

**THE PRIVATE SECTOR AND CIVIL CONFLICT: LEVERAGING ECONOMIC  
SECTORS FOR PEACE**

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# THE PRIVATE SECTOR AND CIVIL CONFLICT: LEVERAGING ECONOMIC SECTORS FOR PEACE

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To my family

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## LIST OF SYMBOLS AND ABBREVIATIONS

ABL	Association of Banks in Lebanon
ATM	Automated Teller Machine
B4P	Business for Peace
BF	Business Freedom
BLOM	Banque du Liban et D’Outre Mer
BS&S	Biosafety and Biosecurity
BSV	Bio Surveillance
CASA	Conflict Affected States in Africa Initiative
CBE	Cooperative Biological Engagement
CENTCOM	U.S. Central Command
CP2	CBRN Preparedness Program
CPIA	Country Policy and Institutional Assessment
CPS	Credit to the Private Sector
CSR	Corporate Social Responsibility
CTR	Cooperative Threat Reduction Program
DOD	U.S. Department of Defense
FCS	Fragile and Conflict-Affected situations
FCS	Fragile and Conflict Affected Situations
FCV	Fragility, Conflict & Violence State
FMF	Foreign Military Financing
FMS	Foreign Military Sales
GDP	Gross Domestic Product
IAI	Israel Aircraft Industries Ltd
IDAL	Investment Development Authority of Lebanon
IFC	International Finance Corporation
IMET	International Military Education & Training
IMF	International Monetary Fund
ISIS	Islamic State of Iraq and Syria
IT	Information and Technology
JAF	Jordan Armed Forces
JUST	Jordan University of Science and Technology
KADDB	King Abdullah II Design and Development Bureau
KIG	KADDB Investment Group
MENA	Middle East and North Africa
MoU	Memorandum of Understanding
MSME	Micro, Small and Medium Enterprises
NTS	Night Targeting System

OECD	Organization for Economic Co-operation and Development
PFITC	Prince Faisal Information Technology Center
PM	Prime Minister
PRIO	Peace Research Institute Oslo
PSD	Private Sector Development
PVE	Prevention of Violent Extremism
QIZ	Qualified Industrial Zones
QoG	Quality of Government
R&D	Research and Development
S&T	Science and Technology
SDG	Sustainable Development Goal
SME	Small and Medium Enterprises
UCDP	Uppsala Conflict Data Program
UK	United Kingdom
UN	United Nations
UNGC	UN Global Compact
US	United States of America
USAID	U.S. Agency for International Development
USN	US Department of the Navy
WMD	Weapons of Mass Destruction

## SUMMARY

My dissertation, *The Private Sector and Civil Conflict: Leveraging Economic Sectors for Peace*, aims to better understand the relationship between the private sector and peace, filling an academic gap and addressing a policy need. To this end, I undertake three interrelated research projects. The inquiries put forth and their findings seek to leverage existing policy tools to help strengthen peacebuilding and conflict prevention interventions in countries affected by conflict.

To frame the questions undertaken in this dissertation, I provide a quick overview in Chapter 1 covering the main bodies of literature that seek to understand peace and prosperity in developing countries. While metatheories of modernization, liberalism, and intuitionism have sought grand-scale explanations, they tend to assume that capitalism is part and parcel of peaceful and prosperous societies. The private sector is treated as a black box. At a more granular level, this dissertation seeks to understand how capitalism and the private sector affect the civil conflict-peace dynamic. Further, more targeted civil conflict academic work – which is more positivist and exhaustive in nature – tends to highlight economic factors (economic growth, poverty, price shocks) as drivers for conflict. Nevertheless, there is significantly less examination or theorization of how the private sector and firms can contribute to these factors. Previous approaches treat the private sector as a consumer of its environment (in terms of property rights, labor, prices, privileges). As such, this dissertation fills an analytical and theoretical gap and shifts the level of analysis to the private sector and firm-level. From this perspective, the private sector engages with labor (would-be-rebels and those with possible grievances) and governments to advance

their material interest. Better understanding the private sector- civil conflict nexus sheds light on previously unexamined areas and can help inform peacebuilding interventions in developing countries.

Notwithstanding academic work, conventional wisdom in the practitioner community states that a vibrant private sector is necessary to help secure peace in conflict-affected countries. International development agencies, for instance, have adopted private sector development as a strategy to promote peace. Despite this conviction, there is little to no evidence in the academic literature to support this claim. In chapter 2, I draw on the business and peace, and civil conflict literatures, to argue that a strong private sector through job creation and growth decreases prospective rebels' incentives to join a rebellion and eventually reduces the likelihood of civil conflict. The argument is tested by examining the effects of private sector strength, as measured by domestic credit granted to the private sector and investment climate, on the probability of civil conflict occurrence from 1995 through 2018. Statistical analysis shows that a strong private sector has a pacifying effect on civil conflict. Specifically, findings demonstrate that access to credit, rather than investment climate, is more effective at sustaining peace. I illustrate the quantitative findings with the comparative cases of Egypt and Tunisia to show the mechanism by which access to credit has higher peace dividends. These findings fill an academic gap and equip policymakers to make more effective peacebuilding interventions.

Further, the civil conflict literature tends to compare conflict nationally and does not differentiate between economic sectors, with the exception of the extractive industries. In chapter 3, I address the question of whether some economic sectors are better than others at sustaining peace. To examine firms' subnational contributions to peace or civil conflict,

I build a theoretical framework to predict economic sectors' propensity for peace. Based on the supply of factors of production in civil conflict, I deduce that economic sectors that rely on skilled labor, mobile, and high-tech equipment are more vulnerable than those that rely on unskilled, fixed, and low-tech equipment. Subsequently, I argue that firms operating in sectors vested in peace (for their bottom line) engage in peace-promoting activities. To test for differentiated effects, I conduct a focused and structured within case analysis in Lebanon examining two sectors: one vested in peace and the other peace-neutral (financial vs. quarrying sector). Analysis of fieldwork data, collected through semi-structured interviews and local news reports reveals that firms vested in peace support national policies to that effect, whereas peace-neutral business can engage in inflammatory tactics, which have occasionally led to violent conflict.

Given that knowledge and high-tech intensive economic sectors are more vested in peace than others, can existing foreign policy tools be leveraged to promote innovation in recipient economies? Chapter 4 examines the conditions under which military aid to developing countries triggers innovation. This question emanates from a puzzle in the innovation literature. Studies focused on military expenditure in the developed world show a positive relationship between military expenditure and innovation. Conversely, studies centered on military expenditure in developing countries often note the unintended, negative consequences of such expenditure (autocracy, increased coups, and the undermining of human rights). Borrowing from current literature on innovation that examines diffusion channels from the military to the national economy, this research seeks to identify a similar process in developing countries. Using a congruence test on a least-likely case, this study finds that military aid – effectively a military expenditure subsidy –

can indeed trigger the emergence of new high-tech knowledge intensive sector in a recipient economy. In Jordan, this is reflected as the emergence of an innovative domestic arms industry after its peace agreement with Israel and a major influx of U.S. military aid. Further, by dividing military aid into different sub-types and tracing and comparing their different effects, this study finds that with conducive industrial and S&T domestic policy, military aid can have secondhand virtuous effects and lead to innovation in the recipient economy.

Finally, Chapter 5 concludes by highlighting the main findings from the project, policy recommendations, and avenues for future research. Overall, this dissertation sheds light on how the private sector can help sustain peace, and how military aid – already dispatched in the billions – can be leveraged to magnify virtuous second-hand effects that work to support peace and prosperity in the long run.

# CHAPTER 1. INTRODUCTION

## 1.1 Introduction

Since 1990, civil conflict has been the most widespread type of conflict. In 2015, there were 49 intrastate conflicts as opposed to only one interstate conflict.<sup>1</sup> As a prevalent phenomenon over the past three decades<sup>2</sup>, non-governmental international organizations and aid-disbursing countries have made peace promotion in conflict-affected societies a strategic priority. Western interference in these places is driven by both altruistic intentions and security concerns. Supporting peace is considered humane, but also serves a purpose. Increased peace and stability abroad helps protect developed nations from terrorist attacks, uncontrolled refugee influx, regional destabilization, etc. Regardless of the motivation behind peace promotion, there is a liberal creed that underlines peace-building efforts in international organizations like the United Nations, the World Bank, and Western developed countries. After the collapse of the Soviet Union and the end of communism, peace-building practitioners attribute an ever-growing role to the private sector in helping support peace in countries that have experienced conflict. Thus, Private Sector Development (PSD) has emerged as a strategy to support peace. To illustrate the depth and magnitude of this conviction, the International Finance Corporation (IFC) – which is a member of the World Bank Group focused exclusively on the private sector in developing countries – has invested over \$7.6 billion cumulatively over the past 4 years in fragile and

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<sup>1</sup> Melander, Erik, Therése Pettersson, and Lotta Themnér. "Organized violence, 1989–2015." *Journal of Peace Research* 53, no. 5 (2016): 727-742. P.729

<sup>2</sup> Strand, Håvard; Siri Aas Rustad; Henrik Urdal & Håvard Mokleiv Nygård (2019) Trends in Armed Conflict, 1946–2018, *Conflict Trends*, 3. Oslo: PRIO.

conflict-affected countries alone.<sup>3</sup> The reasoning behind this investment is that the private sector in fragile environments helps spur economic growth and livelihoods, which in turn helps support peace.

Despite this deep-rooted belief among practitioners, there is little evidence and/or explicit theoretical backing to support such policy efforts and financial disbursements. Thus, practitioners have put the cart ahead of the horse and are engaging in untried and unproven interventions as far as theory and evidence are concerned. Though, this conviction is not completely baseless. It naturally emerges from several theoretical approaches. Broadly speaking, modernization and liberalism are both optimistic in their prediction that countries will eventually converge in peaceful and prosperous societies as capitalism, democracy, and free markets flourish.<sup>4</sup> Under this broad umbrella, the liberal peace and capitalist peace argue that individualism, the pursuit of wealth, increased trade, interdependence, and access to markets have a pacifying effect on society. Nevertheless, these theories and accompanying analysis have not specifically addressed the role of the private sector and business in this nexus. What does the private sector look like? How does

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<sup>3</sup> IFC's work in Fragile and Conflict-Affected Situations, 2021, IFC Ifc.org, Available at: <[https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/fcs/ifc-fcs](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/fcs/ifc-fcs)> [Accessed 19 January 2021].

<sup>4</sup> Kant, Immanuel [1795] 1996. "Toward Perpetual Peace." In *The Cambridge Edition of the Works of Immanuel Kant: Practical Philosophy*, ed. Mary Gregor. Cambridge: Cambridge University Press, pp. 311-51.; Lipset, Seymour Martin. "Some social requisites of democracy: Economic development and political legitimacy." *The American political science review* 53, no. 1 (1959): 69-105.; Keohane, Robert O., and Joseph S. Nye Jr. "Power and interdependence." *Survival* 15, no. 4 (1973): 158-165.; Doyle, Michael W. "Three pillars of the liberal peace." *American political science review* (2005): 463-466. Russett, Bruce, Christopher Layne, David E. Spiro, and Michael W. Doyle. "The democratic peace." *International Security* 19, no. 4 (1995): 164-184. Gartzke, Erik. "The capitalist peace." *American journal of political science* 51, no. 1 (2007): 166-191.; Mousseau, Michael. "Coming to terms with the capitalist peace." (2010): 185-192.; Schneider, Gerald, and Nils Petter Gleditsch. "The capitalist peace: The origins and prospects of a liberal idea." *International Interactions* 36, no. 2 (2010): 107-114.; Mousseau, Michael. "Capitalist development and civil war." *International Studies Quarterly* 56, no. 3 (2012): 470-483.; Mousseau, Michael. "Market prosperity, democratic consolidation, and democratic peace." *Journal of Conflict Resolution* 44, no. 4 (2000): 472-507.

it flourish? How might firms contribute to peace? What is the causal mechanism by which the private realm can contribute to peace? These questions are further developed and addressed in my dissertation project. Further, the more recent civil conflict literature has concerned itself with explaining the outbreak of conflict.<sup>5</sup> This literature tends to highlight economic factors and how those affect would-be rebel calculus and government capacity to suppress violent rebellion. Here too, the analysis stops short of explicitly including the private sector. How does the private sector contribute to rebel calculus? Under what circumstance does the private sector and/or businesses lobby the government for peace (or violence)? There is an understanding in the civil conflict literature that lootable natural resources can enhance a country's likelihood to succumb to conflict. But, how about other economic sectors? Are some businesses – operating within certain economic sectors – better positioned to support peace in fragile environments? And if so, what existing policy tools— specifically military aid - can be leveraged to spur innovation in economic sectors with higher propensity for peace. These questions and ideas are further developed and tested in the dissertation.

To tackle these questions, I organize my dissertation in the following manner. First in this chapter (Chapter 1), I synthesize the main bodies of literature that seek to explain peace and prosperity, beginning with the metatheories of modernization, liberalism, and

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<sup>5</sup> Chatagnier, J. Tyson, and Emanuele Castelli. "The arc of modernization: Economic structure, materialism, and the onset of civil conflict." *Political Science Research and Methods* 7, no. 2 (2019): 233-252.; Collier, Paul, and Anke Hoeffler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595.; Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90.; Mousseau, Michael. "Capitalist Development and Civil War1." *International Studies Quarterly* 56, no. 3 (2012): 470-483; De Soysa, Indra, and Hanne Fjelde. "Is the hidden hand an iron fist? Capitalism and civil peace, 1970-2005." *Journal of Peace Research* 47, no. 3 (2010): 287-298.

intuitionism and covering the more recent positivist work on civil conflict and normative approaches in the business and peace literature. In Chapter 2, I draw on the business and peace, and civil conflict literatures, to argue that a strong private sector through job creation and growth decreases prospective rebels' incentives to join a rebellion and eventually reduces the likelihood of civil conflict. The argument is tested by examining the effects of private sector strength, as measured by domestic credit granted to the private sector and investment climate, on the probability of civil conflict occurrence from 1995 through 2018. Statistical analysis shows that a strong private sector has a pacifying effect on civil conflict. However, access to credit, rather than investment climate, is more effective at sustaining peace. I illustrate the quantitative findings with the comparative cases of Egypt and Tunisia to show how access to credit has higher peace dividends.

In chapter 3, I dissect the private sector into different sub-types to show that not all economic sectors and business clusters have the same interest in peace in fragile societies. To examine firms' subnational contributions to peace or civil conflict, I build a theoretical framework to predict economic sectors' propensity for peace. Based on the supply of factors of production in civil conflict, I deduce that economic sectors that rely on skilled labor, mobile, and high-tech equipment are more vulnerable than those that rely on unskilled, fixed, and low-tech equipment. Subsequently, I argue that firms operating in sectors vested in peace (for their bottom line) engage in peace-promoting activities. To test for differentiated effects, I conduct a focused and structured within case analysis in Lebanon examining two sectors: one vested in peace and the other peace-neutral (financial vs. quarrying sector). Analysis of fieldwork data, collected through semi-structured interviews and local news reports reveals that firms vested in peace support national

policies to that effect, whereas peace-neutral business can engage in inflammatory tactics, which have occasionally led to violent conflict.

Given that knowledge and high-tech intensive economic sectors are more vested in peace than others, can existing foreign policy tools be leveraged to promote innovation in recipient economies? Chapter 4 examines under what conditions can military aid to developing countries trigger innovation. Using a congruence test on a least-likely case, this study finds that military aid – effectively a military expenditure subsidy – can indeed trigger the emergence of new high-tech knowledge intensive sector in a recipient economy. In Jordan, this is reflected as the emergence of an innovative domestic arms industry after its peace agreement with Israel and a major influx of U.S. military aid. Further, by dividing military aid into different sub-types and tracing and comparing their different effects, this study finds that with conducive industrial and S&T domestic policy, military aid can have secondhand virtuous effects and lead to innovation in the recipient economy.

Finally, Chapter 5 concludes by highlighting the main findings from the project, policy recommendations, and avenues for future research. Overall, this dissertation sheds light on how the private sector can help sustain peace in fragile societies, and how military aid – already dispatched in the billions – can be leveraged to magnify virtuous second-hand effects that work to support peace and prosperity in the long run.

In each chapter, there is a synthesis of the immediate scholarly work that is pertinent to the question at hand. In this chapter, however, I take a step back and place the dissertation's empirical and theoretical contributions in a broader context.

Throughout my analysis though, I purposely focus on mutable independent variables. The ultimate goal of the research and analyses is to influence policy and generate actionable recommendations to governments and aid organizations to help support peace in conflict affected societies. Though parsimony and explanatory power tend to be traditionally valued, I prioritize variables that can be manipulated by policymakers in the short-term, knowing that they might have lower explanatory power than others. By design, because the selected independent variables for this project can be humanly calibrated, findings can inform policy and decision making to help advance peace in fragile environments. Thus, while seeking to better understand the causes behind civil conflict and sustained peace, this research is skewed in favor of explanatory factors that can be tweaked by policymakers and aid organizations to have an effect (however small) on civil conflict outcomes. Notoriously, mountainous terrain is associated with increased risk of civil conflict. That is useful for increasing our theoretical understanding of conflict. Yet, there are few policy implications that emerge from this finding. From this project's perspective, understanding how relevant and alterable variables interact with civil conflict is essential to help drive policy change and hopefully tangible impact, however modest.

In this chapter, I situate the private sector and its contribution (or detractions from) peace in the broader theoretical and empirical work. For analytical purposes, I bundle three separate approaches to the understanding of civil conflict: the classical, the positivist, and the normative. From the private sector lens, I highlight the theoretical and analytical gaps in each perspective and briefly outline how subsequent chapters contribute to bridging the knowledge and analytical gap.

## 1.2 Classical Perspectives and Metatheories: Modernization, Liberalism, Institutionalism

Metatheories rooted in modernization and its more recent offshoot liberalism would have universally predicted increasingly peaceful societies. As societies transition away from traditional ways of being, economies liberalize, and governments become more austere in compliance with neoliberal prescriptions – as put forth by the Washington Consensus<sup>6</sup> – countries will become more prosperous and eventually culminate in liberal and or capitalist<sup>7</sup> peace, both internally and across borders.<sup>8</sup>

In this optimistic vein, economic currents will naturally bring about a steady state of wealth and peace to all counties, irrespective of their stage of development. This belief emanates from Adam Smith’s economic theory of social and political change.<sup>9</sup> As the economy becomes more sophisticated and technologically advanced it will trigger economic growth. In the long run, as society becomes more complex and scarcities

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<sup>6</sup> Williamson, John. *Latin American Adjustment: How Much Has Happened?* Institute for International Economics, 1990

<sup>7</sup> Gartzke, Erik. "The capitalist peace." *American Journal of Political Science* 51, no. 1 (2007): 166-191.; Mousseau, Michael. "Coming to terms with the capitalist peace." (2010): 185-192.; Schneider, Gerald, and Nils Petter Gleditsch. "The capitalist peace: The origins and prospects of a liberal idea." *International Interactions* 36, no. 2 (2010): 107-114.; Mousseau, Michael. "Capitalist development and civil war." *International Studies Quarterly* 56, no. 3 (2012): 470-483.; Mousseau, Michael. "Market prosperity, democratic consolidation, and democratic peace." *Journal of Conflict Resolution* 44, no. 4 (2000): 472-507.

<sup>8</sup>Kant, Immanuel [1795] 1996. "Toward Perpetual Peace." In *The Cambridge Edition of the Works of Immanuel Kant: Practical Philosophy*, ed. Mary Gregor. Cambridge: Cambridge University Press, pp. 311-51.; Lipset, Seymour Martin. "Some social requisites of democracy: Economic development and political legitimacy." *The American political science review* 53, no. 1 (1959): 69-105.; Keohane, Robert O., and Joseph S. Nye Jr. "Power and interdependence." *Survival* 15, no. 4 (1973): 158-165.; Doyle, Michael W. "Three pillars of the liberal peace." *American political science review* (2005): 463-466. Russett, Bruce, Christopher Layne, David E. Spiro, and Michael W. Doyle. "The democratic peace." *International Security* 19, no. 4 (1995): 164-184.

<sup>9</sup> Smith, Adam. *The wealth of nations* [1776]. Book I, chapter 2 (“*self-love*”); Book IV, chapter 2, paragraph 9 (“*invisible hand*”); Book 4, chapter 9, paragraph 51 (“*duties of the sovereign*”). [https://www.ibiblio.org/ml/libri/s/SmithA\\_WealthNations\\_p.pdf](https://www.ibiblio.org/ml/libri/s/SmithA_WealthNations_p.pdf)

diminish, states will revert to less coercion and this will increase social peace.<sup>10</sup> Further adopting this natural evolution of political development, Lipset argues that democracy is contingent on the state of economic development. Wealth, industrialization, and urbanization are propellers of stable democracy.<sup>11</sup> Similarly – in contrast to communism – Rostow explains that every society will go through five stages of economic growth. Linearly, society evolves from “traditional,” characterized by subsistence level economic activity, to “modern,” characterized by industrialism, low birth rates, high income in the hand of investors, commerce, and efficiency. This economic evolution culminates in prosperity and social peace for everyone.<sup>12</sup> This linear approach fails to explain why developing countries have lagged behind in terms of economic growth and fallen into civil conflict and authoritarianism. These perspectives also lack the granularity to understand how divergent sectors “traditional” and “modern” can coexist in the same country and have varying effects when it comes to civil conflict. Despite the faith vested in capitalism and markets, there is no discussion on the role of the private sector and firms and how these contribute to the capitalist propeller for peace (or conflict).

Regardless, as early modernization thinkers sought to extract universal lessons from the emergence of the West as peaceful, prosperous, capitalist and democratic societies, these universal rules did not seem to apply to the newly independent and developing world. For example, these perspectives failed to explain developing countries lack of growth and many falling into civil violent conflict. Thus, critics of early

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<sup>10</sup> Janos, Andrew C. *Politics and paradigms: Changing theories of change in social science*. Stanford University Press, 1986. p.10.

<sup>11</sup> Lipset, Seymour M., *Political Man*, Garden City, N.Y., 1960

<sup>12</sup> Rostow, Walt W. "The stages of economic growth." *The Economic History Review* 12, no. 1 (1959): 1-16.

modernization theory such as Moore, Huntington, and North no longer accepted peace, democracy, and economic development as a naturally bundled package. They saw development as a muddled journey, with possibilities for civil strife, violence and authoritarian government. Both Samuel Huntington and Moore see violence and conflict to be almost inevitable, be it through modernizing economies or democratization.

Samuel Huntington criticized modernization theory for its naiveté in assuming that economic change will engender the desired development (peaceful prosperous democracies). In contrast to the conventional wisdom of his day, he argued that economic development in developing countries will bring about instability and violence rather than peace and democracy. “Modernity breeds stability, but modernization breeds instability.”<sup>13</sup> For Huntington, rapid social change triggered by economic development leads to a large urban population, cut from its original social ties, which will mobilize for political rights. This movement coupled with slow development of political institutions leads to increased violence and instability. Thus, for Huntington, without well established political institutions to help mitigate these tensions, violence is inevitable. Despite the added nuance, this perspective fails to dissect the effects of the private sector on potential rebellious urban dwellers and business sector interests when it comes to engaging in violent conflict. How does the private sector influence/employ recently urbanized migrant workers? Thus, how might the private sector affect these individuals’ calculus to engage in rebellion and/or violent conflict? How might the private sector lobby the governing authorities for peace (or conflict)? These questions are addressed in chapters 2 and 3. This study focuses on the role of the private sector, to the extent that political institutions and governing structures

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<sup>13</sup> Huntington, Samuel P. *Political order in changing societies*. Yale University Press, 1968. P.41

can be held constant or tend to change slowly/rarely. Governance explanatory variables – especially dummy variables for democracy or authoritarianism – are found to have no statistical significance in exhaustive quantitative analyses.<sup>14</sup> Democracies are not necessarily more peaceful than autocratic regimes. Thus, there is a dominant voice that argues that democracy is not a force for peace but rather economic factors (such as growth, level of income, etc.) are better predictors of civil conflict.<sup>15</sup>

With the rise of authoritarianism and military coups in the decades after World War II, critics emerged to explain the advent of authoritarianism. Democracy was no longer viewed as the universal byproduct of economic development. Moore and O'Donnell are some critics who argue that authoritarianism can emerge in the wake of industrialization and economic development.<sup>16</sup> O'Donnell focused on explaining the rise of authoritarianism in South America, whereby industrialization resulted in bureaucratic authoritarianism, which was led by modern technocrats.<sup>17</sup> Moore focused on political development and the emergence of different types of political ruling models. In his comparative analysis he seeks to better understand the advent of democracy and authoritarianism outside the West. Though he looks at the democratic and capitalist route to modern age in England, France,

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<sup>14</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90. P. 84; Collier, Paul, and Anke Hoeffler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595. p.580. <sup>14</sup> Mousseau, Michael. "Capitalist Development and Civil War1." *International Studies Quarterly* 56, no. 3 (2012): 470-483. P. 480.; Hegre, Håvard, and Nicholas Sambanis. "Sensitivity analysis of empirical results on civil war onset." *Journal of conflict resolution* 50, no. 4 (2006): 508-535.

<sup>15</sup> This is not to say that the debate is resolved. There are some studies that show that partial democracies and anocracies can be more prone to civil war than complete autocracies or democracies because they tend to lack the capacity to quell rebellion. Hegre, Håvard, and Nicholas Sambanis. "Sensitivity analysis of empirical results on civil war onset." *Journal of conflict resolution* 50, no. 4 (2006): 508-535. P. 531; Gleditsch, Nils Petter, Havard Hegre, and Havard Strand. 2009. 'Democracy and Civil War'. In Manus I. Midlarsky (ed.), *Handbook of War Studies III*, 155–92. Ann Arbor, MI: University of Michigan Press

<sup>16</sup> O'Donnell, Guillermo. *Bureaucratic authoritarianism*. University of California Press, 1988.

<sup>17</sup> O'Donnell, Guillermo. *Bureaucratic authoritarianism*. University of California Press, 1988.

and The US, he also examines political development in countries in the East: Japan, China, and India (fascism, communism, parliamentary democracy).<sup>18</sup> For Moore, economic class relations determined political outcome (democracy or dictatorship). Inspired by Marxist ideas of class and structure, he finds that the political outcome will depend on social configuration and political coalitions inside the country. For example, commercialization and revolution combined will lead to democracy - the agrarian entrepreneur and the urban bourgeois together strive for democracy. Whereas, the traditional seigneur allied to the industrialist will be a coalition for fascism. For this project, the major takeaway from Moore's work is that democracy is not necessarily the end point for all societies (at least in the short term). And, based on the cases of England, France, and the US, violent revolution is not necessarily antithetic to democracy. Actually, violence may be necessary to dislodge traditional interests and pave the way to democratization.

Further, as it relates to this project, Moore sees that certain alliances can bring about violent revolution and democracy. Even though he distinguishes between agricultural elites and urban elites, he does not look at the private sector as a whole nor does he distinguish between different economic sectors, outside of them being rural or urban. Borrowing from the social configuration and class alliances approach to the advent of democracy, I use a similar approach to understand different economic sectors' – including but not restricted to agriculture and industry - interest in peace and how they might ally themselves or lobby governments for peace (or conflict). Using Moore's basic notion that economic interests underpin political and social alliances, I build a general theoretical framework in chapter 3

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<sup>18</sup> Barrington Moore. 1966. *Social Origins of Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World*. Boston: Beacon Press,

to help determine an economic sector's propensity for peace based on its material interests. From this starting point, I test to see whether some business clusters, which are typically overlooked actors, can be more peace-promoting than others. And how, depending on their material interest, might they behave as a force for peace.

Dovetailing with modernization critics, Douglas North – incorporating a political economy lens – is wary of neoclassical economic optimism. Four decades after World War Two, he is looking to explain the divergence in economic performance among nations.<sup>19</sup> At the root of this divergence are institutional structures within countries.<sup>20</sup> In *Structure and Change in Economic History*, Douglas North seeks to explain the institutional structure which underlies and accounts for economic performance and how it can change or remain stable over time. He first challenges the neoclassical model by dissecting some of its basic assumptions. The neoclassical model assumes zero transaction cost, free information, and no uncertainty. Further, this model treats the state as a black box, and therefore an inconsequential actor. Thus, if zero transaction cost, free information, and no uncertainty were to hold true across the board, markets and the change in relative price drive rational profit-maximizing individuals functioning within a benign state that maximizes wealth for society.<sup>21</sup> However, according to North, this parsimonious and static approach fails to explain the change and divergence we see in history. Therefore, he introduces the notion of institutions – defined as humanly devised constraints that structure political, economic, and social interaction” – to present a more dynamic theory.<sup>22</sup>

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<sup>19</sup> North, Douglass C. *Institutions, institutional change and economic performance*. Cambridge university press, 1990. North, Douglass Cecil. *Structure and change in economic history*. Norton, 1981.

<sup>20</sup> North, Douglass Cecil. *Structure and change in economic history*. Norton, 1981.

<sup>21</sup> North, Douglass Cecil. *Structure and change in economic history*. Norton, 1981. P. 22

<sup>22</sup> North, Douglass C. "Institutions." *Journal of economic perspectives* 5, no. 1 (1991): 97-112. p.97

Challenging the classical assumptions, he builds on the theory of property rights, which describes individual and group incentives in the system and the theory of the state, which specifies and enforces these property rights.<sup>23</sup> Property rights emerge from negotiations between the ruler and those who want to exchange, to reduce transaction costs and uncertainty. Further, the state is not a neutral force. But rather, it has a comparative advantage in violence to enforce property rights, tax constituents, and seeks to maximize rents.<sup>24</sup> The state might even engage in violence to gain control over certain resources. As a result of state interest and this unequal distribution of violence, inefficient property rights tend to emerge. These inefficient property rights fail to produce sustained economic growth, and in turn threaten the stability of the state.<sup>25</sup> This inherent tension eventually leads to economic decline, which can be accompanied by violent conflict as ruling factions seek to assert control over resources.

Thus, the tension between rent maximizing rulers and an efficient system is the fundamental dichotomy and root cause of the failure of societies to experience sustained economic growth. Interestingly, there is an unsteady inefficient equilibrium whereby states provide the underlying rules of the game (either through unwritten customs or a written constitution), even though these are less than optimal for society.<sup>26</sup> Historically, even an exploitative state is better than anarchy. Any set of rules tends to be better than none. Nevertheless, states are not oblivious to the motivations of individual actors. It is not in a ruler's interest to make the rules such as to stifle all economic activity altogether.<sup>27</sup>

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<sup>23</sup> North, Douglass Cecil. *Structure and change in economic history*. Norton, 1981. P. 17

<sup>24</sup> North, Douglass Cecil. *Structure and change in economic history*. Norton, 1981. P.21

<sup>25</sup> North, Douglass Cecil. *Structure and change in economic history*. Norton, 1981. P.29

<sup>26</sup> Weingast, Barry R. "The economic role of political institutions: Market-preserving federalism and economic development." *Journal of Law, Economics, & Organization* (1995): 1-31

<sup>27</sup> North, Douglass Cecil. *Structure and change in economic history*. Norton, 1981. P.24

Therefore, the state is constantly attempting to extract what it can get away with, without completely asphyxiating economic productivity.

Though North focuses on the tension between the state's desire to extract rents and the need for efficient property rights (to sustain the extraction), his perspective mostly centers on the individual on one side and the state/ruling institutions on the other. He does not explicitly address the role of the private sector, firms, or business clusters as independent actors. Rather, they are treated as consumers of property rights. However, inspired by Moore's approach, these organized businesses (which in themselves are a class of society) will organize and lobby the state to advance their material interest. Thus, they can be considered as social and political agents that seek to influence government behavior (either promoting peace or conflict) to further their profit-maximizing interests. This concept is fleshed out in Chapter 3, where I develop a theory explaining different economic sectors' propensity for peace, based on their factors of production.

North's work on institutions has served as a precursor to theories on property rights as developed by Hernando De Soto and inclusive institutions as developed by Acemoglu and Robinson. De Soto's work, focuses on the need for legal rights to help transform assets into capital. However, his findings result in supply-driven recommendations whereby the state should provide legal rights.<sup>28</sup> Yet, what is their incentive to do so? What is the role of businesses in advocating for these rights? Further, recent work by Acemoglu and Robinson culminates in the finding that inclusive institutions are the key to economic development (implicitly peace and prosperity). These institution-inspired frameworks tend

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<sup>28</sup> De Soto, Hernando. *The mystery of capital: Why capitalism triumphs in the West and fails everywhere else*. Basic Books, 2000.

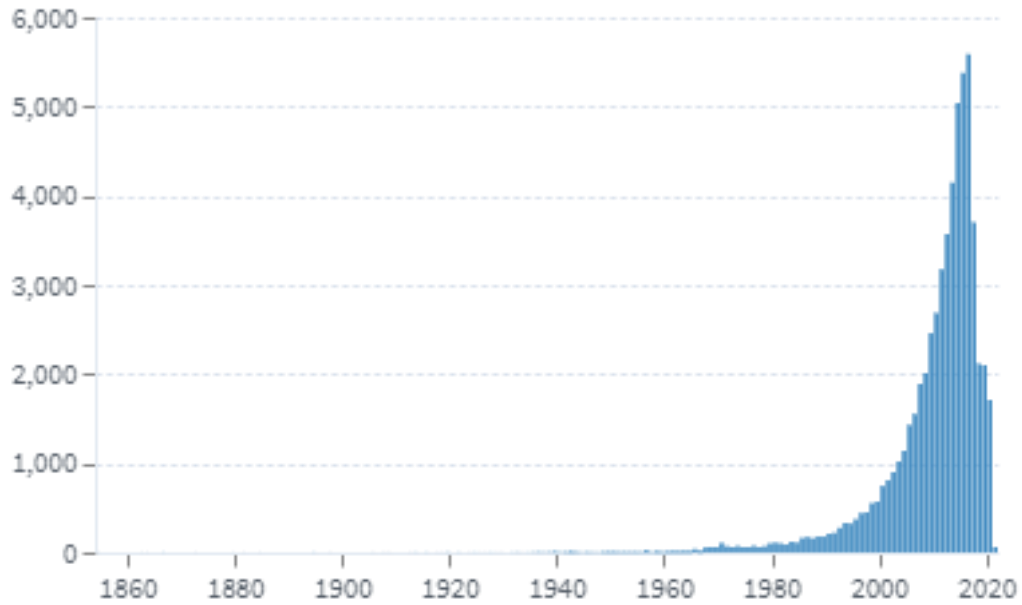
to focus on individual incentives on one end, and governing institutions (be they inclusive or extractive) on the other. They treat the private sector or businesses as consumers of the environment and not as actors that can potentially shape individual/state behavior. For example, Acemoglu and Robinson seek to explain the emergence of a Bill Gates in the Unites States vs a Carlos Slim in Mexico. Yet, they do not consider how in turn, businesses/firms/tycoons affect the calculus of individuals or lobby the state to advance their interests. This is where this project seeks fill the theoretical void. Similar questions are addressed in Chapter 3, whereby business clusters are considered as potential agents for change that lobby the state for a certain outcomes (be it peace or conflict). Again, aside from the need for property rights or inclusive institutions, it is unclear what a vibrant private sector would look like. So, Chapter 2 seeks to define a healthy private sector and tests the leap of faith that a strong private sector can help sustain peace in conflict affected societies.

In short, the metatheories of modernization (and their critics), liberalism, and institutionalism, implicitly assume that capitalism and the private sector coupled with the right institutions will lead to peace, prosperity, and democracy. However, when it comes to the private sector, the theories are shallow in their understanding of what a healthy private sector should look like and how it might contribute to long term peace. Thus, Chapter 2 seeks to define the concept of a vibrant private sector, build a causal mechanism by which a strong private sector can sustain peace, and finally tests this widely held assumption. Further these theories have failed to consider business clusters as social and political agents for change. They have been treated as consumers of property rights. However, the question emerges: are some business more prone than others to lobby for peace and stability? Chapter 3 fills this void by developing a theory on economic sectors'

propensity for peace and tests to see whether some businesses engage in more peace-promoting activities. Finally, Chapter 4, explores ways to leverage existing foreign policy tools (namely military aid) to spur innovation in the peace-promoting economic sectors.

### **1.3 Positivist Perspectives: Civil Conflict**

Compared to the metatheories discussed above, a burgeoning literature on civil conflict has emerged to explain the outbreak of civil conflict. The metatheories were largely concerned with explaining world divergence across countries in terms of economic growth or democratization. Civil conflict, from those perspectives, was bundled with other ailments such as traditional social structures, exclusive institutions, and economic stagnation. Conversely, the civil conflict literature, which takes off after 1990 (see Figure 1), operates at the middle-range level and seeks to more discretely explain and predict the outbreak of civil conflict. This more recent literature is characterized by a positivist and empirical approach.



**Figure 1 - Scholarly Works on Civil Conflict<sup>29</sup>**

A detailed literature review is provided in chapter 2. But, to briefly synthesize, the outbreak of civil conflict is largely explained by two main factors: (1) the individual's calculus to engage in rebellion – namely the opportunity cost to rebel and (2) state capacity to suppress violent uprisings.<sup>30</sup> Though the role of institutions and democracy are debated, there is a broad consensus that economic explanatory factors tend to better predict the outbreak of civil conflict. The foundational works of Fearon and Laitin (2003) and Collier and Hoeffler (2004) find that economic variables such as per capita income and economic growth (rather than inequality, ethnic composition, or democracy) help better explain the outbreak of conflict as they affect rebel movements ability to recruit members and state

<sup>29</sup> Scholarly works on Civil Conflict, Lens.org, accessed on February 9, 2021: Search Results (lens.org)

<sup>30</sup> Chatagnier, J. Tyson, and Emanuele Castelli. "The arc of modernization: Economic structure, materialism, and the onset of civil conflict." *Political Science Research and Methods* 7, no. 2 (2019): 233-252.

capacity to quell rebellion.<sup>31</sup> Further, quantitative work on capitalist peace finds that market capitalism (contract-intensive countries)<sup>32</sup> and economic freedom<sup>33</sup> generate citizen-wide preference for peace that are more significant than good governance, institutional strength, and democracy. Despite these findings, this body of literature offers no granular explanation of the role of the private sector specifically and how it interacts with the relevant variables that correlate with civil conflict.

This is not to say that there has been no expansive work on the micro-dynamics of civil conflict. There is a body of work that is dedicated to understanding individual behavior and motivations to engage violence in civil conflict. For example, Kalyvas' work dissects violence in civil war at the level of individual behavior.<sup>34</sup> In contrast to the civil conflict literature that generally focuses on macroeconomic motivations, Kalyvas' analysis adopts the micro/individual level of analysis. He explores the logics of asymmetric information and local dynamics of rivalries to predict the likelihood of violence.<sup>35</sup> He finds that violence is most likely to occur where one actor is near hegemonic, as in where the organizational demand for information meets its individual supply.<sup>36</sup> Similarly, Sambanis

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<sup>31</sup> Collier, Paul, and Anke Hoefler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595.; Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90.

<sup>32</sup> Mousseau, Michael. "Capitalist Development and Civil War1." *International Studies Quarterly* 56, no. 3 (2012): 470-483;

<sup>33</sup> De Soysa, Indra, and Hanne Fjelde. "Is the hidden hand an iron fist? Capitalism and civil peace, 1970-2005." *Journal of Peace Research* 47, no. 3 (2010): 287-298.

<sup>34</sup> Kalyvas, Stathis N. *The logic of violence in civil war*. Cambridge University Press, 2006. Retrieved <https://rodrigomorenog.files.wordpress.com/2019/02/kalyvas-the-logic-of-violence-in-civil-war-cambridge-university-press-2006.pdf>

<sup>35</sup> Kalyvas, Stathis N. *The logic of violence in civil war*. Cambridge University Press, 2006. P. 6. Retrieved <https://rodrigomorenog.files.wordpress.com/2019/02/kalyvas-the-logic-of-violence-in-civil-war-cambridge-university-press-2006.pdf>

<sup>36</sup> Kalyvas, Stathis N. *The logic of violence in civil war*. Cambridge University Press, 2006. P. 13. Retrieved <https://rodrigomorenog.files.wordpress.com/2019/02/kalyvas-the-logic-of-violence-in-civil-war-cambridge-university-press-2006.pdf>; HUMPHREYS, MACARTAN, and JEREMY M. WEINSTEIN. "Handling and Manhandling Civilians in Civil War." *American Political Science Review* 100, no. 3 (2006): 429-47;

uses case studies to help link individual motives with broader conflict outcomes.<sup>37</sup> Justino, links the economic well-being of households/individuals and their decisions to participate in violent conflict.<sup>38</sup> On the micro-level as well, other work explores the politics of insurgent violence to better understand the structure of rebel organizations and their strategies, which include violence against noncombatants – in contrast to state based violence.<sup>39</sup> Weinstein finds that a rebel group’s initial endowments shapes how it ultimately uses violence. If a rebel group emerges in a context that is abundant in natural resources or with external sources of funding and support it tends to engage in higher levels of indiscriminate violence.<sup>40</sup> Other work indicates that higher levels of abuse against citizens are a result of warring groups’ difficulty to police their member’s behavior.<sup>41</sup>

Even the work that addresses micro-level explanations, fails to examine how the private sector and businesses can influence individual, rebel groups, and/or government calculus when it comes to peace or violent conflict outcomes. These authors look at the role of political actors, rebel organizations and individuals. There is no discussion of the role of the private sector and businesses and their potential ability to affect these more traditionally studied actors’ calculi.

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<sup>37</sup> Sambanis, Nicholas. "Using case studies to expand economic models of civil war." *Perspectives on Politics* 2, no. 2 (2004): 259-279. P.272

<sup>38</sup> Justino, Patricia. "Poverty and violent conflict: A micro-level perspective on the causes and duration of warfare." *Journal of Peace Research* 46, no. 3 (2009): 315-333.

<sup>39</sup> Weinstein, Jeremy M. *Inside rebellion: The politics of insurgent violence*. Cambridge University Press, 2006.

<sup>40</sup> Weinstein, Jeremy M. *Inside rebellion: The politics of insurgent violence*. Cambridge University Press, 2006. P.7

<sup>41</sup> HUMPHREYS, MACARTAN, and JEREMY M. WEINSTEIN. "Handling and Manhandling Civilians in Civil War." *American Political Science Review* 100, no. 3 (2006): 429–47

Thus, to fill this void, this study seeks to better understand whether the private sector can shape would-be rebel's calculus to engage in conflict by providing employment opportunities, and lobby government for peaceful solutions to violent conflict? Chapter 2 addresses these gaps by explicitly building a causal mechanism that links the private sector with economic factors that drive conflict – such as employment opportunity – and quantitative statistical testing to see whether indeed, the private sector can help pacify societies that have experienced conflict.

Furthermore, and elaborated upon in Chapter 3, the civil conflict literature has focused its sectoral lens on extractive industries. Many studies have found that the presence of lootable natural resources can exacerbate conflict – a perspective that can be summarized by various iterations of the resource curse. The production and/or export of oil,<sup>42</sup> mining,<sup>43</sup> drugs,<sup>44</sup> diamonds,<sup>45</sup> have all been considered as explanatory factors and drivers of conflict. Findings underline that the presence of natural resources can increase the likelihood of conflict and lootable commodities can prolong conflicts that have already began.<sup>46</sup>

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<sup>42</sup> Ohmura, Hirotaka. "Natural resources and the dynamics of civil war duration and outcome." *Asian Journal of Comparative Politics* 3, no. 2 (2018): 133-148; Koos, Carlo, and Jan Pierskalla. "The effects of oil production and ethnic representation on violent conflict in Nigeria: a mixed-methods approach." *Terrorism and political violence* 28, no. 5 (2016): 888-911.; Collier, Paul, and Anke Hoeffler. "Resource rents, governance, and conflict." *Journal of conflict resolution* 49, no. 4 (2005): 625-633.

<sup>43</sup> Switzer, Jason. "Armed conflict and natural resources: The case of the minerals sector." *London: International Institute for Environment and Development* (2001). Accessed August 30 2019. [https://www.iisd.org/pdf/2002/envsec\\_mining\\_conflict.pdf](https://www.iisd.org/pdf/2002/envsec_mining_conflict.pdf).

<sup>44</sup> Rettberg, Angelika, and Juan Felipe Ortiz-Riomalo. "Golden opportunity, or a new twist on the resource–conflict relationship: Links between the drug trade and illegal gold mining in Colombia." *World Development* 84 (2016): 82-96; Monteleone, Carla. "Do terrorism, organized crime (drug production), and state weakness affect contemporary armed conflicts? An empirical analysis." *Global Change, Peace & Security* 28, no. 1 (2016): 35-53.; Piazza, James A. "The opium trade and patterns of terrorism in the provinces of Afghanistan: An empirical analysis." *Terrorism and Political Violence* 24, no. 2 (2012): 213-234.

<sup>45</sup> Lujala, Päivi, Nils Petter Gleditsch, and Elisabeth Gilmore. "A diamond curse? Civil war and a lootable resource." *Journal of Conflict Resolution* 49, no. 4 (2005): 538-562.;

<sup>46</sup> Ross, Michael L. "What do we know about natural resources and civil war?." *Journal of peace research* 41, no. 3 (2004): 337-356.

Nevertheless, there is a general blind spot when it comes to the effects of other economic sectors and how those contribute to the conflict calculus. Modernization theory posits a linear trajectory when it comes to economic development, whereby a traditional society is characterized by an agrarian economy and modern society is characterized by advanced economic sectors focused on trade and services. However, in developing countries, “primitive” and “advanced” sectors (like subsistence agriculture and financial capital markets) tend to co-exist. Given heterogenous economic landscapes, how might different economic sectors influence the prospect for peace or conflict? To address this gap in the literature, in chapter 3, I build a theoretical framework to determine different economic sector’s propensity for peace. Deductively, based on factor of production input and profit-maximizing rational incentives, I theorize that some economic sectors can be better than others at sustaining peace in post-conflict societies. This hypothesis is tested in a qualitative interview-based case-study in Lebanon.

#### **1.4 Normative Perspectives: Business and Peace**

In contrast to the civil conflict literature, the business and peace body of work – which is relatively recent – emerges mostly from management schools and focuses on the positive role business should play in promoting peace in conflict affected societies. Nevertheless, this literature remains quite theoretical and normative in its prescriptions. It relies heavily on anecdotal evidence and does not systematically test the relationship between the private sector and peace – be it through qualitative or quantitative methods.<sup>47</sup> As such, this study systematically builds a causal mechanism linking business and the

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<sup>47</sup> Forrer, John J., and John E. Katsos. "Business and peace in the buffer condition." *Academy of Management Perspectives* 29, no. 4 (2015): 438-450.

private sector with peace. A strong private sector, with expanding businesses and more medium and small enterprises, through job creation and growth decreases prospective rebels' incentives to join a rebellion. This in turn reduces the likelihood of civil conflict. The argument is tested in Chapter 2 by examining the effects of private sector strength, as measured by domestic credit granted to the private sector and investment climate, on the probability of civil conflict occurrence.

Chapter 2 also provides a more detailed literature review on this front, but the business and peace literature, fits into the larger liberal approach to building peaceful societies and accepts the premise that capitalism and free markets are foundational for peace. However, the unit of analysis differs from the classics and the civil conflict literatures. This perspective takes a more granular approach – the firms can be important actors for forging peace. Notwithstanding an overarching acknowledgement that some private business activity can have a negative role in prolonging conflict, especially when it comes to lootable natural resources<sup>48</sup> – for example the Democratic Republic of Congo being a notorious case<sup>49</sup> – there is a consensus that generally the private sector is crucial

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<sup>48</sup> Ohmura, Hirotaka. "Natural resources and the dynamics of civil war duration and outcome." *Asian Journal of Comparative Politics* 3, no. 2 (2018): 133-148; Koos, Carlo, and Jan Pierskalla. "The effects of oil production and ethnic representation on violent conflict in Nigeria: a mixed-methods approach." *Terrorism and political violence* 28, no. 5 (2016): 888-911.; Collier, Paul, and Anke Hoeffler. "Resource rents, governance, and conflict." *Journal of conflict resolution* 49, no. 4 (2005): 625-633. Switzer, Jason. "Armed conflict and natural resources: The case of the minerals sector." *London: International Institute for Environment and Development* (2001). Accessed August 30 2019. [https://www.iisd.org/pdf/2002/envsec\\_mining\\_conflict.pdf](https://www.iisd.org/pdf/2002/envsec_mining_conflict.pdf).; Lujala, Päivi, Nils Petter Gleditsch, and Elisabeth Gilmore. "A diamond curse? Civil war and a lootable resource." *Journal of Conflict Resolution* 49, no. 4 (2005): 538-562.

