionism) are found in the same line or one line above or below uncertainty-related words in the companies' annual reports. The results presented in Table A2 of the Appendix show that our tariff-based measures are strongly positively correlated with trade policy uncertainty.

Second, to check that the CAR-based measure is mainly capturing the impact of the trade war and not other contemporaneous negative shocks, we examine the correlation between the two tariff-based measures and the CAR index. Table A3 of the Appendix presents the results. Since the CAR index is time-invariant, we use the mean of tariff shock at the firm level and industry-level tariff over the trade war period 2018−2021 in this analysis. The results show that the CAR index is indeed strongly negatively correlated with firm and industry tariff–based measures. This finding is robust, no matter whether we use the cumulative raw returns (CRR), value-weighted CAR, or equally weighted CAR as the dependent variable, indicating that the tariff-based measures align with stock market perceptions captured in the CAR measure.

[19] For example, consider two firms A and B that face the same tariff shock, and suppose that hiring experienced executives helps ameliorate the effect of the tariff shock. Suppose in the period after the onset of the trade war, firm A fails in its efforts to hire experienced workers while firm B succeeds. Then if the stock market anticipated these outcomes, we would have a lower negative CAR for firm A (which is able to hire) and a larger negative CAR for firm B (which fails to fire), attenuating the negative correlation between the measured CAR and hiring. Thus, our estimate of the coefficient on the CAR measure would be attenuated toward zero by anticipation effects.

3.3 Summary Statistics

Panel A of Table 2 presents summary statistics on the key variables from the firm-level data set, which is at the core of our empirical analysis. The proportion of executives with foreign experience is about 5.9% at the firm level, while the proportion of executives who have both an overseas background and marketing skills is about 2.3%. Each firm has, on average, about 6.31 executives reported in the data.

Panel B of Table 2 provides summary statistics on key variables from the executive-level data set. Approximately 5.5% of the sample (107,424 director-year observations) had foreign experience in year 2017, right before the trade war. About 2.3% of the observations have both an overseas background and marketing skills. The average salary is approximately 733,184 RMB (roughly 101,831 USD at the current exchange rate of about 7.2 RMB/USD), while the average value of equity pay is about 110,024 RMB (or about 15,281 USD), or about 15.0% of the average total salary.

[Insert Table 2 Here]

3.4 Empirical Specifications

We start by estimating the effects of tariff shock on the proportion of executives with foreign experience. As described earlier, we employ three main indices to capture different dimensions of the trade war shock that companies may face. Our strategy is to regress the proportion of executives with foreign experience against these three measures using the firm-year panel data. More precisely, we estimate:

$$Overseas\_proportion_{it} = \beta_0 + \beta_1 \cdot S_{i(j)t} + X_{it} \cdot \Gamma + \alpha_i + \gamma_t + \epsilon_{it} \quad (5)$$

where $Overseas\_proportion_{it}$ represents the proportion of executives with foreign experience at firm i in year t; X_{it} denotes firm-level control variables: Tobin's q, *log (asset)*, leverage ratio, return on asset (ROA), and board independence (the ratio of independent directors over the total number of directors). $S_{i(j)t}$ is one of the three measures capturing the trade war shocks—namely, Firm Tariff_{it} (as defined in Equation 1), or $\text{Industry Tariff}_{jt}$ (defined in Equation 2), or $CAR_i \times post2018$, where CAR_i is defined as in Equation 4 and *post2018* is a dummy

variable representing the trade war period that equals 1 if the year is after (and including) 2018. We include both firm and year fixed effects in the most rigorous specification. As a robustness check, we examine specifications with the number of executives with an overseas background as the dependent variable.

We expect the trade war to impact compensation for all executives with an overseas background, relative to those without, depending on whether there was an increase or decrease in demand for such executives (per the analysis from Specification 5, above). To examine this using data at the executive-year level, we use a standard difference-in-differences approach as follows:

$$C_{kt}=\beta_0+\beta_1 \cdot overseas_{k,2017} \times post2018+X_{kit} \cdot \Gamma+ \alpha_k+\gamma_t+\epsilon_{kt} \quad (6)$$

where C_{kt} represents one of two components of compensation: (i) $\log(1 + \text{value of equity compensation})_{kt}$, where value of equity compensation is the sum of the value of restricted stocks and stock options that executive k receive in year t; or (ii) $\log(1 + \text{Salary}_{kt})$, where Salary_{kt} which is the base salary received by executive k in year t. The term $overseas_{k,2017}$ is a dummy variable that equals 1 if executive k had foreign experience in year 2017.[20] A dummy variable representing the trade war period, $post2018$, equals 1 if the year is after (and including) 2018; X_{kit} denotes control variables at firm i that executive k works at in year t. We include executive (α_k) and year (γ_t) fixed effects to capture executive's characteristics that do not vary over time and aggregate shocks that impact all the executives at the same time. As robustness checks, we also examine wealth-performance sensitivity (delta) and wealth-volatility sensitivity (vega) as our dependent variables following previous studies (e.g., Core and Guay 2002; Coles, Daniel, and Naveen 2006; Brockman, Martin, and Unlu 2010; Lie and Yang 2023). Following a recommendation in recent work by Thakral and Tô (2023), we check the robustness of results to using power transformations as a way to address potential shortcomings in log transformations.

[20] We utilize the foreign experience in 2017 right before the trade war rather than using the corresponding information in each year to isolate the effect of labor demand shift on experienced executives, avoiding any effects from executives who pursue foreign experience after observing the rising demand for such experience. We also verified that our results are robust to excluding those obtaining foreign experience after 2017.

4. Empirical Results

4.1 Executive Composition After the Trade War

In this section, we address the following question related to Hypothesis 1: When firms encounter a crisis in an overseas market, will they attempt to strengthen their operations by hiring more executives with overseas experience, or will they choose to exit overseas markets and hire more executives specializing in the domestic market?

4.1.1 Baseline Results: Increased Demand for Overseas Experience

Table 3 presents the results using the two tariff-based measures of the trade war shocks. The first two columns employ the weighted tariff at the firm level, while columns (3) and (4) use the tariff level at the industry level as the key explanatory variable. Columns (1) and (3) include only firm fixed effects, whereas columns (2) and (4) include both firm and year fixed effects.[21] The results are quite consistent, showing that firms facing a larger tariff shock increase the proportion of executives with an overseas background. To interpret the magnitude of the effects, consider the estimates in column (4) as an example. If the tariff at the industry level increases by one standard deviation (i.e., 7.0%), the proportion of executives with foreign experience increases by 0.36%, which is about 2.94% of the standard deviation of the proportion of executives with foreign experience, or 6.17% of the mean proportion of 5.9%.

As discussed in our development of Hypothesis 1, exiting overseas markets would be more difficult for companies that already derived a significant proportion of their revenue from those markets, while pivoting toward domestic markets is likely to be easier for firms that had a smaller overseas presence at the beginning of the trade war. To confirm this empirically, in Columns (5) and (6), we interact industry tariff level with the firms' export dependence in year 2017, which is measured by the ratio of overseas revenue over the total revenue in 2017.[22] The estimates indicate that, as expected, firms that were more heavily dependent on overseas

[21] The sample sizes in the first two columns are slightly less than those in the last four columns, mainly because the measure, *Tariff at the firm level*, utilizes the revenue information in 2016, before some firms went public in 2016.

[22] Note that the weighted tariff measure in columns 1 and 2 reflect both the tariffs on the firm and the firm's reliance on exports to the United States (as the tariffs are weighted by the U.S. export share of total revenue). Thus, columns 1 and 2 also indirectly confirm that firms with greater reliance on exports made larger adjustments to executive composition.

markets showed a greater relative increase in the proportion of overseas executives employed as a response to the trade war. Comparing a firm whose ratio of overseas sales is at the 90th percentile (0.437) to a firm at the 10th percentile (0), the former increased the proportion of executives with an overseas background by 1.04 percentage points more than the latter in response to a one-standard-deviation increase in the tariff level. This difference is about 8.41% of the standard deviation of the proportion of overseas executives (0.124, Table 2), or 17.63% of the mean proportion of 5.9%.

[Insert Table 3 Here]

Table 4 presents the results using the CAR measure of firm-level trade war shock. When calculating the CAR, columns (1) and (2) use the market value of equity as the weight, while columns (3) and (4) assign equal weights to companies in calculating market returns.[23] The indices yield very similar results, showing that firms with lower (more negative) cumulative abnormal returns during the two biggest trade escalation events (i.e., those hit harder by the trade war) increase the proportion of executives with an overseas background. The coefficient estimate of -0.057 in column (2) implies that when the (value-weighted) CAR decreases by one standard deviation (i.e., 0.079), the proportion of executives with foreign experience increases by 0.45%, which is about 3.63% of the standard deviation of the proportion of overseas executives and 7.63% of the mean proportion.

[Insert Table 4 Here]

The analysis using the CAR measure, which (unlike the tariff measures) has only cross-sectional variation across firms in the extent to which they were affected by the trade war announcements, resembles a standard DID approach. This approach could be misleading, as the estimated effects could reflect divergent trends for the affected and unaffected firms prior to the trade war. We test for parallel pre-trends using an event-study specification (see Figure 2). Specifically, we plot the β_t coefficients estimated from the following regression:

$$Overseas\_proportion_{it} = \beta_0 + \sum_{t=2013}^{2021} \beta_t \, . \, CAR_i \times D_t + X_{it} \cdot \Gamma + \alpha_i + \gamma_t + \epsilon_{it} \qquad (7)$$

[23] The number of observations is less than that in Table 3 because of the sample restrictions we adopt in calculating CAR, as described in Section 3.2.

where D_t denotes a dummy variable for year t, and the rest of the variables are as defined for Equation 5.

Panels A and B show the pre-trend using value-weighted CAR and equally weighted CAR, respectively. The figures show that the relationship between the proportion of overseas executives and the trade shock event CARs is small and statistically insignificant before the trade war, but becomes significantly negative after the onset of the trade war, confirming that the DID results in Table 4 are not driven by pre-trade war trends.

[Insert Figure 2 Here]

We checked whether our results reflect actual increases in the number of executives employed or arise indirectly from changes in the denominator (i.e., the total number of executives). Specifically, in Appendix Table A4 (with tariff-based measures of trade shocks) and Table A5 (with the CAR measure of trade shocks), we examine the number (instead of proportion) of executives with an overseas background as the dependent variable. The results are consistent with those in Table 3, indicating that our baseline results are driven by an actual relative increase in the number of executives with an overseas background. In addition, we employ the total number of executives as the dependent variable in Table A6 of the Appendix and do not observe any significant change associated with the trade war shock. This confirms that the baseline results are not due to an increase in the total number of executives but mainly reflect a replacement of existing executives.[24]

4.1.2 Robustness Checks

Because the COVID-19 pandemic had a significant impact on economic activity in several regions of China, one concern could be that the trade war shock measure is somehow correlated with the intensity of local COVID-19 shocks and that firms may have hired executives with an overseas background to deal with these COVID-19 shocks. To address this potential concern, we construct two indices to measure the local COVID-19 shock faced by firms: One is the

[24] As discussed in Footnote 12, senior officers are not defined precisely in the regulations, so theoretically companies could increase the number of executive positions in response to the trade war shock. Our data and results suggest that Chinese public companies choose to replace existing executives with those having an overseas background, rather than change the number of positions.

number of confirmed cases and the other is the number of deaths attributable to the COVID-19 pandemic in the headquarters city of the company in a given year.[25] Table A7 of the Appendix presents the results after controlling for these measures of local COVID-19 shocks. The results are quite robust, though the coefficients are slightly smaller, suggesting that our main findings are not influenced by local COVID-19 shocks.

Another concern is that our findings may be driven by changes in foreign direct investment in China after the onset of the trade war, if these were correlated with trade war shocks and also impacted the demand for executives with foreign experience. To address this concern, we exclude firms that are Sino-foreign joint ventures or wholly foreign-owned enterprises. The results shown in Table A8 of the Appendix are similar to our baseline results, suggesting that the main effects are not driven by changes in foreign direct investment.

Because the Chinese government retaliated against the United States for its tariff increases by increasing Chinese tariffs on U.S. imports, one possible concern is that our estimates may be confounded by the tariff imposed by the Chinese government. To address this concern, we constructed a measure of the tariff imposed by the Chinese government at the two-digit CIC industry level and added it as a control variable in Panel A of Table A9 of the Appendix (columns (1) and (2)). As another robustness check, we exclude industries that faced high Chinese tariff (above the 75th percentile of the Chinese tariff level in 2021) and redo the main analyses corresponding to columns (3) and (4). The results are robust, suggesting that the baseline findings are not driven by tariffs imposed by the Chinese government. As a third check, for the two measures that exhibit within-industry variation—namely, the firm-level tariff and CAR measures, we further control for industry-by-year fixed effects, which controls for any industry-level effects of tariffs imposed by the Chinese government (as well as other industry-year shocks). Results presented in Panel B of Table A9 in the Appendix confirm that our baseline conclusions remain robust when controlling for industry-level protection measures from the Chinese government.

[25] We downloaded raw data on cases and deaths related to COVID-19 from https://news.sina.cn/zt_d/yiqing0121?vt=4.

4.1.3 Heterogeneity by Skill Type and Country Background

As discussed in the development of Hypothesis 2, we expect firms to seek executives with marketing skills to retain existing clients or develop new ones in foreign markets, in the face of increased costs imposed by the trade war. To examine the expected effect on the skills demanded, we classify executives with an overseas background into four categories based on their skill set, as those with: (i) marketing expertise, (ii) research expertise, (iii) management expertise, and (iv) other expertise (including financing, financial management, law, and human resources).[26]

Panel A of Table 5 presents the results examining the change in the proportion of executives with an overseas background and marketing expertise, using both the tariff-based measures and the CAR measure of the trade war. Results are consistent across the measures and show that companies facing larger trade war shocks increase the proportion of executives with overseas experience who also have marketing skills. In contrast, the coefficients are much smaller and not statistically significant when using the proportion of executives with an overseas background and research skills (reported in Panel B) or the proportion of executives with an overseas background and management skills as the dependent variable (only marginally significant in column (1) of Panel C). In Panel D, we present results concerning the proportion of executives with an overseas background and other skills (including financing, financial management, law, and human resources). The estimates using tariff shock at the firm level and the interaction of industry-level tariff and export dependence are insignificant. However, the estimates become significant when using the CAR measure of trade war shock, providing partial evidence that this category of skills was also sought after by the firms facing more adverse trade war shocks.

[Insert Table 5 Here]

[26] The CSMAR database sorts skills into nine groups: (i) Production; (ii) Research; (iii) Design; (iv) Human Resource; (v) Management; (vi) Marketing; (vii) Finance; (viii) Financial Management; and (ix) Law. We combine groups (ii) and (iii) as research experience; groups (i) and (v) as management experience; groups (iv), (vii), (viii), and (ix) as other experience. One executive might have different skill sets. To make interpretation clearer, we exclude people who have marketing expertise from the research category, exclude those who have marketing and research experience from the management category, and exclude managers with all three from the "other" experience group.

Based on our model's predictions and findings in the literature (see development of Hypothesis 3) that suggest a pivot towards European markets by Chinese exporters, we expect firms facing stronger trade war shocks to seek executives with a European background. To examine this prediction, based on executives' biographies, we categorize the foreign countries in which they had experience into six groups: We first use a five-fold classification of countries into North America, Europe, Asia, Australia, countries outside of these above four areas. Additionally, we examine a distinct group encompassing the Belt and Road countries.[27] The Chinese government has adopted several policies to promote trade between China and the Belt and Road countries (Council on Foreign Relations 2022). In 2018, the trade value with countries along the Belt and Road had reached 8.37 trillion RMB, or about 27.43% of China's total trade value.[28] Therefore, we treat the Belt and Road countries as a separate group.

Table 6 reports the results. Each column represents the proportion of executives with experience in one of the six country groups. We find that firms mainly increase the hiring of executives with European experience as a response to the trade war shock, consistent with companies needing the expertise of this group of executives to shift focus to the European export market.[29] In Table A10 of the Appendix, we add an interaction of *Log (1 + industry*

[27] The Belt and Road Initiative (BRI) is an infrastructure program launched by the Chinese government in 2013 that was intended to connect Chinese cities to partner countries around the globe, but particularly in Central, Southeast, and South Asia and to Central and Eastern Europe. We utilized the country list associated with the Belt and Road Initiative (BRI) in 2017, predating the onset of the trade war. The information was sourced from the official website of the Chinese government's media: http://ydyl.people.com.cn/n1/2017/0420/c411837-29225243.html.

[28] These figures are sourced from China's official report: http://www.xinhuanet.com/english/2019-01/14/c_137742386.htm.

