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Why the Private Sector matters: Sustaining the Islamic State in Iraq


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Declaration

I, Hannes Bräuer, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature.......... Date..... June 15th 2021

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Abstract

This dissertation investigates the private sector's relationship and experiences with the Islamic State in the Iraqi governorates Nineveh and Salahaddin, utilizing unique field data from the insurgents' 2013-2017 rule. It builds on contemporary rebel governance, civil war, and war economy theory to develop an understanding of the complex environment studied. This research then conflates quantitative and qualitative research methods in order to oppose some of the held beliefs about private businesses' involvement in violent conflict and develops a theoretical foundation for further discussion. This study's findings indicate that the private sector's societal functions, characteristics and primary considerations amidst disorder have been largely neglected in studies of conflict. Thereby, this research suggests bridging the gap between purely social, economic, or political conceptualisations of war, and focussing on a nuanced investigation of private businesses' considerations, preferences, and actions in violent environments instead.

Keywords: *Rebel governance, Iraq, Islamic State, ISIS, civil war, private sector, war economy*

Summary of Research Theme

This Master of Science dissertation aims to present original research on the private sector in the Iraqi governorates Nineveh and Salahaddin and its relationship with the rule of the Islamic State (IS) between 2013-2017. As this dissertation is based on an “article” format according to NMBU thesis guidelines (Norwegian University of Life Sciences, Writing Your Degree Thesis, 2021), the author will present an academic article embedded in a synopsis (Haara & Smith, 2011). This synopsis will clarify the choices made when presenting the article in chapter six of this dissertation, as well as considerations related to the theoretical and methodological set up of the research conducted. It will furthermore highlight the research gap(s) to which the article aims to add, discuss the findings and relevance of the knowledge created, and evaluate the study’s limitations and ethical considerations.

The main theme of this research is the relationship between private businesses and non-state armed actors. As it is still contested whether businesses can have agency in enabling or defeating violent groups in settings of civil war or areas of contested authority, this research investigates the case of the IS in Iraq. It will be theorized, investigated, and concluded how businesses navigate situations where authority is contested, and how conflict dynamics influence the decisions of business owners and violent actors.

List of articles related to this Dissertation:

Why the private sector matters: Sustaining the IS in Iraq (Hannes Bräuer, 2021)

Abbreviations

AIC – Akaike Information Criterion

ANOVA – Analysis of Variance

GDP – Gross Domestic Product

GLM – Generalized Linear Model

GO – Governmental Organization

IDP – Internal Displaced People

IPS – International Political Sociology

ICG – International Crisis Group

IS – Islamic State

NGO – Non-Governmental Organization

NMBU – Norwegian University of Life Sciences

PMU/PMF – Popular Mobilisation Units/Forces

UN – United Nations

X² - Chi-square test for independence of categorical variables

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1 Introduction

Private businesses became increasingly important around the globe in the light of economic liberalisation. The opening of the “economy with free flow of commodities and capital across national borders” (Stokke, 2011), as well as the “deregulation aimed at increasing productivity and competitiveness in the private sector” (Maher, 2018, p. 230), lead to the development of business structures more or less independent of governments. These private businesses are believed to be concerned with creating profits which then fund jobs, “development,” services and investments (Australian Government Department of Foreign Affairs and Trade, 2014). However, with some private businesses achieving the value equal to the GDP of several countries, their accountability for income inequality, unlawful practices, and environmental degradation wanes (Nelson, 2004). This becomes especially evident when investigating the involvements of private businesses in civil wars.

The causes of civil wars are highly contested, and the respective literature is growing constantly as new conflicts evolve. Whilst in some cases, economic incentives seem to be decisive for the occurrence of conflict, ethnical, religious, and other divisions might be pivotal elsewhere, and even more often these factors are intertwined (Collier & Hoeffler, 2004; Hassan, 2016). Within these comparisons of causes and cases for civil war, and with the increasing global privatisation of businesses ongoing, it became evident that violence and ongoing fighting does not automatically prohibit the creation of profits, and that high levels of violence can consort with increasing economic growth rates (Maher, 2018, p. 126). Thus, private businesses can play an important role in enabling non-state armed actors in civil war settings and sustaining ongoing fighting (Hansen, 2007, p. 5). On the other hand, businesses can also contribute to reducing the likelihood of conflict and promote stability in post-conflict contexts (Peschka, 2011). In fact, the private sector operates in a variety of dynamics that are severely understudied, as this research will point out.

The role and choices of the private sector in civil wars and its interrelations with non-state armed actors escape simplistic analyses and cannot be accounted for by referring to the “profit motive alone,” demanding for nuanced investigations (Rettberg, 2019). Such research must evaluate businesses’ characteristics, their social functions, “access to politics,” and wider conflict dynamics when considering why businesses stand with local populations, such as “pro-peace coalitions,” or why they chose to cooperate with non-state “armed actors” (Rettberg, 2019). This dissertation will therefore focus on how the private sector experienced and interacted with the IS

in the Iraqi governorates Salahaddin and Nineveh. It will give a theoretical overview in the subsequent chapter, before presenting the methodological approach for the conducted research, and before investigating what the determinants of the relationship between the private sector and the non-state armed actor in both governorates were.

This dissertation relies on words and numbers as carriers of information, utilising primary and secondary data, and deploying mixed methods research in the form of a unique open ended quantitative questionnaire, as well as qualitative interviews. This data is analysed statistically and thematically, aimed at explaining and understanding the phenomenon at hand. In doing so it will add to the understanding of the private sector's role in civil war, its relationship with non-state armed groups and contribute to filling a research gap that remains undertheorized and understudied (Ahmad, 2015, p. 90; Worrall, 2017, p. 710; Hansen, 2007, p. 1; Arjona, Kasfir, & Mampilly, *Rebel Governance in Civil War*, 2015, p. 289).

2 Theoretical basis

Theorizing the relationship between private businesses and violent non-state armed actors builds on theory from various fields. The foundation of our contemporary understanding of the phenomenon studied is the combination of political science theory which focuses on motives and causes for the use or tolerance of violence, as well as economic theories that understand “rebellion as an industry” which foos on violent practices, such as the looting of resources (Collier & Hoeffler, 2004, p. 564; Grossman, 1999, p. 269; Hirshleifer, 1995, pp. 10-11). Furthermore, an increased occurrence of intra-state wars led to a shifting focus towards civil wars, or “new wars” (Kaldor, 2012), where non-state actors interact with various other organisations, groups, the central state, and local populations. In these environments, warlords and large monopolised industries are believed to strive for profit maximisation or “economic incentives for war” (Collier & Hoeffler, 2004; Collier (2000) & Reno (1998) cited in Hansen, 2007, p. 1). On the other hand, international organisations and governments advocate a very different view of businesses involvement in conflicts, highlighting their value for peacebuilding, job creation, value adding and tax payments which can fund services and investments that bring development and reduce the believed drivers of conflict (Peschka, 2011, p. 3). However, it became quickly visible that an exclusive focus on the private sector as either a driver of conflict or an actor for peace is too simplistic and neglects the complex dynamics at play in civil war (Hansen, 2007, p. 1).

This led to the emergence of a war or conflict economy literature, focusing on complex dynamics that can fuel conflict, expanding the “ideological and identity-based” explanations for the emergence of violence by bringing in global political economy theory (Eaton, et al., 2019, p. iv). A conflict economy is “a system of producing, mobilizing and allocating resources to sustain competitive and embedded violence, both directly and indirectly” (Eaton, et al., 2019, p. 4). This definition acknowledges many different influencing factors, pointing towards different causes for the use of violence, and introducing the “coping economy,” which represents the economic dynamics at work also securing the survival of local populations amidst civil war (Eaton, et al., 2019, p. 4). Overall, the war economy literature tends to focus not only on easily accessible resources as drivers of conflict, but also on economic elites, effects and causes of economic actor’s interactions with conflict factions, the types of commodities and industries involved, spatial differences, and the evaluation and recognition of different actor’s rationality (Eaton, et al., 2019; Hansen, 2007, pp. 6-12; Brisard & Martinez, 2014, p. 11). However, a rift remains when considering the exact role of the private sector, and how exactly the interrelations between local populations, the private sector and non-state armed actors function.

As evident from the theories presented which consider warlords, political and economic elites, as well as criminal networks as their main actors, little or no agency has traditionally been granted to local populations and the private sector in its entirety. Departing from these theoretical roots, a new field emerged which focuses more on local populations’ interactions with non-state armed actors, granting locals more agency and highlighting the establishment of agreements between rebels, locals, and other agents, investigating their decision making amidst conflict. Rebel governance can be defined as the intentional ordering of “social, economic, and political life,” in a specific space, to a certain degree, and to advance distinctive objectives by a non-state armed actor (Mampilly, 2015, p. 77; Mabon, 2019). This theoretical perspective, or as some argue, this conflation of theoretical perspectives, incorporates historical structures of authority, conflicts’ socio-economic settings, the role of local populations and economic dynamics for the production of governance and violence, also investigating mechanisms that create unique rebel-individual relationships (Arjona, Kasfir, & Mampilly, 2015; Revkin M. , 2021; Revkin & Ahram, 2017). The emerging field thereby focuses on the examination of a variety of socio-economic interrelations and functions between individuals and rebels, as well as their linkages to wider conflict dynamics.

Even though rebel governance does not specifically examine the private sector in conflict settings, it has the ability to bridge the gap between a pure economic analysis of conflicts and

ideological, political and societal considerations, making choices and preferences of actors visible, as they strive to achieve their objectives. The main contributions of the rebel governance literature include that even under insurgents' coercive usage of violence, locals have tools to express their discontent, such as choosing to escape and have therefore active agency (Revkin & Ahram, 2020). Furthermore, rebel governance takes into consideration why non-state armed actors engage in a certain way with local populations and other factions, offering a variation between a comprehensive engagement approach on the one side, and a narrow one on the other ("stationary bandits" vs "roving bandits" and "rebelocracy" vs "aliocracy") (Arjona, 2014, p. 1375; Mampilly, 2015, p. 77; Mampilly, 2011, p. 11; Olson, 1993). Nevertheless, the rebel governance literature tends to sideline the private sector, only referring to the need to investigate "economic gains" of rebels and local populations (Arjona, Kasfir, & Mampilly, 2015, p. 296), or falling for a faulty distinction between "informal" and "formal" economies, when considering economic aspects (Worrall, 2017, pp. 713,720-723,725).

This dissertation will therefore employ a combination of theories, considering both interacting parts to the "contract," established between private businesses and non-state armed actors. In order to theorize armed actors' choices, a rebel governance approach is chosen which aims to highlight what causes rebels to regulate economic practices in a certain area and why insurgents interact with businesses in a certain way. On the other hand, the role, experiences, and interactions of businesses are theorized assembling theories of civil war, rebel governance and political science, as there is a clear lack of theory concerning the private sector. The choice of the listed theories will be justified by the examined case and will develop conclusions that can help further theorize the existing gap between economic and social considerations for civil war.

3 Location of the research and overall research questions

As presented above, the private sector is neither central element of analysis in the war economy literature, nor in the rebel governance literature. This research will try to bridge this existing gap by looking at the choices, private businesses and non-state armed actors make, and why. To locate the two interacting parties in the wider conflict environment and different theoretical frameworks, this research will deploy different theoretical strands and follow mixed methods to thoroughly explain and understand private businesses' position in relation to non-state armed actors. This dissertation will therefore follow these research questions:

How did businesses experience and interact with the IS in the Iraqi governorates Salahaddin and Nineveh?

1. Did businesses experience the IS coherently across both governorates?
2. Did certain industry sectors experience more threatening by the IS?
3. Did businesses cooperate with the IS?
4. Did large businesses experience IS rule differently than small ones?
5. Did businesses lose or profit from IS presence?
 - a. Did certain businesses lose more than others?
6. What changed after the IS's defeat for the private sector?
7. Did the IS perform rebel governance?

These research questions allow for quantitative and qualitative investigation, leading to clear assumptions regarding the role of the private sector in civil war settings, specifically in Iraq.

4 Previous research

The role of the private sector in civil wars and businesses relations to non-state armed actors remains undertheorized (Ahmad, 2015, p. 90). This becomes especially evident when looking at the delineation of previous research. Studies focus either on the role of the rebels, namely the IS and its characteristics, or on the pure economic dynamics in Iraq or within the terrorist organisations itself. Brisard and Martinez for example focus on an estimation of the IS's income sources but portray "local businessmen" as victims of IS targeting (Brisard & Martinez, 2014, p. 5). Eaton et al., although acknowledging that "formal and "informal" economic practices overlap and that conflict dynamics can ensure local populations' survival, reject that the IS utilised a "new economy" of oil and gas smuggling, as well as taxation, suggesting that the insurgents simply took over the "informal" economic networks from the Baathist era (Eaton, et al., 2019, p. 14). The Chatham House researchers further present a more structural analysis that link tribal forces, ministry officials and conflict factions to the involvement in this "informal" economic networks, side-lining the overall interconnectedness of social, economic, and political actors. Specifically stating the insurgents utilized a "predatory approach" towards the private sector (meaning its pure suppression), this research grants local populations and the private sector little or no agency (Eaton, et al., 2019, pp. 5-6,19). The same holds true for analyses from a "terror-funding" perspective, as

presented by Flores, which focuses on criminal activities and the charity-funding mechanism as a small part of IS economics only (Flores , 2015).

An entirely different picture is painted by authors such as Peschka, Katsos and AlKafaji, who focus on the positive role businesses can have in fostering development in Iraq (Peschka, 2011; Katsos & AlKafaji, 2019). Peschka (2011, p. 6), in a report for the World Bank Group focuses on the importance of the private sector to foster economic growth, job creation, and thereby tax payments, peace and the advancement of services, also touching upon businesses role in conflict, stating that the private sectors get caught up in informal and criminal networks when formal trade complicates. More country specific, Katsos and Alkafaji (2019, p. 45) employ mostly World Bank and interview data to show that Iraq is one of the most challenging environments to conduct business in due to bad infrastructure, bad security situations and corruption, pointing towards businesses' possibilities to "positively influence government policies." Interestingly, Katsos and Alkafaji (2019, pp. 45,48) establish briefly that businesses are "predominantly" concerned with the rule of law and security, even within IS territories, but do not further investigate these findings.

On the other hand, researchers such as Revkin, Ahram, Arjona, Mampilly and Kasfir focus on the social contract between the IS and locals, investigating rebel governance and state-like functions of rebel groups, enabling, and raising the profile of local populations within a conflict setting (Arjona, 2017; Arjona, Kasfir, & Mampilly, 2015; Revkin M. , 2021; Revkin & Ahram, 2017; Arjona, 2014, p. 1380). In Revkin's latest research, the private sector is only allowed one line, stating that business owners under the IS were increasingly threatened, coerced, and incarcerated if not following the regulations in place (Revkin M. , 2021, pp. 55-56). These "rebel-governance" researchers' assumptions are highly relevant for the role of the private sector too, as private businesses can have crucial functions for local populations or side with the rebels, as authors such as Ahmad, Tomlinson, and Hansen have touched upon (Ahmad, 2015; Hansen, 2007; Tomlinson, 2008). These same authors have established that the role of the private sector in civil wars remains undertheorized and understudied (Ahmad, 2015, p. 90; Hansen, 2007, p. 1). The closest and most relevant previous researches conducted are therefore the studies of Ahmad (2015), Hansen (2007), Rettberg (2019) Katsos and Alkafaji (2019), highlighting that the private sector strives for stability and security, is a pragmatic actor in complex environments, can enable or prohibit radical Islamist groups from rising to power and that the IS has coerced many businesses in its Iraqi territories. Furthermore, Rettberg demands more nuanced research, as

“The profit motive alone cannot explain business strategies in contexts of conflict and peacebuilding. Contextual factors, the type of organization, and access to politics are important in understanding how business factions respond to armed conflict, including those participating in civil action within the “pro-peace coalition” and those aligning themselves with armed actors.”
(Rettberg, 2019, p. 1)

However, these relevant authors present studies that do not focus on the IS and the context of Iraq, also lacking a more comprehensive investigation of businesses’ social functions, why businesses side with either rebels or other actors, and how the private sector is located in the wider conflict. Thereby, these researchers are rare pioneers when it comes to theorize and investigate the private sector’s specific involvement in civil wars.

5 Theoretical and Methodological Framework for article

The article presented in the next chapter of this dissertation uses a combination of aforementioned theoretical approaches for the investigation of private businesses’ relationship with the IS. The article especially evaluates Ahmad (2015) and Hansen’s (2007) considerations regarding businesses strive for stability and security amidst the circumstances civil war brings. Furthermore, Revkin (2021), Katsos and AlKafaji’s (2019) contributions regarding the IS’s excessive use of violence is traced and investigated regarding exceptions to this experiences and strategies the IS could have followed. Arjona, Kesfir and Mampilly’s work is incorporated analysing the actions and engagement approaches that the IS deployed across the investigated governorates. For economic theories of the IS, within Iraq and of local businesses, Eaton et al. (2019), Peschka (2011), Katsos and AlKafaji (2019), Brisard and Martinez (2014), as well as KAPITA and the GIZ’s (2019) arguments are examined. Additionally, Hassan (2016), Baban (2020), Bunzel (2015), Lister (2014), Salihy (2019), Al-Tamimi and Zelin (2021), Khatib (2015), plus the Islamic State Archives and Jihadology’s (2014) accounts of the IS’s and Iraq’s characteristics, economics, governance, ideology, history, society, practices, and strategies are used to provide this research with a starting point from which to analyse the non-state armed actor and private businesses. The conflation of theories is justified given the expected complex dynamics at work, as well as considering that 97% of businesses in Iraq are “small establishments” with under nine employees (KAPITA & GIZ, 2019, p. 9), tying business owners closer to local populations, and thereby opening up for an investigation combining rebel governance (focus on local populations and rebels) and businesses perspectives (economy and war economy focuses).

The methodological choices for the research at hand have largely been made by researchers associated with the Norwegian University of Life Science's "Jihadist War Economies" project and do not entirely reflect the choices the author would have made. The field research for the project followed the research principles of NMBU and was conducted from 2016 to 2019, involving an international research team (Norwegian University of Life Sciences, Research Data - guidelines and policies, 2021). This dissertation utilises a quantitative closed-, and open-ended questionnaire of 601 business owners from Nineveh and Salahaddin governorates in Iraq, as well as 74 open-ended qualitative interviews conducted in the wider region with economic and political elites, drivers, and journalists¹. The following presented methodological choices reflect the authors approach of analysing the dataset and qualitative interviews obtained. For a critical reflection on this dissertation's data, please read chapter nine on thesis limitations and ethical considerations.

The mixed methods set up of this investigation aims to balance and triangulate (1) quantifiable data on businesses and their experiences interacting with the IS, as well as the conflicts economic dynamics, whilst (2) qualitative data helps to contextualize and understand the interrelations of actors. The analysis of quantitative data will help show if certain industries experienced IS rule differently and whether there are significant trends in the data, exposing a possible IS strategy. The interview data on the other hand will provide insights into the dynamics at work and help understand if the results found are effects or deliberate IS precipitations. This study thereby also acknowledges that the different theoretical approaches originate in different methodological philosophies (economic quantitative accounts vs qualitative rebel governance accounts), enabling this dissertation's analysis to combine the different strands within the methodological set up of this study.

5.1 Quantitative

The quantitative questionnaire informing this research randomly sampled according to quota from both Iraqi governorates investigated. The quota concerned businesses' size and industry, which were differentiated between according to the Iraqi Industrial Statistic Directorate and data from the GIZ and KAPITA (Industrial Statistic Directorate Iraq, 2018; KAPITA & GIZ, 2019). Business owners' responses were anonymized, given the sensitive character of the phenomenon studied and

¹ For further information and insight regarding the dataset, the questionnaire and qualitative interview responses, please contact Stig Jarle Hansen, head of the Jihadi war economies project, Stig.hansen@nmbu.no.

to prevent possible harm to participants (Bryman, 2016, pp. 77,122-136). Survey questions and interview guidelines were furthermore worked out by the local associated research team.

The resulting dataset was coded and analyzed by the author, investigating the dependent variables “Islamic State threatening” (IST), “business loss due to the Islamic State” (BL), the “amount of business loss” (ABL), and “changes after the Islamic State” (CaIS). Whether the IS threatened businesses (IST), as well as whether businesses lost due to the IS (BL) was recorded using binominal categories (0,1), whilst this study recorded *ABL* as a continuous variable, and *CaIS* on a scale from 0 (negative change) over 1 (no tendency or no change) to 2 (positive change), opening for the clear interpretation of estimates’ coefficients deploying logistic regression with generalized linear models in R commander. Independent variables investigated were businesses’ type (BT), conforming to the UN’s industry sector classification standard (United Nations D. , 2008), respondents governorate (Gov), sex (Sex), education (Educ), working status between 2014 and 2017 (Emp14/17), as well as Islamic State threatening (IST), so to clarify and investigate significant effects on dependent variables. For an overview of all variables included in the analysis, please see appendix table one. The choice of variables will expose whether business owners in certain industry sectors were deliberately threatened by the IS, as well as whether certain businesses’ losses were more likely and more intense in comparison to others, and whether businesses’ location (governorates), business owners’ sex, education and working status had an impact on their experiences under IS rule. These determinants are also employed to investigate how business owners describe and experienced IS defeat and changes, showing how embedded the private sector in IS economics was, and what role it played for the non-state armed group.

