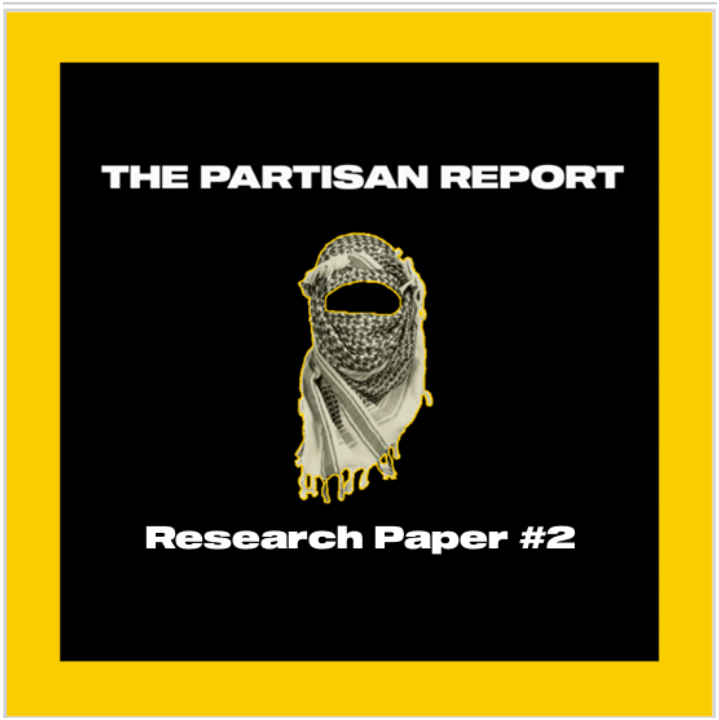

Exploding Boundaries: Analysing the Drivers of Suicide Terrorism in the Post-Arab Spring Era

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Abstract

This study investigates the predictors of suicide terrorism in the Arab world after 2011 and focuses on assessing the relationship between the frequency of suicide bombings and state authoritarianism, group ideology, and foreign intervention. Using a dataset derived from the Global Terrorism Database, this paper examines the predictors of the frequency of suicide bombings across 21 Arab states from 2011 until 2020. A negative binomial regression model exposes that group ideology is the most significant and strongest predictor of an increase in the frequency of suicide bombings, a finding that was complemented by the use of a Chi-square test. Other significant and positive variables included foreign intervention and religious fractionalisation, whilst the positive coefficient of state authoritarianism, inversely operationalised as levels of democracy, did not quite reach statistical significance. These findings and the case-study-rich discussion contribute to not only the broader academic debate, but specifically to Social Movement Theory, Rational Choice Theory, and Ideological Theories of Terrorism, and emphasise the need for a multidimensional approach to understanding the phenomenon of suicide bombing.

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1.0 Introduction

Suicide bombing as a phenomenon has emerged as an often devastating tactic of political violence in the modern era, the effects of which usually reach far beyond the physical loss of life across the broadest political and societal spheres. In particular, suicide bombings have proliferated across the Islamic world, with the post-2011 Arab world seeing frequent attacks across, but especially in the war-torn contexts of Syria, Iraq, Somalia, and others. The complex interplay of ideological, structural, and external factors is often cited as being among the most significant causes of suicide bombing. As such, this paper seeks to explain the factors behind suicide bombing in the Arab world after the Arab Spring. In doing so, this paper seeks to bridge significant gaps in the literature and advance the academic discussion of the dynamics that make suicide bombing a preferred tactic in certain situations.

The Arab Spring, which was a series of uprisings that began in late 2010 in Tunisia before sweeping across the Arab world in the following year, brought with it hopes of political form and democratisation across the Arab world (Yerkes and Mbarek 2021), but often resulted in intense periods of political violence and instability, with notable examples being the civil wars in Yemen and Syria. Extremist movements such as al-Qaeda, Da'esh, and al-Shabaab found a home in the political chaos that surrounded them, and these groups, amongst others, proliferated the use of suicide bombings as a tactic in their respective struggles, highlighting what I will call the tactical centrality of suicide bombings in their post-2011 Arab World operations.

A multidimensional approach is crucial to understanding under what conditions suicide bombings occur. Firstly, this paper will assess the potential cause of authoritarian regimes, whose repression and exclusionary governance practises create grievances that may fuel radicalisation and the propensity for disaffected individuals to sacrifice themselves in a suicide attack. In this paper, I will measure authoritarian governance through levels of democracy, and determine whether this as a variable is associated with the frequency of suicide bombings across the Arab world.

Secondly, I will look at the effects of group ideology on the frequency of suicide bombings. Salafist-Jihadist groups, for example, have centralised suicide bombings as a key component not only of their strategy, but as their ideology/religious outlook as a whole, depicting these attacks not as suicide attacks, but as *'amaliyyaat al-Istishaad*, most often translated as "martyrdom-seeking operations". On the other hand, other groups, which I have labelled as Islamist-Nationalist groups, Shia-Islamist groups, or Secular-Marxist groups, have shown varying degrees of willingness to engage in suicide bombings. I seek to understand how group ideology can predict the prevalence of suicide bombings within a certain country-year datapoint.

Thirdly, this paper will assess the role of foreign intervention in the proliferation of suicide bombings across the Arab world. Foreign military occupation or involvement often exacerbates existing or creates new grievances in affected populations, and terrorist groups often exploit anti-occupation narratives to legitimise their violent actions and recruit potential operatives, particularly in Iraq and Syria.

To account for these three variables and how they interact with suicide bombings across the Arab World, a quantitative analysis of suicide bombings across the Arab after the Arab Spring was conducted. A

standard Negative Binomial Regression was chosen to analyse the country-year data, which breaks down the original data from the Global Terrorism Database into the number of suicide bombings within a certain country in a 12-month period. The independent variables are group ideology (categorised as Takfiri-Jihadist, Islamist-Nationalist, Secular-Marxist, or Shia-Islamist), levels of democracy, and foreign intervention. Control variables, including unemployment rates, and religious fractionalisation, are incorporated to account for structural and economic influences and to strengthen the model.

The findings of this paper reveal interesting insights into the predictors of suicide bombings. Perhaps predictably, Salafi-Jihadist groups emerged from all variables as the most significant variable, showing an extremely statistically significant and positive relationship with the count of suicide bombings. Religious fractionalisation, originally a control variable, and foreign intervention both emerged as significant positive predictors of suicide bombings. On the other hand, state authoritarianism did not emerge as statistically significant, although lower levels of democracy do generally corroborate with higher levels of suicide bombings across the Arab world.

This thesis contributes to the academic discussion of suicide bombing, and terrorism more generally, by highlighting the interplay between structural, ideological, and external factors in shaping patterns of suicide bombing in the Arab world. Through the synthesis of quantitative analysis and theoretical insights from Social Movement Theory and Rational Choice Theory, as well as the broader literature, I offer a multidimensional understanding of suicide bombing. Furthermore, the use of three case studies relevant to each independent variable further depicts how suicide terrorism may emerge, or go away, in different national contexts.

These findings, and their implications, offer significant insight for both academics and those in the policy domains. Within the realm of academia, my research stresses how crucial it is to take a multidimensional approach to the study of not only suicide bombing and terrorism but political violence in general. For policymakers, my findings indicate the need for more comprehensive approaches to tackling suicide bombing in the Arab world through the addressing of the underlying ideology, and grievances that pre-dispose radicalised individuals to conducting suicide attacks. Understanding these conditions allows stakeholders to develop well-thought strategies that will mitigate their occurrence and impact.

In sum, this paper provides a robust examination of the factors driving suicide bombings in the Arab world post-2011 and sheds light on the complex interplay of authoritarianism, ideology, and foreign intervention.

2.0 Literature Review

2.1 Introduction

In the eyes of many, one of the most defining features of the conflicts in the post-Arab Spring era has been the proliferation of suicide bombings across the region by terrorist groups, which I have previously referred to as tactical centrality. The complex nature of modern insurgencies, consisting of political, ideological, social, and economic dimensions, is reflected through this tactical centrality. The academic debate has long concerned itself with the causes of suicide bombing, which range from ethnoreligious diversity (Fox 2004), group ideology (Horowitz 2015), levels of democracy (Wade and Reiter 2007), economic factors (Choi 2019), and foreign intervention (Choi and Piazza 2017).

Foreign military interventions, due to the fact that their very presence acts as a target for terrorists and exacerbates existing power asymmetries, are often cited as a cause of suicide bombings. According to Choi and Piazza (2017, 273-274), The presence of foreign military forces can lead to a "nationalist backlash" which often legitimises extreme tactics as a means of grassroots resistance. Conversely, it is argued by other academics such as Wintrobe (2006) that it is the absence of democratic norms and the presence of repressive, authoritarian governments that drives suicide terrorism. According to him, extremist groups are attracted to more extreme and violent methods in the absence of a democratic state where voices of political opposition are heard (Wintrobe 2006). Thirdly, the importance of group ideology is not to be overlooked, as beliefs and ideologies that are both collectivist and radical often glorify martyrdom, and encourage followers to conduct attacks that seek martyrdom accordingly.

As such, this literature review will seek to critically evaluate the main ideas presented in the pre-existing literature on these three causes of suicide bombings. In doing so, this review aims to shed light on the complex dynamics that drive this form of violence and reveal the research gap that this paper seeks to fill.

2.2 The Relationship Between Foreign Interventions and Suicide Bombings

The following section seeks to review the academic literature on the relationship between suicide terrorism and foreign military intervention and how the latter can act as a catalyst for the former. The tactical and retaliatory dimensions of the relationship between the two are explored extensively by Choi and Piazza (2018) and Seifert and McCauley (2014), while Moghadam (2013) offers a solid critique of these occupation-centric analyses. He does this by shedding light on both the transnational and ideological factors at play and emphasising the multiplicity of factors responsible for suicide terrorism. In addition to this debate, I will further review what has been written by the likes of Pape (2003) and Lewis (2016) on the more strategic and economic dimensions that foreign intervention can have. When analysed side-by-side, these perspectives shed light on a nuanced interaction between foreign interventions, power dynamics, and the motivations underlying suicide terrorism.

2.2.1 Foreign Military Interventions as Catalysts for Suicide Bombings

A recurring theme in academia is the positioning of foreign military intervention at the forefront of the causes of suicide terrorism. Choi and Piazza (2018, 687) use a large cross-national dataset and time-series analysis in their study to determine the relationship between transnational suicide bombing and foreign

military intervention. The findings of their study suggest that politically motivated foreign interventions correlate strongly with increased transnational terrorist activity. Transnational backlash is identified by the authors here as an explanatory factor, that is insurgent groups exploit the presence of foreign and occupying military forces as a justification for extreme tactics. With regards to this research, is not as relevant to this paper as it focuses on terrorism within countries that are active in foreign military intervention. Nevertheless, it does establish a link between suicide bombings and foreign military intervention.

An insightful analysis of the relationship between foreign occupation is offered by Seifert and McCauley (2014), who conducted an analysis of the patterns of suicide attacks in Iraq between 2003 and 2010. Examining the data of their research, the authors conclude that suicide bombings overwhelmingly targetted what they call soft-targets, rather than hard-targets, which the authors define as US military soldiers and instilations. This finding challenges the regularly cited narrative that suicide bombings are ideological acts against foreign forces occupying the land claimed by the extremist group, and instead, as the authors argue, reflects a tactics change in tactics to shift threats and vulnerabilities within the context of occupation. The authors further argue that internal political developments such as the 2007 US Troop Surge and the Sunni awakening movement shaped the focus of suicide bombings. Hence, Seifert and McCauley demonstrate how suicide bombings should not be understood in an ideological vacuum, but as a tactical response to an evolving political and security landscape.

Whilst there is no doubt that the presence of foreign military forces does often correlate with a rise in suicide bombings, Moghadam criticises what he describes as a narrow framing as the primary cause of suicide bombings. The author explains multiple inconsistencies in this line of argument, claiming that suicide bombings frequently occur in states not experiencing any foreign occupation. In doing so, he challenges the simple cause-and-effect relationship between foreign occupation and suicide bombings and points towards ideological and strategic dynamics that hold equal if not greater explanatory power for the motivations behind suicide attacks.

Furthermore, Moghandam states that countries under foreign occupation experience suicide bombings that target oftentimes other local groups such as religious minorities or rival political factions, and not the foreign occupiers themselves, an argument that Seifert and McCauley (2014) represent clearly using data. As such, this strategic, rather than ideological use of suicide bombings under the frame of foreign occupation function as tools to incite internal strife rather than to expel foreign armies.

Moghandam further emphasises the centrality of what he calls transnational jihadist networks, providing the example of suicide bombers in Iraq, who were foreign fighters motivated by ideological narratives of Salafi Jihadism rather than direct experiences of national occupation. This observation builds upon an expanded notion of national backlash developed by Choi and Piazza which they term “transnational backlash”, which attempts to explain how extremist groups frame foreign interventions within a broader ideological struggle. Moghdam critiques what he sees as the marginalisation of religion in earlier writings, stating that Salafist groups such as al-Qaeda use a religiously charged lens to view foreign interventions, framing them as a global defensive jihad.

As such, Moghandam broadens the explanatory causes of suicide bombings beyond foreign occupation alone and emphasises that the interplay between strategy, transnational networks, and crucially, ideology,

is crucial. Through his challenging of the occupation-centric frameworks of Choi and Piazza (2018) and Seifert and McCauley (2014), he demonstrates the multifaceted nature of suicide terrorism and how foreign interventions can trigger a range of grievances and motivations.

2.2.2 Escalation of Violence Due to Power Asymmetry

The exacerbation of power asymmetries is often cited as one of the ways that foreign military interventions intensify violence, especially in conflicts where the foreign power is significantly militarily stronger than its insurgent adversary. Pape (2003) argues that suicide terrorism is a natural and strategic response to this asymmetry, with the insurgent forces often unable to regularly face an often better-trained and equipped military for sustained periods of time. Pape claims in his research that the targeting of foreign military forces belonging to democratic states, such as the United States of America or nation-states in Europe, whose civilian populations may pressure their governments to withdraw if many soldiers are killed or wounded in suicide terrorism. Pape's approach places importance on the role of power asymmetry in the shaping of suicide bombings as an insurgent strategy, with an emphasis on what he refers to as punishment strategies to achieve political objectives when direct military confrontation is not practical.