[29] The results in Table 6 show that firms did not reduce the proportion of executives with US experience as a response to the trade war shock, which is somewhat surprising and not entirely consistent with our model's predictions. One possible explanation is that our model considers permanent negative shocks with immediate and full adjustment by firms. In reality there was considerable uncertainty and reasons for slow adjustment. For example, tariff increases may have been viewed as a temporary with firms expecting changes after subsequent negotiations, which translated to a spike in measures of trade policy uncertainty in the early period of the trade war (Baker, Bloom, and Davis, 2019). In some cases, US importers were able to successfully lobby for exemptions from the tariff hikes, providing time for some Chinese exporters to adjust (Hufbauer and Lu, 2019). Thus, Chinese firms may have had incentives to retain U.S.-experienced executives to maintain their presence in the U.S. market in the short-term, while simultaneously hiring executives with European backgrounds to prepare for expansion into new markets. Another reason (not in our model) to retain US executives is that US clients could be serviced

tariff) and *export dependence*; consistent with the results shown in Table 6, the results suggest that companies with higher exposure to foreign markets are more likely to respond to the trade war shock by hiring executives with European experience. Furthermore, although on average firms did not hire executives with experience in the Belt and Road countries companies that were more dependent on foreign markets, hired more such executives in response to trade war.

[Insert Table 6 Here]

Since companies need to leverage executives' foreign networks and professional experiences to deal with crises in overseas markets or enter a new export market, executives who had worked abroad might be more beneficial to firms compared to those who returned to mainland China after studying abroad. To examine this, we disaggregate executives with foreign experience into two groups: those with overseas work experience and those with only education experience. Panel A of Table A11 in the Appendix shows the results using the proportion of the former group and Panel B shows the results using the proportion of the latter group as the dependent variable. No matter which indices we use to measure the trade war (firm-level tariff, industry level tariff, or value-weighted/equally weighted CAR), the results are consistent, indicating that companies mainly hire executives who have foreign work experience rather than those with just foreign education.

4.2 Executive Compensation After the Trade War

Our results have shown that companies hit by the trade war sought out executives with foreign experience. Because firms compete for talent in the labor market for skilled executives, we expect a relative increase in compensation for executives with the relevant experience and skills. Compensation for executives in Chinese public firms (as for executives in the United States) can be separated into two components: a base salary (not explicitly linked to performance metrics) and equity-linked incentive compensation (in the form of stock options and restricted stock). We expect a stronger increase in equity-based compensation (Hypothesis 4).

We start by examining changes in the value of equity-based compensation granted to

while avoiding tariffs by moving production to foreign subsidiaries, which we find evidence for in Section 4.3.

executives with overseas experience.[30] We employ a standard difference-in-differences approach specified in Equation (5), comparing the changes in equity pay for executives with an overseas background to those without, before and after the onset of the trade war.

Panel A of Table 7 shows the results. Column (1) includes only individual fixed effects, while column (2) includes both individual and year fixed effects. All columns include the same set of control variables as in Table 3. The results indicate that, after the start of the trade war, executives with an overseas background indeed received more equity-based compensation than those without such experience. One concern with the baseline results in columns 1 and 2 is that they may be driven by the differences between executives with and without an overseas background, in terms of other demographic characteristics and the size of firm the executive works at. To address this concern, we conduct a propensity score matching (PSM) analysis. The matching covariates in the propensity model include executive age; gender; educational attainment (whether the executive has a JD, MBA, or PhD degree), and firm size. We match each "treatment" executive (i.e., those with overseas experience in 2017) to a "closest-neighbor" control executive (i.e., one without overseas experience in 2017). The final propensity score-matched sample consists of 963 distinct executives with an overseas background (5,796 executive-year observations) and 896 distinct executives without such background (5,385 executive-year observations).[31]

[Insert Table 7 Here]

Table A12 of the Appendix presents the results of the propensity matching model and balance improvement from the propensity score matching approach. It can be seen that executives who have overseas experience are likely to have more education, while after matching, executives in the treatment group are similar to those in the control group with

30 Equity-based compensation is measured as the total value of restricted stocks and stock options. Following the literature (e.g., Lie and Yang 2023), we employ the Black-Scholes formula to calculate the value of option grants at the end of the fiscal year. We dropped about 16% of the sample for which options information was missing.

31 We allow executives in the control group to be used more than once in the matching process, hence, the lower number of control executives in the matched sample. The sample size is a little smaller when we utilize the equity-based compensation as the dependent variable due to the exclusion of observations with missing stock option information. Thus, the sample consists of 908 distinct executives with an overseas background (4,603 executive-year observations) and 848 distinct executives without such a background (4,474 executive-year observations).

respect to age, gender, educational attainment, and firm size. Columns 3 and 4 in Panel A of Table 7 present the results from a DID analysis using the PSM sample. The results are consistent with those in columns 1 and 2 and show that executives with foreign experience earn more equity-based compensation after the onset of the trade war. The coefficient estimate of 0.358 in column (4) implies that following the onset of the trade war, executives with foreign experience received 35.8% more equity pay than those without such experience. This amounts to about 39,389 RMB (or $ 5,471 dollars) or 5.37% of the average base salary at the mean.

In Figure 3, we check for differential pre-trends using an event study graph for the PSM analysis. The results show that there is no significant difference in trends in the value of equity-based compensation granted to experienced executives relative to those without foreign experience before the trade war, suggesting the post-event trends appear to be an effect of the trade war.

[Insert Figure 3 Here]

Since our results in Section 4.1.3 show that companies favor executives with both an overseas background and having marketing skills, we expect the bigger increases in compensation for this group. In Panel B of Table 7, we test this conjecture, and the results show that executives in this group indeed are granted more stock-related incentives. The results are quite robust when using the PSM approach (see columns 3 and 4). Finally, in Panel C of Table 7, we focus on executives with foreign experience but without marketing skills. We find that the value of equity-based compensation granted to executives is higher, but the coefficients are an order of magnitude smaller than those in Panel B and statistically insignificant. As a robustness check, following the recommendation in Thakral and Tô (2023), we replace log (1 + the value of stock incentives) with the value of equity-based compensation to the one-fifth power as our dependent variable. The results presented in Table A13 of the Appendix are consistent with those in Table 7.

Stock and stock option grants to executives inherently affect the responsiveness of their portfolios to both stock prices and volatility. In Tables A14 and A15 of the Appendix, we examine how the sensitivities of executives' compensation to stock price (delta) and stock return volatility (vega) vary after the onset of the trade war. Both delta and vega of executives

with overseas experience increase after the onset of the trade war compared to those without such experience, suggesting a greater need for incentive alignment in executive compensation to encourage more effort in adverse environments (Coles, Daniel, and Naveen 2006; Lie and Yang 2023).

Because firms compete for management talent, we expect that the greater demand would have resulted in an increase in compensation for all executives with overseas experience, both incumbents and new hires. To confirm that the observed effects in Table 7 do not represent a higher equity-based compensation just for new hires, we redo our analysis excluding those newly hired after the onset of the trade war. The results presented in Table A16 of the Appendix are similar to those in Table 7, suggesting that the value of equity-based compensation for incumbent executives also increased, as was expected.

Next, we repeat the analyses from Table 7 but focus on the salary rather than the equity-based compensation that these executives received. The results are reported in Table 8. Overall (Panel A), executives with an overseas background have a higher salary compared to others after the onset of the trade war, though the estimates are noisy (columns 1 and 2) or only marginally significant in the PSM analysis (columns 3 and 4). The pattern is similar, with higher point estimates, for executives with both an overseas background and marketing skills (Panel B). For those with an overseas background but lacking marketing expertise, the results are weaker and not statistically significant (Panel C). Checks using the power (salary to the one-fifth power) instead of log transformation as our dependent variable (Table A17 of the Appendix) are consistent with those shown in Table 8.

[Insert Table 8 Here]

Finally, we examine whether executives with a European background receive more equity-based compensation, given the greater demand for this group, as documented in Section 4.1.3. In Panel A of Table 9, we find that executives with a European background indeed receive more equity-based compensation after the trade war begins, with results robust across the full and PSM samples. While executives with North American or Asian experience also receive more equity-based compensation, the estimates are not statistically significant. We find these results robust when using the value of equity-based compensation to the one-fifth power in Table A18

of the Appendix. We checked and did not find a significant increase in the salary for any of the three groups of executives based on region of experience (Table A19 of the Appendix).

[Insert Table 9 Here]

4.3 Link Between Executive Experience and Firm Performance

In this section, we present suggestive evidence for a link between the presence of executives with an overseas background and firm performance during the trade war period. Since the likely objective of hiring executives with foreign experience is to address crisis in the overseas markets and stabilize overseas revenue, we begin by examining the effects of the presence of executives with overseas experience on the firms' overseas revenue.

First, we verify the plausibility of a link between executive experience and firm performance in foreign markets, using detailed customs data available for the years prior to the trade war (2011 to 2016).[32] Specifically, Table A20 in the Appendix explores the correlation between the value of exports to foreign countries and the proportion of executives with experience from the corresponding foreign countries/regions at the firm-year level. The first two columns examine total export revenue, while columns (3) and (4) examine export revenue to European countries, columns (5) and (6) examine export revenue to the U.S., and the last two columns examine export revenue to Asian countries. The results show that overall, the executives with foreign experience contribute to firms' export value. After decomposing the foreign experience, we find that the proportion of executives with experience from a specific country group is strongly correlated with export revenue to that group. These results suggest that the link between export success and managerial country experience documented in the literature (e.g., Mion, Opromolla, and Sforza (2022), Muendler and Rauch 2018) also holds strongly in the Chinese context in the period just prior to the trade war.

Next, to investigate the role of executives with foreign experience during the trade war, we compare the performance of firms with different proportions of executives with an overseas background in 2017. As noted in Section 3, detailed customs data that provides firm-year–

[32] As discussed in Footnote 6, customs data at the firm-product-destination level is available only up to 2016. Hence, we are unable to use customs data to directly examine the response of country-specific export values to hiring of executives with related experience in years after the trade war.

destination-level revenues are unfortunately unavailable for the years after 2016, thus this part of the analysis relies on the total foreign sales from corporate financial reports. We focus on the variation in executive composition at the start of the trade war for two reasons. First, this proportion is arguably exogenous to the trade war–induced adversity, as the trade war announcement was unexpected (as revealed by the overall stock market response and our earlier event study figures).[33] Second, we expect lagged effects for new hires, as it may have taken time for newly hired executives to become familiar with products and establish connections with existing and new clients.

[Insert Table 10 Here]

Table 10 reports the results. Column (1) uses only the interaction of the proportion of executives with an overseas background in 2017 and a trade war period dummy, as well as firm and year fixed effects. In contrast, column (2) includes tariff shock at firm level, the yearly change in the overseas executive ratio, and other control variables following Giannetti, Liao, and Yu (2015).[34] The results in column (2) show that companies with a higher proportion of executives with foreign experience obtain larger overseas revenue after the trade war begins, even after controlling for tariff shocks. The magnitude is also substantial. For instance, the coefficient estimate in column (2) shows that a firm where proportion of executives with overseas experience in 2017 is higher by one standard deviation (i.e., 0.122 based on the summary statistics in Table A21 of the Appendix) experience a 15.20% larger increase in overseas revenue. This suggests that these executives indeed helped companies to navigate the crisis in the foreign markets caused by the trade war. We also examine trends in the coefficient of interest in Figure 4 and find an increase in the correlation of foreign executives with foreign sales after the onset of the trade war, consistent with a greater relevance of foreign experience for foreign sales during the trade war period.

[33] Our main results above show that once the trade war happens, the proportion of executives with foreign experience is clearly endogenous—firms hit harder by the trade war are likely to hire more of such executives. Hence, using the proportion of the experienced executives as the key explanatory variable will yield results confounded by endogenous responses by affected firms.

[34] Specifically, we follow Giannetti, Liao, and Yu (2015) to control for leverage ratio, log(asset), number of business segments, free cash flow, and stock volatility.

Columns (3) and (4) concentrate on the effect of executives with European experience on the total overseas revenue using a similar setting as the first two columns. We find that the proportion of executives with European experience contributes to firms' overseas revenue during the trade war, though the coefficients are only marginally significant. The estimate in column (4) implies that a firm whose proportion of executives with European experience in 2017 is higher by one standard deviation (i.e., 0.059 based on the summary statistics in Table A21 of the Appendix), experienced a 14.23% larger increase in overseas revenue in the trade conflict period. The last four columns focus on the effect of executives with American and Asian experience on the total overseas revenue, respectively. These estimates are not statistically significant, and are also smaller in magnitude than those in column (4), suggesting that the European experience plays a stronger role in managing the trade war shock.

[Insert Figure 4 Here]

Besides overseas revenue, we utilize the number and size of foreign subsidiaries as alternative measures of performance in overseas markets following a similar setting as in Table 10. Table 11 presents the results. Panels A, B, and C employ three different measures related to overseas subsidiaries: the number of subsidiaries, the average registered capital, and the total registered capital, respectively. The results in the first two columns indicate that companies with a higher pre-trade war proportion of executives with foreign experience established more and larger overseas subsidiaries after the onset of the trade war, even after controlling for tariff shocks.

The magnitude is also substantial. Take the coefficient estimate in column (2) of Panel A as an example: a firm whose proportion of executives with overseas experience in 2017 is one standard deviation (i.e., 0.122) higher than the average experiences a 0.493 larger increase in the number of overseas subsidiaries, which is about 19.68% of the average number of overseas subsidiaries of 2.507 (see Table A21 of Appendix for the additional summary statistics). Columns (3) and (4) focus on the proportion of executives with European experience, showing a similar pattern with slightly larger effects. The coefficient estimate in column (4) of Panel A implies that when the proportion of executives with European experience in 2017 is higher by one standard deviation (i.e., 0.059), the increase in number of overseas subsidiaries is larger by 0.299, which is about 11.92% of the mean level. The last two columns examine the impact of

pre-trade war European experience specifically on subsidiaries in European markets, revealing a significant positive effect on both the number and size of these subsidiaries. The magnitude is significant: the estimate in column (6) implies that a one standard deviation (i.e., 0.059) higher proportion of executives with European experience in 2017 is associated with a 0.094 larger increase in the number of European subsidiaries, which is about 26.87% of the mean level of 0.35. These findings suggest that these executives with relevant experience indeed helped companies to expand their presence in the foreign markets during the trade war.

[Insert Table 11 Here]

As an alternative test of the value of executives with overseas experience, especially after the onset of the trade war, we leverage companies' stock market reactions to the "unexpected" departure of executives (Borstadt 1987; Dedman and Lin 2002). Checking the data, we find that for many (apparently anticipated) transitions, there are announcements for the departure of an executive and a replacement appointment on the same day. Hence, we define the departure of executives as unexpected if there is only an announcement of a departure with no replacement appointment on the same day (similar to Borstadt 1987). We collect these events and then calculate the CARs around the event days using an approach similar to that described in Section 3.2.[35] We find that after the onset of the trade war, company stock prices react significantly more negatively to the unexpected departure of executives having foreign experience compared to the unexpected departure of those without such experience. The results in Table 12 are highly robust across alternative windows to calculate the CAR.[36] The magnitude is also substantial. The coefficient in column (4) indicates that the stock's three-day cumulative abnormal return dropped by an additional 2.6% following the unexpected departure of an executive with an overseas background compared to the departure of an executive without such a background. These results suggest that the value of executives with an overseas background

[35] For this analysis, we exclude the year 2015 due to the significant turbulence of the stock market in that year. For example, the Shanghai Stock Exchange Composite (SSEC) index increased by 60% in the first five months of year 2015 and then dropped by 45% in the next two months. These abnormal fluctuations affect our CAR measures around the unexpected departure of executives depending on whether the departure happened in the first five months or later months.

[36] Because the unexpected departure of executives occurs only once in many firms, we include industry by year fixed effects instead of firm fixed effects in Table 12.

increased after the onset of the trade war. Figure A1 in the Appendix examines the possibility of a differential pre-trend using the equally weighted CAR around the three-day window of unexpected departure as the dependent variable. We find no significant difference in the market's reaction to the unexpected departure of executives with foreign experience compared to those without such experience before the onset of the trade war.[37]

[Insert Table 12 Here]

In Table A22 of the Appendix, we employ stocks' buy and holding returns as an alternative measure of firm performance and find that companies with higher proportions of executives with an overseas background in 2017 show higher buy and holding returns after the onset of the trade war.

4.4 U.S. Companies' Response to Retaliatory Chinese Tariffs

Finally, in this section, we use Compustat and BoardEx data for U.S. public firms to investigate whether U.S. companies respond in a manner similar to Chinese firms to the retaliatory tariff increases imposed by the Chinese government during the trade war. BoardEx provides information on both executive and non-executive board members, as well as executives whose compensation is disclosed in Securities and Exchange Commission (SEC) filings.[38] One limitation of the BoardEx data is that the information about executives is relatively limited: The average number of executives is only 1.90, while the mean of the number of directors is 8.05. We follow Chen et al. (2020) to define China-related or Asia-related experience based on the additional description of the selected position. If the role description in a particular year includes "Chinese," "China", or refers to a big city in China such as "Hong Kong," "Shanghai," "Beijing," "Shenzhen," or "Guangzhou," then we consider this person to have gained China-related experience starting from that year.[39] We define the

[37] Due to the small sample size of unexpected departures making yearly estimates noisy, we categorize all the years into four groups to conduct the event study: (1) years 2013–2014, which is used as the base year, (2) years 2016–2017, (3) years 2018–2019, and (4) years 2020–2021. Year 2015 is excluded due to the reason discussed in Footnote 34.

