**Private Companies and Public Opinion:**

**Examining the Effect of Company-Consumer Interaction on American Attitudes toward China**

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*Source: This regression is created from the empirical results of this research paper. This regression shows a clear trend line with Americans assigning warmer feelings about China after they were exposed to an app from a hypothetical Chinese company, Taply. Results like this show that economic interaction between Chinese companies and Americans appear to influence Americans to have warmer feelings toward China.*

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**Background**

Much has also been said in recent years about the future of US-China relations and how, if at all, the two sides can bring revive their relationship. A common topic in these discussions has been about how American companies have operated in China since the early 2000s and how, starting fairly recently, Chinese companies have begun to operate in the United States. Yet, there has been little research about how Chinese-originating companies’ entrance into the global marketplace might alter American attitudes towards China. This research project seeks to examine this topic.

This research project is not only an academic endeavor, but a practical one. On August 6, 2020, President Donald Trump issued Executive Order 13942, “Addressing the Threat Posed by TikTok,” and Executive Order 13943, “Addressing the Threat Posed by WeChat.” Besides both TikTok and WeChat being highly sharable, widely used social media applications owned by companies based in the People’s Republic of China, these apps do not share much in common. The White House, however, justified these executive orders as national security considerations. As explained by Commerce Secretary Wilbur Ross on September 18, 2020, the White House believed that banning these apps from the American marketplace would help “guarantee [American] national security and protect Americans from the threat of the Chinese Communist Party” (Ross, 2020).

Banning TikTok and WeChat from the American market was not unprecedented. Since the 2007-2008 financial crisis, policymakers in Washington have made increased use of economic and legal instruments to limit Chinese companies from gaining access to the global market (Foot & King, 2019). These instruments have included trade tariffs, restrictions placed on Chinese foreign investment, and the explicit targeting of Chinese firms that sell and develop technological products—such as Huawei, ZTE, and as of earlier this year, ByteDance’s TikTok and Tencent’s WeChat. These unilateral policy actions taken by the United States government indicate that the question of how Americans might react to Chinese-originating technology companies is increasingly relevant, particularly as the ongoing series of low-level economic skirmishes between the U.S. and China continue to escalate.

The entrance of Chinese corporations into the United States marketplace raises a number of previously unexplored questions. Will Americans trust these Chinese-originating technology companies enough to purchase their products? Or will Americans select away from these companies because they lack trust in Chinese firms? Will usage of these apps meaningfully change American attitudes about China or about American foreign policy regarding China? Because global companies have mainly been a product of Western, market-based, democratic states, there is no clear precedent as to how Americans will react to the continued entrance of these companies into the American market.

Utilizing an online survey experiment conducted on Amazon’s Mechanical Turk, this paper reports new evidence on the impact Chinese firm and American consumer interaction might have on American attitudes towards China. This experiment reveals that simply having Americans imagine using a Chinese-owned social media app can have a substantial positive effect on American attitudes towards China. Additionally, these findings suggest that economic interaction with any foreign country may shift Americans to view China more favorably. When participants were primed with a hypothetical app from a company based in Estonia, a country relatively unknown to the majority of Americans, participants also viewed China with a significantly more favorable attitude. Although the mechanisms behind these changes in public opinion remain unknown, they could be driven by a couple of causal pathways, including in-group favoritism and internal cost-benefit analysis of economic interdependency.

This study makes several contributions. First, its results have implications for an extensive literature on economic interdependence and international relations. A common theory in this field of study assumes that conflict happens less when economic interaction between states is higher. This study extends this literature by indicating that the conflict abating aspects of economic interdependence might not only apply at the macroeconomic state level, but also at the microeconomic, individual level of analysis. Second, this research ties into a number of ongoing academic debates in political science relating to the formation of domestic public opinion about international affairs. While many academics have theorized that domestic public opinion about esoteric subjects such as trade disputes develops based upon top-down guidance from policymakers and the media, this study indicates that individual public opinion can be significantly altered simply through day-to-day economic interaction with international companies. Third, this research has implications for American public policy. Results from this study suggest that more favorable attitudes toward China translate to participants also endorsing increased economic cooperation between the United States and China.

**Chinese Companies and Chinese Public Diplomacy**

Ostensibly, my thesis is focused on how increased Chinese interaction with the United States may alter domestic public opinion towards China. Previously, my thesis has focused on Chinese public diplomacy and propaganda efforts targeted at Americans through America media channels, such as cable and print news. Though TikTok and other Chinese social media apps are not Chinese-state operated attempts at external propaganda, they are likely influenced and overseen by the Communist Party apparatus, whose private-public regulatory system’s reach far extends that of almost all other countries. Even though these companies are not directly controlled by the Chinese state, however, it is also clear that their operations and global reach are increasingly likely to affect international public attitudes towards China. Just as the spread of American companies such as Google and Ford have influenced foreign attitudes towards the government and people United States, so too will Chinese companies.