The dataset utilized in this research contained many questionable recordings of answers, demanding for special attention in the coding process. To assess businesses’ size, businesses’ revenue was recorded by local researchers, with some businesses stating themselves whether they are “big,” “large,” or small entities, when others stated a clear revenue. These self-stated business sizes were excluded from the analysis of all models using BR, since unfortunately no employee numbers or other indicators could have proven their claims, and since social desirability biases are believed to be influential amongst business owners striving for profits (Bryman, 2016, pp. 217,267-268). Businesses were furthermore coded into already mentioned UN industry categories, to produce results that are comparable across cases (United Nations D. , 2008). However, most businesses fell into the wholesale and retail trade category, sacrificing precision for comparability. To counter-balance this trend, and due to the assumed importance of the motorized vehicle sale-

and maintenance industry, these businesses were analyzed in a separate category. As only one business for the education and real estate industries was observed each, these sectors were excluded. As this study focuses on the private sector only, government employees and respondents that did not work between 2014 and 2017 (and did so without having been threatened out of work by the IS) were excluded as well. Another excluded variable was age since no statistical significance was found whatsoever. Please note that lower observations in some statistical models focusing on businesses' losses and losses' origins, occur due to the exclusion of businesses that did not experience any losses in their economic situation due to the IS.

For statistical analysis, this research then deployed X^2 tests of independence (nominal variables), Shapiro-Wilcox' test for cases' distribution, generalized linear regression, linear regressions, as well as an ANOVA (*ABL*), using R commander. Chi-square tests of independence were run for all dependent and independent variables and can be found in the appendix (Table 2), showing how far the independent variables account for the variation in the respective dependent variables. The analysis of data utilizing GLMs results in clearly interpretable estimates with coefficients, showing the ratios, significance levels, and relations between categories. Although observations in some categories might be low (less than five observations), leading to high standard errors, the output allows clear oversight and makes answering the research questions possible. To compare different models and combinations of variables, models' AIC-, pseudo- R^2 , and F statistic values were used to pick those with most explaining power for the analysis. Pseudo R^2 values are calculated based on Nagelkerke's (1991) work and are included as most readers unfamiliar with logistic regression will look for an R square value, accounting for the degree independent variables in a statistical model explain the variation in a dependent variable. For a discussion of R square values in logistic regression, please see Smith and McKenna's work (2013). Hosmer and Lemeshow (2000, pp. 164-167) further show, that pseudo- R^2 values as a measure of deviance "chronically" underestimate the explaining power of statistical models since null and full likelihoods of the "intercept-only" model are compared. Furthermore, the wholesale and retail trade industry was always set as the baseline category for statistical analysis, as it included most business owners (highest observations) and thereby fits best to indicate deviating experiences of other businesses. Therefore, all other business categories' coefficients and standard errors stand in relation to this sector and coefficients show whether for example these businesses were more threatened than the baseline category (see the coefficients in the results sections of this dissertation). The reference categories for all other independent variables are further indicated in

the models (see results section in chapter 6). The one continuous variable investigated for this research (ABL) was investigated using Shapiro-Wilcox test for distribution and analyzed deploying linear regression. Subsequently, an ANOVA was run to test the underlying assumption that for example, businesses' type influenced the amount of businesses' losses.

5.2 Qualitative

Qualitative data informing this research derived from 74 interviews conducted between September 2018 and July 2019. Respondents for these interviews were purposively sampled from economic and political elites, as well as investigative journalists and drivers across Iraq (Bryman, 2016, pp. 374,412,474,478,587). Respondents reflect divisions within Iraq along sectarian and political lines, balancing an equal representation in interviews. Associated researchers further made the choice to interview 33 of the respondents in focus groups and 41 individually. The conduction of focus groups can be very effective, as economic, and political elites are challenged by other interviewees, collectively giving the researchers an idea of the phenomenon studied, contrary to a one-on-one setting (Bryman, 2016, pp. 412-420,474,501-503). On the other hand, one-on-one interviews can lead to more in-depth accounts and possibly expose very sensitive information relevant to the study. However, given the sensitivity of information shared, social desirability biases and ethical considerations remain very relevant to this study, as cooperation with the IS as a designated terrorist organization can have severe consequences for participants. This might have led participants to not reveal everything they know, or to state untruthfully in fear of harm, due to group dynamics in focus groups, or social desirability bias (Bryman, 2016, pp. 216-218). Respondents' identity was immediately anonymized, and interviewees' accounts are reported utilizing an allocated interviewee number for each participant.

Interview questions were furthermore semi-structured and open-ended, allowing respondents to freely reflect on the issues investigated, but setting the conversation frame so to be able to answer posed research questions in the analysis of this dissertation. Posed questions investigated how business for respondents changed throughout the last ten years and under IS rule specifically, including how businesses cooperated or managed IS held territory and trade routes. Furthermore, participants were asked to elaborate on the interconnections between the private sector, armed groups, and political power. Respondents with political functions were additionally asked what they believed key economic dynamics in Iraq were and what challenges after the defeat of the IS remain. To identify overarching similarities and topics of relevance, responses were coded

into themes corresponding to research questions (thematic analysis): *IS strategy, differences in governorates, key industries, cooperation with IS, agency after business size, and businesses' economic experience under IS*. Color coding was then deployed, and relevant answers are reported in the analysis chapter of the following chapter (Bryman, 2016, pp. 264-265,293-294,581-589). The frequency and significance of responses (content and themes) was decisive for the inclusion of answers.

6 Presentation of article

Note: This article conforms with the guidelines and standards of the International Security Journal, published by the MIT press. Therefore, a Chicago referencing style and a certain article structure is deployed in this chapter of the dissertation. The following article further consulted Aisha Ahmad's article in the same journal for guidance (see footnote one).

Why the Private Sector matters: Sustaining the Islamic State in Iraq

This article investigates the private sector's relationship and experiences with the Islamic State in the Iraqi governorates Nineveh and Salahaddin utilizing unique field data from the insurgents' 2013-2017 rule. It builds on contemporary rebel governance, civil war, and war economy theory to develop a theoretical understanding of the complex environment studied. This research then conflates quantitative and qualitative research methods in order to oppose some of the held beliefs about private businesses' involvement in conflict and develops a theoretical foundation for further discussion. This study's findings indicate that the private sector's societal functions, characteristics and primary considerations amidst conflict have been largely neglected in contemporary research. Thereby, this research suggests bridging the gap between purely social, economic, or political conceptualisations of conflicts, and focussing on nuanced investigations of private businesses' considerations, preferences, and actions in violent environments instead.

Keywords: *Rebel governance, Iraq, Islamic State, ISIS, civil war, private sector, war economy*

The role of the private sector in civil wars remains understudied and undertheorized¹. Despite numerous accounts of the Islamic State's rent creation, financial arrangements, resource extraction and terror funding, the role and agency of local businesses during its 2014 through 2017 rule is seldom touched upon². How then did business owners experience IS rule and interact with the non-

¹ Aisha Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia," *International Security* 39, no. 3 (2015); Ana Arjona, Nelson Kasfir, and Zachariah Mampilly, *Rebel Governance in Civil War* (Cambridge: Cambridge University Press, 2015), p. 289; James Worall, "(Re-)Emergent Orders: Understanding the Negotiation(s) of Rebel Governance," *Small Wars & Insurgencies* 28 (2017): p. 710; Stig Jarle Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*, DEID, AE Working Paper No. 1 (Oslo, 2007), p. 1.

² Jean-Charles Brisard and Damien Martinez, *Islamic State: The Economy-Based Terrorist Funding* (Toronto: Thomson Reuters, 2014); Tim Eaton et al., *Conflict Economies in the Middle East and North Africa*, Chatham House: The Royal Institute of International Affairs (London, 2019).

state armed actor in the Iraqi governorates Salahaddin and Nineveh? This article will therefore focus on the analysis of the relationship between the IS and the private sector in these two Iraqi governorates. The area is further known to be fertile and resource rich, bordering major market regions, important trade routes, borderlands, and thereby provide ideal evidence from a key region to the wider conflict³.

This research will point out that the IS failed the business community and locals. Whilst the international coalition's multi-faceted arrangements and efforts have well contributed to bringing IS rule in the region to an end, it will be argued that the IS's interaction with the private sector and locals has played a key role in the organization's territorial decline. Studying the private sector can not only reveal the degree of rebel groups' pervasion of local economic structures, but also its desire to perform governance in regulating economic activities in a region, indicating insurgents' levels of dependency on local communities' support and taxes, income diversification, criminal activities, and the private sector's cooperation⁴. Since most businesses (97%) in Iraq are small establishments that provide for local's primary needs, local employment rates, living standards, and local's well-being are directly linked to the performance and rebel's treatment of the private sector⁵. Private businesses in conflict and post-conflict zones do further have important social functions, that need to be considered and further theorized⁶.

As evidence from various contexts has shown, private businesses can have a decisive role in enabling radical Islamists' governance, as these religious insurgents can overcome tribal and political divisions to provide relative security, predictability and thereby can help create a profitable business environment⁷. These economic environments are often also sustaining local livelihoods, demanding insurgents to engage and navigate the societal systems of their host populations⁸. The IS in Iraq chose to deploy a radical coercive strategy, where members of the organization and

³ Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*, p. 9.

⁴ John Robert Flores, "Funding Terror: An Analysis of Financing Methods for Terror Groups Based in the Middle East" (Campbell University, 2015); Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*, p. 9.

⁵ KAPITA and GIZ, *Iraqi Industrial Overview*, KAPITA (Baghdad, 2019).

⁶ Jolyon Ford, *Regulating Business for Peace: The United Nations, the Private Sector, and Post-Conflict Recovery* (Cambridge: Cambridge University Press, 2015), p. 21.

⁷ Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*; Chris Tomlinson, "Unintended consequences: how Somalia's business community, in search of stability, and the USA, in search of terrorists, nearly created a radical Islamic state in the horn of Africa," *Global Business and Economics Review* 10, no. 2 (2008).

⁸ Eaton et al., *Conflict Economies in the Middle East and North Africa*, p. 5; Ana Arjona, "Civilian Cooperation and Non-Cooperation with Non-State Armed Groups: The Centrality of Obedience and Resistance," *Small Wars & Insurgencies* 28 (2017).

civilians alike feared punishment for breaking rules⁹, suggesting that the organization did not rely on popular support and did not care about locals' well-being.

This research will therefore investigate if the same holds true for the private sector. Did businesses lose under IS rule and how did the private sector experience changes after IS defeat? This study will point out that some businesses were threatened and lost extensively during IS occupation, while others appreciated the initially provided security and the IS's crack-down on corruption¹⁰. Furthermore, it will be established that most businesses appreciated the defeat of the IS and the subsequent positive changes to the economic environment in the region, before persisting problems and dropping oil prices severed the situation again. In discussing what these observations can contribute to understanding IS governance and the organization's territorial defeat, this article tries to bridge the existing research gap of private businesses' role in IS held territory and the wider Syrian civil war. As the civil war, rebel governance and war economy literature cannot account for these considerations, this research suggests a conflation of following theories. This paper builds on a quantitative questionnaire with closed- and open-ended questions, as well as semi-structured qualitative interviews from Iraq. Logistic regression, as well as thematic analysis will be deployed to examine the posed research questions.

For this research, the private sector is considered as the entirety of individuals' non-state businesses. Its contribution to the field lies in the unique analysis of 601 randomly sampled quantitative interviews of business owners that lived in the territory held by the IS between 2013-2017. These firsthand experiences are rare and relevant for the understanding of the relationships between businesses and the IS. As business types were classified according to the UN's industry sector classification, this study enables for comparability across cases, as well as to existing data on the private sector in Iraq (United Nations D. , 2008). Besides providing scarce¹¹ evidence from the field, the sole isolated role of the private sector in the light of numerous complex civil war dynamics presents a relevant key limitation of this research. However, it will provide an account of an understudied phenomenon by deploying logistic regression and qualitative interviews, investigating the causes of IS threatening, businesses' experiences of losses or positive changes under IS rule, as well as the circumstances for positive change after IS defeat. These findings are

⁹ Mara Redlich Revkin and Ariel I. Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State," *World Development* 132 (2020): p. 7.

¹⁰ Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."

¹¹ The nature and instability of civil war creates the fundamental problem of data scarcity. Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State," p. 7.

highly relevant for the theorizing and investigating of civil war and rebel governance contexts and will be discussed in relation to the hybridity of effects and causes in the relationship between the private sector and insurgents.

A businesses' perspective of conflict

To theorize businesses' role in civil wars, one needs to look at the interacting parties: one or several competing authorities or factions, and private businesses. As civil wars come with a decline in security and predictability¹², businesses must navigate fragmented supply chains and access to key markets to survive and remain competitive¹³. On the other hand, factions to the conflict must decide how to engage with local populations and the private sector, creating layers of so called "rebel governance." Rebel governance refers to non-state armed groups' purposive ordering of "social, economic, and political life"¹⁴ in a certain spatiality¹⁵, to a set degree, and aimed at achieving specific objectives. As a theoretical perspective, or as some argue, as a conflation of different theoretical strands, rebel governance allows the closer consideration of historical state institutions, the socio-economic setting of an insurgency, the populations and private sector's agency in competitive governance, as well as the functions and effects of physical and non-physical components of the rebel-individual relation¹⁶. Furthermore, this theoretical perspective does not remain constrained by state-borders or centre-periphery considerations, opening investigation for new hybrid forms of governance and socio-economic agency of individuals and businesses. As this research investigates if businesses experienced the IS coherently across both governorates, and whether different industry sectors varied in their experiences, a rebel governance perspective enables following considerations.

¹² Predictability is preferred by both civilians and businesses. Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*, p. 294.

¹³ Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."

¹⁴ Zachariah Mampilly, "Performing the Nation-State: Rebel Governance and Symbolic Processes," in *Rebel Governance in Civil War*, ed. Ana Arjona, Nelson Kasfir, and Zachariah Mampilly (Cambridge: Cambridge University Press, 2015), p. 77.

¹⁵ See Simon Mabon, "The world is a garden: Nomos, sovereignty, and the (contested) ordering of life," *Review of International Studies* 45, no. 5 (2019) for an account of how spatiality is ordered by "normative values" and human made law "nomos and nomoi," also exceeding spaces of rebels' actual territorial control.

¹⁶ Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State.;" Mara Redlich Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq," *Journal of Conflict Resolution* 65 no. 1 (2021); Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*.

By engaging with local populations and businesses, non-state armed groups shape distinct interconnections¹⁷, which can differ in scope and character¹⁸. Whether businesses will experience insurgents coherently or whether industries will make different experiences under insurgent rule is believed to depend on rebels' engagement strategies. These can be (1) of comprehensive scope, including the establishment of institutions, "informal and formal norms and rules of behaviour", service provisions, dispute resolution mechanisms, tax systems and more, or (2) of narrow scope, where certain services might even still be provided by central states, while rebels provide security or engage only for specific reasons that do not include establishing institutions and providing state-like services¹⁹. Of course, these scopes of engagement can differ widely in between the presented extremes and can change over the course of time, as both parties are pragmatic actors²⁰. Whilst scholars have traditionally granted local populations little agency in civil war contexts, contemporary rebel governance literature investigates local's agency, demanding for a closer look at private businesses too²¹. This research will thereby expose whether the IS considered in beneficial to rule comprehensively or only deployed a narrow approach of engaging with economic key actors as authors such as Eaton et al advocate for²².

The relation of businesses and rebels, or locals and rebels is further reciprocal²³, with both sides of these developing formal or informal "contracts" deploying a certain strategy of interaction, which will depend on the wider conflict environment as well as the actors' constitution, objectives, and assets. Furthermore, rebels' and businesses' choices and actions are influenced by local populations, the central state, time frames, drivers of divisions, economic dynamics, institutions,

¹⁷ Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*, pp. 292-95; Ana Arjona, "Wartime Institutions: A Research Agenda," *Journal of Conflict Resolution* 58 no. 8 (2014): p. 1381.

¹⁸ Adrian Florea, "Rebel governance in de facto states," *European Journal of International Relations* 16, no. 4 (2020). Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*.

¹⁹ Arjona, "Wartime Institutions: A Research Agenda," p. 1375; Mampilly, "Performing the Nation-State: Rebel Governance and Symbolic Processes," p. 77; Zachariah Mampilly, *Rebel rulers: Insurgent governance and civilian life during war* (Ithaca: Cornell University Press, 2011), p. 11; Mancur Olson, "Dictatorship, Democracy, and Development," *The American Political Science Review* 87, no. 3 (1993).

²⁰ Didier Péclard and Delphine Mechoulan, *Rebel Governance and the Politics of Civil War*, Swiss Peace Foundation (Bern, 2015), pp. 23-24; Eaton et al., *Conflict Economies in the Middle East and North Africa*, p. 5.

²¹ Scholars such as Paul Collier and Anke Hoeffler, "Greed and Grievance in Civil War," *Oxford Economic Papers* 56, no. 4 (2004); Eaton et al., *Conflict Economies in the Middle East and North Africa*; John E. Katsos and Yass AlKafaji, "Business in War Zones: How Companies Promote Peace in Iraq," *Journal of Business Ethics* 155 (2019) and Mary Porter Peschka, *World Development Report 2011: The Role of the Private Sector in Fragile and Conflict-Affected States*, The World Bank (New York, 2011) focus on economic aspects of the IS and dynamics in the regions, often side-lining local populations as mere recipients and victims of insurgents' actions and governance.

²² Eaton et al., *Conflict Economies in the Middle East and North Africa*.

²³ Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."

the engagement with other non-state armed actors, as well as groups' members²⁴. Each of these resulting strategies comes at a cost and requires each side to have adequate assets to generate agency in these environments. While Mampilly for example, suggest a force large enough to police populations²⁵ as a decisive factor, Ahmad highlights respective economic or social power to be of importance to rebels' governance²⁶. The degree to which rebels' interactions with businesses are equivalent to their interacting with local populations is dependent on the socio-economic structure of host communities and businesses characteristics²⁷. Following, the two sides' considerations, the IS could have engaged larger businesses and policed certain locations differently, in case it was following certain perspectives or had to consider where to best place its agents to advance its objectives.

The IS, for the purpose of this research is defined as a designated terrorist organisation²⁸, rebel group and extremist Salafi Jihadi insurgency, which follows the proclaimed goal of establishing a global caliphate²⁹. To achieve its objectives, it is deploying hybrid techniques of linking "military, political, social, and economic components," exploiting persisting Iraqi societal tensions and Syrian conflict dynamics for its interests³⁰. The insurgents are funding this enterprise by diversifying its income sources³¹, pointing towards a highly sophisticated coherent economic approach of balancing the costs and benefits of ongoing fighting and economic activities to fund the latter. The IS is thereby also causing several effects, creating a local war economy, which entails the extraction, transportation and allocation of resources and goods to sustain its fighting and state-

²⁴ Arjona, "Wartime Institutions: A Research Agenda."; Eaton et al., *Conflict Economies in the Middle East and North Africa*; Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."

²⁵ Mampilly, "Performing the Nation-State: Rebel Governance and Symbolic Processes."

²⁶ Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."

²⁷ This becomes evident when looking at evidence from economic elites' agency in Somalia and locals' experiences in Syria and Iraq. Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Arjona, "Wartime Institutions: A Research Agenda."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*; Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq."

²⁸ See justifications, individual members, and decisions on the organisations' listing: European Union, *COUNCIL DECISION (CFSP) 2020/1132*, Council Of The European Union, Brussels (2020); United States State Department, *Foreign Terrorist Organizations (FTO)*, Congressional Research Service (Washington, 2019); United Nations, *United Nations Security Council Consolidated List*, United Nations Security Council (New York, 2020).

²⁹ For an account of the development and objectives of the contemporary IS see Charles Lister, *Profiling the Islamic State*, Brookings Doha Center (Doha, 2014); Eaton et al., *Conflict Economies in the Middle East and North Africa*, p. 14; Petter Danckwardt, "Conceptualizing ISIS in international legal terms-implications, crises and failure of Westphalian notions of authority" (Stockholms Universitet, 2016).

³⁰ Lina Khatib, *The Islamic State's Strategy: Lasting and Expanding*, Carnegie Middle East Center (Beirut, 2015), p. 1.

³¹ Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*, p. 9.

like activities³², to achieve its objectives. An investigation of whether the IS performed rebel governance, whether businesses lost or profited from IS rule and how businesses experienced changes after IS defeat will highlight how embedded the private sector in IS war economy was and whether it can be reasoned that businesses cooperated with IS rule or not. The war economy of the IS, as some authors point out, goes beyond Eaton et al's and Brisard and Martinez' accounts of borderlands, resources and capital cities, the pure mobilization of resources and goods, by also including comprehensive laws ordering economic life, the exploitation and utilisation of human capital, and local business owners³³.

The literature therefore suggests that the IS considered it beneficial to engage with economic elites in Iraq to extract, transport and feed resources and goods into local and world markets to benefit mutually³⁴, as well as to tax locals and businesses to generate income³⁵. However, concrete data to address the private sector's relationship with the IS has not yet been presented. The latest research on Iraq suggests that the economic networks used by the IS date back decades and were simply taken over, first by the insurgents and after the IS's defeat by several factions³⁶. Since the first estimations of the IS's budget and its sources were presented by Brisard and Martinez³⁷, it became clear that the IS engaged not only in criminal networks but also local populations and their livelihoods through private businesses. This research will point out that the IS did surely employ aforementioned practices and trade routes, but also heavily relied on human capital and assets of local businesses to establish its governance.

This interplay between insurgents, locals and businesses amidst civil war shapes circumstances which the private sector must navigate just as local populations, as evidence from across the world has shown³⁸. This holds even more true in regions where most businesses are

³² Eaton et al., *Conflict Economies in the Middle East and North Africa*.

³³ Islamic State Archives and Jihadology, "Diwan Bayt al-Mal: Banks Administration Contract for Disbursement of Salaries," *The Islamic State Archives*, May 14, 2014, <https://islamicstatearchives.com/2021/04/05/diwan-bayt-al-mal-banks-administration-contract-for-disbursement-of-salaries/>; Aymenn Jawad Al-Tamimi and Aaron Y. Zelin, "The Islamic State Archives: Welcome," May 14, 2021, <https://islamicstatearchives.com/>; Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq."