Furthermore, Collard-Wexler, Pischedda, and Smith (2014) shed light on the relationship between foreign occupation and suicide attacks, with their research concluding that foreign occupations significantly increase the likelihood of suicide attacks. According to the authors, the heightened risk of suicide bombings during foreign occupations is due to the contradictory effects of what they call target hardening, where armoured, mechanised, and well-defended targets actually incentivise suicide bombings through their sheer quantity and availability.

A further dimension of the relationship between the power asymmetry caused by foreign intervention and suicide bombings presents itself through the consideration of the technological and economic dimensions of suicide bombings according to Lewis (2016), who argues that suicide bombing should be understood as a low-cost tactic that enables insurgent groups to match the destructive and lethal effects of the advanced weapons systems employed by state-aligned forces. The aforementioned argument of Pape (2003) aligns with this, as both fit into the framework of depicting suicide bombings as a strategic response to power asymmetry, but broaden it through the framing of these attacks as within a broader cost-efficiency mismatch in modern warfare.

Collard-Wexler, Pischedda, and Smith (2014) argue that the challenges encountered by state-aligned forces such as the police and military are amplified by the cost-effectiveness of suicide bombing since state forces often rely on complex machinery and fortified positions. The paradoxical nature of target hardening according to the authors aligns with the work of Lewis (2016), as vulnerabilities are inadvertently created by the armouring and hardening of state-aligned forces.

The emphasis Lewis places on the technological logic of suicide bombings does indeed corroborate well with literature on the strategy and ideological dimensions of suicide attacks. This ultimately demonstrates that power asymmetries caused by foreign interventions are able to drive insurgents to innovate tactically, which can result in suicide terrorism. Lewis' argument reveals suicide bombing hence as a logical and

strategic response to undesired foreign occupation, and little more than a practical shift in tactics when faced with modern military asymmetries.

2.2.3 Conclusion

The above section has explored the literature detailing what is a complex and multifaceted relationship between foreign military interventions, power asymmetry, and the emergence of suicide bombings. Whilst the provoking effect on insurgent groups that foreign occupation may have is studied by Choi and Piazza (2018) and Seifert and McCauley (2014), Moghadam (2013) expands the discussion by contextualising these arguments within a frame of ideological networks and transnational jihadism. Meanwhile, the strategic logic argument presented by Pape (2003) and Lewis's (2016) technologically pragmatist argument further illustrates how suicide bombings are leveraged by terrorist and insurgent groups to counter the power asymmetry between the well-equipped occupier and the insurgent.

2.3 The Impact of State Authoritarianism on Terrorism and Suicide Bombings

The following section of the literature review will focus on the academic debate surrounding the relationship between state repression and suicide bombings. Specifically, I will seek to review how the relevant literature assesses if and how authoritarian responses and structural conditions increase the emergence and dynamics of such attacks. Araj (2008) and Chicoione (2020) understand repression both as a direct provoker of terrorism, but also as an ideological framework that insurgent groups exploit. On the other hand, the role of political institutions in shaping the potential for violence is stressed by Aksoy, Carter, and Wright (2012), while Daxecker and Hess (2013) explore what they determine to be the paradoxical effects of authoritarian repression in suppressing or exacerbating terrorism.

2.3.1 Repression and the Rise of Suicide Bombings

Araj (2008) cites harsh state repression as a key and direct driver of suicide bombings in the Palestine-Israel conflict, where he examines the asymmetrical dynamic that defines the conflict and argues that the Israeli repression of the Palestinians not only directly provokes suicide bombings as a direct response to the said repression, but also legitimises the attacks in the eyes of the affected population. Araj highlights how Israeli state violence fosters popular support for suicide bombings by framing them as acts of resistance. A cycle is created through this dynamic where state repression both indirectly and directly fuels the violence it seeks to suppress.

Araj's distinction between secular and Islamist groups operating in the occupied Palestinian territories is a defining feature of his work. According to his observations, while Islamist groups such as Hamas and Palestinian Islamic Jihad engage in suicide bombings as both reactive and strategic tools, secular organisations such as the Popular Front for the Liberation of Palestine and Fatah tend to engage in suicide bombings in response to specific acts of repression. The multifaceted nature of the drivers of suicide bombings, even within the state authoritarianism frame, is highlighted by this key distinction. Furthermore, Araj's emphasis on the role of personal motivations does risk underemphasising the systematic framing that insurgent groups define and cultivate narratives of victimhood and heroism through to accompany suicide bombings.

Through the identification of state repression as a potential catalyst for the grievances that could lead to suicide bombings, Araj's research enables a broader understanding of how suicide bombings can emerge as a tactic in asymmetrical conflicts. However, due to the Palestinian focus of his research, and the uniqueness of the Palestinian situation in comparison to the situations in other Arab states, it is unclear how applicable his findings are on a regional scale.

The role of state violence is expanded upon by Chicoine (2020) through her emphasis on how state repression is integrated into the narratives of terrorist organisations to both justify and inspire violent acts. Instead of demonstrating how harsh repression can directly mobilise support for suicide bombings, as the research of Araj (2008) demonstrates, Chicoine stresses the framing process of terrorist organisations within narratives that inspire violence. This framing approach, as Chicoine sees it, transforms repressive state actions into powerful symbols of oppression and victimhood.

Chicoine's work complements the work of Araj, where both argue that state repression amplifies public support for violent counter-tactics such as suicide bombings. A key difference however lies in Chicoine's focus on how these narratives are constructed and later weaponised. This illustrates that state violence is not necessarily a direct trigger to insurgent violence, but also an active component of the narrative strategy that insurgent groups engage in. Insurgent groups, through narratives of heroism and victimhood, insurgent groups create and maintain frameworks that sustain violence and recruit operatives. Araj's focus on the mobilising effects of repression is built upon Chicoine's focus on the manipulation of these narratives to foster support from violent attacks. Nevertheless, the two authors highlight the critical role of state violence in the cycle of extreme violence.

2.3.2 Does Authoritarianism Fuel Terrorism?

How institutional arrangements within authoritarian regimes can define patterns of terrorism is a focus of the analysis of Aksoy, Carter, and Wright (2012), who through their research, find that regimes with opposition political parties but no legislature are particularly prone to terrorism. This conclusion is reached through the assertion that such states lack institutional avenues for addressing grievances, but create the capacity for mobilisation. This argument complements Chicoine's (2020) observation, which states that state violence is not merely a backdrop of terrorist narratives, but a central feature. Through the denial of legitimate non-violent channels of expressing political opposition, regimes amplify the effectiveness of state-violence narratives formed and maintained by insurgent groups, which ultimately justify the use of violence.

This line of argumentation also aligns itself with the findings of Araj (2008) on how particularly brutal Israeli repression in the Palestinian context legitimises violent responses. However, this argument is extended by Aksoy, Carter, and Wright through their demonstration of how specific political structures exacerbate these dynamics. As mentioned before, authoritarian regimes with opposition parties but no legislature are a fertile environment for the fueling of grievances but also the creation of organisation capacity for collective action. This argument may explain why some authoritarian regimes experience high levels of terrorism despite their repressive capacity such as Pinochet's Chile, while others, such as Yugoslavia under Tito, do not.

Aksoy, Carter, and Wright, by linking the institutional constraints, highlight the interplay between repression and organisational opportunity. Whilst state repression can provide the primary and immediate trigger for terrorist activity, according to their findings, the broader institutional environment is the major determinant as to whether these grievances do, or have the potential to, turn into violence on a systematic scale. Positioned alongside the analyses of Chicoine and Araj, the findings of Aksoy, Carter, and Wright shed light on the importance of understanding how political structures interact with state repression to shape to narrative and strategic frameworks of insurgent organisations.

A counterargument to Aksoy, Carter, and Wright's (2012) analysis of institutional arrangements in authoritarian regimes is offered by Daxecker and Hess (2013), who emphasise the importance of coercive government responses in terminating terrorist campaigns. On one hand, while Aksoy, Carter, and Wright suggest that opposition parties without the ability for legislative representation can mobilise for violent action under such conditions, Daxecker and Hess contend that terrorist group survival is often undermined by repression in generally authoritarian regimes. Daxecker and Hess argue that the unique position to conduct brutal and coercive measures without being constrained by public opinion, which they argue certainly can suppress terrorist recruitment and operations.

Additionally, the broader instability felt in the Middle East resonates well with the findings of Daxecker and Hess on the long-term consequences of political repression. The authors' argument that the downfall of former Egyptian president Mubarak and subsequent longer-term political instability in Egypt can be traced back to his initially well-received and effective counter-terrorism measures shows the link between repressive measures and long-term political instability. The dynamic presented here reinforces Aksoy et al.'s focus on the institutional context, whereby the conditions for terrorism and insurgency within a said region are exacerbated by repression without institutional inclusion.

2.3.3 Conclusion

This section has exposed the multifaceted relationship between state repression and suicide terrorism and has highlighted the former's role not only as a catalyst for direct action from insurgent groups but also its role in the victim narratives often pushed by these organisations. The arguments presented by Aksoy, Carter, and Wright showcase how a lack of political freedom can radicalise individuals and cause violence, an argument complimented by the long-term destabilising consequences that short-term repression can have, as stated by Daxecker and Hess.

2.4 Group Ideology and its Influence on Suicide Bombings

The relationship between ideology, religion, and suicide bombing is an intricate and multifaceted topic, drawing upon theological, historical, and socio-political elements. Much attention has been given by scholars to the role of religious narratives, particularly how they intersect with structural conditions to enable recruitment and provide justification for acts of violence. There exists a variety of ways to engage with one of the ideologies which many identify as co-existing with modern suicide bombing in the Middle East, which is Salafi-Jadism. In this section of the literature review, I will break down this connection first by establishing a connection between ideology, religion, and suicide bombing, before reviewing three different interpretations of the relationship between suicide terrorism and Salafi-Jihadism.

2.4.1 Building a Connection Between Ideology, Religion, and Suicide Bombing

The relationship between ideology, religion, and the lethality of suicide bombing is explored by Capell and Sahliyeh (2007), whose research demonstrates that the suicide bombings of non-religious groups such as the Tamil Tigers are often much more deadly than what they conclude to the non-discriminate targets of religiously motivated suicide bombers. This leads the authors to suggest that while ideology may influence or even determine the justification of method and selection of target, but does not solely determine effectiveness. Hence, Capell and Sahliyeh warn the academic and policy fields of falsely attributing the lethality of terrorism entirely to religious zeal, instead emphasising the crucial role that socio-economic grievances, authoritarianism, and military occupation may have, especially when intersected by extremist religious narrative. With this argument, Capell and Sahliyeh seek to counter the simplistic, reductionist argument by presenting suicide bombing as a multi-causal phenomenon.

The research of Moghandam (2008) delves into the ways in which suicide bombing has been globalised through Salafi Jihadism and links this phenomenon to the ideology of al-Qaeda. With the promotion of a global Muslim community and rejection of national borders. Moghandam identifies the Soviet invasion of Afghanistan, and the subsequent mobilisation of a mujahideen force from around the world, as a catalyst that facilitated the globalisation of Salafi-Jihadist networks. This ultimately compliments the work of Capell and Sahliyeh, highlighting how ideology can expand the scope of the persistence of suicide attacks.

The works of Capell and Sahliyeh and Moghandam both emphasise the critical role of ideology in the shaping of suicide terrorism. On one hand, Capell and Sahliyeh stress the lethal outcomes of religious narratives and their relationship with socio-political factors, whilst, on the other hand, Moghadam highlights the transnational capabilities of ideological frameworks like Salafi-Jihadism. Both works demonstrate the complex relationship between religion, ideology, and the evolution of suicide terrorism, and show that the convergence of local grievances and global aspirations can result in lethal terrorism strategies.

2.3.2 Salafi-Jihadism and the Glorification of Martyrdom

Edomi and Saputra (2024) provide a critical analysis of what they refer to as the myth of martyrdom that terrorists use to justify and glorify suicide bombings. In their qualitative study, the authors emphasise the role of manipulation in the narratives presented by organisations conducting suicide bombings. Through the misinterpretation and selective use of holy texts, the authors claim that terrorist organisations create a veneer of legitimacy for their acts of violence. Edomi and Saputra argue that many of the individuals who do carry out these suicide bombings, or martyrdom-seeking operations, do not do so out of religious zeal, but rather being driven by promises of heavenly rewards or assurances of financial security for their families. In doing so the authors reframe the discourse of suicide bombings as being defined by ideological conviction, and paint the individuals responsible for these types of attacks as victims of manipulated religious beliefs and human exploitation.

Rusli (2014) offers an insightful analysis of Salafism’s theological and historical dimensions, with a focus on its interpretations of jihad and suicide bombings in Indonesia. The work identifies two distinct schools of thought: mainstream Salafis, who condemn suicide bombings as impermissible acts of self-harm, and Salafi-Jihadists, who frame them as "martyrdom operations" in defence of the faith. This division

highlights the importance of intention in Islamic theology, with Salafi-Jihadists arguing that such acts, when directed at oppressive regimes or non-believers, are noble sacrifices rather than self-serving actions. Placing these perspectives within the context of the Abbasid era, Rusli examines Salafism's intellectual roots as it responded to rationalist and philosophical challenges. The analysis challenges simplistic narratives by offering a nuanced understanding of how contemporary Salafism reconciles its violent and non-violent interpretations of jihad.

In contrast to the rather nuanced ideas presented in the previously referenced academia, Caschetta (2015) presents a reductionist, oversimplified argument that Islam itself is the primary driver of suicide terrorism, relying heavily on notions of martyrdom and the promise of paradise. His analysis is, however, fraught with inaccuracies and a lack of understanding of rather basic elements not only of Islam but more broadly Middle Eastern politics. For instance, Caschetta conflates at worst, and overstates at best the relationship between Sunni-Salafi ideologies with Shi'a figures like Ayatollah Khomeini, disregarding the theological and sectarian distinctions within Islam. Furthermore, his Islamist designation of groups such as Kata'ib Shuhada al-Aqsa due to the inclusion of the al-Aqsa Mosque further points to a lack of a nuanced understanding of Middle Eastern politics. This ultimately undermines the credibility of Caschetta's claims.

2.3.5 Conclusion

Academia on the relationship between ideology and suicide bombings shows the multi-causal and oftentimes complex relationship between the two variables. Edomi and Saputra emphasise the manipulation of religious narratives as a defining feature of these Salafist discourses, whilst Rusli notes the ideological diversity within Salafism. On the other hand, Moghadam explores the globalising impact of Salafi-Jihadism, whilst the reductive approach employed by Caschetta is demonstrative of the risks of oversimplifying the role of religion. Together, the academic literature reviewed in this section of the literature review stresses the need to take an all-encompassing approach to understand how theological interpretations, structural grievances, and organizational strategies converge to drive suicide terrorism.