<sup>49</sup> Berdal, Mats, and Nader Mousavizadeh. "Investing for peace: the private sector and the challenges of peacebuilding." *Survival* 52, no. 2 (2010): 37-58. p. 38; UN document S/2009/603, Final report of the Group of Experts on the DRC submitted in accordance with paragraph 8 of Security Council resolution 1857 (2008), 23 November 2009, " *Undocs.Org*. Accessed February 19 2020. <https://www.undocs.org/S/2009/603>.

for sustaining peace and avoiding conflict.<sup>50</sup> From this literature's perspective, businesses can contribute to peace in two ways. The first approach is an economic apolitical role fostering growth and job creation. The second approach views businesses as social and political actors that can contribute to society by non-economic means. The latter approach emphasizes how changes in management practices and corporate social responsibility can help bring about peace;<sup>51</sup> how businesses can enhance trust in post conflict situations;<sup>52</sup> how they can partake in diplomacy and negotiations;<sup>53</sup> and lastly how business can be regulated by governments to enhance businesses' virtuous behavior.<sup>54</sup> From this perspective, business can contribute to society more than just jobs. Again, this theorization remains mostly normative and not thoroughly tested.<sup>55</sup> Thus my dissertation more systemically tests and dissects some of these assumptions.

Finally, rooted in rational choice, my work teases out economic motivation for conflict and peace at previously unexplored sub-national levels and its effect on both rebels' willingness to engage in conflict, but also on business clusters' social and political influence in the peace-conflict calculus. Filling gaps in the academic literature (civil conflict, peace building, and business and peace) and addressing unproven assumptions in the practitioner community, this project seeks to better understand how, when, and which

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<sup>50</sup> Barbara, Julien. "Nation building and the role of the private sector as a political peace-builder: Opinion." *Conflict, Security & Development* 6, no. 4 (2006): 581-594.

<sup>51</sup> Trivedi, Smita. "Operationalizing peace through commerce: Toward an empirical approach." *Business Horizons* 59, no. 5 (2016): 525-532.

<sup>52</sup> Wennmann, Achim. "The role of business in armed violence reduction and prevention." *International Review of the Red Cross* 94, no. 887 (2012): 919-940.

<sup>53</sup> Rettberg, Angelika. "The private sector and peace in El Salvador, Guatemala, and Colombia." *Journal of Latin American Studies* 39, no. 03 (2007): 463-494.; Berdal, Mats, and Nader Mousavizadeh. "Investing for peace: the private sector and the challenges of peacebuilding." *Survival* 52, no. 2 (2010): 37-58. p. 43

<sup>54</sup> Ford, Jolyon. *Regulating business for peace*. Cambridge University Press, 2015.

<sup>55</sup> Felgenhauer, Katharina. "Peace Economics: Private Sector Business Involvement in Conflict Prevention." (2007).

type of private sector can help mitigate conflict and sustain peace (Chapter 2). Further, it seeks to dissect the effects of different business communities in varying economic sectors. Empirically, economic development tends to be non-linear. Traditional (and or backwards) economic sectors tend to co-exist with more advanced (industrial and knowledge-intensive) economic sectors. Accordingly, at the subnational level, how do business clusters belonging to various parts of the economic spectrum contribute to the political debate and a country's propensity for civil conflict (Chapter 3)? Based on these explorations and findings, foreign policy tools – specifically military aid – is explored as an instrument to jumpstart economic sectors that are found to be more pro-peace. Borrowing from the innovation and military spending literature, I explore ways in which military aid in developing countries can trigger innovation in the economic sectors that have a higher propensity for peace (Chapter 4).

## **CHAPTER 2      THE PRIVATE SECTOR: SUSTAINING PEACE IN CONFLICT AFFECTED COUNTRIES?**

### **Abstract**

Can a vibrant private sector help secure peace in conflict-affected countries? The conventional wisdom in the practitioner community is that it can. International development agencies, for instance, have adopted private sector development as a strategy to promote peace. Despite this conviction, there is little to no evidence in the academic literature to support this claim. Drawing on the business and peace, and civil conflict literatures, I argue that a strong private sector through job creation and growth decreases prospective rebels' incentives to join a rebellion and eventually reduces the likelihood of civil conflict. The argument is tested by examining the effects of private sector strength, as measured by domestic credit granted to the private sector and investment climate, on the probability of civil conflict occurrence from 1995 through 2018. Statistical analysis shows that a strong private sector has a pacifying effect on civil conflict. However, access to credit, rather than investment climate, is more effective at sustaining peace. I illustrate the quantitative findings with the comparative cases of Egypt and Tunisia to show the mechanism by which access to credit has higher peace dividends. These findings fill an academic gap and equip policymakers to make more effective peacebuilding interventions.

### **2.1 Introduction**

Can a vibrant private sector help secure peace in fragile and conflict-affected countries? The dominant opinion in the international development practitioner community

is that it can. After the collapse of the Soviet Union, the liberal approach to peacebuilding and its concomitant political economy has emerged as the dominant one, whereby the private sector and the market economy are viewed as essential elements to building sustainable development and peace within countries. The International Finance Corporation (IFC) – which is a member of the World Bank Group focused exclusively on the private sector in developing countries – in 2015 alone, granted \$8.7 billion in loans to Micro, Small and Medium Enterprises (MSMEs) in Sub-Saharan Africa.<sup>56</sup> It also granted \$16 billion to MSMEs in the Middle East and North Africa<sup>57</sup> to boost the private sector for the grander objectives of prosperity, stability, and peace. For the IFC, “fragile and conflict-affected situations” (FCSs) are increasingly a priority for interventions.<sup>58</sup> In 2010, the IFC elevated FCSs as a strategic priority for private sector growth,<sup>59</sup> the main programmatic objectives for which are economic growth and job creation through private sector development (PSD).<sup>60</sup> Private Sector Development refers to harnessing the private sector

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<sup>56</sup> “Sub-Saharan Africa: IFC Financing to Micro, Small and Medium Enterprises”. *International Finance Corporation*, 2019. Accessed October 3 2019.

[https://www.smefinanceforum.org/sites/default/files/IFC\\_Factsheets\\_SSA.pdf](https://www.smefinanceforum.org/sites/default/files/IFC_Factsheets_SSA.pdf).

<sup>57</sup> “Middle East and North Africa: IFC Financing to Micro, Small and Medium Enterprises”. *International Finance Corporation*, 2019. Accessed October 3 2019.

[https://www.smefinanceforum.org/sites/default/files/IFC\\_Factsheets\\_MENA.pdf](https://www.smefinanceforum.org/sites/default/files/IFC_Factsheets_MENA.pdf).

<sup>58</sup> “FCS Africa Program”. 2019. *International Finance Corporation*. Accessed October 3 2019.

[https://www.ifc.org/wps/wcm/connect/REGION\\_\\_EXT\\_Content/IFC\\_External\\_Corporate\\_Site/Sub-Saharan+Africa/Priorities/Fragile+and+Conflict+Affected+Situations/](https://www.ifc.org/wps/wcm/connect/REGION__EXT_Content/IFC_External_Corporate_Site/Sub-Saharan+Africa/Priorities/Fragile+and+Conflict+Affected+Situations/;); “Fragile And Conflict-Affected States”. 2019. *International Finance Corporation*. Accessed October 3 2019.

[https://www.ifc.org/wps/wcm/connect/REGION\\_\\_EXT\\_Content/IFC\\_External\\_Corporate\\_Site/Middle+East+and+North+Africa/Priorities/Fragile+and+Conflict+Affected+States/](https://www.ifc.org/wps/wcm/connect/REGION__EXT_Content/IFC_External_Corporate_Site/Middle+East+and+North+Africa/Priorities/Fragile+and+Conflict+Affected+States/).

Enabling Sustainable Growth: IFC’s FY16 Budget, Approved by IFC’s Board of Directors on June 25, 2015, International Finance Corporation, World Bank Group.

<http://www.ifc.org/wps/wcm/connect/58b2ef004985e2d88357ffe3595da128/Enabling+Sustainable+Growth+-+IFC+FY16+Budget+-+Public+Disclosure.pdf?MOD=AJPERES>, retrieved April 3, 2017.

<sup>59</sup> Generating Private Investment in Fragile and Conflict-Affected Areas, *International Finance Corporation*, 2019, *Ifc.Org*. Accessed February 19 2020. <https://www.ifc.org/wps/wcm/connect/07cb32dd-d775-4577-9d5f-d254cc52b61a/201902-IFC-FCS-Study.pdf?MOD=AJPERES>. P.20

<sup>60</sup> Generating Private Investment in Fragile and Conflict-Affected Areas, *International Finance Corporation*, 2019, *Ifc.Org*. Accessed February 19 2020. <https://www.ifc.org/wps/wcm/connect/07cb32dd-d775-4577-9d5f-d254cc52b61a/201902-IFC-FCS-Study.pdf?MOD=AJPERES>. P.9

to spread economic development and prosperity.<sup>61</sup> The belief is that in order for countries to break the conflict trap and emerge from aid-dependent economies, fostering a healthy, dynamic private sector is crucial. Despite this firm conviction, there has been little to no evidence to support such a strategy. For one, the academic literature has not systematically tested the relationship between private sector strength and the occurrence of civil conflict.

In this paper, I use different sets of literature to build a causal mechanism explicitly linking these two variables. The business and peace literature focuses on the importance of business and private sector activity for job creation and growth. The scholarship on civil conflict has posited that the opportunity cost to rebel can be one of the main drivers for conflict but has largely overlooked the private sector's contribution to such rational calculations. I bridge these literatures in this paper and present a more granular causal argument whereby a strong private sector increases the opportunity cost to rebel, thus leading to less conflict. The rich, quantitative literature on civil wars, durability of peace, peacebuilding, violence onset, peace through commerce, and capitalist peace has to date failed to systematically explain and test what is accepted as common wisdom in the practitioner community. Thus, I add the new variable of PSD to this this body of work.

I test this argument using a large-n quantitative approach. Two proxies – credit granted to the private sector and business freedom – are used to capture different PSD interventions. The findings support the argument that PSD is important in pacifying conflict, especially in fragile and conflict affected states. In addition, the findings show that some interventions are more effective than others. The private sector's access to credit

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<sup>61</sup> Private Sector Development, Center for Strategic and International Studies, found on October 29, 2021 at <https://www.csis.org/topics/international-development/private-sector-development>

seems to trigger more tangible peace dividends when compared with interventions aimed at improving the legal framework in which businesses operate. To better illustrate the mechanisms at play, I conducted an illustrative comparative study between Egypt and Tunisia. Finally, the results of this study help provide a better understanding of PSD's effects on conflict. As private sector development is a strategy that can be manipulated by policymakers – as opposed to other immutable explanatory factors like geography and ethnic make-up – this study provides policy-relevant findings that can help shape peacebuilding and/or stabilizing interventions.

## **2.2 The Conventional Wisdom in Practice**

In 2015, the United Nations designated peace as the 16<sup>th</sup> sustainable development goal (SDG).<sup>62</sup> The international development community has come to recognize the difficulty of pursuing development and building peace in conflict-affected societies and has over the past decade increasingly perceived the private sector as a partner for development and peace. The United Nations (UN),<sup>63</sup> World Bank,<sup>64</sup> and Organization for Economic Co-operation and Development (OECD)<sup>65</sup> have all emphasized the role of the private sector as an engine for economic growth and job creation for all developing countries. The belief is that the private sector employs people, provides tax revenues, delivers goods and services,

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<sup>62</sup> “Sustainable Development Goal 16, United Nations Sustainable Development Knowledge Platform”. 2019. *Sustainabledevelopment.Un.Org*. Accessed October 3 2019. <https://sustainabledevelopment.un.org/sdg16>.

<sup>63</sup> UNDP and the private sector, United Nations Development Program, [http://www.undp.org/content/undp/en/home/ourwork/funding/partners/private\\_sector.html](http://www.undp.org/content/undp/en/home/ourwork/funding/partners/private_sector.html), retrieved April 19, 2017

<sup>64</sup> *United Nations; World Bank. 2018. Pathways for Peace : Inclusive Approaches to Preventing Violent Conflict. Washington, DC: World Bank. © World Bank. <https://openknowledge.worldbank.org/handle/10986/28337> License: CC BY 3.0 IGO.” P.90.*

<sup>65</sup> Pavone, Lorenzo; Kate Eklin; Myriam Grégoire-Zawilski; Josep Casas; How the Private Sector Can Advance Development, OECD, June 2015. <http://www.oecd.org/development/development-posts-private-sector.htm>, retrieved April 19, 2017

and develops innovative solutions to development challenges. This is, a fortiori, the case for countries that are conflict-affected – the common wisdom goes. In these situations, growth generation and job creation through PSD are paramount for long term stability and peace,<sup>66</sup> whereas their absence is understood to be “drivers of conflict and fragility.”<sup>67</sup> As such, institutions like the IFC have built upon the main recommendations of the 2011 World Development Report and employed the strategy of private sector interventions in conflict-affected areas. .<sup>68</sup> These interventions have taken on several forms, including enhancing a countries’ investment climate and regulatory environment, advising on infrastructure privatization, and working with financial institutions to increase private business and household’s access to credit and loans.<sup>69</sup> Highlighting the private sector’s role in employment and as an engine for growth in China, India, and Brazil, the IFC aspires to replicate this in conflict-affected countries.<sup>70</sup> Since a vibrant private sector is assumed to be essential for long term peace, international programmatic interventions have pursued PSD as a pacifier in conflict-affected countries for two decades.<sup>71</sup> Yet, this conviction has

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<sup>66</sup> “Generating Private Investment in Fragile and Conflict-Affected Areas”. 2019 *International Finance Corporation*. Accessed October 3 2019. <https://www.ifc.org/wps/wcm/connect/07cb32dd-d775-4577-9d5f-d254cc52b61a/201902-IFC-FCS-Study.pdf?MOD=AJPERES>.

<sup>67</sup> Project and Programs, Fragility, Conflict, and Violence, <http://www.worldbank.org/en/topic/fragilityconflictviolence/projects>

<sup>68</sup> “World Bank. 2011. *World Development Report 2011 : Conflict, Security, and Development*. World Bank. © World Bank. <https://openknowledge.worldbank.org/handle/10986/4389> License: CC BY 3.0 IGO.”, p.2.

<sup>69</sup> “Generating Private Investment in Fragile and Conflict-Affected Areas”. 2019 *International Finance Corporation*. Accessed October 3 2019. <https://www.ifc.org/wps/wcm/connect/07cb32dd-d775-4577-9d5f-d254cc52b61a/201902-IFC-FCS-Study.pdf?MOD=AJPERES>. P.22

<sup>70</sup> Creating opportunity in Fragile and Conflict-Affected Countries, The international Finance Corporation, World Bank Group, retrieved on April 3, 2017.

[http://www.ifc.org/wps/wcm/connect/corp\\_ext\\_content/ifc\\_external\\_corporate\\_site/ifc+news/pressroom/creating-opportunity-in-fragile-and-conflict-affected-countries](http://www.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/ifc+news/pressroom/creating-opportunity-in-fragile-and-conflict-affected-countries)

<sup>71</sup> “Generating Private Investment in Fragile and Conflict-Affected Areas”. 2019 *International Finance Corporation*. Accessed October 3 2019. <https://www.ifc.org/wps/wcm/connect/07cb32dd-d775-4577-9d5f-d254cc52b61a/201902-IFC-FCS-Study.pdf?MOD=AJPERES>. P.20

not been subject to systematic empirical testing. The following section examines the private sector's role and links it to the occurrence of civil conflict through a granular causal logic.

### 2.3 The Private Sector and Civil Conflict

There is not one body of literature that ties levels of private sector development to civil conflict in a direct manner. In order to make this connection, several literatures should be considered. From the peacebuilding perspective, the dominant voice is that the private sector is an important driver for peace. Nevertheless, this literature remains quite theoretical and normative in its prescriptions. It relies heavily on anecdotal evidence and does not systematically test this relationship – be it through qualitative or quantitative methods. On the other hand, the civil conflict literature is rich in its quantitative analyses and considerations of factors that might correlate with civil conflict (i.e. state reach,<sup>72</sup> education,<sup>73</sup> economic shocks,<sup>74</sup> food prices,<sup>75</sup> ethnic makeup,<sup>76</sup> fiscal policy,<sup>77</sup> economic

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<sup>72</sup> Holtermann, Helge. "Explaining the Development–Civil War Relationship." *Conflict Management and Peace Science* 29, no. 1 (2012): 56-78.

<sup>73</sup> Thyne, Clayton L. "ABC's, 123's, and the Golden Rule: the pacifying effect of education on civil war, 1980–1999." *International Studies Quarterly* 50, no. 4 (2006): 733-754.

<sup>74</sup> Miguel, Edward, Shanker Satyanath, and Ernest Sergenti. "Economic shocks and civil conflict: An instrumental variables approach." *Journal of political Economy* 112, no. 4 (2004): 725-753.  
; Brückner, Markus, and Antonio Ciccone. "International commodity prices, growth and the outbreak of civil war in Sub-Saharan Africa." *The Economic Journal* 120, no. 544 (2010): 519-534.; Bazzi, Samuel, and Christopher Blattman. "Economic shocks and conflict: Evidence from commodity prices." *American Economic Journal: Macroeconomics* 6, no. 4 (2014): 1-38.; Smith, Todd Graham. "Feeding unrest: disentangling the causal relationship between food price shocks and sociopolitical conflict in urban Africa." *Journal of Peace Research* 51, no. 6 (2014): 679-695.

<sup>75</sup> Smith, Todd Graham. "Feeding unrest: disentangling the causal relationship between food price shocks and sociopolitical conflict in urban Africa." *Journal of Peace Research* 51, no. 6 (2014): 679-695.

<sup>76</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90.

<sup>77</sup> Aguirre, Alvaro. "Fiscal Policy and Civil Conflict in Africa." *Journal of African Economies* 25, no. 4 (2016): 614-636.; Carmignani, Fabrizio, and Adrian Gauci. "Chapter 8 Does fiscal policy differ between successful and unsuccessful post-conflict transitions? Lessons from African Civil Wars." In *Economics of War and Peace: Economic, Legal, and Political Perspectives*, pp. 123-145. Emerald Group Publishing Limited, 2010.

structure and materialism,<sup>78</sup> etc.) or, alternatively, what might sustain peace after settlement of a civil war (type of victory,<sup>79</sup> nature of the settlement,<sup>80</sup> etc.). Further, there is a more niche literature on counterinsurgency, which is a subset of civil war.<sup>81</sup> An insurgency requires a cause and seeks to control a population through violence.<sup>82</sup> There is also an acknowledgement that insurgencies, just like revolutions, are difficult to predict and that its beginning and causes are vague. Nevertheless, the two main actors, insurgents and counterinsurgents are synonymous to rebels and governments in the civil conflict literature.<sup>83</sup> For an insurgency to be successful, there needs to be a cause that can attract a large number of supporters. Also, the cause tends to exploit existing problems in society, such as where one class exploits another. Particularly dangerous is when an educated and achieved portion of society is denied elite status. This “rejected elite” tends to eventually serve as leaders of the insurgency.<sup>84</sup> Nevertheless, what would motivate the would be rebel to join such a movement – irrespective of who its leaders might be. As such counterinsurgency is a discussion of a subtype of civil war, that is not quantified and explains the event after it has happened. In this research, I am contributing to the discussion of what helps predict the occurrence of civil conflict – including the emergence of an

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<sup>78</sup> Chatagnier, J. Tyson, and Emanuele Castelli. "The arc of modernization: Economic structure, materialism, and the onset of civil conflict." *Political Science Research and Methods* 7, no. 2 (2019): 233-252.

<sup>79</sup> Toft, Monica Duffy. "Ending civil wars: A case for rebel victory?." *International Security* 34, no. 4 (2010): 7-36.; Toft, Monica Duffy. *Securing the peace: the durable settlement of civil wars*. Princeton University Press, 2009.

<sup>80</sup> Hartzell, Caroline, Matthew Hoddie, and Donald Rothchild. "Stabilizing the peace after civil war: An investigation of some key variables." *International organization* 55, no. 01 (2001): 183-208.

<sup>81</sup> Galula, David. *Counterinsurgency warfare: theory and practice*. Greenwood Publishing Group, 2006. P.2

<sup>82</sup> Galula, David. *Counterinsurgency warfare: theory and practice*. Greenwood Publishing Group, 2006. P.4.

<sup>83</sup> Galula, David. *Counterinsurgency warfare: theory and practice*. Greenwood Publishing Group, 2006. P.7

<sup>84</sup> Galula, David. *Counterinsurgency warfare: theory and practice*. Greenwood Publishing Group, 2006. P.14

insurgency above a certain threshold – and whether the private sector can help pacify this, namely by decreasing the opportunity cost to rebel.

Across these literatures, the level of PSD has never been considered as an explanatory variable for either peace or conflict. This overview highlights the significant gap in the literature when it comes to the role of the private sector and the rift between the practitioner community and academia as significant investments and country interventions are being designed and implemented based on this assumption.

### *Why the private sector?*

In the peacebuilding literature, economic opportunities have an important role in affecting civil conflict outcomes. Political grievances can be addressed with economic gains. People can be edged towards peace with economic incentives.<sup>85</sup> The most dominant approach in the political economy of peacebuilding is that of liberal peace.<sup>86</sup> Though there is some criticism aimed at global capitalism,<sup>87</sup> the liberal agenda as described by Gilpin has dominated international development prescriptions. In contrast to Marxism and Dependency thinking, Liberalism contends that joining the world economy is beneficial for economic development and plugging into the world economy can serve as an engine for growth.<sup>88</sup> This program calls for reduction of the role of the state, macroeconomic stability, transformation through market liberalization, and for exports and foreign

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<sup>85</sup> Gerson, Allan. "Peace building: The private sector's role." *The American Journal of International Law* 95, no. 1 (2001): 102-119. p.102

<sup>86</sup> Pugh, Michael. "The political economy of peacebuilding: a critical theory perspective." *International journal of peace studies* (2005): 23-42.

<sup>87</sup> Cox, Robert W., and Michael G. Schechter. *The political economy of a plural world: Critical reflections on power, morals and civilization*. Psychology Press, 2002.; Hardt, Michael and Antonio Negri. 2000. *Empire*. Cambridge, MA: Harvard University Press.

<sup>88</sup> Gilpin, Robert. *The political economy of international relations*. Princeton University Press, 2016. p.265

investment to stimulate economic growth. In line with early modernization theory, a natural byproduct of this market-driven liberal economic model are peaceful and prosperous societies.<sup>89</sup>

The business and peace literature, fits into the larger liberal approach to building peaceful societies and accepts its overall premises. However, it takes a more granular approach towards the private sector looking at businesses as important actors for forging peace. Though there is an overarching acknowledgement that some private business activity can have a negative role in prolonging conflict, especially when it comes to lootable natural resources<sup>90</sup> – for example mining interests in the Democratic Republic of Congo being a notorious case<sup>91</sup> – there is a consensus that generally the private sector is crucial for sustaining peace and avoiding conflict.<sup>92</sup> From this literature's perspective, businesses can contribute to peace in two ways. The first approach is an economically apolitical role fostering growth and job creation. The second approach views businesses as

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<sup>89</sup> Pugh, Michael. "The political economy of peacebuilding: a critical theory perspective." *International journal of peace studies* (2005): 23-42; Rostow, Walt Whitman. *The stages of economic growth: A non-communist manifesto*. Cambridge university press, 1990; Mousseau, Michael. "Capitalist development and civil war." *International Studies Quarterly* 56, no. 3 (2012): 470-483.

<sup>90</sup> Ohmura, Hirotaka. "Natural resources and the dynamics of civil war duration and outcome." *Asian Journal of Comparative Politics* 3, no. 2 (2018): 133-148; Koos, Carlo, and Jan Pierskalla. "The effects of oil production and ethnic representation on violent conflict in Nigeria: a mixed-methods approach." *Terrorism and political violence* 28, no. 5 (2016): 888-911.; Collier, Paul, and Anke Hoeffler. "Resource rents, governance, and conflict." *Journal of conflict resolution* 49, no. 4 (2005): 625-633. Switzer, Jason. "Armed conflict and natural resources: The case of the minerals sector." *London: International Institute for Environment and Development* (2001). Accessed August 30 2019.

[https://www.iisd.org/pdf/2002/envsec\\_mining\\_conflict.pdf](https://www.iisd.org/pdf/2002/envsec_mining_conflict.pdf); Lujala, Päivi, Nils Petter Gleditsch, and Elisabeth Gilmore. "A diamond curse? Civil war and a lootable resource." *Journal of Conflict Resolution* 49, no. 4 (2005): 538-562.

<sup>91</sup> Berdal, Mats, and Nader Mousavizadeh. "Investing for peace: the private sector and the challenges of peacebuilding." *Survival* 52, no. 2 (2010): 37-58. p. 38; UN document S/2009/603, Final report of the Group of Experts on the DRC submitted in accordance with paragraph 8 of Security Council resolution 1857 (2008), 23 November 2009, " *Undocs.Org*. Accessed February 19 2020. <https://www.undocs.org/S/2009/603>.

<sup>92</sup> Barbara, Julien. "Nation building and the role of the private sector as a political peace-builder: Opinion." *Conflict, Security & Development* 6, no. 4 (2006): 581-594.

social and political actors that can contribute to society by non-economic means. The latter approach emphasizes how changes in management practices and corporate social responsibility can help bring about peace;<sup>93</sup> how businesses can enhance trust in post conflict situations;<sup>94</sup> how they can partake in diplomacy and negotiations;<sup>95</sup> and lastly how business can be regulated by governments to enhance businesses' virtuous behavior.<sup>96</sup> From this perspective, business can contribute to society by providing more than just jobs. Nevertheless, this approach remains mostly theoretical and normative.<sup>97</sup> Dovetailing with this, the capitalist peace theory<sup>98</sup> applied to civil conflicts emphasizes the ways in which market-economies and capitalism generate "citizen-wide preferences for universal freedom and peace."<sup>99</sup> All these arguments emphasize the extra-economic benefits that business can engender in conflict-affected societies.

That being said, the international development community along with a strong trend in the peace-building literature focus on what businesses "naturally" do, which is to contribute to employment and economic growth.<sup>100</sup> From this line of thought, most importantly, businesses transfer technology, increase shareholder value, and generate

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<sup>93</sup> Trivedi, Smita. "Operationalizing peace through commerce: Toward an empirical approach." *Business Horizons* 59, no. 5 (2016): 525-532.

<sup>94</sup> Wennmann, Achim. "The role of business in armed violence reduction and prevention." *International Review of the Red Cross* 94, no. 887 (2012): 919-940.

<sup>95</sup> Rettberg, Angelika. "The private sector and peace in El Salvador, Guatemala, and Colombia." *Journal of Latin American Studies* 39, no. 03 (2007): 463-494.; Berdal, Mats, and Nader Mousavizadeh. "Investing for peace: the private sector and the challenges of peacebuilding." *Survival* 52, no. 2 (2010): 37-58. p. 43

<sup>96</sup> Ford, Jolyon. *Regulating business for peace*. Cambridge University Press, 2015.

<sup>97</sup> Felgenhauer, Katharina. "Peace Economics: Private Sector Business Involvement in Conflict Prevention." (2007).

<sup>98</sup> McDonald, Patrick J. "Capitalism, commitment, and peace." *International Interactions* 36, no. 2 (2010): 146-168.

<sup>99</sup> Mousseau, Michael. "Capitalist Development and Civil War1." *International Studies Quarterly* 56, no. 3 (2012): 470-483; De Soysa, Indra, and Hanne Fjelde. "Is the hidden hand an iron fist? Capitalism and civil peace, 1970-2005." *Journal of Peace Research* 47, no. 3 (2010): 287-298.

<sup>100</sup> Forrer, John J., and John E. Katsos. "Business and peace in the buffer condition." *The Academy of Management Perspectives* 29, no. 4 (2015): 438-450. p. 439

employment opportunities.<sup>101</sup> Reflecting this, The UN's *Investing in Development Millennium Project* (2005) specifically recommended increased investment in public goods such as education and health, but also called for improved governance, especially in the realm of supporting the private sector.<sup>102</sup> The private sector, in the decade after the collapse of the Soviet Union came to be recognized as an essential partner for peace. Further, the private sector has a crucial role to play in sustainable job creation. This is achieved through the expansion of existing businesses, the burgeoning of new ones, and increased investment. Eventually, this results in economic security which underscores peace efforts.<sup>103</sup> Therefore, a strong private sector will allow existing businesses to grow and new businesses to emerge sustaining economic growth and generating employment for would-be-rebels.

Importantly, private sector growth and employment is more sustainable than public spending and employment as a means to occupy would be rebels. As a counterargument to the proponents of employment in the public sector as a strategy for peace, this type of employment could serve as a temporary mechanism to hold peace by keeping would-be rebels on the government payroll. Employment in the government sector can be a short-term solution to help avoid conflict by taking in additional would-be-rebels.<sup>104</sup> However, this additional financial burden on governments, which for the most part are already in

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<sup>101</sup> Forrer, John J., and John E. Katsos. "Business and peace in the buffer condition." *The Academy of Management Perspectives* 29, no. 4 (2015): 438-450. p. 439

<sup>102</sup> *Investing in Development, A Practical Plan to Achieve the Millennium Development Goals*, Millennium Project, 2005

<sup>103</sup> Gerson, Allan. "Peace building: The private sector's role." *The American Journal of International Law* 95, no. 1 (2001): 102-119.

<sup>104</sup> "World Bank. 2011. *World Development Report 2011 : Conflict, Security, and Development*. World Bank. © World Bank. <https://openknowledge.worldbank.org/handle/10986/4389> License: CC BY 3.0 IGO."

fiscal deficit, is neither sustainable nor productive in the long run.<sup>105</sup> For example, in the case of the Israeli-Palestinian conflict, public-sector employment has been a strategy for “social protection.” However, the Palestinian economy and government budget are particularly dependent on international aid and the government is having an increasingly hard time being the employer of last resort because of insufficient government funds.<sup>106</sup> In addition, public employment in developing countries affected by civil conflict tends not to be meritocratic.<sup>107</sup> Rather, employment is viewed as a tool of the state to distribute rents to certain clan members, thus exacerbating horizontal inequalities,<sup>108</sup> feeding into further grievances and fueling more conflict. Further, pressure from the international lending agencies such as the International Monetary Fund and the World Bank has led to smaller governments and increasing austerity measures on what is portrayed as wasteful and irresponsible government spending.<sup>109</sup> Therefore, in the larger context, public employment and spending is not sustainable as a long term strategy for peace nor as an employer of last resort. As such, the IFC and other international organizations have honed in on the domestic private sector as a key player in providing durable sustainable employment and income.<sup>110</sup> This is particularly relevant in conflict affected situations in which ex-

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<sup>105</sup> Berdal, Mats, and Nader Mousavizadeh. "Investing for peace: the private sector and the challenges of peacebuilding." *Survival* 52, no. 2 (2010): 37-58. p. 43

<sup>106</sup> Berdal, Mats, and Nader Mousavizadeh. "Investing for peace: the private sector and the challenges of peacebuilding." *Survival* 52, no. 2 (2010): 37-58. p.43

<sup>107</sup> Evans, Peter B. "Predatory, developmental, and other apparatuses: A comparative political economy perspective on the third world state." In *Sociological forum*, vol. 4, no. 4, pp. 561-587. Kluwer Academic Publishers-Plenum Publishers, 1989.

<sup>108</sup> Cederman, Lars-Erik, Nils B. Weidmann, and Kristian Skrede Gleditsch. "Horizontal inequalities and ethnonationalist civil war: A global comparison." *American Political Science Review* 105, no. 3 (2011): 478-495.

<sup>109</sup> Williamson, John. "What Washington means by policy reform." *Latin American adjustment: How much has happened* 1 (1990): 90-120.; Rodrik, Dani. "Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform." *Journal of Economic Literature* 44, no. 4 (December 1, 2006): 973-87.

<sup>110</sup> Berdal, Mats, and Nader Mousavizadeh. "Investing for peace: the private sector and the challenges of peacebuilding." *Survival* 52, no. 2 (2010): 37-58. p.43

combatants or would-be-rebels are weighing their options. The domestic private sector, as opposed to foreign direct investment or multinational companies, is important because it has already developed know-how to operate in these particular political situations. Therefore, focusing on the private sector and expanding local SMSEs in these contexts is viewed as essential for generating economic opportunities and growth. A more vibrant private sector enables the expansion of existing businesses and the emergence of new ones. The expansion of business activity triggers economic growth and creates employment opportunities. This causal mechanism leads to first hypothesis:

***Hypothesis 1:*** An increasingly vibrant private sector leads to increased employment opportunities (and decreasing unemployment).

#### *Civil conflict and economic motivations*

The literature summarized above considers how business and the private sector can contribute to economic opportunities. The mechanism emphasized acts through job creation and growth. However, it assumes that jobs and growth lessen civil conflict. Though the civil conflict literature does not consider the role of the private sector explicitly, it does explore in more detail the economic motivations behind engaging in civil conflict. Thus, taking these literatures together I connect the private sector and civil conflict variables with a causal logic that can be tested/falsified at several junctures.

Relevant to this debate, the literature on civil war seeks to explain the onset of civil violence through two competing explanations: greed vs grievance.<sup>111</sup> The political science

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<sup>111</sup> Collier, Paul, and Anke Hoeffler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595. p.564

approach seeks to explain motives for conflict in terms of grievances. Conversely, economic theory emphasizes that rebels are motivated by greed – they are thus driven by the opportunity to rebel. In the influential work of Fearon and Laitin (2003) and Collier and Hoeffler (2004), grievances (such as inequality and religious/ethnic fractionalization) are shown to be worse predictors of civil war onset than economic factors. They find that economic variables (per capita income, growth, secondary school enrollment for males) are more significant because they indicate how easy or hard it is for rebel movements to recruit members.<sup>112</sup> Economic conditions matter for Fearon and Laitin because they impact insurgency.<sup>113</sup> Holtermann demonstrates that low government reach and coercion are critical to recruit rebels. Nevertheless, pervasive poverty and a low economic opportunity cost of rebelling can help fuel recruitment.<sup>114</sup>

From this opportunity cost perspective, the economic-centered literature on civil war seeks to explain the onset of violence by looking at economic factors such as food prices, change in wages, and price shocks. Grievances take a secondary role. Instead, income is viewed as the opportunity cost to rebel. Supporting this view, Dube and Vargas (2013) and Fjelde (2015) find that lower income has a significant effect on armed conflict in Colombia and African countries. Evidence from South America and Africa corroborate in highlighting that a change in wages in labor-intensive agricultural goods, as a result of price shocks, affects the outbreak of civil conflict. The specific mechanism for this is

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<sup>112</sup> Collier, Paul, and Anke Hoeffler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595. p.588

<sup>113</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90. (2003) p.88

<sup>114</sup> Holtermann, Helge. "Explaining the Development–Civil War Relationship." *Conflict Management and Peace Science* 29, no. 1 (2012): 56-78.

described as the “opportunity cost effect.”<sup>115</sup> To illustrate this phenomenon, an increase in income will decrease labor supplied to rebellion. In Africa, price shocks led to lower economic returns in agricultural products. This in turn led to increased unemployment and decreased wages in the rural economy, which translated into easier recruitment for and greater support of rebel movements.<sup>116</sup> In the same line of rational calculus, Chatagnier and Castelli (2019) show that in a modernizing economy, marked by increased industrialization, urbanization, and education, potential rebels considerations in the long run skew away from rebellion. New jobs brought about by economic development and salaried individuals with secure occupations are less likely to join a rebellion. Further, a modernizing economy affects individual’s time horizon calculus as well. Profit-maximizing individuals see the benefit of continued investment and sustained growth, and consequently become averse to the potential destruction of human and physical capital in civil war.<sup>117</sup>

Based on this literature, job creation and levels of unemployment affect would-be-rebels’ calculation to engage in conflict via the opportunity cost effect. From this it can be deduced that fewer employment opportunities and/or high unemployment will lead to a higher probability of civil conflict. When rebelling is viewed as a profitable option because of few economic and employment opportunities, then one’s propensity to join rebel forces increases. Therefore, increasing employment opportunities and economic growth make

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<sup>115</sup> Dube, Oeindrila, and Juan F. Vargas. "Commodity price shocks and civil conflict: Evidence from Colombia." *The Review of Economic Studies* 80, no. 4 (2013): 1384-1421.

<sup>116</sup> Fjelde, Hanne. "Farming or fighting? Agricultural price shocks and civil war in Africa." *World Development* 67 (2015): 525-534.

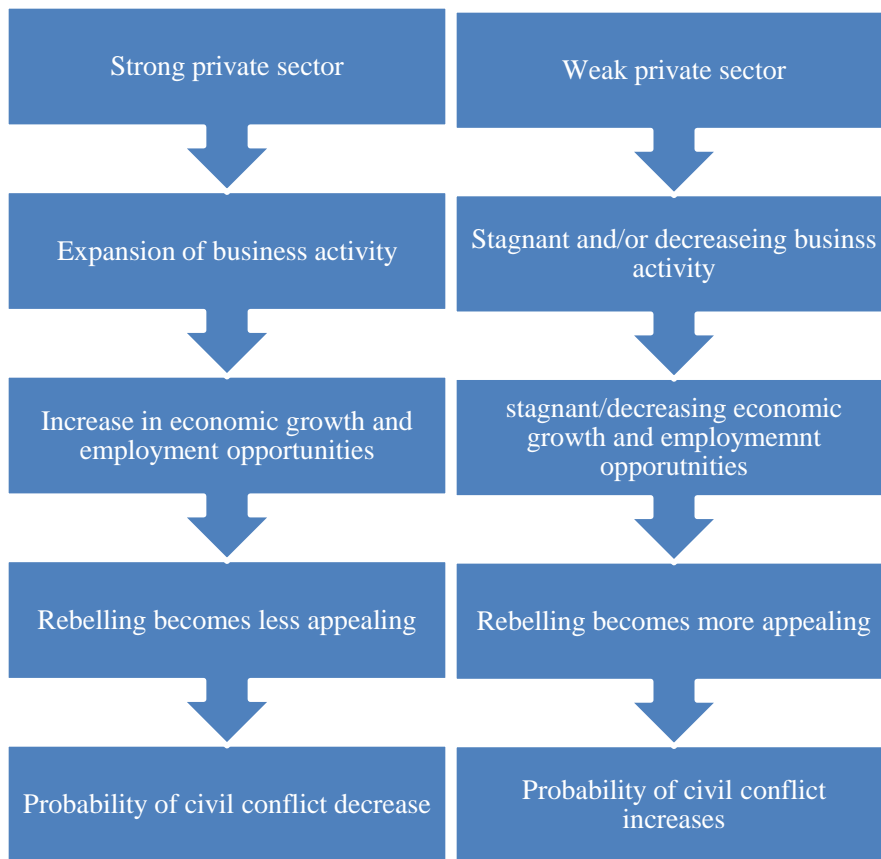
<sup>117</sup> Chatagnier, J. Tyson, and Emanuele Castelli. "The arc of modernization: Economic structure, materialism, and the onset of civil conflict." *Political Science Research and Methods* 7, no. 2 (2019): 233-252. P.237

rebellion less appealing. This in turn leads to a lower likelihood of civil conflict. This leads to the second hypothesis:

***Hypothesis 2:*** Increasing employment opportunities and economic growth decrease the probability of civil conflict.

Thus, combining the hypotheses derived from the different sets of literature, I piece together a causal chain directly linking the level of PSD with civil conflict outcomes. I argue that countries with a stronger private sector will witness an increase in new business and growth of old ones generating growth and creating more employment opportunities. As the economic landscape shifts in the wake of a strengthening private sector, the opportunity cost to rebel changes – the expected payoff from rebellion decreases as more employment opportunities are made available and individuals become more vested in the promise of future growth. In turn, this rational calculus leads to a lower probability of civil war. Figure one summarizes this causal logic linking the private sector to civil conflict. Finally, drawing from the academic literature, I expect the conventional wisdom to hold true. A more vibrant private sector decreases the probability of civil conflict.

***Hypothesis 3:*** A more vibrant private sector decreases the probability of civil conflict.



**Figure 2 - Summary of the causal model linking levels of private sector development to civil conflict outcomes**

## 2.4 Research Design: Data, Measurement, and Model

This chapter aims to introduce the new explanatory factor of PSD to the civil conflict literature and to test the widely held assumption that a strong private sector can help reduce the incidences of civil conflict and sustain peace, especially in fragile and conflict affected countries. Building on the rich quantitative large-N studies on drivers of civil conflict, I test to see whether proxy variables measuring levels of private sector strength can help

better predict the incidence of civil conflict in all countries, but also in the subset of conflict-affected countries (defined below). Building on Fearon and Laitin's (2003) and Thyne's (2006)<sup>118</sup> comprehensive approaches to explaining civil war onset, I use similar control variables and a slightly modified dependent variable (discussed below). Because PSD becomes of greater interest in the decades after the collapse of the Soviet Union, relevant data such as the World Bank's Doing Business indicators are created and recorded after 1995.<sup>119</sup> Therefore, unlike other datasets that cover time periods starting in the 1940s<sup>120</sup>, 1960s<sup>121</sup> and 80s<sup>122</sup>, due to the relatively novel nature of private sector and business environment measurements, this dataset covers the 1995 – 2018 period spanning over two decades after the end of the cold war. Similar to the previous studies mentioned,<sup>123</sup> the dataset is a time-series cross-sectional one. This dataset covers a total of 196 countries. Given the binary nature of the dependent variable, a logistic regression<sup>124</sup> is used to

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<sup>118</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90.; Thyne, Clayton L. "ABC's, 123's, and the Golden Rule: the pacifying effect of education on civil war, 1980–1999." *International Studies Quarterly* 50, no. 4 (2006): 733-754.

<sup>119</sup> The QOG basic Codebook (January 2017), The Quality of Governance Institute. Miller, T., Kim, A. B., & Roberts, J. M. (2018). 2018 index of economic freedom. The Heritage Foundation. Retrieved from <http://www.heritage.org/index/>

<sup>120</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90.; Collier, Paul, and Anke Hoeffler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595.

<sup>121</sup> Collier, Paul, and Anke Hoeffler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595.

<sup>122</sup> Thyne, Clayton L. "ABC's, 123's, and the Golden Rule: the pacifying effect of education on civil war, 1980–1999." *International Studies Quarterly* 50, no. 4 (2006): 733-754.

<sup>123</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90, Thyne, Clayton L. "ABC's, 123's, and the Golden Rule: the pacifying effect of education on civil war, 1980–1999." *International Studies Quarterly* 50, no. 4 (2006): 733-754.

<sup>124</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90.; Thyne, Clayton L. "ABC's, 123's, and the Golden Rule: the pacifying effect of education on civil war, 1980–1999." *International Studies Quarterly* 50, no. 4 (2006): 733-754; Fearon, James D. "Primary commodity exports and civil war." *Journal of conflict Resolution* 49, no. 4 (2005): 483-507.; Jakobsen, Tor Georg, Indra De Soysa, and Jo Jakobsen. "Why do poor countries suffer costly conflict? Unpacking per capita income and the onset of civil war." *Conflict Management and Peace Science* 30, no. 2 (2013): 140-160.;

estimate coefficients for the occurrence of civil conflict. The data is acquired and compiled from The Quality of Government (QoG) Standard Data 2019,<sup>125</sup> The World Bank's World Development Indicators,<sup>126</sup> and the Uppsala Conflict Data Program (UCDP) Peace Research Institute Oslo (PRIO) Armed Conflict Dataset.<sup>127</sup> I keep the standard method of addressing missing data – the listwise deletion.<sup>128</sup>

*Dependent variable: civil conflict*

The dependent variable is *civil conflict*. It is a dichotomous variable taken from the UCDP/PRIO Armed Conflict Dataset version 19.1,<sup>129</sup> which defines armed conflict as “a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in a calendar year.”<sup>130</sup> Further, a conflict is considered “internal” if it occurs between the government of a state and at least one internal opposition group.<sup>131</sup> Thus, the dependent variable is coded as 1 for a year where a country experiences

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<sup>125</sup> Teorell, Jan, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon and Richard Svensson. 2019. The Quality of Government Standard Dataset, version Jan19. University of Gothenburg: The Quality of Government Institute, <http://www.qog.pol.gu.se> doi:10.18157/qogstdjan19

<sup>126</sup> "World Development Indicators (WDI) | Data Catalog". 2019. *The World Bank*. Accessed October 9 2019. <https://datacatalog.worldbank.org/dataset/world-development-indicators>.

<sup>127</sup> Pettersson, Therese; Stina Högladh & Magnus Öberg, 2019. Organized violence, 1989-2018 and peace agreements, *Journal of Peace Research* 56(4).; Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg, and Håvard Strand (2002) *Armed Conflict 1946-2001: A New Dataset*. *Journal of Peace Research* 39(5).

<sup>128</sup> King, Gary, James Honaker, Anne Joseph, and Kenneth Scheve. "Analyzing incomplete political science data: An alternative algorithm for multiple imputation." In *American Political Science Association*, vol. 95, no. 01, pp. 49-69. Cambridge University Press, 2001.;

<sup>129</sup> Pettersson, Therese (2019) UCDP/PRIO Armed Conflict Dataset Codebook v 19.1 (<https://ucdp.uu.se/downloads/>).

<sup>130</sup> Pettersson, Therese (2019) UCDP/PRIO Armed Conflict Dataset Codebook v 19.1 (<https://ucdp.uu.se/downloads/>). P. 1

UCDP/PRIO Armed Conflict Dataset Codebook Version 4-2016, Uppsala Conflict Data Program (UCDP), Centre for the Study of Civil Wars, International Peace Research Institute, Oslo (PRIO)

<sup>131</sup> Pettersson, Therese (2019) UCDP/PRIO Armed Conflict Dataset Codebook v 19.1 (<https://ucdp.uu.se/downloads/>). P.5

an internal conflict that kills more than 25 people. If there is no armed conflict, or armed conflict is of a lower intensity than that described above, the dependent variable is coded 0 for that year. The terms civil and internal conflict are used interchangeably. The data in the UCDP/PRIO Armed Conflict Dataset version 19.1 is presented in a conflict-year format.<sup>132</sup> However, this study examines the same set of countries whether they experience internal conflict or not on a yearly basis. Thus, I convert the conflict-year data into a country-year format and merge it with the QoG and World Development indicator data.

Other studies that are concerned with civil war onset – as in what triggers a civil war and not necessarily what sustains it – either code 0 the year after a civil war starts even though that year meets the baseline definition mentioned above,<sup>133</sup> or drop country-years with ongoing civil war.<sup>134</sup> For the purposes of my hypothesis, I keep country-years coded as 1 for ongoing civil conflict. This allows me to capture not only what triggers a civil conflict but also whether the independent variables have an effect on the persistence of civil conflict.<sup>135</sup> This matters for the hypothesis and the conventional wisdom, because the assumption is that a strong private sector can help mitigate against falling into civil conflict and even a strengthening private sector can help a country break away from an ongoing civil conflict. Additionally, keeping these country-years will allow us to capture the lagged

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<sup>132</sup> Pettersson, Therese (2019) UCDP/PRIO Armed Conflict Dataset Codebook v 19.1 (<https://ucdp.uu.se/downloads/>).

<sup>133</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90;

<sup>134</sup> Collier, Paul, and Anke Hoeffler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595; Mousseau, Michael. "Capitalist Development and Civil War1." *International Studies Quarterly* 56, no. 3 (2012): 470-483.

<sup>135</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90 p.82

effect that a strong or weak private sector might have on the occurrence of civil conflict. The civil conflict variable includes 6,119 occurrences from 1995 until 2018.