³⁴ Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Eaton et al., *Conflict Economies in the Middle East and North Africa*.

³⁵ Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*, pp. 292-95.

³⁶ Eaton et al., *Conflict Economies in the Middle East and North Africa*, p. 14 state that the IS solely captured the "operating environment" of the Iraqi conflict economy, meaning smuggling and trade routes "pre-dating the US invasion".

³⁷ Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*, p. 10.

³⁸ As Ahmad and Hansen have established, businesses strive for predictability and security, just as local populations. Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*. However, the private sector can

“small scale establishments”³⁹, linking the livelihoods and well-being of locals to the economic performance of businesses and unique local economic structures. To a large degree, businesses’ activities must therefore be understood in relation to both insurgents’ objectives, strategies, funding sources and socio-economic choices, as well as businesses’ roles in local communities. Businesses function in societies can, just as rebel governance be very narrow, only employing a few local drivers for a resource extraction site in the countryside, or very fundamental, providing social security networks, creating value and knowledge for locals, and improving living standards. Examples of very different cases might here be the economic elite in Somalia⁴⁰, living abroad and managing profitable business in civil war from afar, or small businesses deeply embedded in local communities in Iraq⁴¹. One can imagine that interests, societal functions, and strategies of these companies vary widely, demanding for more research how these actors engage with insurgents and why.

Whether businesses after all cooperate with rebels or not, depends on their calculation of costs and profits, as well as their desire for predictability and security as Ahmad and Hansen show⁴². When Islamists or rebels can provide cheaper checkpoint or security fees, businesses might align with the rebels. On the other hand, rebels might want to work with the private sector in order to benefit mutually, as civil war accounts from Collier, Hoeffler and Florea in resource rich contexts show⁴³. Ahmad and Hansen established further that this cooperation also depends on businesses size, meaning their revenue and their employees, as large establishments are believed to have more agency than small establishments, which this study tries to prove in the investigated context⁴⁴.

also play a very detached role from locals’ livelihoods, being integrated in war economies or extortion networks to fund rebels’ objectives as supported by Eaton et al., *Conflict Economies in the Middle East and North Africa*; Arjona, "Wartime Institutions: A Research Agenda."; Katsos and AlKafaji, "Business in War Zones: How Companies Promote Peace in Iraq."

³⁹ KAPITA and GIZ, *Iraqi Industrial Overview*, p. 9; Katsos and AlKafaji, "Business in War Zones: How Companies Promote Peace in Iraq," p. 45.

⁴⁰ Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*.

⁴¹ KAPITA and GIZ, *Iraqi Industrial Overview*, p. 9. and Katsos and AlKafaji, "Business in War Zones: How Companies Promote Peace in Iraq." present the business structure in Iraq, revealing that most businesses are small establishments and business owners are at the bottom of the pyramid. Collier and Hoeffler, "Greed and Grievance in Civil War."; Florea, "Rebel governance in de facto states."

⁴² Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*;

⁴³ Collier and Hoeffler, "Greed and Grievance in Civil War."; Florea, "Rebel governance in de facto states."

⁴⁴ Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*.

Businesses strive for alternative ways becomes especially visible when considering the social setting of the private sector in the Nineveh and Salahaddin, with distrust for the Iraqi central state and its weak service and security provisions being traditionally strong for local Sunni populations post the US-invasion⁴⁵. This enabled the IS to easily dissolve central state authority⁴⁶, arranging its own state-like institutions, collecting taxes, recruiting fighters, controlling economic practices, as well as food production and resource extraction sites, plus the use of existing infrastructure and trade routes for revenues creation⁴⁷. With a questionable relationship between rebels, locals, and businesses in place, mostly due to the IS's brutal practices and dissidents amongst the population⁴⁸, the insurgents could additionally have deployed "narrower" engagement methods⁴⁹. The involvement of local economic key players to administer checkpoints, targeted extortions, and other forms of rent creation⁵⁰, would allow the IS and allied private sector actors to create profits well beyond their controlled territory.

Despite this existing evidence, the interconnections of "business networks and Islamist groups remain undertheorized in the civil war literature"⁵¹. The scarce existing literature suggests that under dramatic changes that civil wars bring, businesses foremost strive for stability and security, and are concerned with a stable market environment, where managing supply chains, profit margins, access to target markets, labour-, transport-, and selling costs are calculatable and profitable⁵². This can lead businesses to cooperate and enter agreements with rebels, that can come in various forms. In their strive for stability, businesses interact directly and informally with

⁴⁵ See the following authors for accounts of Sunni dissatisfaction post-US invasion: Lars Erslev Andersen, "The Locals Strike Back: The Anbar Awakening in Iraq and the Rise of the Islamic State," in *Reconfiguring Intervention*, ed. Louise Wiuff Moe and Markus-Michael Müller (London: Palgrave Macmillan UK, 2017); Sarang Hamasaeed and Garrett Nada, "Iraq Timeline: Since the 2003 War," *United States Institute of Peace*, May 29, 2020, <https://www.usip.org/iraq-timeline-2003-war>.

⁴⁶ This aspect is especially relevant considering the ethnic rifts in Iraqi society and possible recruitment of the majority Sunni populations in the captured governorates: Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."

⁴⁷ Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*.

⁴⁸ Revkin and Ahram intensely discuss and evaluate the existence of a social contract between the IS and local populations: Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."

⁴⁹ Arjona specified "rebelocracy" and "aliocracy" as two valuable distinctions in rebels' engagement strategies: Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*.

⁵⁰ Lister, *Profiling the Islamic State*, p. 23; Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."; Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*; Eaton et al., *Conflict Economies in the Middle East and North Africa*, p. 44.

⁵¹ Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia," p. 90.

⁵² Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia," pp. 93-94; Collier and Hoeffler, "Greed and Grievance in Civil War," pp. 563-95; Arjona, "Wartime Institutions: A Research Agenda," p. 1374.

conflict factions, achieving non-binding agreements which can either fuel or reduce conflict, bringing development, employment, value, and foreign direct investment for local communities, or engaging in profit maximisation or even criminal activities, bypassing, and neglecting the well-being of locals⁵³.

Businesses in Iraq had to navigate unstable security situations, high fragmentation and mistrust between Popular Mobilisation Forces, Kurdish Forces, Iraqi Army and Sunni tribal forces⁵⁴. Especially with substantial corruption and Sunni Muslims sidelined from the Shia dominated central government in Baghdad, many business owners hoped for better conditions, including more security, justice, and rule of law under the IS⁵⁵, also tolerating increased sectarian violence and the exploring of alternative security provision networks⁵⁶. Another considerable factor for the business community might have also been the IS's vast territorial control and management of trade routes, connecting Syria and Iraq, as well as being able to conflate criminal activities with conventional economic practices across frontlines and borders⁵⁷. The IS built and captured strong ties to formal and informal economic networks from the Baathist era, involving experienced actors across tribal, ethnic, and political divisions to establish corridors for profit maximization, making the insurgents highly competitive partners for the business community⁵⁸.

⁵³ Katsos and AlKafaji, "Business in War Zones: How Companies Promote Peace in Iraq," pp. 41-42, 45; Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*.

⁵⁴ Eaton et al., *Conflict Economies in the Middle East and North Africa*, pp. 9, 14; Katsos and AlKafaji, "Business in War Zones: How Companies Promote Peace in Iraq," p. 45; Andersen, "The Locals Strike Back: The Anbar Awakening in Iraq and the Rise of the Islamic State."; Hamasaeed and Nada Iraq Timeline: Since the 2003 War.

⁵⁵ Revkin and Ahran, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."; Hamasaeed and Nada Iraq Timeline: Since the 2003 War; Katsos and AlKafaji, "Business in War Zones: How Companies Promote Peace in Iraq."; Khatib, *The Islamic State's Strategy: Lasting and Expanding*; Stephen J. King, *The Arab Winter: Democratic Consolidation, Civil War, and Radical Islamists* (Cambridge: Cambridge University Press, 2020), pp. 251-83.

⁵⁶ For an account of Sunni dissatisfaction and sectarian grievances see Andersen, "The Locals Strike Back: The Anbar Awakening in Iraq and the Rise of the Islamic State."; B.K. Dougherty, "De-Baathification in Iraq: A Lesson in How Not to Pursue Transitional Justice," *Middle East Institute*, June 5, 2014, <http://www.mei.edu/content/de-bathification-iraq-how-not-pursue-transitional-justice>; Toby Dodge, *Iraq – From war to a new authoritarianism* (London: Routledge, 2017); International Crisis Group, *Iraq's Secular Opposition: The Rise and Decline of al-Iraqiya*, Middle East Report No. 127. (Amman/Bruxelles, 2012), [http://www.crisisgroup.org/~media/Files/Middle%20East%20North%20Africa/Iraq%20Syria%20Lebanon/Iraq/127-iraqs-secular-opposition-the-rise-and-decline-of-al-iraqiya.pdf](http://www.crisisgroup.org/~/media/Files/Middle%20East%20North%20Africa/Iraq%20Syria%20Lebanon/Iraq/127-iraqs-secular-opposition-the-rise-and-decline-of-al-iraqiya.pdf). See Hamasaeed and Nada Iraq Timeline: Since the 2003 War.

⁵⁷ Eaton et al., *Conflict Economies in the Middle East and North Africa*; Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*; Danckwardt, "Conceptualizing ISIS in international legal terms-implications, crises and failure of Westphalian notions of authority."; Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq."

⁵⁸ Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*; Eaton et al., *Conflict Economies in the Middle East and North Africa*, pp. 9, 14.

In the context of Iraq, 97% (2018) of businesses are small establishments with under nine employees⁵⁹, consequently linking their considerations closely to those of many locals, seeking predictability and stability amidst civil war⁶⁰. This specific setting justifies considering Collier and Hoeffler⁶¹, which argue that organisations that rely on popular support are more likely to develop service delivery and accountability. Observing the IS's usage of excessive force, harassment, and crimes against humanity⁶², especially against Shia Muslims and other minorities, suggests that the IS did not rely on the support of local populations⁶³. Evidence from qualitative interviews do nevertheless show that many locals appreciated, or at least did not initially mind IS presence when they were free to leave under the IS's newly established caliphate⁶⁴. On the base of these actions and the treatment of opposition, it can be expected that Shia and Kurdish businesspeople were forced to abandon their economic activities and livelihoods, while Sunni Muslims initially profited from IS rule and assets⁶⁵. However, perceptions evidently changed after the IS failed to provide basic services such as security for locals when the fighting and victories of the international coalition against the insurgents intensified⁶⁶. It can therefore be argued that the IS provided little more than protection and a brutal enforcement of Sharia law in return for locals' and businesses obedience⁶⁷.

Whilst this authoritarian interaction style might be true towards locals, some businesses, might have further shared the rationale of profit maximization and the calculated use of violence

⁵⁹ KAPITA and GIZ, *Iraqi Industrial Overview*, p. 9.

⁶⁰ Katsos and AlKafaji, "Business in War Zones: How Companies Promote Peace in Iraq," pp. 48-52; Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*, pp. 2, 9.

⁶¹ Collier and Hoeffler, "Greed and Grievance in Civil War."

⁶² Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq."; Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."; Andersen, "The Locals Strike Back: The Anbar Awakening in Iraq and the Rise of the Islamic State."

⁶³ The IS ruled coercively, suggesting that it did not rely on popular support to sustain its activities. Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."; Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq."

⁶⁴ Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq."; Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."; Andersen, "The Locals Strike Back: The Anbar Awakening in Iraq and the Rise of the Islamic State."

⁶⁵ Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq."; Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."

⁶⁶ Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq," p. 1.

⁶⁷ Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."

with the insurgents, to ensure uninterrupted business⁶⁸. As oil rents are the dominant source of income⁶⁹ in the case of Iraq, the transport, manufacturing, and energy industrial sectors might have been targeted specifically by the IS⁷⁰. The investigated governorates Salahaddin and Nineveh provide evidence from various extraction sites, refineries, and transport routes into neighbouring Syria and to local markets⁷¹. An investigation of this specific region will reveal how the IS interacted with specific business types and how businesses experienced the IS. A focus on the linkages between the private sector and the insurgents will help highlight if only big businesses prospered, whether large establishments have more agency in civil wars, how comprehensive and sustainable the IS's involvement and interaction approach within regulating economic practices was, and how the organisation decided to distribute its profits across the wider societal spectrum⁷².

The study of IS governance and its actions and choices in the case of Iraq, will furthermore add to the contemporary rebel governance and civil war theory. The IS had resource rich and fertile lands⁷³, a population of around five million locals to engage with, foreign funding and fighters⁷⁴, a radical ideology⁷⁵, political and ethnical dissatisfaction within the central state to harvest⁷⁶, high degrees of societal pervasion and the desire to engage comprehensively, setting up various institutions, introducing taxes and laws, as well as Islamic judiciaries⁷⁷ in captured territories. The

⁶⁸ Eaton et al., *Conflict Economies in the Middle East and North Africa*, p. 5; Collier and Hoeffler, "Greed and Grievance in Civil War."

⁶⁹ Income for the Iraqi state, over which different factions are fighting. Eaton et al., *Conflict Economies in the Middle East and North Africa*, p. 5.

⁷⁰ Even though only 20% of Iraq's oil wealth is found in the north of the country. International Crisis Group, *Iraq: Fixing Security in Kirkuk*, International Crisis Group (Brussels, 2020), p. 19.

⁷¹ Logan Bulls, Bridget McConville, and Bradley Miller, "ISIS Oil and How ISIS has Influenced the Oil Trade. November," May 14, 2018,

<https://www.arcgis.com/apps/Cascade/index.html?appid=bfb789da3fd4ce0896cc8f0439e9e30>; Erika Solomon, Robin Kwong, and Steven Bernard, "Inside Isis Inc: The journey of a barrel of oil," *Financial Times*, 29 February. 2016, <https://ig.ft.com/sites/2015/isis-oil/>.

⁷² Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Katsos and AlKafaji, "Business in War Zones: How Companies Promote Peace in Iraq."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*; Eaton et al., *Conflict Economies in the Middle East and North Africa*; Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*.

⁷³ Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*.

⁷⁴ In the form of funding and foreign fighters: Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*. Revkin and Ahrum, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."; Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq."

⁷⁵ Danckwardt, "Conceptualizing ISIS in international legal terms-implications, crises and failure of Westphalian notions of authority."

⁷⁶ Hamasaeed and Nada Iraq Timeline: Since the 2003 War; Khatib, *The Islamic State's Strategy: Lasting and Expanding*; King, *The Arab Winter: Democratic Consolidation, Civil War, and Radical Islamists*.

⁷⁷ Islamic State Archives and Jihadology Diwan Bayt al-Mal: Banks Administration Contract for Disbursement of Salaries; Al-Tamimi and Zelin The Islamic State Archives: Welcome; Revkin, "Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq."

non-state armed actor furthermore engaged in criminal activities like oil smuggling, kidnapping and corruption, besides striving for integration into mainstream economic practices through i.e., banking systems⁷⁸. Florea⁷⁹ and Weinstein⁸⁰ show that these aspects are often theorized as opposing or excluding each other in suggesting that if rebels have “access to lootable mineral resources,” they are less likely to provide governance. On the other hand, these authors suggest that insurgents are more likely to do so when receiving considerable assistance from abroad, when able to access “immobile sources of income”, or when establishing long time territorial control. For the IS however, all these factors are true⁸¹, leaving a research gap on how the organisation would interact with businesses, given its hybrid characteristics.

As already established, central questions to this research are therefore whether the IS followed a coherent strategy of maximizing its own rents, or if it was improving the situation for local businesses too, effectively increasing living standards of local populations and outgoverning competing authorities⁸². By looking at its practices of interaction with businesses, this study aims to establish if the IS deployed a coherent engagement strategy, if certain industry sectors were targeted and whether businesses profited off IS presence. Businesses’ experiences with changes after IS defeat and individuals’ accounts of the situation inform this research to further establish how the IS interacted with the private sector.

Methodology

This paper presents both quantitative and qualitative data to answer the posed research questions. After first presenting deployed quantitative methods first, building on 601 individual business owners’ experiences under IS rule, this paper is secondly going to present 74 qualitative interviews that were conducted in the region, and which aim to contextualize and understand the IS’s interaction with the business community. Whilst respondents for the quantitative survey were randomly sampled according to business size quota within both governorates⁸³, the qualitative

⁷⁸ Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*.

⁷⁹ Florea, "Rebel governance in de facto states." explores differences in engagement strategies across the world and over time.

⁸⁰ Jeremy M. Weinstein, *Inside Rebellion: The Politics of Insurgent Violence* (Cambridge: Cambridge University Press, 2007). links violence and rebel’s behaviour to lootable resources.

⁸¹ The IS ruled over 30% of Iraq’s territory, including oil fields, an estimated 5 Mio civilians to tax, Iraq’s most fertile lands and received financial support from abroad Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*, p. 9; KAPITA and GIZ, *Iraqi Industrial Overview*.

⁸² Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*, pp. 292-95.

⁸³ As visible from Iraq’s industry directorate, small establishments are considered to have less than 9 workers, middle sized businesses between 10 and 29 and large businesses more than 30 employees: Industrial Statistic Directorate

interviews build on purposive sampling⁸⁴ of influential economic and political elites, as well as investigative journalists and drivers, trying to balance different ethnicities and experiences in the region. The sampling choices and data collection in 2019 was undertaken by associated researchers of NMBU's international "war economies" project. All responses of participants in this study were anonymized, given the sensitive character of the phenomenon studied⁸⁵. The mixed methods set up of this study aims to identify how the IS interacted with the private sector and if certain businesses experienced IS rule differently. Whilst quantitative data will help to show if business owners or specific sectors were threatened, lost due to the IS, and experienced economic changes after the IS's defeat, qualitative data will help understand how and why these dynamics unfolded, and whether they were purposively precipitated by one of the actors or occurred as an effect of actors' relationships. Survey questions and interview guidelines were worked out by the local associated researchers for this study and build on scarce prior research on the private sector⁸⁶.

The chosen dependent variables for this research are "Islamic State threatening" (IST), "business loss due to the Islamic State" (BL), the "amount of business loss" (ABL), and "changes after the Islamic State" (CaIS)⁸⁷. Whilst *IST* and *BL* were recorded as binominal categories (0;1), *ABL* was recorded as a continuous variable and *CaIS* was recorded on a scale from "0" (negative change) over "1" (no tendency or no change) to "2" (positive change). Independent variables included were the type of businesses (BT), coded according to the UN industry sector classification standard⁸⁸, businesses' revenue (size) (BR), recorded in three categories, as well as the respective governorate (Gov), sex (Sex), education (Educ), employment (Emp14/17), and Islamic State threatening (IST), so to isolate significant effects on dependent variables. All independent variables except BT, Educ and BR were recorded as binominal variables (0;1), enabling for the clear interpretation of estimates' coefficients deploying logistic regression. This study's analysis thereby allows for the development of clear assumptions that will answer the posed research questions.

Iraq, *Small industrial establishments in the private sector: statistics for the year 2017*, Central Statistical Organisation Iraq (Baghdad, 2018a), p. 4; Industrial Statistic Directorate Iraq, *Industrial Large Establishments Statistics for 2017*, Directorate of Industrial Statistics (Baghdad, 2018b); KAPITA and GIZ, *Iraqi Industrial Overview*, p. 8.

⁸⁴ Please see Alan Bryman, *Social research methods*, 5th ed. (Oxford: Oxford university press, 2016), pp. 374, 412, 74, 78, 587 for the utilised purposive sampling and interview approach.

⁸⁵ See Bryman, *Social research methods*, pp. 77, 120-34 for ethical standards in conflict research.

⁸⁶ Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*.

⁸⁷ Please see appendix Table 1 for all dependent and independent variables.

⁸⁸ Department of Economic and Social Affairs, *International Standard Industrial Classification of All Economic Activities (ISIC)*, United Nations (New York, 2008).

Furthermore, this research uses X^2 tests of independence (for nominal variables), Shapiro-Wilcox' test and ANOVA (*ABL*), as well as both generalized linear regression and linear regression using R commander for quantitative analysis. Generalized linear models of multinomial logistic correlations produce coefficients that enable for clear interpretation of ratios between categories. The results, even though observations in some business categories are low and variances therefore high, give a clear oversight and enable to answer the investigated research questions. AIC-, pseudo- R^2 -⁸⁹, and F statistic values were further used to single out statistical models providing the best explaining power of variation in dependent variables.

The qualitative component of this research is based on semi-structured and open-ended interviews with 74 individuals of which 33 were interviewed in focus groups and 41 individually. The purpose of these sampling decisions was to record how respondents make sense of the private sector under IS rule and the economic situation in Iraq (1) collectively and challenged in a forum, but also (2) individually and discretely⁹⁰ in one-on-one interviews⁹¹. As with all qualitative interviewing, social desirability biases, ethical considerations (especially given the sensitivity of information shared), and respondents' reservations to reveal their possible involvement⁹² in IS practices must be taken into consideration. The author tries to address these problems by assigning all interviewees, regardless of whether interviewed in a focus group or alone, a single number, serving the anonymization and undistinguishable reporting of the most relevant responses. However, the possibility remains, that focus group participants either did not reveal all their experiences or just a biased version of them due to social desirability bias, group dynamics or fear of harm⁹³. The questionnaire investigated how business has changed throughout the last ten years and how goods were traded across zones of different sectarian and political control between 2013-2017. Respondents with political functions were asked what key industry sectors for the survival

⁸⁹ Pseudo R^2 values are calculated based on Nagelkerke's: Nicolaas J. D. Nagelkerke, "A note on a general definition of the coefficient of determination," *Biometrika* 78 (1991). For a comparison of logistic regression with pseudo- R^2 values please see Thomas J. Smith and Cornelius M. McKenna, "A Comparison of Logistic Regression Pseudo R^2 Indices," *Multiple Linear Regression Viewpoints* 39, no. 2 (2013). Please note that pseudo- R^2 values as a measure of deviance strongly underestimate the explaining power of a model since null and full likelihoods of the intercept-only model and full model are compared, as Hosmer and Lemeshow point out. David W. Hosmer and Stanley Lemeshow, *Applied Logistic Regression* (Hoboken: John Wiley & Sons, 2000), pp. 164-67.