2.5 Conclusion and Research Questions

In conclusion, this literature review has underscored how foreign interventions, state authoritarianism, and group ideology determine the frequency and nature of suicide bombings in the post-Arab Spring Arab world. Foreign military interventions, which are often framed as occupations, can catalyse nationalist backlash, which in extreme cases results in suicide bombings. On the other hand, state authoritarianism can inadvertently fuel radicalisation and terrorism through a repressive political environment. Thirdly, group ideology, particularly nowadays amongst Salafi-Jihadist groups, legitimises suicide bombings as historical acts of martyrdom and serves to encourage supporters and operatives of such groups to conduct their own attacks as acts of heroism. This interplay of external, structural, and ideological factors suggests that suicide bombings are not merely tactical choices but are also deeply rooted in complex socio-political and ideological frameworks.

Following the literature review, the three subquestions this paper seeks to answer are:

RQ1: How does group ideology influence the frequency of suicide bombings in the Arab world post-2011?

RQ2: How does group ideology influence the frequency of suicide bombings in the Arab world post-2011?

RQ3: How does foreign military intervention influence the frequency of suicide bombings in the Arab world post-2011?

3.0 Theoretical Framework

In order to examine the factors that have seen the proliferation of suicide bombings in the post-2011 Arab world—particularly the influence of authoritarianism, foreign intervention, and group ideology—this study will employ a multi-theoretical framework. Social Movement Theory, Rational Choice Theory, and Ideological Theories of Terrorism provide different insights into the social, strategic, and ideological dimensions of suicide bombings. A solid foundation is constructed by these theories which enable a systematic analysis of how grievances, strategic decisions, resource mobilisation, and ideological beliefs can have an impact on the use of suicide bombing as a tactic by terrorist groups.

3.1 Social Movement Theory: Grievances, Political Opportunity, and Tactical Framing

Social Movement Theory (SMT) examines how collective action, both violent and nonviolent, is often fueled by grievances, political opportunities, and framing processes. SMT argues that grievances associated with political and economic grievances, which are often exacerbated under authoritarian regimes, can cause a mobilisation to resistance (Beck 2008). Marginalised and organised groups turn to violence, especially when political participation and expression are restricted and when state repression is high. This idea is built further upon by the concept of “political opportunity structure," which seeks to environmentalise the nature of political mobilisation, specifically how political environments can either allow or restrict protest activities, which in turn determines the tactics that certain groups adopt (Alimi 2009). In authoritarian states with low levels of freedom and where political channels are restricted or closed, grievances are often amplified, leading groups to employ extreme tactics (Koktsidis 2019).

In repressive environments, groups often leverage state heavy-handedness to gain public sympathy, framing their actions as resistance to oppression. Donatella della Porta’s research on political violence suggests that state repression can generate a spiral of political violence, where each repressive action by the state provokes increasingly radicalised responses from the opposition (Della Porta 2014). Typically, authoritarian regimes in the Arab world post-2011 have tended to enforce strict controls on political expression, which have subsequently intensified adversarial relationships between the state and opposition groups. SMT thus provides insight into why suicide bombings might emerge as expressions of accumulated grievances, especially in contexts where political freedoms are limited and institutional avenues for dissent are scarce.

As hinted at in the previous paragraph, framing plays a crucial role in SMT, particularly in how groups seek to justify suicide bombings to their target audiences consisting of potential recruits and supporters. Suicide bombings are often framed as morally justified acts of resistance by groups operative under politically authoritarian and repressive states, in a bid to appeal to individuals who identify with narratives of victimisation and retaliatory justice (Nilsson 2020). This framing aligns with “radical moral disengagement,” where groups present violent acts as necessary or honourable responses to oppressive regimes (Espinel, Flórez, and Villegas de Posada 2018). Hence, the use of SMT provides a solid foundation for understanding how authoritarianism may encourage the political and moral conditions that make suicide bombings feasible and justifiable within repressed societies.

3.2 Rational Choice Theory: The Strategic Calculus of Suicide Bombings

The arguments put forth by Rational Choice Theory (RCT), on the other hand, instead focus on the strategic calculations made by groups with regard to the selection of suicide bombings as a tactic by terrorist groups. RCT argues that individuals and groups make logical, strategic decisions aimed at maximising perceived gains and minimising perceived costs (Scott 2000) This is particularly relevant to the usage of suicide bombings as a tactic by insurgent groups across the Arab world, where such operations are viewed as high-impact, symbolically powerful, and operationally cheap.

In the context of foreign military intervention, where insurgent forces are engaged with better-equipped forces, this theory is indeed relevant. In these situations of asymmetric warfare, suicide bombings allow insurgents to not only cause significant material damage to their target but also achieve significant psychological and media effects, all whilst using minimal resources (Choi and Piazza 2017). Pape (2003) adds that in addition to the relatively low operational costs, suicide bombings serve as a materially and politically costly tool that can assist the group in encouraging foreign occupying powers to leave In Iraq, Syria, and Yemen, suicide bombings have been used by a variety of groups as a tactical response to counter the asymmetry with an often poorly trained insurgent group taking on a well-equipped foreign force, validating the applicability of RCT in these contexts (Choi and Piazza 2017).

3.3 Ideological Theories of Terrorism: The Role of Religious and Cultural Beliefs

The final section of this theoretical framework will deal with what I will name “Ideological theories of terrorism”. This theory emphasises the role of cultural practices and religious doctrine in the motivation and legitimisation of suicide bombings. For instance, within Salafi-Jihadist groups, suicide bombings are religiously legitimised through the framing of them as acts of martyrdom that serve a divine purpose, discursively positioning attacks as not only morally justifiable but also as spiritually rewarding (Saputra and Mardina 2024). Hence, suicide bombings are rendered as both tactically appealing, but also as culturally and religiously rewarding through the appeal to deeply held beliefs about dutiful sacrifice. The concept of martyrdom is portrayed as the highest sacrificial act which promises individual and family honour, as well as spiritual reward within the Salafi-Jihadist ideology. Sometimes, these acts are framed as obligatory under certain political circumstances (Warren 2017).

3.4 Conclusion

This theoretical framework, grounded in Social Movement Theory, Rational Choice Theory, and Ideological Theories of Terrorism, offers a comprehensive foundation for examining how authoritarianism, foreign intervention, and group ideology influence the prevalence of suicide bombings in the Arab world post-2011. Social Movement Theory explains how repression and grievances create the conditions for extreme violence, Rational Choice Theory highlights the strategic logic of suicide bombings in asymmetric warfare, and Ideological Theories focus on cultural and religious justifications for martyrdom. Together, these theories allow for a nuanced analysis of the social, strategic, and ideological factors that drive the adoption of suicide bombings.

4.0 Research Design

In this chapter, I will present the research design that I will utilise to examine the factors that have influenced the frequency of suicide bombings across the Arab world from 2011 to 2020. Leading on from the literature review, where I discussed how authoritarianism, group ideology, and foreign intervention have frequently been cited as key drivers of terrorism, their specific impact on the frequency of suicide bombings, I believe, has been insufficiently studied.

I will investigate the interplay of these variables in this paper through a quantitative, longitudinal analysis, focusing on their role in shaping how often suicide bombings occur. In the following chapter, I will outline the methodological framework, data sources, and analytical tools employed to address each of the research questions outlined in the introduction.

4.1 Methodology

I employ a quantitative research methodology to examine how impactful state authoritarianism, group ideology, and foreign intervention are on the frequency of suicide bombings in the Arab world from 2011 to 2020. By using a quantitative approach, I aim for an objective measurement and analysis and analysis of data from reliable sources. This way, I ensure that my conclusions are followed by empirical evidence rather than speculation.

4.1.1 Quantitative Analysis

I use a statistical model to explore a large dataset, which identifies patterns and establishes correlations between economic, demographic, structural, ideological, and external factors and how these impact the frequency of suicide bombings. Taking this approach is favoured for its ability to handle large datasets to test the hypotheses outlined in the introduction.

4.1.2 Longitudinal Analysis

Particularly important to this research design is the longitudinal aspect given the study period, which encompasses the ten years after the Arab Spring, and naturally includes key developments to this study such as the Syrian, Yemen, and Libyan civil wars, the Al-Qaeda insurgency in Tunisia, and the al-Shaab insurgency in Somalia. Due to the decade-long period of examination, this approach facilitates the observation of trends and patterns that have emerged as the political and security dynamics have evolved monumentally in many cases. This sheds light on how changes across the three variables have influenced the frequency of suicide bombings.

4.2 Data Collection

I have drawn the data used for this study from multiple authoritative data sources, as well as conducted open-source research, to facilitate the analysis of the impact of the three independent variables on the frequency of suicide bombings across the Arab world. Focusing on 21 Arab states, I am to encompass within this paper a variety of political, social, and security contexts, to ensure the most comprehensive

understanding possible of the factors behind suicide bombings across the region from January 1, 2011, to December 31, 2020.

The primary source I have used to measure the frequency of suicide bombings for this study is the Global Terrorism Database (GTD). The GTD serves as an authoritative dataset for a variety of terrorism-related data and is renowned for its extensive coverage. The GTD records detailed information about terrorist activity across the world, including perpetrators, attack types, targets, and casualties (START, n.d.). Using the GTD was the most reliable way to operationalise the dependent variable and determine which groups had committed attacks before categorising them into four ideological categories.

I used the Freedom in the World Index from Freedom House to measure state authoritarianism within a given country year. A robust and annually updated measure, The Freedom in the World index calculates numerical scores for political rights and civil liberties through a detailed methodology rooted in the Universal Declaration of Human Rights (Freedom House n.d.).

With the absence of a centralised database for foreign military interventions, I conducted open-source research to determine either the presence or non-presence of any foreign military intervention within a given year. This process of research involved documenting reports from reliable organisations such as the BBC, Al-Jazeera, and Bellingcat, as well as using reliable open-source databases such as AirWars, and GeoConfirmed.

Furthermore, I employed open-source research to determine the ideological classification of each group that had committed either a non-suicide or suicide attack within the location and date parameters. Using academic research, as well as news reports and primary material from terrorist organisations, I classified 315 groups listed as primary perpetrators in the GTD as Takfiri-Jihadist, Shia Islamist, Islamist-Nationalist, Secular-Nationalist/Marxist, or Other/Unknown.

By combining open-source research with authoritative datasets such as the GTD and the Freedom in the World Index, I ensure that this study remains as reliable and comprehensive as possible.

4.3 Variables

In this section of the research design, I will break down the process of operationalising the key variables, and well as justifying their use within this paper.

4.3.1 Dependent Variables

Filtering the data for this study, I focused on entries that the GTD classed as “suicide”, in the selected countries, and between the years of 2011-2020. Using Excel, I then counted the number of attacks in a country within a given year, which became the way I operationalised my dependent variable - “the annual number of suicide attacks in the country”.

4.3.2 Independent Variables

As mentioned earlier, the independent variable of “state authoritarianism” was operationalised using the Freedom of the World Index score. This index was chosen due to the readily available numerical scores

for each country but did encounter one issue. The Freedom House breaks down the country of Palestine into the West Bank and Gaza Strip, as well as Somalia into Somalia and Somaliland. To overcome this issue, I calculated a new score by aggregating the scores proportionally by the most reliable population data of each entity. For Palestine, this was at the Palestinian Central Cureau of Statistics (Palestinian Central Bureau of Statistics n.d.), for Somalia this was the World Bank (World Health Organization n.d.) and for Somaliland, this was The Central Statistics Bureau of Somaliland (Somaliland Centre for Statistics and Development n.d.). There are issues with this method, as reliable year-by-year population data is not readily available, and hence I rely on the unlikelihood of stable population increases across the two entities in each of the countries, however, I found that this was the most accurate way to ensure the highest degree of accuracy.

The categorisation of ideology for each group listed as committing a terrorist attack was done, as previously mentioned, through comprehensive open-source research. This involved searching across think tanks, news articles, and other academic studies on the ideological affiliation of 315 groups. With the absence of an authoritative database that classes all of these groups by ideology, this was the most robust method of operationalising the ideology variable.

Foreign intervention is operationalized through a binary variable that marks whether significant foreign military activity occurred within a country during a particular year. This includes a range of actions from troop deployments to airstrikes, identified from a variety of open-source reports. The study probes whether such interventions correlate with changes in the frequency and strategic use of suicide bombings, suggesting a potential escalation or alteration in terrorist tactics in response to foreign military presence.

Similarly, open-source research was conducted to operationalise the foreign intervention binary variable. Sources included reliable news organisations such as the BBC, Bellingcat, and Al-Jazeera, as well as reliable open-source databases such as GeoConfirmed and AirWars. This too, proved to be the most reliable method to operationalise this variable.

4.3.3 Control Variables

Control variables included unemployment rates and religious fractionalisation. They are included in the statistical model to account for underlying issues that may impact the frequency of suicide bombings across the country-year dataset. Unemployment rates (World Bank n.d.) serve as an indicator of economic well-being on a country-wide level, and religious fractionalisation (Quality of Government Institute n.d.) accounts for the impact that religious division may have on suicide bombings, which may be a significant factor in countries affected by wars or political situations of a sectarian nature.

4.4 Analytical Methods

4.4.1 Descriptive Statistics

I will first describe the data thoroughly to establish a basic understanding of what the data looks like, and to provide a basic understanding of which countries have been most affected by suicide bombings.

4.4.2 Statistical Model

I employ a Negative Binomial Regression model to analyse the count of suicide bombings across each country-year datapoint. This model was chosen due to the overdispersion observed in the data, which is to say that the variance exceeds the mean. Negative Binomial Regression ensures robustness and reliable estimates and allows for the inclusion of the key predictors, which act as my independent variables explained previously.

4.4.3 Research Questions and Hypotheses Alignment

I ensure to address each research question, and by doing so, test each hypothesis using the Negative Binomial Regression. As stated throughout this paper, this study examines the influence of three independent variables on the frequency of suicide bombings. Furthermore, it also assesses how the ideology of terrorist groups impacts their propensity to engage in suicide bombings using a Chi-Square test in addition to the regression analysis.