*Independent (private sector) variables*

There is no commonly accepted definition of strong private sector. However, examining IFC descriptions of their final goals and what types of interventions they support in conflict affected countries I infer a definition of what constitutes a strong/healthy/vibrant private sector. These PSD activities can be organized into two major categories: financing of projects and access to credit on the one hand and advisory programs working with governments to increase local capacity for improving investment climate and the business environment on the other.

Foremost, the IFC works to help “unlock private sector investment, which is essential for expanding businesses, creating jobs, and growing economies.” Increasing critical access to finance is essential.<sup>136</sup> Specifically, the IFC works with financial institutions to help increase access to credit for MSMEs and other marginalized groups. Illustrative examples of such interventions are the IFC’s work with First Microfinance Bank Afghanistan and Rawbank - the second largest bank in the Democratic Republic of Congo – to increase MSMEs and women in business’ access to credit.<sup>137</sup> The majority of

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<sup>136</sup> Overview, IFC, Accessed November 11 2019.

[https://www.ifc.org/wps/wcm/connect/corp\\_ext\\_content/ifc\\_external\\_corporate\\_site/solutions/solutions](https://www.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/solutions/solutions).

<sup>137</sup> Generating Private Investment in Fragile and Conflict-Affected Areas, *International Finance Corporation*, 2019, *Ifc.Org*. Accessed February 19 2020. <https://www.ifc.org/wps/wcm/connect/07cb32dd-d775-4577-9d5f-d254cc52b61a/201902-IFC-FCS-Study.pdf?MOD=AJPERES>. P.25

the IFC's projects are focused on the financial and banking sectors of conflict affected countries to facilitate MSME financing and business' access to credit.<sup>138</sup>

In terms of advising, many World Bank and IFC projects concentrate on improving local regulation for facilitating the operation of businesses.<sup>139</sup> An enabling investment climate and business environment is necessary for businesses to grow and multiply.<sup>140</sup> They work with client countries to help cut red tape and create a friendlier environment for businesses to register, operate, obtain a license, etc. These efforts focus on changing the legal and regulatory environment in which businesses operate.<sup>141</sup> The Doing Business Group tracks 10 families of indicators that impact the overall business enabling environment: starting a business, dealing with construction permits, getting electricity, registering property rights, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency.<sup>142</sup> The World Bank and IFC encourage countries to do better in these areas to strengthen their private sector. For example, working with the World Bank in Sierra Leone, the IFC implemented a program for Removing Administrative Barriers to Investment. This program aimed to reduce the time and cost of registering a business. This initiative, between

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<sup>138</sup> Generating Private Investment in Fragile and Conflict-Affected Areas, *International Finance Corporation*, 2019, *Ifc.Org*. Accessed February 19 2020. <https://www.ifc.org/wps/wcm/connect/07cb32dd-d775-4577-9d5f-d254cc52b61a/201902-IFC-FCS-Study.pdf?MOD=AJPERES>. P.21

<sup>139</sup> Generating Private Investment in Fragile and Conflict-Affected Areas, *International Finance Corporation*, 2019, *Ifc.Org*. Accessed February 19 2020. <https://www.ifc.org/wps/wcm/connect/07cb32dd-d775-4577-9d5f-d254cc52b61a/201902-IFC-FCS-Study.pdf?MOD=AJPERES>. P.22

<sup>140</sup> FCS Africa Program, IFC, retrieved Nov 11, 2019. [http://www.ifc.org/wps/wcm/connect/REGION\\_\\_EXT\\_Content/IFC\\_External\\_Corporate\\_Site/Sub-Saharan+Africa/Priorities/Fragile+and+Conflict+Affected+Situations/](http://www.ifc.org/wps/wcm/connect/REGION__EXT_Content/IFC_External_Corporate_Site/Sub-Saharan+Africa/Priorities/Fragile+and+Conflict+Affected+Situations/)

<sup>141</sup> IFC's Priorities in the Middle East and North Africa, IFC, retrieved April 14, 2017, [http://www.ifc.org/wps/wcm/connect/region\\_\\_ext\\_content/ifc\\_external\\_corporate\\_site/middle+east+and+north+africa/priorities](http://www.ifc.org/wps/wcm/connect/region__ext_content/ifc_external_corporate_site/middle+east+and+north+africa/priorities)

<sup>142</sup> Methodology, Doing Business, The World Bank. <http://www.doingbusiness.org/methodology>. Accessed April 25, 2017.

2004 and 2010, helped create nearly 6,000 new businesses, and generate 15,000 jobs.<sup>143</sup>

In line with the major programmatic activities undertaken to help strengthen PSD in developing countries, proxies are selected to measure these two types of interventions. Splitting the measure of PSD into two proxies can help illustrate which kinds of interventions are better suited for countries affected by conflict. Therefore, findings can shed light on how to sequence and prioritize different types of PSD activities in these societies.

The first proxy for the level of PSD is *Credit to the Private Sector*. This measure captures the strength of the private sector as it pertains to businesses' access to credit for running their operations and opening/expanding business. It draws attention to the financial resources provided to local businesses – including loans, trade credit, and accounts receivable. This indicator is pulled for the World Bank Development database. It measures the total value of credit provided by financial corporations to the private sector as a percentage of GDP.<sup>144</sup> For the time period considered, the value ranges from 0.18% to 361%. Other studies focused on explaining financial development – a key contributor to economic growth – have sought to understand how civil war hampers financial

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<sup>143</sup> Generating Private Investment in Fragile and Conflict-Affected Areas, *International Finance Corporation*, 2019, *Ifc.Org*. Accessed February 19 2020. <https://www.ifc.org/wps/wcm/connect/07cb32dd-d775-4577-9d5f-d254cc52b61a/201902-IFC-FCS-Study.pdf?MOD=AJPERES>. P.32; "How The RABI Program Transformed Sierra Leone". 2011. *World Bank Blogs*. Accessed February 20 2020. <https://blogs.worldbank.org/psd/how-the-rabi-program-transformed-sierra-leone>.

<sup>144</sup>Domestic credit to private sector (% of GDP), "World Development Indicators | Databank". 2019. *Databank.Worldbank.Org*. Accessed November 11 2019. <https://databank.worldbank.org/reports.aspx?source=2&series=FS.AST.PRVT.GD.ZS&country=#>.

development.<sup>145</sup> This study, rather, seeks to understand whether PSD can contribute to sustaining peace.<sup>146</sup>

The second proxy for level of PSD is *business freedom*. This variable is derived from the Doing Business indicators. It considers 10 components measuring varying degrees of difficulties to start a business, obtain a license, and close a business. These components reflect the regulatory framework and are converted to a value between 0 and 100, where 100 represents the maximum degree of business freedom.<sup>147</sup> Therefore, a higher business freedom score is indicative of a stronger private sector in terms of the regulatory framework and business environment. Whereas, a score closer to zero indicates a business environment deemed to be non-business friendly. To illustrate this, Angola registers a 26.8 business freedom score in 2006, whereas Tunisia scores 80.3 for the same year.

### *Control variables*

Drawing on Fearon and Laitin's (2003) foundational piece and Thyne's (2006) and Mousseau's (2012) more recent work, I include many of the same control variables.<sup>148</sup> The most important control variable I omit is prior war. However, I compensate for this omission by running my regressions separately for conflict-affected countries (defined

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<sup>145</sup> Hasan, M. Rashed, and Syed Mansoor Murshed. "Does civil war hamper financial development?." *Defence and peace economics* 28, no. 2 (2017): 188-207.

<sup>146</sup> Other studies have used this measure, credit to the private sector, to capture financial development because it captures the degree to which banks have the capacity to lend.

<sup>147</sup> Teorell, Jan, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon & Richard Svensson. 2019. The Quality of Government Standard Dataset, version Jan19. University of Gothenburg: The Quality of Government Institute, <http://www.qog.pol.gu.se> doi:10.18157/qogstdjan19 P. 358.

<sup>148</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90; Thyne, Clayton L. "ABC's, 123's, and the Golden Rule: the pacifying effect of education on civil war, 1980–1999." *International Studies Quarterly* 50, no. 4 (2006): 733-754; Mousseau, Michael. "Capitalist Development and Civil War1." *International Studies Quarterly* 56, no. 3 (2012): 470-483.

below). The main variables I control for are: *population*;<sup>149</sup> *per capita income*,<sup>150</sup> (testing the argument that higher incomes make rebelling less appealing); *ethnic fractionalization*<sup>151</sup> (testing the idea that more diverse societies are more likely to experience civil war); and *democracy*,<sup>152</sup> a dichotomous variable (testing the effect of regime type on civil war occurrence).

Finally, I include a *size of government*<sup>153</sup> variable to test the counter argument that public expenditure, subsidies, and employment – as opposed to PSD – can also affect a rebel’s opportunity cost to rebel. This variable ranges from 0 to 10, whereby 0 corresponds with large government and 10 with small government allowing the private sector to operate freely and make its own decisions. Governments can sometimes act as employers of last

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<sup>149</sup> Teorell, Jan, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon & Richard Svensson. 2019. The Quality of Government Standard Dataset, version Jan19. University of Gothenburg: The Quality of Government Institute, <http://www.qog.pol.gu.se> doi:10.18157/qogstdjan19 P. 720; World Development Indicators, The World Bank

<sup>150</sup> Teorell, Jan, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon & Richard Svensson. 2019. The Quality of Government Standard Dataset, version Jan19. University of Gothenburg: The Quality of Government Institute, <http://www.qog.pol.gu.se> doi:10.18157/qogstdjan19 P. 687; World Development Indicators, The World Bank

<sup>151</sup> Teorell, Jan, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon & Richard Svensson. 2019. The Quality of Government Standard Dataset, version Jan19. University of Gothenburg: The Quality of Government Institute, <http://www.qog.pol.gu.se> doi:10.18157/qogstdjan19 P. 104; Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., & Wacziarg, R. (2003). Fractionalization. *Journal of Economic Growth*, 8 (2), 155-194. (O. Galor (ed.) (2011), *Inequality and Economic Development: The Modern Perspective*, Edward Elgar, UK.)

<sup>152</sup> Teorell, Jan, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon & Richard Svensson. 2019. The Quality of Government Standard Dataset, version Jan19. University of Gothenburg: The Quality of Government Institute, <http://www.qog.pol.gu.se> doi:10.18157/qogstdjan19 P. 119; Boix-Miller-Rosato Dichotomous Coding of Democracy, Version 2.0 (2013); Boix, C., Miller, M. K., & Rosato, S. (2013). A complete data set of political regimes, 1800-2007. *Comparative Political Studies*, 46 (12), 1523–1554.

Boix, C., Millerand, M., & Rosato, S. (2014). Boix-miller-rosato dichotomous coding of democracy, 1800-2010. *Comparative Political Studies*. (UNF:5:x3P4QDm6R349bpygm/g1Q=) doi: 10.7910/DVN/28468

<sup>153</sup> Teorell, Jan, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon & Richard Svensson. 2019. The Quality of Government Standard Dataset, version Jan19. University of Gothenburg: The Quality of Government Institute. <http://www.qog.pol.gu.se> doi:10.18157/qogstdjan19 p.318;

Gwartney, J., Lawson, R., & Hall, J. (2016). *Economic Freedom Dataset 2016*, published in *Economic Freedom of the World: 2016*. Fraser Institute. Retrieved from <https://www.fraserinstitute.org/economic-freedom/dataset>

resort, including for men of military age. They can also redistribute wealth, provide subsidies to certain sectors, and create social safety nets that can reduce the appeal of rebellion. Nevertheless, I argue that the private sector is more efficient at providing jobs and propelling growth as conflict affected countries tend to suffer from corrupt bureaucracies and are under pressure to shrink government spending. This argument is tested in the following section.

### *Conflict-affected Countries*

The common wisdom in the practitioner community is that a vibrant private sector helps sustain peace, and this is especially true in conflict-affected, post-conflict, and fragile societies. This loosely defined subset of countries is especially important because Collier's work demonstrates, in the first post-conflict decade, a developing country has a 40 percent risk of relapsing.<sup>154</sup> Thus, in 2008, the IFC established the Conflict Affected States in Africa Initiative (CASA) to support private sector growth in these fragile environments.<sup>155</sup> Also, the World Bank identifies a subset of countries as "fragile and conflict affected situations"<sup>156</sup> based on their Country Policy and Institutional Assessment (CPIA) rating and/or whether that country has hosted a UN peace-keeping mission in the previous three years.<sup>157</sup> However, there are inconsistencies: for example, Malawi features

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<sup>154</sup> Collier, Paul, Anke Hoeffler, and Måns Söderbom. "Post-conflict risks." *Journal of Peace Research* 45, no. 4 (2008): 461-478. P.465

<sup>155</sup> "FCS Africa Program". 2020. *Ifc.Org*. Accessed January 28 2020.

[https://www.ifc.org/wps/wcm/connect/REGION\\_\\_EXT\\_Content/IFC\\_External\\_Corporate\\_Site/Sub-Saharan+Africa/Priorities/Fragile+and+Conflict+Affected+Situations/](https://www.ifc.org/wps/wcm/connect/REGION__EXT_Content/IFC_External_Corporate_Site/Sub-Saharan+Africa/Priorities/Fragile+and+Conflict+Affected+Situations/).

<sup>156</sup> "Fragile And Conflict Affected Situations | Data". 2020. *Data.Worldbank.Org*. Accessed January 29 2020. <https://data.worldbank.org/region/fragile-and-conflict-affected-situations>.

<sup>157</sup> "Fragile And Conflict Affected Situations | Data". 2020. *Data.Worldbank.Org*. Accessed January 29 2020. <https://data.worldbank.org/region/fragile-and-conflict-affected-situations>; Harmonized List of Fragile Situations FY 17a, The World Bank, retrieved April 26, 2017, <http://pubdocs.worldbank.org/en/154851467143896227/FY17HLFS-Final-6272016.pdf>

as a CASA country, but not in the more general list of fragile and conflict affected states. Admittedly, these lists are imperfect and attempt to capture a complex concept.<sup>158</sup> Nevertheless, to increase clarity around these classifications, using the UCDP/PRIO Armed Conflict Dataset version 19.1, I create a subcategory of countries that I call conflict-affected countries. I define these countries as having experienced civil conflict for at least one year after 1990.<sup>159</sup> Countries with civil conflicts that began before 1990 but carry on into the 1990s are included. 76 countries meet these criteria. For the list of conflict-affected countries see Table 1. For the most part, countries in the World Bank 2019 list of fragile, conflict and violence group are included in my subset save for Gambia, Guinea-Bissau, Kiribati, Kosovo, Marshall Islands, Micronesia Fed states, Solomon islands, Togo, Tuvalu, West Bank and Gaza, Timor-Leste, Zimbabwe.<sup>160</sup>

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<sup>158</sup> Special Notes, "Fragile And Conflict Affected Situations | Data". 2020. *Data.Worldbank.Org*. Accessed January 29 2020. <https://data.worldbank.org/region/fragile-and-conflict-affected-situations>.

<sup>159</sup> Pettersson, Therese (2019) UCDP/PRIO Armed Conflict Dataset Codebook v 19.1 (<https://ucdp.uu.se/downloads/>).

<sup>160</sup> "Harmonized List of Fragile Situations FY 19 a/ ". 2019. *World Bank*. 2019. Accessed October 1 2019. <http://pubdocs.worldbank.org/en/892921532529834051/FCSList-FY19-Final.pdf>.

**Table 1 - List of Conflict-Affected Countries**

List of Conflict-Affected Countries			
Afghanistan*	El Salvador	Macedonia, FYR	Serbia (Yugoslavia)
Algeria	Eritrea*	Malaysia	Sierra Leone
Angola	Ethiopia	Mali*	Somalia*
Azerbaijan	Georgia	Mauritania	South Sudan*
Bangladesh	Guatemala	Mexico	Spain
Bosnia-Herzegovina	Guinea	Moldova	Sri Lanka
Burundi*	Haiti*	Mozambique*	Sudan*
Cambodia	India	Myanmar*	Syria*
Cameroon	Indonesia	Nepal	Tajikistan
Central African Republic*	Iran	Nicaragua	Thailand
Chad*	Iraq*	Niger	Trinidad and Tobago
China	Israel	Nigeria	Tunisia
Colombia	Ivory Coast*	Pakistan	Turkey
Comoros*	Jordan	Papua New Guinea*	Uganda
Congo*	Kenya	Peru	Ukraine
Croatia	Laos	Philippines	United Kingdom
Djibouti*	Lebanon*	Russia	Uzbekistan
DR Congo*	Liberia*	Rwanda	Venezuela
Egypt	Libya*	Senegal	Yemen*

Source: UCDP/PRIO Armed Conflict Dataset version 19.1<sup>161</sup>, World Bank<sup>162</sup>(2019)

<sup>161</sup> Pettersson, Therese; Stina Högladh & Magnus Öberg, 2019. Organized violence, 1989-2018 and peace agreements, *Journal of Peace Research* 56(4).; Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg, and Håvard Strand (2002) *Armed Conflict 1946-2001: A New Dataset*. *Journal of Peace Research* 39(5).

<sup>162</sup> "Harmonized List Of Fragile Situations". 2019. *World Bank*. Accessed October 1 2019. <https://www.worldbank.org/en/topic/fragilityconflictviolence/brief/harmonized-list-of-fragile-situations>.

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\*These countries are also part of the World Bank’s Fragile, Conflict and Violence Group for 2019<sup>163</sup>

## Statistical Results

Tables 2 and 3 represent empirical testing for the hypothesis 3, which is reflective of the conventional wisdom that a strong private sector leads to more peaceful societies. Models 1 through 4 (reported in Table 2) cover all countries from 1995 onward. Models 5 through 8 (reported in Table 3) mirror the first four models, but for the subset of conflict-affected countries to conduct a more stringent test to see whether this group is inherently different. Model 1 is a baseline showing the control variables’ effects on the probability of the occurrence of civil war. Even though the dependent variable is coded slightly differently, accounting for conflict occurrence (not exclusively onset), the baseline model confirms previous findings from Fearon and Laitin (2003) and Thyne (2006) giving us confidence in these results. Corroborating with previous results the population variable is significant and positive; income per capita is significant and negative; ethnic fractionalization, and regime type (democracy) are statistically insignificant. Using Model 1 as a basis, we test the conventional wisdom for all countries in models 2-4 and for conflict-affected states in models 6-8.

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<sup>163</sup> “Harmonized List of Fragile Situations FY 19 a/ “. 2019. *World Bank*. 2019. Accessed October 1 2019. <http://pubdocs.worldbank.org/en/892921532529834051/FCSList-FY19-Final.pdf>.

**Table 2 - Logit Analysis for all Countries after 1995**

Logit analysis for all countries after 1995  
 Dependent variable = Occurrence of Civil Conflict

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*For All Countries After 1995*

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
Business Freedom			-0.018 (.01875)	- 0.0048 (0.01957)
Credit to the Private Sector		- 0.038** (0.01345)		- 0.069** (0.02153)
Population <sup>‡</sup>	1.345*** (0.29174)	1.387*** (0.30039)	1.753*** (0.3976)	2.044*** (0.438340)
Income/capita	- 0.0002* (0.00006)	-0.00009 (0.00006)	-0.00015* (.000062)	-0.000009 (0.00007)
GDP Growth	- 0.027 (0.03039)	- 0.031 (0.03077)	0.00631 (0.0394)	0.004 (0.04004)
Ethnic Frac.	1.067 (1.68717)	0.352 (1.69369)	1.932 (2.0069)	1.056 (2.11219)
Democracy	- 0.711 <sup>†</sup> (0.36847)	- 0.652 <sup>†</sup> (0.37144)	0.0771 (0.47171)	0.201 (0.49514)
Size of Government	- 0.0096 (0.12938)	0.054 (0.13379)	0.18234 (0.1674)	0.274 (0.17483)
Constant	-25.805*** (5.026819)	-25.539*** (5.12914)	-34.828*** (7.325)	-39.125*** (7.89704)
Observations	1,661	1,555	1,501	1,416

Standard errors are in parenthesis. Estimates were performed using random effects logistic regression. StataMP 14.0.

<sup>†</sup>p<0.1, \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001

<sup>‡</sup>Values are logged

Now for testing the hypothesis 3, based on the causal logic laid outlined in Figure 1, I expect both measures of PSD – *Credit to the Private Sector (CPS)* and *Business Freedom (BF)* – to have a negative effect on the occurrence of civil conflict for all countries, and especially for countries affected by conflict. Looking at Models 2 and 4, we find that the conventional wisdom holds true, when the CPS proxy is considered. Alone

(Model 2) and in the combined model (Model 4), the CPS variable is negative and significant ( $p = 0.004$ ;  $p = 0.001$  respectively), showing that an increase in CPS results in a decrease in the probability of civil war occurrence. In base Model 1, income per capita is significant and negative in accordance with previous literature. However, when we consider it along with the CPS variable in Models 2 and 4, it drops from significance suggesting potential collinearity. Model 2, tells us that for a 1 percent increase in CPS, the expected change in the log odds of conflict occurring is  $-0.038$ , holding the other explanatory variables constant. Alternatively, a 1% increase in CPS is associated with decreased odds of civil conflict occurring by a factor of  $0.9627 \{ \exp(-0.038) = 0.9627 \}$ . Another way to interpret the coefficient is that a one percent increase in CPS is associated with a 3% decrease in the odds of civil conflict occurring, holding all other variables constant.<sup>164</sup> In combined model 4, a 1 percent increase in CPS leads to a decrease in the log odds of conflict occurring by  $0.069$ , holding other variables constant. This could also be interpreted as a 1 percent increase in CPS is associated with decreased odds of civil conflict occurring by a factor of  $0.9333 \{ \exp(-0.069) = 0.9333 \}$ . Finally, converting this to percentages, a 1 percent increase in CPS is associated with a 6.67% decrease in the odds of civil conflict occurring, holding all other variables constant.

These findings lend support to the argument that increasing the private sector's access to financial resources helps reduce the odds of a country experiencing civil conflict. Further, the size of government – a proxy for public sector spending and employment – is

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<sup>164</sup> "FAQ: How Do I Interpret Odds Ratios In Logistic Regression?," Institute for Digital Research and Education, Statistical Consulting, UCLA, 2020.. *Stats.Idre.Ucla.Edu*. Accessed February 4 2020. <https://stats.idre.ucla.edu/other/mult-pkg/faq/general/faq-how-do-i-interpret-odds-ratios-in-logistic-regression/>.

not statistically significant across all models. This lends support to the argument that the private sector is more effective in sustaining peace in comparison to public spending and public employment. There is no statistically significant correlation between government spending and civil conflict outcomes. Therefore, even though governments might spend to hold off rebellion, they might do so in ways that exacerbate horizontal inequalities and are not sustainable given prevalent fiscal deficits.

In contrast, the BF proxy, which captures the strength of the private sector when it comes to regulatory and legal frameworks does not behave as predicted. Both alone (Model 2) and combined (Model 4), the BF variable is negative – which is the predicted sign – however it is not statistically significant. Even though, the conventional wisdom assumes that a friendly business environment and investment climate – legally – are part of what makes for a strong private sector, when it comes to its effects on civil conflict the results are less supportive than the positive effects of CPS on the reduction of civil conflict. One explanation might be that changes in legal frameworks and practices do not result in immediate impact, as business adapt to operate in suboptimal business environments. Businesses probably already know how to take advantage of loopholes and who to bribe to operate smoothly within the existing system. Thus, a change in business freedom does not have a high impact because of sticky and deeply embedded practices. Additionally, there might be a learning curve to adapt to new laws. Whereas, increased financial injection and the private sector's access to credit are more impactful in terms of delivering peace dividends. Businesses with access to loans can expand operations, hire more people, stock up inventory, all of which contribute to more tangible and impactful peace dividends.

Furthermore, these findings hold true in the subset of countries affected by conflict. The conventional wisdom stipulates a strong private sector is important for peace – especially in fragile and conflict affected countries. In order to test this, we run the same logit analysis for the subset of countries that are affected by conflict (See table 1 for the list). These results are reported in Table 3. In this subset, we remove the pull that high income countries might have skewing the results in favor of a strong private sector sustaining peace. For example, Iceland, Japan, Denmark, the UK, the United States, Switzerland, Canada, Singapore, New Zealand, Australia, Finland, etc. score high in both private sector proxies yet do not experience conflict. Therefore, running the test in the subset of conflict-affected countries offers a more stringent test for the hypothesis. For this conflict-affected group, does private sector strength still affect the outcome of civil conflict?

Closer analysis of results reported in table 3 mirror the results found for all countries, lending further support to the argument that a strong private sector helps reduce the odds of civil conflict occurring. Similarly to the models described above, alone (Model 6) and in the combined model (Model 8), CPS is significant and reduces the odds of civil conflict, whereas the BF variable – counter to conventional wisdom – is statistically insignificant alone (Model 7) and combined (Model 8). Further unexpectedly, in model 8, though statistically insignificant, the sign of the BF coefficient does not behave as expected: improved business freedom increases the odds of conflict occurring, which is puzzling and should be explored in future work.

**Table 3 - Logit Analysis for Conflict Affected Countries after 1995**

Logit analysis for conflict affected countries after 1995  
 Dependent variable = Occurrence of Civil Conflict

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*Conflict Affected Countries After 1995*

	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8</i>
Business Freedom			-0.01288 (0.01873)	0.0002 (0.01953)
Credit to the Private Sector		- 0.039** (0.01331)		- 0.075** (0.02232)
Population <sup>‡</sup>	0.749** (0.28568)	0.829** (0.283903)	1.1536** (0.34526)	1.465*** (0.39668)
Income/capita	- 0.00008 (0.00006)	0.00002 (0.00007)	-0.000019 (0.000068)	0.0002 <sup>†</sup> (0.00009)
GDP Growth	- 0.029 (0.03000)	- 0.0326 (0.03016)	0.00386 (0.03911)	0.002 (0.03995)
Ethnic Frac.	- 0.287 (1.75336)	- 1.004 (1.69387)	0.88476 (2.0842)	- 0.588 (2.22256)
Democracy	- 0.519 (0.37034)	- 0.477 (0.37089)	0.2603 (0.47559)	0.361 (0.50354)
Size of Government	0.015 (0.13029)	0.078 (0.13308)	0.19196 (0.16702)	0.289 <sup>†</sup> (0.17571)
Constant	-13.35** (4.99342)	- 13.843** (4.87295)	-22.566*** (6.3201)	- 26.887*** (7.07111)
Observations	689	671	608	592

Standard errors are in parenthesis. Estimates were performed using random effects logistic regression. StataMP 14.0.

<sup>†</sup>p<0.1, \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001

<sup>‡</sup>Values are logged

Nevertheless, when it comes to CPS, in combined Model 8, its coefficient is negative and significant as predicted by the hypothesis ( $p = 0.001$ ). An increase in CPS leads to a decrease in the odds of civil conflict occurring. Specifically, in this subset of countries, as reported in Model 8, a 1% increase in CPS is associated with a decrease in the log odds of conflict occurring by 0.075, holding other variable constant. Stated differently, a 1% increase in CPS leads to decreased odds of civil conflict occurring by a

factor of 0.9277  $\{\exp(-0.075)= 0.9277\}$ . Converting this to percentages, a one percentage increase in CPS is associated with a 7.23% decrease in the odds of civil conflict occurring, holding all other variables constant. These findings lend support to the argument that increasing financial resources to the private sector in conflict affected countries helps reduce the odds of a civil conflict occurring. Furthermore, the CPS coefficient is more impactful for this subset of countries. It is associated with a 7.23% decrease in odds of civil conflict occurring in Model 8 in comparison with a 6.67% decrease for all countries in in Model 4.

Finally, to address potential issues of causality, reverse causality, and collinearity, I conduct several robustness checks. First, I investigate the same models using fixed effects.<sup>165</sup> The fixed effects test is very severe and limiting in terms of observations because of no variance in certain controls (the ethnic diversity variable does not change within groups). For example, observations in Model 4 drop from 1,416 to 273 in the fixed effects test. Despite the added stringency, findings are consistent with results from the reported random effects models. CPS is statistically significant and negative, as predicted, whereas the BF variable is statistically insignificant. This is the case for all countries and the conflict affected subset. Stata results for fixed effect logit analysis are presented in the annex. Further, to address concerns around collinearity, in particular that growth and income per capita might be correlated with private sector strength, I rerun the models in omission of these two independent variables to see whether the CPS variable remains statistically significant.<sup>166</sup> I obtain reaffirming results: CPS is statistically significant and negative and

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<sup>165</sup> Additional fixed effects results are provided in Appendix A.

<sup>166</sup> Additional robustness tests are provided in Appendix A.

BF insignificant. This is the case for all countries and the conflict affected subset. Stata results for this robustness check are presented in the annex as well.

Finally, to address concerns of reverse causality, I apply several tests. The first one is to run the regression on all countries – including the rich peaceful ones which might skew the results in terms of overstating the pacifying effect of a stronger private sector. However, when the model is run on the subset of conflict-affected countries exclusively (that generally have smaller economies, lower income per capita, and more questionable democracies), I find that CPS remains significant and negative despite the stringency of the test (and BF insignificant). Further, in keeping with similar practices in the civil conflict literature to address concerns of reverse causality, I lag the main independent variables by one year.<sup>167</sup> When the private sector variables are lagged in a logit analyses (in both random and fixed effects), I obtain reaffirming results – whereby CPS is significant and negative for all countries and conflict affected countries and BF remains insignificant across all tests.<sup>168</sup> These results are presented in the annex.

Overall, mimicking results for all countries, I find that the CPS proxy for private sector strength is significant and reduces conflict whereas the BF proxy is statistically insignificant. This highlights that CPS – the private sector’s access to financial resources

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<sup>167</sup> Leszczensky, Lars, and Tobias Wolbring. "How to deal with reverse causality using panel data? Recommendations for researchers based on a simulation study." *Sociological Methods & Research* (2019): 0049124119882473.; Collier, Paul, and Anke Hoefler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595; Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* (2003): 75-90; Mousseau, Michael. "Capitalist development and civil war." *International Studies Quarterly* 56, no. 3 (2012): 470-483.; Thyne, Clayton L. "ABC's, 123's, and the Golden Rule: the pacifying effect of education on civil war, 1980–1999." *International Studies Quarterly* 50, no. 4 (2006): 733-754;

<sup>168</sup> Additional lagged effects results are provided in Appendix A

– translates into more impactful peace dividends in comparison with a change of the legal framework that shapes business operations. Though the conventional wisdom lumps these elements of a strong private sector together, results illustrate that in fragile and conflict-affected states, one type of intervention might have a stronger effect when it comes to preserving peace. It seems that credit to the private sector more directly impacts rebels’ opportunity cost calculus – be it through increased employment opportunities, the possibility of starting one’s own business via micro loans, or stocked super market shelves with the promise of future growth. On the other hand, changes in business freedom appear to be less impactful perhaps because changes in the institutional framework can be slower than an injection of resources and does not immediately translate into changes in behavior as businesses might have grown resilient to red tape, developed ways to circumvent legal hurdles, and learned to operate in such suboptimal regulatory environments. This is not to say that business freedom should not matter, but rather, with limited resources perhaps strengthening the private sector’s access to credit should be a priority over regulatory framework reform.

## **2.5 Illustrative cases: The Private Sector in Egypt and Tunisia**

To illustrate the argument made above, this section examines how the proxy measurements of CPS and BF payout in Egypt and Tunisia. Both are conflict-affected states (See table 1) and are similar in many respects. However, Tunisia has a significantly more robust private sector using both measures. Further, both states faced the external shock of the Arab Spring. This provides an initial plausibility probe to observe the civil

conflict response of Egypt and Tunisia.<sup>169</sup> An initial structured comparison of the two cases using a Most Similar Systems Design or Mill's Method of Difference,<sup>170</sup> allows for a more nuanced illustration of the private sector/civil conflict relationship. These cases are briefly presented here as a plausibility test of the argument made above that increases in financial access – rather than improved legal frameworks – are more effective at mitigating civil conflict occurrence.

Egypt and Tunisia have many parallels. Prior to the Arab uprising which erupted in 2011, they were ruled by autocratic repressive regimes. In Tunisia, Zine El Abidine Ben Ali had reigned for more than 20 years; and in Egypt, Hosni Mubarak, had governed for close to 30 years.<sup>171</sup> Furthermore, both Tunisia and Egypt had significant Islamist parties in opposition – the Al-Nahda and Muslim Brotherhood parties – who eventually came to power.<sup>172</sup> Though, in Egypt this was later reversed by a coup.<sup>173</sup> Also, the decade pre-Arab spring, Egypt and Tunisia were experiencing close to 5 percent GDP growth.<sup>174</sup> Additionally, in early 2011, both witness massive social protests calling in large part for economic rights. A 2005 Zogby poll found that across the region the top priority of citizens was to expand employment opportunities.<sup>175</sup> Despite these similarities, Tunisia has a significantly stronger private sector since 2005 as measured by BF and CPS (see figures 2

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<sup>169</sup> Bennett, Andrew, and Alexander L. George. *Process tracing in case study research*. Washington, DC: MacArthur Program on Case Studies, 1997.

<sup>170</sup> Ragin, Charles C. *The comparative method: Moving beyond qualitative and quantitative strategies*. Univ of California Press, 2014., p.39

<sup>171</sup> Cammett, Melani, Ishac Diwan, Alan Richards, and John Waterbury. *A political economy of the Middle East*. Westview Press, 2015., p.1

<sup>172</sup> Cammett, Melani, Ishac Diwan, Alan Richards, and John Waterbury. *A political economy of the Middle East*. Westview Press, 2015, p.32

<sup>173</sup> Kirkpatrick (2013)

<sup>174</sup> World Development Indicators

<sup>175</sup> Zogby, James. *Attitudes of Arabs: 2005*, *Zogby International*. 2005.

[https://d3n8a8pro7vhmx.cloudfront.net/aai/pages/9762/attachments/original/1431961475/ArabAttitudes\\_2005.pdf?1431961475](https://d3n8a8pro7vhmx.cloudfront.net/aai/pages/9762/attachments/original/1431961475/ArabAttitudes_2005.pdf?1431961475)

and 3). In the political economy of the Middle East literature, there is a consensus that economic ailments triggered the Arab uprisings. Cammett et al (2015) argue that economic discontent in interaction with a specific sociopolitical context ignited the uprisings (of which some turned violent). Particularly, perceived inequality, the shrinking of the state, and the rise of capital cronyism limited economic opportunities and equal access to them.

<sup>176</sup> Both Tunisia<sup>177</sup> and Egypt<sup>178</sup> suffer from crony capitalism, whereby certain elites dominate the business sphere in exchange for political support. Because the grievances and eventually the causes for protest and rebellion were largely economic in nature, a fortiori, the conventional wisdom whereby a vibrant private sector producing employment opportunities and peace dividends will help pacify civil conflict and unrest. I trace the unfolding of both proxies of CPS and BF in Egypt and Tunisia.

### **Business Freedom in Egypt and Tunisia**

Tracking this indicator for Egypt, Tunisia, and conflict-affected countries (average score), I find that Tunisia has higher BF scores than Egypt (figure 2). Interestingly though, this score appears to be relatively consistent throughout time for both places, with a dip for

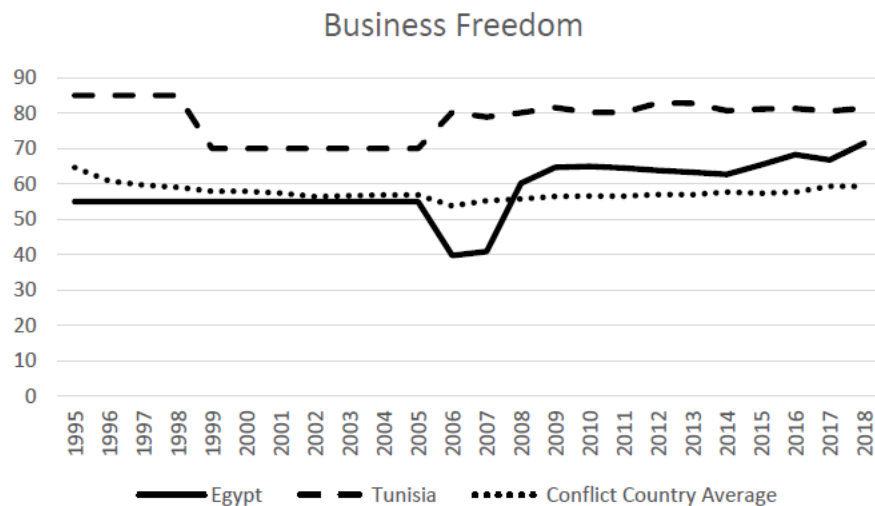
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<sup>176</sup> Cammett, Melani, Ishac Diwan, Alan Richards, and John Waterbury. *A political economy of the Middle East*. Westview Press, 2015, p.4

<sup>177</sup> Rijkers, Bob, Caroline Freund, and Antonio Nucifora. *All in the family: State capture in Tunisia*. The World Bank, 2014.; Arouri, Hassen, Leila Baghdadi, and Bob Rijkers. "State Capture in Ben Ali's Tunisia." *Crony Capitalism in the Middle East: Business and Politics from Liberalization to the Arab Spring* (2019): 173.

<sup>178</sup> Diwan, Ishac, Philip Keefer, and Marc Schiffbauer. "The Mechanics, Growth Implications, and Political Economy of Crony Capitalism in Egypt." *Crony Capitalism in the Middle East: Business and Politics from Liberalization to the Arab Spring* (2019): 67.; Henry, Clement Moore, and Robert Springborg. *Globalization and the Politics of Development in the Middle East*. Vol. 1. Cambridge University Press, 2010.; Chekir, Hamouda, and Ishac Diwan. "Crony capitalism in Egypt." *Journal of Globalization and Development* 5, no. 2 (2014): 177-211.

Egypt in 2006 and 2007.<sup>179</sup> Especially after 2010, Tunisia’s BF score hovers around 80 and Egypt’s around 65 with little fluctuation. As explained above, this demonstrates how institutional and regulatory changes might not quickly and directly translate into behavioral patterns when it comes to operating a business. Thus, there is not much fluctuation in this variable to begin with. Further, in the case of Egypt, we see a slight improvement in the BF score from 2006 to 2010 and again from 2014 to 2016. Nevertheless, 2011 marks the beginning of the revolts and 2014 through 2017 are years marked by bloody civil conflict. Thus, in congruence with the quantitative analysis it would appear that slow variation in the BF scores, because of the nature of legal changes and sticky behavior, does not translate into impactful economic changes that in turn sustain peace, at least in the short term.



**Figure 3 - Business Freedom in Egypt and Tunisia<sup>180</sup>**

<sup>179</sup> Teorell, Jan, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon & Richard Svensson. 2019. The Quality of Government Standard Dataset, version Jan19. University of Gothenburg: The Quality of Government Institute, <http://www.qog.pol.gu.se> doi:10.18157/qogstdjan19 P. 358.

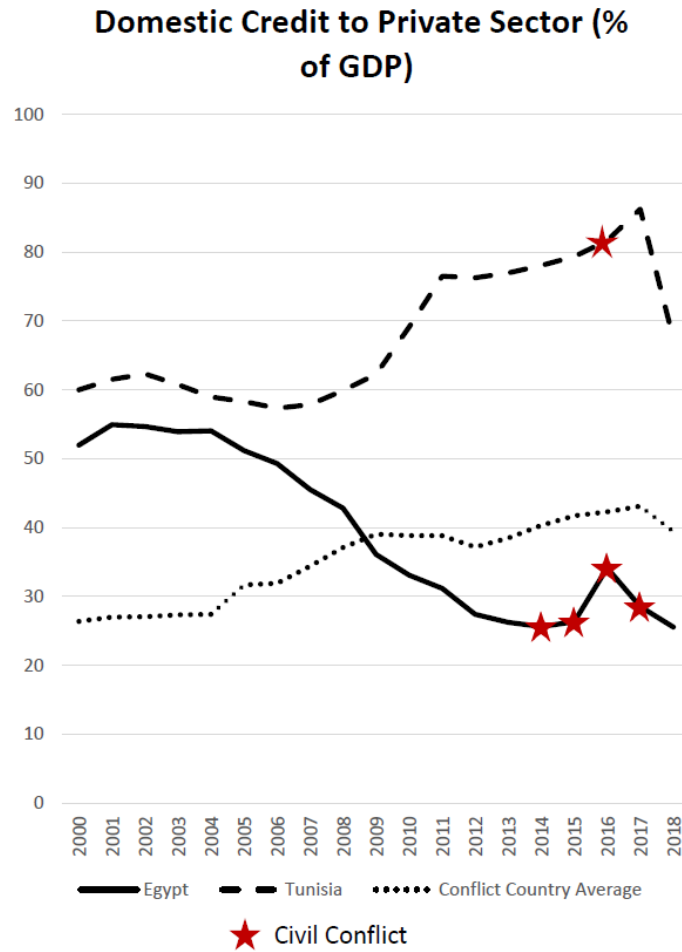
<sup>180</sup> Teorell, Jan, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon & Richard Svensson. 2019. The Quality of Government Standard Dataset, version Jan19. University of Gothenburg: The Quality of Government Institute, <http://www.qog.pol.gu.se> doi:10.18157/qogstdjan19 P. 358.

## **Credit to the Private Sector**

Conversely, there is much more variance in the CPS variable across time. This refers to the resources provided to the private sector by financial corporations, through loans, trade credits, and other accounts receivable. Credit to the private sector is important because it helps finance production, consumption and capital formation, which in turns affects economic activity<sup>181</sup> and eventually a rebel's opportunity cost to rebel. Plotting this variable across time for Egypt, Tunisia, and conflict-affected countries, we see that Tunisia has a significantly stronger private sector – using this proxy – in comparison with Egypt and is considerably above average for conflict-affected states. Post-2008, Tunisia's CPS steadily rises from 60% of GDP in 2008 to 86% in 2017. Egypt CPS decreases from 43% in 2008 to 26% in 2014. Interestingly, Tunisia experiences civil conflict only in 2016, whereas Egypt sees the occurrence of civil conflict from 2014 – 2017, continuously (shown in figure 2). For Egypt, in the years prior to the Arab Spring from 2008 – 2011, we can see a steep decline in CPS, which reflects a contracting private sector and reduced activity.

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<sup>181</sup> Domestic credit to private sector (% of GDP), metadata, Long definition, The World Bank, retrieved April 14, 2017

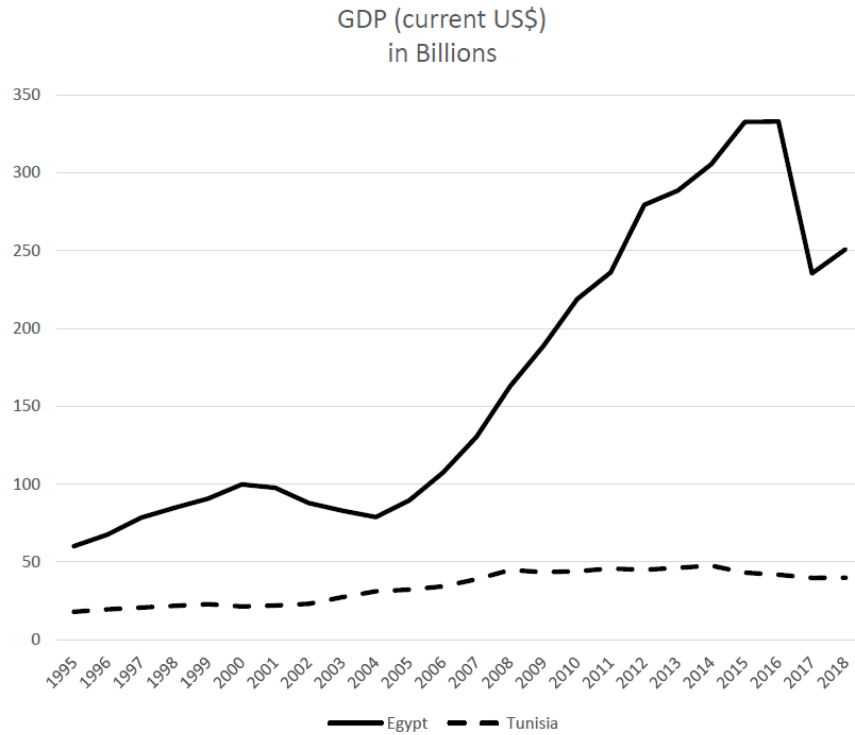


**Figure 4 - Credit to the Private Sector in Egypt and Tunisia<sup>182</sup>**

This probably led to decreasing economic opportunities and economic ailment, which fueled the calculus of more rebels and thus led to a higher level and longer period of civil conflict in Egypt. When looking at GDP mapped below for Egypt and Tunisia, we see that Egypt, counterintuitively, had a growing GDP from 2008 through 2016 (figure 4). Nevertheless the private sector’s access to finance was restricting. This tightening of access

<sup>182</sup> World Development Indicators, World Bank

to cash, a shrinking of the private sector, and the reduction of access to credit, fueled a bloodier and longer civil conflict in Egypt. Tunisia on the other hand, despite a GDP that was growing much slower than Egypt's in the years after 2011, experiences significant growth in CPS in this time period. In comparison, Tunisia experiences civil conflict for one year in 2016. Consequently, in this initial comparison, it seems that a growing CPS helped mitigate conflict in a country faced with the external shock of the Arab Spring. Throughout, Tunisia's stronger private sector in terms of access to credit, seems to have mitigated the occurrence of civil conflict by delivering more tangible peace dividends in comparison with changes in the business environment. Accordingly, more granular examination reveals that Egypt with a weak private sector suffered from more frequent civil conflict occurrences than Tunisia and that higher levels of CPS were associated with lower levels of conflict, whereas BF – the legal framework surrounding business – tends to change little over time and does not seem to affect the conflict outcome as readily.



**Figure 5 - GDP for Egypt and Tunisia<sup>183</sup>**

## 2.6 Conclusions and Implications

There is a deep-seated conventional wisdom in the international policy community that a strong private sector is essential to sustain peace in societies affected by conflict. Nevertheless, this conventional wisdom has never been theorized and tested in academic work. This paper systematically builds the causal mechanism that ties private sector development with civil conflict and tests the prevailing conviction that a strong private sector leads to more peaceful societies using a large-N approach. Building on the civil

<sup>183</sup> World Development Indicators, World Bank

conflict literature, this study introduces an independent variable that has not been previously tested capturing the strength of the private sector – bridging a significant gap between academic understanding and the policy world.

Furthermore, the term strong private sector is loosely used in the practitioner community to refer to a bundle of activities in developing economies. Reflecting competing strands in PSD policy interventions, this study uses two proxies for private sector strength: one measuring improvements in the legal business environment and the other measuring the financial resources given to the private sector. Statistical results for all countries and for the subset of countries affected by conflict indicate that credit to the private sector in all cases decreases the probability of civil war. Interestingly, changes in the business legal and operational environment are statistically insignificant across the board. Overall, these findings lend credence to the argument that a strong private sector is important to sustain peace, but it depends on how private sector strength is defined. Increasing the private sector's access to credit decreases the probability of civil conflict, because of more immediate and tangible peace dividends such as in increased employment opportunity, spending capacity, stocked shelves thanks to lines of credit, etc. Conversely, changes in the business legal operational environment – while may increase business efficiency long term – does not seem to pacify conflict. The way businesses navigate red tape and operational constraints are difficult to change overnight because these are learned and sticky behaviors. Legal changes on paper might not have an immediate behavioral impact, especially in areas where legal enforcement and accountability are lacking.

These statistical findings are supplemented with a brief illustrative plausibility probe of the argument above using the cases of the Egypt and Tunisia. Indeed, closer analysis of these individual countries reveals that a stronger private sector in Tunisia led to lower levels and less frequent civil conflict occurrences in comparison with Egypt for the same post-Arab Spring period. Further in both countries, the business environment changes at a much lower rate in comparison with the private sector's access to credit. This reflects the challenge in altering institutions and regulatory frameworks. In stark comparison, access to credit accounts for much more variance and more directly affects a would-be-rebel's opportunity cost to rebel. More credit to the private sector leads to increased spending capacity for businesses and private individuals. This translates into economic opportunities and people's commitment to future growth, which diminishes one's propensity to engage in rebellion. Thus, growing access to credit in Tunisia helped mollify civil conflict occurrence in comparison with Egypt.