⁹⁰ For an account of qualitative interviewing and the approaches deployed please see Bryman, *Social research methods*, pp. 412-20, 74, 501-03.

⁹¹ Please note that these decisions were made by associated researchers.

⁹² The IS is a designated terrorist organisation, paying fees and taxes to the group can be considered support thereof and might therefore be withheld by individual respondents working between 2014-2017.

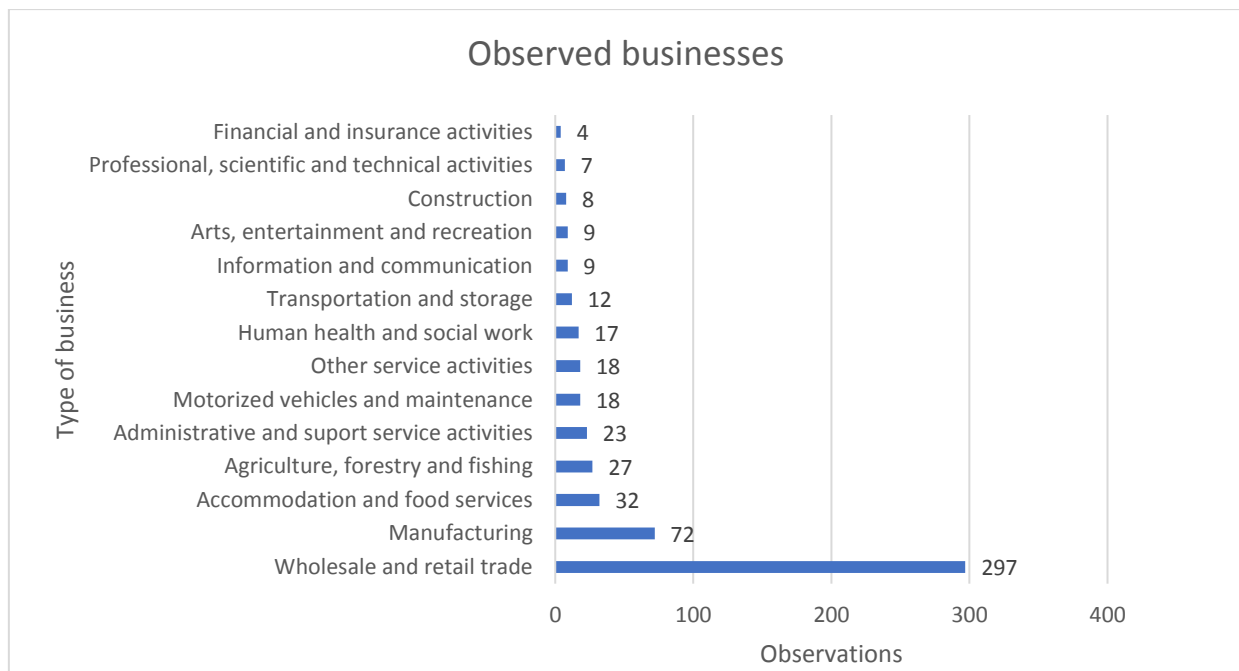
⁹³ Bryman, *Social research methods*, pp. 216-18.

of the Iraqi state are and what challenges after the defeat of the IS must be faced. Respondents were further asked to elaborate on the interconnections between the private sector, armed groups, and political power. The interviews were conducted across the region from summer 2018 to summer 2019. Interviews were coded into themes that mirror the determinants of business owners' experiences in the quantitative questionnaire, so to report overarching similarities and topics of relevance for understanding the posed research questions.

Data from Nineveh and Salahaddin

The quantitative survey examined 553 businesses⁹⁴. As visible below (Figure 1), most of the businesses were active in the wholesale and retail trade industry, including businesses trading food, fabrics, hardware, and household goods. A majority of 395 (71%) businesses were located in Nineveh and 158 (29%) in Salahaddin governorate. Of all respondents, 32 (6%) indicated to have had no formal education at all, while 119 business owners (22%) stated their highest formal education to be primary school, 176 individuals (32%) secondary school, 100 (18%) attended an institute and 126 (23%) studied at a university. Business owners were further predominantly male (93%) and actively working (88%) during the IS' rule from 2014 to 2017.

Figure 1. Observed businesses (N=553).



⁹⁴ The largest dataset examined IST (N=553), followed by datasets to examine CaIS (546), BL (N=448), and ABL (N=372).

For those businesses that further indicated their revenue⁹⁵, 326 (74%) were small businesses with net incomes under \$840⁹⁶, 114 (26%) medium sized and 2 (0%) large with an income of more than \$4200.

In both governorates, around half of the respondents (50% in Salahaddin and 45.6% in Nineveh) were personally threatened by the moral police or armed members of the IS, demanding the business owners to pay zakat⁹⁷, looting businesses, demanding labour, and oppressing individuals. Business owners had to stop the sale of certain products the IS prohibited to sell, such as cosmetics and tobacco, and were often jailed for minor offenses such as cutting the hair of customers in a way the IS did not approve of, or smoking. Of 448 further examined businesses for losses, 70% stated to have experienced losses and problems in their business under IS rule. Especially establishments based in Salahaddin (96%) reported losses in their business, whilst 61% of respondents in Nineveh made the same experience. 59% of respondents that were threatened by the IS further reported losses in their business, compared to only 16% of individuals that were not threatened by the IS. Changes after the IS were recorded for 546 business owners, of which 47% indicated a positive change after the defeat of the IS, whilst only 1% experienced negative developments for their businesses. All those respondents indicating a negative change in their business (8 or 1%), were further located in Nineveh. The following table (Table 2) shows X² tests run for independence of categorical variables.

⁹⁵ N=442

⁹⁶ Note: This paper works with the USD to Iraqi Dinar rate 1 to 0.00084 (as of June 2019 when interviews were conducted).

⁹⁷ Zakat is a fee for the services provided by the IS. Resisting its payment can lead to harsh punishment and execution under the IS: Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State," p. 5.

Table 2. Chi-Square values of all independent and dependent variables⁹⁸. Bold values stand for $p < 0.05$. Note: ABL_S and ABL_N stand for ABL investigated in the respective Governorate. Degrees of freedom in parentheses, sample size in foot note 99).

	Independent Variables					Dependent Variables			
	Gov(1)	Sex	Educ	Emp14/17	BT	IST	BL	BR	CaIS
Sex (1)	15.86								
Educ (4)	2.99	13.23							
Emp14/17 (1)	193.84	5.56	4.02						
BT (13)	131.9	55.66	127.47	105.83					
IST (1)	0.89	0.32	7.62	9.94	57.02				
BL (1)	68.8	8.98	12.86	24.36	35.23	85.37			
BL_S			6.71		22.56	0.14			
BL_N		2.43	13.18		28.33	95.28			
BR(2)	103.82	11.04	11.46		43.68	1.50	10.09		
CaIS (2)	11.46	2.83	9.13	4.98	26.09	7.52	0.09	4.30	

The X^2 test for independence was not run for BL and Gov in the respective governorates since the two governorates were investigated separately. Furthermore, all respondents from Salahaddin governorate were male, making an investigation of sex and BL_S unnecessary. Independence of employment between 2014 and 2017 was also not investigated in the two respective governorates and in relation to businesses' revenue since all respondents in that category were working within this time frame. Dark grey fields in the table stand for the exact same category and were therefore not examined. It is further noteworthy that observations (N) for the different lines differ⁹⁹ and that tests for independence of variables that are both dependent and independent, were conducted using the smaller respective dataset¹⁰⁰.

The decision to investigate the two governorates individually was made after businesses' losses, their revenue, and their experiences after IS defeat varied significantly in between Nineveh and Salahaddin.

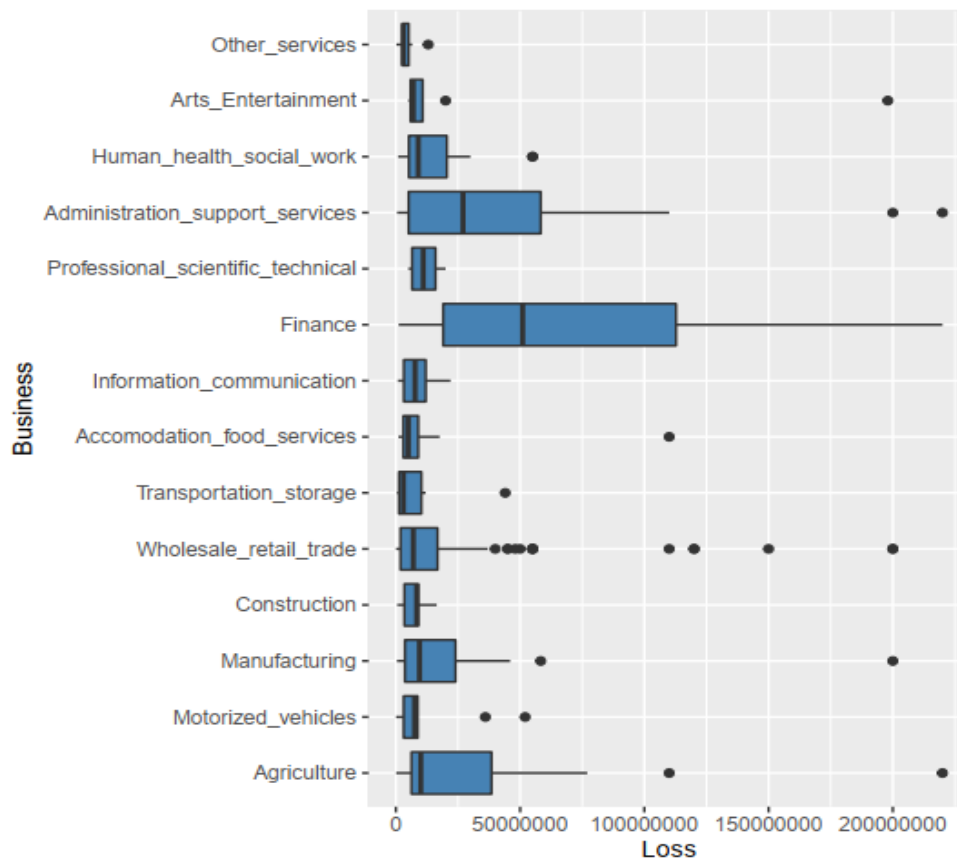
⁹⁸ BL and ABL were investigated separately in both governorates, making an investigation of Gov unnecessary. Furthermore, respondents in Salah ad-Din were exclusively male, leading to sex being excluded from the analysis there.

⁹⁹ IST (553), BL (448), BL_S (157), BL_N (391), BR (442), CaIS (546).

¹⁰⁰ For example, for a X^2 test of IST and BL, the BL dataset with $N=448$ was utilized.

372 business owners further indicated the amount of money lost during IS rule, differing from 25000 IQD (\$21) to 1.1Bn IQD (\$8.4Mio). The mean loss due to the IS amounted to 18.4 (SE:34.7) Mio IQD (\$15.456). Values can further be seen below (Figure 2). A Shapiro-Wilk normality test for businesses' amount of loss revealed an abnormal distribution ($W = 0.21452$, $p\text{-value} < 2.2e-16$) for ABL $N=372$). Data from Nineveh and Salahaddin businesses respectively allows for observing whether the IS followed a coherent strategy of engagement and cooperation with the business community, acted arbitrarily or pragmatic.

Figure 2. Businesses' loss after business type. Two outliers with a loss of IQD 1Bn each (in the wholesale and retail trade and administration and support services industries) are not shown ($N=372$).



Finding patterns between businesses and rebels

The results, as visible below (Table 3) show that business owners working in the wholesale and retail trade industry and those providing other services were significantly more threatened than

other businesses. In contrary, business owners active in the manufacturing and accommodation and food service sector were significantly less threatened. It is further noticeable that business owners working during the IS' 2014-2017 rule, were less threatened than those that did not.

Furthermore, businesses owners in the wholesale and retail trade industry, as well as businesses that were threatened by the IS were also significantly more likely to experience losses in their business, whilst the administration, support services, and other services industries were less likely to do so. Especially noteworthy is that businesses located in Nineveh were 3.5 times less affected by any losses in their business, pointing towards different experiences in different governorates. As further visible, the wholesale and retail trade industry also experienced significantly more positive change after the IS' defeat than other sectors. Since model (2) (Table 3) illustrates that businesses in Nineveh governorate were significantly less subject to experience losses, both governorates were investigated individually. Appendix Table 6, Models (3) and (4) therefore showcase that within the respective governorates, only one significant effect was found: businesses in Nineveh governorate were more likely to experience losses, when they were also threatened by the IS.

Table 3. Best fitting models for the dependent variables Islamic State threatening, business loss due to the IS, and changes after IS defeat: Multinomial Logit Analysis.

Independent Variables		Dependent Variables		
		IS Threat Ratio (1), Loss Ratio (2) and Positive Change Ratio (3)		
		Multinomial Logit Coefficient (Standard Error)		
		(1) IST	(2) BL	(3) CaIS
BT	Ref.-Cat: BT _{WRT}	0.8(0.33)*	2.49(1.05)*	3.87(0.41)***
	BT _{AFF}	-0.77(0.43)	16.69(1050.13)	16.70(3412.21)
	BT _{MV}	-0.89(0.54)	0.17(0.60)	-1.03(1.11)
	BT _M	-1.19(0.3)***	-0.06(0.33)	0.40(1.09)
	BT _C	-1.62(0.86)	0.01(1.07)	16.70(6268.63)
	BT _{TS}	-0.22(0.61)	-1.76(1.03)	16.70(5118.32)
	BT _{AFS}	-0.81(0.40)*	-0.98(0.54)	16.70(3237.11)
	BT _{IC}	1.92(1.07)	15.50(1956.41)	16.70(5910.12)
	BT _{FI}	-0.37(1.04)	15.48(3007.62)	16.70(8865.19)
	BT _{PST}	-0.002(0.8)	17.27(1911.71)	16.70(6701.45)
	BT _{ASS}	-0.15(0.47)	-1.85(0.81)*	16.70(3697.04)
	BT _{HHSW}	0.90(0.55)	-1.23(0.72)	16.70(4300.25)
	BT _{AE}	15.28(471.26)	-0.92(1.15)	16.70(5910.12)
	BT _{OS}	1.56(0.65)*	-1.41(0.69)*	16.70(4300.25)
Gov	Ref.-Cat: Gov _S		-3.52(0.66)***	
	Gov _N			
Sex	Ref.-Cat: Sex _F		0.40(0.46)	
	Sex _M			
Educ	Ref.-Cat: Educ _{No}			
	Educ _P		-0.47(0.56)	
	Educ _S		-0.07(0.53)	
	Educ _I		0.35(0.57)	
	Educ _U		0.61(0.56)	
Emp14/17	Ref.-Cat: Emp14/17 _{No}			
	Emp14/17 _{Yes}	-0.87(0.32)**	0.18(0.88)	
IST	Ref.-Cat: IST _{No}			
	IST _{Yes}		2.41(0.29)***	
N		553	548	546
Pseudo R ²		0.16	0.49	0.09
AIC		723.63	483.24	104.8

Cells contain ratios with standard errors in parentheses. *p < 0.05, **p < 0.01, ***p < 0.001. Significant values indicate the variables' association and confirms the existence of a relevant relationship between these categorical variables. The wholesale and retail trade industry was set as the residual category. For variables and determinants clarification, please consult appendix table one.

The effect businesses' revenue had on the three dependent variables, was investigated in three further models that are displayed under appendix Table 4¹⁰¹. The models show that businesses' revenue had no significant effect on threatening by the IS, the likelihood of experiencing losses due to the IS or experiencing a specific economic change after IS' defeat. An investigation of businesses' amounts of loss due to the IS was on the other hand with around 33.5

¹⁰¹ BR was investigated separately due to a considerably lower observation number (N=442).

Mio IQD (\$28.000) significantly higher for the wholesale and retail trade-, as well as with 84.8 Mio IQD (\$71.000) for the administration and support service industry, as visible in the appendix¹⁰². A sub-investigation of the same loss amounts in both governorates revealed that the administration and support service industry lost with 86.2 Mio IQD (\$72.408) especially high amounts in comparison to other industries in Salahaddin, while in Nineveh only business owners' education, primary and secondary education, proofed significant and resulted in 29.1 Mio IQD (\$24.444) and 21 Mio IQD (\$17.640) less losses for these business owners. An ANOVA test to proof these assumptions was then run and proofed a significant interaction, $F(13,358)=1.81, p=0.04$.

Understanding the private sector's relation to the IS

Interview respondents experienced the IS as a coherent actor. Business owners were threatened across Salahaddin and Nineveh by the moral police or regular militants when the insurgents established tight control and Sharia law over locals and economic practices¹⁰³. Business owners that were not directly forced to abandon their business due to their religion or political opinions¹⁰⁴, were tightly restricted and coerced by the IS. This first and foremost entailed the introduction of regular zakat payments to the IS, the adoption of tight regulations for product sales, forced labour and cruel punishments for even minor offenses. The IS further confiscated all kinds of goods for redistribution amongst its soldiers and members, especially estates and luxury products such as TVs and gold accessories. Business owners stated that they had to tailor traditional Muslim clothing only, had to terminate giving certain haircuts, selling cigarettes and political books, cosmetics like the birth control pill, were forced to sell products for lower prices, and faced confiscation of goods on a Sharia law and arbitrary basis. Breaching the rules or engaging in "un-Islamic" activities caused many respondents and their families' incarceration, torture, punishment like cleaning activities, transportation of confiscated goods and the digging or destruction of graveyards and tunnels, for some even facing death.

But even business owners that obeyed IS regulations were forced to provide labour for the insurgents such as extracting and transporting oil across IS territory (from Syria), doing administrative work, teaching children, providing health services, mechanical work, the blocking

¹⁰² See Table 8 in the appendix.

¹⁰³ Respondents' answers to quantitative survey questions.

¹⁰⁴ Shia, Christian and Yazidi business owners fled before the IS arrived. Sunni business owners in Salahaddin tended to flee to Kurdish or Iraqi government-controlled areas when harassed by the IS or confronted with unprofitable developments.

of roads, transporting goods, and deploying their knowledge (health or technical services) for free. According to respondents from Nineveh, the IS provided security, law, and order in return, while business owners in Salahaddin stated that security, law, and order was predominantly provided for businesses only, as well as for the transport of goods. Some respondents in Nineveh further experienced that the IS provided clothes, food and health care to women and children, mostly for IS families only, while such service provisions were not experienced in Salahaddin.

Furthermore, as expressed by a hardware and construction supplies trader from Baghdad, the IS provided safe trade routes and clear rule-based economic practices, opposed to harassment, robbery, and high bribes as he claims was a common practice at checkpoints belonging to the Iraqi army, Popular Mobilisation Units (PMU) or other factions¹⁰⁵. This was confirmed by several Mosul drivers that operated during IS rule, which paid a relatively stable and predictable one-time fee every time they exited or entered IS territory¹⁰⁶. This highlights the importance of the transport industry for IS economy and its close ties to the Sunni population of the area, relying on the inter-regional trade of food products and oil. It also highlights that other factions and the Iraqi state engaged with the IS to benefit mutually. This becomes especially visible when considering Iraq's main income: oil.

As refineries and oil extraction sites are under the control of political parties and their economic networks, trade with the IS to refine, transport and sell fuel products became important¹⁰⁷ when the group captured major oil fields and transport routes in Iraq and Syria. A political figure from Kurdistan further stated that the IS had considerable support of Sunni business owners when capturing Mosul, and that political parties, oil extraction and armed actors in Iraq remain strongly connected¹⁰⁸. However, the IS also sold other products such as wheat from its captured territories to Kurdish business actors, which then sold these products on to the Iraqi state¹⁰⁹. Considering the determinants of businesses' agency, respondents clearly pointed towards linkages to political parties, armed groups, and local leaders, which were involved with clearing the way for transports at checkpoints or arranging exchanges of goods¹¹⁰. Interestingly, these practices were not

¹⁰⁵ Int. 13, hardware, and construction supplies trader from Baghdad, interviewed in Baghdad March 2019.

¹⁰⁶ Drivers payed from USD200 to USD700 depending on the oil price and their truck's size. Int. 38,39,41, drivers working on the Mosul-Baghdad route. Interviewed March 2019 in Mosul.

¹⁰⁷ Int. 70, truck driver from the north transported oil to refineries in Kurdish lands and petrol back to IS territories.

¹⁰⁸ Int. 73 and 74, political figures interviewed September 2018 in Sulaymaniyah.

¹⁰⁹ Int. 71, political figure from Kurdistan, Interviewed September 2018 in Sulaymaniyah.

¹¹⁰ Int. 3, reporter from Kurdistan, Int. 44, 61 and 63, drivers from Mosul, all interviewed March 2019 in Mosul.

experienced by businesses located in IS territory, as coercion was the mean to control life under the IS.

Overall, businesses owners lost excessively due to IS rule. Roadblocks and ongoing fighting between 2013 and 2017 complicated trade, destroyed infrastructure, and drove up the demand for food products and other primary goods, severely damaging inter-city trade, transportation- and valuable agricultural sectors in Nineveh and Salahaddin. Additionally, the IS' harsh regulations led businesses and locals to halt many economic activities, especially related to construction, beauty treatments, weddings, music, cosmetics, and tobacco. Subsequently, as people stopped all unnecessary expenses, buying power plummeted, severely damaging all sectors. Even as initially for many securities and predictability under IS rule improved, and the availability of fuel and electricity gave many business owners and locals hopes, a large majority of businesses witnessed nothing but economic decline and hardship under the IS. Business owners were especially disillusioned when the security situation worsened, and people had to prove their non-cooperation with the IS to not face punishment.