With this being said, there remains the possibility that TikTok and other Chinese products may soon become involved in Chinese external propaganda and public diplomacy efforts, if they have not been integrated already. This concern seems to be one of the chief worries that the Trump-Pence White House administration had when issuing executive orders prohibiting Americans from downloading TikTok and WeChat. In his Executive Order on “Addressing the Threat Posed by TikTok,” President Trump noted that TikTok’s data collection “threatens to allow the Chinese Communist Party access to Americans’ personal and propriety information” and that “this mobile application may be also used to for disinformation campaigns that benefit the Chinese Communist Party” (Trump, 2020).

While no evidence has been found supporting the allegations, it is more than feasible that Chinese-designed propaganda can be spread through TikTok to unsuspecting American users, particularly given how obscure and inaccessible Chinese companies internal governance structures are to the general public. Recent election interference campaigns showcase the ease at which foreign actors can disseminate disinformation to unwitting social media users, such as in the United States’ 2016 presidential election (Allcott & Gentzkow, 2017). In fact, Chinese propaganda has already been spread widely on the mainland China version of TikTok, Douyin. Chinese state media actively maintains accounts on Douyin that share state-created sare content. Because the Douyin app is almost identical to the internationally available TikTok, concerns that China may begin to share public opinion-focused propaganda through TikTok appear to be justified. That is to say, while technology can ultimately disseminate information across networks that inspire positive outcomes, such as how social media helped facilitate peaceful political revolution during the so-called Arab Spring (Comunello & Anzera, 2012), technology can certainly also induce harm onto political institutions and systems.

This thesis chapter assumes that the Chinese government does not currently attempt to proactively share propaganda through products owned by Chinese private firms. Rather it seeks to examine how seemingly politically innocuous Chinese firms entering the international marketplace in search of revenue and a wider customer base might still influence American attitudes toward China. Ultimately, social media and technology represent a new front in the study of mass public opinion. If Americans view Chinese products as innocuous and a net positive in their lives, it logically follows that there might be spillover effects into how they view China and the policy preferences they hold about American policy towards China.

**U.S.-China Relations and Economic Interdependence**

In the past decade and under the leadership of Chinese president Xi Jinping, China has increasingly put focus on promoting a sort of “Chinese dream” approach to international affairs, a state-led approach that emphasizes Chinese exceptionalism in dealing with and seeking influence from foreign powers (Chen, 2019). While Chinese leaders have emphasized that this approach does not entail a copy-and-paste model that other countries can implement, many foreign governments, including that of the United States, have interpreted Beijing’s approach as representing exactly that, a Chinese attempt to promote authoritarianism abroad at the cost of a Western-led, liberal world order. Among Washington insiders, China’s newfound aggression on the international stage has led rise to a fear that Chinese influence is introducing “illiberal conceptions of international governance and international norms” across the globe and even within established democracies (Barma & Ratner, 2006).

Reacting to this threat, American and European policymakers have swung away from a consensus that supports engagement with China to one that increasingly calls for competition and containment. Part of this new strategy involves limiting Chinese cultural and economic exports to the United States, a broad category that particularly includes the targeting of Chinese corporations that specialize in developing technological products (Foot & King, 2019). Beginning in the mid-2010s, some American policymakers—including prominent members of the Trump Administration—have even pushed for broad economic disengagement from the Chinese economy and continued bans on Chinese firms from operating in the American market.

This concern about Chinese technological innovations relates to a broader series of academic literature about the nature of economic interdependence on international relations. The dominant view in academic and policy circles is that increased economic exchange fosters political cooperation and warmer relations (Mansfield & Pollins, 2001; Keohane & Nye, 1987). Although realists and some policymakers reject this argument, the vast majority of large-*n* studies on interdependence supports the liberal hypothesis (Mansfield & Pollins, 2001). So-called trade liberals have stressed a number of causal mechanisms behind this trend. Some academics argue that economic exchange and conflict are substitute means for acquiring state resources (Mansfield & Pollins, 2001). Others argue that economic exchange increases contact and promotes communication between private actors, thereby fostering trust (Labarca, 2014; Oetzel et al., 2010). Yet another view argues that commercial openness sends a costly signal that makes domestic consumers dependent on foreign markets and binds together economies (Morrow, 2003; Davis & Meunier, 2011).

Although there is no clear consensus on to what mechanisms have driven the apparent trend between interdependence and peace, and at what level of analysis these mechanisms operate, the liberal conception of economic interaction as a tool capable of bringing together countries has dominated American foreign policy post-WWII. The theory was influential in President Richard Nixon’s decision to reopen of the American economy to China in the 1970s and decision by President Bill Clinton’s decision to support China’s entry into the World Trade Organization (WTO) in 2001 (Mansfield & Pollins, 2011). Today, though, a number of academics have issued challenges to this longstanding understanding of trade and politics, many of whom cite evidence related to the Chinese economy itself. For instance, economists have argued that “China trade shock” has led to depressed labor-force participation rates, wages, and employment rates in regions of the United States most exposed to Chinese competition (Autor et al., 2016). At the national level, these authors argue that Chinese trade has cratered employment in certain American industries without offsetting employment gains in other American industries that more frequently export to China. This “China shock” argument has been cited in a variety of articles since with academics claiming that Chinese trade imbalances with the United States holds partial responsibility for anything from increased American opioid overdoses to the election of Donald Trump in 2016 (Dean, 2019; Autor et al., 2017). It has also led to a re-imagining of the typical literature on interdependence with some academics now arguing that the relationship-building effect of trade interdependence should apply long among politically analogous, market-based economies (Zhao, 2019).