4.5 Conclusion

For this paper, I use a quantitative, longitudinal analysis to identify and analyse the factors influencing the frequency of suicide bombings in the Arab world from 2011 to 2020. By using a Negative Binomial Regression model, I account for overdispersion and ensure a rigorous analysis of the effects of three key independent variables—state authoritarianism, group ideology, and foreign intervention—alongside relevant control variables. Using this approach, I ensure that the analytical framework remains as reliable and robust as possible, and will provide empirical insights into the drivers of suicide bombings across the region.

5.0 Descriptive Statistics

In this section of the paper, I will provide a basic, but detailed overview of the dataset used in this study, and will provide the reader with an understanding of the geographic and temporal patterns of suicide bombings across the Arab world. This section of the paper aims to establish the necessary context for the understanding of the statistical results presented in the results section of this paper. In addition to the temporal and geographic scope of all attacks, I will provide a visual of which countries have and have not experienced foreign intervention, as well as break down the ideological distribution of suicide attacks, which will precede and inform the Chi-Square analysis in the results section.

5.1 Dataset Overview

As mentioned previously, the dataset used in this paper is derived from the Global Terrorism Database (GTD) and focuses on the frequency of suicide bombings across 21 Arabic-speaking states. The data covers various dimensions including the frequency of suicide bombings, the geographic and temporal patterns, and the ideological category assigned to the GTD-identified primary perpetrator group.

The dataset contains 210 country-year observations, covering 21 Arab states across the Middle East and Africa during the ten-year study period. These observations capture 3097 incidents. Among the country-year observations, 63.22% (153 out of 242) contain zero suicide bombing incidents, while 36.78% (89 out of 242) include one or more.

5.1.1 Geographic Scope

Across the 21 states across the Arab world that feature in this study, we observe that Iraq, Syria, Yemen, Somalia, and Libya have all experienced at least 100 suicide attacks between 2011 and 2020, as shown by figures 1 and 2. Figure 1 shows the total number of suicide attacks across all of the countries included in the study, and Figure 2 shows the number of suicide attacks in a more visually digestible format, showing only the countries that have experienced one attack and excluding the disproportionately high score of Iraq. The geographic distribution of attacks is also shown on a QGIS map (Figure 3)breaking down the attacks by ideology, with clear evidence that groups belonging to the Takfiri/Salafi-Jihadist category commit the most attacks, with a large number of attacks also coming from groups registered as unknown within the GTD database.

The data shows that states that have experienced significant periods of intense political violence between 2011 and 2020 have experienced the greatest share of suicide bombings across the Middle East. These countries include Iraq, with 1925 suicide bombings, Syria with 400, Somalia with 223, Yemen with 213, and Libya with 123 suicide bombings. Meanwhile, countries that experienced significant political unrest during the decade of data, but no widespread conflict such as Algeria (10), Egypt (72), Lebanon (28), Palestine (13), Saudi Arabia (18), and Tunisia (12), all scored between 10 and 100 suicide attacks. States in the Persian Gulf (excluding Saudi Arabia), Jordan, as well as Mauritania, Morocco, Comoros, Djibouti, and Sudan, all experienced less than 5 suicide bombings within the time period.

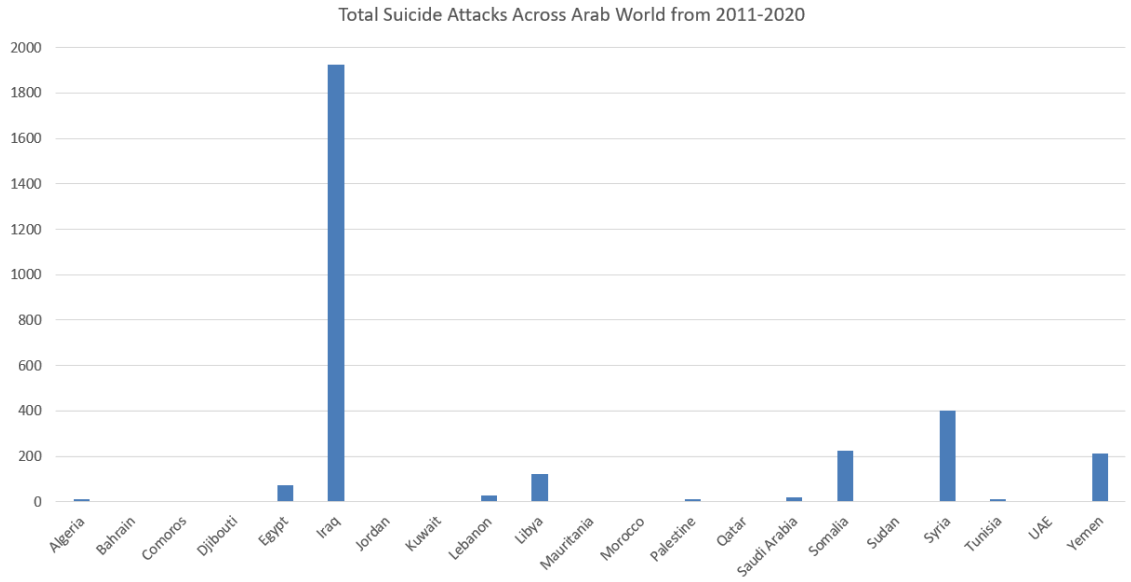

Figure 1: Graph showing the geographic distribution of all suicide bombings across the Arab World from 2011 to 2020

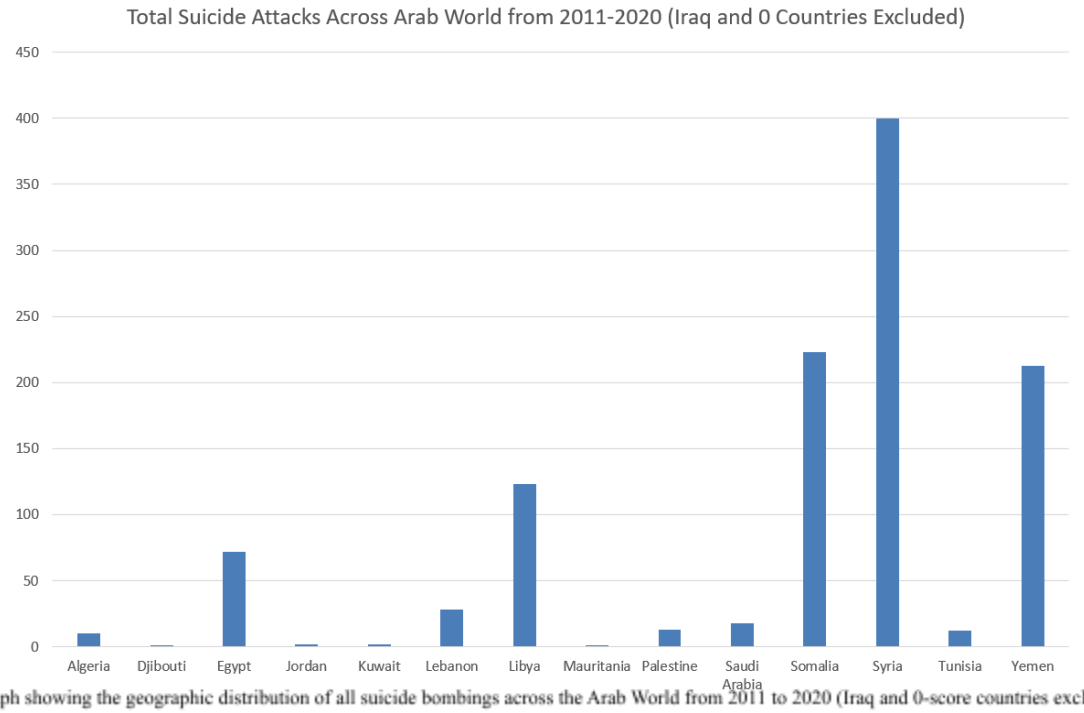

Figure 2: Graph showing the geographic distribution of all suicide bombings across the Arab World from 2011 to 2020 (Iraq and 0-score countries excluded)

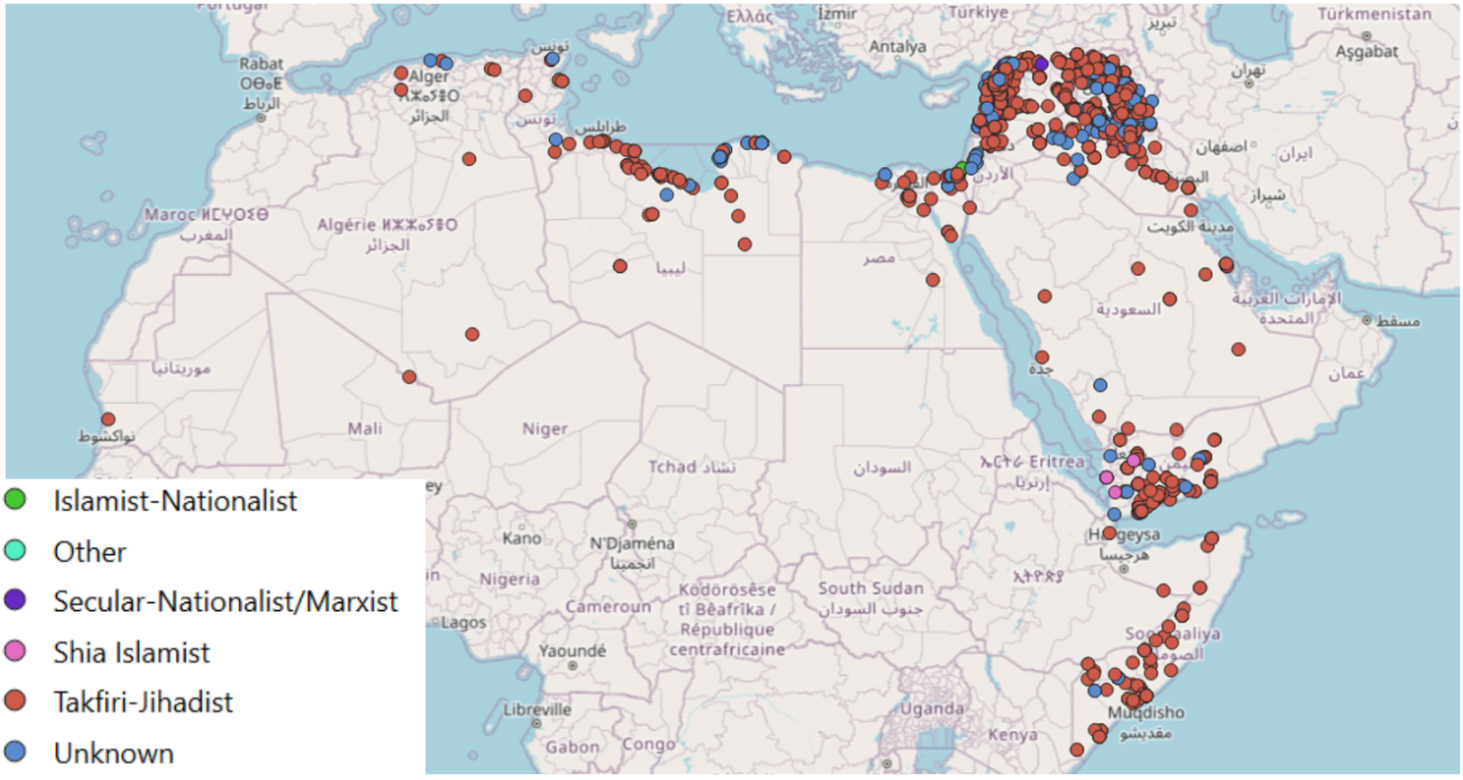

Figure 3: QGIS Map Screenshot showing the geographic distribution of all suicide bombings across the Arab World from 2011 to 2020.

5.1.2 Temporal Scope

Across the ten years of this study, we observe a clear incline and decline in the frequency of suicide bombings across the Arab world from 2011 to 2020, visualised in Figure 4. In 2011, there were a total of 68 suicide bombings across the Arab world, a figure which quickly grew to 462 in 2014, before growing further and peaking at 706 in 2016. After 2016, the annual number of suicide bombings declined rapidly, with the annual total of suicide bombings in 2018 and 2019 being below 150, with only 53 suicide bombings occurring in 2020.

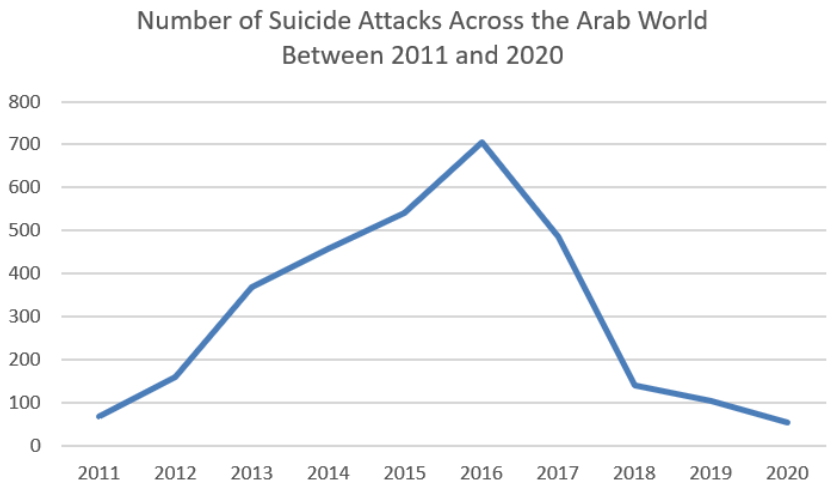

Figure 4: Graph showing the temporal distribution of all suicide bombings across the Arab World from 2011 to 2020.

5.1.3 Ideological Scope

As mentioned in the research design, all 315 groups that committed at least one terrorist attack between 2011 and 2020 were categorised into six categories: Salafi-Jihadist, Shia Islamist, Islamist-Nationalist, Secular-Nationalist/Marxist, Other,[1] and Unknown.[2] These classifications aim to provide insight into how ideology and religious doctrine may influence the frequency of suicide bombings.

Ideology	, Sum of Number of Suicide Attacks
Islamist-Nationalist	15
Secular-Nationalist/Marxist	5
Shia-Islamist	6
Salafi-Jihadist	2170

Table 1: Table Showing the Number of Suicide Attacks Attributed to each Ideological Category

Table 1 shows the ideological breakdown of the number of suicide bombing attacks between 2011 and 2020. Salafist-Jihadist groups committed significantly more attacks than groups belonging to any other ideology, with 2170 attacks committed compared to the 15 committed by groups deemed to be Islamist-Nationalist, the 5 committed by Secular-Nationalist/Marxist, such as the Kurdistan Workers' Party (PKK), and Shi'a Islamist groups such as Yemen's Ansar Allah, more popularly known as the Houthis.