[38] The U.S. federal securities laws require clear disclosure about compensation for "its chief executive officer, chief financial officer and the three other most highly compensated executive officers." For more details, please see the SEC website at https://www.sec.gov/answers/execcomp.htm.

[39] The results are similar if we exclude "Hong Kong" and consider only mainland China.

Asia (other than China) experience similarly, based on the presence of Asian country names. For the tariff measure, we aggregate tariffs from the product level to the four-digit NAICS industry level using the export value of each product to China over the five years prior to the onset of the trade war (i.e., 2013−2017) as weights (similar to the definition used in Equation (2)).

[Insert Table 13 Here]

We consider the backgrounds of four groups of the management team: directors plus executives, directors, independent directors, and executives. The results are reported in Table 13. In Panel A of Table 13, we show that U.S. companies that were hit hard by China's retaliatory tariff hired more independent directors with Asia (other than China)–related experience, suggesting that U.S. firms might need to leverage directors' Asian experience to shift sales to other Asian markets. The effects of tariff increase on the proportion of Asia (other than China)–related executives are insignificant, possibly due to the limited information about executives in the BoardEx data set, as noted above. Panel B focuses on the proportion of directors/executives with China-related experience. We do not find that U.S. companies significantly increased the proportion of directors or executives with China-related experience in response to the higher tariff imposed by the Chinese government. Overall, these results suggest that U.S. firms adjust their human resources—specifically, directors' experiences—to respond to adverse shocks.

5. Conclusion

This paper provides new evidence on how firms adjust executive composition and compensation in response to adverse shocks. Leveraging unique data on the executives of Chinese public firms, we examine how these firms modified their executive teams and compensation structures in response to the significant tariff increases following the onset of the U.S.-China trade war in 2018. We find that firms experiencing more substantial trade war shocks increased the proportion of executives with overseas backgrounds after the trade war began. As expected, firms with a higher pre-trade war share of overseas income were more likely to increase the proportion of such executives. Further disaggregating foreign experience

by various dimensions, we find that firms primarily raised the proportion of executives with foreign work experience (rather than foreign education), those with an overseas background coupled with marketing skills (as opposed to research, production, or other skills), and those with experience in Europe.

Consistent with the expectation that increased demand after the trade war would raise the market value of executives with desirable backgrounds, we find that the value of equity-based compensation granted to executives with foreign experience increases after the onset of the trade war, especially for those with foreign experience and marketing skills or those with a European experience background. Finally, we find that firms with a higher proportion of executives with foreign experience indeed perform better in terms of overseas income and the number and size of their foreign subsidiaries, and stock markets react more negatively to the unexpected departure of executives with overseas background, both indicating that these executives became more valuable to companies during this turbulent period.

Future work could build on our study. In particular, when shipment-level export data for the post-2016 period becomes available for China, researchers could more fully explore specific mechanisms through which overseas executives may have helped Chinese firms cope with the increased tariff costs. Such granular data would also allow researchers to investigate if the additional stock-based compensation granted to these executives translated into better firm performance, particularly in the markets in which these executives had prior experience.

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Figure 1. Trends in Average Tariff Imposed by the United States During the Trade War

This figure shows the average monthly tariff level imposed by the U.S. government between January 2018 and December 2021. Combing the product-level tariff data provided by Fajgelbaum et al. (2020) and tariff changes during the trade war provided by Bown (2021), we calculate the weighted average tariff imposed by the U.S. government in each month using the total value of exports from China in five years before the trade war (2013–2017) as the weight. Regarding labels along the *x*-axis, "2018m1" represents January 2018, "2018m9" corresponds to September 2018, and so on.

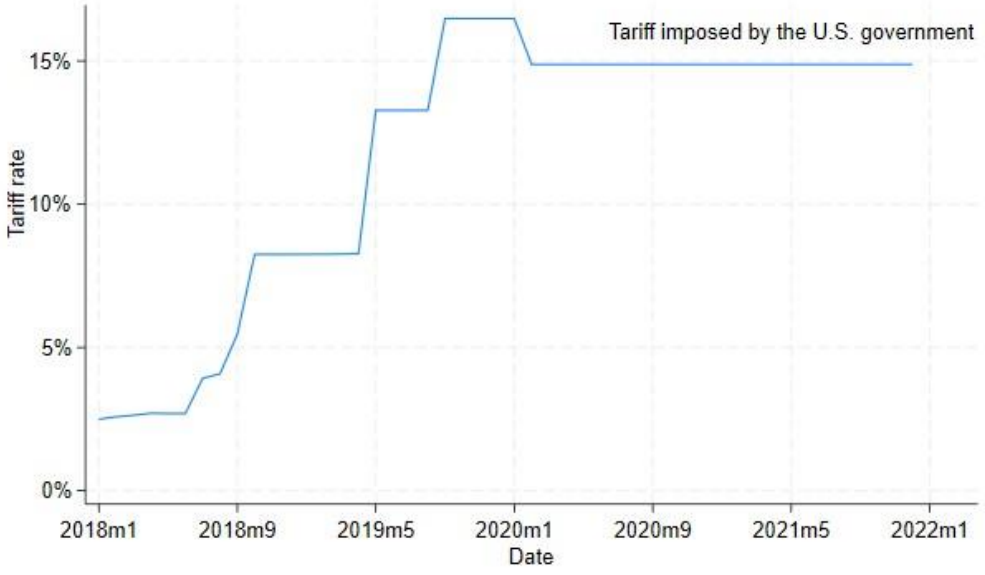
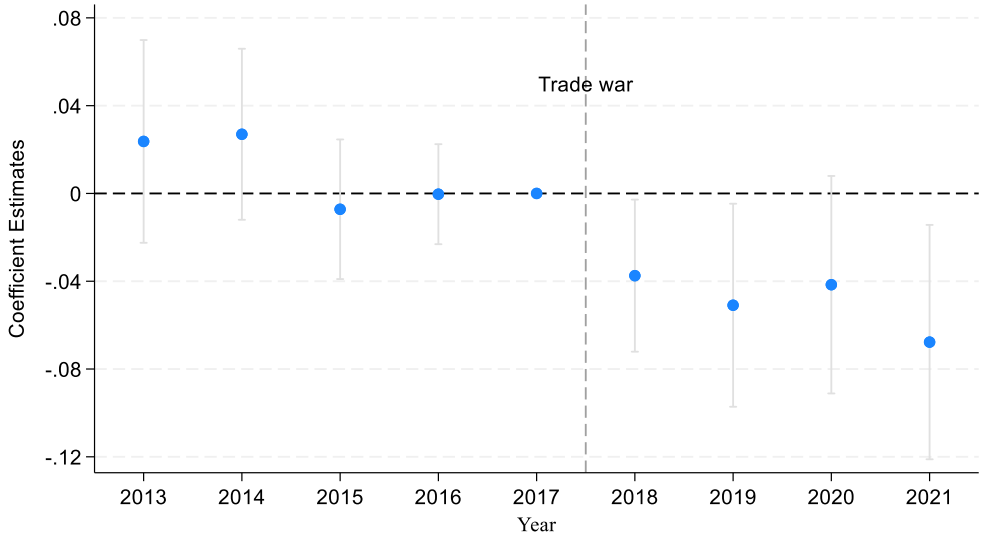


Figure 2. Event Study of the Proportion of Executives with Foreign Experience Using the CAR Measure of the Trade War Shocks

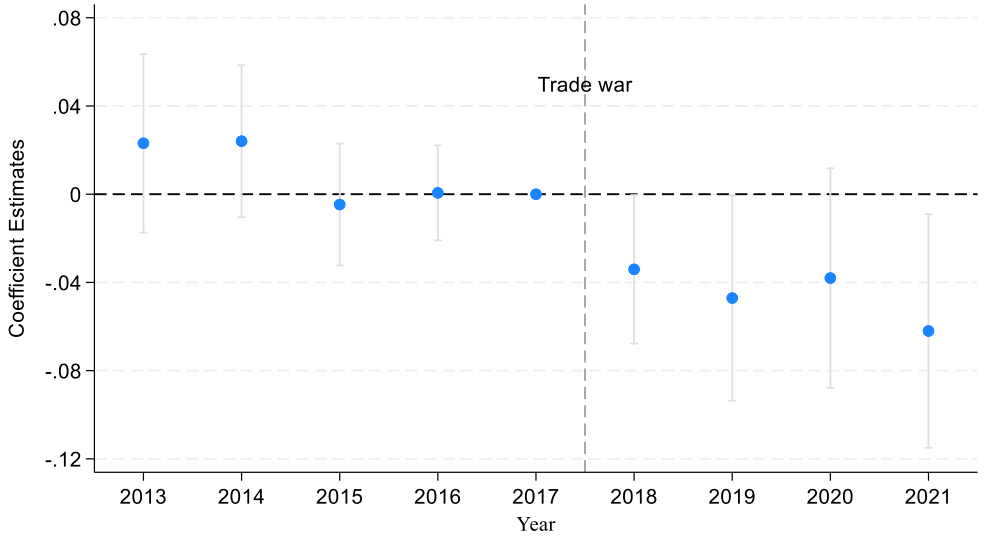
This figure presents coefficients on the cumulative abnormal returns (CARs) around the trade war shock interacted with year dummies, in a regression with the proportion of executives with foreign experience as the dependent variable (Equation 7). Panel A uses value-weighted CAR and Panel B uses equally weighted CAR as the key explanatory variable. Fixed effects and controls are the same as in Columns 2 and 4 of Table 4. Because more negative CARs represent more adverse shocks, figures below indicate an increase in proportion of overseas executives by firms facing more adverse shocks.

Panel A. Value-weighted CAR



Notes. OLS coefficient estimates (and their 90% confidence intervals) are reported.

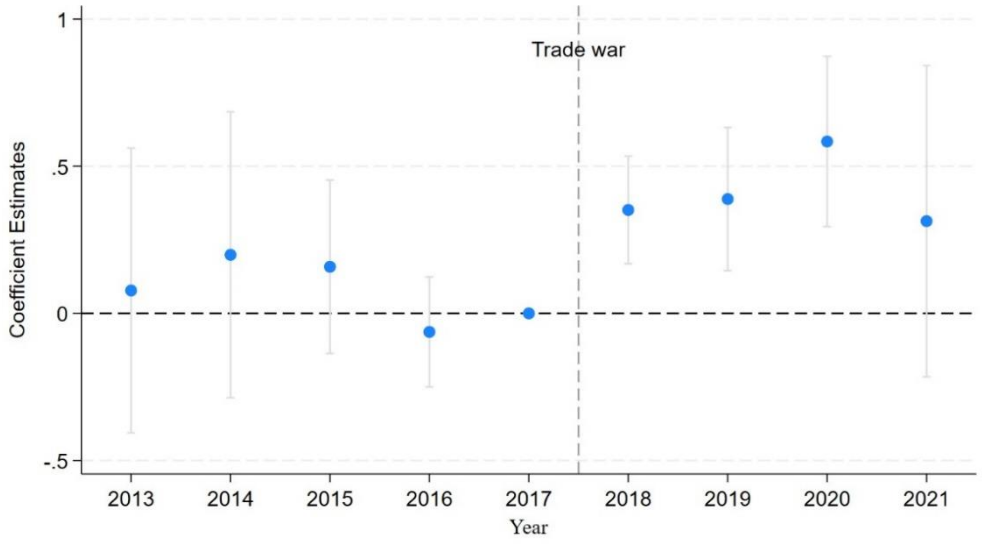
Panel B. Equally weighted CAR



Notes. OLS coefficient estimates (and their 90% confidence intervals) are reported.

Figure 3. Event Study of the Value of Equity Compensation Granted (With PSM)

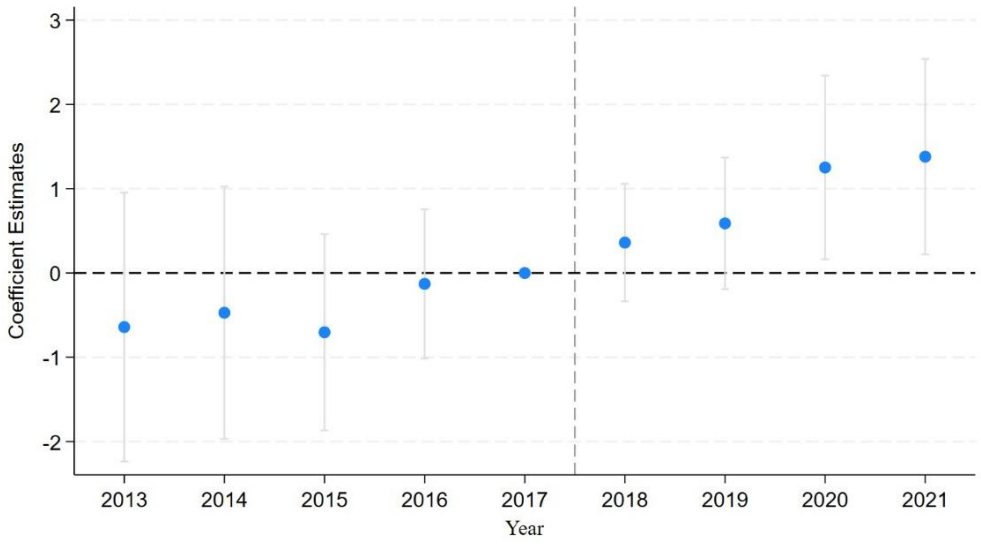
This figure plots the coefficients on a dummy for executives with foreign experience in 2017 with year dummies, in a regression with the natural logarithm of 1 plus the value of equity-based compensation granted as the dependent variable. This analysis uses the propensity-score matched sample. Fixed effects and controls are as in Column 4 of Table 7.



Notes. OLS coefficient estimates (and their 90% confidence intervals) are reported.

Figure 4. Event Study of Total Overseas Revenue

This figure plots the coefficients on the proportion of executives with foreign experience in 2017 interacted with year dummies, in a regression using the logarithm of 1 plus the total amount of overseas revenue as the dependent variable. Fixed effects and controls are in Column 2 of Table 10.



Notes. OLS coefficient estimates (and their 90% confidence intervals) are reported.

Table 1. Timeline of the U.S.–China Trade War

This table shows a timeline of the trade war based on Bown (2021). The second and third columns report the number of products (10-digit HS code) upon which new tariffs were imposed and the total import value of these products from China in 2017, respectively. The last column shows the increase in tariffs in each round of increases.

Date enacted	Products (HS-10)	2017 imports ($ billion)	Tariff increase (%)
July 6, 2018	1,629	34	25
August 23, 2018	401	16	25
September 24, 2018	8,664	200	10
May 10, 2019	8,664	200	15
September 1, 2019	5,597	112	15

Table 2. Summary Statistics

Panels A and B of this table provide summary statistics for firm- and executive-level characteristics, respectively. The samples consist of 26,968 Chinese firm-year observations (Panel A) and 107,424 executive-year observations (Panel B) over the period 2013 to 2021. Table A1 in the appendix provides a detailed description of the definition and source of these variables.