It is furthermore clear, that certain business lost more than others under the IS. As evident from questionnaire responses, IS market regulations were damaging all sectors, but especially the wholesale and retail trade industry were subject to plundering and regulations, affecting peoples' livelihoods. However, businesses that managed to facilitate inter-regional trade amidst ongoing fighting, navigating unstable security situations, unpredictable checkpoint practices, and factions' suspicions during IS occupation, managed to secure huge profits when terminating a job successfully¹¹¹. It appears as if these businesses operating across frontlines and governorates were tolerated and mutually beneficial for all factions to the conflict, spanning mostly oil, food, and construction materials, ensuring peoples' survival¹¹². Respondents stated that connections between businesses and political parties must be traced, because these can implement mutually beneficial agreements and enable businesses to operate across sectarian divisions while competitors are prevented from crossing checkpoints or regional borders¹¹³. Furthermore, it remains highly complicated to identify which economic outcomes are deliberate intentions of IS governance or just effects resulting from the latter.

¹¹¹ Due to the decline in security and predictability, many transporters and traders stopped working between 2013-2017. Those that continued working had either no other way to secure their families survival or intended to make more money at the expense of their security. Int. 44,47, drivers from Mosul, interviewed in Mosul March 2019.

¹¹² Int. 61, driver from Mosul, interviewed in Mosul March 2019.

¹¹³ Int. 3, reporter from Kurdistan, interviewed March 2019 in Kirkuk.

After IS defeat, business owners in Nineveh and Salahaddin noted an economic flourishing in trade, tourism, construction, entertainment, and luxury businesses, seeing cafés, malls and restaurants reopening, the return of government salaries and IDPs, reopening trade routes and overall appreciation of liberation from the IS. However immediate necessities of business owners were also the hiring of armed groups to protect properties against robberies, the payment of \$2000 to certain officials to remove their names from “blacklists” (people that were thought to have cooperated economically with the IS)¹¹⁴, and the establishment of political ties to ensure continuous revenues. As many factories and infrastructure components were destroyed because of fighting, the construction, wholesale, and retail trade sectors experienced a boom, while many people reliant on the same factories found themselves jobless, creating socio-economic havoc for many.

Additionally, the security situation remained unstable, discrimination and mistrust against Sunni Muslims was widespread, fragmentation developed, and political and economic structures soon returned to sectarian, political and tribal lines¹¹⁵ because of unaddressed mayor socio-economic problems in Iraq¹¹⁶. Such persisting problems are the inability of local products to compete with cheap products from Iran, Saudi Arabia, and Turkey due to high costs caused by general instability and poor economic policy making. Increasing checkpoint fees and bribes, slow custom procedures along dangerous and politically fragmented transportation routes, as well as an overall decline in goods quality are therefore troublesome circumstances¹¹⁷. Wide-spread corrupt bureaucracy, a lack of local and foreign investments, extremely poor service provisions by the Iraqi government, and a status quo upheld by political parties and sectarian divisions leads to severe institutionalized biases and exacerbation of local populations suffering the consequences¹¹⁸.

As high degrees of dissatisfaction and countrywide divisions manifest and the Shia government in Baghdad appears to safeguard its own sectarian interests only, extremism and

¹¹⁴ Drivers that worked between 2013-2017 had to remove their names and establish links to the PMU to pass through checkpoints: Int. 47,61,63, drivers from Mosul, interviewed in Mosul March 2019.

¹¹⁵ Int. 25, member of the Iraqi parliament from 2010-2014 from Anbar province.

¹¹⁶ Int. 35, professor of international relations, interviewed in Baghdad March 2019.

¹¹⁷ If business owners are not politically connected or refuse to pay bribes, transports may be assaulted and stopped upon entry for months: Interviewees 4,5,6, leading large business owners, interviewed in Baghdad April 2019.

¹¹⁸ A furniture trader for example, from import at Basra port to selling in Kirkuk, must pass 5 main checkpoint and up to 52 small checkpoints, each demanding fees of USD20-50 or USD300 for each container, as well as USD10000 at main checkpoints, such as Safra which still does not entail the official tax. Int. 5, a clothes trader from Anbar, Int. 6 food and household goods trader from Baghdad, Int. 9, sugar trader from Sulaymaniyah, interviewed in Baghdad March 2019; Int. 16 a metal trader from Babylon; Int. 35 professor of international relations, interviewed in Baghdad March 2019; Int. 57, driver from Mosul, interviewed in Kirkuk March 2019; Int. 14, furniture and home supplies trader from Wasit, interviewed in Baghdad March 2019.

tensions are on the rise again¹¹⁹. One fruit and vegetables trader notes that under the IS, he used to pay \$300 for a load under five tons, and \$500 for loads over five tons to enter IS territory, getting a receipt in return, whilst he now must pay \$700 and \$1000 respectively to the Iraqi Federal Police without obtaining any documentation¹²⁰. For business owners, the stakes are high and Sunni dissatisfaction in Nineveh and Salahaddin, if not adequately addressed by Baghdad, may result in a new insurgency “anytime”¹²¹. Foreign states, such as Turkey, Iran, and the Gulf monarchies do further have enormous responsibility to not further exacerbate tensions, as interviewees observed¹²².

Discussion

Following empirical and qualitative evidence, private businesses made mostly coherent but also very specific experiences with the IS as a non-state armed group. While respondents from Nineveh governorate experienced significantly less losses in their businesses, a specific investigation of the two governorates found that none of the investigated determinants of businesses losses was significant. A reason for this might be Nineveh’s role as an important agricultural region (especially cereal production), which is located along major trade routes and important borderlands. The governorate is further characterized by Sunni-Muslim inhabitants (Christians were repeatedly displaced from the area), repeated droughts and some of the worst education-, clean water access-, and electricity conditions across Iraq (Inter-Agency Information and Analysis Unit, 2010, S. 1). Combined with a higher degree of experienced IS service provisions in Nineveh, less harassment and clear economic rules, these findings suggests that the IS was more embedded and appreciated by locals in Nineveh than in Salahaddin, pointing towards the importance of borderlands and Eaton et al’s economic theory¹²³. This closely aligns with the IS’s strategy of exploiting Sunni Muslim dissatisfaction post-US invasion and its Sunni-centric radical worldview, but also Ahmad’s and Hansen’s accounts¹²⁴ of businesses striving for security and stability amidst civil war, leading business owners to value IS predictable economic practices over those of other factions. On the

¹¹⁹ Int 65, member of the Kurdistan Islamic Union, interviewed in Erbil September 2019; Int. 66 member of the foreign Affairs Committee, interviewed in Duhok September 2018.

¹²⁰ Int. 67, fruit and vegetable trader, interviewed in Baghdad March 2019.

¹²¹ Int. 73 and 74, political elites, interviewed September 2018 in Sulaymaniyah.

¹²² Int 65, member of the Kurdistan Islamic Union, interviewed in Erbil September 2019.

¹²³ Eaton et al., *Conflict Economies in the Middle East and North Africa*.

¹²⁴ Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia," p. 90; Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*.

other hand, in the investigated case, larger businesses did not have more agency than smaller ones, contrary to expectations. Furthermore, expected valuable industries for the IS, like the transportation, storage, and motorized vehicle sectors (as Eaton et al or Martinez and Brisard for example suggest), even though pointed out in qualitative accounts, did not experience very different dynamics than other businesses either.

Private businesses experienced moreover effects of conflict dynamics such as the higher demand of food during war and the complicated inter-regional trade of food products and oil during that time which further potentially explain less threatening of the manufacturing (entails the manufacturing of food products), accommodation, and food services sectors. The other services and wholesale and retail trade industries on the other hand might have been a crucial area for the IS to establish its tight control, Sharia law and rebel governance over economic practices, resulting in more threatening of these businesses, and indicating a possible higher priority of industries that directly interact with customers. While rebel governance scholars such as Ahram, Revkin, Arjona and Mampilly touch on such economic effects, their considerations neglect such experienced dynamics of businesses. As the IS further operated coercively all over, the sole threatening of business owners cannot be considered a direct indicator for businesses non-cooperation with the IS, as businesses can be pressured into obedience with the insurgent's rule. The other services industry, which most importantly entails the repair of computers and household goods, as well as hairdressers, was for example more threatened by the IS than other sectors, but also lost significantly less often. This leads to the assumption that the IS's threatening of business owners does not automatically yield more losses in their businesses and that the IS's coercive strategy does also allow for some businesses to experience less losses than others. These findings oppose the fundamental claim of scholars such as Eaton et al.¹²⁵ that the IS suppressed the private sector indiscriminately and entirely, not accounting for variations.

Whilst some industries' experiences deviate from overall private sector experiences, the loss under IS rule was very coherent and especially excessive when businesses were directly and continuously threatened by IS agents (as visible in Table 3, model 2 and Table 8 in the appendix). Significantly more experiences of losses in the wholesale and retail trade industry might be explained by exacerbated circumstances in inter-regional trade and the IS's harsh restrictions. Many business owners that did not work under IS rule or those that experienced excessive losses,

¹²⁵ Eaton et al., *Conflict Economies in the Middle East and North Africa*.

were forced to abandon their economic activities (especially in Salahaddin) and fled the area when the situation worsened. The analysis of the amounts businesses lost between 2014 and 2017 confirms these findings, with the wholesale, retail trade, administration and support service industries losing 33.5 Mio IQD (\$28.140) and 84.8 Mio IQD (\$71.232) more than other industries. This aligns with the wholesale and retail trade sectors' overall experiences but surprises, as the administration and support service industry was less threatened, and experienced losses less often. These dynamics could potentially be explained by the ongoing fighting which negatively affected trades, as well as tourism, renting agreements, administrative and labour practices under brutal IS rule. As the administration and support service businesses perform crucial repair and other everyday services, the IS might have spared these individuals from too harsh treatment. However, such dynamics were not specifically mentioned in qualitative accounts. Contemporary theories can further not account for these dynamics and show a clear research gap that need further investigations.

A closer investigation of both governorates show that the administration and support service industry was the significantly worst effected sector in Salahaddin with 86.2 Mio IQD (\$72.408) higher losses than other respective business types. In Nineveh on the other hand, the only significant lowering effect on businesses' amount of loss constituted respondents' education (primary: 29.1 Mio IQD (\$24.444) and secondary 21 Mio IQD (\$17.640)). As it was already established that the wholesale and retail trade sector generally suffered under IS rule and the circumstances, excessive losses come as no surprise. Business owners' lower education as a factor reducing the number of losses under the IS in Nineveh is however very interesting and demands for a possible extraordinary treatment of certain individuals based on their education history. This effect could unfortunately not be dissolved by triangulation and could be the subject of further inquiries. This study's results thereby connect to some already established facts about IS governance¹²⁶.

The insurgents ruled by deploying excessive force coherently over the territory they controlled and utilized local populations for their ideological, ethnical, social, and economic

¹²⁶ The IS's interaction with local populations has been established by following authors: Arjona, "Wartime Institutions: A Research Agenda."; Eaton et al., *Conflict Economies in the Middle East and North Africa*; Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."; Razaw Salihi, "Terror and Torment: The Civilian Journey to Escape Iraq's War Against the "Islamic State," in *Iraq after ISIS*, ed. Jacob Eriksson and Ahmed Khaleel (Cham: Palgrave Pivot, 2019).

objectives. As Brisard and Martinez point out¹²⁷, the IS achieved a highly sophisticated economic diversification by taxing and exploiting locals, utilizing resource rich and fertile lands, banking systems and foreign support to strive for economic integration into world markets, as well as criminal activities such as smuggling, kidnapping and ransom to fund its undertaking. In doing so, the group discriminated and harassed ethnic minorities and dissidents, damaged economic enterprises that did not conform with IS dictated interpretation of Sharia law, maximized its own profits, and did little to better the situation for local populations and the private sector¹²⁸. It can therefore be assumed that the private sector under IS rule had only minor agency and was comprehensively coerced and exploited by the insurgents, more prone to suffer effects of IS rule rather than possessing active agency.

This study's results further reveal that in the case of the IS and the private sector in Nineveh and Salahaddin, business revenue (as a measure of size) had no impact on businesses' experiences under IS rule. This might display that (1) in the case of Iraq, the biggest and most lucrative businesses (gas and oil, telecommunication and media) are already in the hands of political parties and powerful key actors, divided along sectarian lines, (2) businesses' "proximity" to and functions for local populations must be considered, and (3) businesses' affiliation and linkages to parties and institutions must be more deeply investigated within a framework that respects local populations, conflict factions, institutions, economic dynamics and societal circumstances equally. Overall, these lessons can also account for the universally experienced positive economic change after IS defeat, which brought the opening of trade routes and many liberties for everyone but did not alter fundamental grievances, mistrust, and injustices in Iraq.

The IS as a non-state armed actor unquestionably performed rebel governance, even though business owners' coherent accounts support the observation that the IS failed to significantly improve living standards for local populations and better the economic situation for businesses sustainably¹²⁹. This becomes especially clear when considering that individuals had the initial chance to leave IS territories, were provided with some degree of services, amongst which the most important were relative security and predictability (law), leading some business owners and locals to value staying under the insurgents' rule over other options. This deployed rule allowed the

¹²⁷ Brisard and Martinez, *Islamic State: The Economy-Based Terrorist Funding*, p. 9.

¹²⁸ Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*, pp. 292-95.

¹²⁹ Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*, pp. 292-95; Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."

insurgents to extract large sums of taxes from locals and businesses, checkpoint fees and resources, all under the “legitimate” cover of the IS’s interpretation of Sharia law, with respondents being herein equally divided between those affirming and rejecting the IS’s attempt to achieve legitimacy.

A favouring of the IS was further driven by individuals’ experience of disrespect and discrimination at the hands of Iraqi central state authorities, cheaper checkpoint fees at IS roadblocks and the insurgents’ promotion of an extremist Sunni-centric ideology. These historical, socio-economic, and ideological circumstances, as well as conflict dynamics and pragmatic considerations, led mostly Sunni Muslim locals and business owners to stay under IS rule, accepting high levels of violence and complying with the rebel’s practices to certain degrees. Whether this compliance can be called active cooperation, depends on individuals’ considerations and rationality, weighing their livelihoods, personal assets, incomes, families, and alternative options like defection and displacement against each other.

It can furthermore be argued that the private sector is bound to its assets and customers, leading many business owners to stay and continue operating under IS rule. Thereby, local populations and private businesses sustained the IS’s rule, also engaging in both “formal and informal” trade with other surrounding territories, effectively ensuring both locals’ survival and IS profits. Respondents’ accounts of IS threatening, losses and positive changes after IS defeat do suggest that locals were predominantly violently pressured into submission, but nevertheless did not consider displacement or resistance an alternative, demanding further research to investigate business owners’ decision making amidst civil war. It further remains unclear to what degree local populations and businesses became active members, fighters, or facilitators of the IS, as the forced transportation or labor for the IS can be executed out of pure necessity for survival or out of support for the insurgents. Considering the massive, forced mobilization and confiscation of the private sector’s assets, properties, and individuals’ labour, it becomes evident that the IS relied significantly on controlling private businesses and local populations to sustain its rule.

This study therefore argues economic dynamics are always intertwined with the social, and that conflicts must be theorized, including both economic and social functions of businesses, as well as their interacting with insurgents, other factions, and existing authorities. Due to the economic landscape in the two governorates, which is made up of 97% small establishments and only a few “large” businesses¹³⁰, it is clear from this study’s results that the private sector

¹³⁰ It remains questionable if the quantitative survey captured relevant large businesses, given that employee numbers were not recorded and the most profitable businesses in IS territory remained tightly controlled by the insurgents and

experienced more or less the same dynamics under IS rule as local populations, pointed out by scholars such as Arjona, Revkin and Ahram¹³¹. Businesses did more so fit that understanding when considering their *proximity* to local population's life, meaning that each small business reflects the livelihood and survival of a family or community. They did less so when considering businesses' unabated strive for *economic survival*, managing complex socio-economic conflict environments to generate income between 2013-2017. The other services industry demands, for example, in its higher experiencing of IS threatening, but also in losing less than other industry sectors, for a clear distinction between the social and economic functions of businesses (See Table 3).

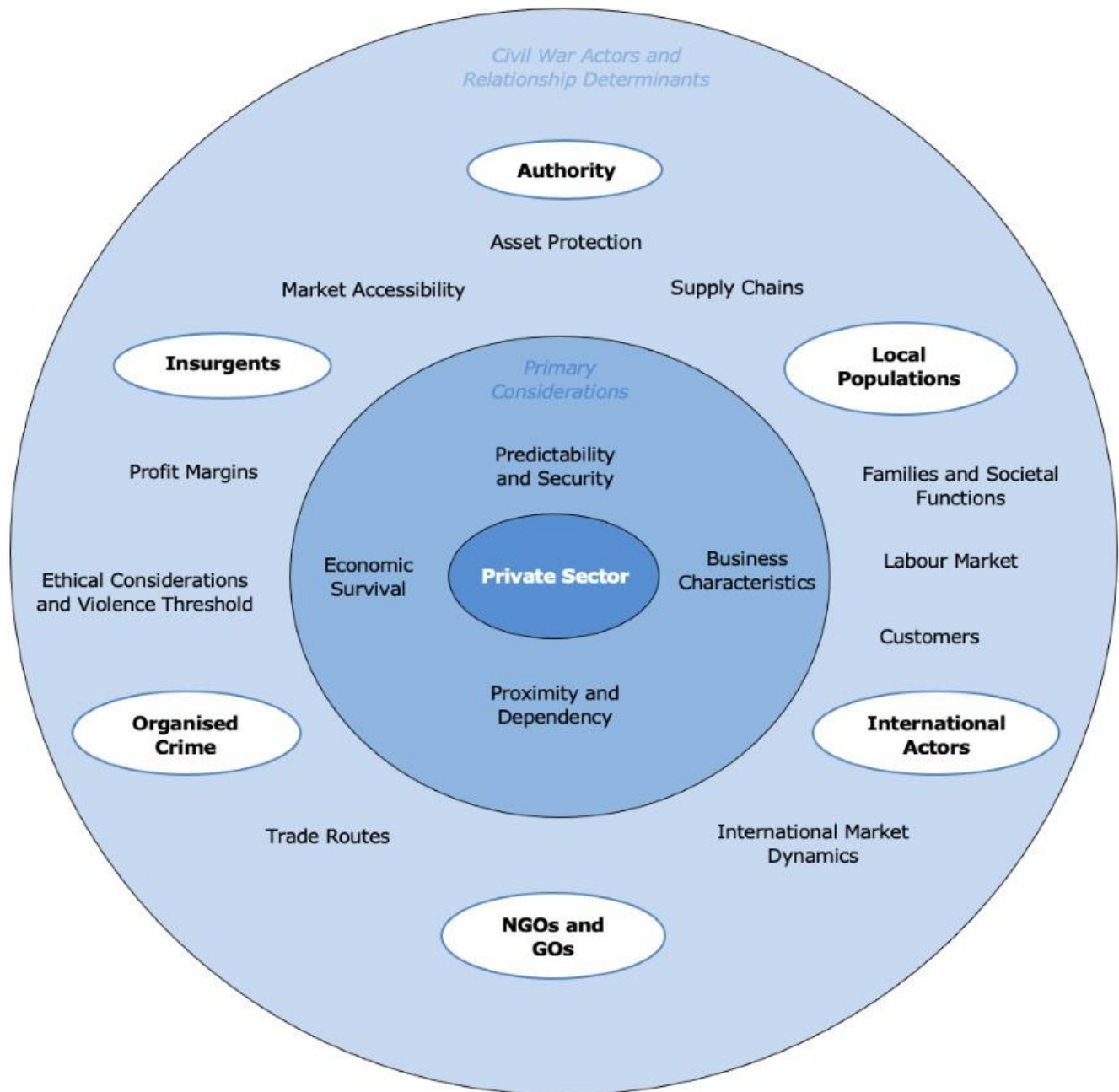
As this research has pointed out, contrary to cases of Somalia, Africa, and South America, where business elites and large establishments often profited immensely from cooperating with insurgents like the Islamist Al-Shabaab¹³², the private sector's role in Iraq is different. The proximity of businesses to local populations appears to be fundamentally closer in the case of establishments under the IS, as well as the insurgent's economic approach and its effects for private businesses. To grasp ongoing dynamics, this research suggests the consideration of the following graphic (Figure 3), which illustrates the private sector in a civil war setting, where different factions compete over authority, social- and economic assets. This study thereby hopes to evoke a debate that discusses the role of the private sector more thoroughly and achieves a more nuanced understanding of economic and societal dynamics amidst civil war.

cooperating political parties outside the area (meaning here Kurdish and Iraqi state forces when cooperation was needed to refine crude oil and distribute the fuel products).

¹³¹ Arjona, "Wartime Institutions: A Research Agenda."; Eaton et al., *Conflict Economies in the Middle East and North Africa*; Revkin and Ahram, "Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State."

¹³² Hansen, *Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*; Ahmad, "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia."

Figure 3. Considerations and determinants of the private sector in a civil war setting.



The findings of this research, as well as prior research on the private sector suggest, that the private businesses' primary considerations in a civil war setting are (1) predictability and security, (2) economic survival, but also (3) its proximity *to*, and dependency *on* different actors in the conflict environment, and (4) businesses' characteristics. As business owners navigate conflict settings, they must engage with different actors in civil wars, namely the central authority (may it be the central state or regional authorities), insurgents as challengers of the central authority, local

populations that reside in businesses operating areas, as well as potentially NGOs, GOs, criminal actors and international agents, which might add to the conflict landscape. The four *primary considerations* that shape private businesses' relationships with these actors apply overall but are furthermore influenced by complex interconnected *relationship determinants*. These determinants are profit margins, market accessibility, trade routes, supply chains, customers, business owners' families and societal functions, the labour market, as well as ethical considerations, international market dynamics and violence thresholds regarding engagement and cooperation with armed actors.