The quantitative analysis and statistical tests are run for all countries and a subset of conflict-affected countries that is not region (but rather event/civil conflict) specific and spans all regions (North Americas, South America, Asia, Africa, the Far East, and Europe). Further, the measures of civil conflict and credit to the private are reliable and comparable across regions, countries, and time. Thus, findings from the large-N study are expected to travel well across regions. To illustrate the quantitative findings and highlight the difference between credit to the private sector and business freedom variables and their effects on civil conflict, I conduct an illustrative structured comparison (drawn from the quantitative data) to provide an initial plausibility probe of the large-n quantitative findings. A closer examination of Egypt and Tunisia confirms the large n findings: Egypt had low

levels of credit to the private sector, whereas Tunisia had high levels. In this comparison, we see that Tunisia experienced lower levels of civil conflict than Egypt across the same period of time. I chose the Middle East and North Africa Region (MENA), established the average for the region in terms of credit to the private sector and selected a high (Tunisia) and a low (Egypt) country to trace the difference that statistics point to. This plausibility can be extended to other regions and countries to help illustrate the quantitative findings. Even though I use the MENA region to illustrate the difference between credit to the private sector and business freedom, the external validity remains quite powerful as the major evidence for the findings is drawn from a large sample of countries spanning all regions.

In addition, this chapter has important implications for future research when it comes to civil war. In addition to adding these novel independent variables related to private sector strength, future research can help flesh out, measure, and test the intermediate steps and causal mechanism linking private strength and civil conflict. Results from this study indicate that private sector development – especially credit to the private – is an effective way to mitigate civil conflict. Increasing the private sector's access to credit decreases the probability of civil conflict, because of more immediate and tangible peace dividends such as in increased employment opportunity, spending capacity, and stocked shelves thanks to lines of credit. The civil conflict literature heavily relies on the opportunity cost to rebel and employment mechanism to explain the outbreak of civil conflict. However, the credit to the private sector variable might be capturing several other reinforcing mechanisms in addition to that of employment. The private sector's access to credit triggers several potentially reinforcing pacifying effects, including – but perhaps not limited to increased employment. Additional effects captured by the credit to the private

sector variable could include: the possibility of starting one's own business via micro loans, stocked super-market shelves, the promise of future growth, or even increased influence that businesses might have with governments as a result of their access to money. All these potential changes can directly affect the opportunity cost to rebel calculus – acting in ways that are not necessarily strictly linked to employment per se but rather to a would-be rebel's commitment to peace because of the prospect of growth, future employment, increased purchasing power, etc. Further, empowered businesses via increasing loans and lines of credit might be taking on a greater role in lobbying governments for peaceful solutions to conflict – playing into state capacity and interest to quell rebellion. A framework for better understating how the private sector engages with governments to promote peace (or conflict) is developed and tested in the following chapter. Future research should further explore the different elements that are captured in the opportunity cost to rebel mechanism, including the role of employment along the causal chain, but also other potentially virtuous effects and reinforcing mechanisms that credit to the private sector might be triggering in tandem.

Also, this paper does not capture economic activity in the informal sector, which is significantly large in conflict-affected states. The measures used for private sector strength capture the formal market exclusively. The informal sector is important as it is also a major source of economic opportunity in developing countries. Therefore, focusing on these measures has perhaps underplayed the role of the private sector, as informal activity is not captured. Lastly, given the binary nature of the dependent variable, it is possible that more subtle trends are being missed in the statistical analysis. As such, corroborating these

results with a continuous measure of civil conflict and/or civil conflict intensity might reveal a more nuanced relationship.

Finally, these findings have practical implications for the policy community looking to strengthen peacebuilding interventions with private sector reform. While many predictors of civil conflict are immutable factors such as population size or geography, credit to the private sector is a variable that can be relatively easily manipulated with policy tools, targeted interventions, and investment. For example, IFC programs focused on increasing access to credit for SMSEs or to strengthen the local financial and banking sectors to more effectively disperse loans to local businesses can help sustain peace in fragile societies. These types of interventions are more likely to pacify civil conflict in comparison with efforts aimed to strengthen the legal environment. Thus, with limited funds, strengthening private sector access to credit perhaps should be prioritized in a society affected by conflict. Accordingly, these findings can help prioritize and sequence private sector development interventions in developing countries experiencing or emerging from conflict.

## **CHAPTER 3. LEVERAGING ECONOMIC SECTORS FOR PEACE - LESSONS FROM LEBANON**

### **Abstract**

Are some economic sectors better than others at promoting peace? Practitioners believe that the private sector, as a whole, has a crucial role to play, but the civil conflict literature tends to compare conflict nationally and does not differentiate between economic sectors. To examine firms' subnational contributions to peace or conflict, I build a theoretical framework to predict economic sectors' propensity for peace. Subsequently, I argue that firms operating in sectors vested in peace engage in peace-promoting activities. To test for differentiated effects, I conduct a focused and structured within-case analysis in Lebanon in the post-civil war era 1991-2019, examining two sectors: one vested in peace and stability (financial sector) and the other peace-neutral (quarrying sector). By analyzing fieldwork data collected through semi-structured interviews and local news reports, it is demonstrated that firms vested in peace support national policies to that effect, whereas peace-neutral business can engage in inflammatory tactics, which occasionally lead to violent conflict.

### **3.1 Introduction**

Can business and private sector activity in different economic sectors have divergent effects on civil conflict in post-conflict societies? The conventional wisdom in the academic literature and the international development practitioner community stipulates that a vibrant private sector is essential for sustaining peace in conflict-affected

and fragile societies. After the collapse of the Soviet Union, the liberal approach to peacebuilding and its political economy has emerged as the dominant one, whereby the private sector and the market economy are viewed as an essential element to building sustainable development and peace within countries. The International Finance Corporation (IFC) – which is a member of the World Bank Group focused exclusively on the private sector in developing countries – in 2015 alone, granted \$8.7 billion in loans to Micro, Small and Medium Enterprises (MSMEs) in Sub-Saharan Africa<sup>184</sup> and \$19.3 billion to MSMEs in the Middle East and North Africa<sup>185</sup> in 2016 as part of their effort to boost the private sector in developing countries for the grander objective of peace and prosperity. Nevertheless, the causal mechanism linking private sector activity and civil conflict remains poorly understood. Moreover, there is no distinction between the effects that different economic sectors might have on civil peace in one country. The civil conflict literature tends to study and compare conflict at the national level, focus on quantitative methods, and does not differentiate between sectors of the economy – with the exception of extractive resources – and their potential impact on civil conflict.

To illustrate this puzzle, in Lebanon’s post civil war era we see businesses in different economic sectors having varying effects when it comes to either sustaining peace or instigating conflict. Specifically, in the post-civil war period of 1990 – 2019 some business clusters contributed to forging peace, stability, and national unity explicitly and

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<sup>184</sup> “Sub-Saharan Africa, IFC Financing to Micro, Small and Medium Enterprises,” *International Finance Cooperation*. Accessed September 13 2019.

[https://www.smefinanceforum.org/sites/default/files/IFC\\_Factsheets\\_SSA.pdf](https://www.smefinanceforum.org/sites/default/files/IFC_Factsheets_SSA.pdf).

<sup>185</sup> “MIDDLE EAST AND NORTH AFRICA IFC Financing to Micro, Small and Medium Enterprises,” *International Finance Cooperation*. Accessed September 13 2019.

[https://www.smefinanceforum.org/sites/default/files/IFC\\_NOV2017\\_Factsheets\\_MENA\\_INTERACTIVE.PDF](https://www.smefinanceforum.org/sites/default/files/IFC_NOV2017_Factsheets_MENA_INTERACTIVE.PDF).

while others contributed to the instigation of conflict by using divisive and inflammatory rhetoric and resorting to regional warlords to solve conflict. This research seeks to fill the academic void and bridge the gap between academic inquiry and what is already being implemented in practice by shedding light on more nuanced sub-national forces that can help sustain peace. Thus, adapting a more granular approach— breaking private sector activity into different economic subtypes – will help tease out which economic sectors are more peace-promoting. First, I build a theoretical framework to help predict an economic sector’s propensity for sustaining peace, derived mainly from the civil conflict literature. Second, I test for the differentiated effects. To do this, I conduct a focused and structured within case analysis in Lebanon looking at two economic sectors – one theorized to be vested in peace and the other peace neutral, in the post-civil war period of 1991-2019. Data collected from semi-structured open-ended interviews with business leaders and government officials (among others), local newspaper reports, and secondary sources are used to trace and compare different conflict outcomes. Findings from this project contribute to an academic debate and address a policy need, especially as it relates to leveraging the private sector and making peace-building efforts more effective.

### **3.2 Civil Conflict Perspectives**

To help forge peaceful societies it is important to understand what initiates conflict and what helps sustain peace. In conflict-affected countries – countries that are either experiencing conflict or have experience conflict in recent history – this dynamic is particularly important. As Collier’s work demonstrates, in the first decade post conflict, a developing country has a 40 percent risk of relapsing into conflict – in contrast to only 9

percent for a developing country that has been at peace for a long time.<sup>186</sup> Given that this subset of countries is more prone to relapse, it is important to understand the push and pull factors that are at play and what government or international development agencies can do to help mitigate this risk.

In the civil conflict literature, the outbreak of conflict is largely explained by two main factors: (1) the individual's calculus to engage in rebellion and (2) state capacity to suppress violent uprisings.<sup>187</sup> In terms of what might motivate an individual to rebel, there are debates along the greed and grievance divide.<sup>188</sup> The greed school of thought emphasizes the opportunity cost of rebelling and the importance of individual material gains made possible through civil war.<sup>189</sup> Whereas, the grievance school of thought highlights ethnic fractionalization, political repression, and relative deprivation as motivation for engaging in violence and justice-seeking behavior.<sup>190</sup> The foundational and

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<sup>186</sup> Collier, Paul. "Post-conflict recovery: How should strategies be distinctive?." *Journal of African Economies* 18, no. suppl\_1 (2009): i99-i131.

<sup>187</sup> Chatagnier, J. Tyson, and Emanuele Castelli. "The arc of modernization: Economic structure, materialism, and the onset of civil conflict." *Political Science Research and Methods* 7, no. 2 (2019): 233-252.

<sup>188</sup> Collier, Paul, and Anke Hoeffler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595

<sup>189</sup> Miguel, Edward, Shanker Satyanath, and Ernest Sergenti. "Economic shocks and civil conflict: An instrumental variables approach." *Journal of political Economy* 112, no. 4 (2004): 725-753.; Thyne, Clayton L. "ABC's, 123's, and the Golden Rule: the pacifying effect of education on civil war, 1980–1999." *International Studies Quarterly* 50, no. 4 (2006): 733-754.; Brückner, Markus, and Antonio Ciccone. "International commodity prices, growth and the outbreak of civil war in Sub-Saharan Africa." *The Economic Journal* 120, no. 544 (2010): 519-534.; Bazzi, Samuel, and Christopher Blattman. "Economic shocks and conflict: Evidence from commodity prices." *American Economic Journal: Macroeconomics* 6, no. 4 (2014): 1-38. Dube, Oeindrila, and Juan F. Vargas. "Commodity price shocks and civil conflict: Evidence from Colombia." *The Review of Economic Studies* 80, no. 4 (2013): 1384-1421.; Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90.; Fjelde, Hanne. "Farming or fighting? Agricultural price shocks and civil war in Africa." *World Development* 67 (2015): 525-534. Smith, Todd Graham. "Feeding unrest: disentangling the causal relationship between food price shocks and sociopolitical conflict in urban Africa." *Journal of Peace Research* 51, no. 6 (2014): 679-695.

<sup>190</sup> Regan, Patrick M., and Daniel Norton. "Greed, grievance, and mobilization in civil wars." *Journal of Conflict Resolution* 49, no. 3 (2005): 319-336.; Cederman, Lars-Erik, Kristian Skrede Gleditsch, and Halvard Buhaug. *Inequality, grievances, and civil war*. Cambridge University Press, 2013.; Gurr, Ted

exhaustive works of Fearon and Laitin (2003) and Collier and Hoeffler (2004) find that economic variables such as per capita income and economic growth (rather than inequality, ethnic composition, or democracy) help better explain the outbreak of conflict as they affect rebel movements ability to recruit members and state capacity to quell rebellion.<sup>191</sup> While these approaches focus on individuals and political groups' calculus and motivation to engage in civil war, little attention has been given to the potential role of the private sector and firms operating in different economic sectors. Despite these findings, the civil conflict literature offers no granular explanation of the role of the private sector specifically and how it interacts with individuals and/or the state, as they look to either avoid or engage in violent conflict.

This is not to say that there has been no expansive work on the micro-dynamics of civil conflict. There is a body of work that is dedicated to understanding individual behavior and motivations to engage violence in civil conflict. For example, Kalyvas' work dissects violence in civil war at the level of individual behavior.<sup>192</sup> In contrast to the civil conflict literature that generally focuses on macroeconomic motivations, Kalyvas' analysis adopts the micro/individual level of analysis. He explores the logics of asymmetric information and local dynamics of rivalries to predict the likelihood of violence.<sup>193</sup> He finds

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Robert. "Minorities at risk- a global view of ethno-political conflicts." *UNITED STATES INSTITUTE OF PEACE PRESS, ARLINGTON, VA 22210(USA)*. 1995. (1995).

<sup>191</sup> Collier, Paul, and Anke Hoeffler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595.; Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90.

<sup>192</sup> Kalyvas, Stathis N. *The logic of violence in civil war*. Cambridge University Press, 2006. Retrieved <https://rodrigomorenog.files.wordpress.com/2019/02/kalyvas-the-logic-of-violence-in-civil-war-cambridge-university-press-2006.pdf>

<sup>193</sup> Kalyvas, Stathis N. *The logic of violence in civil war*. Cambridge University Press, 2006. P. 6. Retrieved <https://rodrigomorenog.files.wordpress.com/2019/02/kalyvas-the-logic-of-violence-in-civil-war-cambridge-university-press-2006.pdf>

that violence is most likely to occur where one actor is near hegemonic, as in where the organizational demand for information meets its individual supply.<sup>194</sup> Similarly, Sambanis uses case studies to help link individual motives with broader conflict outcomes.<sup>195</sup> Justino, links the economic well-being of households/individuals and their decisions to participate in violent conflict.<sup>196</sup> On the micro-level as well, other work explores the politics of insurgent violence to better understand the structure of rebel organizations and their strategies, which include violence against noncombatants – in contrast to state based violence.<sup>197</sup> Weinstein finds that a rebel group’s initial endowments shapes how it ultimately uses violence. If a rebel group emerges in a context that is abundant in natural resources or with external sources of funding and support it tends to engage in higher levels of indiscriminate violence.<sup>198</sup> Other work indicates that higher levels of abuse against citizens are a result of warring groups’ difficulty to police their member’s behavior.<sup>199</sup> But even the work that addresses micro-level explanations, fails to examine how the private sector and businesses can influence individuals, rebel groups, and/or government calculus when it comes to peace or violent conflict outcomes. These authors look at the role of political actors, rebel organizations and individuals. There is no discussion of the role of

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<sup>194</sup> Kalyvas, Stathis N. *The logic of violence in civil war*. Cambridge University Press, 2006. P. 13. Retrieved <https://rodrigomorenog.files.wordpress.com/2019/02/kalyvas-the-logic-of-violence-in-civil-war-cambridge-university-press-2006.pdf>; HUMPHREYS, MACARTAN, and JEREMY M. WEINSTEIN. “Handling and Manhandling Civilians in Civil War.” *American Political Science Review* 100, no. 3 (2006): 429–47;

<sup>195</sup> Sambanis, Nicholas. "Using case studies to expand economic models of civil war." *Perspectives on Politics* 2, no. 2 (2004): 259-279. P.272

<sup>196</sup> Justino, Patricia. "Poverty and violent conflict: A micro-level perspective on the causes and duration of warfare." *Journal of Peace Research* 46, no. 3 (2009): 315-333.

<sup>197</sup> Weinstein, Jeremy M. *Inside rebellion: The politics of insurgent violence*. Cambridge University Press, 2006.

<sup>198</sup> Weinstein, Jeremy M. *Inside rebellion: The politics of insurgent violence*. Cambridge University Press, 2006. P.7

<sup>199</sup> Humphreys, Macartan, and Jeremy m. Weinstein. “Handling and Manhandling Civilians in Civil War.” *American Political Science Review* 100, no. 3 (2006): 429–47

the private sector and businesses and their potential ability to affect these more traditionally studied actors' calculi.

### 3.3 Economic Sectors and Peace

Traditionally, in the civil conflict literature, the lenses adopted to better understand the occurrence of violence focuses on either an insurgent's opportunity cost to rebel<sup>200</sup> and/or state capacity<sup>201, 202</sup>. Thus, the main actors that have been studied are rebels and the state. Nevertheless, can the private sector also contribute to a country's peace/conflict dynamic? In the management literature, businesses (as opposed to individuals, rebel groups, and governments) are elevated to the forefront as an important actor when it comes to sustaining peace in post-conflict societies. There is a general assumption that businesses are vested in peace and stability for their bottom line because wars can be destructive of their assets and slow down economic growth.<sup>203</sup> Outside of their business operation, the private sector has attempted to influence peace outcomes by directly engaging in political activities, such as mediating negotiations,<sup>204</sup> and engaging in Corporate Social Responsibility (CSR) which have had national peace as an end goal.<sup>205</sup> However, there is no attempt to systematically test these assumptions or categorize different business clusters

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<sup>200</sup> De Soysa, Indra, and Hanne Fjelde. "Is the hidden hand an iron fist? Capitalism and civil peace, 1970-2005." *Journal of Peace Research* 47, no. 3 (2010): 287-298.; Dube, Oeindrila, and Juan F. Vargas. "Commodity price shocks and civil conflict: Evidence from Colombia." *The Review of Economic Studies* 80, no. 4 (2013): 1384-1421.

<sup>201</sup> Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 1 (2003): 75-90.

<sup>202</sup> Chatagnier, J. Tyson, and Emanuele Castelli. "The arc of modernization: Economic structure, materialism, and the onset of civil conflict." *Political Science Research and Methods* (2016): 1-20.

<sup>203</sup> Forrer, John J., and John E. Katsos. "Business and peace in the buffer condition." *The Academy of Management Perspectives* 29, no. 4 (2015): 438-450.

<sup>204</sup> Rettberg, Angelika. "The private sector and peace in El Salvador, Guatemala, and Colombia." *Journal of Latin American Studies* 39, no. 3 (2007): 463-494.

<sup>205</sup> Forrer, John J., and John E. Katsos. "Business and peace in the buffer condition." *The Academy of Management Perspectives* 29, no. 4 (2015): 438-450.

and their propensity for peace.<sup>206</sup> In a more targeted manner, the business-government relations literature examines this relationship as an explanatory factor for shaping economic outcomes: businesses interact with government to lobby and push for their interests. Previous work shows that effective state-business relations (based on evidence from Japan, Korea,<sup>207</sup> Tunisia, Morocco,<sup>208</sup> India,<sup>209</sup> and South Africa<sup>210</sup> in the apparel and pharmaceutical industries among others) are important in cluster upgrading and fostering economic growth. Borrowing from this perspective and using businesses as a unit of analysis, I attempt to shed light on the complex phenomena of civil conflict and peace.

However, that is not to say that all businesses benefit from and thus promote peace. The extractive industries are notorious for being associated with the outbreak and prolonging of conflict – mostly because they provide lootable commodities that can bolster rebel movements. Despite the general lack of differentiation between economic sectors and their potential civil conflict impacts, the civil conflict literature has scrutinized the relationship between natural resources and civil conflict. The production and/or export of

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<sup>206</sup> Forrer, John J., and John E. Katsos. "Business and peace in the buffer condition." *The Academy of Management Perspectives* 29, no. 4 (2015): 438-450.

<sup>207</sup> Evans, Peter B. *Embedded autonomy*. Princeton University Press, 2012.

<sup>208</sup> Cammett, Melani. "Business-government relations and industrial change: The politics of upgrading in Morocco and Tunisia." *World development* 35, no. 11 (2007): 1889-1903.

<sup>209</sup> Cali, Massimiliano, and Kunal Sen. "Do effective state business relations matter for economic growth? Evidence from Indian states." *World Development* 39, no. 9 (2011): 1542-1557.

<sup>210</sup> Papaioannou, Theo, Andrew Watkins, Julius Mugwagwa, and Dinar Kale. "To Lobby or to Partner? Investigating the Shifting Political Strategies of Biopharmaceutical Industry Associations in Innovation Systems of South Africa and India." *World Development* 78 (2016): 66-79.

oil,<sup>211</sup> mining,<sup>212</sup> drugs,<sup>213</sup> diamonds,<sup>214</sup> have all been considered as explanatory factors and drivers of conflict. In this literature, lootable natural resources factor into the self-interested calculus of would-be rebels.<sup>215</sup> They tend to adopt a profit-seeking/greed<sup>216</sup> approach at the individual-level whereby individuals are weighing the economic benefit of looting and funding a rebellion.<sup>217</sup> Findings underline that the presence of natural resources can increase the likelihood of conflict and lootable commodities can prolong conflicts that have already begun.<sup>218</sup> Nevertheless, this perspective is centered on how the presence of natural resources fuels rebellion via the rebel/individual's calculus – not from the business interests perspective.

So, what remains to be examined is how civil war affects the businesses that operate in the natural resource extraction industry. This will help determine how vested a particular

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<sup>211</sup> Ohmura, Hirotaka. "Natural resources and the dynamics of civil war duration and outcome." *Asian Journal of Comparative Politics* 3, no. 2 (2018): 133-148; Koos, Carlo, and Jan Pierskalla. "The effects of oil production and ethnic representation on violent conflict in Nigeria: a mixed-methods approach." *Terrorism and political violence* 28, no. 5 (2016): 888-911.; Collier, Paul, and Anke Hoeffler. "Resource rents, governance, and conflict." *Journal of conflict resolution* 49, no. 4 (2005): 625-633.

<sup>212</sup> Switzer, Jason. "Armed conflict and natural resources: The case of the minerals sector." *London: International Institute for Environment and Development* (2001). Accessed August 30 2019. [https://www.iisd.org/pdf/2002/envsec\\_mining\\_conflict.pdf](https://www.iisd.org/pdf/2002/envsec_mining_conflict.pdf).

<sup>213</sup> Rettberg, Angelika, and Juan Felipe Ortiz-Riomalo. "Golden opportunity, or a new twist on the resource–conflict relationship: Links between the drug trade and illegal gold mining in Colombia." *World Development* 84 (2016): 82-96; Monteleone, Carla. "Do terrorism, organized crime (drug production), and state weakness affect contemporary armed conflicts? An empirical analysis." *Global Change, Peace & Security* 28, no. 1 (2016): 35-53.; Piazza, James A. "The opium trade and patterns of terrorism in the provinces of Afghanistan: An empirical analysis." *Terrorism and Political Violence* 24, no. 2 (2012): 213-234.

<sup>214</sup> Lujala, Päivi, Nils Petter Gleditsch, and Elisabeth Gilmore. "A diamond curse? Civil war and a lootable resource." *Journal of Conflict Resolution* 49, no. 4 (2005): 538-562.;

<sup>215</sup> Collier, Paul, and Anke Hoeffler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595.; Boix, Carles. "Economic roots of civil wars and revolutions in the contemporary world." *World Politics* 60, no. 3 (2008): 390-437.

<sup>216</sup> Chatagnier, J. Tyson, and Emanuele Castelli. "The arc of modernization: Economic structure, materialism, and the onset of civil conflict." *Political Science Research and Methods*(2016): 1-20. P.234

<sup>217</sup> Taydas, Zeynep, Dursun Peksen, and Patrick James. "Why do civil wars occur? Understanding the importance of institutional quality." *Civil Wars* 12, no. 3 (2010): 195-217. P196.

<sup>218</sup> Ross, Michael L. "What do we know about natural resources and civil war?." *Journal of peace research* 41, no. 3 (2004): 337-356.

natural resource sector is in peace, from the business owner's point of view. As will be shown in the prosperity for peace framework developed below, the extractive sector should not be lumped in one category. Rather, they should be differentiated based on the types of capital and labor they require. For example, firms operating in the offshore oil and gas extraction or fracking industries<sup>219</sup> – considered to be more high tech, might have different interests than firms operating in the mining, quarrying or diamond sector – considered to be relatively low tech.<sup>220</sup> This concept is fleshed out in more detail below.

Further, in Middle East area studies, businesses and firms are not merely apolitical profit-seekers.<sup>221</sup> Often, business owners are elites that are entangled with politicians and politics and can stand to benefit from the political economy of war or peace. For example, the post-civil war political economy in Lebanon was created to serve the oligarchic political elite.<sup>222</sup> And in many works (such as Haddad's work on Syria), the nexus between politics and business is upheld as an explanatory factor for authoritarianism, stability, revolution,<sup>223</sup> and conflict.<sup>224</sup> Conflict can even create ruptures in old monopolistic patterns, which can lead to opportunities for new entrepreneurs that might have an interest in protracted

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<sup>219</sup> Ergun, Merve. "A Comparative Study on Fracking Technology and Sustainable Development." *Available at SSRN 3660500* (2020).

<sup>220</sup> Nemery, B. "Low-tech mining of materials critically needed for high-tech applications: impacts on air, water, places and... people." *Environmental Epidemiology* 3 (2019): 284.

<sup>221</sup> Diwan, Ishac, Adeel Malik, and Izak Atiyas, eds. *Crony Capitalism in the Middle East: Business and Politics from Liberalization to the Arab Spring*. Oxford University Press, 2019.

<sup>222</sup> Salloukh, Bassel F. "Taif and the Lebanese state: the political economy of a very sectarian public sector." *Nationalism and Ethnic Politics* 25, no. 1 (2019): 43-60.

Fawwaz Traboulsi, Social Classes and Political Power in Lebanon, Heinrich Böll Stiftung - Middle East Office, found at <https://lb.boell.org/en/2014/05/04/social-classes-and-political-power-lebanon>

<sup>223</sup> Haddad, Bassam S. A.. *Business Networks in Syria: The Political Economy of Authoritarian Resilience*. Redwood City: Stanford University Press, 2011. <https://doi.org/10.1515/9780804778411>

<sup>224</sup> Dahi, Omar. "Conflict Economies in Syria: Roots, Dynamics, and Pathways for Change." Syrian Center for Policy Research (SCPR). 2019. Found at <https://www.scpr-syria.org/conflict-economies-in-syria-roots-dynamics-and-pathways-for-change/>.

conflict.<sup>225</sup> Nevertheless, in these works, there is no systematic discussion or differentiation between which types of economic sectors might benefit more from peace than from conflict.

Classical works that consider the structure of the economy as an explanatory variable for development and civil conflict tend to categorize economies as industrial, resource-rich, or pre-modern/agrarian.<sup>226</sup> These types of economies are presented as mutually exclusive or as a linear progression towards modernism, a logic first put forth in classical thought by Adam Smith as early as 1776 in the *Wealth of Nations*.<sup>227</sup> More recently, in modernization theory as presented by Rostow, countries follow a unilinear trajectory transitioning from agrarian, to industrial, and finally to modern economies characterized by trade and services.<sup>228</sup>



**Figure 6 - Economic Progression in Modernization Theory**

The ultimate findings are that modern economies are more peaceful and less prone to civil conflict. In a modern economy – in contrast with an agrarian one – would-be-rebels

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<sup>225</sup> Richani, Nazih. "The political economy and complex interdependency of the war system in Syria." *Civil Wars* 18, no. 1 (2016): 45-68. P.53

<sup>226</sup> Chatagnier, J. Tyson, and Emanuele Castelli. "The arc of modernization: Economic structure, materialism, and the onset of civil conflict." *Political Science Research and Methods*(2016): 1-20.

<sup>227</sup> Smith, Adam. *The wealth of nations*, 1776; retrieved September 2021  
[https://www.ibiblio.org/ml/libri/s/SmithA\\_WealthNations\\_p.pdf](https://www.ibiblio.org/ml/libri/s/SmithA_WealthNations_p.pdf)

<sup>228</sup> Rostow, Walt Whitman,. *The stages of economic growth: A non-communist manifesto*. Cambridge university press, 1960.

with secure occupations would be less likely to join a rebel group and engage in civil conflict because they are vested in the continuity of their jobs and economic growth. Similarly, they would be concerned about civil violence's adverse effects on human and physical capital – thus threatening long term growth.<sup>229</sup>

These economic categorizations are useful conceptual tools to compare different countries. However, developing countries affected by civil conflict tend to have many elements of these economic types concurrently. An agrarian, an extractive, and an advanced service sector can co-exist in the same country. To illustrate this, an aggregate look at Fragile and Conflict affected situations (FCS) countries<sup>230</sup> – a category devised by the World Bank to study countries that have been affected by civil conflict<sup>231</sup> – makes this point. Using World Bank data, I select measures to show the economic makeup of FCS

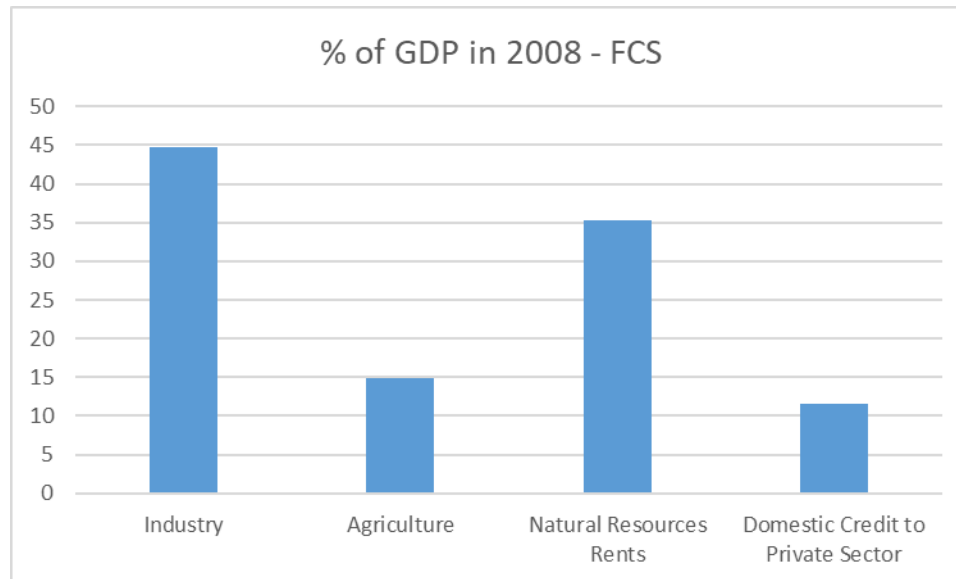
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<sup>229</sup> Blattman, Christopher, and Edward Miguel. "Civil war." *Journal of Economic literature* 48, no. 1 (2010): 3-57.

<sup>230</sup> Definition: Countries with fragile situations are primarily International Development Association-eligible countries and nonmember or inactive countries and territories with a 3.2 or lower harmonized average of the World Bank's Country Policy and Institutional Assessment rating and the corresponding rating by a regional development bank, or that have had a UN or regional peacebuilding and political mission (for example by the African Union, European Union, or Organization of American States) or peacekeeping mission (for example, by the African Union, European Union, North Atlantic Treaty Organization, or Organization of American States) during the last three years. The group excludes IBRD countries (for which the CPIA scores are not publicly disclosed); unless there is the presence of a peacekeeping or political/peacebuilding mission. This definition is pursuant to an agreement between the World Bank and other multilateral development banks at the start of the International Development Association 15 round in 2007. The list of countries and territories with fragile situations is imperfect and used here to reflect a complex concept. The World Bank continues to work with partners and client countries to refine the concept.

<sup>231</sup> "World Development Indicators | Databank". 2019. *Databank.Worldbank.Org*. Accessed August 28 2019. <https://databank.worldbank.org/reports.aspx?source=2&series=NV.IND.TOTL.ZS&country=COL#>.

countries.<sup>232</sup> The Domestic Credit to the Private Sector measure, serves as a proxy for the financial sector,<sup>233</sup> which is a significant portion of the service sector.<sup>234</sup>



**Figure 7 - FCS Economic Sectors Distribution<sup>235</sup>**

Taken together, FCS countries have co-existing sectors – industry, agriculture, natural resources, and financial – that are non-negligible (Figure 2). This also holds true for separate countries. Colombia, a country that features in the 2008 list of fragile

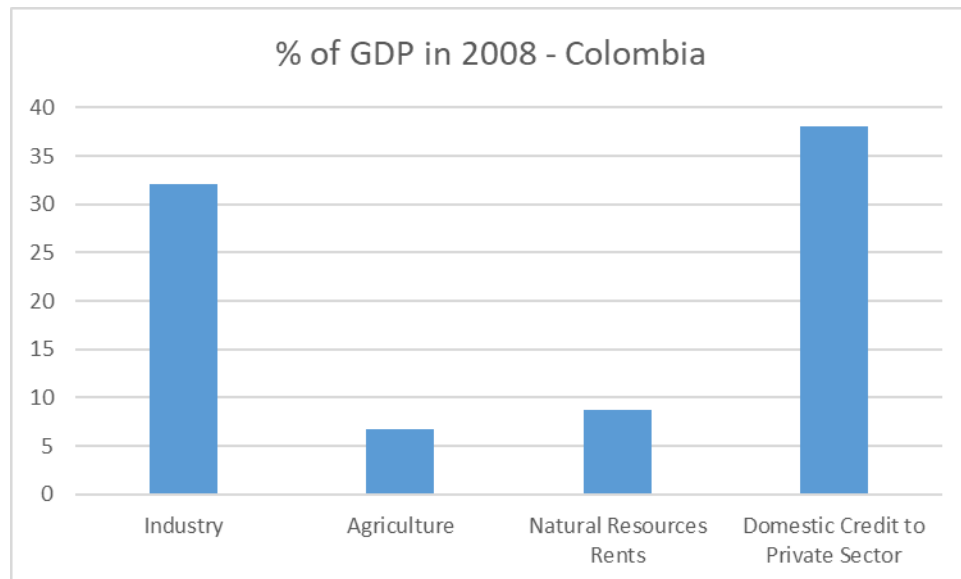
<sup>232</sup> The indicators used are (1) Industry, value added (% of GDP); (2) Agriculture, forestry, and fishing, value added (% of GDP); (3) Total natural resources rents (% of GDP); (4) Domestic credit to private sector (% of GDP).

<sup>233</sup> Hasan, M. Rashel, and Syed Mansoob Murshed. "Does civil war hamper financial development?." *Defence and peace economics* 28, no. 2 (2017): 188-207.

<sup>234</sup> Begg, Iain. "The service sector in regional development." *Regional Studies* 27, no. 8 (1993): 817-825.; "International Trade - Trade In Services - OECD Data". 2019. *Theoecd*. Accessed August 29 2019. <https://data.oecd.org/trade/trade-in-services.htm>; Amable, Bruno, and Stefano Palombarini. "Technical change and incorporated R&D in the service sector." *Research policy* 27, no. 7 (1998): 655-675.

<sup>235</sup> This Graph was compiled using the World Development Indicators databank (WDI)

countries<sup>236</sup> has several robust economic sectors (see Figure 3). As such, the more “modern” sectors might have a different interest in peace than more “traditional” agrarian ones. Given this heterogeneous make-up, it should be possible to observe in one country several counteracting forces for peace emerging from different economic sectors.



**Figure 8 - Colombia Economic Sector Distribution<sup>237</sup>**

### 3.4 Factors of Production Conceptual Framework

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<sup>236</sup> FY06 LICUS List (Low-Income Countries Under Stress). 2019. *Pubdocs.Worldbank.Org*. Accessed August 29 2019. <http://pubdocs.worldbank.org/en/359521410886172040/FY6toFY9Fragile-States-List-formerly-LICUS.pdf>.

<sup>237</sup> This Graph was compiled using the World Development Indicators databank (WDI)

For the most part, studies in civil conflict have centered on the study of macro-economic factors during and after a civil wars (such as GDP, growth, inflation).<sup>238</sup> These are important factors, but this study concerns itself with the understudied analysis of firm-level and business cluster dynamics during and after a civil war.<sup>239</sup> In order to assess different economic sectors' interest in peace, I look at their firms' factors of production. Based on what inputs they require for production, economic sectors/business clusters are impacted by civil conflict differently. Conflict can threaten various production models in a myriad of ways. Given the extent of potential civil war impact, firms operating in different economic sectors will have diverse interests in sustaining peace after a civil war or in the looming threat of one.

In order to determine how vested an economic sector is in peace, I develop a logical framework centered on production and the supply of factors of production – because production is an element that business owners can more easily manipulate in comparison with demand for their product. In times of civil conflict, with the exception of select arms industries, it is assumed that aggregate demand declines overall. To maximize profit, businesses attempt to keep their cost of production low and protect their capital and assets. Thus, in order to rank different sectors' interest in peace, I examine how civil war and

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<sup>238</sup> Barro, Robert J. "Economic growth in a cross section of countries." *The quarterly journal of economics* 106, no. 2 (1991): 407-443; Collier, Paul, and Anke Hoeffler. "Aid, policy and peace: Reducing the risks of civil conflict." *Defence and Peace Economics* 13, no. 6 (2002): 435-450; Collier, Paul, and Anke Hoeffler. "Aid, policy and growth in post-conflict societies." *European economic review* 48, no. 5 (2004): 1125-1145.

<sup>239</sup> Collier, Paul, and Marguerite Duponchel. "The Economic Legacy of Civil War: Firm-Level Evidence from Sierra Leone." *Journal of Conflict Resolution* 57, no. 1 (February 2013): 65–88. <https://doi.org/10.1177/0022002712464847>.

violence affects – not the economy overall (such as GDP or growth), but rather – differentiated economic sectors’ factors of production – capital and labor.<sup>240</sup>

Collier’s work on the consequences of civil war (1999), does categorize economic activity into war-vulnerable and war- invulnerable “activities.” This is based on the fall in demand for domestic capital goods and transaction services. Collier states that during civil war, the supply of physical and human capital contracts relative to land, buildings, and unskilled labor.<sup>241</sup> He argues that activities that are capital intensive tend to contract relative to others during war. Also, demand will fall for domestic capital goods (construction sector) and for transaction services (transport, distribution, and finance)<sup>242</sup> as well, which will affect transportation, distribution finance, and manufacturing. These sectors are deemed to be “war-vulnerable.” On the other hand, arable subsistence agriculture is deemed to be “war-invulnerable.”<sup>243</sup> Collier’s work shows that civil war affects different economic sectors disproportionately. However, there is no systematic distinction between different types of capital (mobile, fixed, high tech, low tech) or labor (skill and unskilled). Thus, a more granular categorization of factors of production can lead to a more nuanced classification of economic sectors propensity for peace. For Collier, arable subsistence agriculture is the only sector that is war-invulnerable. More granular and

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<sup>240</sup> Blattman, Christopher, and Edward Miguel. "Civil war." *Journal of Economic literature* 48, no. 1 (2010): 3-57. P.37

<sup>241</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183. P.178

<sup>242</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183. P 181.

<sup>243</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183. P.179

disaggregate categorization can help build a more specific ranking of how some economic sectors are affected by civil war and thus their propensity for peace.

Previous work on civil conflict's effects on economic sectors finds that capital intensive industries were more vulnerable to civil conflict because big investments are diminished in uncertain times.<sup>244</sup> However, this analysis has not taken into consideration the different types of labor required for certain industries, nor the different types of capital. For example, educated labor is particularly adversely affected in times of conflict and political uncertainty, whereby that labor is subject to brain drain (more on this below). Additionally, the type of capital required for production also varies widely. For example, both the pharmaceutical and construction industries require significant capital. Nevertheless, the pharmaceutical industry relies much more heavily on skilled labor and high tech equipment, which is difficult to operate and replace in case of destruction or malfunction. Thus, I take into account the type of labor (skilled, unskilled) and type of capital (high tech/mobile, low tech/fixed) required for different economic sectors' production to provide a more nuanced framework for economic sectors' propensity for peace. I find that types of labor and capital are key elements in determining an economic sectors' propensity for peace.

While previous work aims to explain the economic consequences of civil war broadly,<sup>245</sup> the section below aims to systematically determine which factors of production subtypes are more vulnerable or resistant to civil war. Based on these combinations of

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<sup>244</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183.

<sup>245</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183.

inputs, I deduce that some economic sectors are more vulnerable than others. Consequently, the vulnerable economic sectors are theorized to be more vested in peace than the resilient ones, because they are more adversely affected by civil conflict.

### *Civil Conflicts' Effect on Labor*

Overall, civil conflict affects the supply of human capital and labor adversely as already shown in Collier's work.<sup>246</sup> In the civil conflict literature, Dube and Vargas<sup>247</sup> look at how commodity prices affect the wages and thus labor supplied to rebellion. They find that a price increase in labor-intensive commodities, such as agriculture, leads to less labor supplied to rebellion and eventually less civil conflict. However, this research centers on understanding how civil conflict affects the labor supplied to different economic sectors (not rebellion). How does civil conflict affect the labor supplied to private enterprises?

Previous studies show that, in times of political uncertainty and conflict, educated/skilled labor is subject to brain drain - the emigration of a country's educated population.<sup>248</sup> The educated population of a developing country can look to better paying and more secure occupations in the developed world. In developing countries, unskilled labor is generally more abundant than educated labor and is thus relatively less affected by civil conflict.<sup>249</sup> Nevertheless, unskilled labor is not completely immune to the impact of

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<sup>246</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183.

<sup>247</sup> Dube, Oeindrila, and Juan F. Vargas. "Commodity price shocks and civil conflict: Evidence from Colombia." *The review of economic studies* 80, no. 4 (2013): 1384-1421.

<sup>248</sup> Collier, Paul, Anke Hoeffler, and Catherine Pattillo. "Africa's exodus: Capital flight and the brain drain as portfolio decisions." *Journal of African Economies* 13, no. suppl\_2 (2004): ii15-ii54. P. ii27; Bang, James T., and Aniruddha Mitra. "Civil war, ethnicity, and the migration of skilled labor." *Eastern Economic Journal* 39, no. 3 (2013): 387-401.

<sup>249</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183. P.178

violence and conflict. Research shows that the surge in violence during the Mexico drug wars acts as a negative blue-collar/unskilled labor supply shock and average wage for unskilled blue collar worker increases because its becomes relatively more scarce.<sup>250</sup> Further, in rare but extreme cases, such as the Rwandan genocide and civil war, a mass exodus of the Hutus substantially depleted the labor force in its totality (skilled and unskilled).<sup>251</sup> Notwithstanding, in relative terms, the supply of educated/skilled labor is disproportionately affected in times of civil conflict and violence, because educated labor is relatively more scare and highly susceptible to brain drain. Therefore, when it comes to labor supply, industries that more heavily rely on educated/skilled labor are more vulnerable to civil war as their labor force is more easily threatened by migration and is more difficult to replenish.

### *Civil Conflicts' Effects on Capital*

In his paper, *the economic effects of civil conflict*, Collier examines the consequences of civil war on growth. To do this, he examines how civil war affects factors of production as an explanatory factor for GDP growth. I draw on his analysis of factors of production to better understand how civil war affects their supply to different economic sectors. Collier's work argues that capital intensive industries are more adversely affected by civil war. By further disaggregating capital into different types, I find that sectors that rely more heavily on low tech and fixed capital are less affected by civil war than industries that rely on mobile (i.e financial or lightweight) and high tech capital.

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<sup>250</sup> Utar, Hâle. "Firms and Labor in Times of Violence: Evidence from the Mexican Drug War." (2018).

<sup>251</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183. 170

In Collier's analysis of the effects of civil war on capital, capital is a broad category including financial capital, physical capital, human capital, and social capital. Domestic capital, can gradually be transformed into financial capital – by reducing investment below the depreciation rate – and, financial capital is more readily susceptible to capital flight.<sup>252</sup> Collier explains that most forms of capital can be relocated abroad, eventually. Most easily, financial capital (which social capital and physical capital can gradually be converted to) can be relocated followed by mobile physical capital. Additionally, when it comes to physical capital, Collier explains that generally, civil wars are fought with lower technology than international wars and are thus less destructive. Therefore, the biggest threat to physical capital is its gradual transformation into financial capital via underinvestment and its eventual physical relocation.<sup>253</sup> Though there is a risk of destruction, this is not the biggest threat to physical capital. Lastly, buildings, land, and unskilled labor are the least responsive to civil war (and are considered to be endogenous to civil war).<sup>254</sup> In times of civil war there is increased uncertainty regarding the future return on assets within the country, thus there is incentive to retain liquid assets that can be diverted more easily and subjected to capital flight.<sup>255</sup> Other studies focused exclusively on capital flight in times of civil war and political uncertainty confirm this.<sup>256</sup> Thus, financial and mobile capital are particularly susceptible to civil war.

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<sup>252</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183. P.169

<sup>253</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183. P.169

<sup>254</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183. P.170

<sup>255</sup> Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183. P.171

<sup>256</sup> Davies, Victor AB. "Postwar capital flight and inflation." *Journal of Peace Research* 45, no. 4 (2008): 519-537.; Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1

However, what is overlooked in previous studies is the type of physical capital utilized by an industry and how that might make it more vulnerable than others in times of civil conflict. High tech sectors (such as pharmaceuticals, aerospace, data processing, Software publishers, etc),<sup>257</sup> because they rely on skilled labor – which is vulnerable to civil war – for the operation of their machinery and marketing and research are more susceptible to civil conflict. Further, their machinery is expensive and more difficult to repair and or replace. Thus, in terms of the type of labor employed and the capital required, sectors that are high tech and rely on financial capital will tend to be disproportionately negatively affected by civil war. Thus, they will tend to be more vested in peace. On the other hand, low tech sectors that rely more heavily on unskilled labor do not suffer as acutely from a shortage of labor (examples: non-mechanized agriculture, food trucks<sup>258</sup> or stands, quarrying, childcare<sup>259</sup>). Also, low tech capital is more easily and cheaply replaced and/or repaired. For example, a truck if impaired during a civil war, is more easily repaired than a nuclear turbine or specialized pharmaceutical processing equipment. Further, industries that rely on fixed capital such as land, buildings are also more resilient as these elements remain unchanged in civil war. Good examples of such sectors are subsistence agriculture and quarrying whereby the land is immutable and the equipment used to extract the raw material is low tech.

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(1999): 168-183.; Lensink, Robert, Niels Hermes, and Victor Murinde. "Capital flight and political risk." *Journal of international Money and Finance* 19, no. 1 (2000): 73-92. Davies, Victor AB. "Capital flight and violent conflict-a review of the literature." (2011). Efobi, Uchenna, and Simplice Asongu. "Terrorism and capital flight from Africa." *International Economics* 148 (2016): 81-94.

<sup>257</sup> <https://www.bls.gov/opub/btn/volume-5/pdf/the-high-tech-industry-what-is-it-and-why-it-matters-to-our-economic-future.pdf>

<sup>258</sup> <https://www.entrepreneur.com/article/306930>

<sup>259</sup> <https://www.sciencedirect.com/topics/engineering/quarrying>

### **3.5 Economic Sectors' Propensity for Peace**

To visualize this proposed theory, Figure 4 illustrates, based on sub-types of factors of production (capital and labor), how different economic sectors are affected by civil conflict and thus how vested they are in peace. To illustrate this logic, I elaborate on and compare two quadrants representing the extreme cases (1) the financial sector and (2) the quarrying sector. The upper left quadrant represents economic sectors that rely on high tech/mobile financial capital and skilled labor – both of which are disproportionately negatively affected by civil war (as discussed above). Thus, businesses and firms operating in this economic sphere are considered to be vulnerable to civil war and thus, by extension more conflict-averse or vested in peace than others. Sectors that reside in this category include the financial, pharmaceutical, and aerospace industries. In this study, I elaborate on the financial services sector, which heavily relies on mobile financial capital and educated/skilled labor.