Panel A: Firm Characteristics				
	N	Mean	Median	SD
Proportion of executives with overseas background	26,968	0.059	0.000	0.124
Proportion of executives with overseas background and marketing skill	26,968	0.023	0.000	0.072
No. of executives	26,968	6.314	6.000	2.417
Tariff shock at the firm level (x100)	25,780	0.050	0.000	0.228
Log(1+industry tariff)	26,968	0.044	0.000	0.070
Dependence on exports	26,968	0.126	0.013	0.209
CAR (value-weighted)	19,886	0.029	0.026	0.079
CAR (equally-weighted)	19,886	0.004	0.002	0.080
Tobin's *q*	26,968	2.168	1.677	1.598
Size (log(asset))	26,968	22.247	22.081	1.361
Leverage	26,968	0.435	0.423	0.211
ROA	26,968	0.029	0.034	0.086
Board independence	26,968	0.378	0.364	0.056
Panel B: Executive Characteristics				
	N	Mean	Median	SD
Age	107,424	48.112	48.000	6.745
Female	107,424	0.163	0.000	0.369
Master degree	107,424	0.326	0.000	0.469
Having overseas background in 2017	107,424	0.055	0.000	0.228
Having overseas background and marketing skill in 2017	107,424	0.023	0.000	0.150
The value of stock ownership incentive	90,789	110,024	0.000	1,766,314
Total base salary	107,424	733,184	529,000	834,641

Table 3. Executive Composition During the Trade War Using Tariff-Based Measures

This table examines whether companies that experienced larger tariff increases during the trade war increase the proportion of executives with foreign experience. We construct two indices to measure tariffs in this table. One is the *firm-level Tariff*, which is computed based on Equation (1); the other one is the *Log(1 + industry tariff)*, where *industry tariff* is computed based on Equation (2). Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Firm-level tariff	0.008***	0.008***				
	(0.002)	(0.002)				
Log(1 + industry tariff)			0.039***	0.052***	-0.012	0.001
			(0.014)	(0.018)	(0.017)	(0.021)
Log(1 + industry tariff) × Export dependence					0.336***	0.341***
					(0.089)	(0.088)
Tobin's *q*	0.001	0.001	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Size	0.016***	0.015***	0.016***	0.015***	0.016***	0.015***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Leverage	-0.016*	-0.014*	-0.017**	-0.015*	-0.018**	-0.016**
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
ROA	-0.012	-0.010	-0.013	-0.012	-0.013	-0.012
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Board independence	0.007	0.005	0.002	0.001	0.003	0.002
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
Post–year 2018	0.009***		0.007***		0.007***	
	(0.002)		(0.002)		(0.002)	
Observations	25,780	25,780	26,968	26,968	26,968	26,968
Adjusted *R*-squared	0.653	0.653	0.667	0.667	0.668	0.669
FIRM FE	YES	YES	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES	NO	YES

Table 4. Executive Composition During the Trade War Using the CAR Measure

This table employs the cumulative abnormal returns (CAR) of a firm's stock during the trade war escalation events as an alternative measure of the trade war shocks, with more negative CARs indicating more adverse shocks. Depending on whether we utilize value-weighted or equally weighted market return in computing abnormal returns, we have value-weighted and equally weighted CARs. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
CAR (vw) × post-2018	-0.054**	-0.057**		
	(0.024)	(0.024)		
CAR (ew) × post-2018			-0.050**	-0.053**
			(0.024)	(0.024)
Tobin's *q*	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Size	0.013***	0.011***	0.013***	0.011***
	(0.003)	(0.003)	(0.003)	(0.003)
Leverage	-0.009	-0.008	-0.009	-0.007
	(0.010)	(0.010)	(0.010)	(0.010)
ROA	-0.000	0.002	-0.001	0.001
	(0.013)	(0.012)	(0.013)	(0.012)
Board independence	0.011	0.010	0.011	0.010
	(0.022)	(0.022)	(0.022)	(0.022)
Post–year 2018	0.013***		0.011***	
	(0.002)		(0.002)	
Observations	19,886	19,886	19,886	19,886
Adjusted *R*-squared	0.651	0.651	0.651	0.651
FIRM FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table 5. Executive Composition Under the Trade War: Types of Expertise

This table sorts the executives with foreign experience into four skill groups: marketing, research, production, and other. Panels A, B, C, and D utilize the proportion of executives with foreign experience and marketing, research, production, and other skills as the dependent variable, respectively. All panels employ three different measures of trade war shocks as the key explanatory variable. All regressions include the control variables Tobin's q, log(asset), leverage ratio, ROA, board independence, and the firm- and year-fixed effects. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Panel A: Dependent variable: Proportion of executives with an overseas background and marketing expertise					
Firm-level tariff	0.003*				
	(0.002)				
Log(1 + industry tariff)		0.029**	-0.002		
		(0.014)	(0.016)		
Log(1 +industry tariff) × Export dependence			0.206***		
			(0.047)		
CAR (vw) × post–2018				-0.024**	
				(0.012)	
CAR (ew) × post-2018					-0.021*
					(0.012)
Adjusted *R*-squared	0.590	0.598	0.600	0.593	0.593
Panel B: Dependent variable: Proportion of executives with an overseas background and research expertise					
Firm-level tariff	0.001				
	(0.001)				
Log(1 + industry tariff)		0.008	0.003		
		(0.008)	(0.011)		
Log(1 + industry tariff) × Export dependence			0.031		
			(0.040)		
CAR (vw) × post-2018				-0.007	
				(0.007)	
CAR (ew) × post-2018					-0.008
					(0.008)
Adjusted *R*-squared	0.589	0.603	0.603	0.565	0.565
Panel C: Dependent variable: Proportion of executives with an overseas background and management expertise					
Firm-level tariff	0.004*				
	(0.002)				
Log(1 + industry tariff)		0.017	0.003		
		(0.013)	(0.013)		
Log(1 + industry tariff) × Export dependence			0.098		
			(0.068)		

CAR (vw) × post-2018				-0.020	
				(0.015)	
CAR (ew) × post-2018					-0.023
					(0.016)
Adjusted *R*-squared	0.527	0.547	0.547	0.524	0.524
Panel D: Dependent variable: Proportion of executives with an overseas background and other experience					
Firm-level tariff	0.000				
	(0.000)				
Log(1 + industry tariff)		0.001	0.000		
		(0.002)	(0.002)		
Log(1 + industry tariff) × Export dependence			0.004		
			(0.011)		
CAR (vw) × post-2018				-0.004*	
				(0.002)	
CAR (ew) × post-2018					-0.005**
					(0.002)
Observations	25,780	26,968	26,968	19,886	19,886
Adjusted *R*-squared	0.324	0.329	0.329	0.376	0.376
FIRM FE	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES

Table 6. Executive Composition and Trade Shock: Proportion from Specific Regions

This table explores which types of country experience are favored by Chinese firms in their response to the trade war. Using textual analyses of biographies of executives with an overseas background, we determine the country in which each executive gained their foreign experience. Then, we sort these countries into five groups: North America (NA), Europe, Asia, Australia, and countries outside of the first four areas. Given that Chinese government policies in this period promoted international trade between China and countries belonging to the Belt and Road Initiative, we create a separate sixth group of these countries. Each column in this table utilizes the proportion of executives with the corresponding country experience as the dependent variable. The first four rows use the *firm-level tariff*, rows 5−8 use the *Log(1 + industry tariff)*, and the last four rows use *CAR (vw)* as the key explanatory variable, respectively. All regressions include the control variables Tobin's q, log(asset), leverage ratio, ROA, board independence, and the firm- and year-fixed effects. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	North America	Europe	Asia	Australia	Others	Belt and Road
Panel A: Using firm-level tariff						
Firm-level tariff	0.003	0.006***	-0.002	-0.000	0.000	0.001
	(0.003)	(0.002)	(0.003)	(0.001)	(0.001)	(0.002)
Observations	25,780	25,780	25,780	25,780	25,780	25,780
Adjusted *R*-squared	0.648	0.607	0.570	0.516	0.413	0.575
Panel B: Using industry-level tariff						
Log(1 + industry tariff)	0.019	0.019*	0.011	0.003	0.002	0.009
	(0.012)	(0.010)	(0.010)	(0.005)	(0.002)	(0.008)
Observations	26,968	26,968	26,968	26,968	26,968	26,968
Adjusted *R*-squared	0.667	0.611	0.594	0.534	0.415	0.587
Panel C: Using value-weighted CAR						
CAR (vv) × post-2018	-0.023	-0.028***	0.005	0.004	0.004	0.010
	(0.017)	(0.009)	(0.012)	(0.006)	(0.003)	(0.011)
Observations	19,886	19,886	19,886	19,886	19,886	19,886
Adjusted *R*-squared	0.653	0.620	0.524	0.530	0.380	0.519
Adding Controls	YES	YES	YES	YES	YES	YES
FIRM FE	YES	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES	YES

Table 7. Equity Compensation Granted to Executives After the Trade Shock

This table presents estimates of ordinary least squares (OLS) difference-in-differences regressions at the executive level. The dependent variable is the natural logarithm of 1 plus the value of the equity-based compensation. The first two columns utilize the original sample, while the last two columns use a nearest-neighbor propensity score matched sample. The variables used in the matching are executive age, gender, and education and firm size. Panel A focuses on all executives with foreign experience, while Panels B and C distinguish executives with foreign experience and marketing skills from those without marketing skills. All regressions include the control variables Tobin's q, log(asset), leverage ratio, ROA, board independence. Standard errors are clustered at the individual level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Without PSM		PSM (nearest 1)	
Panel A: All executives				
Overseas background × post-2018	0.257**	0.256**	0.390***	0.358***
	(0.114)	(0.113)	(0.137)	(0.136)
Observations	90,789	90,789	9,077	9,077
Adjusted *R*-squared	0.249	0.271	0.264	0.286
Panel B: Executives with both an overseas background and marketing expertise				
Overseas background and marketing expertise × post-2018	0.537***	0.545***	0.568**	0.562**
	(0.185)	(0.185)	(0.233)	(0.232)
Observations	90,789	90,789	4,033	4,033
Adjusted *R*-squared	0.249	0.271	0.265	0.277
Panel C: Executives with an overseas background but no marketing expertise				
Overseas background without marketing expertise × post-2018	0.025	0.017	0.123	0.106
	(0.138)	(0.137)	(0.175)	(0.172)
Observations	90,789	90,789	5,257	5,257
Adjusted *R*-squared	0.249	0.271	0.266	0.294
Controls	YES	YES	YES	YES
INDIVIDUAL FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table 8. Executives' Salary After the Trade Shock

This table presents estimates of ordinary least squares (OLS) fixed effects difference-in-differences regressions at the executive level. The dependent variable is the natural logarithm of 1 plus the total salary. All regressions include the control variables Tobin's q, log(asset), leverage ratio, ROA, board independence. Standard errors are clustered at the individual level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Without PSM		PSM (nearest 1)	
Panel A: All executives				
Overseas background × post-2018	0.051	0.060	0.124*	0.131*
	(0.042)	(0.042)	(0.069)	(0.068)
Observations	107,424	107,424	11,181	11,181
Adjusted *R*-squared	0.543	0.547	0.513	0.517
Panel B: Executives with both an overseas background and marketing expertise				
Overseas background and marketing expertise × post-2018	0.096	0.100	0.150*	0.160**
	(0.061)	(0.061)	(0.080)	(0.080)
Observations	107,424	107,424	4,866	4,866
Adjusted *R*-squared	0.543	0.547	0.623	0.627
Panel C: Executives with an overseas background but no marketing expertise				
Overseas background without marketing expertise × post-2018	0.015	0.028	0.082	0.091
	(0.056)	(0.056)	(0.062)	(0.062)
Observations	107,424	107,424	6,564	6,564
Adjusted *R*-squared	0.543	0.547	0.575	0.579
Controls	YES	YES	YES	YES
INDIVIDUAL FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table 9. Value of Equity Compensation Granted to Experienced Executives After the Trade Shock: Variation Across Regions of Experience

This table explores the number of options granted to executives with experience in different settings. The dependent variable is the natural logarithm of 1 plus the value of equity-based compensation granted. Panels A, B, and C consider executives with European, North American, and Asian background, respectively. All regressions include the control variables Tobin's q, log(asset), leverage ratio, ROA, board independence. Standard errors are clustered at the individual level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Without PSM		PSM (nearest 1)	
Panel A: Executives with a European background				
European background × post-2018	0.623***	0.607***	0.696**	0.675**
	(0.223)	(0.222)	(0.271)	(0.269)
Observations	90,789	90,789	2,754	2,754
Adjusted *R*-squared	0.249	0.271	0.320	0.335
Panel B: Executives with a North American background				
NA background × post-2018	0.118	0.138	0.215	0.233
	(0.161)	(0.161)	(0.215)	(0.213)
Observations	90,789	90,789	4,272	4,272
Adjusted *R*-squared	0.249	0.271	0.176	0.200
Panel C: Executives with an Asian background				
Asian background × post-2018	0.272	0.278	0.444	0.443
	(0.256)	(0.256)	(0.318)	(0.323)
Observations	90,789	90,789	1,832	1,832
Adjusted *R*-squared	0.249	0.271	0.286	0.295
Controls	YES	YES	YES	YES
IND FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table 10. Proportion of Executives with Overseas Experience and Firms' Overseas Revenue

This table tests the value to companies of executives with an overseas background. We conduct a difference-in-differences analysis using the pre-existing proportion of executives with an overseas background as the treatment and comparing firms' exports after the onset of the trade war. The dependent variable is the natural logarithm of firms' overseas revenue. The first two columns focus on the effects of the pre-trade war proportion of executives with foreign experience, while columns (3) and (4) focus on the proportion with European experience, columns (5) and (6) focus on the proportion with North American experience, and columns (7) and (8) focus on the proportion with Asian experience. Following Giannetti, Liao, and Yu (2015), we control for leverage ratio, log(asset), number of business segments, free cash flow, stock volatility, and the firm- and year-fixed effects. Standard errors are clustered at the firm level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Proportion of executives with overseas experience (2017) × post-2018	1.400**	1.246**						
	(0.583)	(0.627)						
Proportion of executives with European experience (2017) × post-2018			2.433*	2.412*				
			(1.383)	(1.427)				
Proportion of executives with North American experience (2017) × post-2018					1.055	0.790		
					(0.878)	(0.940)		
Proportion of executives with Asian experience (2017) × post-2018							1.870	1.176
							(1.215)	(1.474)
Leverage		1.293***		1.299***		1.299***		1.306***
		(0.411)		(0.411)		(0.412)		(0.412)
Size		1.430***		1.434***		1.435***		1.436***
		(0.147)		(0.147)		(0.147)		(0.147)
Number of business segments		-0.021		-0.021		-0.021		-0.022

		(0.035)		(0.035)		(0.035)		(0.035)
Free cash flow		-0.275		-0.278		-0.276		-0.279
		(0.226)		(0.226)		(0.226)		(0.226)
Stock volatility		-3.434		-3.168		-3.201		-3.048
		(4.322)		(4.313)		(4.326)		(4.315)
Firm-level tariff		-0.177***		-0.167***		-0.166***		-0.160***
		(0.038)		(0.037)		(0.037)		(0.036)
Changes in the proportion of executives with overseas experience		0.243		0.112		0.068		0.045
		(0.318)		(0.302)		(0.318)		(0.316)
Observations	28,209	26,077	28,209	26,077	28,209	26,077	28,209	26,077
Adjusted *R*-squared	0.864	0.868	0.864	0.868	0.864	0.868	0.864	0.868
FIRM FE	YES	YES	YES	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES	YES	YES	YES

Table 11. Proportion of Executives with Overseas Experience and Firms' Overseas Subsidiaries

This table tests the impact of having executives with an overseas background on the number and size of overseas subsidiaries in the post-trade war period. We conduct a difference-in-differences analysis using the pre-existing proportion of executives with an overseas background as the treatment and comparing firms' exports after the onset of the trade war. Panels A, B and C employ three difference measures about overseas subsidiaries: the number, the average amount of registered capital, and the total amount of registered capital, respectively. The first two columns focus on the effects of the pre-trade war proportion of executives with foreign experience on the subsidiaries in all overseas markets, while columns (3) and (4) focus on the effects of the proportion with European experience. The last two columns concentrate on the effects of the pre-trade war proportion of executives with European experience on the subsidiaries in European markets. Since some overseas subsidiaries lack information on registered capital, the numbers of observations in Panels B and C are less than those in Panel A. As long as the number of subsidiaries in European markets is zero, we impute the value of average and total amount of registered capital of overseas subsidiaries as zero in this market, therefore, the number of observations in columns (5)−(6) are larger than those in the first four columns. Following Giannetti, Liao, and Yu (2015), we control for leverage ratio, log(asset), number of business segments, free cash flow, stock volatility, and the firm- and year-fixed effects. Standard errors are clustered at the firm level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	In all overseas markets				In European markets	
Panel A: The number of overseas subsidiaries						
Proportion of overseas executives (2017) × post 2018	4.524***	4.044***				
	(0.766)	(0.778)				
Proportion of executives with European experience (2017) × post 2018			5.497***	5.065***	1.612***	1.594***
			(1.695)	(1.831)	(0.485)	(0.529)
Firm-level tariff		0.178*		0.219**		0.090**
		(0.106)		(0.103)		(0.036)
Changes in the proportion of overseas executives		1.286***		0.725**		0.169**
		(0.321)		(0.315)		(0.086)
Observations	28,209	26,077	28,209	26,077	28,209	26,077
Adjusted R-squared	0.721	0.743	0.719	0.741	0.641	0.660
Panel B: log(1+the average amount of registered capital of overseas subsidiaries)						
Proportion of overseas executives (2017) × post 2018	2.227***	1.609**				
	(0.741)	(0.750)				

Proportion of executives with European experience (2017) × post 2018			4.093***	3.538**	2.172**	2.294**
			(1.501)	(1.523)	(1.058)	(1.119)
Firm-level tariff		0.362***		0.372***		0.326***
		(0.136)		(0.135)		(0.124)
Changes in the proportion of overseas executives		1.683***		1.524***		0.389
		(0.476)		(0.459)		(0.280)
Observations	20,604	18,867	20,604	18,867	25,491	23,490
Adjusted R-squared	0.818	0.844	0.818	0.844	0.727	0.745
Panel C: log(1+the total amount of registered capital of overseas subsidiaries)						
Proportion of overseas executives (2017) × post 2018	2.135***	1.477*				
	(0.770)	(0.781)				
Proportion of executives with European experience (2017) × post 2018			3.943**	3.374**	2.138**	2.262**
			(1.551)	(1.587)	(1.086)	(1.146)
Firm-level tariff		0.388***		0.396***		0.334***
		(0.139)		(0.138)		(0.127)
Changes in the proportion of overseas executives		1.768***		1.628***		0.383
		(0.492)		(0.476)		(0.282)
Observations	20,604	18,867	20,604	18,867	25,491	23,490
Adjusted R-squared	0.822	0.847	0.822	0.847	0.728	0.746
Controls	NO	YES	NO	YES	NO	YES
FIRM FE	YES	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES	YES