As visible in the figure (Figure 3), different actors in a conflict environment are more associated with certain determinants. The private sector, in order to operate in a predictable and secure manner, as well as to secure its assets, market accessibility, profit margins, supply chains and favorable laws, will consider and evaluate different competing authorities and factions (given a credible challenging by insurgents). This builds on rebel governance and economic accounts from both the case of the IS and the Al-Shabaab, as well as rebels in South America. On the other hand, *proximity to and dependency on* different actors in a conflict landscape further shape businesses' considerations. These functions for society or dependency on certain actors, as well as businesses' characteristics, including enterprises size, philosophy, employees, business type, location, customers, societal functions etc. are more associated with customers, family and societal functions, the labour market, and local populations. Lastly, *economic survival* as a primary concern for private businesses can lead businesses to support violent insurgents, or engage in organized crime, in case given circumstances develop, for example when an authority is not able to fulfill private businesses' primary needs (i.e. security). These aspects have been highlighted in the case of the Al-Shabaab when large businesses sided with the insurgents, but undervalued businesses' characteristics and reasoning when cooperating with rebels. However, these primary considerations do apply to all relationships of the private sector, to other actors and are complemented and influenced by the presented relationship determinants.

Although business owners' accounts throughout this study are clear and fit the picture political and economic elites are presenting, it is difficult to distinguish and isolate effects and causes within conflict dynamics, as the system is always in flux, influencing and being influenced simultaneously. A clearer investigation of political affiliation and businesses links to local and regional power figures, as well as religious and political preferences amongst business owners and local populations could therefore be crucial to understand the complexity of the situation on various

levels. Market dynamics, such as fluctuating oil prices, checkpoint fees and goods availability, can further be highly relevant, and need more investigation. Furthermore, conflating traditional inequalities and sectarianism with economic and social contract accounts could eventually strengthen our understanding and theorizing about the nature and dynamics of contemporary conflicts.

In the case of this study, most businesses were small establishments, ensuring locals' survival and sustaining business owner's families' livelihoods. Contrastingly, locals were also the primary customers and employees for small businesses, yielding strong ties and valuable societal functions of the private sector. The IS, as a rebel actor utilized these dynamics to pressure the private sector and locals into submission, extracting rents, assets, and labor for its purposes. The private sector, in strive for its own survival, thereby also sustained IS rule between 2014-2017 and will be an even more decisive force in prohibiting the radical Sunni insurgents from regaining power in the future. International market dynamics do influence post-IS relationships fundamentally, such as the global crude oil price, which has the power to alter conflict dynamics in Iraq as the most oil-reliant state in the world. Giving the private sector, its determinants, and complex relationships its rightful place in future conflict analysis can fundamentally change our understanding of civil war and help tailor more sensitive policy responses in the future.

This research utilized accounts of business owners, economic and political elites, as well as drivers and journalists to establish an understanding and explain the private sector within civil war. Respondents were adequately anonymized for analysis and ethical clearance prior to data collection by the NMBU war economy project. Given the sensitivity of the research content, no specific dates or roles of individuals are shared to shield participants from possible harm. In order to achieve good levels of trustworthiness, this study deployed triangulation by combining different research methods¹³³. A concern for this study's credibility remains the exact quota of large businesses, as it appears that this research might have not achieved to include large scale establishments that are influenced and controlled by political parties, and since the author had no oversight over the sampling process.

Furthermore, results' transferability is limited, as a significant degree of "informal" or "political party-controlled business structures" are believed to have been at work, which are difficult to expose. These unique interconnections are also believed to vary significantly across

¹³³ Bryman, *Social research methods*, pp. 384-89.

cases, only allowing for the transfer of suggested theoretical considerations to other conflict environments. Concerning dependability and reliability of the methods utilized, quantitative results are believed to achieve robust levels, whilst the dependability of interviewing data on ever-changing socio-economic dynamics leads the researcher to believe that respondents could have answered differently if interviewed today.

Conclusion

This study has established that the private sector in Nineveh and Salahaddin was comprehensively and coherently coerced and exploited by the IS, but also experienced significant differences across industry sectors. It further established that businesses which directly worked with customers, were more prone to suffer threatening by the IS's excessive rebel governance, whilst businesses size had no significant impact on business owners' experiences. Overall, businesses lost due to the IS and appreciated IS defeat, which brought the reopening of major trade routes and liberties for both vendors and customers. Businesses that relied on inter-regional trade, tourism and fundamental liberties that were restricted under IS rule (such as the wholesale, retail trade, administrative and support service industries) consequently experienced the highest losses across both governorates. This research importantly pointed out that it is difficult to isolate the complex dynamics influencing the private sector's preferences and a possible cooperation with armed non-state actors, suggesting only a nuanced figure can illustrate the private sector's considerations amidst civil war.

Contemporary civil war, rebel governance, and war economy theory comes short of accounting for the private sector's considerations and preferences, attributing private businesses only a subordinated role in conflicts. Looking at the existing evidence and assumptions of authors such as Ahmad, Hansen, Eaton et al, Brisard, Martinez, Rettberg, Collier, Hoeffler, Ahram, Arjona, Revkin, Mampilly, Florea and Salihi, it becomes evident that neither economic-, war-economy-, social-contract-, or civil war centric accounts and inquiries can fully grasp observed dynamics. Assumptions that focus on businesses' profit incentives to cooperate with insurgents fall short of considering local-micro-dynamics, important characteristics, and societal functions of the private sector, while social-contract and "civil" investigations fail to account for economic dynamics that influence how conflict actors interact with each other.

In presenting the importance of linking economic, social, and pragmatic considerations of private businesses in conflict environments, this research aims to stimulate more nuanced research on why businesses side with non-state armed groups or not. Unabated considerations of the private

sector will continue, and shape post-IS Iraq. With increasing and discriminatory checkpoint practices, ever smaller profit margins for businesses and products' quality decreasing, it is only a matter of time before conflict might flare up again. Further research on the private sector's role amidst civil wars should therefore focus on combining an economic and societal investigation, conflating research methods to grasp complex dynamics and account for actors' (state-actors, the private sector, local populations, NGOs etc.) active choices, change in behavior and preferences, as well as experiences of externally caused effects. For these investigations, more sensitive measurements could be utilized, such as detailed characteristics of actors investigated (i.e. number of employees, businesses revenue, individuals' reasons to stay under IS rule), likert scales to measure satisfaction rates and respondents' decision making, five-point preference scales between different conflict actors, as well as organizational theory and international political sociology to investigate practices deployed by actors.

Article Bibliography

- Ahmad, Aisha. "The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia." *International Security* 39, no. 3 (2015): 89-117.
- Al-Tamimi, Aymenn Jawad, and Aaron Y. Zelin, "The Islamic State Archives: Welcome," May 14, 2021, <https://islamicstatearchives.com/>.
- Andersen, Lars Erslev. "The Locals Strike Back: The Anbar Awakening in Iraq and the Rise of the Islamic State." In *Reconfiguring Intervention*, edited by Louise Wiuff Moe and Markus-Michael Müller, 187-205. London: Palgrave Macmillan UK, 2017.
- Arjona, Ana. "Civilian Cooperation and Non-Cooperation with Non-State Armed Groups: The Centrality of Obedience and Resistance." *Small Wars & Insurgencies* 28 (2017): 755-78.
- . "Wartime Institutions: A Research Agenda." *Journal of Conflict Resolution* 58 no. 8 (2014): 1360-89.
- Arjona, Ana, Nelson Kasfir, and Zachariah Mampilly. *Rebel Governance in Civil War*. Cambridge: Cambridge University Press, 2015.
- Brisard, Jean-Charles, and Damien Martinez. *Islamic State: The Economy-Based Terrorist Funding*. Toronto: Thomson Reuters, 2014.
- Bryman, Alan. *Social Research Methods*. 5th ed. Oxford: Oxford university press, 2016.
- Bulls, Logan, Bridget McConville, and Bradley Miller, "Isis Oil and How Isis Has Influenced the Oil Trade. November," May 14, 2018, <https://www.arcgis.com/apps/Cascade/index.html?appid=bfbb789da3fd4ce0896cc8f0439e9e30>.
- Collier, Paul, and Anke Hoeffler. "Greed and Grievance in Civil War." *Oxford Economic Papers* 56, no. 4 (2004): 563-95.
- Danckwardt, Petter. "Conceptualizing Isis in International Legal Terms-Implications, Crises and Failure of Westphalian Notions of Authority." Stockholms Universitet, 2016.
- Department of Economic and Social Affairs. *International Standard Industrial Classification of All Economic Activities (Isic)*. United Nations (New York: 2008).
- Dodge, Toby. *Iraq – from War to a New Authoritarianism*. London: Routledge, 2017.
- Dougherty, B.K., "De-Baathification in Iraq: A Lesson in How Not to Pursue Transitional Justice." *Middle East Institute*, June 5, 2014, <http://www.mei.edu/content/de-bathification-iraq-how-not-pursue-transitional-justice>.
- Eaton, Tim, Christine Cheng, Renad Mansour, Peter Salisbury, Jihad Yazigi, and Lina Khatib. *Conflict Economies in the Middle East and North Africa*. Chatham House: The Royal Institute of International Affairs (London: 2019).
- European Union. *Council Decision (Cfsp) 2020/1132*. Council Of The European Union, Brussels (2020).
- Florea, Adrian. "Rebel Governance in De Facto States." *European Journal of International Relations* 16, no. 4 (2020): 1004-31.
- Flores, John Robert. "Funding Terror: An Analysis of Financing Methods for Terror Groups Based in the Middle East." Campbell University, 2015.

- Ford, Jolyon. *Regulating Business for Peace: The United Nations, the Private Sector, and Post-Conflict Recovery*. Cambridge: Cambridge University Press, 2015.
- Hamasaeed, Sarang, and Garrett Nada, "Iraq Timeline: Since the 2003 War." *United States Institute of Peace*, May 29, 2020, <https://www.usip.org/iraq-timeline-2003-war>.
- Hansen, Stig Jarle. *Civil War Economies, the Hunt for Profit and the Incentives for Peace (the Case of Somalia)*. DEID, AE Working Paper No. 1 (Oslo: 2007).
- Hosmer, David W., and Stanley Lemeshow. *Applied Logistic Regression*. Hoboken: John Wiley & Sons, 2000.
- Industrial Statistic Directorate Iraq. *Industrial Large Establishments Statistics for 2017*. Directorate of Industrial Statistics (Baghdad: 2018b).
- . *Small Industrial Establishments in the Private Sector: Statistics for the Year 2017*. Central Statistical Organisation Iraq (Baghdad: 2018a).
- International Crisis Group. *Iraq: Fixing Security in Kirkuk*. International Crisis Group (Brussels: 2020).
- . *Iraq's Secular Opposition: The Rise and Decline of Al-Iraqiya*. Middle East Report No. 127. (Amman/Bruxelles: 2012).
<http://www.crisisgroup.org/~media/Files/Middle%20East%20North%20Africa/Iraq%20Syria%20Lebanon/Iraq/127-iraqs-secular-opposition-the-rise-and-decline-of-al-iraqiya.pdf>.
- Islamic State Archives, and Jihadology, "Diwan Bayt Al-Mal: Banks Administration Contract for Disbursement of Salaries." *The Islamic State Archives*, May 14, 2014, <https://islamicstatearchives.com/2021/04/05/diwan-bayt-al-mal-banks-administration-contract-for-disbursement-of-salaries/>.
- KAPITA, and GIZ. *Iraqi Industrial Overview*. KAPITA (Baghdad: 2019).
- Katsos, John E., and Yass AlKafaji. "Business in War Zones: How Companies Promote Peace in Iraq." *Journal of Business Ethics* 155 (2019): 41-56.
- Khatib, Lina. *The Islamic State's Strategy: Lasting and Expanding*. Carnegie Middle East Center (Beirut: 2015).
- King, Stephen J. *The Arab Winter: Democratic Consolidation, Civil War, and Radical Islamists*. Cambridge: Cambridge University Press, 2020.
- Lister, Charles. *Profiling the Islamic State*. Brookings Doha Center (Doha: 2014).
- Mabon, Simon. "The World Is a Garden: Nomos, Sovereignty, and the (Contested) Ordering of Life." *Review of International Studies* 45, no. 5 (2019): 1-21.
- Mampilly, Zachariah. "Performing the Nation-State: Rebel Governance and Symbolic Processes." In *Rebel Governance in Civil War*, edited by Ana Arjona, Nelson Kasfir and Zachariah Mampilly, 74-97. Cambridge: Cambridge University Press, 2015.
- . *Rebel Rulers: Insurgent Governance and Civilian Life During War*. Ithaca: Cornell University Press, 2011.
- Nagelkerke, Nicolaas J. D. "A Note on a General Definition of the Coefficient of Determination." *Biometrika* 78 (1991): 691-92.
- Olson, Mancur. "Dictatorship, Democracy, and Development." *The American Political Science Review* 87, no. 3 (1993): 567-76.
- Péclard, Didier, and Delphine Mechoulan. *Rebel Governance and the Politics of Civil War*. Swiss Peace Foundation (Bern: 2015).

- Peschka, Mary Porter. *World Development Report 2011: The Role of the Private Sector in Fragile and Conflict-Affected States*. The World Bank (New York: 2011).
- Revkin, Mara Redlich. "Competitive Governance and Displacement Decisions under Rebel Rule: Evidence from the Islamic State in Iraq." *Journal of Conflict Resolution* 65 no. 1 (2021): 46-80.
- Revkin, Mara Redlich, and Ariel I. Ahram. "Perspectives on the Rebel Social Contract: Exit, Voice, and Loyalty in the Islamic State." *World Development* 132 (2020): 1-8.
- Salihiy, Razaw. "Terror and Torment: The Civilian Journey to Escape Iraq's War against the "Islamic State." In *Iraq after Isis*, edited by Jacob Eriksson and Ahmed Khaleel, 79-98. Cham: Palgrave Pivot, 2019.
- Smith, Thomas J., and Cornelius M. McKenna. "A Comparison of Logistic Regression Pseudo R² Indices." *Multiple Linear Regression Viewpoints* 39, no. 2 (2013): 17-26.
- Solomon, Erika, Robin Kwong, and Steven Bernard. "Inside Isis Inc: The Journey of a Barrel of Oil." *Financial Times*, 29 February. 2016. <https://ig.ft.com/sites/2015/isis-oil/>.
- Tomlinson, Chris. "Unintended Consequences: How Somalia's Business Community, in Search of Stability, and the USA, in Search of Terrorists, Nearly Created a Radical Islamic State in the Horn of Africa." *Global Business and Economics Review* 10, no. 2 (2008): 229-38.
- United Nations. *United Nations Security Council Consolidated List*. United Nations Security Council (New York: 2020).
- United States State Department. *Foreign Terrorist Organizations (Fto)*. Congressional Research Service (Washington: 2019).
- Weinstein, Jeremy M. *Inside Rebellion: The Politics of Insurgent Violence*. Cambridge: Cambridge University Press, 2007.
- Worall, James. "(Re-)Emergent Orders: Understanding the Negotiation(S) of Rebel Governance." *Small Wars & Insurgencies* 28 (2017): 709-33.

7 Discussion of article and conclusion for overall problem

The article points out that the societal embeddedness of private businesses and the facets of their considerations in conflict contexts is neglected in contemporary civil war, rebel governance and war economy research. It furthermore develops the demand for a combination of different theoretical and methodological strands to specifically investigate the role of the private sector under rebel rule. Unfortunately, the quantitative and qualitative data informing this research were not directly compiled by the author, leading this dissertation to rely on partially very poorly recorded answers of respondents, and very unnuanced measurements, dissipating immense potential for an even more detailed investigation. Nevertheless, the article's results expose nuanced micro-economic dynamics, that allow for an attempt to theorize the private sector in civil war. Such micro-dynamics were for example the threatening, losses and experienced positive change of the wholesale and retail trade industry due to the IS's brutal restrictions and ongoing fighting complicating inter-regional trade. In contrary, the other services industry was significantly more threatened by the IS but experienced less losses than the wholesale and retail trade industry, given its crucial role for both the insurgents and local populations. These nuanced accounts were supplemented by respondents' qualitative accounts and put into relation in the article's discussion.

The article further established that private sector can either be coerced or actively incorporated by the insurgents, always possessing a degree of agency and functions for wider conflict dynamics and local populations. These functions can for example entail the provision of goods to fulfil locals' primary needs and thereby reflect locals and rebels' reliance and dependency on functioning supply chains and trade routes, which private businesses must navigate in coordination with the insurgents and other conflict actors. Furthermore, the article's results show that seizing the private sector's assets, labour power and societal functions can sustain insurgents' survival considerably and should not be underestimated when conceptualizing economic conflicts dynamics. Lastly, this research pointed out that indeed the role of the private sector in civil war remains undertheorized and future research must address these immense research gaps.

Overall, the presented article cannot account for the private sectors concrete decision making, respondents' political and economic ties to the insurgents and other competing factions, as it lacks accurate measurements and more nuanced data to support its claims. It does however identify these problematics and demands for intensified research on exactly these issues, which it

cannot grasp. In doing so, it might lie the foundation for future thorough evaluations of the private sector's decision making, considerations and preferences within conflict settings.

8 Significance of knowledge creations

As already established, the knowledge creations of this dissertation remain limited, as the deployed research methods, concrete questionnaire questions, and interactions with respondents lack nuance and more sensitive measurements. This research however allows for debating the role of the private sector under IS rule, and its significance for sustaining the radical Islamists three-year-governance in the two investigated governorates. Furthermore, this study can credibly underpin the need to consider business societal functions, as businesses characteristics, customers, supply chains etc., do determine how these economic agents interact with other actors in their environments. The presented figure in the article's discussion is an attempt to frame and theorized the role of the private sector in civil war, which is hoped to produce a debate and closer consideration of the considerations and determinants of private businesses choices. As this is a master dissertation and the included article has not been published, further assumptions of its relevance for further academia are omitted.

9 Thesis limitations and research needs

The dataset utilized for this survey has significant weaknesses and could have been recorded in a more thorough way. A clearer and stricter way of recording business owners' responses could have let to more interesting and robust insights. For example, businesses size could have been measured in number of employees and revenue, while including business owner's religion (and ethnicity) could have been recorded in sub-categories of Islam, Christianity, and other beliefs. Political preferences of business owners could have been recorded related to different actors in the conflict environment, while likert scales could have assessed businesses' experiences and satisfaction with these actors in relation to economic circumstances, services, laws, infrastructure and more. Additional scales between different political or sectarian actors could have helped understand why certain business owners chose to stay and survive under the IS instead of fleeing the area. A further investigation of businesses self-understanding and their functions for society and primary concerns could have shown, what possibly distinguishes bigger and smaller businesses. Clearer classifications of businesses' industry sector and characteristics by the time of interviewing could have further refined and eased the research process.

As businesses revenue was recorded without evidence, respondents could have inflated their revenue and businesses loss, as well as stated false information to not get associated with the IS. Furthermore, the sampling choices seem to deviate from the guidelines, not exactly aligning with country wide proportions, possibly under-sampling large businesses (only two businesses with net-revenues over USD 4200 sampled) and leading to little or no observations in some industries, which might have been of central interest due to their function and linkages to political parties and criminal practices. This research could have further been more gender-sensitive, focusing on and including more women in the analysis, as well as exposing the IS discrimination and outdated understanding of gender roles in comparison to other actors in the conflict that promote gender equality (Kurdish forces) (Lilleslåtten, 2021). Thereby, this research demands caution when accessing its wider trustworthiness.

As already mentioned in the discussion of chapter six, triangulation was deployed by incorporating different research methods. This allowed to evaluate and discuss this research's findings from different epistemological starting points and a cross check of complex dynamics and effects at play. Furthermore, as this study is very particular in its scope and set up, its transferability is very limited. Especially so when considering that the sampling and data collection process was not conducted by the author themselves. Further findings that place the political linkages and "informal practices" of businesses at the center of their narratives and understanding of the conflict, are however difficult to triangulate and lack proof through alternative research methods. These connections and possible hidden preferences of business owners very likely escaped quantitative analysis and reflect a considerable weakness of this research. Lastly, considering dependability and reliability, this dissertation produces good levels, especially of the quantitative measurements deployed. The dataset and the methods used would very likely result in the same results, but questionnaires could be modified to be more sensitive towards the complexity and sensitivity of businesses' considerations. The dependability of qualitative data also reflects good trustworthiness levels but are subject to the dynamic social reality the data derived from. This means that respondents could have answered very differently nowadays and also that qualitative data obtained from business owners could have been more thoroughly recorded in order to account for the understanding of their exact affiliations and considerations.

This study has revealed that the private sector's role in civil wars is dependent on local economic structures and the roles businesses play in local populations. As almost all businesses in the governorates captured by the IS, are small businesses, their experiences are tightly connected

to those of society at large. This dissertation therefore suggests that any analysis and understanding of rebel governance and private sector relationships must take into consideration complex relationships between private businesses, local populations, rebel groups and other actors in conflict contexts. Whilst an alienated elitist business society, or specific industry sectors might seek closer cooperation with rebels and other non-state actors for profit maximization, small businesses that directly feed into locals' livelihoods share the same experiences as local populations. Rebels on the other hand can engage with both businesses and locals in a similar way, when their clear objective is to establish permanent rule and sustain their undertaking by exploiting the private sectors' assets and labour. Future research methods investigating civil war and other conflict context could focus on conflating methodological approaches and investigating more thoroughly how economic dynamics, actors in the area and social functions interact. This research suggests four fundamental considerations of the private sector as well as further determinants for its relationships with other conflict actors that future research can investigate to gain a more comprehensive understanding of the private sector in a conflict setting.