To a large degree, academic research on economic interdependence has yet to consider this paper’s research question, however. At present there is a great deal of uncertainty about how economic interdependence affects people at the individual level, a topic that analysis of trade flows cannot sufficiently capture. In particular, current research large-n and qualitative research on interdependence cannot sufficiently test for how international firms, like TikTok or WeChat, might impact individual attitudes about their country-of-origin.

This is the gap that this paper intends to fill. Research shows that the degree of local trade interdependence with China can help explain Americans’ assessments of China as a threat or ally with those standing to benefit from trade holding positive views of China and vice versa (Fordham & Kleinberg, 2011). In an unrelated field of research, academics have identified the outsized role private business can play mediating public policy and public opinion (Oetzel et al., 2010; Vogel, 1998; Malhotra et al., 2018; Druckman & Valdes, 2019). Previous research has even analyzed whether a product’s country of origin can impact consumer purchasing habits, finding that Polish consumers considered company reputation when making purchases more than they did product country-of-origin (Michaelis et al., 2008). Previous research has even shown that international disputes change consumer attitudes to foreign products, the reverse causal effect as the previous example. In a 2003 paper, researchers found that during a dispute between the United States and France, American consumers purchased significantly less French-sounding supermarket brands (Pandya & Venkatesan, 2016). This effect was stronger in American supermarkets with a higher proportion of customers who are U.S. citizens, or people who more strongly identify with the U.S. national identity.

With this in mind, no research that I am aware of has attempted to examine the logical intersection of these topics: can economic interaction with a foreign firm alter consumers’ political preferences and attitudes? The experiment conducted in this study was specifically designed to address this gap in literature and to provide new, direct evidence on how American attitudes toward China might change after interaction with a hypothetical Chinese firm.

**Research Design**

1. *Hypotheses*

This particular experiment focuses on U.S.-China business relations and the impact economic interaction between American consumers and Chinese firms might have on American public opinion. In this experiment, I exposed participants a variation of a phone app produced by hypothetical firms based in either the United States, China, or Estonia. Based on the literature reviewed in the previous section, I came to a number of hypotheses regarding this experiment. First, I assume that (*H0) exposure to an American app will not mediate individual attitudes toward China.* In other words, using American products on a day-to-day basis should not affect how Americans feel about China.

With exposure to a Chinese-originating app, however, I hypothesize that (*H1) exposure to a Chinese app will mediate individual attitudes toward China in the positively valanced, warmer direction.* While some literature has found that the direction of change in attitudes depends on the nature of economic interaction (Fordham & Kleinberg, 2011), I hypothesize that absent any cues, participants will rationalize basic interaction with a Chinese company as a positive indicator of economic interdependence with China. In turn, because economic interdependence correlates with political trust, I predict that people will express warmer feelings toward China. An extension of this country-level effect hypothesis to the individual level suggests that individuals analyze foreign companies using a cost-benefit matrix. This mechanism implies that after exposure to a Chinese company, Americans rationally interpret the availability of this Chinese company in the American marketplace as having net positive utility on their individual lives. This potential mechanism assumes rational attitudes and preference formation in public policy. Alternatively, another mechanistic pathway may be more in line with motivated reasoning and behavioral economics: Americans policy preferences might be better explained by individuals adjusting their judgements via simple heuristics (If I like a Chinese product, I must also like China). This mechanism assumes that Americans seek to form coherent narratives after exposure to products they might enjoy using, even extending their feelings of positivity towards a product’s country-of-origin. With this in mind, though, I also hypothesize that (*HA) Americans will assign less trust to a Chinese company than they will to an American company.* In this case, I assume that Americans will display in-group bias and trust American companies more than Chinese companies. In line with previous research on American identity and consumer choice, I believe the effect of American nationalism will outweigh most of any effect after positive exposure to a Chinese company (Pandya & Venkatesan, 2016).

In line with Fordham & Kleinberg’s (2011) findings that individual American assessments of China as a threat or ally were mediated by the amount that individual benefited from or was harmed by trade with China, I also hypothesize that (*H2) a positive experience using a Chinese-originating app will lead to a more positively valanced change in individuals attitudes toward China* *than in the H1 scenario* and (*H3) a negative experience using a Chinese-originating app will lead to a negatively valanced change in individuals’ attitudes towards China.* These hypotheses are distinct from *H1* in that they recognize that attitudes about China will likely shift in different manners depending on whether the consumer enjoys using his or her purchased product. Additionally, for both of these hypotheses I assume that individuals will still trust the Chinese app less than they would an American app, copying hypothesis *HA.*

Lastly, I predict that (*H4) exposure to an app originating from a country different from either the United States or China will not mediate individual attitudes toward China.* That is, when American consumers use apps from say, Estonia, they will not experience an attitudinal change in how they view China. Because I predict in-group favoritism will modify trust of all non-American apps in a negative direction, I predict that *(HB) Americans will assign less trust to the company behind an app originating from a third-party country as compared to the United States but will assign more trust to this app than they do for a Chinese-originating app.* I assume that there would be a differentiation in assigned trust between a third-party country and China because of the adversarial characterization that most Americans have about China, assuming that the third-party country considered is also not an adversarial country like Russia or Iran.