Table 12. Stock Market Reaction to the Unexpected Departure of Executives

This table examines the value to companies of executives with an overseas background by comparing stock market reactions to the unexpected departure of such executives relative to the unexpected departure of those without such experience. Each column represents one alternative approach to calculate the stock market reaction. All regressions include industry by year-fixed effects. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	CAR[0,1] (ew)	CAR[0,1] (vw)	CAR[-1,1] (ew)	CAR[-1,1] (vw)
Overseas background × post-2018	-0.022**	-0.019**	-0.023*	-0.026**
	(0.009)	(0.008)	(0.012)	(0.011)
Overseas background	0.001	-0.006*	-0.000	-0.004
	(0.005)	(0.004)	(0.006)	(0.006)
Age	0.001	0.000	0.001**	0.001
	(0.000)	(0.000)	(0.000)	(0.000)
Female	-0.004	-0.003	-0.001	0.002
	(0.007)	(0.008)	(0.009)	(0.011)
Master's degree	-0.009*	-0.009**	-0.013**	-0.014***
	(0.004)	(0.004)	(0.005)	(0.005)
Total number of positions	-0.001	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.002)	(0.002)
Tobin's *q*	0.004*	0.004**	0.004*	0.005*
	(0.002)	(0.002)	(0.002)	(0.002)
Size	0.002	0.002	0.003	0.003
	(0.002)	(0.002)	(0.002)	(0.002)
Leverage	-0.008	-0.007	-0.009	-0.005
	(0.014)	(0.014)	(0.015)	(0.013)
ROA	-0.033	-0.027	-0.059*	-0.055
	(0.029)	(0.030)	(0.029)	(0.034)
Board independence	0.044	0.039	0.061	0.049
	(0.030)	(0.030)	(0.036)	(0.040)
Observations	431	431	431	431
R-squared	0.291	0.298	0.338	0.337
INDUSTRY BY YEAR	YES	YES	YES	YES

Table 13. U.S. Companies' Response to China's Retaliatory Tariff

This table explores U.S. firms' reactions to the tariff imposed by the Chinese government using the BoardEx and Compustat database. Following Chen et al. (2020), we compute the proportion of directors/executives with Asian (other than Chinese) experience and the proportion of directors/executives with China-related experience and then use them as the dependent variables. Results are presented in Panels A and B, respectively. Columns (1) through (4) focus on different types of management teams: directors plus executives, directors, independent directors, and executives, respectively. All regressions include the control variables Tobin's q, log(asset), leverage ratio, ROA, board independence, and the firm- and year-fixed effects. Standard errors are clustered at the (four-digit NAICS code) industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Directors plus Executives	Directors	Independent Directors	Executives
Panel A: Proportion of directors/executives with Asia-related (other than China-related) experience in U.S. firms				
Log (1 + industry tariff imposed by the Chinese government)	0.030**	0.030*	0.032**	-0.022
	(0.015)	(0.016)	(0.016)	(0.033)
Observations	28,887	28,887	28,875	27,792
Adjusted *R*-squared	0.745	0.747	0.733	0.691
Panel B: Proportion of directors/executives with China-related experience in U.S. firms				
Log (1 + industry tariff imposed by the Chinese government)	0.003	0.007	0.011	0.009
	(0.007)	(0.007)	(0.008)	(0.016)
Observations	28,887	28,887	28,875	27,792
Adjusted *R*-squared	0.708	0.712	0.693	0.649
Controls	YES	YES	YES	YES
FIRM FE	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES

Internet Appendix

Managerial Capital and Adverse Shocks: Evidence from the 2018 US-China Trade War

Haibing Shu, Jagadeesh Sivadasan, Wenjian Xu

Theory Appendix

T1. Main Results

We assume that domestic market and foreign markets are very different in terms of product standards and varieties, so production capacity used for foreign markets cannot be shifted for domestic market in the short run. Hence we take domestic and foreign markets as isolated markets and focus on firms' response in different foreign markets after the tariff shock.

Suppose firm serves two foreign markets 1 and 2, and firm has fixed capacity Q, so that $Q_1 + Q_2 = Q$.[40] Suppose an isoelastic demand in each market, so we have for market i.[41]

$$Q_i = A_i \, P_i^{-\epsilon} \tag{A1}$$

where we make the standard assumption that $\epsilon > 1$. Firm's profit is given by:

$$\Pi = P_1 \, Q_1 + P_2 \, Q_2 - F \tag{A2}$$

where F is the sum of fixed costs resulted from binding capacity constraint and executive labor cost discussed later.

The demand shifter A_i is determined by the following relation:

$$A_i = \phi_i n_i e_i \tag{A3}$$

where ϕ_i captures size of the market as well as other shifters including tariff and other trade barriers. (In particular, an increase in trade barriers would mean a lower price received by the supplier, so can be modeled as a decline in ϕ.). n_i is the number of marketing executives with experience specific to market i. e_i is the effort exerted by each executive in market i. Following the approach in Raith (2003), we assume that each executive is paid a base salary and incentive pay as follows:

[40] There is anecdotal evidence suggesting that Chinese firms pivot to European market when there is a decline in the demand in the US market, as the domestic market could not fully absorb their production capacity (https://thebambooworks.com/u-s-rethinks-timing-of-biotech-crackdown-easing-pressure-on-wuxi/).

[41] In principle, the demand elasticity could be market specific, but this reduces tractability of the model significantly.

$$w_i = s_i + b_i e_i \tag{A4}$$

where s_i is a salary, b_i represents incentive pay. Since we do not examine changes in riskiness, we abstract from noise in the measurement of effort. Then the executive's utility function is monotonic in the compensation received, less a psychic cost of effort, so her utility in monetary units is assumed to be:

$$U_i = s_i + b_i e_i - \frac{k e_i^2}{2} \tag{A5}$$

where $\frac{k e_i^2}{2}$ reflects the agent's disutility of exerting effort. The firm's decision can be broken down into two steps. First, the firm can choose optimal quantities for market 1 and 2, given overall binding capacity constraint of Q. Then, the firm chooses the optimal number of executives (n_i) and incentive pay rate (b_i). The first step yields optimal quantities and profits, based on equations 1 and 2 as:

$$Q_i = \frac{A_i}{A_1 + A_2} Q$$

$$\Pi^* = (A_1 + A_2)^{\frac{1}{\epsilon}} Q^{1-\frac{1}{\epsilon}} - F = \bar{Q}(A_1 + A_2)^{\frac{1}{\epsilon}} - F \tag{A6}$$

where $\bar{Q} = Q^{1-\frac{1}{\epsilon}}$ is a constant that depends mainly on the total capacity (and the elasticity of demand). For the worker, given utility in (5), the optimal effort choice is given by:

$$e_i^* = \frac{b_i}{k} \tag{A7}$$

We assume there is a (fixed) mass m of identical firms in the market, so that the wage for type i executives (i.e., with executives with experience in market i)is determined by an upward sloping linear labor supply curve as follows:[42]

$$\overline{w_i} = \mu_i . m . n_i \tag{A8}$$

$\overline{w_i}$ represents the outside option that type i executive could obtain in the market, and μ_i is related to (inverse of) the elasticity of labor supply of type i executives. The firm sets salary s_i such that the worker's utility in monetary units matches the market wage:

$$s_i^* = \overline{w_i} - \frac{b_i^2}{2k} \tag{A9}$$

[42] Key results can be shown to be robust to using a more general labor supply curve $\overline{w}_i = \widehat{w}_i . (m . n_i)^{\mu}$

$$\Rightarrow w_i^* = s_i^* + b_i e_i^* = \overline{w_i} + \frac{b_i^2}{2k} \quad \text{(A10)}$$

Then the optimization problem facing the firm to choose the optimal number of executives as well the bonus rate in each market is given by the following:

$$Max_{\{n_i,b_i\}}\Pi^* = \bar{Q}(A_1 + A_2)^{\frac{1}{\epsilon}} - n_1 w_1 - n_2 w_2 - C$$

$$= \bar{Q}\left(\frac{\phi_1 n_1 b_1}{k} + \frac{\phi_2 n_2 b_2}{k}\right)^{\frac{1}{\epsilon}} - n_1\left(\overline{w_1} + \frac{b_1^2}{2k}\right) - n_2\left(\overline{w_2} + \frac{b_2^2}{2k}\right) - C$$

where C is the fixed cost.

First order conditions for $n_i$yield:

$$\frac{1}{\epsilon}\bar{Q}(A_1 + A_2)^{\left(\frac{1}{\epsilon}-1\right)}\left(\frac{\phi_i b_i}{k}\right) = \overline{w_i} + \frac{b_i^2}{2k} \quad \text{(A11)}$$

First order conditions for $b_i$yield:

$$\frac{1}{\epsilon}\bar{Q}(A_1 + A_2)^{\left(\frac{1}{\epsilon}-1\right)}(\phi_i) = b_i \quad \text{(A12)}$$

Combing Equations (A8), (A11) and (A12), we can solve for b_2 (see Section T2 for a detailed derivation):

$$b_2 = \left(\frac{\bar{Q}\phi_2}{\epsilon}\right)^{\frac{\epsilon}{4\epsilon-3}}\left[\left(\frac{1}{2k^2 m}\right)\left(\frac{\phi_1^4}{\mu_1\phi_2^3} + \frac{\phi_2}{\mu_2}\right)\right]^{\left(\frac{1-\epsilon}{4\epsilon-3}\right)} \quad \text{(A13)}$$

First, we consider the changes in the total number of executives with foreign background, i.e., $\frac{d(n_1+n_2)}{d\phi_1}$. The value of $\frac{d(n_1+n_2)}{d\phi_1}$ could be positive or negative depending on the relative value of ϕ_1 and ϕ_2 and the value of ϵ. A key sufficient condition is that market 2 be smaller than market 1 and elasticity of demand be high enough; then the negative shock in market 1 would lead to a relatively larger increase in executives hired for helping divert sales to market 1 compared to the direct decline for market 2 (the precise conditions are discussed in Section T2). This result is stronger if the labor supply curve in market 2 is less steep, i.e., if there is more elastic supply of executives for market 2. This yields our first prediction.

Prediction 1: The impact of a trade shock in market 1 (i.e. a decline in ϕ_1) on the optimal total number of executives with foreign background is ambiguous. For certain parameter values (relative market sizes, elasticity of demand, and elasticities of labor

supply), firms hit harder by the trade war will increase the aggregate proportion of executives with foreign experience (i.e., $\frac{d(n_1+n_2)}{d\phi_1} > 0$).

Next, we consider how the tariff shock in one foreign country (a decrease in ϕ_1) affects the number of executives with experience in the other foreign country. We can show that $\left(\frac{dn_2}{d\phi_1}\right) = \left(\frac{1}{2km\mu_2} 2b_2 \frac{db_2}{d\phi_1}\right)$. Consequently, our model implies that when the firm has fixed production capacity in the short run and there is a negative demand shock in one market, firms reallocate more production capacity to the unaffected market and hire more executives with experience in such countries to stimulate demand.

Prediction 2: An increase in trade costs towards destination 1 (equivalently, a decrease in ϕ_1) will increase the demand for executives with experience in destination 2. In other words, firms will hire more executives with European experience as a response to the tariff increase in the US market.

Given $\epsilon > 1$, we can show that $\frac{db_2}{d\phi_1} < 0$, i.e., firms provide higher incentive pay (i.e., choose a higher b) for executives with specialty in destination 2 after a negative demand shock in the other country. Increasing b has two opposing effects: it increases optimal effort, which then shifts the demand curve out, which in turn has a positive effect on revenue. However a higher b has a direct effect on compensation cost and an indirect effect through the fact that there is an increase in effort and hence a need to compensate the workers for this additional effort. This raises the compensation to be paid for the worker, which also increases the marginal cost of hiring an additional worker. With our functional form assumptions (particularly the upward sloping labor supply curve), we get that the former positive effect on revenue outweighs the negative effect through compensation costs, so that increasing the strength of incentives in market 2 is optimal.[43]

[43] In particular, we can show that if labor supply is infinitely elastic, i.e., if the outside wage level for executives stays constant at $\hat{w}$, then the incentive rate is independent of the demand level, so that $\frac{db_2}{d\phi_1} = 0$.

Prediction 3: An increase in trade costs towards destination 1 (equivalently, a decrease in ϕ_1) will increase the incentive pay rate in destination 2. In other words, firms will provide higher incentive pay to executives with European experience as a response to the tariff increase in the US market.

T2. Derivations for Key Results

Derivation of equation (A13)

After deriving A12 and A13, imposing the equilibrium labor market clearing wage condition and labor supply curve of executives ($\overline{w_i} = m \times \mu_i \times n_i$), we get:

$$\frac{1}{\epsilon}\bar{Q}(A_1 + A_2)^{\left(\frac{1}{\epsilon}-1\right)}\left(\frac{\phi_i b_i}{k}\right) = m\mu_i n_i + \frac{b_i^2}{2k} \quad \text{(A14)}$$

$$\text{(A11)+(A12)} \rightarrow \left(\frac{b_i^2}{k}\right) = m\mu_i n_i + \frac{b_i^2}{2k} \rightarrow b_i^2 = 2km\mu_i n_i \quad \text{(A15)}$$

$$\text{(A12)+(A14)} \rightarrow \frac{b_1}{b_2} = \frac{\phi_1}{\phi_2} \Rightarrow n_1 = \frac{b_1^2}{2km\mu_1} = \frac{\phi_1^2 \times b_2^2}{\phi_2^2 \times 2km\mu_1} \quad \text{(A16)}$$

$$\text{(A12)} + \text{(A15)} \rightarrow b_2 = \frac{1}{\epsilon}\bar{Q}\left(\frac{\phi_1 n_1 b_1}{k} + \frac{\phi_2 n_2 b_2}{k}\right)^{\left(\frac{1}{\epsilon}-1\right)}\phi_2$$

$$= \frac{1}{\epsilon}\bar{Q}\left(\frac{\phi_1}{k} \times \frac{\phi_1^2 \times b_2^2}{\phi_2^2 \times 2km\mu_1} \times \frac{\phi_1}{\phi_2} b_2 + \frac{\phi_2 n_2 b_2}{k}\right)^{\left(\frac{1}{\epsilon}-1\right)}\phi_2$$

$$+(14) \Rightarrow b_2 = \frac{1}{\epsilon}\bar{Q}\left[\frac{\phi_1^4 b_2^3}{2k^2 m\mu_1\phi_2^3} + \frac{\phi_2 b_2^3}{2k^2 m\mu_2}\right]^{\left(\frac{1}{\epsilon}-1\right)}\phi_2$$

$$\Rightarrow b_2 = \frac{1}{\epsilon}\bar{Q}\left[\left(\frac{1}{2k^2 m}\right)\left(\frac{\phi_1^4}{\mu_1\phi_2^3} + \frac{\phi_2}{\mu_2}\right)\right]^{\left(\frac{1}{\epsilon}-1\right)} b_2^{3\left(\frac{1}{\epsilon}-1\right)}\phi_2$$

$$\Rightarrow b_2^{1+3\left(1-\frac{1}{\epsilon}\right)} = \frac{1}{\epsilon}\bar{Q}\left[\left(\frac{1}{2k^2 m}\right)\left(\frac{\phi_1^4}{\mu_1\phi_2^3} + \frac{\phi_2}{\mu_2}\right)\right]^{\left(\frac{1}{\epsilon}-1\right)}\phi_2$$

$$\Rightarrow b_2 = \left(\frac{\bar{Q}\phi_2}{\epsilon}\right)^{\frac{\epsilon}{4\epsilon-3}}\left[\left(\frac{1}{2k^2 m}\right)\left(\frac{\phi_1^4}{\mu_1\phi_2^3} + \frac{\phi_2}{\mu_2}\right)\right]^{\left(\frac{1-\epsilon}{4\epsilon-3}\right)} \quad \text{(A17)}$$

Derivation for $\frac{d(n_1+n_2)}{d\phi_1}$ (Prediction 1)