10 Literature

- Ahmad, A. (2015). The Security Bazaar: Business Interests and Islamist Power in Civil War Somalia. *International Security* Vol. 39 (3), 89-117.
- Al-Tamimi, A., & Zelin, A. (2021). *The Islamic State Archives: Welcome*. Retrieved 05 14, 2021, from <https://islamicstatearchives.com/>
- Andersen, L. (2017). The Locals Strike Back: The Anbar Awakening in Iraq and the Rise of the Islamic State. In L. Moe, & M.-M. Müller, *Reconfiguring Intervention* (pp. 187-205). London: Palgrave Macmillan UK.
- Arjona, A. (2014). Wartime Institutions: A Research Agenda. *Journal of Conflict Resolution* Vol. 58 (8), 1360-1389.
- Arjona, A. (2017). Civilian Cooperation and Non-Cooperation with Non-State Armed Groups: The Centrality of Obedience and Resistance. *Small Wars & Insurgencies* Vol. 28, 755-778.
- Arjona, A., Kasfir, N., & Mampilly, Z. (2015). *Rebel Governance in Civil War*. Cambridge: Cambridge University Press.
- Australian Government Department of Foreign Affairs and Trade, T. (2014). *The role of the private sector in supporting economic growth and reducing poverty in the Indo-Pacific region*. Canberra: Department of Foreign Affairs and Trade.
- Baban, S. H. (2020, 10 16). *Sold, whipped and raped: A Yazidi woman remembers ISIL captivity*. Retrieved from Aljazeera: <https://www.aljazeera.com/features/2020/10/16/separation-from-my-children-was-more-painful-than>
- Bojicic-Dzelilovic, V., & Turkmani, R. (2018). War Economy, Governance and Security in Syria's Opposition-Controlled Areas. *Stability: International Journal of Security & Development* Vol. 7 (1), 1-17.
- Brisard, J.-C., & Martinez, D. (2014). *Islamic State: The Economy-Based Terrorist Funding*. Toronto: Thomson Reuters.
- Bryman, A. (2016). *Social Research Methods*. Oxford: Oxford University Press.

- Bulls, L., McConville, B., & Miller, B. (2018, November). *ISIS Oil and How ISIS has Influenced the Oil Trade*. Retrieved 05 14, 2021, from <https://www.arcgis.com/apps/Cascade/index.html?appid=bfb789da3fd4ce0896cc8f0439e9e30>
- Bunzel, C. (2015). *From Paper State to Caliphate: The Ideology of the Islamic State*. Washington: Center for Middle East Policy.
- CASIS, T. (2020). EXTREMISM AND COVID-19. *Journal of Intelligence, Conflict and Warfare* Vol. 3 (1), 1-8.
- CIA, T. (2020, 04 30). *The World Fact Book: Iraq and Syria*. Retrieved from Central Intelligence Agency: <https://www.cia.gov/library/publications/the-world-factbook/geos/iz.html>
- Clancy, T. (2018). Theory of an Emerging-State Actor: The Islamic State of Iraq and Syria (ISIS) Case. *Systems* Vol. 6 (16), 1-24.
- Collier, P., & Hoeffler, A. (2004). Greed and Grievance in Civil War. *Oxford Economic Papers* 56 (4), 563-595.
- Danckwardt, P. (2016). *Conceptualizing ISIS in international legal terms-Implications, crises and failure of Westphalian notions of authority*. Stockholm: Stockholms Universitet.
- Eaton, T., Cheng, C., Mansour, R., Salisbury, P., Yazigi, J., & Khatib, L. (2019). *Conflict Economies in the Middle East and North Africa*. London: Chatham House: The Royal Institute of International Affairs.
- European Union, T. (2020). *COUNCIL DECISION (CFSP) 2020/1132*. Brussels: Council Of The European Union.
- Florea, A. (2020 Vol. 16(4)). Rebel governance in de facto states. *European Journal of International Relations*, 1004-1031.
- Flores, J. (2015). *Funding Terror: An Analysis of Financing Methods for Terror Groups Based in the Middle East*. Buies Creek: Campbell University.

- Ford, J. (2015). *Regulating Business for Peace: The UNited Nations, the Private Sector, and Post-Conflict Recovey*. Cambridge: Cambridge University Press.
- Goodhand, J. (2003). *From war economy to peace economy?* London: London School of Economics and Political Science.
- Grossman, H. (1999). Kleptocracy and revolutions. *Oxford Economic Papers* 51, 267-2283.
- Haara, F., & Smith, K. (2011). The 'synopsis': one size fits all? *UNIPED Vol. 34*, 79-86.
- Hamasaeed, S., & Nada, G. (2020, 05 29). *Iraq Timeline: Since the 2003 War*. Retrieved from United States Institute of Peace: <https://www.usip.org/iraq-timeline-2003-war>
- Hansen, S. J. (2007). *AE Working paper nr. 1: Civil War economies, the hunt for profit and the incentives for peace (The case of Somalia)*. Oslo: DEID.
- Hassan, G. (2016). *Civil War determinants: The case of Iraq and Syria's*. Ames: Iowa State University.
- Hirshleifer, J. (1995). *Theorizing About Conflict*. Los Angeles: UCLA Depratment of Economics Working Paper No. 727.
- Hosmer, D., & Lemeshow, S. (2000). *Applied Logistic Regression*. Hoboken: John Wiley & Sons.
- Hutchinson, S., & O'Malley, P. (2019). Discipline and Governmentality. In S. Hutchinson, P. O'Malley, & M. Deflem, *The Handbook of Social Control* (pp. 63-75). Hoboken: John Wiley & Sons.
- ICG, T. (2020). *Iraq: Fixing Security in Kirkuk*. Brussels: International Crisis Group.
- Industrial Statistic Directorate Iraq, T. (2018). *Industrial Large Establishments Statistics for 2017*. Baghdad: Directorate of Industrial Statistics.
- Industrial Statistic Directorate Iraq, T. (2018). *Small industrial establishments in private sector: statistics for the year 2017*. Baghdad: Central Statistical Organisation Iraq.

- Ingram, H. J. (2018). *Islamic State's English-language magazines, 2014-2017: Trends & implications for CT-CVE strategic communications*. The Hague: International Center for Counter-Terrorism.
- Inter-Agency Information and Analysis Unit, U. (2010). *Ninewa Governorate Profile*. New York: United Nations.
- International Crisis Group, T. (2020). *Contending with ISIS in the Time of Coronavirus*. Brussels: International Crisis Group.
- Islamic State Archives, T., & Jihadology, T. (2014). *Diwan Bayt al-Mal: Banks Administration Contract for Disbursement of Salaries*. Retrieved 05 14, 2021, from The Islamic State Archives: <https://islamicstatearchives.com/2021/04/05/diwan-bayt-al-mal-banks-administration-contract-for-disbursement-of-salaries/>
- Kaldor, M. (2012). *New and Old Wars: Organised violence in a global era*. New Jersey: John Wiley & Sons.
- KAPITA, T., & GIZ, T. (2019). *Iraqi Industrial Overview*. Baghdad: KAPITA.
- Katsos, J., & AlKafaji, Y. (2019). Business in War Zones: How Companies Promote Peace in Iraq. *Journal of Business Ethics Vol. 155*, 41-56.
- Khatib, L. (2015). *The Islamic State's Strategy: Lasting and Expanding*. Beirut: Carnegie Middle East Center.
- King, S. (2020). *The Arab Winter: Democratic Consolidation, Civil War, and Radical Islamists*. Cambridge: Cambridge University Press.
- Krefting, L. (1991). Rigor in Qualitative Research: The Assessment of Trustworthiness. *American Journal of Occupational Therapy Vol. 45 (3)*, 214-223.
- Le Billon, P. (2004). The Geopolitical Economy of Resource Wars. *Geopolitics*, 21-42.
- Lilleslåtten, M. (2021, 01 28). *Traditions are more important than violence when rebel forces govern in the Middle East*. Retrieved from UiO: Department of Culture Studies and Oriental Languages: <https://www.hf.uio.no/ikos/english/research/news-and->

events/news/2021/traditions-are-more-important-than-violence-when-rebel-forces-govern?kilde=tw-reb

Lister, C. (2014). *Profiling the Islamic State*. Doha: Brookings Doha Center.

Mabon, S. (2019). The world is a garden: Nomos, sovereignty, and the (contested) ordering of life. *Review of International Studies*, 1-21.

Maher, D. (2018). *Civil War and Uncivil Development: Economic Globalisation and Political Violence in Colombia and Beyond*. Cham: Palgrave Macmillan.

Malik, A., & Gallien, M. (2020). Border economies of the Middle East: why do they matter for political economy. *Review of International Political Economy Vol. 27 (3)*, 732-762.

Malik, N. (2020, 03 26). *Self-isolation might stop coronavirus, but it will speed the spread of extremism*. Retrieved from Foreign Policy: <https://foreignpolicy.com/2020/03/26/self-isolation-might-stop-coronavirus-but-spread-extremism/>

Mampilly, Z. (2011). *Rebel rulers: Insurgent governance and civilian life during war*. Ithaca: Cornell University Press.

Mampilly, Z. (2015). Performing the Nation-State: Rebel Governance and Symbolic Processes. In A. Arjona, N. Kasfir, & Z. Mampilly, *Rebel Governance in Civil War* (pp. 74-97). Cambridge: Cambridge University Press.

Mapping Militants Organizations, t. (2019, 09). *The Islamic State*. Retrieved from Stanford Center for International Security and Cooperation: https://cisac.fsi.stanford.edu/mappingmilitants/profiles/islamic-state#text_block_18356

Martinez, J. C., & Sirri, O. (2020). Of bakeries and checkpoints: state affects in Amman and Baghdad. *Society and Space*, 1-18.

Mazur, K. (2020). Dayr Al-Zur From Revolution to ISIS: Local Networks, Hybrid Identities, And Outside Authorities. In M. Cimino, *Syria: Borders, Boundaries and the State* (pp. 151-195). Basingstoke: Palgrave Macmillan.

- MSCI, T., & S&P, T. (2020). *Global Industry Classification Standard*. New York: Morgan Stanley Capital International.
- Nagelkerke, N. (1991). A note on a general definition of the coefficient of determination. *Biometrika Vol. 78*, 691-692.
- Nelson, J. (2004). *The Public Role of Private Enterprise: Risks, Opportunities and New Models of Engagement*. Cambridge: John F. Kennedy School of Government, Harvard University.
- Norwegian University of Life Sciences, T. (2021, May 21). *Research Data - guidelines and policies*. Retrieved from Norwegian University of Life Sciences: https://www.nmbu.no/en/research/for_researchers/researchdata/node/34680
- Norwegian University of Life Sciences, T. (2021, 05 17). *Writing Your Degree Thesis*. Retrieved from Norwegian University of Life Sciences: <https://www.nmbu.no/en/students/administration/master-thesis>
- OECD, T. (2020). *Investment in the MENA region in the time of COVID-19*. Paris: Organisation for Economic Co-operation and Development publishing.
- Olson, M. (1993). Dictatorship, Democracy, and Development. *The American Political Science Review Vol. 87 (3)*, 567-576.
- Péclard, D., & Mechoulan, D. (2015). *Rebel Governance and the Politics of Civil War*. Bern: Swiss Peace Foundation.
- Peschka, M. (2011). *World Development Report 2011: The Role of the Private Sector in Fragile and Conflict-Affected States*. New York: The World Bank.
- Plonski, S., & Yousuf, Z. (2018). *Borderlands and peacebuilding: A view from the margins*. London: Conciliation Resources: working together for peace.
- Raeymaekers, T. (2012). Reshaping the state in its margins: The state, the market and the subaltern on a central African frontier. *Critique of Anthropology Vol. 32 (3)*, 334-350.

- Rettberg, A. (2019). The Colombian Private Sector in Colombia's Transition to Peace. In E. Chenoweth, D. Avant, M. Beryy, R. Epstein, C. Hendrix, O. Kaplan, & T. Sisk, *Civil Action and the Dynamics of Violence*. New York: Oxford University Press.
- Revkin, M. (2021). Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq. *Journal of Conflict Resolution Vol. 65 (1)*, 46-80.
- Revkin, M. R. (2020). *Competitive Governance and Displacement Decisions Under Rebel Rule: Evidence from the Islamic State in Iraq*. Georgetown: Georgetown University Center.
- Revkin, M., & Ahram, A. (2020). Perspectives on the rebel social contract: Exit, voice, and loyalty in the Islamic State. *World Development Vol. 132*, 1-8.
- Revkin, M., & Ahram, A. I. (2017, 01 27). *Exit, Voice, and Loyalty Under the Islamic State*. Retrieved from Project on Middle East Political Science: <https://pomeps.org/exit-voice-and-loyalty-under-the-islamic-state>
- Salihi, R. (2019). Terror and Torment: The Civilian Journey to Escape Iraq's War Against the "Islamic State". In J. Eriksson, & A. Khaleel, *Iraq after ISIS* (pp. 79-98). Cham: Palgrave Pivot.
- Smith, T., & McKenna, C. (2013). A Comparison of Logistic Regression Pseudo R² Indices. *Multiple Linear Regression Viewpoints Vol. 39 (2)*, 17-26.
- Solomon, E., Kwong, R., & Bernard, S. (2016, 02 29). *Inside Isis Inc: The journey of a barrel of oil*. Retrieved from Financial Times: <https://ig.ft.com/sites/2015/isis-oil/>
- Solomon, E., Kwong, R., & Bernard, S. (2016, February 29). *Inside Isis Inc: The journey of a barrel of oil*. Retrieved May 14, 2021, from <https://ig.ft.com/sites/2015/isis-oil/>
- Stokke, K. (2011). Liberal peace in question: The Sri Lankan Case. In K. Stokke, & J. Uyangoda, *Liberal peace in question* (pp. 1-33). London: Anthem Press.
- Studdard, K. (2004). *War Economies in a Regional Context: Overcoming the Challenges of Transformation*. New York: International Peace Academy.

- Tejel, J. (2020). The Complex and Dynamic Relationship of Syria's Kurds with Syrian Borders: Continuities and Changes. In M. Cimino, *Syria: Borders, Boundaries, and the State* (pp. 243-267). New York: Palgrave Macmillan.
- Tomlinson, C. (2008). Unintended consequences: how Somalia's business community, in search of stability, and the USA, in search of terrorists, nearly created a radical Islamic state in the horn of Africa. *Global Business and Economics Review Vol. 10 (2)*, 229-238.
- Turkmani, R., Ali, A. A., Kaldor, M., & Bojicic-Dzelilovic, V. (2015). *Countering the logic of the war economy in Syria*. London: LSE research online.
- United Nations Counter Terrorism Committee, T. (2020). *The impact of the COVID-19 pandemic on terrorism, counter-terrorism and countering violent extremism*. New York: United Nations Security Council.
- United Nations, D. (2008). *International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 4*. New York: United Nations.
- United Nations, T. (2020). *United Nations Security Council Consolidated List*. New York: United Nations Security Council.
- United States State Department, T. (2019). *Foreign Terrorist Organization (FTO)*. Washington: Congressional Research Service.
- Weinstein, J. (2007). *Inside Rebellion: The Politics of Insurgent Violence*. Cambridge: Cambridge University Press.
- Worrall, J. (2017). (Re-)Emergent Orders: Understanding the Negotiation(s) of Rebel Governance. *Small Wars & Insurgencies Vol. 28*, 709-733.

11 Appendix

Figure 1. Observed businesses

Figure 1. Observed businesses (N=553).

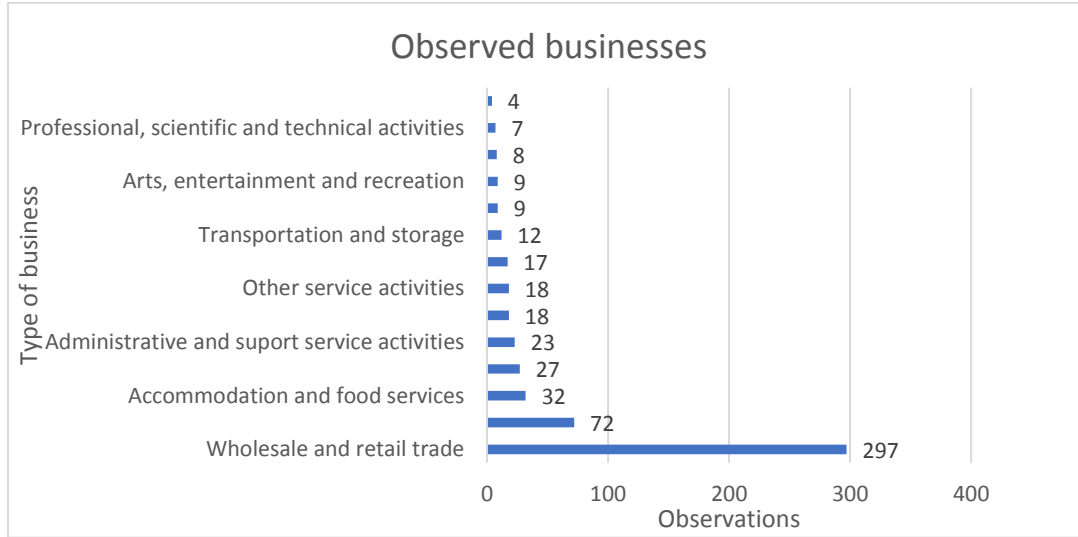


Figure 2. Businesses' amount of loss grouped after industry sectors

Figure 2. Businesses' loss after business type. Two outliers with a loss of IQD 1Bn each (in the wholesale and retail trade and administration and support services industries) are not shown (N=372).

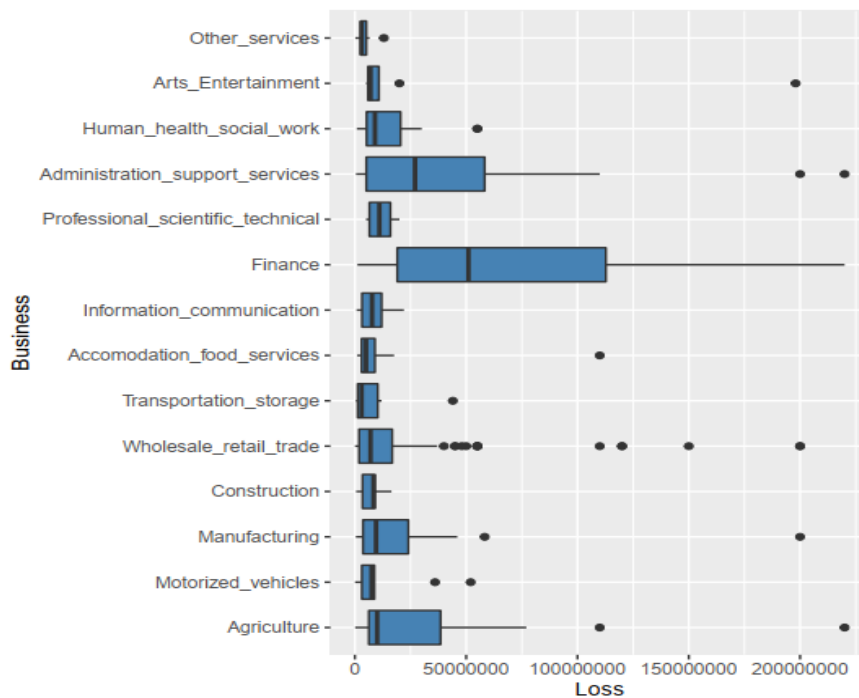


Figure 3. The private sector amidst civil war

Figure 3. Considerations and determinants of the private sector in a civil war setting.

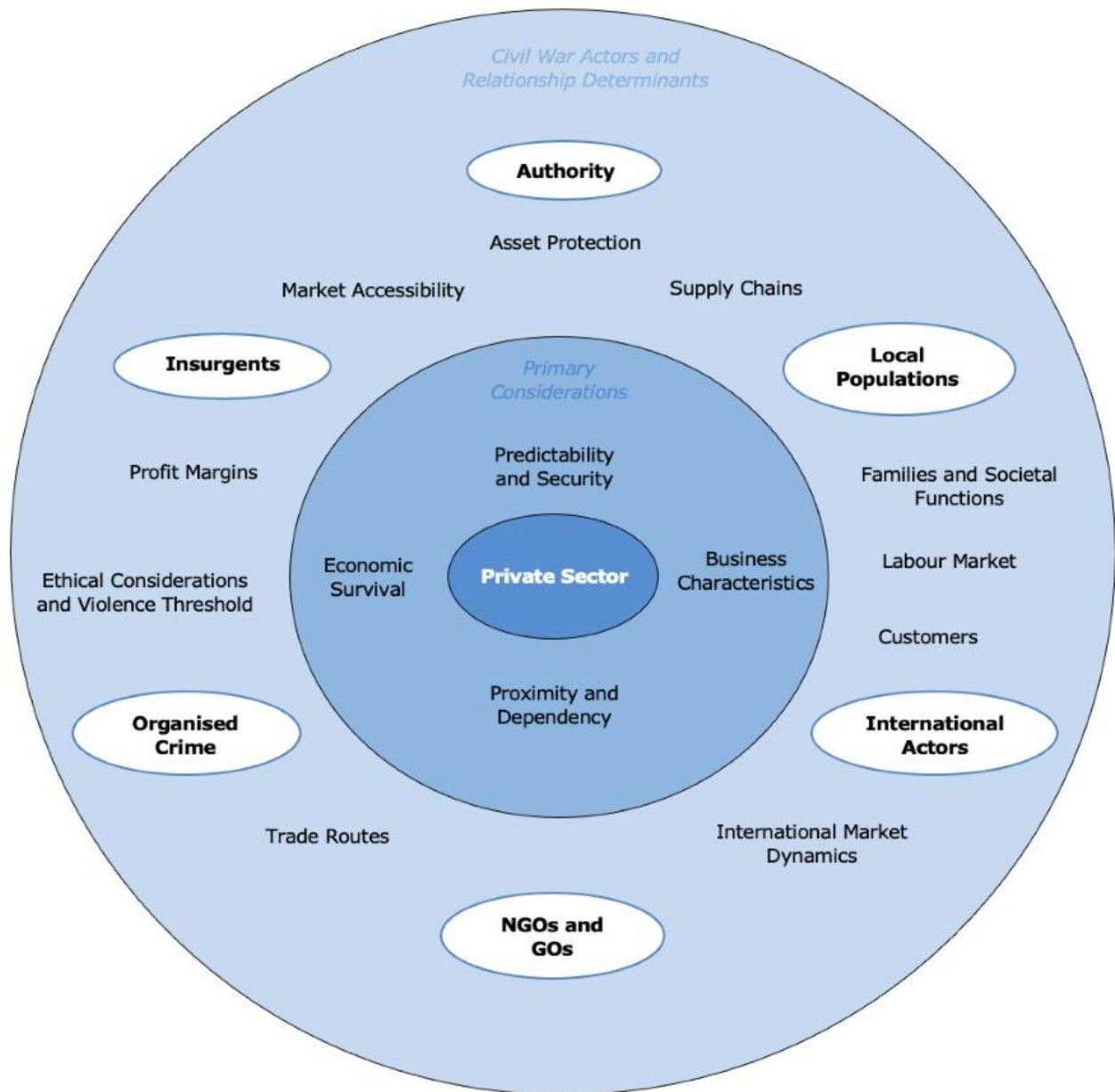


Table 1. Dependent and independent variables used in the analysis.