5.2 Conclusion

The descriptive statistics chapter of this paper highlights the geographical geographic, temporal, and ideological dimensions of suicide bombings across 21 Arab states between 2011 and 2020. The countries that account for the highest number of attacks include Iraq, Syria, Yemen, Somalia, and Libya, reflecting years of prolonged and often brutal conflicts within these five states. Furthermore, a clear temporal pattern is visible, with the number of suicide attacks peaking in 2016 before declining sharply by 2020. About the ideological distribution of the data, we observe that Salafi-Jihadist groups are responsible for the overwhelming majority of suicide attacks. Together, these descriptive insights form a comprehensive picture of how political violence, time, and group ideology shape the frequency of suicide terrorism across the Arab world.

[1] Groups which do not have a clear ideology, or whose ideology falls outside of the four main ideological categories, were categorised as other. Many of these groups were tribal alliances.
[2] Groups classified in the GTD as "Unknown", or "Gunmen" were categorised here. The other groups categorised as unknown include groups with little infirmation on their ideologies.

6.0 Results

The following section presents the findings from the Negative Binomial Regression that was conducted to examine the aforementioned research questions on the frequency of suicide bombings across the Arab world. The results are aimed to answer the three following research questions:

> Research Question 1: How does state authoritarianism affect the frequency and relative proportion of suicide bombings?
>
> Research Question 2: To what extent does group ideology influence the likelihood of using suicide bombings as a tactic?
>
> Research Question 3: What role does foreign military intervention play in the frequency and prominence of suicide bombings?

A Negative Binomial Regression and a Chi-square test for independence were conducted in order to answer these three questions. The previous descriptive statistics section provides the reader with a solid grasp of the data across geography, time, and ideology.

A Chi-square test was conducted to investigate the relationship between group ideology and the use of suicide bombings, while the Negative Binomial Regression model explores the effects of state authoritarianism, foreign intervention, and group ideology on the frequency of suicide bombings across the Arab world.

The independent variables of interest include group ideology ("Takfiri-Jihadist," "Islamist-Nationalist," "Secular-Marxist," and "Shia-Islamist"), levels of democracy (measured by Freedom House scores), and foreign intervention (binary indicator). The control variables employed within the test include religious fractionalisation and unemployment levels. Aside from strengthening the model, these variables aim to account for structural and economic factors that may influence the frequency of suicide bombings.

The figures, tables, and statistical tests in this chapter of the paper present the full results of the research in detail, focusing on the frequency of suicide terrorism across the Arab world, and testing the factors that may drive their occurrence. These results shed light on the predictors most strongly correlated and associated with the frequent use of suicide bombing in the region, which will provide a more nuanced understanding of the phenomena, which will be explored further in the discussion chapter.

6.1 Negative Binomial Regression

The Negative Binomial (NB) model was employed to analyse the count of suicide bombings across country years in the Arab world. As mentioned previously, this approach was chosen due to the overdispersion observed in the data, where the variance significantly exceeded the mean. Firstly, the model demonstrated a strong fit, with a log-likelihood of -384.24, an Akaike Information Criterion (AIC) of 796.49, and a Pseudo R2R^2R2 of 0.9773, all of which indicate that the independent variables explain the variance in suicide bombings to a strong extent. The analysis included 210 observations and converged successfully without stability issues.

6.1.1 Result Table

Predictor	Coefficient (β)	Std. Error	z-Value	p-Value	95% Confidence Interval
Intercept	-4.0003	0.533	-7.504	<0.001	[-5.045, -2.955]
Salafi-Jihadist	4.7928	0.327	14.667	<0.001	[4.152, 5.433]
Islamist-Nationalist	1.0927	0.45	2.431	0.015	[0.212, 1.974]
Shia-Islamist	1.4305	0.57	2.508	0.012	[0.313, 2.548]
Secular-Marxist	-0.6544	0.558	-1.174	0.241	[-1.747, 0.438]
Levels of Democracy	-0.2352	0.126	-1.861	0.063	[-0.483, 0.013]
Foreign Intervention	1.1437	0.313	3.649	<0.001	[0.529, 1.758]
Religious Fractionalisation	3.4078	0.578	5.892	<0.001	[2.274, 4.541]
Unemployment Levels	0.0504	0.029	1.754	0.079	[-0.006, 0.107]

Table 2: Results Table of Negative Binomial Regression

6.1.2 Key Predictors and Their Effects

Significant relationships are revealed between suicide bombing counts and the independent variables tasted in the Negative Binomial Regression, with Salafi-Jihadist groups and religious fractionalisation emerging as the two most significant predictors. The presence of Takfiri-Jihadist groups was associated with a dramatic increase in the expected count of suicide bombings, with an estimated rate ratio of 120.48 (Exp(β) = 120.48, CI: [82.34, 153.50]). This effect was highly significant ($p<0.001p < 0.001p<0.001$) and consistent across a narrow confidence interval, a statistic which goes as far as to almost define the operational focus of Takfiri-Jihadist groups to be on the use of suicide bombings. Similarly, religious fractionalisation, which was originally intended to be a control variable, emerged as a dominant predictor, carrying with it a 30-fold increase in expected bombing counts per unit increase in religious diversity (Exp(β) = 30.2, CI: [21.2, 42.1]). As such, we can observe that statistically significant relationships exist between the counts of suicide bombing and the independent variables of religious fractionalisation and groups with a Salafi-Jihadist ideology.

Significant relationships are revealed between suicide bombing counts and the independent variables tasted in the Negative Binomial Regression, with Salafi-Jihadist groups and religious fractionalisation emerging as the two of the most significant predictors.

Moving on to the other ideologies identified as having committed suicide bombings within the country-year dataset, Islamist-Nationalist groups showed a moderate positive effect, increasing bombing counts approximately threefold (Exp(β) = 2.98, CI: [1.23, 4.33]). These groups tend to define the religious aspects of their ideology within a national context, contrary the the transnational worldview of Salafi-Jihadi groups, rarely, but occasionally using suicide bombings as a tactical choice, albeit far less prominently than Salafi-Jihadist organisations and individuals. Shia-Islamist groups exhibited a similar trend, increasing expected suicide bombing counts by over four times (Exp(β) = 4.18, CI: [1.37, 6.41]). Although their involvement in suicide bombings is slightly less frequent than their Islamist-Nationalist and far less frequent than their Salafi-Jihadist counterparts, they do engage occasionally in suicide bombing operations, usually in the religiously charged conflict of Yemen.

In contrast, Secular-Marxist groups demonstrated a protective association, reducing the expected count of suicide bombings by approximately 48% (Exp(β) = 0.52, CI: [0.18, 0.87]). This finding underscores the ideological divergence of these groups, which tend to favour alternative tactics over suicide bombings. Their secular ideological frames appear to limit their propensity to engage in suicide terrorism.

Furthermore, foreign military intervention also emerged as a statistically significant driver of suicide bombings, showing a threefold increase in bombing counts (Exp(β) = 3.14, CI: [1.69, 5.83], p<0.001p < 0.001p<0.001). This effect complements narratives that external military involvement can provoke excessively violent insurgent activity and is used to frame narratives of martyrdom in the face of foreign occupation. Democracy scores were associated with a slight protective effect, reducing bombing counts by approximately 21% (Exp(β) = 0.79, CI: [0.62, 1.02], p=0.063p = 0.063p=0.063). While this result was borderline significant, it does suggest that democratic governance can contribute to the mitigation of some drivers identified in the academic literature of suicide bombings, such as political repression and the grievances associated with it. Unemployment levels, on the other hand, showed a weak association, with bombing counts increasing marginally by 5% (Exp(β) = 1.05, CI: [0.98, 1.13], p=0.079p = 0.079p=0.079).

6.1.3 Patterns and Insights

The dominant roles shown in the results of the Salafi-Jihadist ideology and religious fractionalisation, indicated by their high rate ratios, play a significant role in the driving of suicide bombing across the Arab world. The engagement of Islamist-Nationalist and Shia-Islamist ideologies also shows significant positive effects, although their impact is dwarfed by the rate ratios of Salafi-Jihadism (120.48) and Religious Fractionalisation (30.2). Foreign military intervention does emerge from the analysis as a significant driver of suicide bombings, showing destabilising effects, while democracy scores showed a marginally protective trend, and unemployment exhibited minimal influence.

6.1.4 Rate Ratios

Predictor	Rate Ratio (Exp(β))	Lower CI	Upper CI
Takfiri-Jihadist	120.48	82.34	153.5
Religious Fractionalisation	30.2	21.2	42.1
Islamist Nationalist	2.98	1.23	4.33

Shia-Islamist	4.18	1.37	6.41
Foreign Intervention	3.14	1.69	5.83
Levels of Democracy	0.79	0.62	1.02
Unemployment Levels	1.05	0.98	1.13
Secular-Marxist	0.52	0.18	0.87

Table 3: Rate Ratio Table

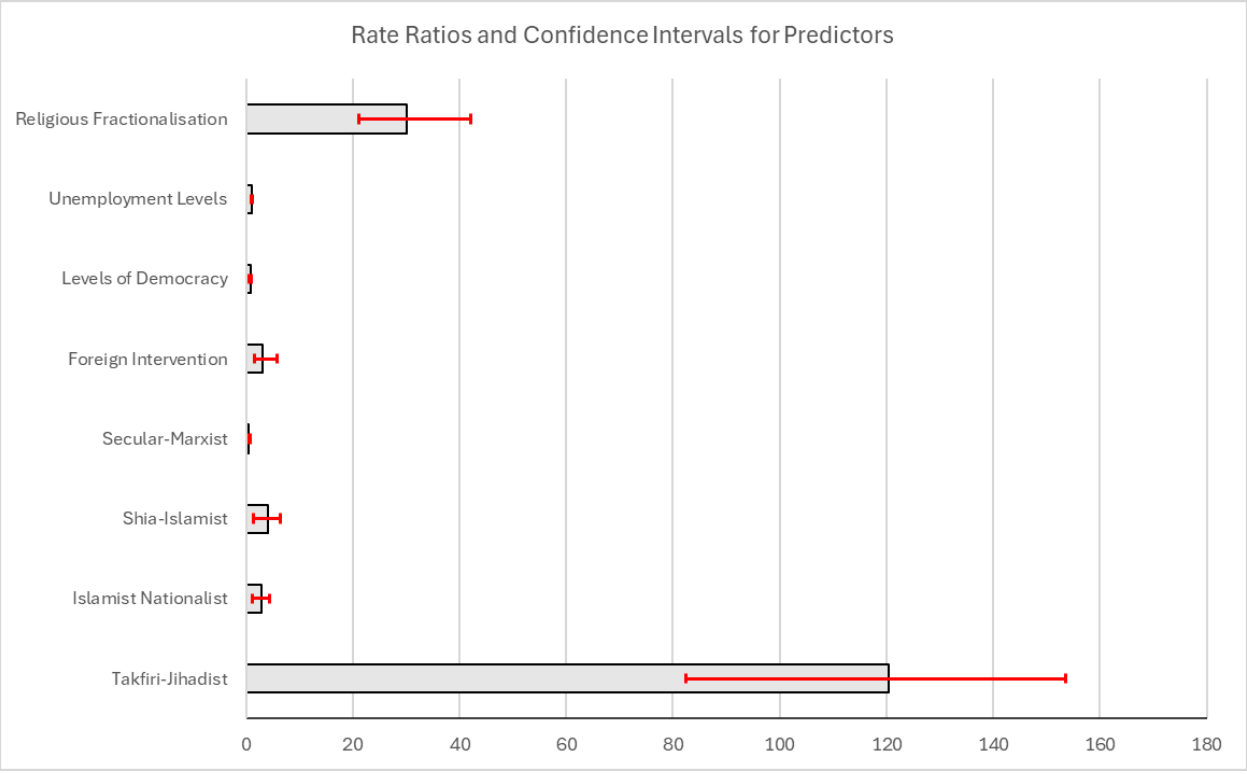

Figure 4: Confidence Interval and Rate Ratios

The above graph (Figure 4) illustrates the rate ratios (Exp(β)) and confidence intervals for predictors of suicide bombing counts, derived from a Negative Binomial model. Predictors are displayed on the y-axis, with rate ratios plotted on a logarithmic x-axis to accommodate the wide range of values.

The predictor of Salafi-Jihadist groups shows the most significant impact on the counts of suicide bombings, with an exceptionally high rate ratio of 120.48. This indicates that the engagement of such groups in suicide terrorism drives up the expected counts of suicide terrorism by approximately 120

times. The confidence interval is wide (82.34–153.50), which does reflect variability in the estimate, but the result remains both highly statistically significant and dominant in magnitude. Religious fractionalisation is the second most dominant predictor, with a rate ratio of 30.2. Its confidence interval (21.2–42.1) is narrower than that of Salafi-Jihadist groups, which we observe to indicate a robust and consistent relationship between religious diversity and higher suicide bombing counts.

Moderate effects are observed for Shia-Islamist (rate ratio: 4.18, CI: 1.37–6.41), Foreign Intervention (rate ratio: 3.14, CI: 1.69–5.83), and Islamist-Nationalist (rate ratio: 2.98, CI: 1.23–4.33). These predictors display significant, but noticeably smaller increases in bombing counts compared to the Salafi-Jihadism and Religious Fractionalisation predictors. Secular-Marxist groups exhibit a protective effect, with a rate ratio of 0.52 (CI: 0.18–0.87), indicating a significant decrease in suicide bombing counts. Similarly, Levels of Democracy (rate ratio: 0.79, CI: 0.62–1.02) suggest a slight protective trend, though the result approaches statistical insignificance. Unemployment Levels show minimal effect, with a rate ratio of 1.05 (CI: 0.98–1.13), as the confidence interval crosses 1, indicating no meaningful association.

Figure X shows the comparative dominance of Salafi-Jihadist groups and Religious Fractionalisation, with the other predictors showing smaller or non-significant effects on the counts of suicide bombings across the Arab World.

6.1.5 Limitations and Contextual Notes

Despite the robustness of the model, consideration is warranted to certain limitations of the model and analysis. Temporal effects, which can influence the trends of suicide bombing over time, were not modelled. Shifts of group dynamics over time, for example, can interact with the independent variables included in this model. Furthermore, this model did not explore interaction effects between the different variables, such as between religious fractionalisation and foreign intervention, which may be able to provide further valuable insights into how external and structural factors interact and drive up the frequency of suicide bombings across the region.