1. *Experimental Design - Treatment*

This experiment employs data from an original experiment conducted using Amazon’s Mechanical Turk (MTurk). This online experiment was fielded over the period of two days, beginning on December 11, 2020 and ending on December 12, 2020, and was restricted to American participants only. One-hundred ninety-one participants were recruited under the understanding that they were participating in a study about emerging business opportunities (N = 191; female = 70; mean age = 41.47). To obtain behavioral measures of how exposure to Chinese-owned companies and Chinese-owned social media mediated American public opinion towards China, I exposed participants to vignettes describing a hypothetical app in which the treatment varied said app’s country-of-origin. Experimental treatment was followed by two dependent measures questionnaires. The first asked about participants’ prior exposure to Chinese-owned companies and their reactions to the app they were treated with. The second questionnaire asked about participants’ foreign policy preferences and about their attitudes toward China.

The control group (USA Base) was exposed to information about a hypothetical American company similar to China’s TikTok. Information was provided about the hypothetical company’s founders, the experience of using the app, and about the company behind the app—including the company’s corporate responsibility pledge and office locations. The purpose of the control group was to test for baseline American attitudes towards China after exposure to Taply, the hypothetical app created for the purposes of this experiment.

The first treatment group (China Base) was exposed to the same information as the control group except the app’s country-of-origin was changed to China. Like Group A, information was provided about the hypothetical company’s founders, the experience of using the app, and about the company itself. Names of the founders, background information, and office locations were all changed to be clearly Chinese. The China Base treatment was intended to test for whether limited interaction with a Chinese company was sufficient to mediate participant attitudes toward China.

The China Base treatment group was further segmented into two other subgroups, China Loved and China Hated. In addition to being told the same information as the China Base treatment, participants exposed to the China Loved treatment were told to imagine that they loved using the app, Taply, and that they had recommended it to friends and family. In addition to being told the same information as the China Base treatment, participants in the China Hated treatment were told to imagine that they hated using Taply and that they had told friends and family not to download it. These positive and negative experience treatments were intended to tease out whether the type of experience Americans had with Chinese products was relevant in modifying their perceived attitudes toward China. Of note, previous research has found that moral disengagement can be driven by individuals’ levels of affective desire for a product (Paharia et al., 2013). For instance, participants in this study were more likely to endorse the use of sweatshop labor when considering a desirable product for themselves rather than a friend (ibid). In the context of Chinese products, this behavioral economics finding suggests that Americans might engage in mutative moral reasoning about China at-large after a positive interactive with a Chinese product.

The fifth and final treatment group, Estonia Base, was exposed to the same information as the USA Base and China Base conditions, yet the theoretical app’s country-of-origin and relevant background information were modified to be clearly Estonian. This country was selected as I believe relatively few Americans have static attitudes about Estonia. I hypothesized that most participants would therefore have limited stereotypical frames about Estonia that could bias the experiment’s main dependent variable, American attitudes about China. As with the previous emotionally abstract Base treatments, information was provided about the hypothetical company’s founders, the social media app experience, and the company itself. The Estonia Base treatment was intended to test whether exposure to any international firm, and not necessarily a Chinese one, was sufficient to alter American attitudes toward China. That is to say, this group was intended to differentiate my results as being due to a unique U.S.-China consumer-firm effect or as being due to a general economic interdependence and exchange effect.

1. *Experimental Design – Data Collection*

After treatment, participants answered survey questions about their reactions to Taply, the hypothetical app, and about their attitudes toward China. Participants first answered questions about their reactions to the app itself.

There was a number of dependent variables measured in the initial, app-focused questionnaire. Respondents were first asked to estimate the number of hours per week they might spend using Taply on a weekly basis, on a scale from 0 hours to 10+ hours. Participants were then asked whether they would choose to keep or delete the app from their phone, assuming they had downloaded it as described in the vignette. After these initial two questions, participants read a series of statements with measurement scales of 0 (strongly disagree) to 5 (strongly agree). In order, participants were asked if they agreed Taply would follow through with its commitments and make donations to charitable causes, whether the app’s country-of-origin factored into their keep/delete decision, and whether, in general, they trust Chinese products and apps like TikTok. Participants then answered a final question in this survey section asking how frequently they had interacted with Chinese-originating apps in the past week on a scale from 0 hours (none at all) to 10 or more hours. Provided with this question was a list of Chinese businesses and their apps, such as TikTok and Alibaba, in case participants were unfamiliar with what apps are Chinese. Of note, the question asking whether participants thought Taply would follow through with its promise to make charitable donations served as a proxy variable for individual trust towards the company overall. Logically, if participants did not have faith that their assigned version of Taply would follow through with its corporate responsibility pledge, they likely would not give trust to Taply in other areas, such as in handling sensitive information or processing online payments.

The second section of my survey was focused on gathering participant attitudes about the main dependent measures in this study, American attitudes about China and American foreign policy. The primary dependent measure was an attitudinal feeling thermometer on a 100-point scale. Participants were asked to rate how they felt toward China where higher numbers correlated to warmer feelings and vice versa. This dependent variable is a standard measure used in the study of public attitudes and foreign policy. After completing this primary attitudinal scale, participants were asked to complete an Osgood semantic differential scale where the opposing adjectives “untrustworthy” and “trustworthy” were placed at opposite ends of a 1 to 7 scale. Participants were asked to choose the number best represented which adjective they thought better described China.