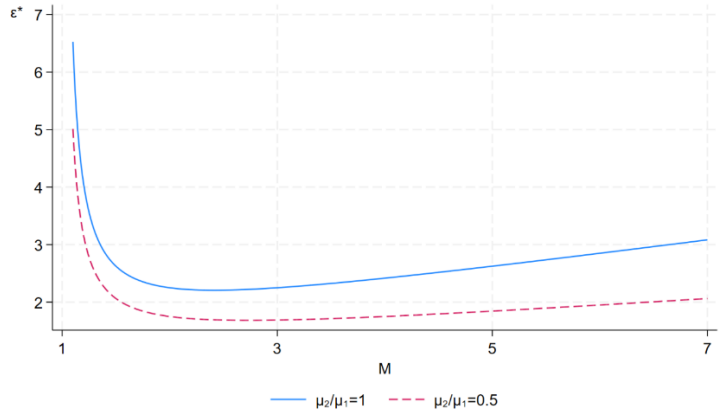
According to Equations (A4) and (A5), we can obtain $n_i = \frac{b_i^2}{2km\mu_i}$. Hence, $\frac{d(n_1+n_2)}{d\phi_1} = \frac{b_1}{km\mu_1}\frac{db_1}{d\phi_1} + \frac{b_2}{km\mu_2}\frac{db_2}{d\phi_1} = \frac{\phi_1 b_2^2}{km\mu_1\phi_2^2} + \frac{\phi_1^2 b_2}{km\mu_1\phi_2^2}\frac{db_2}{d\phi_1} + \frac{b_2}{km\mu_2}\frac{db_2}{d\phi_1}$. Based on Equation (A6), we

can derive $\frac{db_2}{d\phi_1} = J \cdot \frac{1-\epsilon}{4\epsilon-3} \cdot \frac{2\phi_1^3}{k^2 m \mu_1 \phi_2^3}$ and $b_2 = J \cdot \frac{1}{2k^2 m} \cdot \left(\frac{\phi_1^4}{\mu_1 \phi_2^3} + \frac{\phi_2}{\mu_2}\right)$, where $J = \left(\frac{\bar{Q}\phi_2}{\epsilon}\right)^{\frac{\epsilon}{4\epsilon-3}} \left[\left(\frac{1}{2k^2 m}\right)\left(\frac{\phi_1^4}{\mu_1 \phi_2^3} + \frac{\phi_2}{\mu_2}\right)\right]^{\left(\frac{1-\epsilon}{4\epsilon-3}\right)-1}$. Plugging the formulas of $\frac{db_2}{d\phi_1}$ and b_2 into $\frac{d(n_1+n_2)}{d\phi_1}$ yields:

$$\frac{d(n_1+n_2)}{d\phi_1} = \frac{J b_2 \phi_1^3}{k^3 m^2 \mu_1 \phi_2^3} \frac{1}{2\mu_2(4\epsilon-3)} \frac{\phi_2^2}{\phi_1^2} \cdot \left[\frac{\mu_2}{\mu_1} M^2 + 4M - 3 + 4\epsilon(1-M)\right] \quad \text{(A18)}$$

where $M = \frac{\phi_1^2}{\phi_2^2}$.

Suppose $M > 1$, i.e., $\phi_1 > \phi_2$, then $\frac{d(n_1+n_2)}{d\phi_1} < 0$, if $\epsilon > \frac{\frac{\mu_2}{\mu_1}M^2+4M-3}{4(M-1)} = \epsilon^*$, otherwise $\frac{d(n_1+n_2)}{d\phi_1} > 0$. The graph below plots how the value of threshold (ϵ^*) varies when M changes for two different values of $\frac{\mu_2}{\mu_1}$ (1 and 0.5).



This graph provides some intuition for when we may get an overall increase in experienced executives following a negative shock in market 1, i.e., when $\frac{d(n_1+n_2)}{d\phi_1} <$ 0the results. Specifically, sufficient conditions for the results are that (a) market 2 be smaller than market 1; (2) elasticity of demand be high enough. Then a negative shock in market 1 would lead to a larger increase in optimal number of executives hired for market 2, enough to more than offset the decrease in executives with experience in market 1. As would be intuitive, the result is more likely if it is relatively easier to hire executives in market 2, i.e., if the elasticity of labor supply for 2 is higher (or equivalently when $\frac{\mu_2}{\mu_1}$ is lower).

Derivation for $\frac{d(n_2)}{d\phi_1}$ and $\frac{d(b_2)}{d\phi_1}$ (Predictions 2 and 3)

Equation (A17) implies:

$$\frac{db_2}{d\phi_1} = \left(\frac{1-\epsilon}{4\epsilon-3}\right)\left(\frac{\bar{Q}\phi_2}{\epsilon}\right)^{\frac{\epsilon}{4\epsilon-3}}\left[\left(\frac{1}{2k^2m}\right)\left(\frac{\phi_1^4}{\mu_1\phi_2^3}+\frac{\phi_2}{\mu_2}\right)\right]^{\left(\frac{1-\epsilon}{4\epsilon-3}\right)-1}\left(\frac{1}{2k^2m}\right)\frac{4\phi_1^3}{\mu_1\phi_2^3}$$

Given all the other terms on the RHS are positive, we get:

$\text{sign}\left(\frac{db_2}{d\phi_1}\right) = \text{sign}\left(\frac{1-\epsilon}{4\epsilon-3}\right) < 0$, since $\epsilon > 1$

Then, from equation (A15), $b_i^2 = 2km\mu_i n_i$ ➔ $\frac{dn_2}{d\phi_1} = \frac{1}{2km\mu_2} 2b_2 \frac{db_2}{d\phi_1} < 0$

Data Appendix

This section first provides two sample biographies of a top management team disclosed in companies' annual financial reports. We provide the texts in both the original language (Chinese) and in English. Next, we describe the process of our textual analysis.

Sections 1, 2, and 3 of Article 25 in the "Notice of the China Securities Regulatory Commission (CSRC) on Promulgating the Standards Concerning the Contents and Formats of Information Disclosure by Companies Offering Securities to the Public No. 2—Contents and Formats of Annual Reports" (initially issued by the CSRC on December 10, 2001, and revised in 2007) require publicly listed firms to disclose in their annual report essential information about their senior management personnel, including personal details, educational background, work experience, professional qualifications, and remunerations.[44] While the term "senior management" is not explicitly defined in the Securities Law, Article 216 of Chinese Company Law defines "senior officers" as "the manager, deputy manager and person in charge of financial affairs of a company and, in the case of a listed company, the secretary to the board of directors and other personnel specified in the articles of association" (https://fdi.mofcom.gov.cn/EN/come-falvfagui-con.html?id=10499). Based on our conversations with executives in consulting firms and investment banks, our understanding is that in practice vice president and other higher positions are considered to be executive positions in a publicly listed firm.

Example 1: Beijing Dinghan Technology Group Co., Ltd. (stock ID: 300011) disclosed the following information about its vice president, Wei Liming (person ID: 30378140), in 2018.

[44] Here is the link to this notice: https://en.pkulaw.cn/display.aspx?cgid=05e073042a6ebbb9bdfb&lib=law.

魏黎明先生：1963 年 4 月出生，中国国籍，无永久境外居留权。西南交通大学电气工程本科毕业。1984 年留学法国，1988 年获得法国图卢兹理工学院电气工程博士学位；1989 年-2004 年在法国阿尔斯通车辆牵引列控系统中心从事研发、全球各类车型项目的应用及管理；2005 年-2016 年在阿尔斯通信号部主管中国信号业务开拓、战略规划、营运管理、技术转让等，并担任技术主管、投标主管、营运总监、战略总监等职位；现任公司副总裁。

Translation into English:

Mr. Wei Liming, born in April 1963, is a Chinese national with no permanent residency abroad. He graduated with a degree in Electrical Engineering from Southwest Jiaotong University. In 1984, he pursued further studies in France and obtained a Ph.D. in Electrical Engineering from the National Polytechnic Institute of Toulouse in 1988. From 1989 to 2004, he engaged in research and development, as well as the application and management of various global projects at Alstom's Vehicle Traction and Control Systems Center in France. From 2005 to 2016, he served in various capacities at Alstom's Signaling Division, overseeing the expansion of the company's signaling business in China, strategic planning, marketing and operational management, technology transfer, and holding positions such as Technical Manager, Bid Manager, Operations Director, and Strategic Director. He currently serves as the Vice President of the company.

Example 2: Chengzhi Co., Ltd. (stock ID: 000990) disclosed information about its vice president, Zhang Le (person ID: 30194208), in 2018.

张乐先生，1968 年 10 月生，硕士，Syracuse 大学材料科学与工程专业毕业。曾任美国 Materials Research Corporation 公司市场与销售部产品经理，美国加州 KLA-Tencor 公司销售与市场部项目主管，美国 CHINAMALLS.COM 公司高级副总裁，北京 AFLEA 网络技术公司首席策划官，美国 Transtech Consulting Group 高级合伙人。现任诚志股份有限公司专务副总裁。

Translation into English:

Mr. Zhang Le, born in October 1968, holds a master's degree and graduated from Syracuse University with a major in Materials Science and Engineering. He has previously served as a Product Manager in the Marketing and Sales Department at Materials Research Corporation in the United States, a Project Manager in the Sales and Marketing Department at KLA-Tencor in California, a Senior Vice President at CHINAMALLS.COM in the United States, the Chief Planning Officer at Beijing AFLEA Network Technology Co., Ltd., and a Senior Partner at Transtech Consulting Group in the United States. Currently, he serves as the Executive Vice President of Chengzhi Co., Ltd.

Based on these biographies, the CSMAR data set assigns a value of 1 to the overseas background variable of these two executives. For the skills background, the CSMAR data categorize skills according to nine types: 1. Production; 2. Research; 3. Design; 4. Human Resource; 5. Management; 6. Marketing; 7. Finance; 8. Financial Management; 9. Law. Therefore, based on the work experience of the two individuals mentioned above, CSMAR considers the first executive to possess three types of skills: research, management, and marketing; whereas, the latter possesses two types of skills: management and marketing.

The CSMAR does not provide the information about the country in which executives obtained their foreign experience. For this information, we conduct textual analysis using executives' biography through the following steps.

(1) Extract all the executives that have foreign experience based on the CSMAR information.

(2) Search for the name of the university from which executives obtained their degree. Then use Baidu Baike to identify country where the university is located using Python.[45]

(3) Extract the country mentioned in the biography of CSMAR data, keeping the

[45] Baidu Baike is an online Chinese language encyclopedia that serves as a comprehensive knowledge-sharing platform. Launched by Baidu, the leading search engine in China, it provides a vast array of information across various subjects and disciplines.

preceding ten and the following ten characters around the country name.

(4) Manually check 100 cases and correct any systematic errors in coding the country information, such as those that mentioned only U.S. Certified Public Accountant (CPA) or U.S. Chartered Financial Analyst (CFA) or that mentioned only the publishing of a book on topics related to the United States.

(5) Repeat Steps (3) and (4) using biographic information from Tianyancha data.

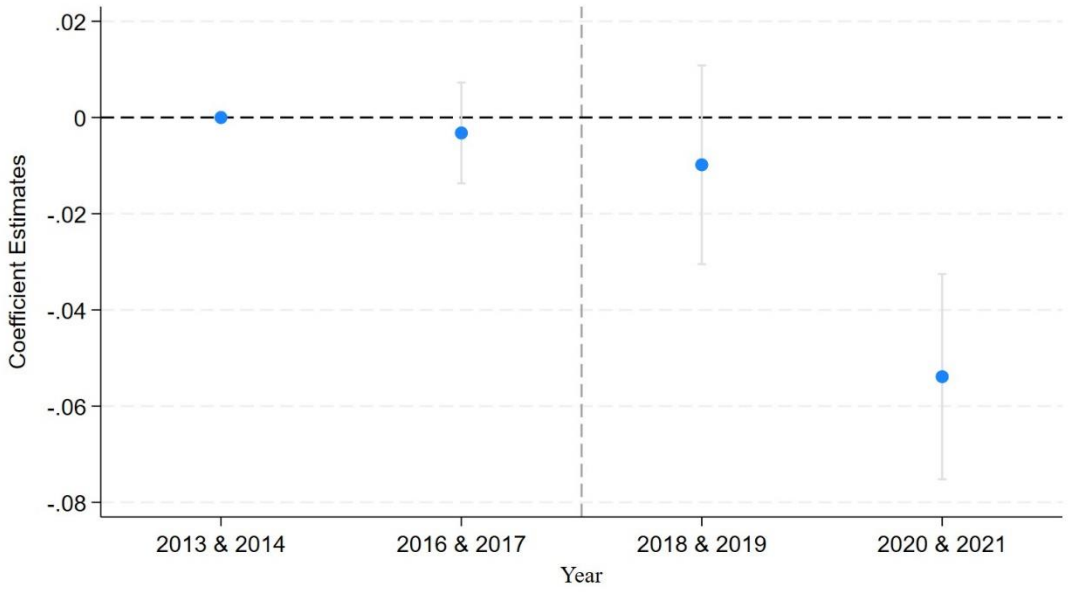
(6) Combine the results from the CSMAR with those from the Tianyancha to get the country source of executives' overseas work experience and then combine this information with the overseas education background from Step (2) to get our final variables about country information of overseas background.

By following the six steps outlined above, we can discern that the first executive in the aforementioned examples holds European experience, while the latter possesses North American experience.

Appendix Figures and Tables

Figure A1. Event Study of Stock Market Reactions to the Unexpected Departure of Executives

This figure plots the coefficients on treatment (i.e., executives with foreign experience) interacted with year dummies, in a regression with the value-weighted cumulative abnormal returns (CARs) around the three-day window of the unexpected departure of executives as the dependent variable. Due to the small sample size of unexpected departures which makes yearly estimates noisy, we categorize all the years according to four groups: (1) years 2013–2014, which is used as the base year, (2) years 2016–2017, (3) years 2018–2019, and (4) years 2020–2021. We exclude year 2015 due to the huge abnormal fluctuations in this year (see Footnote 33 in the text).



Notes. OLS coefficient estimates (and their 90% confidence intervals) are reported.

Table A1. Variable Definitions

This appendix provides detailed descriptions of the variables used in the tables.

Variable	Definition and Data Source
Panel A: Firm-level variables	
Proportion of executives with an overseas background	Ratio of the number of executives with an overseas background over the total number of executives. *Source:* CSMAR database.
Proportion of executives with an overseas background and marketing expertise	Ratio of the number of executives with an overseas background and working experience in marketing over the total number of executives. *Source:* CSMAR database.
Proportion of executives with an overseas background and research expertise	Ratio of the number of executives with an overseas background and working experience in research and design over the total number of executives. We exclude executives with marketing expertise from this category. *Source:* CSMAR database.
Proportion of executives with an overseas background and management expertise	Ratio of the number of executives with an overseas background and working experience in management and production over the total number of executives. We exclude executives with marketing and research expertise from this category. *Source:* CSMAR database.
Proportion of executives with an overseas background and other expertise	Ratio of the number of executives with an overseas background and working experience in human resources, finance, financial management, and law over the total number of executives. We exclude executives with marketing, research and management expertise from this category. *Source:* CSMAR database.
No. of executives	The total number of executives in each firm in a given year. *Source:* CSMAR database.
No. of executives with an overseas background	The number of executives with an overseas background in each firm in a given year. *Source:* CSMAR database.
Firm-level tariff	Calculated based on Equation (1) in the main text. *Source:* Fajgelbaum et al. (2020) and Chinese Customs database.
Log(1 + industry tariff)	The natural logarithm of tariff at the industry level. Tariff at the industry level is calculated based on Equation (2) in the main text. *Source:* Fajgelbaum et al. (2020).
Dependence on exports	The value of total exports over total revenue in 2017. *Source:* CSMAR database.
CAR (vw)	Uses value-weighted market return to compute coefficients employing Equation (3), and then derives cumulative abnormal returns over the five-day window of the two largest trade escalation events. *Source:* CSMAR database.

CAR (ew)	Uses equal-weighted market return to compute coefficients employing Equation (3), and then derives cumulative abnormal returns over the five-day window of the two largest trade escalation events. *Source:* CSMAR database.
Cumulative raw returns	The cumulative raw returns over the five-day window of the two largest trade escalation events. *Source:* CSMAR database.
Tobin's *q*	The market value of assets divided by the book value of assets. *Source:* CSMAR database.
Size	The natural logarithm of a firm's book value of total assets. *Source:* CSMAR database.
Leverage	Ratio of the book value of debt to total assets. *Source:* CSMAR Database.
ROA	The ratio of the firm's net income to total assets. *Source:* CSMAR database.
Board independence	Ratio of independent directors to the total number of directors on the board. *Source:* CSMAR database.
Number of business segments	The number of industries in which a firm operates, set to 1 if the information is missing. Winsorized at the 1% and 99% levels. *Source:* CSMAR database.
Free cash flow	Earnings before interest and taxes plus depreciation and amortization, minus cash paid to working capital and capital expenditures, scaled by total assets. Winsorized at the 1% and 99% levels. *Source:* CSMAR database.
Stock volatility	The standard deviation of a firm's daily stock returns. Winsorized at the 1% and 99% levels. *Source:* CSMAR database.
Changes in the proportion of overseas executives	The proportion of overseas executives minus such proportion in the last year. *Source:* CSMAR database.
Proportion of directors/executives with Asia-related (other than China) experience in the U.S. firms	The number of directors (executives) with Asia-related (other than China) experience over the total number of directors (executives) in the U.S. firms. *Source:* BoardEx.
Proportion of directors/executives with China-related experience in the U.S. firms	The number of directors (executives) with China-related experience over the total number of directors (executives) in the U.S. firms. *Source:* BoardEx.
TPU	Trade policy uncertainty, constructed using a firm's own annual reports. Specifically, we follow Benguria et al. (2022) and count instances in which trade policy-related words (tariff, protectionism, etc.) are found in the same line or one line above or below uncertainty-related words in the company's annual financial report.
Panel B: Executive-level variables	
Age	Age of executives. *Source:* CSMAR Database.
Female	Gender of executives. *Source:* CSMAR Database.
Master's degree	A dummy variable indicating whether the executive has a master's degree. *Source:* CSMAR Database.
Having an overseas background in 2017	A dummy variable indicating whether the executive had an overseas background in year 2017. *Source:* CSMAR Database.