		Capital	
		Mobile/High Tech	Fixed/Low Tech
Labor	Skilled	<b>VULNERABLE</b> <b>Economic Sectors Vested in Peace</b> (Financial Sector, Pharmaceutical, Aerospace, etc.)	<b>CHALLENGED</b> Talent at risk (Rural Healthcare, tertiary education, etc.)
	Unskilled	<b>CHALLENGED</b> Capital Investment at risk (oil/gas extraction, mechanized agriculture, manufacturing, etc.)	<b>RESISTANT</b> <b>Peace-Neutral Economic Sectors</b> (Quarries, subsistence agriculture, plumbing, childcare, etc.)

**Figure 9 - Economic Sectors Propensity for Peace**

The **financial sector** constitutes part of the advanced service sector. When the financial sector is broken down into its inputs, its factors of production are mainly skilled labor and financial capital. There is no physical transformation of tangible material.<sup>260</sup> However, civil war threatens both these inputs severely, as discussed above. In a large-n cross country study, findings show a negative correlation between civil war and financial development.<sup>261</sup> In a civil war, financial assets are at risk because conflict leads to lower bank deposits.<sup>262</sup> Similarly, the outbreak of violence, civil conflict, and political instability

<sup>260</sup> Begg, Iain. "The service sector in regional development." *Regional Studies* 27, no. 8 (1993): 817-825.

<sup>261</sup> Hasan, M. Rashel, and Syed Mansoob Murshed. "Does civil war hamper financial development?." *Defence and peace economics* 28, no. 2 (2017): 188-207.

<sup>262</sup> Hasan, M. Rashel, and Syed Mansoob Murshed. "Does civil war hamper financial development?." *Defence and peace economics* 28, no. 2 (2017): 188-207. P.191

leads to capital flight.<sup>263</sup> Further, human capital – educated labor – is subject to brain drain in times of economic and security risk.<sup>264</sup> As such, the risk of civil war threatens the financial sector’s factors of production. Therefore, it can be assumed that businesses in this sector (banks, insurance, and mortgages companies) are vested in peace and stability for their survival.

On the other hand, the lower right quadrant represents sectors that employ unskilled labor and fixed/low tech capital – both of which are resistant to civil conflict (as discussed above). Therefore, businesses operating in this sphere are deemed to be relatively resistant to the negative effects of civil conflict. By extension, businesses operating in this realm are deemed to be peace-neutral, as they are relatively less threatened by the outbreak of civil conflict. Sectors that reside in this quadrant include subsistence agriculture, quarries, childcare, etc. Here, I elaborate on the **quarrying sector**, which relies on unskilled labor, fixed capital (land) and low tech, to illustrate that they are peace-neutral and behave as such in post conflict society. Though quarrying is deemed to be capital intensive, the type of capital and labor it requires, render it resistant to civil conflict. The type of labor required to extract the raw material of rubble and sand from the earth tends to be low-skill and cheap<sup>265</sup> (miners, truck drivers, dynamite, etc.). As already discussed above, civil war

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<sup>263</sup> Davies, Victor AB. "Postwar capital flight and inflation." *Journal of Peace Research* 45, no. 4 (2008): 519-537.; Collier, Paul. "On the economic consequences of civil war." *Oxford economic papers* 51, no. 1 (1999): 168-183.; Lensink, Robert, Niels Hermes, and Victor Murinde. "Capital flight and political risk." *Journal of international Money and Finance* 19, no. 1 (2000): 73-92. Davies, Victor AB. "Capital flight and violent conflict-a review of the literature." (2011). Efobi, Uchenna, and Simplice Asongu. "Terrorism and capital flight from Africa." *International Economics* 148 (2016): 81-94.

<sup>264</sup> Collier, Paul, Anke Hoeffler, and Catherine Pattillo. "Africa's exodus: Capital flight and the brain drain as portfolio decisions." *Journal of African Economies* 13, no. suppl\_2 (2004): ii15-ii54. P. ii27; Bang, James T., and Aniruddha Mitra. "Civil war, ethnicity, and the migration of skilled labor." *Eastern Economic Journal* 39, no. 3 (2013): 387-401.

<sup>265</sup> Wallerstein, Immanuel. *The modern world-system I: Capitalist agriculture and the origins of the European world-economy in the sixteenth century*. Vol. 1. Univ of California Press, 2011. Original 1974.

triggers exodus of skilled labor and unskilled labor remains relatively abundant. As such, even in the face of violence or threat of violence, it can be assumed that the labor supply for this sector is not significantly challenged as unskilled labor is more abundant and/or easily replaced. Further, the second main input – land – is not affected by civil war. Even in the presence of violence and instability, access to the land harboring this natural resource is possible – be it with significant security measures if necessary. Additionally, the capital required to extract rubble and sand from the land is low tech – trucks and dynamite can cheaply and easily be acquired, repaired, and maintained. Therefore, civil war does not affect this economic sector’s production model much. Stemming from this, it can be assumed that businesses – motivated by profit – operating in this sector are less vested in peace and stability as the prospect of violence and civil conflict does not affect their production model much. They are thus deemed to be peace-neutral.

Therefore, it can be deduced, that based on their factors of production and the type of capital and labor required, some economic sectors are more vested in peace than others. The rest of this research will serve to compare and contrast these two economic sectors’ propensity for peace. Based on this framework, the hypothesis put forth is *businesses vested in peace and stability for their bottom-line will engage in peace-promoting policies and activities relative to peace-neutral businesses*. The other quadrants – and economic sectors they contain - are reserved for future research projects.

### **3.6 Methods & Design**

The dominant trend in the civil conflict literature has been to study conflict at the national level using quantitative methods. However, this obscures potentially significant

micro-dynamics at the local and regional levels that can contribute to either civil war or peace. Further, there has been a lack of differentiation between economic sectors and their potential civil conflict impacts. This study adopts a more granular approach at the sub-national level to help further our understanding of how economic sectors and firm behavior impact a country's conflict dynamic.<sup>266</sup> Based on businesses' material interests, I hypothesize that firms vested in peace and stability for their bottom-line will engage in peace-promoting policies and activities. To test this hypothesis, I conduct a focused and structured within case analysis. Looking at one country affected by civil conflict will help hold confounding factors constant, such as economic growth, levels of education, macro-economic shocks, regional influence, state capacity, the rule of law, etc. I trace and compare the effects of two sectors: one theorized to be vested in peace (the banking sector, a subset of the financial services) and another theorized to be peace-neutral (the quarrying sector). Data is collected through over 40 semi-structured interviews<sup>267</sup> with business leaders, government officials, non-governmental organizations, and academics amongst others and supplemented with local newspaper reports, secondary sources and previous works and analyses of the Lebanese political economy. If the hypothesis holds true, we should observe the banking sector engage more frequently in peace-promoting activities relative to the quarrying sector in the post-civil war period of 1991 - 2019.

The case study method has several advantages and seeks to complement the more prevalent quantitative analysis in the civil conflict literature. In the quantitative literature, peace is measured as the absence of conflict (with a pre-determined threshold of number

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<sup>266</sup> Rettberg, Angelika, Ralf Leiteritz, and Carlo Nasi. "Entrepreneurial activity and civil war in Colombia." *World Institute for Development Economics Research* 6 (2010).

<sup>267</sup> The Author possesses a full list of interview partners and transcripts. `

of deaths).<sup>268</sup> This might be a reliable way to measure peace at the national level. Nevertheless, it fails to capture more nuanced forces at play at the subnational level. As such, the case study approach helps with conceptual validity<sup>269</sup> - especially when it comes to capturing peace-promoting policies and activities pursued by different economic sectors. Further, this approach helps explore complex causality and interaction effects that can be overlooked in quantitative analysis. This matters here, because economic considerations and civil war tend to be correlated and causation can go either way. Thus, a case study can help tease out the direction of the relationship from economic sectors to peace-promoting activities.

Lebanon is an ideal case because its domestic economy has several coexisting sectors (mining, agriculture, industry, and services).<sup>270</sup> Also, it is a small-open economy like most developing countries affected by conflict. Further, relative to other countries in the region, Lebanon has a long history of “laissez-faire” economy whereby market forces – rather than the state – determine economic outcomes.<sup>271</sup> Thus, Lebanon provides a setting that corroborates with neoliberal conventional wisdom and offers a convenient setting to test the hypothesis. Firms in different economic sectors operate with little government intervention. Further, embodying the conventional wisdom, Rafik Hariri (a

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<sup>268</sup> Hartzell, Caroline, Matthew Hoddie, and Donald Rothchild. "Stabilizing the peace after civil war: An investigation of some key variables." *International organization* 55, no. 1 (2001): 183-208.; P.195. Toft, Monica Duffy. *Securing the peace: the durable settlement of civil wars*. Princeton University Press, 2009. Thyne, Clayton L. "ABC's, 123's, and the golden rule: The pacifying effect of education on civil war, 1980–1999." *International Studies Quarterly* 50, no. 4 (2006): 733-754.

<sup>269</sup> George, Alexander L., Andrew Bennett. *Case studies and theory development in the social sciences*. mit Press, 2005. p.76

<sup>270</sup> "Lebanon Economic Vision Full Report". 2019. *McKinsey and Company*. Accessed September 4 2019. <https://www.economy.gov.lb/media/11893/20181022-1228full-report-en.pdf?fbclid=IwAR1D3dyuF33kZKS07CWomlljvLPFaOpA4Rb213Ve3PDbhCHf6ijsdcqRIQA>

<sup>271</sup> Gaspard, Toufic. *A political economy of Lebanon, 1948-2002: the limits of laissez-faire*. Brill, 2003.

businessman himself) who was prime minister for a significant chunk of the post-war period after 1990 had an engrained vision<sup>272</sup> that prosperous private businesses and profit in the post-civil war period would help stabilize and pacify post-conflict Lebanon.<sup>273</sup> In line with this vision, the Investment Development Authority of Lebanon (IDAL), was established in 1994 to promote and retain foreign business investment in Lebanon. Similarly, Kafalat – a financial company – was established to facilitate domestic small and medium enterprises’ (SMEs) access to funding from commercial banks in a government effort to strengthen the Lebanese private sector – “which leads to increased domestic investment, output, and employment.”

Thus, in the period after the civil war and characterized by relative macro-economic stability (1991- 2019), I consider the effects of two sectors based on their propensity for peace: the first is theorized to be vested in peace (the banking sector, a subset of the financial services) and the second is theorized to be peace-neutral (the quarrying sector). After October 2019, Lebanon plunges into one of the most severe economic depressions and financial crisis worldwide since the mid-nineteenth century<sup>274</sup> and suffers from several overlaying blows including: the largest peace-time economic and financial crisis, the spread of COVID-19, and the deadly Port of Beirut explosion in August 2020.<sup>275</sup> Figure 5,

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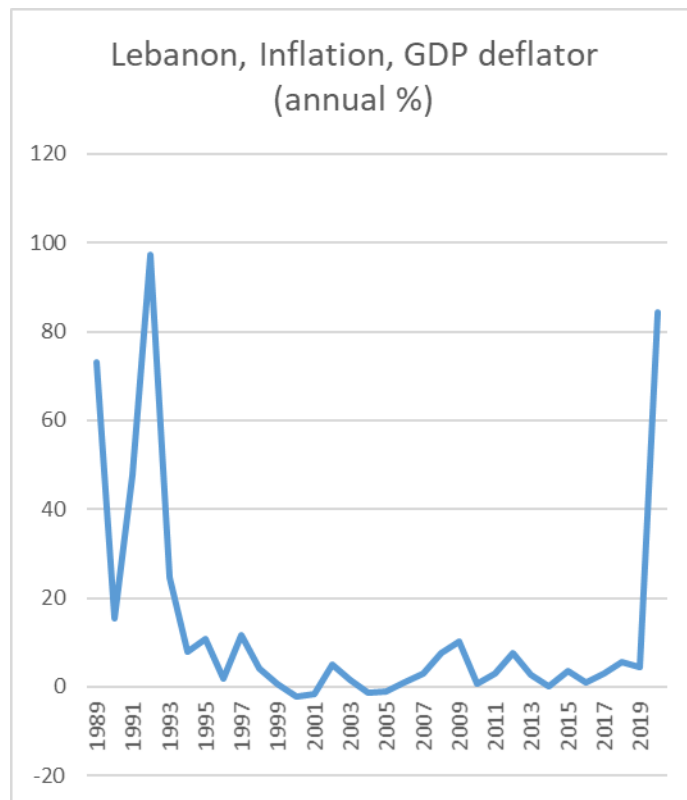
<sup>272</sup> Blanford, Nicholas. *Killing Mr Lebanon: the assassination of Rafik Hariri and its impact on the Middle East*. IB Tauris, 2006. P.49 "About Rafik Hariri". 2019. *Atlantic Council*. Accessed September 4 2019. <https://www.atlanticcouncil.org/programs/rafik-hariri-center-for-the-middle-east/about-rafik-hariri>.

<sup>273</sup> "Who We Are". *IDAL*. Accessed September 4, 2019. [https://investinlebanon.gov.lb/en/about\\_us](https://investinlebanon.gov.lb/en/about_us). "About Us." *Kafalat Guarantees for Loans to Small and Medium Enterprises*, Accessed September 4, 2019. <http://kafalat.com.lb/about-us>.

<sup>274</sup> Lebanon Economic Monitor, Spring 2021: Lebanon Sinking (to the Top 3), The World Bank, MAY 31, 2021, <https://www.worldbank.org/en/country/lebanon/publication/lebanon-economic-monitor-spring-2021-lebanon-sinking-to-the-top-3>

<sup>275</sup> Lebanon Sinking into One of the Most Severe Global Crises Episodes, amidst Deliberate Inaction, The World Bank, JUNE 1, 2021, <https://www.worldbank.org/en/news/press-release/2021/05/01/lebanon-sinking-into-one-of-the-most-severe-global-crises-episodes>

shows the inflation rate in the Lebanese economy in the post-war period as a proxy to illustrate the macro-economic instability that ensues after October 2019 (and existed before 1991). Inflation shows the rate of price change in the economy as a whole and reflects the decline in purchasing power and dramatic rise in prices after October 2019.<sup>276</sup>



**Figure 10 - Inflation in the Lebanese Economy 1989 - 2020<sup>277</sup>**

The aggressive contraction of the economy, inflation, and decline in economic growth which began in October 2019 and persists through 2021, is typically associated

<sup>276</sup> World Bank Indicator, Inflation, GDP deflator (annual %). The long definition is: "Inflation as measured by the annual growth rate of the GDP implicit deflator shows the rate of price change in the economy as a whole. The GDP implicit deflator is the ratio of GDP in current local currency to GDP in constant local currency." World Bank Development Indicators, retrieved September 29, 2021.

<sup>277</sup> Inflation, GDP deflator (annual %), World Bank Development Indicators, retrieved September 29, 2021.

with the outbreak of conflict in the civil conflict literature,<sup>278</sup> and this in a country which has long been characterized as a Fragility, Conflict & Violence (FCV) State by the World Bank.<sup>279</sup> Thus, the dynamic that is studied and observed in the 1991-2019 timeframe, is likely to be overridden by these extraordinary socio-economic shocks. Therefore, in the post-2020 macro-economic climate, it is important not to overestimate the effects of micro-business clusters vested in peace, because there are larger and stronger macroeconomic currents to take into consideration.

***Dependent Variables: The pursuit of peace-promoting policies and activities***

The dependent variable is operationalized as businesses' observable behavior either in direct support of or undermining peace and stability at the national/regional level. This can manifest as declared policies, media statements, press releases, financial donations/investments, para-business social and political engagements and/or Corporate Social Responsibility (CSR) projects. Also, in this context, peace signifies the absence of violence, specifically between religious sects – which was the major fault line during the 1975 – 1990 civil war.<sup>280</sup> This is an important definition, because it is purposefully narrow and defines the scope of this study. It builds on previous definitions in the civil conflict literature that measure peace and civil conflict as binary outcomes of one dimension (violence) – usually with a threshold of 25 deaths per calendar year from internal

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<sup>278</sup> Collier, Paul, and Anke Hoefler. "Greed and grievance in civil war." *Oxford economic papers* 56, no. 4 (2004): 563-595.; Fearon, James D., and David D. Laitin. "Ethnicity, insurgency, and civil war." *American political science review* 97, no. 01 (2003): 75-90.

<sup>279</sup> Lebanon Economic Monitor, Spring 2021: Lebanon Sinking (to the Top 3), The World Bank, MAY 31, 2021, <https://www.worldbank.org/en/country/lebanon/publication/lebanon-economic-monitor-spring-2021-lebanon-sinking-to-the-top-3>

<sup>280</sup> Leenders, Reinoud. *Spoils of truce: Corruption and state-building in postwar Lebanon*. Cornell University Press, 2012. P1.

conflict.<sup>281</sup> This bareboned definition of peace does not factor in social justice, good governance, government effectiveness, inter-sectarian marriage, etc. Thus, at a minimum, this study seeks to understand which economic sectors are most vested in the lack of political violence, security, and stability. Do they engage in behavior that supports this notion of peace, or do they incite violence and civil conflict. A broader definition of peace – potentially inclusive of good governance, sound macro-economic policy, and/or rural development – is reserved for future research and considerations.

***Independent Variables: Different economic sectors***

This study tracks businesses' support for peace in two sectors. The first cluster of businesses belongs to the commercial banking sector and the second to the quarrying sector. Each of these, based on the factor of production framework discussed above, are theorized to have a different propensity for peace. The banking sector and the quarrying sector are examined to test whether they have different tendencies to support peace at the national scale in post-civil conflict Lebanon. While other studies in the political economy of the Middle East literature have sought to examine the extent to which businesses are connected with the ruling political class, in this analysis we hold economic sectors' political connectedness constant as most firms are politically connected across the board.<sup>282</sup>

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<sup>281</sup> Pettersson, Therese (2019) UCDP/PRIO Armed Conflict Dataset Codebook v 19.1 (<https://ucdp.uu.se/downloads/>). P. 1

<sup>282</sup> Diwan, Ishac, and Jamal Ibrahim Haidar. "Clientelism, Cronyism, and Job Creation." *Crony Capitalism in the Middle East: Business and Politics from Liberalization to the Arab Spring* (2019): 119.; Salloukh, Bassel F. "Taif and the Lebanese state: the political economy of a very sectarian public sector." *Nationalism and Ethnic Politics* 25, no. 1 (2019): 43-60.; Leenders, Reinoud. *Spoils of truce: Corruption and state-building in postwar Lebanon*. Cornell University Press, 2012.

This connectedness holds true for both the banking<sup>283</sup> and the quarrying<sup>284</sup> industry. Despite the entrenched political economy and oligarchical elite in post-war Lebanon, do we observe different behavior between the commercial banks and the quarries?

### 3.7 The Banking Sector

Fitting into the factor of production model above, the commercial banking sector is a subset of the financial sector. Based on the previous discussion, it is deemed to be vested in peace because of its material interest and the potential damage civil war has on its assets. The banking sector is considered to be one of the leading sectors in Lebanon.<sup>285</sup> Its total assets reached approximately USD 220 billion in 2016, the equivalent of 412% GDP.<sup>286</sup> The commercial banking sector is vested in the formal economy. Therefore, commercial banks and their collective organization – the Association of Banks (ABL) – are easily identifiable in terms of offices, staff, websites, CSR, etc. They have published data and resources, which is accessible to the public. Thus, information for this section is gathered from interviews with commercial bankers and financial and economic leaders in

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<sup>283</sup> Chaaban, Jad. "Mapping Connections between Lebanon's Banking Sector and the Ruling Class." *Crony Capitalism in the Middle East: Business and Politics from Liberalization to the Arab Spring* (2019): 330.

<sup>284</sup> Leenders, R. (2012). *Spoils of truce: Corruption and state-building in postwar Lebanon*. Cornell University Press. P. 196; BAAKLINI. August, 3 2018. "Les Carrières, Ces Plaies Indélébiles Dans Le Paysage Libanais". *L'orient-Le Jour*. Accessed December 7 2018. <https://www.lorientlejour.com/article/1105710/les-carrieres-ces-plaies-indelebiles-dans-le-paysage-libanais.html>.

<sup>285</sup> "Lebanon Economic Vision Full Report". 2019. *McKinsey and Company*. P.236 Accessed September 4 2019. <https://www.economy.gov.lb/media/11893/20181022-1228full-report-en.pdf?fbclid=IwAR1D3dyuF33kZKS07CWomlljvLPFaOpA4Rb213Ve3PDbhCHF6ijsdcqRIQA>

<sup>286</sup> "Lebanon Economic Vision Full Report". 2019. *McKinsey and Company*. P.380 Accessed October 19, 2021. <https://www.economy.gov.lb/media/11893/20181022-1228full-report-en.pdf?fbclid=IwAR1D3dyuF33kZKS07CWomlljvLPFaOpA4Rb213Ve3PDbhCHF6ijsdcqRIQA>

government,<sup>287</sup> news reports, commercial banks' individual websites, and secondary non-academic and academic work on the Banking sector.

In Lebanon, the banking sector is the most prominent subset of the financial sector. It represents 95% of assets of financial services.<sup>288</sup> The banking sector is also one of the largest singular contributors to GDP at 6% - 9%.<sup>289</sup> Its private sector deposits are \$171 billion dollars, and this is roughly 3 times the amount of Lebanese GDP.<sup>290</sup> The banking sector in Lebanon relies on educated labor: over 70% of bank employees are university graduates (See Figure 5).<sup>291</sup> Additionally, this educated labor is considered a precious commodity. Banks voluntarily engage in providing desirable and competitive wages in order to retain their staff. For example, banks have their own collective labor agreement,<sup>292</sup> which stipulates benefits for their employees that supersede the minimum requirements imposed by the government. This is one attempt to keep staff faithful to their employer and from emigrating for better opportunities abroad.<sup>293</sup> Additionally, banks need financial capital and deposits to sustain their business model. As such, they are concerned with capital flight<sup>294</sup> and reduced deposits from clients around the nation and abroad in the face

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<sup>287</sup> 5 government officials, 8 commercial bankers – including two of the top banks in Lebanon

<sup>288</sup> In comparison with the insurance sector and venture capital. Lebanon Economic Vision Full Report". 2019. *McKinsey and Company*. Accessed September 4 2019. P.30

<https://www.economy.gov.lb/media/11893/20181022-1228full-report-en.pdf?fbclid=IwAR1D3dyuF33kZKS07CWomlljvLPFaOpA4Rb213Ve3PDbhCHF6ijsdcqRIQA>

<sup>289</sup> Representative, Association of Banks in Lebanon. 2019. Interviewed by Rana Shabb. Beirut, June 26; Banker, Byblos Bank. 2019. Interviewed by Rana Shabb. Beirut, July 30

<sup>290</sup> Banker, Byblos Bank. 2019. Interviewed by Rana Shabb. Beirut, July 30

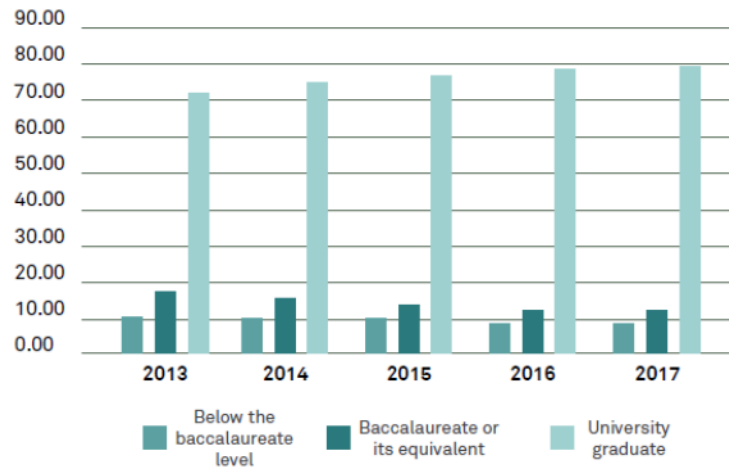
<sup>291</sup> "The Annual Report Edition 2017, Part III : HUMAN RESOURCES IN BANKS OPERATING IN LEBANON," *Association of Banks in Lebanon*. P81 Accessed September 9 2019. <https://www.abl.org.lb/english/the-annual-report/edition-2017>.

<sup>292</sup> "عقد العمل الجماعي" (*Aaqd elaamal eljimaai* - collective labor agreement), *جمعية مصارف لبنان Association of Banks in Lebanon*, Accessed September 9 2019. <https://www.abl.org.lb/arabic/publications-amp-resources/collective-labor-agreement>.

<sup>293</sup> Representative, Association of Banks in Lebanon. 2019. Interviewed by Rana Shabb. Beirut, June 26

<sup>294</sup> Alami, Mona. "Lebanon's Perfect Financial Storm". *Carnegie Middle East Center*. October 17, 2018. Accessed September 9 2019. <https://carnegie-mec.org/sada/77521>.

of political instability and violence.<sup>295</sup> Therefore, it can be assumed that the banking sector is vested in peace for its bottom line. Consequently, as the hypothesis predicts, we should observe banks engage in peace-promoting activities.



**Figure 11 - Distribution of Bank Employees According to Education Levels (%)<sup>296</sup>**

First and foremost, the Association of Banks in Lebanon (ABL) – a group organized to increase cooperation between banks and lobby for the banking sector’s interests<sup>297</sup> – officially contributes to consolidating state authority<sup>298</sup> and increasing the state’s monopoly over the use of weapons in order to preserve domestic peace and security.<sup>299</sup> This is stated on the ABL website and several Bankers in interviews expressed the banking sector’s

<sup>295</sup> "Explainer: How Pressing Is Lebanon's Financial Challenge?". *Reuters*. JANUARY 17, 2019. Accessed September 9 2019. <https://www.reuters.com/article/us-lebanon-economy/explainer-how-pressing-is-lebanons-financial-challenge-idUSKCN1PB19C>.

<sup>296</sup> "The Annual Report Edition 2017, Part III : HUMAN RESOURCES IN BANKS OPERATING IN LEBANON," *Association of Banks in Lebanon*. P81 Accessed September 9 2019. <https://www.abl.org.lb/english/the-annual-report/edition-2017>.

<sup>297</sup> "Constitution And Objectives". *Association of Banks in Lebanon* 2019. *Abl.Org.Lb*. Accessed September 9 2019. <https://www.abl.org.lb/english/about-abl/constitution-and-objectives>.

<sup>298</sup> "Retrospective", *Association of Banks in Lebanon*. 2019. Accessed September 10 2019. <https://www.abl.org.lb/english/about-abl/retrospective>.

<sup>299</sup> Director of Communication, Association of Banks in Lebanon. 2019. Interviewed by Rana Shabb. Beirut, June 26

interest in a strong central government and an army that pursues peace and stability.<sup>300</sup> Acting on this goal, ABL contributed \$2 million dollars to the Lebanese army in July 2007<sup>301</sup> during a government raid against a Palestinian refugee camp that was harboring a jihadi extremist group.<sup>302</sup> The aim of this contribution was to help restore stability and support counter terrorism efforts.<sup>303</sup> Further, in 2008, the banks financially supported a “one-hundred-day truce” after Hezbollah militants (a Shiite affiliated armed group in the opposition at the time) and Sunni fighters’ loyal to the government came into the worst sectarian clashes since the end of the civil war, leaving 11 dead and 20 wounded.<sup>304</sup> In addition to public statements in support of peace and stability, ABL contributed financially to ending violent skirmishes to the advantage of the army and restore national peace between clashing Lebanese militias. Further, the banking sector<sup>305</sup> is the only private economic sector engaged in a government and UN strategy for the prevention of violent extremism (PVE).<sup>306</sup> This political initiative was launched by the Prime minister’s office in tandem with the United Nations and in partnership with religious organizations, various ministries, and the banks. In light of Lebanon’s long experience with civil conflict and

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<sup>300</sup> Banker, BLOM Bank. 2019. Interviewed by Rana Shabb. Beirut, July 31; Banker, MEAB Bank. 2019. Interviewed by Rana Shabb. Beirut, August 1.

<sup>301</sup> "Retrospective", *Association of Banks in Lebanon*. 2019. Accessed September 10 2019. <https://www.abl.org.lb/english/about-abl/retrospective>.

<sup>302</sup> Bakri, Nada. September 3, 2007. "Militants Are Driven From Refugee Camp". *Nytimes.Com*. Accessed September 11 2019. <https://www.nytimes.com/2007/09/03/world/middleeast/03lebanon.html>.

<sup>303</sup> "Retrospective", *Association of Banks in Lebanon*. 2019. Accessed September 10 2019. <https://www.abl.org.lb/english/about-abl/retrospective>.

<sup>304</sup> Bakri, Nada, and Robert Worth. May 10, 2008. "Hezbollah Seizes Swath Of Beirut From U.S.-Backed Lebanon Government". *Nytimes.Com*. Accessed September 11 2019. <https://www.nytimes.com/2008/05/10/world/middleeast/10lebanon.html>.

<sup>305</sup> " NEWS. Lebanon - Preventing Violent Extremism ". January 28-29, 2019. *National Strategy for Preventing Violent Extremism, Pvelebanon.Org*. Accessed September 11 2019. <http://pvelebanon.org/NewsDetails.aspx?n=1>.

<sup>306</sup> " Lebanon - Preventing Violent Extremism ". 2019. *Pvelebanon.Org*. Accessed September 11 2019. <http://pvelebanon.org/>.

regional wars and instability, this initiative seeks to prevent violent extremism and actively promotes “the values of social cohesion and the peaceful settlement of disputes.”<sup>307</sup> The Prime Minister’s initiative views the banks as a major player from the private sector that helps preserve stability as they employ tens of thousands and have over 1.3 million clients/depositors all over Lebanon.<sup>308</sup> They view the banks as a good partner to raise awareness given the number of people they reach. From the banks’ perspective, this initiative is preaching to the choir as the banks are openly and obviously vested in peace, stability, and the fight against violent extremism. For more effectiveness, they thought that the Prime Minister’s initiative should work with marginalized youth and poorer target groups.<sup>309</sup>

In addition to collective action at the ABL level, individually, banks have pursued peace-promoting goals through their corporate strategies and CSR. Nationally, the army is viewed as an institution symbolizing national unity, non-sectarianism, and a pillar for peace.<sup>310</sup> This sentiment is held by ABL<sup>311</sup> – but also by individual commercial banks.<sup>312</sup> BLOM, one of the largest commercial banks in Lebanon (with a national clientele),<sup>313</sup> has

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<sup>307</sup> “National Strategy for Preventing Violent Extremism.” 2018, *Presidency of the Council of Ministers*. Accessed September 11 2019. [http://pvelebanon.org/Resources/PVE\\_English.pdf](http://pvelebanon.org/Resources/PVE_English.pdf).

<sup>308</sup> Official, the Presidency of Council of Ministers, PVE National Coordination Unit. 2019. Interviewed by Rana Shabb. Beirut, July 31

<sup>309</sup> Representative, Association of Banks in Lebanon. 2019. Interviewed by Rana Shabb. Beirut, June 26

<sup>310</sup> Fattah, Hassan. June 20, 2007. "Army Provides A Sense Of Unity In Fractured Lebanon". *Nytimes.Com*. Accessed September 11 2019. <https://www.nytimes.com/2007/06/20/world/middleeast/20lebanon.html>.

<sup>311</sup> Representative, Association of Banks in Lebanon. 2019. Interviewed by Rana Shabb. Beirut, June 26; Representative, Association of Banks in Lebanon. 2019. Interviewed by Rana Shabb. Beirut, July 18

<sup>312</sup> Banker, BLOM Bank. 2019. Interviewed by Rana Shabb. Beirut, July 31; Banker, MEAB Bank. 2019. Interviewed by Rana Shabb. Beirut, August 1. Banker, Banque Libano-Francaise. 2019. Interviewed by Rana Shabb. Beirut, July 30

<sup>313</sup> Chaaban, Jad. "Mapping Connections between Lebanon's Banking Sector and the Ruling Class." *Crony Capitalism in the Middle East: Business and Politics from Liberalization to the Arab Spring* (2019): 330. P 335)

a program in cooperation with the army, which works to clear landmines and unexploded ordinances in the south.<sup>314</sup> Additionally, MEAB – a large commercial bank serving mostly Shiite clients<sup>315</sup> – actively supports the army with loans at preferential rates<sup>316</sup> and campaigns on social media.<sup>317</sup>

Other banks, in their CRS, have committed to notions of national unity and peace. Fransabank – another top-five commercial Bank,<sup>318</sup> which is owned<sup>319</sup> by a Sunni politician Adnan Kassar<sup>320</sup> - is vocal in its support for the country to remain “unified and strong.” It has launched several solidarity campaigns to help support Southern Lebanon (where the population is mostly Shia) after the 2006 July war between Israel and Hezbollah and to strengthen the notion of “unity” especially during the violent skirmishes between domestic Shia and Sunni militias in 2007.<sup>321</sup> Additionally, the bank is a signatory to the *Business*

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<sup>314</sup> The Lebanon Mine Action Center. "Be Part Of Demining And Spread Peace Of Mind With BLOM Bank, The Lebanese Army And Mastercard". August 03, 2014. *Mastercard Social Newsroom*. Accessed September 11 2019. <https://newsroom.mastercard.com/mea/press-releases/be-part-of-demining-and-spread-peace-of-mind-with-blom-bank-the-lebanese-army-and-mastercard/>.

<sup>315</sup> Rijock, Kenneth, 2015. "why doesn't ofac sanction meab bank ?". *Rijock.Blogspot.Com*. Accessed September 11 2019. <http://rijock.blogspot.com/2015/06/why-doesnt-ofac-sanction-meab-bank.html>;; "Lebanon's Jammal Trust Bank To Be Sold Or Liquidated Due To US Sanctions". September 4, 2019. *The National*. Accessed September 11 2019. <https://www.thenational.ae/world/mena/lebanon-s-jammal-trust-bank-to-be-sold-or-liquidated-due-to-us-sanctions-1.906484>.

<sup>316</sup> "MEAB Announces Special Offer To Army Members". August 17, 2015. *MEAB Bank Of Lebanon*. Accessed September 11 2019. <http://www.meabank.com/node/167?language=en>.

<sup>317</sup> "MEAB Celebration Army Day With A Campaign". 2017. *MEAB Bank Of Lebanon*. Accessed September 11 2019. <http://www.meabank.com/node/213?language=en>; "تفتخر عائلة بنك مياب بدعمها المتواصل للجيش اللبناني". *MEAB Bank Of Lebanon*. Accessed September 11 2019. <http://www.meabank.com/lebanese-army-support>.

<sup>318</sup> Chaaban, Jad. "Mapping Connections between Lebanon's Banking Sector and the Ruling Class." *Crony Capitalism in the Middle East: Business and Politics from Liberalization to the Arab Spring* (2019): 330. P 335

<sup>319</sup> "Board Of Directors". *Fransabank Group*. Accessed September 11 2019.

<http://www.fransabank.com/English/CorporateGovernance/Pages/Board-of-Directors.aspx>.

<sup>320</sup> Baroudi, Sami E. "Sectarianism and business associations in postwar Lebanon." *Arab Studies Quarterly* (2000): 81-107. P88

<sup>321</sup> "National Initiatives". *Fransabank CSR Initiatives*. Accessed September 11 2019.

<https://www.fransabank.com/English/SociallyCommittedGroup/FransabankCSRInitiatives/NationalInitiatives/Pages/default.aspx>.

*for Peace [B4P]*, which was launched by the UN Global Compact (UNGC), adhering to its aim of deepening the private sector's involvement in supporting peace in conflict-affected and high-risk areas.<sup>322</sup> Further, BLOM Bank, in an attempt to further solidify peace, partnered with the ministry of education and Kidproof<sup>323</sup> to financially support the adoption of a curriculum in schools across the country that helps combat notions of “violence, crime, discrimination, segregation, and extremism thus turning schools into centers of learning, culture, and advancement.”<sup>324</sup>

Therefore, by tracing the banks observable behavior, be it in public statements, corporate policy, or financial contributions, we see that they seek to contribute to the sustenance of peace and stability in a post-conflict society. While some might suggest that the motive behind these efforts is to acquire political capital, this does not negate the fact that banks are observed to engage in peace-promoting activities in their monetary contributions, public rhetoric, and their charitable work. Though some bankers might have ulterior political ambitions, they are engaging in such activities because it is also a way to protect their bottom line.

As already shown above, large banks pursue CSR and post-conflict reconstruction in areas that are not affiliated with the religion of their leadership. But at a more

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<sup>322</sup> Corporate Social Responsibility: Building a Sustainable Tomorrow 2018. *Fransabank.Com*. Accessed October 28 2019. P.8  
[http://www.fransabank.com/\\_layouts/fransabank/PDFViewer.aspx?pdf=/English/MediaCenter/Publications/Corporate%20Responsibility%20Report/Documents/Fransabank%20Corporate%20Social%20Responsibility%20Report%202018.pdf](http://www.fransabank.com/_layouts/fransabank/PDFViewer.aspx?pdf=/English/MediaCenter/Publications/Corporate%20Responsibility%20Report/Documents/Fransabank%20Corporate%20Social%20Responsibility%20Report%202018.pdf).

<sup>323</sup> Kidproof. a Canadian-based organization to further child safety. "ABOUT - Kidproof Safety". 2019. *Kidproof Safety*. Accessed September 11 2019. <http://www.kidproofsafety.com/aboutus/>.

<sup>324</sup> Banker, BLOM Bank. 2019. Interviewed by Rana Shabb. Beirut, July 31 "BLOM BANK And Protect Ed Renew Partnership To Provide Effective And Preventative Education For Children". 20 April 2018. *Blombank.Com*. Accessed September 11 2019. <https://www.blombank.com/english/news-and-publications/news/blom-bank-protected-renew-partnership>.

fundamental level, banks are after depositors, irrespective of their geography.<sup>325</sup> Given the banks' mobile assets and capital, their relationship to geography/regions is not restricted. Banks are after the largest number of depositors, irrespective of where their clients might live. The fluid and mobile nature of the capital asset – money – is behind this interesting and superregional behavior. Even during the civil war era, the Lebanese banking sector cradled interconfessional commercial ties and facilitated inter-sectarian cooperation.<sup>326</sup> Bank owners and managers, though politically connected, historically did not exclusively support political clientelism in terms of their client base. According to the logic of risk diversification, the most successful banks had depositors in communities outside their own.<sup>327</sup> Thus, the larger banks tried to maintain branches in all parts of the country irrespective of their sectarian allegiance, so they can secure the largest number of clients and deposits.<sup>328</sup> This logic persists in the post-civil war era under examination. To illustrate this, Figure 6 and Figure 7 show the distribution of BLOM and Byblos' Banks ATMs across the Lebanese territory. These are two of the three largest commercial banks across Lebanon.<sup>329</sup> BLOM is Sunni-owned<sup>330</sup> and its ATMs are distributed across population centers in the North, South, Bekaa Valley to the East of the coast, and Mountains which collectively are home to Sunni, Shia, Christian and Druze communities. Further, even

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<sup>325</sup> Banker, MEAB Bank. 2019. Interviewed by Rana Shabb. Beirut, August 1; Banker, Kafalat. 2019. Interviewed by Rana Shabb. Beirut, July 8

<sup>326</sup> Moore, Clement Henry. "Prisoners' Financial Dilemmas: A Consociational Future for Lebanon?." *The American Political Science Review* (1987): 201-218. P.212

<sup>327</sup> Moore, Clement Henry. "Prisoners' Financial Dilemmas: A Consociational Future for Lebanon?." *The American Political Science Review* (1987): 201-218. P.215.

<sup>328</sup> Banker, Kafalat. 2019. Interviewed by Rana Shabb. Beirut, July 8

<sup>329</sup> Chaaban, Jad. "Mapping connections between Lebanon's banking sector and the ruling class." *Crony Capitalism in the Middle East: Business and Politics from Liberalization to the Arab Spring* (2019): 330.

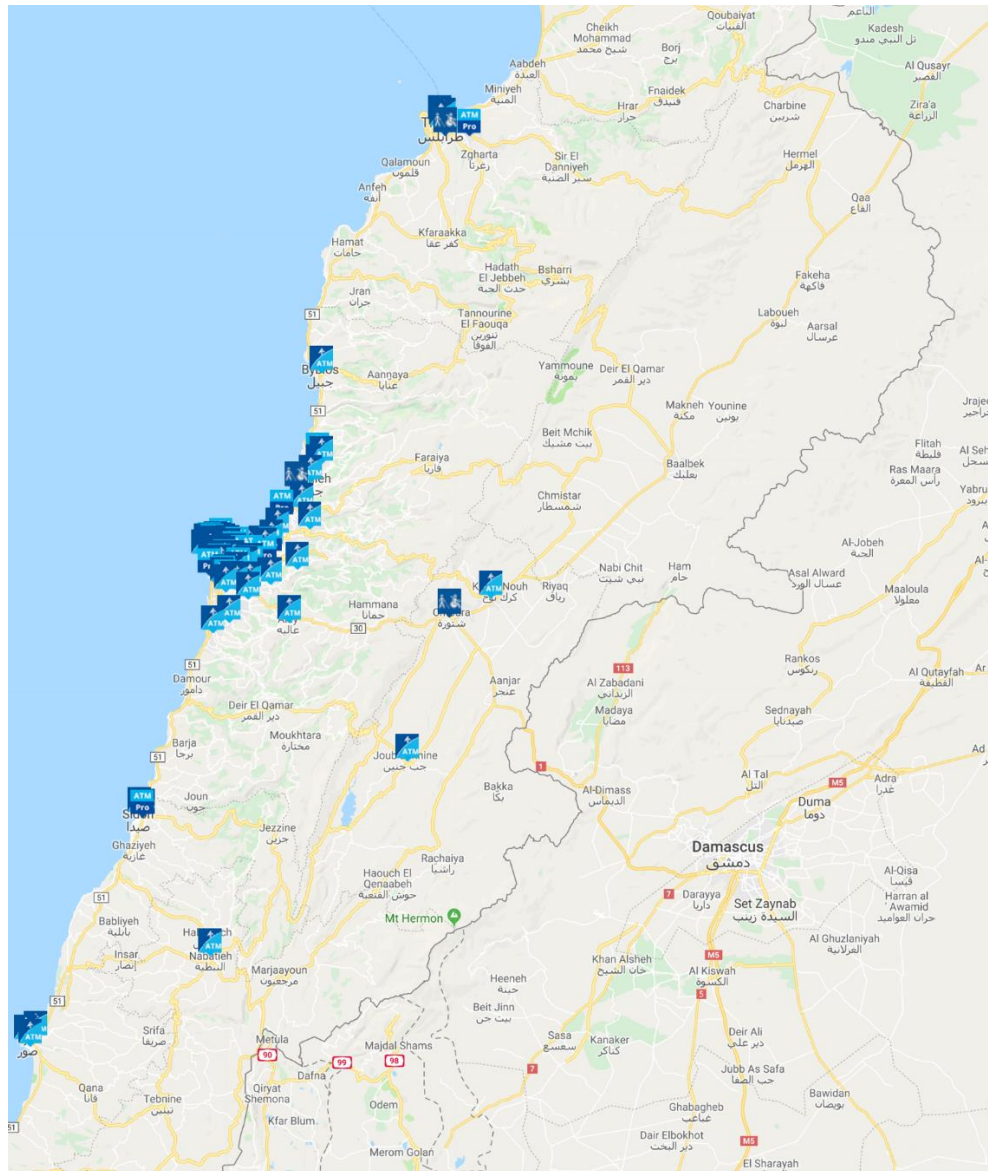
<sup>330</sup> Chaaban, Jad. "Mapping connections between Lebanon's banking sector and the ruling class." *Crony Capitalism in the Middle East: Business and Politics from Liberalization to the Arab Spring* (2019). P.14

though Byblos Bank is mostly Christian-owned<sup>331</sup>, its ATMs also span a similarly diversified and comparable geography to BLOM.<sup>332</sup> This ATM distribution reflects banks' interest in a diversified geography, unity, and access across the entirety of the Lebanese territory.

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<sup>331</sup> Chaaban, Jad. "Mapping connections between Lebanon's banking sector and the ruling class." *Crony Capitalism in the Middle East: Business and Politics from Liberalization to the Arab Spring* (2019). P.14

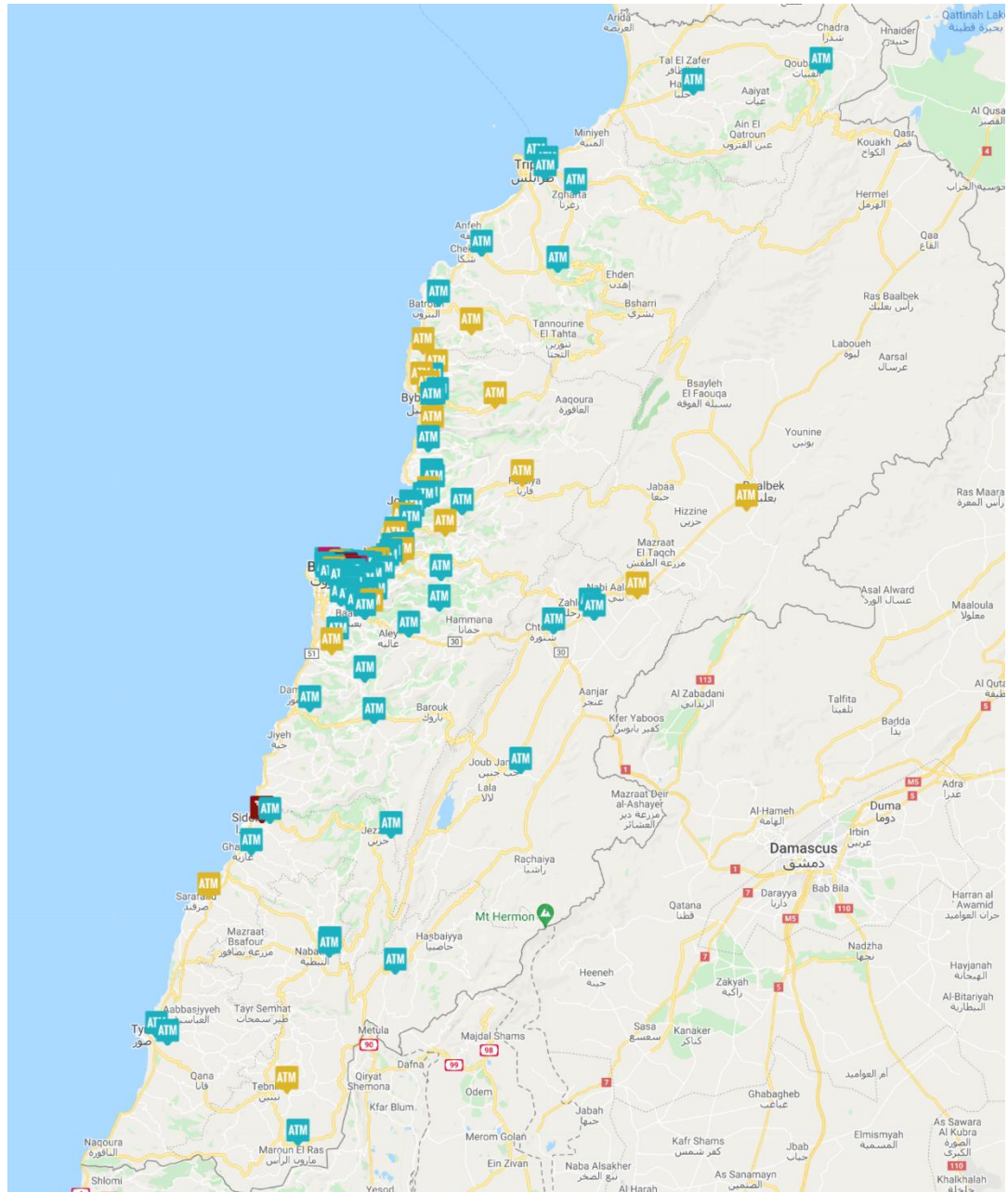
<sup>332</sup> Larger banks' ATMs tend to be diversified geographically. The smaller banks tend to be more concentrated in the area more closely affiliated to their denomination (like MEAB and AM Bank also known as Al Mawarid). However, these banks also have Headquarters, Branches and some outreach in other areas, but not to the same extent.



**Figure 12 - BLOM ATM distribution across Lebanon<sup>333</sup>**

<sup>333</sup> BLOM ATM distribution, July 2019.