Next, participants were asked to respond to a series of policy preference questions on American policy about Chinese commerce. Respondents were asked for their opinions on how the U.S. should deal with the growth of Chinese business (Undertake friendly cooperation and allow these companies to freely operate in the United States; Actively work to limit the growth of these Chinese businesses; or Completely ban and disallow these companies from operating in the United States), for their opinions on whether international business between the U.S. and China does more to strengthen or weaken U.S. national security (Strengthen; Weaken; or Don’t know), and for their opinions on a number of U.S. policies towards China, such as placing tariffs on imports from China and limiting the number of Chinese exchange students who can study in the United States (Support; Oppose; or Don’t Know).

The last component of the Chinese-related dependent measures survey was to have participants complete an additional feeling thermometer on participants’ feelings about Chinese citizens, again on a scale of 0 to 100 with higher numbers correlating to warmer feelings. Generally speaking, people tend to have warmer feelings about foreign people than they do for foreign governments.

**Results**

***Attitudes Toward China***

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As predicted, participants exposed to the China Loved treatment had significantly more positive views of China than those exposed to the USA Base control condition (usabaseapp: *M*=46.53, *SD*=32.65; chinahatedapp: *M*=56.87, *SD*=27.97; chinalovedapp: *M*=61.49, *SD*=29.54; chinabaseapp: *M*=58.58; *SD*=32.13; estoniabaseapp: *M*=61.34; *SD*=25.06), chinalovedapp: p<.05. Further analysis of the other treatment groups, however, revealed a number of surprises that did not match my original hypotheses. For instance, I had originally hypothesized that the China Hated treatment would shift attitudes in the negative direction and the Estonia Base treatment would not shift attitudes. While the China Base treatment had no effect on attitudes toward China as compared to the USA Base control (chinabaseapp: p = .055), both the China Hated and Estonia Base treatments did significantly affect participant attitudes toward the *positive* direction (chinahatedapp: p<.05, estoniabaseapp: p<.05).

After controlling for treatment, the demographic variables found to have a significant causal effect on attitudes about China were race (p<.01), education (p<.01), and political identification (p<.01).

The surprising finding about the China Hated and Estonia Base treatments having a significant effect on attitudes toward China indicates that my original hypotheses were misguided. A number of potential explanations could account for the error. First, I could have been wrong about the direction of effect that usage of foreign products primes for—perhaps American opinion toward China actually exists at around the mean level of the China Base treatment and using American products actually negatively influenced attitudes toward China by priming for American in-group favoritism. If this revised hypothesis is correct, that would suggest that the majority of Americans actually feel much warmer towards China on a day-to-day basis than current polling might suggest, but that the American attitude can also quickly swing negative after exposure to in-group primes, like patriotic political speeches and contact with American-made goods. Previous literature on framing effects finds that policy attitudes toward trade and immigration policies is mediated by the degree to which nationalism is presented as a core issue to participants, especially when these participants have little information on the issues (Hiscox, 2006). Interestingly, and of relevance to this thesis’ general argument, individuals can overcome these framing effects in the real world by taking advice from sources of information they trust (ibid). Secondly, assuming that the USA Base control truly captured baseline attitudes about China, it is possible that *any* interaction with foreign products can influence American attitudes about international affairs through a mechanism similar to that hypothesized in liberal theories of economic interdependence and political relations. This mechanism would account for why both the China Hated and Estonia Base treatments shifted attitudes in a *positive* direction as compared to the USA Base control. Lastly, relating to the China “hated” effect alone, another possibility explaining this finding is that after individuals interacted with what they deemed to be an undesirable and uninteresting product, they broadly updated their beliefs about China, including Chinese economic and technological competency, reducing the sense of threat they felt from China overall.

***Trust***

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Shifting attention to focus on the effect treatment had on the level of trust participants assigned to their app, only the China Base treatment resulted in a significantly different level of assigned trust about whether Taply would follow through on its corporate social responsibility pledge as compared to the control (usabaseapp: *M*=3.82, *SD*=0.52; chinahatedapp: *M*=3.44, *SD*=0.94; chinalovedapp: *M*=3.73, *SD*=0.71; chinabaseapp: *M*=3.39; *SD*=1.20; estoniabaseapp: *M*=4.03; *SD*=0.72), chinabaseapp: p<.05. As predicted, all Chinese treatment groups had lower mean trust ratings than did the American app, although the China Base app was the only treatment that was meaningfully lower than the control. Mean assigned trust under the Estonia Base treatment, however, was greater than that of the control group, a finding opposite from my original prediction. The difference between these two groups was not significant though, limiting the conclusions I can draw. Taken together, this series of results suggest that my hypothesis that Americans would trust domestic apps moreso than international apps may be more limited than originally predicted, speaking to the low amount of trust that Americans generally assign to American companies. Although we should expect Americans to trust an American app more than one from an adversarial country, this trend probably inverses for most other trading partners, including relatively unknown countries like Estonia.