Having an overseas background and marketing expertise in 2017	A dummy variable indicating whether the executive had an overseas background and marketing expertise in year 2017. *Source:* CSMAR Database.
European background	A dummy variable indicating whether the executive had a European background in year 2017. *Source:* CSMAR Database.
NA background	A dummy variable indicating whether the executive had a North American (NA) background in year 2017. *Source:* CSMAR Database.
Asian background	A dummy variable indicating whether the executive had an Asian background in year 2017. *Source:* CSMAR Database.
The value of equity compensation	The total value of conditional stocks and stock options granted to executives. *Source:* CSMAR Database.
Log (1 + value of equity compensation)	The natural logarithm of the total value of stock ownership incentive received by the executive. *Source:* CSMAR Database.
Salary	The salary received by the executive. *Source:* CSMAR Database.
Log (1 + Salary)	The natural logarithm of the salary received by the executive. *Source:* CSMAR Database.

Table A2. Correlation Between Tariff-Based Trade Shock Measures and Text-Based Trade Policy Uncertainty Measure

This table explores the correlation between our tariff-based measures of trade policy shocks (*firm-level tariff* and *Log(1 + industry tariff*)) and a text-based trade policy uncertainty measure (TPU). All columns add controls (Tobin's *q*, log(asset), leverage ratio, ROA, board independence) as well as both firm- and year-fixed effects. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)
Firm-level tariff	0.124***		
	(0.028)		
Log(1 + industry tariff)		0.644***	0.101
		(0.212)	(0.215)
Log(1 + industry tariff) × Export dependence			3.671***
			(0.706)
Observations	25,485	26,653	26,653
Adjusted *R*-squared	0.336	0.341	0.347
Controls	YES	YES	YES
FIRM FE	YES	YES	YES
YEAR FE	YES	YES	YES
Mean of TPU	0.235	0.235	0.235
SD of TPU	0.638	0.638	0.638

Table A3. Correlation Between CAR and Tariff-Based Measures

This table presents the cross-sectional correlation between our tariff shock measures (*firm-level Tariff* and *Log(1 + industry tariff*) and CAR measures. Panels A, B, and C employ cumulative raw returns (CRR), value-weighted, and equally weighted CAR as the dependent variable, respectively. We derive cumulative raw returns by adding up company's stock return over the five-day window around the two events, while for the other two CARs, we first calculate each firm's β_i using value-weighted or equally-weighted market return, and then utilize β_i to compute the abnormal returns. We then add the abnormal returns around the most two significant trade escalation events to get the (value-weighted and equally-weighted) CARs for each firm. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)
Panel A. Dependent variable: Cumulative Raw Returns (CRR)			
Firm-level tariff (post-2018 mean)	-0.008***		
	(0.002)		
Log(1 + industry tariff) (post-2018 mean)		-0.104***	
		(0.033)	
Export dependence			-0.047***
			(0.011)
Constant	-0.086***	-0.079***	-0.082***
	(0.003)	(0.004)	(0.003)
Adjusted *R*-squared	0.003	0.008	0.014
Panel B. Dependent variable: CAR (vw)			
Firm-level tariff (post-2018 mean)	-0.007***		
	(0.002)		
Log(1 + industry tariff) (post-2018 mean)		-0.074**	
		(0.036)	
Export dependence			-0.036***
			(0.011)
Constant	0.030***	0.035***	0.033***
	(0.003)	(0.005)	(0.003)
Adjusted *R*-squared	0.002	0.004	0.008
Panel C. Dependent variable: CAR (ew)			
Firm-level tariff (post-2018 mean)	-0.006**		
	(0.002)		
Log(1 + industry tariff) (post-2018 mean)		-0.091**	
		(0.042)	
Export dependence			-0.035***
			(0.012)
Constant	0.005	0.012**	0.009**
	(0.003)	(0.005)	(0.004)
Observations	2,317	2,317	2,317
Adjusted *R*-squared	0.001	0.006	0.007

Table A4. Number of Executives with an Overseas Background During the Trade War

This table (analogous to Table 3 in the main text) employs the number instead of the proportion of executives with foreign experience as a robustness check. We construct two indices to measure tariff shocks. One is the *firm-level tariff*, which is computed based on Equation (1); the other is the *Log(1 + industry tariff)*, where *industry tariff* is computed based on Equation (2). Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Firm-level tariff	0.034**	0.035**				
	(0.015)	(0.015)				
Log(1 + industry tariff)			0.205***	0.262**	-0.019	0.037
			(0.077)	(0.103)	(0.088)	(0.118)
Log(1 + industry tariff) × Export dependence					1.482***	1.511***
					(0.475)	(0.468)
Total number of executives	0.055***	0.056***	0.056***	0.056***	0.056***	0.056***
	(0.005)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)
Tobin's *q*	0.008**	0.007*	0.007**	0.007*	0.007**	0.007*
	(0.004)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)
Size	0.094***	0.081***	0.092***	0.083***	0.091***	0.081***
	(0.016)	(0.019)	(0.016)	(0.019)	(0.016)	(0.018)
Leverage	-0.085*	-0.072	-0.092**	-0.079*	-0.097**	-0.084*
	(0.048)	(0.047)	(0.046)	(0.045)	(0.046)	(0.045)
ROA	-0.063	-0.047	-0.072	-0.060	-0.074	-0.061
	(0.053)	(0.051)	(0.053)	(0.051)	(0.053)	(0.051)
Board independence	-0.134	-0.145	-0.162	-0.172	-0.158	-0.168
	(0.127)	(0.126)	(0.130)	(0.130)	(0.130)	(0.130)
Post–year 2018	0.061***		0.051***		0.051***	
	(0.009)		(0.010)		(0.010)	
Observations	25,780	25,780	26,968	26,968	26,968	26,968
Adjusted *R*-squared	0.690	0.690	0.704	0.705	0.705	0.705
FIRM FE	YES	YES	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES	NO	YES

Table A5. Number of Executives with an Overseas Background and CAR

This table (analogous to Table 4 in the main text) employs the number instead of the proportion of executives with foreign experience as a robustness check. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
CAR (vw) × post-2018	-0.280*	-0.299**		
	(0.143)	(0.144)		
CAR (ew) × post-2018			-0.260*	-0.280*
			(0.143)	(0.145)
No. of executives	0.057***	0.058***	0.057***	0.058***
	(0.006)	(0.006)	(0.006)	(0.006)
Tobin's *q*	0.009*	0.007	0.009*	0.007
	(0.005)	(0.005)	(0.005)	(0.005)
Size	0.083***	0.066***	0.083***	0.066***
	(0.017)	(0.019)	(0.017)	(0.020)
Leverage	-0.075	-0.062	-0.072	-0.059
	(0.057)	(0.054)	(0.057)	(0.054)
ROA	-0.023	-0.004	-0.026	-0.007
	(0.065)	(0.062)	(0.065)	(0.062)
Board independence	-0.126	-0.135	-0.126	-0.135
	(0.147)	(0.147)	(0.147)	(0.147)
Post–year 2018	0.079***		0.072***	
	(0.012)		(0.012)	
Observations	19,886	19,886	19,886	19,886
Adjusted *R*-squared	0.691	0.691	0.691	0.691
FIRM FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table A6. Total Number of Executives During the Trade War

This table (analogous to Tables 3 and 4 in the main text) employs the total number of executives as the dependent variable to explore whether companies hit hard by the trade war increase the total number of (reported) executives. We construct three indices to measure tariff shocks. Column (1) utilizes *firm-level tariff*, which is computed based on Equation (1); columns (2) and (3) employ *Log(1 + industry tariff)*, where *industry tariff* is computed based on Equation (2). The last two columns use cumulative abnormal returns (CAR), which is calculated based on Equation (4). All columns include the control variables Tobin's *q*, log(asset), leverage ratio, ROA, board independence, and the firm- and year-fixed effects. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Firm-level tariff	0.014				
	(0.044)				
Log(1 + industry tariff)		-0.317	-0.269		
		(0.458)	(0.506)		
Log(1 + industry tariff) × Export dependence			-0.319		
			(1.159)		
CAR (vw) × post-2018				0.343	
				(0.339)	
CAR (ew) × post-2018					0.402
					(0.346)
Observations	25,780	26,968	26,968	19,886	19,886
Adjusted *R*-squared	0.664	0.662	0.662	0.679	0.679
Controls	YES	YES	YES	YES	YES
FIRM FE	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES

Table A7. Robustness Check of Executive Composition Effects: Controlling for Local COVID-19 shocks

To address the concern that the COVID-19 pandemic may confound our baseline estimates, we add two indices to control for local COVID-19 shocks: One is the number of confirmed cases and the other is the number of deaths attributable to the pandemic in the city that companies located in for a given year. The specifications are the same as those used in Tables 3 and 4. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Firm-level tariff	0.005**				
	(0.002)				
Log(1 + industry tariff)		0.045**	0.004		
		(0.018)	(0.021)		
Log(1 + industry tariff) × Export dependence			0.284***		
			(0.092)		
CAR (vw) × post-2018				-0.058**	
				(0.023)	
CAR (ew) × post-2018					-0.052**
					(0.023)
Log(1 + confirmed cases)	-0.039	-0.037	-0.036	-0.020	-0.020
	(0.031)	(0.030)	(0.030)	(0.042)	(0.042)
Log(1 + deaths)	0.194	0.186	0.185	0.087	0.087
	(0.178)	(0.171)	(0.169)	(0.241)	(0.241)
Observations	25,193	26,335	26,335	19,490	19,490
Adjusted *R*-squared	0.657	0.671	0.672	0.656	0.656
Controls	YES	YES	YES	YES	YES
FIRM FE	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES

Table A8. Robustness Check of Executive Composition Effects: Excluding Sino-Foreign Joint Ventures or Wholly Foreign-Owned Enterprises

To address the concern that the baseline estimates could be driven by changes in foreign direct investments, we exclude companies that are either Sino-foreign joint ventures or are wholly foreign-owned enterprises. The specifications are the same as those used in Tables 3 and 4. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Firm-level tariff	0.008***				
	(0.002)				
Log(1 + industry tariff)		0.051***	0.001		
		(0.018)	(0.020)		
Log(1 + industry tariff) × Export dependence			0.338***		
			(0.090)		
CAR (vw) × post-2018				-0.050*	
				(0.026)	
CAR (ew) × post-2018					-0.045*
					(0.026)
Observations	24,949	26,056	26,056	19,264	19,264
Adjusted *R*-squared	0.643	0.657	0.659	0.639	0.639
Controls	YES	YES	YES	YES	YES
FIRM FE	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES

Table A9. Robustness Check of Executive Composition Effects: Controlling for Retaliatory Tariffs Imposed by the Chinese Government

To address the concern that the baseline estimates could be driven by the retaliatory tariffs imposed by the Chinese government, we first constructed measures of tariffs imposed by the Chinese government at the two-digit CIC industry level and added it as a control variable (Panel A, columns (1) and (2)). As a robustness check, we exclude industries that faced a high Chinese tariff (above the 75th percentile of Chinese tariff level in 2021) and redo the baseline analyses in columns (3) and (4). As an additional check, we add industry by year-fixed effects (Panel B) to analogous specifications from the baseline analyses in Tables 3 and 4. The industry by year effects control for any industry level variations in Chinese tariffs (or other industry-year shocks). Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
Panel A: Adding an industry-level tariff imposed by China or excluding industries facing a high Chinese tariff				
	Full sample: Adding a control for the Chinese tariff		Excluding industries facing a high tariff imposed by China	
Log(1 + industry tariff)	0.043**	0.048**	0.047*	0.061**
	(0.017)	(0.021)	(0.025)	(0.027)
Log(1 + industry tariff imposed by China)	-0.005	0.005		
	(0.019)	(0.019)		
Observations	26,968	26,968	18,753	18,753
Adjusted *R*-squared	0.667	0.667	0.675	0.675
FIRM FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES
Panel B: Adding industry by year fixed effect				
Firm-level tariff	0.007***			
	(0.002)			
Log(1 + industry tariff) × Export dependence		0.363***		
		(0.090)		
CAR (vw) × post-2018			-0.058**	
			(0.026)	
CAR (ew) × post-2018				-0.058**
				(0.026)
Observations	25,743	26,927	19,857	19,857
Adjusted *R*-squared	0.652	0.666	0.650	0.650
Controls	YES	YES	YES	YES
FIRM FE	YES	YES	YES	YES
INDUSTRY YEAR FE	YES	YES	YES	YES

Table A10. Executive's Country Background and Export Dependence

This table (analogous to Table 6 in the main text) explores which types of country experience are favored the most in Chinese firms' response to the trade war. Here we focus on the interaction of *Log(1 + industry tariff)* and *Export dependence*. We categorize these countries into five groups: North America, Europe, Asia, Australia, and countries other than the previous four areas. Given that the Chinese government promotes international trade between China and countries belonging to the Belt and Road Initiative, we created a separate group for these countries. Each column in this table utilizes the proportion of executives with the corresponding country experience as the dependent variable. All regressions include the same control variables we used in Table 3 (Tobin's *q*, log(asset), leverage ratio, ROA, board independence), as well as the firm- and year-fixed effects. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	NA	Europe	Asia	Australia	Others	Belt and Road countries
Log(1 + industry tariff) × Export dependence	0.059	0.137***	0.085	-0.006	0.000	0.106**
	(0.042)	(0.047)	(0.053)	(0.025)	(0.009)	(0.050)
Log(1 + industry tariff)	0.010	-0.001	-0.001	0.004	0.001	-0.007
	(0.014)	(0.012)	(0.010)	(0.005)	(0.002)	(0.010)
Observations	26,968	26,968	26,968	26,968	26,968	26,968
Adjusted *R*-squared	0.667	0.612	0.595	0.534	0.415	0.588
Controls	YES	YES	YES	YES	YES	YES
FIRM FE	YES	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES	YES

Table A11. Executive Composition Effects: Foreign Work Versus Educational Experience

In this table we disaggregate executives' foreign experience across work and education. Panel A uses the proportion of executives with foreign work experience as the dependent variable, while Panel B employs the proportion of those with foreign education. Both Panel A and Panel B utilize three different measures involving trade war shocks as the key explanatory variable. All regressions include the control variables Tobin's *q*, log(asset), leverage ratio, ROA, board independence, and the firm- and year-fixed effects. Standard errors are clustered at the industry level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)
Panel A: Dependent variable: Proportion of executives with foreign work experience					
Firm-level tariff	0.008***				
	(0.002)				
Log(1 + industry tariff)		0.062***	0.007		
		(0.015)	(0.016)		
Log(1 + industry tariff) × Export dependence			0.369***		
			(0.085)		
CAR (vw) × post-2018				-0.045**	
				(0.018)	
CAR (ew) × post-2018					-0.043**
					(0.019)
Adjusted *R*-squared	0.639	0.657	0.659	0.626	0.626
Panel B: Dependent variable: Proportion of executives with only foreign study experience					
Firm-level tariff	-0.000				
	(0.001)				
Log(1 + industry tariff)		-0.010	-0.006		
		(0.010)	(0.012)		
Log(1 + industry tariff) × Export dependence			-0.027		
			(0.031)		
CAR (vw) × post-2018				-0.011	
				(0.013)	
CAR (ew) × post-2018					-0.009
					(0.013)
Observations	25,780	26,968	26,968	19,886	19,886
Adjusted *R*-squared	0.581	0.588	0.588	0.584	0.584
Adding Controls	YES	YES	YES	YES	YES
FIRM FE	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES

Table A12. Balance Tests for Propensity Score Matched Sample

This table shows the probit propensity regression model used in the matching process (Column (1)) and the comparison of executives with and without foreign experience in the propensity score matched sample (columns (2) through (5)).