6.1.6 Summary

The dominance of Salafi-Jihadist groups on the frequency of suicide bombings across the Arab world is highlighted from the Negative Binomial model, which also notes smaller, but still significant contributions from Islamist-Nationalist and Shia-Islamist defined groups. Structural variables such as religious fractionalisation and the presence of foreign intervention further drive the frequency of suicide bombings, whilst levels of democracy and economic factors show both weaker and less consistent effects. These results provide a comprehensive understanding of the factors that influence suicide bombing across the Arab world between 2011 and 2020.

6.2 Chi-Square Analysis: Ideology and Suicide Attacks

To further test the relationship between group ideology and the occurrence of suicide attacks across the Arab world between 2011 and 2020, a Chi-Sqare test is conducted to complement the analysis above. It seeks to determine whether the likelihood of groups committing suicide attacks varies to a point of significance across the four ideological categories.

6.2.1 Methodology

The data was organised into a contingency table (Table 4), which displays rows defined by ideological categories–Takfiri-Jihadist, Islamist-Nationalist, Secular-Nationalist/Marxist, and Shia Islamist–and columns to indicate how many groups in each ideology have committed at least one suicide attack. The null hypothesis (H0H_0H0) posits no association between ideology and the likelihood of committing suicide attacks. The alternative hypothesis (HAH_AHA) posits a significant association between group ideology and the use of suicide attacks.

6.2.2 Contingency Table

Ideology	**Has not committed a suicide attack (0)**	**Has committed a suicide attack (1)**	**Total**
Islamist-Nationalist	31	7	38
Secular-Nationalist/Marxist	18	4	22
Shia Islamist	33	2	35
Takfiri-Jihadist	59	47	106
Total	**141**	**60**	**201**

Table 4: Chi-Square Contingency Table

6.2.3 Chi-Square Test Table

Ideology	Observed (Committed)	Expected (Committed)	Difference (Observed - Expected)	Standardised Residual
Islamist-Nationalist	7	11.34	-4.34	-1.29
Secular-Nationalist/Marxist	4	6.57	-2.57	-1.00
Shia Islamist	2	10.45	-8.45	-2.62
Takfiri-Jihadist	47	31.64	15.36	2.73

Table 5: Results Table of Chi_Square Test

Table 5 shows the observed and expected frequencies for groups that committed suicide attacks, alongside the differences and standardised residuals. Standardised residuals indicate the strength and direction of deviation between observed and expected values. A residual exceeding ±2 is typically considered significant, with Takfiri-Jihadist and Shia Islamist groups showing the strongest deviations.

6.2.4 Results

The chi-square test yielded a statistic of 24.165 with three degrees of freedom and a p-value of 0.0000231 ($p<0.001p < 0.001p<0.001$), indicating a statistically significant association between group ideology and the occurrence of suicide attacks.

To estimate the number of groups in each ideological category anticipated to commit, or not commit, a suicide bombing if no association with ideology existed, expected frequencies were calculated. Among Islamist-Nationalist groups, 11.34 groups were expected to commit suicide attacks, but only 7 groups were observed doing so, suggesting that groups defined as Islamist-Nationalist tend to avoid suicide bombings. For groups defined as Secular-Nationalist/Marxist groups, such as the PKK and the Popular Front for the Liberation of Palestine (PFLP), the expected value was 6.57, while the observed count was 4, highlighting that these groups committed fewer suicide attacks than anticipated. Shia-Islamist groups displayed the greatest aversion to engaging in suicide terrorism, with only 2 observed groups committing such attacks out of the expected 10.45. On the other hand, 31.64 Salafi-Jihadist groups were expected to

commit suicide attacks, and the observed group count was 47, showing their strong alignment between the ideology and this tactic across the Arab World.

Islamist-Nationalist, Secular-Nationalist/Marxist, and Shia Islamist groups consistently committed fewer suicide attacks than expected, and Takfiri-Jihadist groups were distinctly overrepresented in the test. A strong ideological and strategic preference for suicide bombings from groups adhering to Salafi-Jihadist groups is emphasised by the results of the Chi-Square test.

6.2.5 Summary

The results of the Chi-Square test reveal the crucial role played by ideology in shaping the willingness to engage or to not engage, with suicide terrorism. Disproportionately, Salafi-Jihadist groups are associated with the frequent use of suicide bombings, which likely reflects their doctrinal emphasis on martyrdom as discussed in the literature review. In contrast, groups adhering to Islamist-Nationalist, Secular-Nationalist/Marxist, and especially Shia-Islamist factions, demonstrate a lower likelihood of employing suicide bombings, which may indicate an ideological aversion to suicide bombings at first glance, but as I will discuss in the following section, may reflect the shifting priorities of Shia-Islamist armed groups in the Middle East.

6.3 Alignment with Hypotheses and Research Questions

The regression analysis and chi-square test served to answer the three questions and test the three hypotheses stated in the introduction of this paper. Here, I will directly answer each research question and align each hypothesis with the results of the regression analysis.

6.3.1 Research Question 1: State Authoritarianism and Suicide Bombings

The first research question posed by this study was on the relationship between State Authoritarianism and the frequency of suicide bombings. As such, this study sought to answer:

RQ1: How does group ideology influence the frequency of suicide bombings in the Arab world post-2011?

H1: Higher levels of state authoritarianism are positively associated with an increase in suicide bombings.

This study predicted a positive relationship between higher levels of state authoritarianism and suicide bombing counts. This hypothesis was somewhat supported by the results, with the variable “Levels of Democracy”, inversely representing state authoritarianism. While the tested variable “Levels of Democracy displayed a negative association with the frequency of suicide bombings ($\beta = -0.2352$, $\text{Exp}(\beta) = 0.79$), this result was only marginally significant ($p = 0.063$), with the 95% confidence interval marginally crossing zero ([-0.483, 0.013]). As such, this paper suggests that whilst state authoritarianism may influence the frequency of suicide bombings, the evidence provided by this testing is not statistically conclusive. This paper suggests future research focus on the relationship between regime type and the frequency of suicide bombings, as this can account for structural differences in regimes with high levels of authoritarianism, but different rates of suicide bombings.

6.3.2 Research Question 2: Group Ideology and Suicide Bombings

The second research question sought to be answered by this study looked at the relationship between group ideology and the frequency of suicide bombings. As such, this study sought to answer:

RQ2: How does group ideology influence the frequency of suicide bombings in the Arab world post-2011?

H2: Salafi-Jihadist groups are more likely to engage in suicide bombing than Shia-Islamist, Islamist-nationalist, or secular-nationalist/Marxist groups.

This study predicted a strong relationship between group ideology and the frequency of suicide bombings over the test period, a hypothesis which was supported by both the regression analysis and a chi-square test. In the regression analysis model, which tested whether the presence of at least one suicide bombing attributed to each ideology would increase the overall frequency of suicide bombings, we find that the presence of at least one Salafi-Jihadist group engaging in suicide bombings significantly increased bombing counts ($\text{Exp}(\beta) = 120.48$, $p < 0.001$). Both Shia-Islamist ($\text{Exp}(\beta) = 4.18$, $p = 0.012$) and Islamist-Nationalist ($\text{Exp}(\beta) = 2.98$, $p = 0.015$) groups also exhibited statistically significant effects, although smaller in magnitude. Secular-Marxist groups, in contrast, demonstrated a protective trend ($\text{Exp}(\beta) = 0.52$, $p = 0.241$), reflecting their preference for alternative tactics. These results were expanded upon and complemented by the results of the chi-square tests, which revealed a highly statistically significant difference in the frequency of attacks across ideological groups ($\chi^2 = 24.165$, $df = 3$, $p < 0.001$). 15.36 more Salafi-Jihadist groups than expected committed suicide bombing attacks in the study's period, with 31.64 expected to commit attacks and the observed group total being 47. As for the other ideologies, all showed a statistical aversion to engaging in suicide bombings, with the greatest aversion being shown by Shia-Islamist groups, with only 2 groups committing suicide attacks out of the expected 10.45. Hence, these results align with the hypothesis, showing that groups associated with the Salafi-Jihadist ideology are far more likely to engage in suicide terrorism than groups associated with other ideologies.

6.3.3 Research Question 3: Foreign Intervention and Suicide Bombings

The third research question sought to answer whether the presence of foreign intervention increases the frequency of suicide bombings. In doing so, this study sought to answer:

RQ3: How does foreign military intervention influence the frequency of suicide bombings in the Arab world post-2011?

H3: The presence of foreign military intervention is positively associated with an increase in suicide bombings.

This study predicted a positive relationship between the presence of foreign intervention and the frequency of suicide bombings. The results of this study support this hypothesis with the binary "Foreign Intervention" variable displaying a positive association with the frequency of suicide bombings ($\beta = 1.1437$, $\text{Exp}(\beta) = 3.14$), which was also highly statistically significant ($p = <0.001$). As such, this paper concludes the presence of foreign military intervention indeed increases the frequency of suicide bombings. Future research may seek to understand the ways different types of foreign military

interventions may influence the frequency of bombings, such as interventions limited to airstrikes versus boots-on-the-ground interventions.

7.0 Discussion

7.1 Introduction

Significant insights into the factors which influence the frequency of suicide across the Arab world from 2011 to 2020 are revealed by the results section of this study. Through the testing of three much-discussed variables prevalent in the academic discussion, this study seeks to contribute to the said discussion and provide a nuanced understanding of the dynamics influencing suicide bombings across the region.

In the following section, I will take a deeper look at the three research questions this paper poses. In doing so, I will first expand on the results and interpret these in light of the research question, before explaining the significance of the findings to the theories and literature on suicide bombings and political violence. Finally, I will present a short case study aimed at enriching the understanding of the three variables in action across the Arab world.

The first research question analyses whether state authoritarianism may impact or influence the frequency of suicide bombings across the test region. With varying degrees of state control, repression, and interference, authoritarian governance is one of the factors that many have assigned as a cause of various forms of political violence. After guiding the reader through the results and the significance of the results to the overall academic discussion, I will present a comparative case study between Syria and Saudi Arabia, which may suggest that measuring regime type, rather than levels of authoritarianism, may be a more appropriate way to understand the relationship between state authoritarianism and suicide bombings.

The second research question addresses the role of ideology and its impact on the frequency of suicide bombings. In this section of the discussion, I will challenge what some may see as the results of this study, which is that suicide bombing from an ideological standpoint is a uniquely Salafi-Jihadist phenomenon. The case study of Hezbollah will be used to show how Realpolitik, and not ideology, is responsible for the decline in the group's use of suicide bombings since the group's founding in the 1980s.

Thirdly, after discussing the results and implications of the final research question posed by this study, I will seek to contextualise the results of the US-led Operation Inherent Resolve in Iraq, and what effect this may have had on suicide bombings in the country.

7.2 State Authoritarianism and the Frequency of Suicide Bombings

7.2.1 Interpretation of Results

The results of this study reveal that there may exist a relationship between state authoritarianism as measured through the “Levels of Democracy” variable, but the negative binomial does not suggest any statistically significant relationship. While the coefficient for Levels of Democracy is negative (-0.2352), which would indicate that lower levels of democracy (ie., more authoritarianism) are associated with more suicide bombings, the effect as measured by the negative binomial regression falls short of statistical significance[3] at p=0.063. Despite the lack of statistical significance, its proximity to the 5% mark suggests that there may exist a relationship between the two.

[3] Conventional statistical significance is reached at 5%, or (p = 0.05).

The theoretical discussions and literature which posit state authoritarianism as a driver of suicide bombings are reflected by the negative coefficient. As discussed previously in the literature review, the current academic literature suggests that state authoritarians can not only act as a catalyst for direct action from insurgent groups Araj (2008) but also inform the victim narratives often pushed by insurgent organisations Chicoine (2020), this negative coefficient associated with the variable determined from the dataset supports these schools of thought.

Whilst the state authoritarianism variable, measured inversely as "Levels of Democracy", does not reach the traditionally accepted threshold of statistical significance, it's borderline significance and theoretical consistency do indeed warrant that the relationship between the two variables be studied further. Further research may consider regime type to be a more appropriate study, as this can accurately distinguish between regimes with similar levels of authoritarianism, but drastically different governance structure, which will be discussed shortly.

7.2.2 Significance of Results

Focusing on the negative coefficient, this study can be interpreted to suggest that lower levels of democracy, or higher levels of state authoritarianism, are associated with higher frequencies of suicide bombings. Taking this relationship as true, we see an alignment with Social Movement Theories that emphasise how grievances and repression under authoritarian regimes can lead to the violent mobilisation of marginalised groups. This relationship aligns with a subfield of Social Movement Theory (SMT) which focuses on the relationship between social movements and repression. The violent repression of social movements, both subtle and overt, can often result in the expansion of such movements, as was the case in Egypt, whose 2011 revolution certainly amplified in part due to the "police beating and murder of Khaled Said" (Fominya and Wood 2011, 2). States across the Arab World violently repressed protests and conducted extrajudicial killings against protesters (Ozgun, Mekouar, Cavatorta 2023, 7))., undoubtedly amplifying adversarial dynamics between regimes and pro-democracy, leftist and Islamist opposition groups. In this context, mobilised groups can turn to violence as a direct result of state oppression, (Koktsidis 2019, 389) the most extreme form of which, naturally is suicide bombing.

When it comes to the literature explicitly linking state repression to suicide bombings, Araj's (2008) work as discussed in the literature review of this paper supports the negative coefficient observed in the results of this study. Araj identifies harsh Israeli repression as a significant cause of reactionary Palestinian suicide bombings from across the ideological spectrum, with 82% of such attacks during the Second Intifada designated by Araj as direct responses to specific acts of Israeli repression. Palestine, comprised for this study as both the West Bank and the Gaza Strip, did feature in the dataset but faces a unique situation in its prolonged occupation by a foreign entity. Relying on the coefficient and the findings of Araj's work, we assume that this reflects the dynamics of the relationship between authoritarianism and suicide bombing across the Arab world.