After controlling for condition groups, the demographic variables found to have a significant causal effect on trust assigned to Taply were education (positive impact, p<.01) and political identification (negative impact, p<.01).

***Keep/Delete Decisions***

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Treatment group assignment appeared to have no significant effect on people’s decisions to keep or delete Taply assuming they had downloaded it (usabaseapp: *M*=0.71, *SD*=0.46; chinahatedapp: *M*=0.56, *SD*=0.50; chinalovedapp: *M*=0.78, *SD*=0.42; chinabaseapp: *M*=0.66; *SD*=0.48; estoniabaseapp: *M*=0.74; *SD*=0.45).

After controlling for treatment, the demographic variables that impacted Keep/Delete decisions were education (p<.01) and political identification (p=.02). Interestingly, age was not statistically meaningful in affecting the measurement value (p=.4), a finding that contradicts claims that Chinese apps like TikTok only have the potential to be popular among younger generations.

***Attitudes About Protectionist Policy Targeting Chinese Businesses***

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The China Loved and Estonia Base treatments appeared to significantly alter participants’ stated policy preferences about how policymakers should react to Chinese businesses entering the U.S. market (usabaseapp: *M*=1.91, *SD*=0.79; chinahatedapp: *M*=2.05, *SD*=0.72; chinalovedapp: *M*=2.46, *SD*=0.67; chinabaseapp: *M*=2.18; *SD*=1.24; estoniabaseapp: *M*=2.42; *SD*=0.60), chinalovedapp: p<.01; estoniabaseapp: p<.01. Rounding the mean response for each treatment group to the nearest integer revealed that all groups held the aggregate policy option of 2, having the U.S. “actively work to limit the growth of these Chinese business [in the United States].” With this being said, it is noteworthy that the China Love treatment led participants to endorse cooperative policy at a significantly greater amount than the China Base and China Hated treatments. This result indicates that while economic interaction alone might be able to instigate Americans to have somewhat more cooperative feelings about U.S.-China business relations, the critical response to Chinese companies operating in the United States matters too. Chinese companies that are better liked and more popular are likely to more meaningfully alter American public opinion towards China than Chinese companies that are disliked and unpopular.

After controlling for treatment groups, the only demographic variable that had a significant effect on participants’ policy preferences about Chinese business entry into the United States was political identification (p<.01), with Republicans and Independents indicating harsher policy preferences towards China, matching the partisan effect found throughout this analysis.

***Attitudes Toward Chinese Citizens***

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Unlike favorability towards China in general, treatment group assignment did not have any significant effect on participant attitudes toward Chinese citizens (usabaseapp: *M*=66.74, *SD*=25.29; chinahatedapp: *M*=67.56, *SD*=23.26; chinalovedapp: *M*=69.07, *SD*=22.51; chinabaseapp: *M*=70.82, *SD*=24.27; estoniabaseapp: *M*=75.95, *SD*=20.52). As expected, when comparing within the same treatment group, the mean favorability ratings toward Chinese citizens were also all higher than the mean favorability ratings toward China in general.

After controlling for treatment groups, the only demographic variable that had a significant effect on participant attitudes toward Chinese citizens was political identification (p=.05).

**General Discussion**

In this paper I provide original data on how individual engagement with a China-originating product can impact American attitudes toward China. Convergent results across multiple dependent measures showed that after a hypothetical positive interaction with a Chinese app, consumers registered significantly more favorable attitudes toward China in addition to significantly less isolationist preferences regarding U.S.-China policy (Tbl. 1, Tbl. 4,). Holding all other attributes constant, simply informing American consumers that they had a positive experience using a Chinese app was enough to cause a positive and significant effect on their attitudes toward China. Moreover, assigning participants to imagine a negative experience with a Chinese-originating app and assigning participants to imagine a neutral experience with an app from Estonia were both able to significantly shift Americans to feel more warmly toward China. Second, I find that an app’s country-of-origin does not influence American consumers in their decisions to either keep or delete an app. This finding indicates that Americans may not preference against purchasing goods from foreign countries simply due to country-of-origin. Third, I find that although Americans register lower trust in Chinese apps than they do for American apps, Americans only had significantly less trust for the Base Chinese app where no details were provided about the critical reception the participant had after using the app. Given how quickly people tend to rate their purchases, it seems unlikely that this unknown ‘Base’ condition can exist in daily life, indicating that Americans may be quick to give their trust to foreign companies simply after sampling their products.

Much has been written about how economic interdependence at the macrolevel has either harmed or benefited Sino-American relations. This study provides evidence that continued interaction with Chinese products might be enough to meaningfully shift individuals to more favorably view China and economic interaction with China. Moreover, this study shows that this economic interaction effect needs not necessarily be conveyed through interaction with a Chinese product. Rather, interaction with a product from a third-party country, such as Estonia, also seems to trigger warmer feelings about China among Americans.