<https://www.blombank.com/Corporate/Network.aspx?lang=1&pageid=15>



**Figure 13 - Byblos ATM distribution across Lebanon<sup>334</sup>**

Further, ATMs are geographically diversified (regardless of Sunni or Christian ownership). Bank headquarters tend to be concentrated in the capital. Despite this, they

<sup>334</sup> Byblos Bank ATM distribution, October 2021. <https://www.byblosbank.com/branch-atm-address-lebanon>

employ their staff from all over Lebanon. Unlike the public sector, there is no sectarian quota for employees. Rather, bank management is after talent (irrespective of sectarian affiliation) over clientelist employment.<sup>335</sup> Thus, in addition to their support of peace as a baseline, interviews with all the commercial bankers and the ABL highlighted a consensus that they view themselves as a diverse employer of educated Lebanese nationals including women (irrespective of religious/sectarian affiliation) and a key pillar of the economy. Their loans contribute to elevated standards of living by shoring up access to housing, education, and health. An ABL representative's view crisply summarizes the general commercial bank perspective: "The Banks and army are pillars of peace: The banks for the economy, and the army for security."<sup>336</sup> Though it was acknowledged that ultimately it is the state's responsibility to provide stability and civil peace, the commercial banks play an important role in stabilization and enhancing living standards and access to housing, education, health, etc.<sup>337</sup>

This view that commercial banks are the pillar of the economy is further cemented by the International Financial Corporation (IFC) involvement in Lebanon<sup>338</sup> and Kafalat's missions to strengthen small and medium enterprise (SME) access to finance to support

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<sup>335</sup> Banker, BLOM Bank. 2019. Interviewed by Rana Shabb. Beirut, July 31; Banker, MEAB Bank. 2019. Interviewed by Rana Shabb. Beirut, August 1. Banker, Banque Libano-Francaise. 2019. Interviewed by Rana Shabb. Beirut, July 30; Representative, Association of Banks in Lebanon. 2019. Interviewed by Rana Shabb. Beirut, June 26; Representative, Association of Banks in Lebanon. 2019. Interviewed by Rana Shabb. Beirut, July 18; Banker, Byblos Bank. 2019. Interviewed by Rana Shabb. Beirut, July 30; Banker, Kafalat. 2019. Interviewed by Rana Shabb. Beirut, July 8.

<sup>336</sup> Representative, Association of Banks in Lebanon. 2019. Interviewed by Rana Shabb. Beirut, July 18

<sup>337</sup> Representative, Association of Banks in Lebanon. 2019. Interviewed by Rana Shabb. Beirut, June 26

<sup>338</sup> Andrew Raven, How Loans to Small Businesses Are Changing Lives in Lebanon, *IFC*, July 2019. Retrieved October 17, 2021 at

[https://www.ifc.org/wps/wcm/connect/news\\_ext\\_content/ifc\\_external\\_corporate\\_site/news+and+event  
s/news/impact-stories/loans-small-businesses-are-changing-lives-lebanon](https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/impact-stories/loans-small-businesses-are-changing-lives-lebanon)

indigenous businesses, tech startups, manufacturing, and industry.<sup>339</sup> The IFC works with commercial banks in Lebanon to enhance their collateral-free small business loans to help create jobs and contribute to economic growth.<sup>340</sup> Similarly, Kafalat provides loan guarantees to SME so they can access commercial bank funding.<sup>341</sup> These initiatives, though important, highlight the fact that banks typically go after lower risk loans with established businesses and clients and therefore require additional incentives to work with SMEs.<sup>342</sup> Nevertheless, they can be a commercial vector for enhanced access to credit for SMEs with government and policy support.

### 3.8 The Quarrying Sector

Fitting into the factor of production model shown in Figure 4, the quarrying sector is deemed to be peace-neutral because its material interests are relatively less affected by civil war. This sector is considerably smaller in comparison to the banking sector, which is a major contributor to GDP. The quarrying industry is considered part of the industrial sector<sup>343</sup> and is estimated at \$150 million USD in 2016.<sup>344</sup> Because of the largely informal nature of the sector and the short time in country for interviews, firms and individuals linked to the sector were more difficult to locate in comparison with the banking sector.

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<sup>339</sup> Banker, Kafalat. 2019. Interviewed by Rana Shabb. Beirut, July 8

<sup>340</sup> Andrew Raven, How Loans to Small Businesses Are Changing Lives in Lebanon, *IFC*, July 2019. Retrieved October 17, 2021 at

[https://www.ifc.org/wps/wcm/connect/news\\_ext\\_content/ifc\\_external\\_corporate\\_site/news+and+events/news/impact-stories/loans-small-businesses-are-changing-lives-lebanon](https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/impact-stories/loans-small-businesses-are-changing-lives-lebanon)

<sup>341</sup> About us, Kafalat, retrieved October 17, 2021 at <https://kafalat.com.lb/about-us>

<sup>342</sup> Banker, Kafalat. 2019. Interviewed by Rana Shabb. Beirut, July 8.

<sup>343</sup> Leenders, R. (2012). *Spoils of truce: Corruption and state-building in postwar Lebanon*. Cornell University Press.

<sup>344</sup> "Lebanon Economic Vision Full Report". 2019. *McKinsey and Company*. P.294 Accessed September 4 2019. <https://www.economy.gov.lb/media/11893/20181022-1228full-report-en.pdf?fbclid=IwAR1D3dyuF33kZKS07CWomlljvLPFaOpA4Rb213Ve3PDbhCHF6ijsdcqRIQA>

The unofficial number of quarries is estimated at 1,500. Most operate without permits and are diffuse around the country. Thus, business owners are difficult to reach in addition to being politically protected.<sup>345</sup> Therefore, data gathering for the quarry sector relies more heavily on interviews with expert journalists, academics, local news reports and secondary analysis of Lebanon's economic and political sectors.

Quarrying is the only primary resource in Lebanon.<sup>346</sup> There are discussions surrounding off-shore oil and gas extraction, but these remain inaccessible to the government and local businesses.<sup>347</sup> Fitting into the conceptual framework, the quarrying sector is an example of an industry that employs low skilled workers,<sup>348</sup> such as truck drivers.<sup>349</sup> Further, the physical capital required to extract sand and rubble is low tech. Thus, the equipment and the land are not at high risk in the event of conflict. As such, the sector is theorized to be peace-neutral.

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<sup>345</sup> Expert Journalist. 2019. Interviewed by Rana Shabb. Beirut, July 11; Public Works Studio, "Reading the Quarries' Map in Lebanon," *Jadaliyya*, Apr 17, 2019 retrieved at <https://www.jadaliyya.com/Details/38569> on October 24, 2021

<sup>346</sup> "Lebanon Economic Vision Full Report". 2019. *McKinsey and Company*. P.236 Accessed September 4 2019. <https://www.economy.gov.lb/media/11893/20181022-1228full-report-en.pdf?fbclid=IwAR1D3dyuF33kZKS07CWomlljvLPFaOpA4Rb213Ve3PDbhCHF6ijsdcqRIQA>

<sup>347</sup> Widdershoven, Cyril. "Lebanon's High Risk Offshore Oil & Gas Boom." *Oil Price*. Accessed September 12 2019. <https://oilprice.com/Geopolitics/International/Lebanons-High-Risk-Offshore-Oil-Gas-Boom.html>.

<sup>348</sup> "Au Terme D'une Réunion Avec Boueiz R. El-Khazen Met En Garde Contre Une Explosion Sociale". 1997. *L'orient-Le Jour*. Accessed August 23 2019.; "Truck Drivers, Quarry Owners Temporarily Call Off Protest - Annahar Staff". 2015. *An-Nahar*. Accessed September 12 2019. <https://en.annahar.com/article/282735-truck-drivers-quarry-owners-temporarily-arily-call-off-protest-after-authorities>. [https://www.lorientlejour.com/article/222094/Au\\_terme\\_dune\\_reunion\\_avec\\_Boueiz\\_R.\\_El-Khazen\\_met\\_en\\_garde\\_contre\\_une\\_explosion\\_sociale.html](https://www.lorientlejour.com/article/222094/Au_terme_dune_reunion_avec_Boueiz_R._El-Khazen_met_en_garde_contre_une_explosion_sociale.html).

<sup>349</sup> "Thousands Stranded As Truck Drivers Protest Quarries Closure". 2017. *An-Nahar*. Accessed September 12 2019. <https://en.annahar.com/article/575291-thousands-stranded-in-traffic-as-truck-drivers-protest-quarries-closure>; Expert Journalist. 2019. Interviewed by Rana Shabb. Beirut, July 11.

The quarrying sector in Lebanon is largely informal.<sup>350</sup> In efforts to regulate the sector for environmental and taxation purposes, the government faced many obstacles in attempting to create and enforce legislation. In reaction to these attempts, business representatives tend to use sectarian, divisive, and inflammatory rhetoric to halt these efforts in the interest of protecting their business operations.<sup>351</sup> The logic expressed by quarrying entrepreneurs stipulates that if the government is allowing quarries to function in the Chouf – mainly a Druze area – but not in Kisirwan –mainly a Maronite Christian area – that is unfair to the Kisirwan businesses and employees, and thus to the Christian community.<sup>352</sup> Political elites and representatives were particularly responsive to the quarrying sector's aversion to restriction and regulation. As pressure increased to regulate the quarries surrounding the capital Beirut (because they are the most visible and environmentally damaging) the quarrying sector adopted a sectarian and divisive rhetoric to defend its continued operations.<sup>353</sup> The quarries in question tended to be located in Kisirwan and Jbeil, which are for the most part in Maronite areas. As such, private interests and local representatives defended the on-going operations of the quarries in confessional and divisive terms. They positioned themselves as defenders of the local Maronite community against the Sunni Prime Minister's decision (using the environment as a

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<sup>350</sup> Leenders, R. (2012). *Spoils of truce: Corruption and state-building in postwar Lebanon*. Cornell University Press.

<sup>351</sup> Hatoum, Leila. "Environmentalists call for greater government support - 2004 saw continued pollution of Lebanon's air, sea and rivers by local industry." *Daily Star, The (Beirut, Lebanon)*, January 14, 2005: 8. *NewsBank: Access World News*. <https://infoweb-newsbank-com.eu1.proxy.openathens.net/apps/news/document-view?p=AWNB&docref=news/1079DAD5E752B4A7>.

<sup>352</sup> Expert Journalist. 2019. Interviewed by Rana Shabb. Beirut, July 11.

<sup>353</sup> Leenders, R. (2012). *Spoils of truce: Corruption and state-building in postwar Lebanon*. Cornell University Press. P.196

pretext) to hurt the Maronite community.<sup>354</sup> Further, the quarries – based on this rhetoric – have managed to secure religious-leadership backing. The Patriarch of the Maronite Church at the time Nasrallah Sfeir supported the interests of the quarrying business in the face of government regulation attempts.<sup>355</sup> More recently, discussions of a new quarry in the village of Ain Dara in the Chouf (to cater to Syrian reconstruction needs) has served as fuel for political feuds and sectarian tension in the Chouf.<sup>356</sup> A Christian businessman has gained the support of Hezbollah<sup>357</sup> and other pro-Syrian forces for this project against Walid Junblatt – an influential Druze leader.<sup>358</sup> Amidst sectarian rhetoric, protests against the quarrying project of Ain Dara turned violent and led to clashes between polarized opposing political factions.

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<sup>354</sup> "Au Terme D'une Réunion Avec Boueiz R. El-Khazen Met En Garde Contre Une Explosion Sociale". 1997. *L'orient-Le Jour*. Accessed August 23 2019.

[https://www.lorientlejour.com/article/222094/Au\\_terme\\_dune\\_reunion\\_avec\\_boueiz\\_r\\_el\\_khazen\\_met\\_en\\_garde\\_contre\\_une\\_explosion\\_sociale.html](https://www.lorientlejour.com/article/222094/Au_terme_dune_reunion_avec_boueiz_r_el_khazen_met_en_garde_contre_une_explosion_sociale.html).

<sup>355</sup> "Sfeir Serait Opposé À L'Importation De Gravier Et De Sable". 2003. *L'orient-Le Jour*. Accessed August 23 2019.

[https://www.lorientlejour.com/article/457073/Sfeir\\_serait\\_oppose\\_a\\_l%2527importation\\_de\\_gravier\\_et\\_de\\_sable%2528photo%2529.html](https://www.lorientlejour.com/article/457073/Sfeir_serait_oppose_a_l%2527importation_de_gravier_et_de_sable%2528photo%2529.html).

<sup>356</sup> Rose, Sunniva. "In Lebanon, Pro And Anti-Syria Camps Face Off Over A Cement Factory". June 30, 2019. *The National*. Accessed September 12 2019. <https://www.thenational.ae/world/mena/in-lebanon-pro-and-anti-syria-camps-face-off-over-a-cement-factory-1.881081>.

<sup>357</sup> B., S. July 15 2019. "Joumblatt Ironise Sur Le « Grand Exposé » De Nasrallah Qui « Se Conclut Sur Fattouche » - S. B.". *L'orient-Le Jour*. Accessed September 12 2019.

<https://www.lorientlejour.com/article/1178865/joumblatt-ironise-sur-le-grand-expose-de-nasrallah-qui-se-conclut-sur-fattouche-.html>.

<sup>358</sup> Bou Mujahed, Majd. July 22 . "مُتَقَعٌ بـ"البيئة"" بوليسي" ملف عين دارة "مخاوف من فتنة؟". 2019. *An-Nahar*. Accessed September 12 2019. <https://www.annahar.com/arabic/article/987832-%D9%84%D9%87%D9%8A%D8%A8-%D8%A7%D9%84%D8%B3%D9%8A%D8%A7%D8%B3%D8%A9-%D9%8A%D9%84%D9%81%D8%AD-%D8%A7%D9%84%D8%AC%D8%A8%D9%84-%D9%88%D9%85%D8%AE%D8%A7%D9%88%D9%81-%D9%85%D9%86-%D9%81%D8%AA%D9%86%D8%A9-%D9%85%D9%84%D9%81-%D8%B9%D9%8A%D9%86-%D8%AF%D8%A7%D8%B1%D8%A9-%D8%A8%D9%88%D9%84%D9%8A%D8%B3%D9%8A-%D9%85%D9%82%D9%86%D8%B9-%D8%A8%D8%A7%D9%84%D8%A8%D9%8A%D8%A6%D8%A9>

As such, private business interests in this sector – which also hold close ties with politicians<sup>359</sup> – resort to inflammatory sectarian rhetoric for protection of the business bottom line. Given that civil conflict minimally affects their business model, they are not risking much when using sectarian and divisive rhetoric. Thus, though originally classified as peace-neutral, they do exhibit behavior which can be indirectly conflict-promoting. Sectarian and divisive language is used to protect business interests. Even though businesses in the quarrying sector might not want conflict per se, their public statements and tactics provide fuel for festering sectarian and horizontal inequalities to surface into violence.<sup>360</sup>

This effect is in direct contrast to the banking sector's public behavior and CSR objectives. Even though the banking sector is highly conscious of sect and power sharing – as evidenced by the 50% Muslim 50% Christian make-up of the ABL board of directors<sup>361</sup> – the banking sector explicitly engages in messaging that involves the promotion of peace and national unity. A Shia-owned and servicing bank supports messages of national unity via the army. A Sunni-owned bank donates and advertises its donation to reconstruct Shia areas in the south post-Israeli bombardment. Further, the

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<sup>359</sup> The Businessman pursuing the Ain Dara project Pierre Fattouche's brother is Nicolas Fattouche, a politician who was Member of Parliament and Minister of Tourism. "H.E. Nicolas Fattouch, Former Lebanese Minister of Tourism; BAAKLINI, Suzanne. 2019. "Carrières : Après La Fermeture, Nouveau Sursis Pour Les Exploitations... - Suzanne BAAKLINI". *L'orient-Le Jour*. Accessed September 13 2019. <https://www.lorientlejour.com/article/1162881/apres-la-fermeture-nouveau-sursis-pour-les-exploitations.html>.

& Former Lebanese Deputy | World Greek Catholic Melkite Who's Who | Melkite Council". 2019. *Melkitecouncil.Com*. Accessed September 12 2019. <https://melkitecouncil.com/?p=eliteslink&i=32>.

<sup>360</sup> Cederman, Lars-Erik, Nils B. Weidmann, and Kristian Skrede Gleditsch. "Horizontal inequalities and ethnonationalist civil war: A global comparison." *American Political Science Review* 105, no. 3 (2011): 478-495.

<sup>361</sup> Baroudi, Sami E. "Sectarianism and business associations in postwar Lebanon." *Arab Studies Quarterly* (2000): 81-107. P.82

banks are the only private sector represented in the strategy for the prevention of violent extremism. Therefore, I find that indeed businesses vested in peace and stability for their bottom-line (banks) engage in peace-promoting policies and activities, whereas firms operating in peace-neutral sectors might risk the notion of peace to protect their material interest.

Interestingly, the nature of the asset is a major difference across the quarrying and Banking sector, which has implications for how the business interacts with local warlords and politicians. Quarries depend on extracting rubble from land. This is a fixed asset that is deeply rooted in geography. Therefore, the entrepreneurs and regional warlords/politicians are linked in deals that are relatively easy to enforce, as the quarrying entrepreneur is tightly tied to a specific geography, which tends to be a rural population center. Because the main business asset is access to the land and the entry and exit points to that specific region, a close alliance is necessary between the quarrying entrepreneur and the regional political leaders. Further given the tight nature of this alliance, it is difficult for villagers in the area to speak up against the quarries. Environmentally, they negatively affect water and air quality in the area. People in the surrounding areas are afraid to speak up and arms have been turned against citizens in the villages.<sup>362</sup> In the rural areas, people are easier to identify, control, and intimidate.<sup>363</sup> Other economic sectors are more complex than this, as traders for example would need to deal with multiple political elites and warlords for the operation of their business. In contrast, the banks' main asset is capital which is accrued through depositors. These depositors can be anywhere geographically

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<sup>362</sup> Expert Journalist. 2019. Interviewed by Rana Shabb. Beirut, July 11.

<sup>363</sup> Expert Journalist. 2019. Interviewed by Rana Shabb. Beirut, July 11.

speaking (as shown in the maps above) and thus the assets of one bank are more diversified across regions and are less linked to the whims of one regional warlord and the tensions between them (as shown in the quarry in the Chouf above).

Further quarries thrive when environmental regulations are weak. In these circumstances, they can operate and expand illegally and avoid required investments in the protection of the environment. They are thus vested in weaker and less effective governance to protect their bottom line. In major contract, the banks operate very differently. Banks do not operate autonomously in different regions. They all share the same risks as they depend on the central bank's regulation and the stability of the currency. Also, as shown above, their deposit base is diversified across communities. A depositor is a depositor whether they are Maronite, Sunni, or Shia. Thus, the banks are more interconnected nationality and are vested in stability and good enough governance that their actions are regulated and the currency, inflation, etc. are stable. However, banks remain risk averse and are primarily concerned with short-term gains. As such, they have engaged in speculation and short-term rewards and have not invested enough in long term productive sectors, as these endeavors can be more risky (as evidenced by the work and goals of Kafalat).<sup>364</sup> Therefore, we see commercial banks engage in more peace promoting activities and are more vested in peace and stability across regions than are the quarry entrepreneurs. However, these intentions are not enough to feign off potential violence. As mentioned above, macro-economic shocks and other external factors can still be destabilizing and violence promoting.

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<sup>364</sup> Banker, Kafalat. 2019. Interviewed by Rana Shabb. Beirut, July 8

### **3.9 Conclusion and Implications**

This research demonstrates that firms operating in different economic sectors can behave in either peace-promoting or peace-threatening ways. While both economic sectors that were examined have politically well-connected businesses, their behavior diverges when it comes to peace – stability and the absence of political violence – and has strikingly different civil conflict effects at the subnational level. The banking sector, which is theorized to be vested in peace, voluntarily engages in peace-promoting activities, and openly supports notions of peace and national unity across different religious sects and regions. In direct contrast to this, the quarrying sector on occasion threatens national peace by explicitly engaging in violence-inciting rhetoric. Businesses operating within the latter sphere tend to use divisive language and sectarian-based accusatory language to defend their interests, which have occasionally flared up into violent clashes between opposing political clans. This shows that not all economic sectors are equal when it comes to sustaining in peace in post conflict societies.

Also, the size of the sectors further highlights the potential disproportion between their economic contribution and their ability to trigger violence. In the period examined, the much smaller quarrying sector – a couple hundred million dollar industry – led to politically violent clashes, whereas the banks (under macroeconomic stability) – a multibillion dollar industry – did not, and sought to contribute to security, stability, and peace in both their rhetoric, CSR funding, and unanimous support of the national army.

These findings should be cautioned. Business behavior is not the sole determinant of whether peace persists, or conflict breaks out. Other potentially more powerful factors

such as macroeconomic instability, the government interests, regional trends, and external factors can trigger the outbreak of civil conflict despite the micro trends discussed in this chapter. We see these limitations in the Tunisian case (in the previous chapter), where despite increasing credit to the private sector, Tunisia witnesses the occurrence of civil conflict in the year 2016. (In comparison, though, Egypt with lower and declining credit to the private sector in the same period witnesses the outbreak of civil conflict in the years 2014, 2015, 2016, and 2017). Nevertheless, for Tunisia, increasing credit to the private sector was not enough to prevent civil conflict all together.

Also, in the case of Lebanon, to the extent that macroeconomic factors can be held constant in this case study between 1991-2019, it is shown that business behavior can be a non-trivial part of the peace-conflict calculus. Business are economically-motivated actors with access to political influence and clout that should not be ignored if one is to better understanding the dynamics for peace at the subnational level. Still, it is important to be modest in terms of how much political clout business carry and how unified they are. In the lead up to the financial crisis that occurred at the end of 2019, some bank owners tried to push back against the government's continued access to loans from the local commercial banking sector, especially at a time when the government was increasingly looking like it would default on its loans because of decades fiscal mismanagement and corruption. Francois Bassil, leader of Byblos bank (one of the three largest banks) raised the alarm several times throughout the 2010s warning that the rising public debt was no longer tenable, and a financial crisis could be imminent if the government does not reduce the size

of public debt.<sup>365</sup> These calls led to several threats and lawsuits against Francois Bassil (who was also ABL President at the time).<sup>366</sup>

Despite some of these cries – perhaps too late and too few – as the banks were a large lender to the government throughout the examined period, political leaders, the central bank, which is the main regulatory agency for the commercial banking sector – insisted (and threatened) those banks that were raising the alarm on untenable debt. Those banks did not have the clout to sway the politicians in their persistence on lending. Nevertheless, in Lebanon, many of the banks – in addition to lending to the private sector including traders, industrialist, and agriculture – engaged in short term gains by lending to the government for significant returns. The banks’ loans where not leveraged enough to strengthen industrial policy nor productive industries. This highlights, that despite good intentions at times, individual firms and business clusters can fail in their lobbying efforts and succumb to the stronger interests and arm twisting of governments.

Consequently, in planning peacebuilding interventions governments and international organizations should be cognizant of the potentially negative unintended effects of peace-neutral business clusters. Because their bottom line is not affected by civil conflict or its prospect, these businesses might use tactics detrimental to the national interest to advance their interests. Further, for those sectors vested in peace, governments and international development practitioners might seek to devise interventions that

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<sup>365</sup> Francois Bassil: Lebanon may suffer Greece’s fate, Kataeb.org, February 3, 2012 found at <http://www.dev.kataeb.org/entertainment1/2012/02/03/francois-bassil-lebanon-may-suffer-greece-s-fate>

<sup>366</sup> Francois Bassil: I will not apologize to Speaker Nabih Berri for I did nothing wrong, Kataeb.org, July 2, 2014. Found at <http://www.dev.kataeb.org/news/2014/07/02/francois-bassil-i-will-not-apologize-to-speaker-nabih>.

encourage better organization of business associations to help amplify their pro-peace lobbying efforts and engagements with the public sector. Therefore, future research should seek to expand the factors of production framework constructed in this paper to categorize and examine other sectors such as agriculture and manufacturing. A better understanding of how different economic sector subtypes affect peace will help build more robust and resistant post-conflict societies.

The economic sector's propensity for peace framework proposed in this chapter by inquiry and design is also a general framework, relying on general variables and mechanisms (Capital and Labor inputs) to help explain the degree to which an economic sector is vested in peace and how they contribute to the peace-conflict nexus within a country. This framework is intended to be explored and tested in any country for any period time. I chose to conduct a qualitative case to help better highlight the causal mechanisms and conditions under which the theory, framework, and predictions will hold. The dominant trend in the civil conflict literature has been to study conflict at the national level using quantitative methods. However, this obscures potentially significant micro-dynamics at the local and sub-national levels that can contribute to either civil war or peace. Thus, to test the general hypothesis, I conduct a focused and structured within case analysis with variation across economic sectors within country. Lebanon has both an economic sector theorized to be vested in peace and an economic sector theorized to be peace-neutral. This variation is key to trace and compare civil conflict effects across these diverse economic sectors. Further, looking at one country affected by civil conflict is an effective way to help maximize control over alternative explanations. Studying different economic sectors in one country, helps hold confounding factors constant, such as economic growth, levels of

education, macro-economic shocks, the status of corruption, regional influence, state capacity, the rule of law, etc. Thus, in this qualitative analysis developed in general terms, and tested in the case of Lebanon which provides variations across economic sectors and helps control alternative explanations the findings are well positioned to travel across regions and countries. Nevertheless, future research should explore and test this framework in other regions and countries as well, starting with other small open economies and post-conflict consociational democracies with concurrent economic sectors – such as Iraq, Afghanistan, and/or Bosnia-Herzegovina.

As this study shows, Lebanon is a good place to test the proposed hypothesis, largely because of its laissez-faire and relatively thriving private sector compared to other countries in the region. For next steps, though, it is important to test the external validity of these findings. A natural expansion of this project would be to test this framework in other post conflict small open economies – with concurrent economic sectors – such as Iraq, Afghanistan, and/or Bosnia-Herzegovina. How are private business interests in different economic sectors contributing to peace or conflict there? Findings from these inquiries can help inform which economic sectors to bolster post-conflict and point towards potentially preventative conflict-mitigating programs for economic sectors that might engage in riskier tactics to protect their material interest.

While this work narrowly focused on the civil conflict effects of business sectors, there is an interesting opportunity to broaden this research beyond peace/security to study how different business sectors are vested in good governance, government effectiveness, and/or regulation. While the banking, industry, or agricultural sectors can range from peace neutral to pro-peace, that is only considered a first basic need. In interviews, some sectors

exhibited a more pressing need for quality control, regulation, boarder control and smuggling prevention over the need for peace/security. An extension of this project will examine whether different businesses sectors have varying interest in supporting or undermining government effectiveness and how that might be leveraged to create forces for change in building responsive and effective governments in conflict affected societies.

## CHAPTER 4. MILITARY AID & INNOVATION: LESSONS FROM JORDAN

### **Abstract**

Can military aid to developing countries trigger innovation in the recipient economy? And if so, under what conditions? These questions emanate from a puzzle in the academic literature and the inclination of policymakers to make US aid more effective. Studies focused on military expenditure in the developed, industrialized world portray a positive relationship between military expenditure and innovation. Conversely, studies focused on military expenditure and military aid in the developing world highlight a multitude of negative unintended consequences such as undermining democratic rule, increasing the likelihood of coups, and fueling regional arms races. Borrowing from innovation literature that examines diffusion from military expenditure to the domestic economy in the developed world, I seek to identify a similar process in developing countries, better understand the causal mechanism at play, and identify new potentially overlooked variables that can help military aid trigger innovation. To do this, I conducted a case study on Jordan in which I trace the effects of different types of military aid in the Jordanian economy. Using congruence test on a least-likely case, I find that military aid can indeed trigger innovation in a recipient economy. In Jordan, this is reflected as the emergence of a domestic arms industry after its peace agreement with Israel and a major influx of US military aid. By breaking down military aid into different sub-types, my analysis further examines the factors and conditions that enabled military aid to succeed in triggering innovation. As a result of this process tracing, I find that military aid has a better

chance of leading to innovation when the military aid intervention supports the domestic S&T priority and industrial vision for the domestic economy. Therefore, as military aid is already dispatched in large sums to achieve stability and security in fragile environments, policymakers can seek to magnify the secondhand innovation effects of military aid by being cognizant of the domestic S&T and industrial policies of recipient nations and factoring them into the decision making and design processes of military aid disbursement.

#### **4.1 Introduction**

Can military aid to developing countries trigger innovation in high-tech sectors in the recipient economy? Foreign aid is a tool of foreign policy and will continue to be dispatched, especially as the main security concerns of the US – namely terrorism – continue. The US gives a significant amount of this assistance in the form of military aid to strategic allies to combat terrorism and bolster allies' capabilities in the Middle East and elsewhere. Consequently, the question of whether military aid can be better spent to further long-term innovation, economic growth, and development in addition to the immediate security priorities is relevant to academics and policymakers alike. By design, the explanatory variable in this study – military aid – is a factor that can be manipulated by policymakers. Therefore, better understating how military aid can help trigger innovation in recipient economies can lead to relevant policy recommendations as leaders find ways to increase aid efficiency and long-term economic development as a means to fulfill US security concerns and global stability.

The question of military aid effectiveness in triggering innovative knowledge-intensive and high tech economic sectors arises also from a puzzle in the current literature:

military expenditure is generally portrayed as having positive ramifications – including innovation – in the developed world but is believed to have negative ramifications in the developing world. The main fault line in previous research is between the rich industrialized world and developing nations. The literature on innovation suggests that military spending in the developed world can help foster innovation and long-term sustainable economic growth by triggering several distinct mechanisms through military Research and Development (R&D) spending, defense technology spinoff, and/or military procurement. Conversely, military expenditure and military aid – which can be viewed as a subsidy for military expenditure – are portrayed generally as negative forces in the development and foreign aid literature. This latter body of work often highlights the negative and unintended ramifications of military aid, such as the undermining of democratic rule and human rights in recipient countries. This research tries to bridge these two diverging trends in the literature to better understand a thus far overlooked innovation mechanism in the developing world as triggered by military aid. Could military aid, which boosts domestic military spending, help trigger innovation in developing nations – emulating the generally positive relationship shown in industrialized economies?

Motivated by this gap in the literature, this research attempts to answer the following question: Can military aid trigger innovation in recipient economies? To do this, I borrow from a spillover mechanism framework derived from research on developed countries and apply it to military aid in Jordan – a least likely case. Using this framework, I initially hypothesize that different types of military aid will lead to different innovation outcomes in the recipient country's economy, and I trace each type of military aid to better understand its effects on innovation and the potential causal mechanisms at play. In

particular, I hypothesize that military aid focused on training, the proliferation of US technical know-how, and scientific skill development will most likely lead to innovation as opposed to military aid focused on financial transfers. Categorizing military aid in this way allows for a more discriminating analysis on the effectiveness of military aid and also allows for the identification of new variables and conditions inductively that interact with military aid – either hindering or catalyzing its success in bringing about innovation.

Based on this analysis, I find that military aid can indeed help trigger innovation in recipient economies. However, other important variables interact with military aid to either help advance or hinder its success. Military aid, taken alone, has limited explanatory power in terms of triggering innovation, yet it can amplify local science and technology (S&T) and industrial priorities, irrespective of its sub-type, as long as there is an alignment with local priorities. Following from this, further work is needed to better understand how domestic S&T and industrial policy affect how military aid translates into innovation. Better understanding how domestic policies interact with military aid can help donor countries better identify prospects for where their aid (either financial or skill transfer) can have secondhand positive effects in the innovation economy, or whether there will be missed opportunities.

#### **4.2 Foreign Aid as a National Security Policy Tool**

In 1949, President Harry Truman called for the sharing of US technical knowledge, scientific advances, capital investment, and skill with “underdeveloped areas” to help propel their economic growth in the hopes that they would catch up with the industrialized

world.<sup>367</sup> Since the end of World War II, this perspective has manifested itself as foreign aid. Improving the lot of the “free people of the world”<sup>368</sup> serves not only an altruistic objective but is also a crucial tool of US foreign policy. Foreign aid is used to achieve humanitarian goals, further commercial interests, and most importantly advance national security objectives.<sup>369</sup>

Starting with the Marshall plan and throughout the Cold War, US foreign aid was viewed as a way to curb communist expansion. With the collapse of the Soviet Union in the early 1990s, there was a sharp decrease in the foreign aid budget reflecting the lack of urgency and clear security threat to the United States. Nevertheless, foreign aid at an all-time low in the 1990s (1997 was the lowest year at right under \$20 billion), persisted and focused on furthering Middle East peace and helping countries democratize among other objectives.<sup>370</sup> However, in the decades after the September 11, 2001 terrorist attacks foreign aid reached a new high (see Figures 1 and 2). With a revived pressing security threat, foreign aid was ramped up as a tool to combat terrorism and bolster allies. In the wake of this change, assistance to strategic partners in counter-terrorism efforts and funds to rebuild Iraq and Afghanistan were increased to help quell this emerging threat. For example, in 2015, US foreign assistance was \$48.57 billion, almost double what it was in

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<sup>367</sup> " Truman Inaugural Address, January 20, 1949 ". 2017. *Trumanlibrary.Org*. Accessed December 5 2017. <https://www.trumanlibrary.org/whistlestop/5>

<sup>368</sup> " Truman Inaugural Address, January 20, 1949 ". 2017. *Trumanlibrary.Org*. Accessed December 5 2017. <https://www.trumanlibrary.org/whistlestop/5>

<sup>369</sup> Tarnoff, Curt, and Marian L. Lawson. "Foreign Aid: An Introduction to US Programs and Policy." LIBRARY OF CONGRESS WASHINGTON DC CONGRESSIONAL RESEARCH SERVICE, 2016. p.3 <https://fas.org/sgp/crs/row/R40213.pdf>

<sup>370</sup> Tarnoff, Curt, and Marian L. Lawson. "Foreign Aid: An Introduction to US Programs and Policy." LIBRARY OF CONGRESS WASHINGTON DC CONGRESSIONAL RESEARCH SERVICE, 2016. P. 15 <https://fas.org/sgp/crs/row/R40213.pdf>

1997. Driving the resurgence of US assistance in the past decades are the Bush,<sup>371</sup> Obama,<sup>372</sup> and Trump<sup>373</sup> national security strategies, which both highlight the terrorist threat as prime national security objective and global development, prosperity, and poverty reduction as a means to achieving a safer world. Therefore, foreign aid has acted as one of the main mediums by which to achieve both these goals in developing countries, which are also US allies.

A significant subset of US foreign aid is of a military nature and is on an upward trajectory since 2001. In 2015, 35% of all aid was distributed in the form of military assistance to strategic partners (in comparison to only 16% for humanitarian activities, 43% for bilateral economic assistance, and 6% to support multilateral institutions.)<sup>374</sup> Military aid is targeted at strengthening allies' militaries and strengthening partner capacity for countering national security threats. Development assistance programs, on the other hand, are aimed at fostering shared economic growth and social stability in developing countries. This latter type of aid focused on agriculture, trade, health, protecting the environment, etc., tends to be managed by U.S. Agency for International Development (USAID).<sup>375</sup> Military aid amounted to over \$15 billion in 2015<sup>376</sup> - of this amount, \$8 billion were managed by the US Department of Defense (DOD).<sup>377</sup> Matching overall trends of aid, the

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<sup>371</sup> National Security Strategy, February 2002. *Nssarchive*. Accessed December 6 2017. <http://nssarchive.us/wp-content/uploads/2015/02/2015.pdf>.

<sup>372</sup> National Security Strategy, February 2015. *Nssarchive*. Accessed December 6 2017. <http://nssarchive.us/wp-content/uploads/2015/02/2015.pdf>.

<sup>373</sup> National Security Strategy, December 2017, *The white house.org*. Accessed May 26 2020. <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>

<sup>374</sup> Tarnoff, Curt, and Marian L. Lawson. "Foreign Aid: An Introduction to US Programs and Policy." LIBRARY OF CONGRESS WASHINGTON DC CONGRESSIONAL RESEARCH SERVICE, 2016.

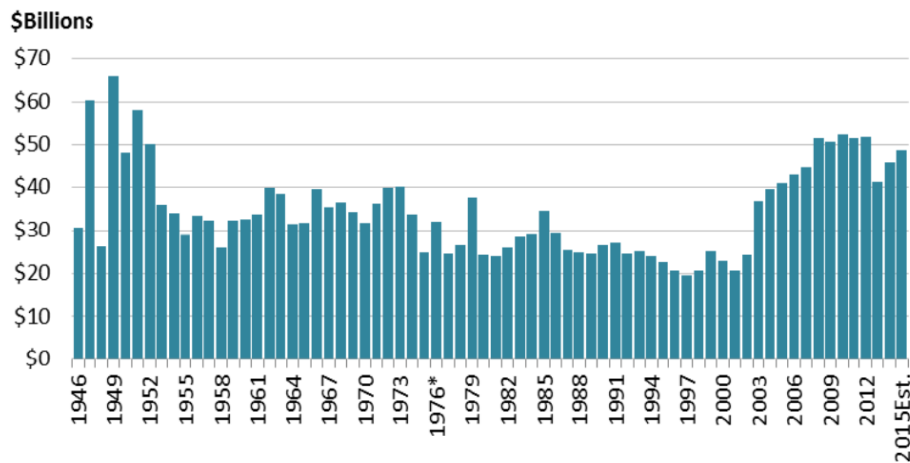
<sup>375</sup> Tarnoff, Curt, and Marian L. Lawson. "Foreign Aid: An Introduction to US Programs and Policy." LIBRARY OF CONGRESS WASHINGTON DC CONGRESSIONAL RESEARCH SERVICE, 2016. p.6

<sup>376</sup> US Foreign aid, Foreign Aid Explorer, Retrieved Dec 7, <https://explorer.usaid.gov/aid-trends.html>

<sup>377</sup> US Foreign aid, Foreign Aid Explorer, Retrieved Dec 7, <https://explorer.usaid.gov/aid-trends.html>

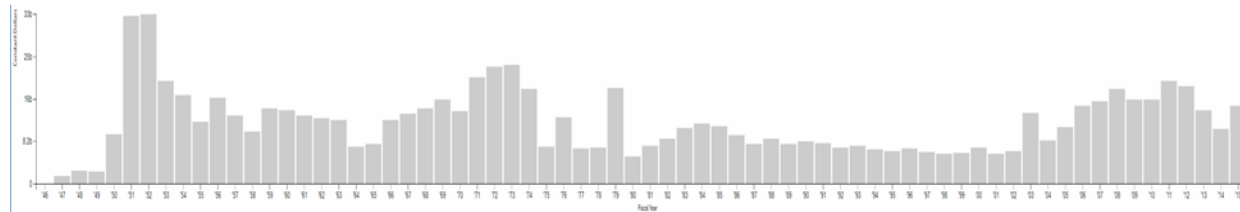
level of military aid has followed a similar pattern with the security assistance increasing since 2001 (See Figure 2).

Since then, almost all the top recipients of US military aid have been developing countries. Table 1 displays the top recipients over the past twelve years. There is an obvious overlap between signatories of peace with Israel (Egypt and Jordan) and allies involved in counter-terrorism efforts and US security assistance. Israel, Egypt, Jordan, Iraq, Afghanistan, Pakistan all feature heavily in Table 1. With the exception of Israel, all are developing countries. Given the US’s long term security concerns, be it either counter-terrorism efforts in the Middle East, Afghanistan and Pakistan, or counter-narcotics programs, the US has an interest in fostering long-term sustainable development in these countries as a durable strategy for peace and stability.



**Figure 14 - US Foreign Aid 1946 – 2015 Est (Obligation in billions of constant 2015 dollars)<sup>378</sup>**

<sup>378</sup> Tarnoff, Curt, and Marian L. Lawson. “Foreign Aid: An Introduction to US Programs and Policy.” LIBRARY OF CONGRESS WASHINGTON DC CONGRESSIONAL RESEARCH SERVICE, 2016. p.16



**Figure 15 - US Foreign Military Aid 1946 – 2015<sup>379</sup>**

As these aid trends can be expected to continue given national security priorities, is there a way that military aid which is dispersed with immediate security concerns have a positive long-term effect on economic development, which is itself another security policy goal? Given the existing trends of foreign military aid and some of the negative consequences that emerge from the development and military aid literature discussed below, the question that emerges is: is there a better way to invest these funds? Can military aid have positive long-term effects especially in the realm of the goals of global development like innovation and economic growth?

<sup>379</sup> US Foreign aid, Foreign Aid Explorer, Retrieved Dec 7, <https://explorer.usaid.gov/aid-trends.html>

**Table 4 - Top 10 Recipients of US Military Foreign Aid by Year<sup>380</sup>**

Rank	2005	2006	2007	2008	2009	2010
1	Israel	Iraq	Iraq	Afghanistan	Afghanistan	Afghanistan
2	Egypt	Israel	Afghanistan	Iraq	Israel	Israel
3	Iraq	Afghanistan	Israel	Israel	Egypt	Iraq
4	Afghanistan	Egypt	Egypt	Egypt	Iraq	Egypt
5	Pakistan	Pakistan	Pakistan	Pakistan	Pakistan	Pakistan
6	Jordan	Russia	Sudan	Jordan	Jordan	Jordan
7	Russia	Colombia	Colombia	Colombia	Colombia	Colombia
8	Colombia	Jordan	Jordan	Russia	Russia	Mexico
9	Sudan	Sudan	Russia	Sudan	Kazakhstan	Russia
10	Poland	Philippines	Philippines	Liberia	Mexico	Poland

Rank	2011	2012	2013	2014	2015	2016
1	Afghanistan	Afghanistan	Afghanistan	Afghanistan	Afghanistan	Iraq
2	Israel	Israel	Israel	Israel	Israel	Israel
3	Egypt	Egypt	Egypt	Jordan	Egypt	Afghanistan
4	Iraq	Iraq	Jordan	Pakistan	Iraq	Egypt
5	Pakistan	Jordan	Somalia	Lebanon	Jordan	Jordan
6	Jordan	Somalia	Iraq	Somalia	Pakistan	Pakistan
7	Colombia	Russia	Lebanon	Bangladesh	Lebanon	Philippines
8	Russia	Colombia	Colombia	Colombia	Philippines	Kenya
9	Kazakhstan	Pakistan	Mexico	Philippines	Tunisia	Ukraine
10	Mexico	Kazakhstan	Yemen	Mexico	Colombia	Colombia

### 4.3 Military Expenditure and New Knowledge Intensive Sectors/Innovation

In addressing the question of can military aid to developing countries trigger innovation in the domestic economy, several bodies of literature are relevant to help answer this question. Though different perspectives help hone in on the issue, they also delineate a puzzle: why is military expenditure in the developed industrialized world associated with positive second hand effects in the economy, whereas in the developing world this relationship tends to be portrayed as negative? Can policymakers learn from the industrialized world in

<sup>380</sup> Table created from data accessed from Foreign Aid Explorer: The official record of U.S. foreign aid.

order to better select or design military aid interventions, so that they can have positive secondhand effects in the recipient country's economy? This question is important and remains unaddressed in the literature. In fact, the literature on innovation generally focuses on the developed world, mostly the US,<sup>381</sup> and other successful cases like Israel, Taiwan, and Ireland.<sup>382</sup> In stark contrast to this, the literature on development and military aid tends to focus on negative externalities such as regional arms races,<sup>383</sup> the undermining of human rights and democratic institutions,<sup>384</sup> increased probabilities of coups,<sup>385</sup> etc. From this puzzle emerge several questions: under what circumstances can military aid have positive secondhand effects in the civilian economy? What would be the process? Can different types of military aid lead to different types of externalities? Are some military aid interventions more desirable than others?

#### *4.3.1 Innovation and the Developed World*

The literature on innovation and military expenditure is useful to get at potential causal mechanisms and processes that could then be applied to the developing world. It is important to highlight that this body of work largely focuses on industrialized developed nations – particularly the US – and for the most part paints a positive relationship between

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<sup>381</sup> Mowery, David C. "Military R&D and Innovation." *Handbook of the Economics of Innovation* 2 (2010): 1219–1256.

<sup>382</sup> Breznitz, Dan. *Innovation and the State: Political Choice and Strategies for Growth in Israel, Taiwan, and Ireland*. Yale University Press, 2007.

<sup>383</sup> Collier, Paul, Anke Hoeffler, and Måns Söderbom. "Post-Conflict Risks." *Journal of Peace Research* 45, no. 4 (July 1, 2008): 461–78. doi:10.1177/0022343308091356.

<sup>384</sup> Powers, Elizabeth. "Greed, Guns and Grist: US Military Assistance and Arms Transfers to Developing Countries." *NDL Rev.* 84 (2008): 383.

<sup>385</sup> Savage, Jesse Dillon, and Jonathan D. Caverley. "When Human Capital Threatens the Capitol: Foreign Aid in the Form of Military Training and Coups." *Journal of Peace Research* 54, no. 4 (2017): 542–557.

military expenditure and innovation (however measured).<sup>386</sup> Breznitz's examines three case studies of now developed economies: Ireland, Israel, and Taiwan. He argues that innovation requires the state to actively step in to solve the market failure of R&D – private investors tend to underinvest because of high uncertainty in emerging markets – and connect local industry with international markets (as local demand is not enough to spur such innovation).<sup>387</sup> Despite the parsimony in his overarching theory, in his discussion of the Israeli case, he argues that the military in Israel and its security concerns played an important role in the initial demand for highly qualified labor in order to create an independent and local arms industry. He states that Israel's competitive edge and innovative sectors originate in the defense sector. The state provided the R&D funds and facilitated know-how transfer from the defense sector to the civilian one. Specifically, the origins of the successful Information and Technology (IT) sector in Israel can be traced back to the defense apparatus and state bureaucracy's pioneering role in developing computing.<sup>388</sup>

Partially echoing this point, Taylor's work on the politics of innovation posits a theory of creative insecurity. To explain why countries innovate and why we see different rates of innovation across countries (measured by patent data), Taylor theorizes that each country balances domestic and external security concerns; this balance influences its rate of innovation.<sup>389</sup> Those countries that innovate tend to be driven by security concerns

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<sup>386</sup> Mowery, David C. "Military R&D and Innovation." *Handbook of the Economics of Innovation 2* (2010): 1219–1256

<sup>387</sup> Breznitz, Dan. *Innovation and the state: Political choice and strategies for growth in Israel, Taiwan, and Ireland*. Yale University Press, 2007. P.191

<sup>388</sup> Breznitz, Dan. *Innovation and the State: Political Choice and Strategies for Growth in Israel, Taiwan, and Ireland*. Yale University Press, 2007. P.47

<sup>389</sup> Taylor, MZ. *The politics of innovation: why some countries are better than others at science and technology*. By Mark Zachary Taylor. Vol. 92, no. 6. Oxford University Press, 2016. P.5

because these security threats help citizens accept the cost and risky endeavor of trying to become more competitive and innovative.<sup>390</sup> Specifically, external threats to a nation's military can increase the relative cost of technological stagnation. This makes innovation more appealing because it can create an economy that is more competitive internationally. Domestically, threats can help rally support for technological advancement from the public.<sup>391</sup> Subsequently, a local high-tech sector can provide the foundation for a domestic defense industry, making a country less dependent on importing weapons.<sup>392</sup> Though Taylor focuses on external security threats as an important motivator, he looks at innovation as a whole and does not comment on the direction of innovation – be it from the military to the civilian sector or vice versa. Similarly, he does not distinguish between external and internal security threats, it is unclear how terrorism, for example, might affect state behavior when it comes to innovation.

Breznitz' work on Israel illustrates how security concerns can trigger innovation. According to him, it is Israel's security concerns that originally triggered its R&D spending and technological advancement in military defense industry, which eventually led to innovation in the private sector, specifically in the IT sector.<sup>393</sup> It is now accepted that the US and Israel are strong strategic allies. However, this was not always the case. In its first two decades of existence (since 1948), Israel's biggest ally was France. Most of Israel's equipment including fighter jets and ships were purchased from France. However, in 1967

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<sup>390</sup> Taylor, MZ. *The politics of innovation: why some countries are better than others at science and technology*. By Mark Zachary Taylor. Vol. 92, no. 6. Oxford University Press, 2016. P.5

<sup>391</sup> Taylor, Mark Z. "Toward an International Relations Theory of National Innovation Rates." *Security Studies* 21, no. 1 (January 1, 2012): 113–52. <https://doi.org/10.1080/09636412.2012.650596>.p.114

<sup>392</sup> Taylor, MZ. *The politics of innovation: why some countries are better than others at science and technology*. By Mark Zachary Taylor. Vol. 92, no. 6. Oxford University Press, 2016. P.15.