Della Porta's (2014) concept of the repression-resistance spiral found in her work on the repression of left-wing organisations in Europe, further contextualises these findings, suggesting specifically that indiscriminate state violence has the ability, and often does trigger increasingly radicalised responses from opposition groups. This is is self-evident truth in the Arab world, at least from 2011, where regimes which employed both coercive and indiscriminate methods of containing dissent inadvertently led to the

escalation of extremist tactics, which was the case in Iraq (Amnesty International 2014) and Syria (Amnesty International 2011). The framing strategies employed by insurgent organisations only exacerbate these dynamics, which often portray the group as fighting against oppression, and therefore legitimate (Nilsson 2020). Narratives of victimisation and retaliatory justice only mobilise support for violence, and simultaneously undermine state

A significant flaw in this research question lies within the operationalisation of state authoritarians as "Levels of Democracy" derived from Freedom House. The operationalisation of state authoritarianism in this way ignores variations on regime type and the specific mechanisms of repression which the literature review noted as potentially determinant factors in the ways authoritarianism can affect the frequency of suicide bombings, which was a key finding of Aksoy, Carter, and Wright (2012.

7.2.3 The Cases of Syria and Saudi Arabia: Different Authoritarianisms and Different Contexts

Syria and Saudi Arabia, both highly repressive authoritarian regimes in the study period according to Freedom House, offer contrasting examples understanding how different authoritarianism can produce different frequencies of suicide bombings. Both Syria and Saudi Arabia practise repressive governance of their populations and afford their subjects restricted political freedom, however, the counts of suicide bombings differ to a great extent. This may be down to variations in regime type, avenues of authoritarianism, sociopolitical contexts, and external factors. The different contexts in how these different authoritarian regimes operate, despite both achieving low scores in the Levels of Democracy Index, show how the lack of a more rigorous operationalisation of the State Authoritarianism variable may cause its borderline significance P-value.

The Assad regime's authoritarianism and repression in Syria since 2011 has been characterised by the use of chemical weapons against civilian populations (Angelova 2014, 7), mass detention centres and torture camps (Rizkalla et al. 2022, 2), and indiscriminate airstrikes. This has undoubtedly created intense grievances among the varying opposition groups, including groups that have used suicide bombings extensively, such as Da'esh and al-Qa'eda. The absence of meaningful political participation or negotiation between the regime and opposition groups has only compounded these grievances, which is argued to have led to the radicalisation of the aforementioned groups (Carsten 2012). These groups, as well as others, frame suicide bombings as acts of resistance against not only the regime, but also other actors, such as the Syrian Democratic Forces (SDF), foreign actors such as the United States and Russia, and other opposition groups (Islamic State 2023, 5).

Despite similarities in the Freedom House rating, Saudi Arabia's authoritarianism is fundamentally different in its structure and approach to that of Syria. A monarchy that maintains political stability through a combination of coercion (Al-Rasheed 2016) and religious legitimacy (Guillemin-Puteaux 2018), Saudi repression is less overtly violent than Syria. Instead, repression is practised through surveillance, imprisonment, and control over religious discourse (Al-Rasheed 2020). Saudi Arabia has experienced far fewer suicide bombing attacks than Syria despite its authoritarian nature, as shown in Table 6 below. The attacks that have occurred between 2011 and 2020, such as those by Al-Qaeda in the Arabian Peninsula (AQAP) and Da'esh, have typically targeted religious institutions symbolic of the state, often aiming to delegitimise the state's Islamic credentials (BBC News 2016). Furthermore, Saudi Arabia has not seen the same widespread internal armed conflict which Syria had between 2011 and 2020,

a contextual fact that does limit the scope for insurgent groups to operationalise suicide bombings on a large scale.

Country	Year	Levels of Democracy	Number of Suicide Attacks
Saudi Arabia	2011	12	0
Syria	2011	9	2
Saudi Arabia	2012	10	0
Syria	2012	6	37
Saudi Arabia	2013	10	0
Syria	2013	5	36
Saudi Arabia	2014	10	1
Syria	2014	1	53
Saudi Arabia	2015	10	8
Syria	2015	-1	77
Saudi Arabia	2016	10	7
Syria	2016	-1	79
Saudi Arabia	2017	10	1
Syria	2017	-1	59
Saudi Arabia	2018	7	0
Syria	2018	-1	20
Saudi Arabia	2019	7	1
Syria	2019	0	37
Saudi Arabia	2020	7	0
Syria	2020	0	9

Table 6: Comparison of Democracy Levels and Suicide Bombings between Syria and Saudi Arabia

Foreign intervention, a variable also tested in this study, is a key area that also distinguishes the two situations. In Syria, Russia, Iran, Turkey, and the United States have all militarily intervened, which provides insurgent groups such as Da'esh and al-Qa'eda further grievances used to justify suicide bombings, where as mentioned before, these groups can frame their bombings not only against the regime, but also against an imagined foreign oppressive order. In Saudi Arabia, on the other hand, there is no such foreign military intervention.

A further key difference lies in the different ways opposition groups operate within the two states. Opposition groups in Syria are able to flourish in areas outside the regime's control, whereas, in Saudi Arabia, no such situation exists, with the state controlling the whole country due to the absence of a civil war. Furthermore, the Saudi monarchy is able to develop robust counterterrorism measures (Qurtuby and Aldamer 2021) which the Syrian state is simply unable to do.

Through the comparison of the cases of Syria and Saudi Arabia, it is revealed that the proliferation of suicide bombings interacts with broader political, social, and military dynamics. Extreme and violent

repression in Syria, alongside the civil war, has created a conducive environment for the high frequency of suicide bombings. In Saudi Arabia, the greater state capacity, less militarised environment, and religious nature of the state have prevented the widespread occurrence of suicide terrorism. As such, this comparison demonstrates that while authoritarianism may create grievances that can lead to extreme violence, the nature of such authoritarianism and external factors are crucial to their proliferation.

7.2.4 Summary

This study has highlighted the often complex relationship between the frequency of suicide bombings and state authoritarianism in the post-2011 Arab world. While on one hand, the results do reveal a positive association between state authoritarianism and the frequency of suicide bombings, this result remains statistically insignificant. Through a more categorised understanding of state authoritarianism, this statistical insignificance may change and a clearer relationship may emerge. Despite this, the positive association is supported by the existing literature and theories, suggesting merit to the relationship.

The comparative analysis of the Syrian regime and the Saudi monarchy reveals the crucial roles that regime type, state capacity, and broader sociopolitical contexts play in the frequency of suicide bombings. Syria's overtly violent repression combined with civil war dynamics and foreign intervention has created a fertile environment for the proliferation of suicide bombings. On the other hand, Saudi Arabia's state control embedded within an authoritarian regime has largely contained the proliferation of such attacks.

The findings of both this study at large and the Syrian and Saudi Arabian case studies suggest that authoritarianism does interact with other factors such as security dynamics, foreign intervention, and state capacity, in the larger picture of suicide bombings across the Arab world. Future research should address regime type and its influence on suicide bombings, and compare this to the operationalisation of state authoritarianism used in this study.

An understanding of the interaction between authoritarianism and political violence has crucial implications for counterterrorism strategies. Policymakers ought to realise that addressing state authoritarianism and encouraging democratic political processes may reduce the grievances that insurgent groups use to frame their suicide attacks. However, the comparison of different authoritarianism in Saudi Arabia and Syria demonstrate that a more nuanced understanding of the different types of authoritarianism, as well as external factors, should also be considered.

7.3 Ideology and Suicide Bombing

7.3.1 Interpretation of Results

The pivotal role of group ideology is revealed by the results of this study, both through the Negative Binomial regression analysis and the Chi-Square test. The Chi-square test revealed a statistically significant relationship between the four group-ideology categories and the occurrence of suicide bombings, while the regression analysis quantified the varying effects of different ideologies' engagement in suicide terrorism on the overall expected count of suicide bombings.

The regression results indicate that the conducting of at least one suicide bombing by a Salafi-Jihadist group is the most influential predictor of higher frequencies of suicide bombings, with a rate ratio of

120.48. This suggests that at least one attack being conducted by a Salafi-Jihadist group increases the expected count of suicide bombings by over 120 times compared to groups operating under different ideological frameworks. These findings align with the existing theory and literature, as Salafi-Jihadist groups such as Da'esh emphasise martyrdom within their propaganda (Perry and Long 2016).

Islamist Nationalist groups, such as Hamas, Palestinian Islamic Jihad, and some factions in the Syrian opposition, showed a moderate but statistically significant increase in expected suicide bombing counts, but the Chi-Square analysis revealed fewer observed suicide bombings than predicted (observed = 7; expected = 11.34). This suggests that Islamist-Nationalist groups tend not to use suicide bombings as a tactic in military campaigns, and favour other tactics.

Groups identified as being Shi'a-Islamist exhibited a similar trend within this study, with a positive and statistically significant coefficient ($Exp(\beta)=4.18$, $p=0.012$), which may indicate that Shi'a Islamist groups are often fighting against Salafi-Jihadist groups who commit the greatest amount of attacks. Despite this, the Chi-Square test revealed that fewer Shia-Islamist groups engaged in suicide bombings than expected (observed = 2; expected = 10.45). This marks a significant shift in the tactics of Shia groups, who as I will explain in the case study of this part of the discussion, engaged in some of the most high-profile suicide bombings in the 1980s.

The presence of a suicide bombing conducted by Secular-Marxist groups demonstrated a protective effect on overall suicide bombing counts, reducing the expected count by approximately 48%, however, this result was statistically insignificant ($p = 0.241$) The Chi-square analysis suggests that suicide bombing is not a favoured tactic employed by secular-nationalist/Marxist groups, with the observed groups engaging in suicide bombings (4) falling below the expected levels (6.57).

7.3.2 Significance of Results

The extraordinary reliance of Salafi-Jihadist groups on suicide bombings is perhaps the most notable revelation of this study, reflected in the discrepancy between expected and observed counts in the Chi-Square test. This result complements and validates the view that Salafi-Jihadist groups have all but institutionalised the use of suicide terrorism as a core tactical and ideological practice. The excessive use of these tactics as revealed by the results is inherently intertwined with theology, strategy, and the exploitation of recruits.

Religious Justifications: Framing Suicide Bombings as Istishhad

The framing of these attacks as martyrdom-seeking operations, and not as suicide, is central to Salafi-Jihadist thought. Suicide, understood in Islam as killing oneself as a result of despair, is condemned as a grave sin within Islam. Salafi-Jihadist groups reframe these attacks as self-sacrificial acts the the greater good of Islam, which elevates those directly responsible for such attacks to martyrdom (Slavicek 2008; Caschetta 2015). *Niyyah*, the Arabic word for intention, plays a crucial role in this framing. Salalfi-Jihadist scholars assert that if the *niyyah* of the attackers is to serve Islam when conducting such attacks, then the attack is justified and encouraged within this school of thought (Slavicek 2008).

The "Plunging Line" Analogy: Historical Validation

Suicide bombings are scripturally justified by Salafi-Jiahdist groups through the drawing of analogies to the tactic of *inghimās,* which roughly translates to "plunging oneself into the enemy". Originally a manoeuvre used in the Medieval times by the forces of the early Islamic caliphates, the tactic of inghimas involved individual soldiers charging at enemy forces, often facing near-death circumstances, to achieve a strategic advantage (Molloy 2009). Modern-day jihadists frame suicide missions in the historical context of inghimas to legitimise these tactics (Hassan 2017, 4). This analogy also reframes suicide bombings as both tactically ingenious and courageous acts rather than the desperation that they often are. The historical and religious legitimacy derived from this *inghimas* frame strengthens Salafi-Jihadist narratives that under conditions of existential threat to the ummah,[4] inghimasi attacks are not only permissible, encouraged, but even required (Ward 2018, 90-91).

Strategic Logic in Asymmetric Warfare

Despite being deeply rooted in theology, the use of suicide bombings by Salafi-Jihadist groups also reflects their strategic calculus in asymmetric warfare. Under significant resource constraints and in the face of militarily superior opponents, suicide bombings are cost-effecting, and cannot only cause material damage on the battlefield but also deplete the morale of enemy forces (Horowitz 2015, 74-78; Winter 2017, 20). The effectiveness of suicide bombings as a weapon of fear is amplified by their unpredictability and effectiveness, as they force enemy forces to divert resources to counterterrorism efforts. Winter (2017) highlights how flexible suicide operations are by categorising suicide attacks carried out by Da'esh, and notes how useful each can be, particularly in urban environments.

Comparative Context: Salafi-Jihadism and Other Ideologies

These results expose a clear contrast between ideologies in the use of suicide bombings. Groups categorised as secular-nationalist/Marxist such as the PKK and PFLP do occasionally employ suicide bombings, however, they generally lack the religious framing that Salfi-Jihadist groups rely on.

Shia Islamist groups, on the other hand, pioneered the use of suicide bombings in the 1980s. Despite this, Shia groups have largely abandoned the tactic over the last 30 years, which I will show in the next section of the discussion due to changing political realities rather than ideological evolution.

7.3.3 Case Study: Hezbollah's decline

Historical Context: Hezbollah and Suicide Bombings

Hezbollah's rise to prominence as an insurgent group is inherently connected to the group's use of suicide bombings as a tactic against foreign occupation. Two monumental attacks in Beirut in 1983 exemplified the group's early success with this tactic, killing 362 people and forcing the withdrawal of American and French forces from Lebanon (Weiner 2018; Stilwell 2022). These early attacks and others were framed by what was then the early formations of Hezbollah within distinctly Shi'a concepts of martyrdom, which are largely derived from the actions of Imam Hussein at the Battle of Karbala in 680AD (Kafeyan 2010). However, since these highly influential suicide bombings in the 1980's Hezbollah has moved away from

[4] Ummah translates to the nation of Muslims as a whole, often used in opposition to the nation-state oder of the Middle East.

suicide bombing as demonstrated by Figure 5. It is worth noting that the two attacks shown by the figure between 2010 and 2015 have not been claimed by Hezbollah.