	Probit Regression	Comparison of Matched Sample			
	(1)	(2)	(3)	(4)	(5)
	Coefficients and SE	Treated	Control	Difference	*t*-value
Age	-0.001 (0.002)	47.40	47.41	-0.01	-0.02
Female	0.000 (0.044)	0.16	0.17	-0.01	-0.98
Having a master's degree	0.688*** (0.032)	0.66	0.66	0.00	-0.00
Log (asset)	0.002 (0.012)	22.40	22.40	0.00	-0.00

Table A13. Equity Compensation to Experienced Executives: Robustness to Using (Value of Equity Compensation)$^{1/5}$ as the Dependent Variable

This table (analogous to Table 7 in the main text) replaces *log (1 + the value of equity compensation)* with (Value of Equity Compensation)$^{1/5}$ as the dependent variable, per recommendation in Thakral and Tô (2023). The first two columns utilize the original sample, while the last two columns use a nearest-neighbor propensity score matched sample. The variables used in the matching are executive age, gender, education, and firm size. Panel A considers all executives with foreign experience, while Panels B and C consider executives with foreign experience and marketing skill and those with foreign experience and no marketing skills, respectively. All regressions include the control variables Tobin's q, log(asset), leverage ratio, ROA, board independence. Standard errors are clustered at the individual level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Without PSM		PSM (nearest 1)	
Panel A: All executives				
Overseas background × post-2018	0.319**	0.318**	0.488***	0.447**
	(0.144)	(0.143)	(0.176)	(0.174)
Observations	90,789	90,789	9,077	9,077
Adjusted *R*-squared	0.248	0.269	0.253	0.276
Panel B: Executives with both an overseas background and marketing expertise				
Overseas background and marketing expertise × post-2018	0.632***	0.643***	0.647**	0.645**
	(0.227)	(0.226)	(0.291)	(0.290)
Observations	90,789	90,789	4,033	4,033
Adjusted *R*-squared	0.248	0.269	0.239	0.253
Panel C: Executives with an overseas background and no marketing expertise				
Overseas background without marketing expertise × post-2018	0.059	0.049	0.191	0.169
	(0.180)	(0.179)	(0.227)	(0.224)
Observations	90,789	90,789	5,257	5,257
Adjusted *R*-squared	0.248	0.269	0.264	0.293
Controls	YES	YES	YES	YES
INDIVIDUAL FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table A14. Sensitivity of Executives' Wealth to Stock Price (Delta) After the Trade Shock

This table presents estimates of ordinary least squares (OLS) difference-in-differences regressions at the executive level. The dependent variable is the natural logarithm of one plus delta, where delta is the dollar change in executives' wealth for a 1% change in stock price. The first two columns utilize the original sample and the last two columns use a nearest-neighbor propensity score matched sample. Panel A considers all executives with foreign experience, while Panels B and C consider executives with foreign experience and marketing skill and those with foreign experience and no marketing skills, respectively. All regressions include the control variables Tobin's q, log(asset), leverage ratio, ROA, board independence. Standard errors are clustered at the individual level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Without PSM		PSM (nearest 1)	
Panel A: All executives				
Overseas background × post-2018	0.190**	0.189**	0.309***	0.284***
	(0.083)	(0.083)	(0.099)	(0.098)
Observations	90,789	90,789	9,077	9,077
Adjusted *R*-squared	0.248	0.274	0.269	0.294
Panel B: Executives with both an overseas background and marketing expertise				
Overseas background and marketing expertise × post-2018	0.379***	0.385***	0.372**	0.369**
	(0.134)	(0.133)	(0.169)	(0.168)
Observations	90,789	90,789	4,033	4,033
Adjusted *R*-squared	0.248	0.275	0.262	0.278
Panel C: Executives with an overseas background but no marketing expertise				
Overseas background without marketing expertise × post-2018	0.033	0.026	0.118	0.105
	(0.102)	(0.102)	(0.130)	(0.128)
Observations	90,789	90,789	5,257	5,257
Adjusted *R*-squared	0.248	0.274	0.267	0.297
Controls	YES	YES	YES	YES
INDIVIDUAL FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table A15. Sensitivity of Executives' Wealth to Stock Return Volatility (Vega) After the Trade Shock

This table presents estimates of ordinary least squares (OLS) difference-in-differences regressions at the executive level. The dependent variable is the natural logarithm of one plus vega, where vega is the dollar change in executives' wealth for a 0.01 change in stock return volatility. The first two columns utilize the original sample, while the last two columns use a nearest-neighbor propensity score matched sample. Panel A considers all executives with foreign experience, while Panels B and C consider executives with foreign experience and marketing skill and those with foreign experience and no marketing skills, respectively. All regressions include the control variables Tobin's q, log(asset), leverage ratio, ROA, board independence. Standard errors are clustered at the individual level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Without PSM		PSM (nearest 1)	
Panel A: All executives				
Overseas background × post-2018	0.158**	0.156**	0.219***	0.207**
	(0.070)	(0.069)	(0.083)	(0.082)
Observations	90,804	90,804	9,081	9,081
Adjusted *R*-squared	0.290	0.296	0.307	0.314
Panel B: Executives with both overseas background and marketing expertise				
Overseas background and marketing expertise × post-2018	0.362***	0.364***	0.386***	0.377***
	(0.118)	(0.117)	(0.144)	(0.143)
Observations	90,804	90,804	4,035	4,035
Adjusted *R*-squared	0.291	0.297	0.306	0.310
Panel C: Executives with an overseas background and no marketing expertise				
Overseas background without marketing expertise × post-2018	-0.010	-0.015	0.074	0.068
	(0.081)	(0.081)	(0.103)	(0.103)
Observations	90,804	90,804	5,259	5,259
Adjusted *R*-squared	0.290	0.296	0.318	0.326
Controls	YES	YES	YES	YES
INDIVIDUAL FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table A16. Equity Compensation Granted to Executives After the Trade Shock, Excluding New Hires

This table (analogous to Table 7 in the main text) excludes those executives hired after the trade war began (2018) to examine if increases in the value of equity-based compensation are driven primarily by new hires. The dependent variable is the natural logarithm of 1 plus the value of equity-based compensation. The first two columns utilize the original sample, while the last two columns use a nearest-neighbor propensity score matched sample. The variables used in the matching are executive age, gender, education, and firm size. Panel A considers all executives with foreign experience, while Panels B and C consider executives with foreign experience and marketing skill and those with foreign experience and no marketing skills, respectively. All regressions include the control variables Tobin's q, log(asset), leverage ratio, ROA, board independence. Standard errors are clustered at the individual level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Without PSM		PSM (nearest 1)	
Panel A: All executives				
Overseas background × post-2018	0.268**	0.264**	0.303**	0.289*
	(0.117)	(0.116)	(0.151)	(0.150)
Observations	87,666	87,666	8,652	8,652
Adjusted *R*-squared	0.252	0.275	0.304	0.319
Panel B: Executives with both an overseas background and marketing expertise				
Overseas background and marketing expertise × post-2018	0.544***	0.554***	0.522**	0.515**
	(0.189)	(0.188)	(0.245)	(0.244)
Observations	87,666	87,666	3,809	3,809
Adjusted *R*-squared	0.253	0.275	0.281	0.294
Panel C: Executives with an overseas background and no marketing expertise				
Overseas background without marketing expertise × post-2018	0.038	0.024	0.044	0.010
	(0.144)	(0.143)	(0.199)	(0.196)
Observations	87,666	87,666	5,104	5,104
Adjusted *R*-squared	0.252	0.274	0.298	0.320
Controls	YES	YES	YES	YES
INDIVIDUAL FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table A17. Salary Received by Executives After the Trade Shock (Using (Salary)$^{1/5}$ as the Dependent Variable)

This table (analogous to Table 8 in the main text) employs (Salary)$^{1/5}$ instead of *log (1 + salary)*, per recommendation in Thakral and Tô (2023). The first two columns utilize the original sample, while the last two columns use a nearest-neighbor propensity score matched sample. The variables used in the matching are executive age, gender, education, and firm size. Panel A considers all executives with foreign experience, while Panels B and C consider executives with foreign experience and marketing skill and those with foreign experience and no marketing skills, respectively. All regressions include the control variables Tobin's *q*, log(asset), leverage ratio, ROA, board independence. Standard errors are clustered at the individual level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Without PSM		PSM (nearest 1)	
Panel A: All executives				
Overseas background × post-2018	0.115*	0.143**	0.198**	0.217**
	(0.064)	(0.064)	(0.096)	(0.096)
Observations	107,424	107,424	11,181	11,181
Adjusted *R*-squared	0.716	0.725	0.712	0.720
Panel B: Executives with both an overseas background and marketing expertise				
Overseas background and marketing expertise × post-2018	0.232**	0.245**	0.207	0.235*
	(0.099)	(0.099)	(0.130)	(0.130)
Observations	107,424	107,424	4,866	4,866
Adjusted *R*-squared	0.716	0.725	0.738	0.747
Panel C: Executives with an overseas background and no marketing expertise				
Overseas background without marketing expertise × post-2018	0.022	0.060	0.121	0.148
	(0.082)	(0.082)	(0.100)	(0.101)
Observations	107,424	107,424	6,564	6,564
Adjusted *R*-squared	0.716	0.725	0.745	0.754
Controls	YES	YES	YES	YES
INDIVIDUAL FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table A18. Equity Compensation by Region of Experience: Robustness to Using (Value of Equity Compensation)$^{1/5}$ as the Dependent Variable

This table (analogous to Table 9 in the main text) employs (Value of Equity Compensation)$^{1/5}$ instead of log (1 + the value of equity compensation). Panels A, B, and C consider executives with a European, a North American (NA), and an Asian background, respectively. All regressions include the control variables Tobin's *q*, log(asset), leverage ratio, ROA, board independence. Standard errors are clustered at the individual level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Without PSM		PSM (nearest 1)	
Panel A: Executives with a European background				
European background × post-2018	0.756***	0.735***	0.859**	0.825**
	(0.279)	(0.278)	(0.357)	(0.354)
Observations	90,789	90,789	2,754	2,754
Adjusted *R*-squared	0.248	0.269	0.300	0.317
Panel B: Executives with a North American background				
NA background × post-2018	0.199	0.225	0.293	0.322
	(0.205)	(0.204)	(0.268)	(0.267)
Observations	90,789	90,789	4,272	4,272
Adjusted *R*-squared	0.248	0.269	0.166	0.192
Panel C: Executives with an Asian background				
Asian background × post-2018	0.296	0.304	0.601	0.612
	(0.322)	(0.323)	(0.411)	(0.420)
Observations	90,789	90,789	1,832	1,832
Adjusted *R*-squared	0.248	0.269	0.279	0.291
Controls	YES	YES	YES	YES
IND FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table A19. Executive Salary by Region of Experience

This table (analogous to Table 9 in the main text) focuses on executive salary rather than the value of equity-based compensation, and examines variation by region of experience. Panels A, B, and C consider executives with a European, a North American (NA), and an Asian work background, respectively. All regressions include the control variables Tobin's *q*, log(asset), leverage ratio, ROA, board independence. Standard errors are clustered at the individual level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Without PSM		PSM (nearest 1)	
Panel A: Executives with a European background				
European background × post-2018	0.113	0.110	-0.000	-0.015
	(0.086)	(0.086)	(0.112)	(0.113)
Observations	107,424	107,424	3,403	3,403
Adjusted *R*-squared	0.543	0.547	0.596	0.603
Panel B: Executives with a North American background				
NA background × post-2018	0.024	0.036	0.041	0.051
	(0.058)	(0.058)	(0.075)	(0.075)
Observations	107,424	107,424	5,470	5,470
Adjusted *R*-squared	0.543	0.547	0.430	0.435
Panel C: Executives with an Asian background				
Asian background × post-2018	-0.125	-0.112	-0.026	-0.008
	(0.105)	(0.105)	(0.112)	(0.112)
Observations	107,424	107,424	2,229	2,229
Adjusted *R*-squared	0.543	0.547	0.702	0.704
Controls	YES	YES	YES	YES
IND FE	YES	YES	YES	YES
YEAR FE	NO	YES	NO	YES

Table A20. Overseas Revenue and Foreign Experience in Corresponding Regions

This table shows results of our analysis of the relation between the value of exports to foreign countries and the proportion of executives with experience from the corresponding foreign regions using customs data from 2011 to 2016. The first two columns concentrate on the relationship between the total overseas revenue and the proportion of executives obtaining experience from any foreign countries. Columns (3) and (4) probe the relationship between overseas revenue from European countries and the proportion of executives with European experience. Similarly, Columns (5) and (6) show the relationship between overseas revenue from the United States and the proportion of executives with North American experience; columns (7) and (8) show the relationship between overseas revenue from Asian countries and the proportion of executives with Asian experience; columns (2), (4), (6), and (8) include the control variables leverage ratio, log(asset), number of business segments, free cash flow, stock volatility). Standard errors are clustered at the firm level. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Dep: Log (total overseas revenue)		Dep: Log (overseas revenue from Europe)		Dep: Log (overseas revenue from the United States)		Dep: Log (overseas revenue from Asia)	
Lag of proportion of executives with foreign experience	8.959***	6.504***						
	(1.543)	(1.355)						
Lag of proportion of executives with European experience			7.052**	4.650**				
			(2.793)	(2.332)				
Lag of proportion of executives with North American experience					9.583***	8.087***		
					(1.947)	(1.838)		
Lag of proportion of executives with Asian experience							15.298***	12.729***
							(3.227)	(3.012)
Observations	14,762	14,692	14,762	14,692	14,762	14,692	14,762	14,692
Adjusted *R*-squared	0.010	0.275	0.002	0.222	0.008	0.180	0.007	0.262

Controls	NO	YES	NO	YES	NO	YES	NO	YES
INDUSTRY FE	NO	YES	NO	YES	NO	YES	NO	YES
YEAR FE	YES	YES	YES	YES	YES	YES	YES	YES

Table A21. Additional Summary Statistics

This table provides additional summary statistics for dependent variables used in Tables 10−12.

	N	Mean	p50	SD
Total overseas revenue	26,077	1.104×10^{9}	1.880×10^{7}	6.517×10^{9}
Log(total overseas revenue)	26,077	11.160	16.749	9.625
Proportion of executives with overseas experience (2017)	26,077	0.057	0.000	0.122
Proportion of executives with European experience (2017)	26,077	0.017	0.000	0.059
The number of overseas subsidiaries (all markets)	26,077	2.507	1.000	5.065
The number of overseas subsidiaries (European markets)	26,077	0.350	0.000	1.134
The average amount of registered capital of overseas subsidiaries (all markets)	18,867	0.743×10^{8}	0.000	4.830
Log(The average amount of registered capital of overseas subsidiaries (all markets))	18,867	5.648	0.000	7.778
The total amount of registered capital of overseas subsidiaries (all markets)	18,867	2.366×10^{8}	0.000	1.909×10^{9}
Log(The total amount of registered capital of overseas subsidiaries (all markets))	18,867	5.831	0.000	8.051
The average amount of registered capital of overseas subsidiaries (European markets)	23,490	0.549×10^{6}	0.000	3.778×10^{6}
Log(The average amount of registered capital of overseas subsidiaries (European markets))	23,490	0.874	0.000	3.463
The total amount of registered capital of overseas subsidiaries (European markets)	23,490	0.725×10^{6}	0.000	5.092×10^{6}
Log(The total amount of registered capital of overseas subsidiaries (European markets))	23,490	0.888	0.000	3.519
CAR[0,1] (ew)	431	0.001	-0.003	0.037
CAR[0,1] (vw)	431	0.001	-0.002	0.038
CAR[-1,1] (ew)	431	-0.002	-0.004	0.044
CAR[-1,1] (vw)	431	-0.002	-0.004	0.045

Table A22. Proportion of Executives with an Overseas Background and Buy-and-Hold Returns

This table shows results of our analysis of the value to companies of executives with an overseas background using the buy-and-hold returns as the dependent variable. The first three columns use the buy-and-hold returns starting from the month after the second largest trade war escalation event (i.e., Sep. 2018 to year 2021, the end of sample period). The second column adds industry fixed effects, while column (3) further controls for leverage, firm size, number of business segments, free cash flow, and stock volatility in year 2017, following Giannetti, Liao, and Yu (2015). Besides these variables, we control for the average changes in the proportion of overseas executives after 2017. The last three columns employ the buy-and-hold returns from the month after the first largest trade war event to the end of year 2021. Standard errors are clustered at the firm level. *, ** and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	From September 2018 to December 2021			From April 2018 to December 2021		
Proportion of overseas executives in 2017	0.293**	0.246*	0.312**	0.251*	0.238*	0.278**
	(0.135)	(0.124)	(0.123)	(0.144)	(0.133)	(0.132)
Leverage			-0.232*			-0.335**
			(0.134)			(0.146)
Size			-0.031			-0.008
			(0.021)			(0.020)
Number of business segments			-0.003			-0.010*
			(0.006)			(0.006)
Free cash flow			-0.003			0.022
			(0.156)			(0.160)
Stock volatility			2.979*			1.947
			(1.754)			(1.872)
Changes in proportion of overseas executives (post-2018 mean)			0.173			0.151
			(0.216)			(0.228)
Observations	3,378	3,373	3,284	3,379	3,374	3,285
Adjusted *R*-squared	0.002	0.094	0.110	0.001	0.098	0.111
Industry FE	NO	YES	YES	NO	YES	YES