<sup>393</sup> Breznitz, Dan. *Innovation and the state: Political choice and strategies for growth in Israel, Taiwan, and Ireland*. Yale University Press, 2007. P.46

during the Six Day War, French President Charles de Gaulle declared France's alliance with the Arab States, condemned Israel's pre-emptive strike against Egypt, and instilled an arms embargo on the Middle East, which hurt Israel primarily.<sup>394</sup> Overnight, Israel was no longer able to buy crucial weapon systems. In the wake of this experience, Israel decided to break its dependence on foreign powers for military platforms. It shifted large amounts of spending into military R&D and high-technology defense industry. In addition to creating the skill and R&D capacity, this new shift in policy and spending helped create more demand for scientists and engineers in Israel. This in part helped pave the way for innovative industries in the Israeli economy.

The literature on innovation suggests that security threats and the military have a positive effect on civilian innovation. How does this relate to recipients of military aid, which are in large part developing countries? Further, recipients of military aid are not a randomly selected group. Top recipients of US bilateral military aid receive it because they are strategic allies in combatting terrorism, fighting drugs, or maintaining regional stability. In other words, they face a high level of internal and/or external security threat that is also of concern to the US. Thus, in applying the theory of creative insecurity, this subset of countries (though generally lower income than what has been discussed previously) are better positioned to innovate than other developing countries with lower security threats.

#### *4.3.2 Military Expenditure and Innovation*

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<sup>394</sup> Bass, Gary J. "Opinion | When Israel and France Broke Up." *The New York Times*, March 31, 2010, sec. Opinion. <https://www.nytimes.com/2010/04/01/opinion/01bass.html>.

The literature that attempts to explain innovation is broad. We can distill from it, that security concerns and the military might have a role to play in innovation. But how? The subset of literature that focuses on the military specifically and innovation is more useful in helping derive causal mechanisms as to how innovation might move from one realm to another. However, the work here almost exclusively focuses on the US and the developed world.<sup>395</sup> Nevertheless, the major takeaways from this perspective reinforce the argument that military procurement promotes the development of new technology and industry. The military as a state-based organization with strategic vision sponsors and consumes emerging technologies that can lead to spillovers effects in the civilian economy and the emergence of new high tech and knowledge intensive industrial sectors.<sup>396</sup> A demonstrative example is Fordism – standardizing mass production to increase efficiency and productivity. This mode of production originated in the 19<sup>th</sup> century in the US military arms industry and was later adopted by the private sector.<sup>397</sup> In addition to procurement, however, there are other channels by which innovation can diffuse from the military to the civilian economy.

Mowery highlights three such channels which will prove useful to better understanding the casual mechanism between military aid and innovation in developing countries. The first mechanism he identifies is through defense-related R&D. Military R&D can support the creation of new bodies of engineering and scientific knowledge that can lead to innovation in the economy. Mowery illustrates this relationship with defense-

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<sup>395</sup> Mowery 2010, Snyder 1984, Smith 1985, Rosen 1991, Schmid 2017.

<sup>396</sup> Mani, Kristina. "Military entrepreneurs: patterns in Latin America." *Latin American Politics and Society* 53, no. 3 (2011): 25-55. P.28.

<sup>397</sup> Smith 1985, p.11

related spending during the Cold War that supported university research, which in turn served as a significant springboard for innovation. In the US, the Department of Defense (DOD) represented a lion share of overall federal spending on R&D during the postwar period. During this period, this funding mostly supported private firms and universities as opposed to national laboratories (“The Cold War University”).<sup>398</sup> This public funding directly addresses the market failure whereby private firms tend to underinvest in R&D.<sup>399</sup> By funding these activities, the military helped create a knowledge base from which civilian innovation emanated. Second, the military can contribute to innovation via the channel of “spinoff.” This is when technologies developed by the military originally suited for defense purposes find application in the civilian realm.<sup>400</sup> Commonly cited examples to illustrate this are the internet and semiconductors, which began in the military but triggered a large number of subsequent innovations and new economic sectors.<sup>401</sup>

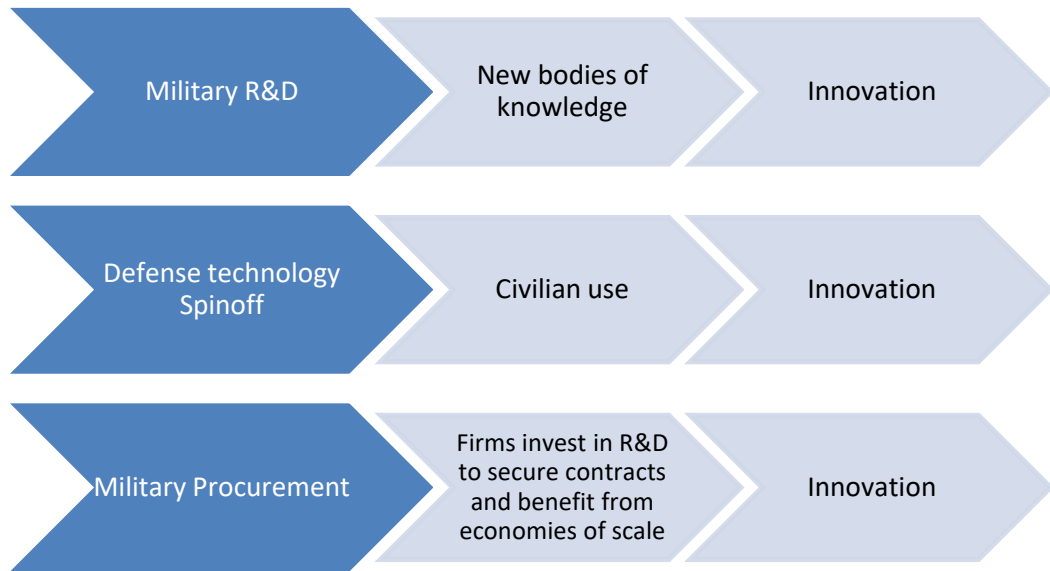
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<sup>398</sup> Mowery, David C. “Military R&D and Innovation.” *Handbook of the Economics of Innovation* 2 (2010): 1219–1256. P.1229

<sup>399</sup> Arrow, Kenneth. “Economic welfare and the allocation of resources for invention.” In *The rate and direction of inventive activity: Economic and social factors*, pp. 609-626. Princeton University Press, 1962. AND Nelson, Richard R. “The simple economics of basic scientific research.” *Journal of political economy* 67, no. 3 (1959): 297-306.

<sup>400</sup> Mowery, David C. “Military R&D and Innovation.” *Handbook of the Economics of Innovation* 2 (2010): 1219–1256. P.1236

<sup>401</sup> Schmid, Jon. “The Diffusion of Military Technology.” *Defence and Peace Economics*, 2017, 1–19. P.3



**Figure 16 - Summary of Spillover Mechanisms from Military Expenditure to Innovation<sup>402</sup>**

Finally, the third mechanism is that of procurement. Defense spending can also spur demand for new technologies; to meet this demand, private firms might be incentivized to increase their own R&D spending to help secure large government contracts and could also benefit from economies of scale to become more efficient at manufacturing their product.<sup>403</sup> Figure 3 summarizes Mowery's three mechanisms. This framework is rooted in and derived from the experience of the industrialized world. However, could this framework be applicable to developing countries? Could military aid, catalyze these processes in recipient countries?

<sup>402</sup> Figure created based on the three mechanisms provided by Mowery, David C. "Military R&D and Innovation." *Handbook of the Economics of Innovation* 2 (2010): 1219–1256. P.1229

<sup>403</sup> Lichtenberg, Frank R. "The relationship between federal contract R&D and company R&D." *The American Economic Review* 74, no. 2 (1984): 73-78.

For recipients of military aid, it seems that two of these mechanism by which military expenditure translates into innovation is most likely. Because of stages of development, developing countries are less likely to engage in “reinventing the wheel” and are less likely to develop cutting edge local indigenous defense technologies. Looking at the top 100 arms producing companies in the world over the past ten years, the top recipients of military aid - with the exception of Israel – do not feature on this list.<sup>404</sup> This shows that in these countries, the defense industry is not particularly competitive. For example, Egypt does have an old defense industry and Jordan a relatively newer one.<sup>405</sup> Nevertheless, it is unlikely to see technology spinoffs from the military to the civilian sector. If anything, technology transfer might be more likely to come from abroad. Hence, defense technology spinoff from the military to the private sector, can be eliminated as a mechanism for positive second hand effects, at least in the near future. Similarly, the military procurement channel is a less likely channel for innovation when it comes to military aid recipients. For the most part military procurement with assistance funds tends to be redirected to firms in the US rather than in the recipient country. Defense systems acquired under the Foreign Military Financing (FMF) Program are generally imported. Therefore, in developing nations the last two channels are less applicable. Nevertheless, by indirect means, insofar as military aid frees local funds to invest more in their local R&D capacity or local procurement these positive spillover channels might be encouraged.

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<sup>404</sup> Source: SIPRI Arms Industry Database, retrieved December 2017

<sup>405</sup> Amara, Jomana. "Military industrialization and economic development: Jordan's defense industry." *Review of Financial Economics* 17, no. 2 (2008): 130-145; Marshall, Shana. "Jordan's Military-Industrial Complex and the Middle East's New Model Army." *Middle East Report* 267 (2013): 42-45; Paul, Jim. "The Egyptian Arms Industry." *Merip Reports* 112 (1983): 26-28.

In a more direct way however, it seems that military aid in the form of training, capacity building, and skill transfer can increase the military's ability in a technical field, which could serve as a basis for innovation and the creation of new industry. Thus, based on this preliminary analysis, it seems that military aid focused on skill transfer will more likely lead to innovation than military aid focused on financial transfer. Given the available channels triggered by military aid, it seems that the most direct way to spur innovation is through increasing human capacity and creating a knowledge base (emulating R&D spending) that can serve as a springboard for further innovation in the recipient economy. The case study presented in this research will seek to explore this initial hypothesis by tracing the effects of two different subtypes of military aid in one recipient economy.

#### *4.3.3 Military Expenditure in the Developing World*

Military aid is a subsidy to military expenditure. Nevertheless, in the developing world context, the topic of military expenditure is controversial and is often portrayed as the "guns" versus "butter" debate.<sup>406</sup> This debate was ignited in the 1970 by UN-sponsored research on economic growth in developing countries and military expenditures.<sup>407</sup> Mainly, in direct contrast to the innovation literature discussed above, it views defense spending (guns) as a zero-sum game at the expense of social programs (butter).<sup>408</sup> Despite several decades of research, there is still no consensus to this broader research question. In her historical summary on the issue, Neuman lumps in military assistance with procurement

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<sup>406</sup> Neuman, Stephanie G. "Arms Transfers, Military Assistance, and Defense Industries: Socioeconomic Burden or Opportunity?." *The Annals of the American Academy of Political and Social Science* 535, no. 1 (1994): 91-109.

<sup>407</sup> Benoit, Emile. "Defense and economic growth in developing countries." (1973).

<sup>408</sup> United Nations, Department for Disarmament Affairs. "Economic and Social Consequences of the Arms Race and of Military Expenditures." *New York: United Nations, 1983 p.23.*

and local defense industry. However, this categorization is not entirely correct, as military aid can be considered a donation from a foreign country for a specific purpose (defense). Therefore, equating military assistance with procurement misrepresents how developing country governments might be allocating their government spending. Conversely, military assistance can free up funds of the host country that can be reallocated to social programs. From this perspective military assistance is a subsidy of defense spending that can increase the amount local governments can spend on butter. Nevertheless, more recent research specifically focused on aid by Collier and Hoeffler highlights the negative unintended consequences of aid. They argue, because aid is fungible, it ends up subsidizing defense spending. This in turn triggers a regional arms race, which has no positive impact on peace and stability.<sup>409</sup>

Further, beyond the economics of developing nations, more recent literature has focused on the negative consequences of military aid specifically in the form of undermining democratic institutions and in some instances supporting human rights abusers.<sup>410</sup> Additionally, undermining the most basic motivation of military aid, which is immediate stability and security, Savage and Caverley argue that military aid – particularly in the form of training military personnel – results in the increased likelihood of coups. Strengthening human capital in the military is less fungible than other forms of military assistances that

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<sup>409</sup> Collier, Paul, and Anke Hoeffler. "Unintended Consequences: Does Aid Promote Arms Races?" *Oxford Bulletin of Economics and Statistics* 69, no. 1 (2007): 1–27. P.29.

<sup>410</sup> Powers, Elizabeth. "Greed, Guns and Grist: US Military Assistance and Arms Transfers to Developing Countries." *NDL Rev.* 84 (2008): 383.

can be diverted to “coup-proofing.” This increases the balance of power in favor of the military vis-à-vis the regime and leads to an increased propensity for military coups.<sup>411</sup>

That said, there are also perspectives that see military aid/military spending as potentially beneficial. In a first instance, skills gained from learning to operate and maintain equipment can be transferred to the civilian sphere. Increased security and stability, which some assume to be a byproduct of military aid/expenditure, is necessary for economic development.<sup>412</sup> Also, from a military spending perspective, specifically focused on the a domestic defense industry there are more positive linkages that echo what was discussed in the previous sections such as spillover: the transfer of technology from the military to the civilian realm.<sup>413</sup> However, many of the top recipients of military aid (see table 1) do not have competitive defense industries. Thus, the original question posed remains unanswered. Under what circumstances can military aid have positive effects on innovation? Do different types of military aid lead to different second hand effects?

The discussion above highlights a puzzle. Military expenditure in the developed, industrialized world seems to contribute somehow to innovation, whereas military expenditure, and specifically military aid in the developing world is associated with negative secondhand effects in the recipient economy. Notwithstanding, military aid is different than military expenditure, because in a way it circumvents the guns versus butter

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<sup>411</sup> Savage, Jesse Dillon, and Jonathan D. Caverley. “When Human Capital Threatens the Capitol: Foreign Aid in the Form of Military Training and Coups.” *Journal of Peace Research* 54, no. 4 (2017): 542–557.

<sup>412</sup> Neuman, Stephanie G. "Arms Transfers, Military Assistance, and Defense Industries: Socioeconomic Burden or Opportunity?." *The Annals of the American Academy of Political and Social Science* 535, no. 1 (1994): 91-109. P.98.

<sup>413</sup> Neuman, Stephanie G. "Arms Transfers, Military Assistance, and Defense Industries: Socioeconomic Burden or Opportunity?." *The Annals of the American Academy of Political and Social Science* 535, no. 1 (1994): 91-109. P.103

debate. Military aid does not divert local government spending away from social expenditure. Therefore, this might be a less controversial way to increase R&D capabilities in the military. From the several bodies of literature examined here, countries receiving military aid should be more prone to industrialize and innovate in their domestic economies than others because they are, to begin with, a select group facing acute security concerns. Consequently, a competitive economy is also one of their aims in order to help increase both their economic and military capabilities. Further it would seem that military aid that furthers skill acquisition and capacity building in the military – emulating the benefits of R&D spending – is more likely to lead to the creation of new industries in the economy as opposed to aid that focuses on acquiring weapons systems designed and manufactured abroad. Thus, depending on the type of military aid, secondary effects in the domestic economy could vary. I hypothesize that aid focused on human capacity and skill transfer is more likely to create a knowledgebase that can serve as a springboard for innovation in developing countries.

#### **4.4 Measurement and Case Selection**

To better understand how military aid could result in innovation and new knowledge intensive economic sectors in developing countries, I conduct a focused and structured within case analysis to better understand the potential causal mechanisms at play and to determine under what circumstances foreign military aid might lead to innovation. I superpose Mowery's framework on one least likely case – Jordan, where I track different types of military aid and assess their secondhand effects on innovation. This case study approach allows for several advantages compared with other methods. Even within the developed world, measuring innovation is challenging and the causal mechanism by which

military expenditure leads to innovation is complex and not well understood.<sup>414</sup> The case study approach, as explained by George and Bennett, helps explore complex causality and complex interaction effects.<sup>415</sup> Further, the case study approach helps with conceptual validity.<sup>416</sup> For example, many large *n* studies exploring innovation use patents as a measure of innovation. However, this measure is narrow and would exclude many developing countries, which are arguably experiencing innovation – but not at the patent level. Innovation could take the form of new industries, new products, and increased productivity in the economy all of which are plausible measures of innovation<sup>417</sup> and occur to varying extents in developing countries. Given that the causal mechanisms behind innovation are not well understood in the significantly more developed literature on innovation in developed nations, a case study to better understand this causal mechanism in developing nations is necessary.<sup>418</sup> Because of the nature of the causality being explored and the potential issues of conceptual validity, a case study helps better explain the complex causality in developing nations and understand what other interactive variables might be at play. Better grasping how the causality works will allow for more relevant generalization pertaining to military aid and innovation.

To this end, a universe of cases is selected. Looking at the time period after September 11, 2011 is most relevant because in this phase, military aid increases to pre-

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<sup>414</sup> Mowery, David C. "Military R&D and Innovation." Handbook of the Economics of Innovation 2 (2010): 1219–1256. P.1253

<sup>415</sup> George, Alexander L., and Andrew Bennett. Case studies and theory development in the social sciences. mit Press, 2005 p.10

<sup>416</sup> George, Alexander L., and Andrew Bennett. Case studies and theory development in the social sciences. mit Press, 2005 p.76

<sup>417</sup> Taylor

<sup>418</sup> Even the mechanisms that are adopted as a framework to structure this study are not fully understood, as Mowery acknowledges.

1990 levels and is motivated by similar US national security concerns (see earlier discussion). Using official data from the United States Agency for International Development (USAID) from 2005 to 2016 the table in Table 1 presented earlier in the essay shows the top ten recipients of US military assistance for the past 12 years. The table shows that Israel, Egypt, Jordan, Iraq, Afghanistan are the top recipients of US aid. Among the top recipients, Israel is the only country considered to be developed. To see how different types of military aid might contribute to innovation in the economy this research will focus on developing economies to understand how such a process might unfold.

Looking at the universe of cases, Jordan presents a good least likely case. Jordan is a developing country, which consistently features in the top ten recipients and has not experienced a major war or civil strife over the 2001-2016 period. More importantly, Jordan signed a peace treaty with Israel on October 26, 1994, which eliminated a major security threat and enhanced stability for Jordan. Simultaneously, while bringing increased security to Jordan, this treaty also ushered in a significant influx of foreign aid— including military.<sup>419</sup> Applying Taylor’s theory of creative insecurity coupled with Breznitz’s analysis of Israel’s innovation success and the role of external security threats, it would seem that Jordan’s diminished external security threat would reduce Jordan’s incentive to innovate. Interestingly, this reduction in external threat is couple with increased military aid to Jordan providing a fitting natural experiment. Therefore, in the face of supposed reduced incentives to innovate, tracing military aid’s effect in the Jordanian economy is relevant. If military aid helped trigger innovation under these least-likely circumstances,

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<sup>419</sup> David Schenker, “Twenty Years of Israeli-Jordanian Peace: A Brief Assessment,” The Washington Institute for Near East Policy, October 23, 2014

than we can generalize that military aid can be more effective in triggering innovation in countries that face more severe external security threats. Further, are different types of military aid in Jordan leading to different kinds of innovation effects in the local economy? I superpose Mowery's three suggested mechanisms on different types of military aid to help trace these effects and identify potentially relevant previously overlooked variables.

***Independent Variable: Military Aid***

This section operationalizes the main variables to explore the following hypothesis: military aid that furthers skill acquisition and capacity building in the military is more likely to lead to the creation of new industries in the domestic economy. To test the hypothesis, the independent variable is defined as military aid/assistance. The US provides military assistance to allies in order to purchase military equipment and train their personnel. The immediate goal for US policy is strengthening allies in their fight against common national security threats. However, this is an aggregate number. Military aid can be of several types. USAID disaggregates military aid/assistance in several categories listed in Annex 1. Most studies focused on military aid have not disaggregated this variable. However, this is important in addressing our hypothesis. Some forms of aid like the International Military Education & Training (IMET) Program, Cooperative Threat Reduction Program (CTR), and the CBRN Preparedness Program (CP2), are more directly focused on training military personnel and strengthening their capacity and transferring a skill-set in certain technical areas, whereas, Foreign Military Financing (FMF) tends to focus on cash or credit for procurement.

Nevertheless, these categories are not clear-cut, because FMF, might have indirectly imbedded in it a skill-transfer and R&D strengthening component. One example of this is the US-Israel agreement concerning the Development of Night Targeting System (NTS) for Cobra Aircraft.<sup>420</sup> This is a FMF procurement treaty with Israel from 1987. The treaty is focused on acquiring a specific capability within both militaries. The US Department of the Navy (USN) and Israel's Ministry of Defense share the common goal of developing and acquiring a defense NTS for its Cobra helicopters. The government of Israel had been working on this capability via Israel Aircraft Industries Ltd. (IAI), a state-owned aerospace manufacturer. However, this cooperative effort would build upon IAI's achievements by jointly developing, integrating and producing a NTS and adding improved technologies and a laser designator. The US will acquire 80 NTS and Israel 40. This memorandum of understanding (MoU) is mutually beneficial beyond the acquisition of the NTS capability for both parties. For the US, it will gain exposure to the emerging technology and has guaranteed itself a second NTS production source in the US. As for Israel, even though it has provided the seed idea and knowledge, the costs of developing, integrating, and producing the NTS capability are shared. This not only grants it financial benefits (in terms of economies of scale and some form of R&D), but also exposure to how other institutions like the USN work. Further, cooperation over developing the product will enable more sharing of technical knowledge. Therefore, some of the FMF projects might include some skill transfer elements that might not be apparent at face value. Given these

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<sup>420</sup> U.S.-Israel Memorandum of Understanding Concerning Development of Night Targeting System (NTS) for Cobra Aircraft (August 1987)." Accessed November 1, 2017. <http://www.jewishvirtuallibrary.org/u-s-israel-memorandum-of-understanding-concerning-development-of-night-targeting-system-nts-for-cobra-aircraft-august-1987>.

at times blurry boundaries, an in depth case study will help parse the difference and keep to the validity of what is being measured.

Nevertheless, the independent variable of military aid can be broadly categorized as two main subtypes: FMF and non-FMF. FMF for the most part (despite some exceptions like the Cobra NTS example above) will be characterized as low-skill transfer because the main focus is acquiring weapons rather than transferring human capacity and technical knowhow to foreign militaries. In contrast, other types of military aid are more deliberately focused on training and increasing human capacity. These non-FMF programs – including the CTR, IMET, and CP2 – can be characterized as high-skill transfer programs as they aim to create a technical know-how in the recipient foreign military.

***Dependent Variable: Innovation***

Innovation is defined as “the discovery, introduction, or development of new technology, or the adaptation of established technology to a new use or to a new physical or social environment. Innovation occurs throughout the technical evolution of an invention. It includes the technological changes introduced from first prototype to the establishment of a globally competitive industry.”<sup>421</sup> In order to measure innovation in developing countries that receive military aid, new sectors or products in the economy will serve as a measure of innovation. Focusing on patents or scholarly publications, for example, will probably miss the mark for many developing countries.

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<sup>421</sup> Taylor, Mark Z. "Toward an international relations theory of national innovation rates." *Security Studies* 21, no. 1 (2012): 113-152. p.118

## ***Controls***

Because so many other factors might be at play, the military aid independent variable will probably interact with other variables to achieve various outcomes. Some of these potential variables can be absorption capacity, domestic institutions, type of threat (internal or external), type of bureaucracy, etc. For example, in countries with overall higher levels of education (or absorption capacity) it might be easier for human capital to seep from the military to the civilian realm. Therefore, in this context, military aid with a high skill-level transfer will be more likely to lead to innovation than in a place with low absorption capacity. Because so many variables are at play and military aid is likely not the sole driving factor, in depth cases could be a better way to test this relationship. Further, case studies – rather than a statistical approach – will allow to better tease out the causal mechanism by which military aid could lead to innovation in the recipient economy and identify new variables that affects the success of military aid. Looking at one case allows to hold the environment constant and focus on the different subtypes of military aid.

## **4.5 Military Aid - Foreign Military Financing**

Using Mowery's framework, this section traces the effects of the FMF military aid subtype in the Jordanian economy. This will later be compared to the effects of the non-FMF military aid to test the initial probe that non-FMF military aid is more likely to lead to innovation than FMF.

FMF represents the largest bulk of aid to Jordan and many other recipient countries (see Figure 5). FMF is credit given to a foreign government for the procurement of defense articles and defense services.<sup>422</sup> Using Mowery's mechanism of procurement, one could expect that the increased ability to spend on military weapon systems domestically via military aid might lead to increased efficiencies and new products and technologies by private firms in order to meet government needs and demand. This mechanism can be observed in Israel, whereby the development of its competitive local arms industry has been subsidized by US FMF. This has been the case since 1984, when Israel was given permission to spend a portion of its US FMF domestically on Israeli manufactured arms.<sup>423</sup> This is known as Off-Shore Procurement (OSP). In a MOU reached in 2007, the U.S. and Israeli governments agreed to a \$30 billion aid package over 10 years (from 2009 – 2018).<sup>424</sup> In this agreement, Israel was allowed to spend up to 26.3% of its FMF on locally manufactured equipment.<sup>425</sup> This amounts to a subsidy of close to \$8 billion over ten years of US funds to be spent in the local Israeli economy. While this might seem like an attractive way for developing countries receiving FMF to spur innovation in the local domestic economy, this channel is only available to Israel. No other country receiving FMF is allowed to spend these funds on domestic procurement.<sup>426</sup>

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<sup>422</sup> Definition of Foreign aid retrieved from the Foreign Aid Explorer: The Official Record of U.S. Foreign Aid. Also in Annex 1.

<sup>423</sup> Clayton Thomas, Arms Sales in the Middle East: Trends and Analytical Perspectives for U.S. Policy, Congressional Research Service, October 11, 2017; <https://fas.org/sgp/crs/mideast/R44984.pdf>

<sup>424</sup> United States-Israel Memorandum of Understanding, Signed by then U.S. Under Secretary of State R. Nicholas Burns and Israeli Ministry of Foreign Affairs Director General Aaron Abramovich, August 16, 2007.

<sup>425</sup> Jeremy M. Sharp, U.S. Foreign Aid to Israel, Congressional Research Service, February 26, 2018

<sup>426</sup> Clayton Thomas, Arms Sales in the Middle East: Trends and Analytical Perspectives for U.S. Policy, Congressional Research Service, October 11, 2017; <https://fas.org/sgp/crs/mideast/R44984.pdf>

Therefore, given the restriction on how FMF can be spent (with the exception of Israel), US military aid does not directly trigger the innovation mechanism ignited by procurement. Jordan, like others, is obligated to spend its military aid funds in the US. As a result, the indigenous arms industry does not directly benefit from this aid. However, in a less direct manner, this FMF might free up local Jordanian government expenditure that can be more readily spent domestically, be it on military personnel, military R&D, or local arms procurement.

Most notably, in the case of Jordan, FMF has allowed Jordan to retain elevated levels of military spending over the past decades. Though FMF cannot be spent in the domestic Jordanian economy to trigger procurement or R&D channels for innovation directly, it indirectly supports the Jordanian defense budget and allows it to remain considerably high compared to its neighbors (Figure 4). For example, in the past decade, Jordan's military expenditure as a percent of GDP hovered around 5% in comparison to 2% for Turkey (Figure 5). Aided by this massive inflow of FMF, the fungibility of these funds has helped Jordan sustain military spending at a relative constant and support its indigenous defense industry post 1994.<sup>427</sup> Since 2001, Jordan has been able to maintain its military expenditure at over 4% of GDP, and hitting over 6% for a couple years.<sup>428</sup> As part of its military spending, Jordan purposefully established the King Abdullah II Design and Development Bureau (KADDB) in 1999 to kick off an indigenous arms sector after signing

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<sup>427</sup> Amara, Jomana. "Military industrialization and economic development: Jordan's defense industry." *Review of Financial Economics* 17, no. 2 (2008): 130-145, p. 142.

<sup>428</sup> Source: SIPRI Arms Industry Database, retrieved March 2017

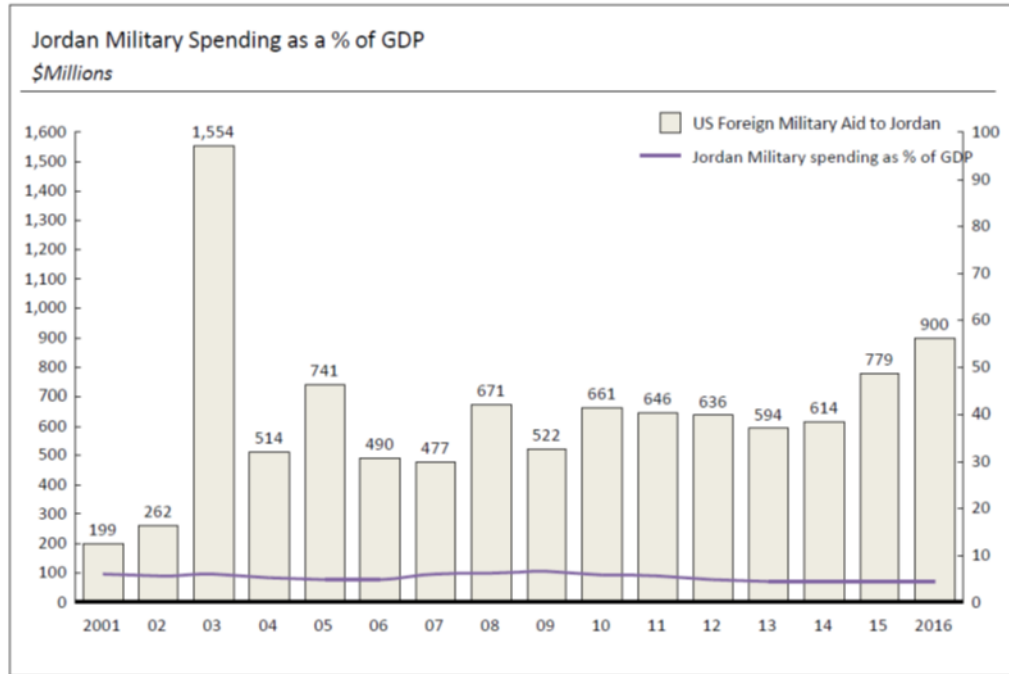
peace with Israel in 1994. This bureau is nested within the Jordan Armed Forces (JAF), but its board of director reports directly to the King of Jordan, through the Chairman of the Joint Chiefs of Staff.<sup>429</sup> Despite being funded from the defense budget, the main goal, however, was economic development. The KADDB intended to trigger the development of a scientific industrial base to help the development of domestic industries and technology. The hope was that this industrial park would create backward and forward linkages into the civilian economy.<sup>430</sup> The KADDB's explicit mission statement is to "provide innovative solutions and exploit advanced technologies to serve National Security" and "to enhance independence and increase competitiveness through the improvement of local production capabilities and human competency."<sup>431</sup>

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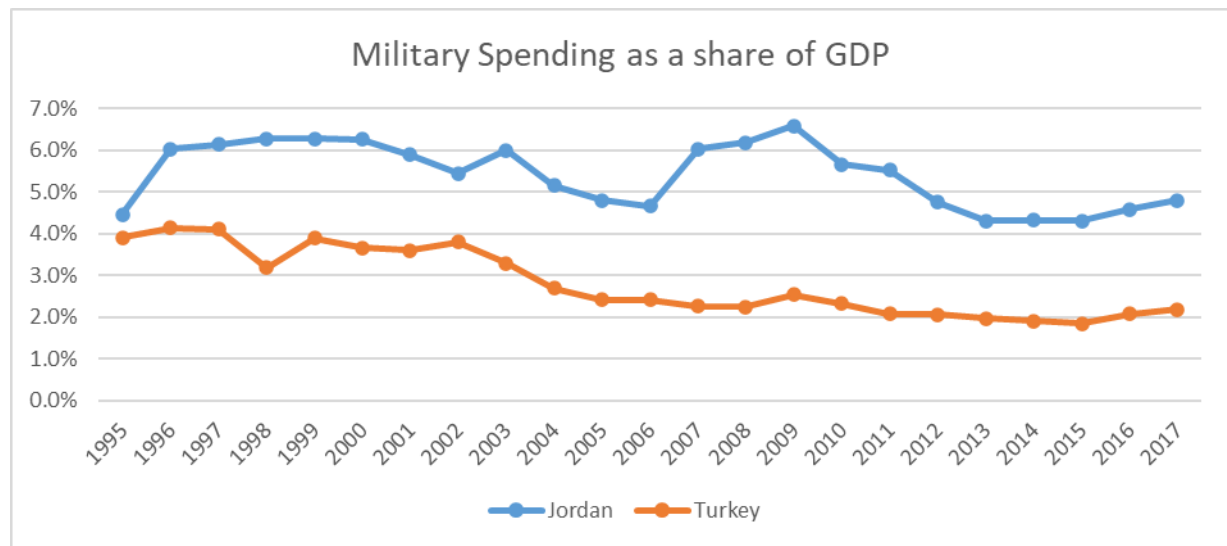
<sup>429</sup> Amara, Jomana. "Military industrialization and economic development: Jordan's defense industry." *Review of Financial Economics* 17, no. 2 (2008): 130-145, p141

<sup>430</sup> Amara, Jomana. "Military industrialization and economic development: Jordan's defense industry." *Review of Financial Economics* 17, no. 2 (2008): 130-145, p. 131

<sup>431</sup> KADDB website, vision and mission statement. <http://www.kaddb.com/en-us/ABOUT-US/VISION-MISSION>



**Figure 17 - Jordan US Military Aid & Military Spending as a Percentage of GDP<sup>432</sup>**



**Figure 18 - Jordan and Turkey Military Spending as a share of GDP<sup>433</sup>**

<sup>432</sup> Figure used combining data from US Foreign Service official data and Sipri military data base

<sup>433</sup> Source: SIPRI Military Expenditure Database 2018, <https://www.sipri.org/databases/milex>

In tandem, the KADDB Investment Group (KIG) was designated as its commercial and investment arm. This group's aim is to help grow business in the defense industries and establish Jordan as a manufacturer and partner of choice in the region. So production is not only meant to serve the JAF, but also for export.<sup>434</sup> However, explicitly stated, the role of the KADDB is to strengthen Jordan's economy, industrial development, and innovation. KIG emphasizes the role of transferring "know-how" to Jordan via its joint ventures with international companies, establishing a competitive industry base, and retaining high level human capital in Jordan. Therefore, the Kingdom has clearly tied military spending to economic development and innovation, at least in theory.

As such, a closer look at this industrial park shows that Jordan, using military spending, has been able to establish new innovative high tech industries and products. For example, the KADDB, has launched a slew of new land system products to serve the JAF as well as for export. For example, the Desert Iris, is a Special Forces vehicle that is light weight and an all-terrain vehicle that can serve as an agile, multi-mission, and light patrol vehicle.<sup>435</sup> It was designed, developed, and manufactured by KADDB in partnership (through a joint venture) with two UK companies Jankel Group and SHP Motorsports.<sup>436</sup> Technologies that were based on the JAF's requirements, gained some traction internationally. This light weight jeep, which serves well for counter-terrorism border and

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<sup>434</sup> KADDB Investment Group, Vision Statement, <http://www.kaddbinvest.com/ABOUTUS>

<sup>435</sup> KADDB military vehicles, <http://www.kaddb.com/en-us/KADDBs-PORTFOLIO/LAND-SYSTEMS>

<sup>436</sup> Jordan eyes expansion of domestic defense industry, National Defense Industrial Association, 2005  
<https://www.thefreelibrary.com/Jordan+eyes+expansion+of+domestic+defense+industry-a0132162761>

internal security has found markets in other countries such as Saudi Arabia and the UAE. It was also used by the United Nations in some peacekeeping missions.<sup>437</sup>

Looking at KADDB's range of new products and industries, this domestic arms industry has been able to achieve increased competency and produce more sophisticated products. This ranges from assembling less sophisticated weapons with a local component production and in some instances has been tacking on R&D improvements to locally produced arms. As such, Jordan has been able to successfully transfer technology from abroad to its local industry, arguably, more successfully than the qualified industrial zones (QIZ). Further, KADDB, makes it a deliberate point to partner with civilian entities as a way to ensure that technology and knowledge is also flowing from the arms industry into the civilian economy.<sup>438</sup>

In its quest for talent, KADDB has partnered with Jordanian Universities and foreign partners to help transfer technical know-how and create competency in emerging technology fields. KADDB established these partnerships with the hope that the JAF's knowledge needs can be met. For example, in 2003, the Prince Faisal Information Technology Center (PFITC) was launched as a collaboration between KADDB and Yarmouk University in Amman Jordan. This center offers technical training for engineers but also master programs in needed fields such as in Computer Engineering – Embedded Systems, wireless communication, and electrical power. Therefore, the KADDB seems to

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<sup>437</sup> Jordan eyes expansion of domestic defense industry, National Defense Industrial Association, 2005 <https://www.thefreelibrary.com/Jordan+eyes+expansion+of+domestic+defense+industry-a0132162761>

<sup>438</sup> Amara, Jomana. "Military industrialization and economic development: Jordan's defense industry." *Review of Financial Economics* 17, no. 2 (2008): 130-145, p143

be investing in skills and human capital to satisfy its own demand for skilled labor and keep its industrial efforts successful.<sup>439</sup>

Though FMF cannot be directly spent in the domestic Jordanian economy to trigger procurement or R&D channels for innovation, it indirectly supports the Jordanian defense budget and allows it to remain considerably high compared to its regional neighbors. Turkey for example, which receives less foreign aid than Jordan, from 2001-2016 military expenditure as a percent of GDP ranged from 2.2 to 3.7%. In comparison, Jordan's expenditure for the same time period ranged from 4.3 to 6.6%. (See Figure 5)<sup>440</sup> Because of this fungibility, more can be spent on increasing local R&D capacity and the procurement of weapons locally (like the Desert Iris discussed above), which is the main goal of the KADDB. However, it is hard to determine how reliant the survival of this executive initiative is on foreign aid. Disaggregated data on Jordan military spending is not available.<sup>441</sup> Similarly, KADDB spending is also obscure. They do not disclose their budget. Thus, it is not clear what is spent on R&D and how much is earned from exports.

Therefore, it is difficult to disentangle whether it is domestically generated funds or foreign aid that is behind this effort to increase local R&D capacity and knowledge intensive sectors.

It is challenging to gauge how much domestically generated funds going into the domestic arms sector and increasing local R&D capacity is reliant on the US's military

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<sup>439</sup> Prince Faisal Information Technology Center, <http://hijawi.yu.edu.jo/en/prince-faisal-information-technology-center>

<sup>440</sup>Sipri, military expenditure as a percentage of GDP for Jordan and Turkey,

<sup>441</sup> Sipri does not disaggregate data on Jordan military spending  
<https://www.sipri.org/databases/milex/frequently-asked-questions#10-do-you-have>

subsidy to Jordan – namely in the form of FMF. In other words, does an increase in FMF result in an increase in domestic spending on local R&D and procurement in Jordan’s domestic arms industry? With the data available, it is reasonable to deduce that that the US FMF package to Jordan, broadly speaking, helps keep its military budget at a significant level, which in turn funds the R&D, innovation, and procurement efforts at KADDB. However, SIPRI does not have disaggregated data on military spending for Jordan.<sup>442</sup> Similarly, the JAD and KADDB itself do not provide disaggregate data of how military spending is allocated or in terms of arms sales, personnel, procurement, or R&D.<sup>443</sup> Therefore, it is not possible to correlate levels of US aid with changes in military spending (domestic procurement and R&D spending) to see how closely connected they are. Nevertheless, irrespective of the direct source of funds, it is clear that the absence of FMF would significantly undermine the military’s capacity to spend and invest in what it prioritizes, including the KADDB and other knowledge-intensive innovative efforts. This is evident in the aggressive efforts Jordan engages in to sustain these levels of aid.<sup>444</sup> Short of this aid, Jordan would have to levy heavier taxes or divest from other government programs, which could upset local citizens. Therefore, because of its fungibility, FMF has been able to contribute to Jordanian’s efforts to invest in R&D and spur new knowledge intensive economic sectors.

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<sup>443</sup> Amara, Jomana. "Military industrialization and economic development: Jordan's defense industry." *Review of Financial Economics* 17, no. 2 (2008)

<sup>444</sup> <https://jo.usembassy.gov/new-u-s-jordan-memorandum-understanding-bilateral-foreign-assistance-jordan-2/>, <https://www.washingtoninstitute.org/policy-analysis/view/the-jordan-exception-in-u.s.-foreign-assistance>

Finally, by tracing the effects of FMF military aid, I find that counter to expectations FMF military aid seems to have supported innovation in the Jordanian economy. Going against the creative insecurity prediction, Jordan develops a new local arms industry despite a reduced external threat environment after the peace agreement with Israel. Further, because of the fungibility of FMF funds, Jordan is able to leverage this subsidy of its military spending towards targeted innovation goals under the KADBB umbrella and mission.

#### *4.5.1 The Evolution of Military Aid in Jordan*

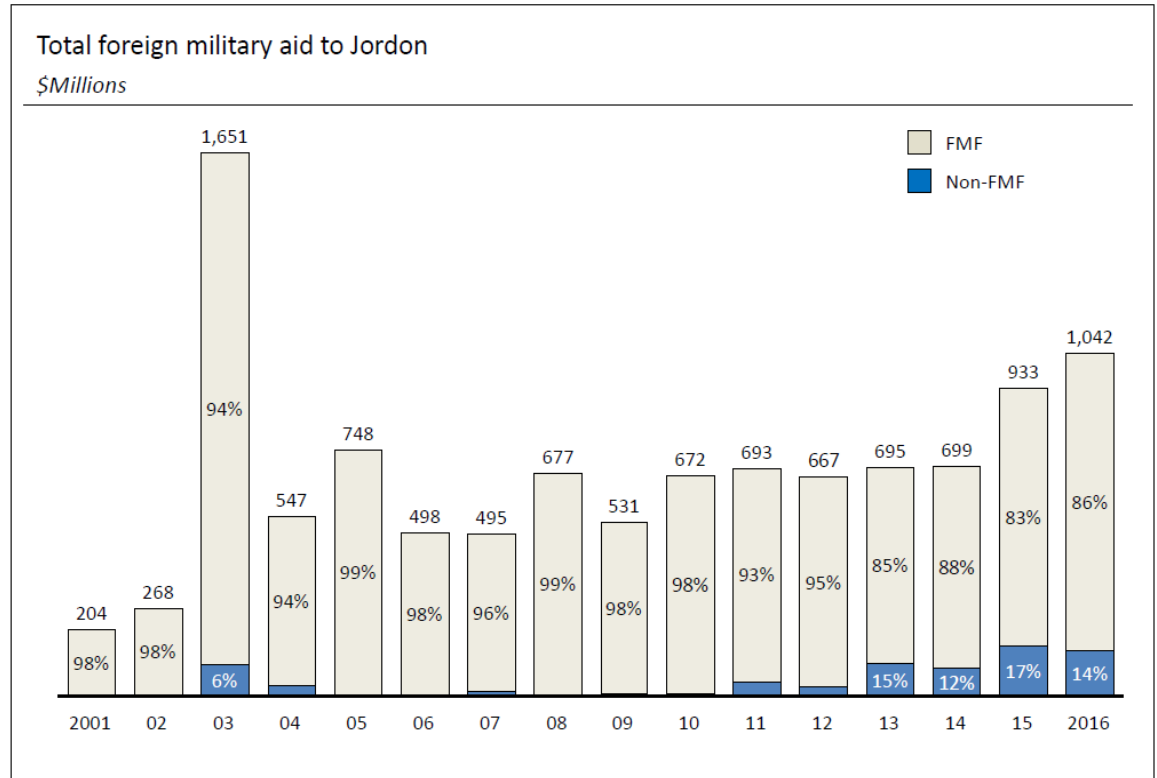
Foreign military aid is increasingly being criticized for its negative secondhand effects (such as undermining human rights as discussed in the literature review) and low effectiveness even in fulfilling its primary purpose, which is stabilizing fragile states.<sup>445</sup> Strong and authoritative voices within the military are having to defend the continued disbursement of military aid in the form of FMF and Foreign Military Sales (FMS) in the face of these accusations. Of note, in a briefing to the Senate Arms Services committee, CENTCOM Commander General Joseph L. Votel acknowledged this criticism and warned against doing away with military aid because of human rights abuses and political oppression:

“In recent years we have seen an increase in restrictions placed on assistance provided to partner nations, limiting their ability to acquire U.S. equipment based on human rights and/or political oppression of minority groups. While these are significant challenges that must be addressed, the use of FMF and FMS as a mechanism to achieve changes in behavior has questionable effectiveness and can have unintended consequences. We need to carefully balance these concerns against our desired outcomes for U.S. security assistance programs – both DoD and State-funded – to build and shape partner nations’ capability, interoperability, and self-reliance in

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<sup>445</sup> Karlin, Mara. "Why Military Assistance Programs Disappoint: Minor Tools Can't Solve Major Problems." *Foreign Aff.* 96 (2017): 111. Washington Institute discussion on aid efficiency.

support of broader U.S. foreign policy. We should avoid using the programs as a lever of influence or denial to our own detriment.”<sup>446</sup>



**Figure 19 - Foreign Military Aid to Jordan: FMF & Non-FMF<sup>447</sup>**

This quote highlights the dedication to pursuing military aid despite potentially negative unintended consequences in other realms and the public debate surrounding military aid. For example, in the cases of Egypt and Bahrain FMF and FMS were temporarily suspended and or linked to improvement in human rights and progress towards

<sup>446</sup> Statement of General Joseph L. Votel, Commander, U.S. Central Command, Before the Senate Armed Services Committee, March 9, 2017, at [https://www.armed-services.senate.gov/imo/media/doc/Votel\\_03-09-17.pdf](https://www.armed-services.senate.gov/imo/media/doc/Votel_03-09-17.pdf)

<sup>447</sup> Data used from Foreign Aid Explorer: The official record of U.S. foreign aid, U.S. Agency for International Development (USAID)

democracy.<sup>448</sup> In Egypt, after several months of Sisi's rise to power in October 2013, the Obama administration suspended delivery of F-16s and M1A1 tanks to Egypt for over a year, until they showed signs of progress towards democracy.<sup>449</sup>

Accompanying this skepticism from the public surrounding FMF and FMS, there is a proliferation of other types of aid that are more focused on transferring skill and training to increase allied nations' capacity to respond to specific threats. The table below (Table 2) shows the proliferation of different types of non-FMF funding to Jordan. Before 2011, non-FMF aid which focuses on training amounted to less than 10% of foreign aid to Jordan. However, after the civil war in Syria and the 2013 chemical attacks, different types of aid dealing with chemical and biological threats have proliferated. Table 2 illustrates the propagation of different types of aid after and during the Syrian crisis. In 2001, there were only two types of aid: FMF and IMET. However in 2015, Jordan was receiving military aid under nine different categories, including the CTR bio engagement program. Arguably, these programs are more targeted and focused on increasing an ally's military capacity in specific prioritized fields in direct response to US national security goals. One of these programs is the Cooperative Threat Reduction Program focused on bio engagement.