Table 1. Dependent and independent variables used in the analysis.		
Variable Name	Abbreviation	Variable Nature
Islamic State Threatening	IST	Binominal
No	IST _{No}	Dependent
Yes	IST _{Yes}	Independent
Business Loss due to Islamic State	BL	Binominal
No	BL _{No}	Dependent
Yes	BL _{Yes}	
Amount of Loss in Business due to the Islamic State	ABL	Interval/Ratio
less than 1000000 IQD	ABL ₀	Dependent
1000000-5000000 IQD	ABL _{1Mio}	
5000000-10000000 IQD	ABL _{5Mio}	
10000000-20000000 IQD	ABL _{10Mio}	
20000000-50000000 IQD	ABL _{20Mio}	
50000000-100000000 IQD	ABL _{50Mio}	
100000000-1000000000 IQD	ABL _{100Mio}	
more than 1000000000 IQD	ABL _{1Bn}	
Change after the Islamic State	CaIS	Nominal
Negative Change	CaIS _{neg}	Dependent
No Tendency/No Change	CaIS ₀	
Positive Change	CaIS _{pos}	
Business Type	BT	Nominal
Agriculture, Forestry and Fishing	BT _{AFF}	Independent Variable
Motor Vehicles	BT _{MV}	
Manufacturing	BT _M	
Construction	BT _C	
Wholesale/Retail Trade	BT _{WRT}	
Transport/Storage	BT _{TS}	
Accommodation/Food Services	BT _{AFS}	
Information/Communication	BT _{IC}	

Finance/Insurance	BT _{FI}	
Real Estate	BT _{RE}	
Professional/Science/Technical	BT _{PST}	
Administrative/Support Services	BT _{ASS}	
Education	BT _E	
Human Health/Social Work	BT _{HHSW}	
Arts/Entertainment	BT _{AE}	
Other Service Activities	BT _{OS}	
Governorate	Gov	Binominal
Salah ad-Din	Gov _S	Independent
Nineveh	Gov _N	<i>Control Variable</i>
Sex	Sex	Binominal
Female	Sex _F	Independent
Male	Sex _M	Control Variable
Education	Educ	Nominal
No Education/No Certificate	Educ _{No}	Independent
Primary Education	Educ _P	<i>Control Variable</i>
Secondary Education	Educ _S	
Institute	Educ _I	
University	Educ _U	
Employment btw. 2014 and 2017	Emp14/17	Binominal
No	Emp14/17 _{No}	Independent
Yes	Emp14/17 _{Yes}	
Business Size after Revenue	BR	Independent
Less than 1000000 IQD	BR _{Small}	
1000000-5000000	BR _{Medium}	
More than 5000000	BR _{Large}	

Table 2. Chi square values of categorical variables

Table 2. Chi-Square values of all independent and dependent variables¹³⁵. Bold values stand for $p < 0.05$. Note: ABL_s and ABL_N stand for ABL investigated in the respective Governorate. Degrees of freedom in parentheses, sample size in foot note 97).

	Independent Variables					Dependent Variables			
	Gov(1)	Sex	Educ	Emp14/17	BT	IS _{II}	BL	BR	CaIS
Sex (1)	15.86								
Educ (4)	2.99	13.23							
Emp14/17 (1)	193.84	5.56	4.02						
BT (13)	131.9	55.66	127.47	105.83					
IST (1)	0.89	0.32	7.62	9.94	57.02				
BL (1)	68.8	8.98	12.86	24.36	35.23	85.37			
BL _s			6.71		22.56	0.14			
BL _N		2.43	13.18		28.33	95.28			
BR(2)	103.82	11.04	11.46		43.68	1.50	10.09		
CaIS (2)	11.46	2.83	9.13	4.98	26.09	7.52	0.09	4.30	

¹³⁵ BL and ABL were investigated separately in both governorates, making an investigation of Gov unnecessary. Furthermore, respondents in Salah ad-Din were exclusively male, leading to sex being excluded from the analysis there.

Table 3. Summary of best fitting models without businesses' revenue

Table 3. Best fitting models for the dependent variables Islamic State threatening, business loss due to the IS, and changes after IS defeat: Multinomial Logit Analysis.

Independent Variables		Dependent Variables		
		IS Threat Ratio (1), Loss Ratio (2) and Positive Change Ratio (3)		
		Multinomial Logit Coefficient (Standard Error)		
		(1) IST	(2) BL	(3) CaIS
BT	Ref.-Cat: BT _{WRT}	0.8(0.33)*	2.49(1.05)*	3.87(0.41)***
	BT _{AFF}	-0.77(0.43)	16.69(1050.13)	16.70(3412.21)
	BT _{MV}	-0.89(0.54)	0.17(0.60)	-1.03(1.11)
	BT _M	-1.19(0.3)***	-0.06(0.33)	0.40(1.09)
	BT _C	-1.62(0.86)	0.01(1.07)	16.70(6268.63)
	BT _{TS}	-0.22(0.61)	-1.76(1.03)	16.70(5118.32)
	BT _{AFS}	-0.81(0.40)*	-0.98(0.54)	16.70(3237.11)
	BT _{IC}	1.92(1.07)	15.50(1956.41)	16.70(5910.12)
	BT _{FI}	-0.37(1.04)	15.48(3007.62)	16.70(8865.19)
	BT _{PST}	-0.002(0.8)	17.27(1911.71)	16.70(6701.45)
	BT _{ASS}	-0.15(0.47)	-1.85(0.81)*	16.70(3697.04)
	BT _{HHSW}	0.90(0.55)	-1.23(0.72)	16.70(4300.25)
	BT _{AE}	15.28(471.26)	-0.92(1.15)	16.70(5910.12)
	BT _{OS}	1.56(0.65)*	-1.41(0.69)*	16.70(4300.25)
Gov	Ref.-Cat: Gov _S		-3.52(0.66)***	
	Gov _N			
Sex	Ref.-Cat: Sex _F		0.40(0.46)	
	Sex _M			
Educ	Ref.-Cat: Educ _{No}			
	Educ _P		-0.47(0.56)	
	Educ _S		-0.07(0.53)	
	Educ _I		0.35(0.57)	
	Educ _U		0.61(0.56)	
Emp14/17	Ref.-Cat: Emp14/17 _{No}			
	Emp14/17 _{Yes}	-0.87(0.32)**	0.18(0.88)	
IST	Ref.-Cat: IST _{No}			
	IST _{Yes}		2.41(0.29)***	
N		553	548	546
Pseudo R ²		0.16	0.49	0.09
AIC		723.63	483.24	104.8

Cells contain ratios with standard errors in parentheses. *p < 0.05, **p < 0.01, ***p < 0.001. Significant values indicate the variables' association and confirms the existence of a relevant relationship between these categorical variables. Wholesale and retail trade industry was set as the residual category.

Table 4. Summary of best fitting models with businesses' revenue

Independent Variables		Dependent Variables		
		IS Threat Ratio (4), Loss Ratio (5) and Positive Change Ratio (6)		
		Multinomial Logit Coefficient (Standard Error)		
		(4) IST	(5) BL	(6) CaIS
BT	Ref.-Cat: BT _{WRT}	-0.23(0.14)	2.90(1.11)**	3.91(0.48)***
	BT _{AFF}	-0.16(0.49)	15.83(718.77)	17.04(4008.92)
	BT _{MV}	-0.86(0.54)	0.24(0.60)	-0.84(1.11)
	BT _M	-1.30(0.34)***	0.14(0.35)	0.53(1.10)
	BT _C	-15.50(833.02)	-0.12(1.26)	16.92(10163.98)
	BT _{TS}	0.46(0.93)	-2.94(1.48)*	16.97(7871.13)
	BT _{AFS}	-1.02(0.49)*	-0.94(0.58)	16.82(3526.15)
	BT _{IC}	1.77(1.10)	14.95(1577.30)	16.80(7202.18)
	BT _{FI}	15.34(1455.40)	16.00(3956.18)	17.34(17730.37)
	BT _{PST}	-0.47(1.23)	17.02(2027.89)	16.65(10236.63)
	BT _{ASS}	-0.46(0.75)	-1.43(1.05)	16.95(6223.01)
	BT _{HHSW}	0.72(0.57)	-0.94(0.80)	17.02(4544.61)
	BT _{AE}	15.79(650.87)	-1.15(1.17)	16.65(7929.26)
	BT _{OS}	1.50(0.67)*	-1.60(0.72)*	16.72(4726.43)
Gov	Ref.-Cat: Gov _S		-4.04(0.82)***	
	Gov _N			
Sex	Ref.-Cat: Sex _F			
	Sex _M		0.41(0.52)	
Educ	Ref.-Cat: Educ _{No}			
	Educ _P		-0.19(0.61)	
	Educ _S		0.21(0.58)	
	Educ _I		0.52(0.62)	
	Educ _U		0.88(0.61)	
IST	Ref.-Cat: IST _{No}			
	IST _{Yes}		2.62(0.31)***	
BR	Ref.Cat: BR _{Small}			
	BR _{Medium}	0.46(0.24)	-0.53(0.36)	-0.69(0.75)
	BR _{Large}	0.31(1.44)	9.33(1931.77)	15.76(11369.76)
N		442	442	442
Pseudo R ²		0.15	0.47	0.08
AIC		582.97	435.95	106.1

Table 5. Models analyzing threatening by the IS

Independent Variables		Dependent Variables		
		IS Threat Ratios		
		Multinomial Logit Coefficient (Standard Error)		
		(7)	(8)	(9)
		IST	IST	IST
BT	Ref.-Cat: BT _{WRT}	-0.13(0.65)	-0.02(0.12)	0.8(0.33)*
	BT _{AFF}	-0.51(0.47)	-0.67(0.42)	-0.77(0.43)
	BT _{MV}	-0.92(0.54)	-0.94(0.54)	-0.89(0.54)
	BT _M	-1.18(0.31)***	-1.15(0.3)***	-1.19(0.3)***
	BT _C	-1.66(0.86)	-1.08(0.82)	-1.62(0.86)
	BT _{TS}	-0.12(0.65)	0.02(0.59)	-0.22(0.61)
	BT _{AFS}	-0.84(0.41)*	-0.77(0.4)	-0.81(0.40)*
	BT _{IC}	1.96(1.08)	2.1(1.07)*	1.92(1.07)
	BT _{FI}	-0.3(1.05)	0.02(1.01)	-0.37(1.04)
	BT _{PST}	-0.09(0.8)	0.31(0.77)	-0.002(0.8)
	BT _{ASS}	-0.08(0.48)	0.28(0.44)	-0.15(0.47)
	BT _{HHSW}	1.06(0.56)	0.9(0.54)	0.90(0.55)
	BT _{AE}	15.24(470.56)	15.59(485.13)	15.28(471.26)
	BT _{OS}	1.66(0.67)*	1.63(0.64)*	1.56(0.65)*
Gov	Ref.-Cat: Gov _S			
	Gov _N	0.2(0.28)		
Sex	Ref.-Cat: Sex _F			
	Sex _M	0.25(0.39)		
Educ	Ref.-Cat: Educ _{No}			
	Educ _P	0.64(0.47)		
	Educ _S	0.74(0.46)		
	Educ _I	0.81(0.48)		
	Educ _U	0.58(0.47)		
Emp14/17	Ref.-Cat: Emp14/17 _{No}			
	Emp14/17 _{Yes}	-1.01(0.38)**		-0.87(0.32)**
N		553	553	553
Pseudo R ²				
AIC		731.3	729.12	723.63

Table 6. Models analyzing businesses loss due to the IS

Table 6. Business Loss: Multinomial Logit Analysis of BL overall and in both Governorates respectively. (for both governorate the best respective model is displayed) NA symbolise no observations in this category; "-" stands for exclusion due to unimportance.

Independent Variables		Dependent Variables			
		Business Loss Ratios			
		Multinomial Logit Coefficient (Standard Error)			
		(10) BL	(11) BL	(12) BL _S	(13) BL _N
BT	Ref.-Cat: BT _{WRT}	2.49(1.05)*	0.80(0.13)***	40.79(12968.56)	-1.2(0.7)
	BT _{AFF}	16.69(1050.13)	16.76(761.37)	0.29(11283.71)	17.08(1390.15)
	BT _{MV}	0.17(0.60)	-0.35(0.5)	0.65(26147.52)	0.14(0.61)
	BT _M	-0.06(0.33)	-0.41(0.27)	-19.0(6273.61)	0.001(0.34)
	BT _C	0.01(1.07)	0.3(0.83)	0.86(20379.37)	-0.31(1.25)
	BT _{TS}	-1.76(1.03)	0.81(0.78)	-19.81(6273.61)	NA
	BT _{AFS}	-0.98(0.54)	-0.87(0.38)*	-0.66(14594.98)	-1.14(0.59)
	BT _{IC}	15.50(1956.41)	16.76(1318.73)	-19.16(25626.65)	15.17(1758.54)
	BT _{FI}	15.48(3007.62)	16.76(1978.09)	-0.59(24976.72)	15.54(3956.18)
	BT _{PST}	17.27(1911.71)	16.76(1495.3)	-1.34(25062.57)	17.20(1769.24)
	BT _{ASS}	-1.85(0.81)*	0.48(0.52)	-20.61(6273.61)	-2.08(1.3)
	BT _{HHSW}	-1.23(0.72)	-0.2(0.52)	-19.42(23260.57)	-1.21(0.74)
	BT _{AE}	-0.92(1.15)	1.28(1.07)	-1.67(21522.66)	-1.01(1.16)
	BT _{OS}	-1.41(0.69)*	-0.2(0.52)	-22.3(6273.61)	-0.54(0.79)
Gov	Ref.-Cat: Gov _S				
	Gov _N	-3.52(0.66)***		-	-
Sex	Ref.-Cat: Sex _F				
	Sex _M	0.40(0.46)		NA	0.64(0.48)
Educ	Ref.-Cat: Educ _{No}				
	Educ _P	-0.47(0.56)		-20.0(11350.13)	-0.39(0.59)
	Educ _S	-0.07(0.53)		-19.24(11350.13)	0.08(0.56)
	Educ _I	0.35(0.57)		0.32(13972.99)	0.37(0.6)
	Educ _U	0.61(0.56)		0.27(13213.51)	0.62(0.58)
Emp14/17	Ref.-Cat: Emp14/17 _{No}				
	Emp14/17 _{Yes}	0.18(0.88)			
IST	Ref.-Cat: IST _{No}				
	IST _{Yes}	2.41(0.29)***		0.99(1.0)	2.51(0.3)***
N		548	548	157	391
Pseudo R ²		0.49	0.12	0.50	0.40
AIC		483.24	650.2	69.28	426.91

Table 7. Models analyzing changes after IS defeat

Independent Variables		Dependent Variables			
		Businesses' Positive Change after IS Ratio			
		Multinomial Logit Coefficient (Standard Error)			
		(14)	(15)	(16)	(17)
		CaIS	CaIS	CaIS	CaIS
BT	Ref.-Cat: BT _{WRT}	58.43(11899.1)	3.87(0.41)***	58.53(11340.40)	21.13(2186.89)
	BT _{AFF}	17.67(7578.14)	16.70(3412.21)	17.58(7573.53)	16.19(4786.73)
	BT _{MV}	-0.93(1.16)	-1.03(1.11)	-0.88(1.15)	-1.26(1.14)
	BT _M	0.14(1.13)	0.40(1.09)	0.14(1.13)	0.06(1.12)
	BT _C	17.63(15102.99)	16.70(6268.63)	17.67(15042.77)	16.15(9192.57)
	BT _{TS}	1.36(14185.99)	16.70(5118.32)	1.43(14215.72)	0.94(8631.38)
	BT _{AFS}	18.45(8189.76)	16.70(3237.11)	18.56(8205.39)	17.18(5040.98)
	BT _{IC}	17.72(13034.40)	16.70(5910.12)	17.68(13012.00)	17.49(9026.67)
	BT _{FI}	17.95(19565.99)	16.70(8865.19)	17.90(19472.17)	16.54(12552.50)
	BT _{PST}	18.12(16234.29)	16.70(6701.45)	17.97(16124.16)	16.94(10206.53)
	BT _{ASS}	17.04(8209.01)	16.70(3697.04)	17.19(8174.86)	15.79(5121.26)
	BT _{HHSW}	16.56(9268.72)	16.70(4300.25)	16.74(9252.17)	17.50(6714.86)
	BT _{AE}	17.59(13647.80)	16.70(5910.12)	17.77(13593.98)	17.50(9049.19)
	BT _{OS}	17.83(9748.30)	16.70(4300.25)	17.88(9757.22)	17.56(6664.32)
Gov	Ref.-Cat: Gov _S				
	Gov _N	-18.31(4587.04)		-17.94(3431.99)	-16.93(2186.89)
Sex	Ref.-Cat: Sex _F				
	Sex _M	-18.69(7731.89)		-18.75(7736.81)	
Educ	Ref.-Cat: EduC _{No}				
	Educ _P	-18.21(7519.24)		-18.20(7547.72)	
	Educ _S	-18.25(7519.24)		-18.24(7547.72)	
	Educ _I	-18.01(7519.24)		-18.01(7547.72)	
	Educ _U	0.36(8478.20)		0.33(8503.64)	
Emp14/17	Ref.-Cat: Emp14/17 _{No}				
	Emp14/17 _{Yes}	0.61(6701.66)			
IST	Ref._Cat: IST _{No}				
	IST _{Yes}	-0.53(0.91)		-0.74(0.78)	-0.87(0.77)
BL	Ref.-Cat: BL _{No}				
	BL _{Yes}	-0.44(0.98)			
N		546	546	546	546
Pseudo R ²		0.22	0.09	0.22	0.14
AIC		111.86	104.8	108.7	104.45

Table 8. Models analyzing businesses' losses

Independent Variables		Dependent Variables		
		Businesses' Amount of Loss Ratio		
		Multinomial Logit Coefficient (Standard Error)		
		(18) ABL	(19) ABL _N	(20) ABL _S
BT	Ref.-Cat: BT _{WRT}	33457490(9862547)***	24229220(12353164)	-12559878(46416310)
	BT _{AFF}	-31963(18296532)	13211523(12403465)	21102469(38507151)
	BT _{MV}	-9068080(27564444)	-1099620(11260505)	-31528240(78988266)
	BT _M	-3854695(14802239)	8471546(6256037)	-8874623(40195956)
	BT _C	-23244178(35758135)	-9696696(29229234)	-29203972(62307152)
	BT _{TS}	-24908490(28641043)		-3139697(47715720)
	BT _{AFS}	-13920875(23069135)	-11483049(12275094)	-42975705(48831176)
	BT _{TC}	-15432561(29055828)	-13592826(13255554)	-48941550(71532650)
	BT _{FI}	51468728(43260922)	-13435097(29149116)	61332769(79484890)
	BT _{PST}	-12411849(32758407)	-9166883(14885568)	-38919226(78673647)
	BT _{ASS}	84763127(23229405)***	15464903(29149116)	86212279(39361426)*
	BT _{HHSW}	-6927560(26431471)	-9730654(12352866)	-20481264(64426623)
	BT _{AE}	6869946(30779906)	-12357258(14855303)	-3066251(69397557)
	BT _{OS}	-19384567(27607538)	-4555077(13219639)	-38479120(68828588)
Gov	Ref.-Cat: Gov _S			
	Gov _N	-16604872(10219911)		
Sex	Ref.-Cat: Sex _F			
	Sex _M		11271017(8578158)	
Educ	Ref.-Cat:			
	Educ _{No}			
	Educ _P		-	23578470(47181110)
	Educ _S		29122571(10939539)**	
	Educ _I		-20965141(10325921)*	24918681(46495788)
	Educ _U		-16803542(10708944)	96367204(51198573)
			-16922792(10659568)	76051428(48324490)
Emp14/17	Ref.-Cat:			
	Emp14/17 _{No}			
	Emp14/17 _{Yes}			
N		372	224	148
Multiple R ²		0.07	0.08	0.11
Adjusted R ²		0.03	0.002	-0.004
F-statistic		1.877(14/357 DF)	1.02(17/206 DF)	0.969 (17/130 DF)
P-value of F		0.03*	0.43	0.50



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