A potential concern with this experiment is that merely treating participants via a hypothetical vignette describing a product may be insufficient to meaningfully condition participants in the intended fashion. While I am unable to completely dismiss this possibility, I argue that, if anything, this experimental design shows the strength of the relationship between economic interaction and public opinion. Simply telling participants to imagine an experience involving a China technological product was enough to meaningfully alter American attitudes on topics ranging from favorability towards China to policy preferences about economic exchange between the United States and China. Another possible concern with this study relates to experimental design and systemic error. More specifically, the experimental treatment groups included information that was intended to provide necessary background for experimental participants, but that could have biased responses. For instance, both the American and Estonian hypothetical founders had obviously Caucasian names while the Chinese founders were Asian. Although I believe this concern is legitimate, I do not think it undermines this study’s results. Equivalent concerns about experimental design are raised for nearly every social science experiment and even more so for those conducted online. To account for these issues, I controlled for race and other demographic variables in my statistical analysis of survey results.

It is unclear as to what mechanisms are influencing this change in attitudes. I suspect that there are at least a few potential mechanisms involved. First, I believe economic interaction with a foreign-originating product can be sufficient to trigger people’s rational consideration about the benefits globalization and economic interdependence has brought to their lives. This theory is substantiated in how even the China Hated treatment and Estonia Base treatment were able to make participants have more favorable attitudes toward China, the U.S.’s largest trading partner. In sum, this potential causal mechanism argues that by priming participants to consider the nature of globalization and “complex interdependence” via exposure to a foreign company, participant attitudes toward China became more favorable because participants rationally identify China as the U.S.’s most recognizable trading partner.

Alternatively, it is possible that the USA Base control group did not operate as intended and itself affected attitudes toward China. For instance, the American app could have primed respondents to think in terms of patriotism and American exceptionalism. Previous scholars have argued that American exceptionalism is a meaningful way of defining the national American identity (Restad, 2014). Belief in American exceptionalism is so relevant in the United States, in fact, that it is often used as a litmus test for American politicians and has contributed to the U.S.’s historical adoption of a unilateral, internationalist grand strategy (Johnston, 2017). With this line of thought, it is possible that exposure to an American-made app primed feelings of patriotism and American protectionism in respondents, thereby depressing favorability towards China, an American adversary. This mechanism does not preclude the possibility that the economic interaction mechanism also had a significant effect on attitudes but provides an alternate causal pathway that theoretically could have co-existed with others.

To my knowledge, there has yet to be previous experiments conducted on how American social media sites like Facebook have influenced American attitudes about the U.S. itself or how other consumer facing companies have affected attitudes towards their originating country. With this in mind though, it is clear that American companies such as Ford, Coca-Cola, and Budweiser—among others—have embedded themselves with the American national identity through their marketing campaigns. It is possible that this relationship exists in a multidirectional nature; while these American companies prime American patriotism among Americans, they can also suggest through their advertising that Americans endorse protectionist economic policy so as to take keep America ‘exceptional.’

Of note, while I controlled for demographics in my statistical analysis, they did appear to play an outsized role in affecting how participants responded to the survey experiment. Take, for example, the political identification demographic which was significant for almost all dependent measurements included in the experiment. While both Republicans and Democrats appeared to assign similar levels of favorability to China and similar levels of assigned trust to Taply, political Independents appeared to have much lower attitudes on both fronts when comparing across treatment group (1 = Democrat, 2 = Republican, 3 = Independent).

Chart, box and whisker chart

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Future research should focus on replicating this experiment’s findings with larger sample sizes and unique designs. Due to the nature of MTurk and the limited sample size of this particular experiment, it is possible that my findings lack statistical power. Additionally, future research should consider examples of economic interaction in industries different than the emerging technology and social media industry. Previous research about “China shock” has frequently cited, in particular, the number of lost American manufacturing jobs to Chinese competition. It is questionable if equivalent findings about public opinion and trust in foreign companies would exist if this experiment, say, exposed participants to a hypothetical manufacturing company rather than a hypothetical technology company. Lastly, it would be appropriate to attempt to replicate this study’s findings via a field experiment methodology. With more Americans using Chinese-originating apps on a daily basis, it would be relatively simple to conduct a longitudinal study on whether TikTok and WeChat meaningfully alters its users’ attitudes about China over time. By conducting a field experiment, researchers would be able to confidently avoid the potential endogeneity, external validity, and systematic error issues that limit all lab and survey experiments.

Altogether, this chapter reports new evidence on how the proliferation of privately-owned Chinese products might significantly alter American attitudes toward China. Traditional theories of economic interdependence and conflict abatement assume that states make rational decisions that reflect costs and benefits or are otherwise influenced by special interests lobbying. This line of research investigates a similar phenomenon but through a very different channel, that which economic interdependence may impact relations between nations via individual level attitude change—the findings of this chapter suggests radically different implications for the future of Sino-American relations than most academics currently imagine.

On the Chinese state equation, this paper’s findings imply that the best path towards achieving increased international acceptance of Chinese leadership might not come from overt propaganda and public diplomacy efforts, but from supporting the development and introduction of popular Chinese products and companies to the broader global community. On the other hand, this paper suggests that the United States government might be justified in its attempts to limit the spread of influence of Chinese corporations operating in the U.S. By allowing these companies to gain popularity, policymakers risk not only losing more capital outflow to China but also carry the risk of creating an American population that increasingly appreciates the Chinese perspective in international disputes. With this being said, such a linkage between consumer-to-foreign company interactions and public opinion may not be a bad thing if policymakers eschew realist interpretations of international relations. Because American politics are limited and guided by domestic public opinion, it is possible that policymakers will become ‘bound’ by increasingly favorable public opinion towards China as more Chinese companies enter and gain popularity with the American market. In this scenario, as the literature on economic interdependence suggests, the future of Sino-American relations may look more like a cooperative relationship, with cooperation in both economic interaction and political relations.