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<sup>448</sup> Clayton Thomas, *Arms Sales in the Middle East: Trends and Analytical Perspectives for U.S. Policy*, The Congressional Research Service, October 11, 2017, p.25; <https://fas.org/sgp/crs/mideast/R44984.pdf>

<sup>449</sup> Clayton Thomas, *Arms Sales in the Middle East: Trends and Analytical Perspectives for U.S. Policy*, The Congressional Research Service, October 11, 2017, p.25; <https://fas.org/sgp/crs/mideast/R44984.pdf>

Types of Aid	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
DOD - Foreign Military Financing (FMF) Prog	\$ 199.4	\$ 262.2	\$ 1,553.8	\$ 514.1	\$ 740.8	\$ 490.1	\$ 477.1	\$ 670.8	\$ 522.3	\$ 660.9	\$ 646.4	\$ 636.1	\$ 593.9	\$ 614.3	\$ 779.2	\$ 900.0
DOD - International Military Education & Trz	\$ 4.5	\$ 5.3	\$ 6.2	\$ 8.1	\$ 7.2	\$ 7.1	\$ 6.7	\$ 6.6	\$ 6.9	\$ 8.3	\$ 8.1	\$ 7.7	\$ 7.5	\$ 7.3	\$ 7.7	\$ 7.5
DOD Excess Defense Articles, EDA Grant (S16)	\$ 0.2	\$ 90.5	\$ 24.9													
DOD Excess Defense Articles, Grant Authority						\$ 0.8	\$ 11.0		\$ 1.9	\$ 2.3	\$ 34.9	\$ 20.0	\$ 5.5	\$ 13.4		
In-Country Counternarcotics Program								\$ 0.0								
Combating Terrorism Fellowship Program (CTFP)											\$ 3.2	\$ 3.1	\$ 1.7	\$ 1.4	\$ 1.0	\$ 2.0
Cooperative Threat Reduction Program: Proliferation Prevention [non-ODA]													\$ 86.3	\$ 12.9	\$ 15.2	
Cooperative Threat Reduction Program: Cooperative Biological Engagement/Proliferation Prevention [non-ODA]														\$ 39.9		
Global Train & Equip Program - Unspecified Activities														\$ 22.9		
U.S. Army Corps of Engineers: PM-F, JO-B-HBW, DB Arab Village, Peace Operations Training Center, Zarqa														\$ (0.0)		
Cooperative Threat Reduction Program: Cooperative Biological Engagement [non-ODA]															\$ 2.3	\$ 5.9
Global Train & Equip Program - Border Security (FY15 CTFP)															\$ 62.2	
Global Train & Equip Program - Fixed Wing ISR (2282 YE Redirection)															\$ 18.8	
Global Train & Equip Program - Operational Engagement Program															\$ 19.6	
Global Train & Equip Program - Quick Response Force (FY15 CTFP)															\$ 29.6	
CBRN Preparedness Program (CP2)																\$ 5.6
Cooperative Threat Reduction Program: Global Nuclear Security [non-ODA]																\$ 2.2
Global Train & Equip Program - Operational Equipment for Countering Violent Extremist																\$ 103.3
Service Academy Foreign Student Program - U.S. Military Academy																\$ 0.2
Service Academy Foreign Student Program - U.S. Naval Academy																\$ 0.2

**Figure 20 - Foreign aid to Jordan, by Category, in millions<sup>450</sup>**

#### **4.6 Non-FMF Military Aid - Cooperative Threat Reduction Program, Bio Engagement**

This section traces the effects of the non-FMF military aid subtype (particularly the CTR Bio Engagement Program) in the Jordanian economy to test the initial probe that non-FMF military aid is more likely to lead to innovation than is FMF military aid.

The original Cooperative Threat Reduction (CTR) Program was known as the “Nunn-Lugar Amendment” to the Arms Export Control Act. It was established in 1991 with the intent of dealing with the Soviet nuclear, chemical, and biological weapons threat.<sup>451</sup> However in the past two decades, this program has expanded to other geographies where the DOD seeks to curtail the spread of and control the use of nuclear, chemical, biological, and other weapons. The program has moved from an emergency response to the

<sup>450</sup> Data used from Foreign Aid Explorer: The official record of U.S. foreign aid, U.S. Agency for International Development (USAID)

<sup>451</sup> Security Assistance and Cooperation: Shared Responsibility of the Departments of State and Defense, <https://fas.org/sgp/crs/natsec/R44444.pdf>

collapse of the Soviet Union to a more preventative effort whereby the main focus is to keep CBRN weapons away from terrorist groups and rogue nations.<sup>452</sup> DOD classifies its CTR programs in several categories including strategic offensive arms elimination, chemical weapons destruction, global nuclear security, cooperative biological engagement, and proliferation prevention.<sup>453</sup>

In 2014, via the Defense Authorization Act of 2014, CTR efforts were expanded to countries in the Middle East and North Africa.<sup>454</sup> This is was in response to international efforts of disposing of chemical weapons in Syria and regime change in Libya and Iraq. The Cooperative Biological Engagement (CBE) program, which began as efforts to dismantle Soviet biological weapons, has transitioned to a program focused on pushing “best practices” in promoting security and safety in biological laboratories with pathogens and establishing bio-surveillance to help detect and prevent Weapons of Mass Destruction (WMD) terrorism. The main goal fits in the larger post 9/11 approach to counter the threat of state and non-state actors obtaining biological materials that could lead to a biological weapon.<sup>455</sup>

Countering bio threats is a priority for the US. Preventing non-state actors, particularly terrorist organizations, from acquiring tools and expertise to launch a bio attack

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<sup>452</sup> Mary Beth D. Nikitin and Amy F. Woolf, The Evolution of Cooperative Threat Reduction: Issues for Congress, June 2014 <https://fas.org/sgp/crs/nuke/R43143.pdf>

<sup>453</sup> Mary Beth D. Nikitin and Amy F. Woolf, The Evolution of Cooperative Threat Reduction: Issues for Congress, June 2014, p.10 <https://fas.org/sgp/crs/nuke/R43143.pdf>

<sup>454</sup> NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2014, PUBLIC LAW 113–66—DEC. 26, 2013; <https://www.congress.gov/113/plaws/publ66/PLAW-113publ66.pdf>

<sup>455</sup> Mary Beth D. Nikitin and Amy F. Woolf, The Evolution of Cooperative Threat Reduction: Issues for Congress, June 2014, p.37 <https://fas.org/sgp/crs/nuke/R43143.pdf>

is key.<sup>456</sup> Therefore, the US has focused on the proliferation of science technology and know-how in scientific communities around the world to better counter this threat via its CTR Bioengagement program. This threat is particularly acute when it comes to border security. Because of the use of chemical weapons in Syria in 2013 and the movement of people across the borders into neighboring countries such as Lebanon and Jordan, military aid to Jordan has soared and in addition to FMF now focuses on several activities connected with bioengagement, proliferation prevention, CBRN Preparedness Program (CP2), etc. Though the efficacy of these programs is hard to measure, they are fulfilling a US security concern in highly vulnerable areas – Syria’s neighboring countries. Syria is a failing state with an ongoing civil war since 2011. It is harboring transnational terrorist groups such as ISIS. Therefore, a bio threat emanating from within Syria to neighboring countries is particularly acute. Despite the challenges in evaluating the bioengagement program, having existing relationships with national labs, universities, the Ministry of Health, and the science and technology community in countries surrounding Syria is crucial for an effective response. Helping to reduce this threat are other programs such as the CBRN Preparedness Program and the proliferation prevention and border security programs. Therefore from the US perspective, continuing such programs which aim to build local capacity (potentially at the expense of FMF) is key to help counter the elusive and difficult-to-predict bio threat emanating from Syria. Since the use of chemical weapons in Syria in 2013, military aid in Jordan focused on training and increasing local capabilities via targeted programs has tripled – increasing from 5% of total military aid in 2012 to 17% of

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<sup>456</sup> Berger, Kavita M., Future opportunities for bioengagement in the MENA region, Calhoun: The NPS Institutional Archive, 2013; p.8;  
<https://calhoun.nps.edu/bitstream/handle/10945/37105/AAAS%20Future%20MENA%20Bioengagement%20102513%20with%20GP%20table.pdf?sequence=1&isAllowed=y>

total military aid in 2015. This highlights US commitment to these types of programs to counter potential CBRN threats in Jordan.

Thus, the chemical weapon use in Syria by ISIS and the Syrian regime has brought to the fore the importance of containing CBRN threats, particularly in neighboring countries such as Jordan and Lebanon.<sup>457</sup> In addition to chemical weapons use in Syria, bioterrorism and Syrian refugees crossing the borders into Jordan carrying unknown infections are all concerns addressed by the CBE program.<sup>458</sup>

In Jordan, the CBE program focuses on promoting biosafety and biosecurity (BS&S) and bio surveillance (BSV) to confront biological threats – mitigating the potential of outbreaks of pathogens of major security concerns where there are weak capabilities in BS&S and BSV. The major concern is that increasingly non-state actors have increased asymmetric threats to the US and its allies when it comes to biological threats, because of movement of people and the diffusion of biological expertise.<sup>459</sup> The CBE programs work with partner countries to further research and increase local capacity for improved early detection and rapidly reporting outbreaks of disease. Additionally, bio engagement programs focus on engaging with the scientists and scientific community for upgrading

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<sup>457</sup> STATEMENT OF MR. PETER VERGA PERFORMING THE DUTIES OF ASSISTANT SECRETARY OF DEFENSE FOR HOMELAND DEFENSE AND GLOBAL SECURITY BEFORE THE HOUSE ARMED SERVICES COMMITTEE EMERGING THREATS AND CAPABILITIES SUBCOMMITTEE MARCH 23, 2017; <http://docs.house.gov/meetings/AS/AS26/20170323/105748/HHRG-115-AS26-Wstate-VergaP-20170323.pdf>

<sup>458</sup> Berger, Kavita M., Future opportunities for bioengagement in the MENA region, Calhoun: The NPS Institutional Archive, 2013; p.5; <https://calhoun.nps.edu/bitstream/handle/10945/37105/AAAS%20Future%20MENA%20Bioengagement%20102513%20with%20GP%20table.pdf?sequence=1&isAllowed=y>

<sup>459</sup> Cooperative Biological Engagement Program, Fiscal Year 2015, Annual Accomplishments, DTRA, <http://www.dtra.mil/Portals/61/Documents/Missions/CBEP%20FY15%20Annual%20Accomplishments.pdf?ver=2016-09-16-150152-690>

response mechanisms to a potential threat. The program helped international efforts to counter Ebola, for example.<sup>460</sup> In Jordan, these efforts focused on increasing the capacity of the Jordan University of Science and Technology's (JUST) in detecting and reporting pathogens. They have a Biorisk Management and Genomics Training Divisions at the Princess Haya Biotechnology Center. Further, this CTR bio engagement intervention works with laboratory staff to help assure that they can safely perform lab practices and detect certain diseases.<sup>461</sup> Additionally, work in Jordan included bringing together different agencies whose work overlaps when it comes to countering bio threats: the Jordan Armed Forces, Ministry of Interior, and Ministry of Health. This effort aimed at improving interagency communication. Training material focused on emergency operations and crisis communication.<sup>462</sup>

Already, there is concern about measuring the success of such a program. The CBE is dealing with biological threats which are by nature unpredictable. So measuring prevention on such an elusive target is difficult and developing metrics for partner's capabilities and the personal and institutional relationships established are challenging.<sup>463</sup> However, the point of this exercise is not to measure how effective the CBE program is in countering bio threats but rather whether it is helping trigger a mechanism for innovation.

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<sup>460</sup> Berger, Kavita M., Future opportunities for bioengagement in the MENA region, Calhoun: The NPS Institutional Archive, 2013 P.8  
<https://calhoun.nps.edu/bitstream/handle/10945/37105/AAAS%20Future%20MENA%20Bioengagement%20102513%20with%20GP%20table.pdf?sequence=1&isAllowed=y>

<sup>461</sup> Cooperative Biological Engagement Program, Fiscal Year 2015, Annual Accomplishments, DTRA,  
<http://www.dtra.mil/Portals/61/Documents/Missions/CBEP%20FY15%20Annual%20Accomplishments.pdf?ver=2016-09-16-150152-690> p.20.

<sup>462</sup> Cooperative Biological Engagement Program, Fiscal Year 2015, Annual Accomplishments, DTRA,  
<http://www.dtra.mil/Portals/61/Documents/Missions/CBEP%20FY15%20Annual%20Accomplishments.pdf?ver=2016-09-16-150152-690> p.24.

<sup>463</sup> Mary Beth D. Nikitin and Amy F. Woolf, The Evolution of Cooperative Threat Reduction: Issues for Congress, June 2014, p. 15 <https://fas.org/sgp/crs/nuke/R43143.pdf>

Using Mowery's framework, this type of technical engagement, which focuses on transferring knowhow and creating capacity in the local scientific community, could in theory have ripple effects of triggering innovation via increased capacity in the local economy.

While the CBE program focuses on increasing domestic scientific and research capacity it did not engage with the already successful local pharmaceutical industry.<sup>464</sup> All activities and trainings focused on government agencies, the military, and universities. Excluding the private sector from such an activity severs the potential bridge towards innovation and cooperation with the private sector. Building on the literature of regional innovation systems, the role of networks is extremely important in helping transfer ideas, technical knowledge, as well as tacit knowledge.<sup>465</sup> While the CBE effort might help create a pocket of excellence within the public sector to respond to a biohazard, there are limited channels for creating new industries, new products, or increasing efficiencies with the private sector. The CBE program sidelined the private pharmaceutical industry, which has advanced labs certified by the US. There seems to be a missing link to the private sector, whereby both could benefit from such a program and increase shared knowledge when it comes to lab safety and security. This type of missed connection could have helped the CBE programs' work reverberate further in the domestic economy.

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<sup>464</sup> Al-Wazaify, Mayyada, and Abba Albsoul-Younes. "Pharmacy in Jordan." *American Journal of Health-System Pharmacy* 62, no. 23 (2005): 2548–2551

<sup>465</sup> Simmie, James (2005) *Innovation and Space: a critical review of the literature*. *Regional studies* 39, 789–804; Gertler, Meric (2003) *Tacit Knowledge and the Economic Geography of Context, or the Undefinable Tacitness of Being (There)*. *The Journal of Economic Geography*. 3 pp. 75–99

However, it seems that this skill transfer is not resonating as far as it could, because Jordan might not be prioritizing its pharmaceutical sector in its S&T and Industrial policy. In stark contrast, the KADBB's mission was to increase science technology and engineering capabilities to spur a competitive domestic arms industry. In that policy space, there is a deliberate goal to partner with outside organizations via joint ventures to transfer technology and know-how to Jordan and then partner with the private sector to help trigger new products and industries. As a result of this, Jordan successfully started a domestic arms industry and new products. In the cases of FMF, we see US military aid freeing up local resources that are invested in Jordan's industrial policy priorities. Though, in the case of the CTR Bio Engagement Program, the US is supplying this skill where there might not necessarily be a strong demand on the Jordanian side— or at least a demand that fits or resonates with their domestic industrial policy. Prior to CBE initiation in 2015, the pharmaceutical industry already suffered from a disconnect with local universities and public policy. Therefore, because of the mismatch of priorities between US security objectives and Jordan's S&T and industrial policy we see that the provision of training and engagement with the scientific community seems to have been a lost opportunity for potential partnerships and innovation via the private sector.

Countering the initial probe, tracing the effects of the non-FMF CBE military aid program in Jordan, which focuses on training, technical skill transfer, and building local capacity for bio terrorist threats, reveals that there is a major hurdle to triggering innovation – unlike the FMF scenario. In this case, the US sponsored military aid program did not enhance a local Jordanian economic priority or industrial policy. The intervention created a pocket of excellence within the government and public sector. Explicit links to potential

industries (pharmaceutical) or the private sector were not pursued and these actors were excluded from the trainings and the meetings. Therefore, it seems that the Jordanian government's commitment to an industrial strategy and leveraging financial resources and/or technical knowhow like in the KADBB case is a necessary condition to see innovation flourish, which is lacking in the CBE case. Therefore, tracing these two types of aid in one country shows that the local government's industrial and S&T policy is an important factor that can help military aid catalyze innovation in the local economies.

#### **4.7 Conclusion**

Observing the second hand effects of military aid in the case of Jordan helps demonstrate that military aid can help trigger innovation in the recipient economy. Based on predictions of creative insecurity theory, it would appear that Jordan, amongst the universe of cases, is a least-likely case for innovation because of its peace treaty with Israel. However, I find that after a reduction of its external security threat and influx of military aid a new innovative high-tech domestic arms industry emerges. Therefore, countries with ongoing external security threats should be better positioned to see innovation triggered by military aid in their economy. Further, to better understand the mechanisms at play I trace the effects of two different types of aid – FMF which is characterized by financial and low-skill transfer and non-FMF which is characterized by high-skill transfer and focuses on training and increasing technical knowhow of foreign militaries. By following these two types of military aid through the Jordanian economy, I find that against initial expectations, military aid focused on high-skill transfer does not necessarily lead to innovation whereas military aid focused on low-skill and financial transfer did, because of certain underlying conditioning factors.

The Jordanian case demonstrates that military aid alone in recipient countries does not necessarily trigger innovation. We see important intervening variables that help or impede the translation of foreign military aid into innovation. Even though FMF is categorized as a low skill transfer, given its subsidizing effect, it is triggering innovation in the domestic economy as measured by new knowledge intensive industries and products. An illustrative example is the Desert Iris – a new Jordanian product – being exported to other countries with comparable terrain and similar border patrolling concerns. On the other hand, foreign military aid focused on skill transfer of technical know-how seems to have created isolated pockets of efficiency within the government. Though, there seems to be potential for broader synergies for example between the CBE program and the vibrant Jordanian pharmaceutical industry, the aid and training intervention is not capitalizing on this potential. The private sector is largely absent from the CBE trainings and discussions. Even though the CBE has partnered with local universities to create know-how, the next step of engaging the private sector is missing. In stark contrast to this, the KADBB projects – indirectly subsidized by FMF – deliberately seek to engage companies from the private sector to trigger and sustain innovation in the domestic economy.

The major disconnect seems to emanate from a mismatch between US security concerns and the recipient country's priorities in terms of S&T policy and strategic priorities for economic development. Therefore, local S&T policy and strategic priorities for economic development emerge as important interactive variables that affect how Mowery's mechanisms of spinoff, procurement, and R&D play out in the recipient developing economies. When the recipient country has the liberty of investing its own domestic resources it will chose to invest those where its priorities are. For example, King

Abdullah of Jordan was dedicated to creating a domestic arms industry via the KADDB initiative. This body, which is embedded in the military, invests in local R&D capacity and partners with local universities to generate the supply of skill necessary to produce high-tech locally-manufactured weapon systems that can meet the JAF demands, but that can also be competitive enough for export. However, in contrast to the initial hypothesis, aid focused on skill transfer – as shown via the CBE program – does not seem to necessarily result in innovation in the domestic economy. The main reason is that creating a local defense industry was an executive priority. There was commitment and local buy in for that project.

In contrast, the CBE program reflects a strategic priority for the US. Jordan seems to recognize this need, but this US objective does not necessarily amplify a domestic industrial priority for Jordan. Because Jordan has a successful pharmaceutical industry which exports to the region and the US, there is the potential for cooperation and added synergies there. However, the private sector was not privy to the training or training materials offered by the CBE program. Their laboratories, which are competitive, some of which are even certified by the US, were not engaged in this endeavor. Perhaps this represents the lack of public support the pharmaceutical industry receives in comparison to the defense industry.

Finally, as military aid will continue to be dispatched in large sums to achieve stability and security in fragile environments, policymakers can seek to magnify the secondhand innovation effects of military aid by being cognizant of the domestic S&T and industrial policies of recipient nations and factoring them into the decision making and design processes of military aid disbursement. Future research should consider the role of

domestic S&T and industrial policy when it comes to understanding how military aid can trigger innovation, or whether there will be missed opportunities because of a disconnect between US national strategic objectives and local priorities.

## **CHAPTER 5. FINDINGS, EXTENSIONS, AND POLICY RECOMMENDATIONS**

This dissertation aims to better understand the relationship between the private sector and peace, filling an academic gap and addressing a policy need. The main findings from the project, policy recommendations, and avenues for future research are highlighted below.

### **5.1 Can the Private Sector Help Sustain Peace in Conflict-Affected Societies?**

There is a *strong* deep-seated conventional wisdom in the international policy community that a robust private sector is essential to sustain peace in societies affected by conflict. Nevertheless, this conventional wisdom has never been theorized and tested in academic work. Chapter 2 systematically builds the causal mechanism that ties private sector development with civil conflict and tests the prevailing conviction that a strong private sector leads to more peaceful societies using a large-N approach. Building on the civil conflict literature, this study introduces new independent variables capturing the strength of the private sector, bridging a significant gap between the academic and policy worlds.

Further, the term strong private sector is loosely used in the practitioner community to refer to a bundle of activities in developing economies. Reflecting competing strands in PSD policy interventions, this study uses two proxies for private sector strength: one measuring improvements in the legal business environment and the other measuring the amount of financial resources given to the private sector. Statistical results for all countries

and for the subset of countries affected by conflict indicate that credit to the private sector in all cases decreases the probability of civil war. Interestingly, changes in the legal and operational environment related to business are statistically insignificant across the board. Overall, these findings lend credence to the argument that a strong private sector is important to sustain peace, but it depends on how private sector strength is defined. Increasing the private sector's access to credit decreases the probability of civil conflict, because of more immediate and tangible peace dividends such as in increased employment opportunity, spending capacity, stocked shelves thanks to lines of credit, etc. More credit to the private sector leads to increased spending capacity for businesses and private individuals. This translates into economic opportunities and people's commitment to future growth, which diminishes one's propensity to engage in rebellion. Conversely, changes in the business legal operational environment – while may increase business efficiency long term – does not seem to pacify discontent. The way businesses navigate red tape and operational constraints are difficult to change overnight because these are learned and sticky behaviors. Legal changes on paper might not have an immediate behavioral impact, especially in areas where legal enforcement and accountability are lacking.

This research also has important implications for future research concerning civil war. In addition to adding these novel independent variables related to private sector strength, future research can help flesh out, measure, and test the intermediate steps linking private sector strength and civil conflict. Importantly, this work does not capture economic activity in the informal sector, which is significantly large in conflict-affected states. The measures used for private sector strength capture the formal market exclusively. The informal sector is important as it is also a major source of economic opportunity in

developing countries. Therefore, focusing on these measures has perhaps underplayed the role of the private sector, as informal activity is not captured. Lastly, given the binary nature of the dependent variable, it is possible that more subtle trends are being missed in the statistical analysis. As such, corroborating these results with a continuous measure of civil conflict and/or civil conflict intensity might reveal a more nuanced relationship.

As a further test of the hypothesis, future research can address the same question and variables within one county and draw comparisons across regions. This project looked at national-level data and compared variance across countries. A deep dive into one country would help better understand how discrepancies in credit to the private sector might trigger local violence. For these purposes, one could look at where the credit is going within a certain country and whether that coincides with the expected pattern of violence.

Finally, the findings of this study have practical implications for the policy community looking to strengthen peacebuilding interventions with private sector reform. While many predictors of civil conflict are immutable factors such as population size or geography, credit to the private sector is a variable that can be relatively easily manipulated with policy tools, targeted interventions, and investment. For example, IFC programs focused on increasing access to credit for SMSEs or to strengthen the local financial and banking sectors to more effectively disperse loans to local businesses can help sustain peace in fragile societies. These types of interventions are more likely to pacify civil conflict in comparison with efforts aimed to strengthen the legal environment. Thus, with limited funds, strengthening private sector access to credit perhaps should be prioritized in a society affected by conflict. Accordingly, these findings can help prioritize and sequence

private sector development interventions in developing countries experiencing or emerging from conflict.

## **5.2 Some Economic Sectors Are Better than others at Sustaining Peace**

To help determine whether some economic sectors are better than others at sustaining peace, I deductively build a theoretical framework to determine an economic sector's propensity for peace. To do this, I rely on previous work that examines the effect of civil conflict on factors of production (labor, capital, and technology). Based on those findings, industries that rely on educated labor, mobile capital, and high-tech equipment are more vulnerable to civil war (via brain drain, capital flight, etc). Thus, businesses operating in this sphere are predicted to be more vested in peace. And, as a result, are expected to lobby government for violence prevention and sustained peace and stability. Conversely, industries that rely on unskilled labor, fixed capital, and low-tech equipment are more resilient to civil conflict. Hence, businesses operating in this sphere are deemed relatively peace neutral. They have less of an incentive to lobby government for peaceful solution, as they will more likely successfully navigate a civil war. In addition to building the theoretical framework, my research seeks to test the emerging hypotheses as they relate to the two extremes. There are, however, shades of businesses that operate in between these two poles – for example industries that rely on skilled-labor but are low-tech (i.e tertiary education in developing countries, rural healthcare) or industries that rely on unskilled labor and high tech equipment (i.e. off-shore oil and gas extraction, mechanized agriculture, etc) . Future research could examine what effects these intermediate business sectors might have on civil conflict.

To test for differentiated effects, I conduct a focused and structured within case analysis in Lebanon examining two sectors: one vested in peace and the other peace-neutral (financial vs. quarrying sector). Analysis of fieldwork data, collected through semi-structured interviews and local news reports reveals that firms vested in peace support national policies to that effect, whereas peace-neutral business can engage in inflammatory tactics, which have occasionally led to violent conflict. While both economic sectors that were examined have politically well-connected businesses, when it comes to peace, their behavior diverges and has strikingly different civil conflict effects at the subnational level. The banking sector, which is theorized to be vested in peace, voluntarily engages in peace-promoting activities and openly supports notions of peace and national unity across different religious sects and regions. In direct contrast to this, the quarrying sector has shown to threaten national peace. Business interests operating within the latter sphere tend to use divisive language and sectarian-based accusatory language to defend their business interest, which have occasionally flared up into violent clashes between opposing political clans. As such, not all economic sectors are equal in terms of helping sustain in peace in post conflict societies. This is not to say that business behavior is the sole determinant of whether peace persists, but rather they are a non-negligible part of a bigger picture and are economically-motivated actors with access to political tools and clout that should not be ignored if one is to better understanding the dynamics for peace at the subnational level.

Consequently, in planning peacebuilding interventions governments and international organizations should be cognizant of the potentially negative unintended effects of peace-neutral business clusters. Because their bottom line is not as affected by civil conflict or its prospect, they might use harming tactics to advance their business

interests. Further, for those sectors vested in peace, governments and international development practitioners might seek to devise interventions that encouraging better organization of business associations. This can help amplify their pro-peace lobbying efforts and engagements with the public. Therefore, future research should seek to expand the factors of production framework constructed in this paper to categorize and examine other sectors such as agriculture and manufacturing. A better understanding of how different economic sector subtypes affect peace will help build more robust and resistant post-conflict societies.

Though Lebanon was a good place to test the proposed hypothesis because of its laissez-faire and relatively thriving private sector compared to other countries in the region, next steps should seek to test the external validity of these findings. A natural expansion of this project would be to test this framework in other post conflict small open economies – with concurrent economic sectors – such as Iraq, Afghanistan, and/or Bosnia-Herzegovina. How are private business interests in different economic sectors contributing to peace or conflict there? Findings from these inquiries can help inform industrial policy and which economic sectors to bolster post-conflict. Further, countries can invest in preventative conflict-mitigating programs for economic sectors that might engage in riskier tactics to protect their material interest.

### **5.3 Military aid can be leveraged to trigger innovation in the recipient economy**

In developed countries, military expenditure is associated with positive externalities – especially innovation. Could such virtuous effects be replicated in developing countries? Borrowing from observed mechanisms in western societies, could

military aid be leveraged to trigger similar high-tech innovative sectors in the recipient economy?

Tracing the secondhand effects of military aid in the case of Jordan helps demonstrate that military aid can help trigger innovation in the recipient economy. Based on predictions of creative insecurity theory, it would appear that Jordan, amongst the universe of cases, is a least-likely case for innovation because of its peace treaty with Israel. However, I find that after a reduction of its external security threat and influx of military aid, a new innovative high-tech domestic industry emerges. Therefore, countries with persisting external security threats should be better positioned to see innovation triggered by military aid in their economy. Further, to better understand the mechanisms at play, I trace the effects of two different types of aid – FMF which is characterized by financial and low-skill transfer and non-FMF which is characterized by high-skill transfer and focuses on training and increasing technical knowhow of foreign militaries. By following these two types of military aid through the Jordanian economy, I find that against initial expectations, military aid focused on high-skill transfer does not necessarily lead to innovation, whereas military aid focused on low-skill and financial transfer did, because of certain underlying conditioning factors.

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other countries with comparable terrain and similar border patrolling concerns. On the other hand, foreign military aid focused on skill transfer of technical know-how seems to have created isolated pockets of efficiency within the Jordanian government. Though, there seems to be potential for boarder synergies for example between the CBE program and the vibrant Jordanian pharmaceutical industry, the military aid and training intervention is not capitalizing on this potential. The private sector is largely absent from the CBE trainings and discussions. Even though the CBE has partnered with local universities to create know-how, the next step of engaging the private sector is missing. In stark contrast to this, the KADBB projects – indirectly subsidized by FMF – deliberately seek to engage companies from the private sector to trigger and sustain innovation in the domestic economy.

The major disconnect seems to emanate from a mismatch between US security concerns and the recipient country's priorities in terms of S&T policy and strategic priorities for economic development. Therefore, local S&T policy and strategic priorities for economic development emerge as important interactive variables that affect how Mowery's mechanisms of spinoff, procurement, and R&D play out in the recipient developing economies. When the recipient country has the liberty of investing its own domestic resources it will chose to invest those where its priorities are. For example, King Abdullah of Jordan was dedicated to creating a domestic arms industry via the KADDB initiative. This body, which is embedded in the military, invests in local R&D capacity and partners with local universities to generate the supply of skill necessary to produce high-tech locally-manufactured weapon systems that can meet the Jordanian armed forces demands, but that can also be competitive enough for export. However, in contrast to the initial hypothesis, aid focused on skill transfer – as shown via the CBE program – does not

seem to necessarily result in innovation in the domestic economy. The main reason is that creating a local defense industry was an executive priority. There was commitment and local-buy in for that project. The CBE program reflects a strategic priority for the US. Jordan seems to recognize this need, but this US objective does not necessarily amplify a domestic industrial priority for Jordan. Because Jordan has a successful pharmaceutical industry which exports to the region and the US, there is the potential for cooperation and added synergies there. However, the private sector was not privy to the conversations or training materials offered by the CBE program. Their laboratories, which are competitive, some of which are even certified by the US, were not engaged in this endeavor. Perhaps this represents the lack of public support the pharmaceutical industry receives in comparison to the defense industry.

Finally, as military aid will continue to be dispatched in large sums to achieve stability and security in fragile environments, policymakers can seek to magnify the secondhand innovation effects of military aid by being cognizant of the domestic S&T and industrial policies of recipient nations and factoring them into the decision making and design processes of military aid disbursement. Further, where possible and under the right conditions, the transfer of fungible resources – as opposed to supply-driven technical knowhow – can be more effective in triggering new economic sectors in a recipient economy.

## **APPENDIX A. ADDITIONAL ROBUSTNESS TESTS**

### **6.1 Statistical Results - Fixed Effects**

Chapter 2 showcases results from random effects logistic regressions. However, as a robustness check, I run the same regression with fixed effects. I obtain similar results. Namely, CPS is negative and significant, whereas BF is statistically insignificant. This is the case for all countries and the conflict affected subset. Stata results for fixed effect logit analysis are presented below.

**Table 5 - Fixed Effects Results all Countries:**

```

Jan 23 2020 Results FOR Appendix - Notepad
File Edit Format View Help

. import excel "\\prism.nas.gatech.edu\rshabb3\Fall 2019\Reduced Book for Stata_9.19.2019 This One PSD
> added added sheet with Conflict countries sub group.xlsx", sheet("all countires") firstrow clear

. gen wdi_poplog = log( wdi_pop)
(5,962 missing values generated)

. xtset ccode year
      panel variable:  ccode (strongly balanced)
      time variable:  year, 1946 to 2018
      delta: 1 unit

. xtlogit Internal_Conflict hf_business CredittoPS wdi_poplog wdi_gdpcapcur wdi_gdpgr al_ethnic bmr_d
> em fi_sog, fe
note: multiple positive outcomes within groups encountered.
note: 120 groups (1,143 obs) dropped because of all positive or
      all negative outcomes.
note: al_ethnic omitted because of no within-group variance.

Iteration 0:  log likelihood = -108.54378
Iteration 1:  log likelihood = -95.209604
Iteration 2:  log likelihood = -95.026215
Iteration 3:  log likelihood = -95.025479
Iteration 4:  log likelihood = -95.025479

Conditional fixed-effects logistic regression      Number of obs   =       273
Group variable: ccode                            Number of groups =        25

Obs per group:
      min =          5
      avg =        10.9
      max =          12

LR chi2(7) =       28.39
Prob > chi2 =       0.0002

Log likelihood = -95.025479

-----
Internal_Conflict |      Coef.   Std. Err.   z   P>|z|   [95% Conf. Interval]
-----+-----
      hf_business |  -.0261749   .0237824   -1.10  0.271   -.0727876   .0204379
      CredittoPS |  -.1168913   .0357231   -3.27  0.001   -.1869073   -.0468753
      wdi_poplog |  -6.454812   2.499711   -2.58  0.010   -11.35416   -1.555469
      wdi_gdpcapcur |  .001261     .0003417    3.69  0.000   .0005913    .0019307
      wdi_gdpgr |  -.0043479   .0425821   -0.10  0.919   -.0878074   .0791115
      al_ethnic |           0 (omitted)
      bmr_dem |  .938931     .6301107    1.49  0.136   -.2960633    2.173925
      fi_sog |  .5127491    .206389    2.48  0.013   .108234     .9172642
-----

```

**Table 6 - Fixed Effects Results for Conflict Affected Countries**

```

Jan 23 2020 Results FOR Appendix - Notepad
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. xtlogit Internal_Conflict hf_business CredittoPS wdi_poplog wdi_gdpcapcur wdi_gdpgr al_ethnic bmr_d
> em fi_sog, fe
note: multiple positive outcomes within groups encountered.
note: 35 groups (319 obs) dropped because of all positive or
      all negative outcomes.
note: al_ethnic omitted because of no within-group variance.

Iteration 0:  log likelihood = -108.54378
Iteration 1:  log likelihood = -95.2096004
Iteration 2:  log likelihood = -95.026215
Iteration 3:  log likelihood = -95.025479
Iteration 4:  log likelihood = -95.025479

Conditional fixed-effects logistic regression   Number of obs   =       273
Group variable: ccode                          Number of groups =        25

Obs per group:
      min =          5
      avg =       10.9
      max =         12

LR chi2(7)   =       28.39
Prob > chi2  =       0.0002

Log likelihood = -95.025479

-----+-----
Internal_Conflict |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      hf_business |   -.0261749   .0237824    -1.10  0.271    - .0727876   .0204379
      CredittoPS |   -.1168913   .0357231    -3.27  0.001    - .1869073   -.0468753
      wdi_poplog |  -6.454812    2.499711    -2.58  0.010    -11.35416   -1.555469
      wdi_gdpcapcur |   .001261     .0003417     3.69  0.000     .0005913   .0019307
      wdi_gdpgr |   -.0043479   .0425821    -0.10  0.919    - .0878074   .0791115
      al_ethnic |           0     (omitted)
      bmr_dem |   .938931     .6301107     1.49  0.136    - .2960633   2.173925
      fi_sog |   .5127491     .206389     2.48  0.013     .108234    .9172642
-----+-----

```

**6.2 Statistical Results - Growth and Per Capita Income Omission**

Because of potential collinearity between the independent variables of growth and income per capita, I rerun the regression omitting these variables to see whether the CPS variable remains statistically significant. I obtain similar results. Namely, CPS is negative and significant, whereas BF is statistically insignificant. This is the case for all countries and the conflict affected subset. Stata results are presented below.

**Table 7- Growth and Per Capita Income Omission, All Countries**

```

Feb 2 2020 rerun without growth and income per capita - Notepad
File Edit Format View Help
LR test of rho=0: chibar2(01) = 385.67          Prob >= chibar2 = 0.000

. xtlogit Internal_Conflict hf_business CredittoPS wdi_poplog al_ethnic bmr_dem fi_sog if year>1989

Fitting comparison model:

Iteration 0: log likelihood = -552.78946
Iteration 1: log likelihood = -450.8576
Iteration 2: log likelihood = -427.91373
Iteration 3: log likelihood = -427.29795
Iteration 4: log likelihood = -427.29461
Iteration 5: log likelihood = -427.29461

Fitting full model:

tau = 0.0 log likelihood = -427.29461
tau = 0.1 log likelihood = -389.32845
tau = 0.2 log likelihood = -358.91688
tau = 0.3 log likelihood = -334.78922
tau = 0.4 log likelihood = -315.54951
tau = 0.5 log likelihood = -299.79805
tau = 0.6 log likelihood = -286.91135
tau = 0.7 log likelihood = -276.24888
tau = 0.8 log likelihood = -267.94053

Iteration 0: log likelihood = -276.16577
Iteration 1: log likelihood = -240.51542
Iteration 2: log likelihood = -235.09537
Iteration 3: log likelihood = -230.89143
Iteration 4: log likelihood = -230.87819
Iteration 5: log likelihood = -230.86417
Iteration 6: log likelihood = -230.86417 (backed up)
Iteration 7: log likelihood = -230.85827
Iteration 8: log likelihood = -230.85827

Random-effects logistic regression          Number of obs = 1,417
Group variable: ccode                      Number of groups = 145

Random effects u_i ~ Gaussian              Obs per group:
                                           min = 1
                                           avg = 9.8
                                           max = 12

Integration method: mvaghermite            Integration pts. = 12

Log likelihood = -230.85827                 Wald chi2(6) = 27.58
                                           Prob > chi2 = 0.0001

-----+-----
Internal_Conflict |      Coef.   Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
hf_business       |  -.0052487   .0194113    -0.27  0.787    -.0432941   .0327966
CreditoPS         |  -.0699057   .019981    -3.50  0.000    -1.1090678  -.0307436
wdi_poplog        |   2.056943   .4427371    4.65  0.000    1.189195    2.924692
al_ethnic         |   1.116384   2.098328    0.53  0.595    -2.996264    5.229032
bmr_dem           |   .2032482   .49669     0.41  0.682    -.7702463    1.176743
fi_sog            |   .2810612   .174069    1.61  0.106    -.0601077    .6222301
_cons             |  -39.38776   8.008856   -4.92  0.000    -55.08482   -23.69069
-----+-----
/lnsig2u          |   2.92489    .3115852                    2.314195    3.535586
-----+-----
sigma_u           |   4.316501   .672479                    3.180687    5.857911
rho               |   .8499288   .0397426                    .7546091    .9125151
-----+-----
LR test of rho=0: chibar2(01) = 392.87          Prob >= chibar2 = 0.000

```

**Table 8 - Growth and Per Capita Income Omission, Conflict Affected Countries**

```
Feb 2 2020 rerun without growth and income per capita - Notepad
File Edit Format View Help
. xtlogit Internal_Conflict hf_business CredittoPS wdi_poplog al_ethnic bmr_dem fi_sog if year>1989
```

Fitting comparison model:

```
Iteration 0: log likelihood = -369.62358
Iteration 1: log likelihood = -332.34114
Iteration 2: log likelihood = -330.08214
Iteration 3: log likelihood = -330.0741
Iteration 4: log likelihood = -330.0741
```

Fitting full model:

```
tau = 0.0 log likelihood = -330.0741
tau = 0.1 log likelihood = -303.19118
tau = 0.2 log likelihood = -283.12271
tau = 0.3 log likelihood = -267.55609
tau = 0.4 log likelihood = -254.9696
tau = 0.5 log likelihood = -244.46202
tau = 0.6 log likelihood = -235.55396
tau = 0.7 log likelihood = -228.12966
tau = 0.8 log likelihood = -222.60162
```

```
Iteration 0: log likelihood = -227.7867
Iteration 1: log likelihood = -211.98741
Iteration 2: log likelihood = -209.87416
Iteration 3: log likelihood = -209.51173
Iteration 4: log likelihood = -209.51019
Iteration 5: log likelihood = -209.50994
Iteration 6: log likelihood = -209.50994 (backed up)
Iteration 7: log likelihood = -209.50991
Iteration 8: log likelihood = -209.50991
```

```
Random-effects logistic regression      Number of obs   =      593
Group variable: ccode                  Number of groups =       60

Random effects u_i ~ Gaussian          Obs per group:
                                         min =          1
                                         avg =         9.9
                                         max =         12

Integration method: mvaghermite        Integration pts. =       12

Wald chi2(6) =      18.70
Prob > chi2 =      0.0047

Log likelihood = -209.50991
```

Internal_Conflict	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
hf_business	.0032539	.0192446	0.17	0.866	-.0344649	.0409727
CredittoPS	-.0570601	.0182108	-3.13	0.002	-.0927526	-.0213677
wdi_poplog	1.340969	.3834091	3.50	0.000	.5895013	2.092437
al_ethnic	-.8050233	2.179868	-0.37	0.712	-5.077486	3.467439
bmr_dem	.3560758	.4917341	0.72	0.469	-.6077052	1.319857
fi_sog	.26058	.170556	1.53	0.127	-.0737035	.5948636
_cons	-24.60274	6.824748	-3.60	0.000	-37.979	-11.22648
/lnsig2u	2.487303	.3510422			1.799273	3.175333
sigma_u	3.468254	.6087518			2.458709	4.892319
rho	.7852378	.0591995			.6475815	.8791585

```
LR test of rho=0: chibar2(01) = 241.13      Prob >= chibar2 = 0.000
```

### 6.3 Statistical results for lagged Private Sector variables

**Table 9 - Lagged Private Sector for All Countries**

Logit analysis for all countries after 1995, **Lagged Private Sector** Variables by one year  
 Dependent variable = Occurrence of Civil Conflict

	<i>For All Countries After 1995</i>				
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>FIXED Eff</i>
Business Freedom (Lagged 1 yr)			-.02138 (.01979)	-.0066246 (.020681)	
Credit to the Private Sector (Lagged 1yr)		-.044** (.0141297)		-.0704892** (.02573)	-.0478532* (.0182482)
Population‡	1.345*** (0.29174)	1.417*** (.304507)	1.7596*** (.42882)	2.0888*** (.4855742)	-1.446843 (1.236879)
Income/capita	- 0.0002* (0.00006)	-0.0000851 (0.0000637)	-0.0001338† (.0000627)	-2.93e-06 (.0000718)	-0.0000426 (.0001118)
GDP Growth	- 0.027 (0.03039)	-0.0386085 (0.0314512)	-0.015433 (.041077)	-.027215 (.0424094)	-.0330116 (.0308483)
Ethnic Frac.	1.067 (1.68717)	0.215071 (1.715715)	2.482863 (2.11914)	1.59287 (2.26227)	(omitted)
Democracy	- 0.711† (0.36847)	-.63102† (.372776)	-.4625004 (.501885)	-.252174 (.518539)	-.4584221 (.4012949)
Size of Government	- 0.0096 (0.12938)	.053136 (.133775)	0.18808 (.18189)	0.260926 (.189051)	.1771105 (.1590275)
Constant	-25.805*** (5.026819)	-25.8517*** (5.182376)	-34.814*** (7.9663)	-39.7268*** (8.75059)	
Observations	1,661	1,535	1,417	1,327	400

Standard errors are in parenthesis. Estimates were performed using random effects logistic regression. StataMP 14.0.

†p<0.1, \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001

‡Values are logged

**Table 10 - Lagged Private Sector for Conflict Affected Countries**



Logit analysis for conflict affected countries after 1995, Lagged Private Sector Variables by one year  
 Dependent variable = Occurrence of Civil Conflict

<i>Conflict Affected Countries After 1995</i>					
	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8</i>	<i>Fixed Effects</i>
Business Freedom (Lagged 1yr)			-.0153064 (.0198464)	-.0007811 (.0208018)	
Credit to the Private Sector (Lagged 1yr)		-.0447247** (.013891)		-.0768592** (.0251397)	-.0478532** (.0182482)
Population <sup>‡</sup>	0.749** (0.28568)	.8555496 (.2882385)	1.163842** (.354426)	1.4965*** (.4161564)	-1.446843 (1.236879)
Income/capita	- 0.00008 (0.00006)	.0000264 (.0000656)	-6.17e-06 (.0000679)	.0001796 <sup>†</sup> (.0000969)	-.0000426 (.0001118)
GDP Growth	- 0.029 (0.03000)	-.0395036 (.0308663)	-.0169731 (.0409498)	-.0280524 (.0423804)	-.0330116 (.0308483)
Ethnic Frac.	- 0.287 (1.75336)	-1.134413 (1.725124)	1.522284 (2.140183)	.0422884 (2.311555)	Omitted
Democracy	- 0.519 (0.37034)	-.4649118 (.372157)	-.2677038 (.5061433)	-.0841272 (.5277356)	-.4584221 (.4012949)
Size of Government	0.015 (0.13029)	.0779151 (.133173)	.1984978 (.1808423)	.2684628 (.1892326)	.1771105 (.1590275)
Constant	-13.35** (4.99342)	-14.07882** (4.938747)	-22.744*** (6.508978)	-27.275*** (7.383542)	
Observations	689	668	573	557	400

Standard errors are in parenthesis. Estimates were performed using random effects logistic regression. StataMP 14.0.

<sup>†</sup>p<0.1, \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001

<sup>‡</sup>Values are logged

## **APPENDIX B. TYPES OF MILITARY AID AS DEFINED BY USAID**

**All definition below are provided by USAID<sup>466</sup>**

**Foreign Military Financing (FMF) Program, Payment Waived** - The amount of credit extended to a foreign government or international organization in any fiscal year for the procurement of defense articles, defense services, and design and construction services.

**Global Train & Equip Program - Operational Equipment for Countering Violent Extremist** - Section 2282 Building Capacity of Foreign Security Forces programs (formerly known as Section 1206 Train and Equip), are intended to build partnership capacity for time-sensitive "new and emerging" counter-terrorist operations or to participate in or support military and stability operations in which the U.S. Armed Forces are a participant.

### **Cooperative Threat Reduction Program: Proliferation Prevention [non-ODA]**

The Proliferation Prevention Program builds partner countries' capacity to interdict illicit trafficking of WMD and related components and technologies. The program develops self-sustaining, multi-agency capabilities to prevent the proliferation of WMD materials, components, and technologies across country borders. The program develops our partners' capacities in non-proliferation and counter-proliferation, border security and interdiction, disposition, and other areas related to chemical, biological, radiological, and nuclear identification, security, and consequence incident response. The program complements the

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<sup>466</sup> Definitions retrieved from the Foreign Aid Explorer: The official record of U.S. foreign aid.

assistance provided by other USG and international partners that enhance counter-smuggling capacities, enhance border security, and increase maritime domain awareness and interoperability.

**Cooperative Threat Reduction Program: Cooperative Biological Engagement [non-ODA]**

Cooperative Biological Engagement Program (CBEP) - objectives are to cooperatively assist partner nation governments in addressing obligations assumed by signing the United Nations National Security Council Resolution 1540, to prevent the proliferation of nuclear, chemical and biological weapons, and their means of delivery, including by establishing appropriate controls over related materials.

**International Military Education & Training (IMET) Program/Deliveries**

The dollar value allocated in any fiscal year for the training of foreign military students both overseas and in the continental United States, and the cost of training aids and materials associated with such training, for which the U.S. Government receives no dollar reimbursement.

**CBRN Preparedness Program (CP2)**

The CBRN Preparedness Program (CP2) is U.S. Department of Defense's premier program for developing partner nation Weapons of Mass Destruction(WMD)/Chemical, Biological, Radiological, or Nuclear (CBRN) preparedness and emergency response capabilities across all levels of government (tactical to strategic). This program trains and equips partners to prevent, protect against, mitigate, respond to, and recover from WMD/CBRN

incidents. All program activities directly support CCMD Theater Campaign Plan Objectives, Guidance for Employment of Forces End States, Secretary of Defense Strategy for Countering WMD, and the Presidents Priorities for the 21st Century Defense. Program activities decrease the need for U.S. assets to deploy in support of partner nations, reduce the amount of resources when support is required, and enhance the interoperability of U.S. and partner forces.

### **Combating Terrorism Fellowship Program (CTFP)**

The CTFP is a Secretary of Defense authority (Title 10) to build partnerships in the struggle against violent extremism through targeted, non-lethal, combating terrorism (CbT) education and training for mid- to senior-level international military officers, ministry of defense civilians, and security officials.

### **In-Country Counter narcotics Program**

In-Country Counternarcotics Program under U.S. Central Command. ICDP enables the Secretary of Defense to provide foreign governments with support for the counter-drug activities of that government, such as training and equipment.

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