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Appendix

*LOESS Regression for Favorability toward China ~ Treatment Group:*

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*LOESS Regression for Trust ~ Treatment Group:*

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*LOESS Regression for Protectionist Policy ~ Treatment Group:*

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*LOESS Regression for Keep/Delete Decision ~ Treatment Group:*

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*LOESS Regression for Favorability towards Chinese Citizens ~ Treatment Group:*

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* *Experimental survey responses and data analysis for this project are available at* [*https://github.com/jberry2/gov94ek*](https://github.com/jberry2/gov94ek)*.*

*Vignette Experimental Treatments:*

*USA Base App:*

A new American company has developed a smartphone app called **Taply** that is a social media video sharing platform. The app allows you to take and share short 15-60 second videos among friends. The app recommends videos based on an algorithm that analyses your previous video watch history (data) and makes predictions on what other, similar videos you’ll enjoy.

**Taply**was founded in 2018 by two American entrepreneurs: Trey Lynn, a graduate of Stanford University, and Jonathan Pate, a graduate of the University of California, Berkeley. **Taply** is based in the United States. The company has offices located in San Francisco, New York, Atlanta, and Chicago.

**Taply**is free to download and makes money off targeted advertisements. The company states that it donates a proportion of its profits to leading anti-poverty and environmental conservation organizations.

*China Base App:*

A new Chinese company has developed a smartphone app called **Taply** that is a social media video sharing platform. The app allows you to take and share short 15-60 second videos among friends. The app recommends videos based on an algorithm that analyses your previous video watch history (data) and makes predictions on what other, similar videos you’ll enjoy.

**Taply**was founded in 2018 by two Chinese entrepreneurs: Fang Luoyang, a graduate of Peking University, and Zhang Guiyang, a graduate of Fudan University. **Taply** is based in China. The company has offices located in Beijing, Shanghai, Chengdu, and Shenzhen.

**Taply**is free to download and makes money off targeted advertisements. The company states that it donates a proportion of its profits to leading anti-poverty and environmental conservation organizations.

*China Loved App:*

A new Chinese company has developed a smartphone app called **Taply** that is a social media video sharing platform. The app allows you to take and share short 15-60 second videos among friends. The app recommends videos based on an algorithm that analyses your previous video watch history (data) and makes predictions on what other, similar videos you’ll enjoy.

**Taply**was founded in 2018 by two Chinese entrepreneurs: Fang Luoyang, a graduate of Peking University, and Zhang Guiyang, a graduate of Fudan University. **Taply** is based in China. The company has offices located in Beijing, Shanghai, Chengdu, and Shenzhen.

**Taply**is free to download and makes money off targeted advertisements. The company states that it donates a proportion of its profits to leading anti-poverty and environmental conservation organizations.  
  
Imagine that, so far, the app has been a big hit in the United States and that it has received millions of downloads. On your best friend's recommendation you downloaded Taply last week. On the first day of your download, you couldn’t put the app down and spent hours watching and sharing videos. You really love the app and have been telling friends and family to download it every day since downloading it!

*China Hated App:*

A new Chinese company has developed a smartphone app called **Taply** that is a social media video sharing platform. The app allows you to take and share short 15-60 second videos among friends. The app recommends videos based on an algorithm that analyses your previous video watch history (data) and makes predictions on what other, similar videos you’ll enjoy.

**Taply**was founded in 2018 by two Chinese entrepreneurs: Fang Luoyang, a graduate of Peking University, and Zhang Guiyang, a graduate of Fudan University. **Taply** is based in China. The company has offices located in Beijing, Shanghai, Chengdu, and Shenzhen.

**Taply**is free to download and makes money off targeted advertisements. The company states that it donates a proportion of its profits to leading anti-poverty and environmental conservation organizations.

Imagine that, so far, the app has been a big hit so far in the United States and has received millions of downloads. You downloaded Taply last week. On the first day of your download you spent a couple minutes on the app but didn’t find it very interesting or noteworthy. After 5 minutes, you quit the app and stopped using it.  You really hate the app and have been telling friends and family not to download it every day since downloading it!

*Estonia Base App:*

A new Estonian company has developed a smartphone app called **Taply** that is a social media video sharing platform. The app allows you to take and share short 15-60 second videos among friends. The app recommends videos based on an algorithm that analyses your previous video watch history (data) and makes predictions on what other, similar videos you’ll enjoy.

**Taply**was founded in 2018 by two Estonian entrepreneurs: Jaakob Lill, a graduate of Tallinn University of Technology, and Ardi Viiding, a graduate of the University of Tartu. **Taply** is based in Estonia. The company has offices located in Tallinn, Tartu, Narva, and Pärnu.

**Taply**is free to download and makes money off targeted advertisements. The company states that it donates a proportion of its profits to leading anti-poverty and environmental conservation organizations.