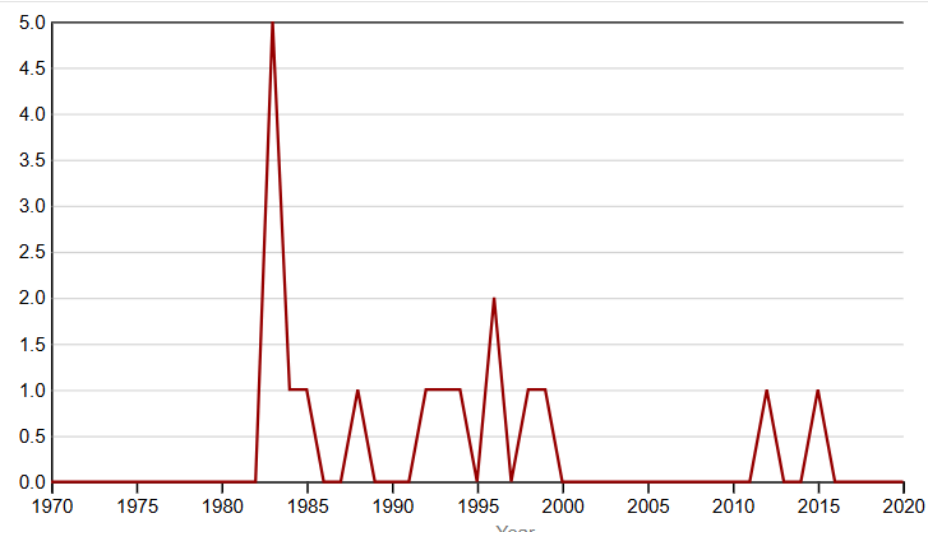

Figure 5: GTD showing all suicide attacks that have been attributed to or claimed by Hezbollah.

Transition to State-Aligned Actor

The Israeli withdrawal from Southern Lebanon in 2000 marked Hezbollah's shift away from Hezbollah (Norton 2000, 33-34), which was largely celebrated as a victory of their insurgent efforts (Blanford 2020). This framed victory reduced the need for Hezbollah to continue to use tactics such as suicide bombings, with the group focusing instead on the consolidation of control, engagement in politics and regional relations, and building local support (Blanford 2022, 14).

Meanwhile, Hezbollah had begun to participate in the Lebanese political system, with the group participating in the 1992 elections (Wiegand 2009, 675). Maintaining legitimacy not just as a militia but also as a political player became paramount to the survival of the organisation, and engagement in suicide bombings could only harm the legitimacy the group sought. Instead, Hezbollah built its military capacity in a more state-like manner, training disciplined ground forces and building a large rocket arsenal (Samaan 2017, 156)

An evolution of Hezbollah's strategy is reflected in this transition, with the moving of the group from a classical insurgent actor to a state-aligned actor, emphasising its ability to rule and maintain security and legitimacy, whilst professing its militant origins and core.

Role in Proxy Wars

Hezbollah's deployment into the Syrian civil war to support the regime marked a significant shift in the operational focus of the organisation. Acting not only in its interest but also in the interest of Iran (Milani 2013, 79), Hezbollah deployed its forces across Syria to support the Syrian Arab Army (Al-Aloosy, 2022, 131), using conventional and hybrid warfare strategies to successfully hold down armed opposition groups (Syrian Observatory for Human Rights 2017). Furthermore, the group was instrumental in the training and arming of new Shia militias, such as the Liwa Zainebiyoun and Liwa Fatemiyoun (Miron 2019, 21-22). Within the scope of this conflict, the prospect of Hezbollah using suicide bombings to support a regime would not align with the group's operational objectives.

Decline of Suicide Bombings: Tactical and Strategic Considerations

The Shi'a aversion to suicide bombings in the 21st Century, despite an early reliance on such tactics, demonstrates the relationship between what can be termed as ideological permissiveness, and strategic considerations. Both Salafi-Jihadist groups and Shi'a Islamist groups rely on ideological frameworks that are fundamentally permissive towards what are referred to as martyrdom-seeking operations. For Shi'a groups, this ideological permissiveness can be found in the legacy of Imam Hussein at the Battle of Karbala, whereas Salafi-Jihadist groups tend to see suicide bombings in line with the medieval tactic of *inghmasi*.

Despite the justifications found in both ideologies, the use of these tactics between the two groups differs greatly. Hezbollah has distanced itself from suicide bombings across the Arab world since the turn of the millennium, which we observe as a direct consequence of the group's realpolitik priorities as part of the Axis of Resistance. The group has cemented itself as a key regional player within a coalition of states such as Iran and (Assadist) Syria and has focused on building its own legitimacy within this frame. Suicide bombings prove to be a risky tactic for Hezbollah, with the risk of indiscriminate harm an issue that would only delegitimise the group's legitimacy within the Axis of Resistance.

In contrast, Salafi-Jihadist groups such as al-Qa'eda and Da'esh have both centralised and institutionalised suicide bombings in their tactical strategy. Unconcerned with traditional state-building or long-term governance, these groups use suicide bombings to further their own ideological, strategic, and political objectives. The complete rejection of the nation-state order enables these groups to exploit the ideological permissiveness of martyrdom-seeking operations without considerations of realpolitik.

The tactical evolution of Hezbollah exposes that the decline in the frequency of suicide bombings conducted by Shi'a groups across the Arab world is not necessarily due to a change of ideology, but rather a reflection of changing geopolitical circumstances. While both Salafi-Jihadist and Shia-Islamist groups do draw on theological justifications for suicide bombing, framed as martyrdom-seeking operations, we observe that Hezbollah and other state-aligned Shi'a-Islamist actors such as the Popular Mobilisation Forces in Iraq do not seek to use this tactic, due to fears it may hinder the sought legitimacy of the two groups. This demonstrates that strategic environments, rather than ideology alone, determine the frequency of suicide bombings across the Arab world.

7.4 Foreign Intervention and Suicide Bombing

7.4.1 Interpretation of Results

The results of the negative binomial regression signify a statistically significant and positive relationship between the presence of foreign military intervention and the frequency of suicide bombings across the Arab world from 2011 to 2020. The coefficient for foreign intervention is positive (1.1437) and statistically significant ($p < 0.001$), suggesting that foreign military intervention correlates with a higher likelihood of suicide bombings. The findings of this test complement the theory and literature on the link between the two variables, suggesting that the presence of foreign military interventions does exacerbate political violence and provides insurgent groups with a frame to justify the use of suicide bombing.

The argument that suggests that foreign military intervention can intensify the grievances that cause radicalisation across the Arab world is suggested by the positive coefficient. In part of the Arab world where the presence of foreign forces can be observed, suicide bombings can also target the domestic governments and actors that they support. This has been particularly evident in Iraq and Syria, where it appears that foreign military intervention may have played a role in the proliferation of suicide terrorism.

7.4.2 Significance of Results

The findings of this study, which suggest that foreign military intervention plays a significant role in the proliferation across the Arab world in the study period, align with an extensive body of academic literature that cites the role of foreign military interventions in suicide bombings. Specifically, this study complements the argument that suggests that foreign military involvement can exacerbate violence by altering the strategic environment in a given conflict zone. Choi and Piazza (2017), for example, suggest that foreign military interventions, particularly those involving the deployment of ground troops, create fertile conditions for insurgent groups to resort to suicide bombing as a cost-effective and symbolically powerful tool. The results of this study corroborate well with these findings, although the foreign military interventions in the study period have not involved the large-scale deployment of ground forces.

Local power dynamics are often disrupted by foreign military interventions, oftentimes empowering regimes and as discussed in the literature review, “hardening” potential targets, both of which are perceived by insurgent groups as opportunities symbolic and strategic. Choi and Piazza (2017) argue that large-scale troop deployments actively increase the likelihood of suicide bombings, as the presence of these forces is interpreted by the insurgents as a lucrative and visual target. This is particularly relevant to the propaganda of Da’esh, whose propaganda paints the Russian intervention in Syria as a modern crusade (Islamic State 2023, 3) and attempts to galvanise support for anti-Russian operations as anti-crusader operations. This aligns with Rational Choice Theory (RCT), which suggests that engagement in suicide terrorism is a logical and strategic decision intended to maximise gains, which in this case include media attention, material damage, and political leverage (Pape 2003).

Pape and Feldman’s (2010) analysis similarly demonstrates the catalysing effect that foreign military intervention has on the proliferation of suicide terrorism, identifying the presence of foreign troops in contested territories as a primary catalyst for these types of attacks. In response to foreign military intervention, insurgent groups discursively position themselves as the defenders of national sovereignty and local identities. This dynamic noted in the authors’ study seems to apply to many Arab states, where foreign interventions have indeed intensified local grievances which have fueled these narratives. In these contexts, such as Iraq and Syria, suicide bombings serve as powerful ideological symbols of resistance as well as military action.

In conclusion, the findings of this study reveal that foreign intervention played a central role in determining the frequency of suicide terrorism across the Arab world between 2011 and 2020, aligning themselves with the Rational Choice Theory. Through the intensification of grievances, strengthening the discourse of insurgent groups, and altering national power dynamics, foreign interventions do indeed act as a catalyst and an enabler of suicide terrorism across the study region. Future research should look at the interaction that foreign intervention has with structural variables such as regime type, or religious fractionalisation.

7.4.3 Case Study: Operation Inherent Resolve in Iraq

An interesting case study into the relationship between foreign intervention and suicide bombings is revealed with the case study of Operation Inherent Resolve, a U.S.-led coalition campaign against ISIS in Iraq and Syria. From 2014 onwards, OIR was involved in extensive military operations including airstrikes, ground troop support, and intelligence-sharing, all aimed at degrading the military capacity of Da'esh (U.S. Department of Defense n.d.). While the campaign succeeded in reclaiming large swaths of territory from ISIS, it also intensified the group's reliance on suicide bombings as a core tactic of resistance and terror (Winter 2017). Whilst OIR was not an intervention defined by extensive ground troop deployment, how it was framed by Da'esh built the impression that US forces were backing a *rafidhi*[5] Shi'ite government that was disenfranchising and oppressing Sunni Muslims.

The escalation of suicide bombings inside Iraq during OIR aligns with the findings of the regression analysis. Much of the relevant literature suggests that pro-government interventions involve significant ground troop deployments and that pro-government interventions involve significant ground troop deployments to predict an increase in the use of suicide bombings due to the strategic and symbolic value of attacking foreign forces. OIR was not a ground-troops-heavy foreign intervention, however, the results of this test do suggest that any foreign intervention generally causes a greater proliferation of suicide bombing. This may be due to how Da'esh frames actors such as the Iraqi Army, Peshmerga, or Syrian Army as agents of foreign regimes. Suicide bombings during this period targeted Shia-majority areas as well as Iraqi forces and government infrastructure, all of which are framed using heavily interlinked anti-occupation and sectarian narratives (Ubayasiri 2021; Islamic State 2023).

Year	Suicide Attacks	Key Events
2011	46	
2012	67	Sunni Protests begin against perceived Sunni repression.
2013	273	Daesh announces its existence
2014	308	Operation Inherent Resolve Begins
2015	345	
2016	454	

[5] *Rafidhi* is an Arabic term meaning "rejectionist", and is used as a derogatory slur to describe Shi'a Muslims, who reject the authority of the first three Caliphs after the death of the prophet Mohammad.

2017	338	Liberation of Mosul and declaration of victory over Da'esh in Iraq
2018	64	
2019	30	
2020	7	

Table 7: Table showing number of suicide attacks in Iraq and significant events.

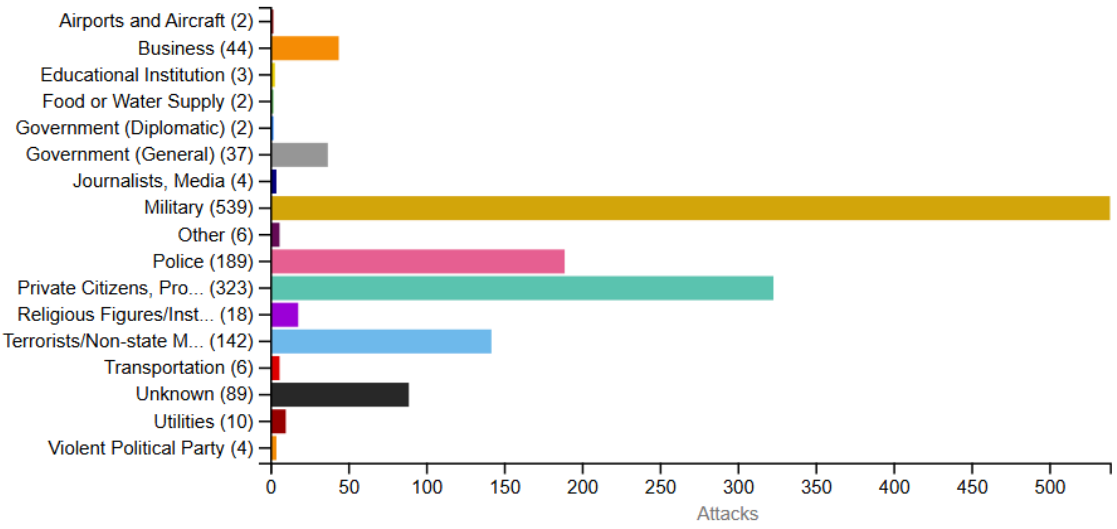

Figure 6: GTD showing breakdown of targets of Da'esh Suicide Bombing from 2014 t0 2020 in Iraq.

Rational Choice Theory provides a useful lens to expose the strategic calculus behind the reliance of Da'esh on suicide bombings during the duration of OIR. An insurgent group facing a better-trained and equipped enemy, Da'esh proliferated its use of suicide bombings in an attempt to offset power asymmetries and cause as much psychological and material damage as possible with their minimal resources. Pape (2003) emphasises the effectiveness of suicide bombings as a low-cost, high-impact tactic able to cause significant damage to enemy forces. This is reflected in the target breakdown of Da'esh's suicide attacks in Iraq. Figure 6 below shows the breakdown of targets in all ISIS suicide attacks from 2014 to 2020. In the graph, we see that throughout OIR, Da'esh has primarily targeted security forces, with the number of attacks targeting the Military, Police, and Non-State Militias (in this case, the Popular Mobilisation Forces) totalling 870. Private citizens and property have also heavily featured as targets of Da'esh attacks (323), but this number is still dwarfed by the focus on security forces.

On one hand, while OIR did lead to the military and strategic defeat of Da'esh in Iraq, the campaign also exposed the potential pitfalls of foreign military intervention in creating opportunities for insurgent groups to launch suicide attacks. The military focus of the coalition against Da'esh, coupled with the sectarian policies of the Iraqi government (Haddad 2016) and the growth of pro-Iran militias (Alaaldin

2017), caused the intensification of grievances felt by Sunni-Arab Iraqs, many of whom felt alienated by the post-Saddam reconstruction of the Iraq State (Moaddel, Tessler, and Inglehart 2008). These grievances facilitated the use of suicide terrorism and other forms of violent activity by Sunni armed groups in Iraq such as Da'esh's predecessor, the Islamic State of Iraq, as well as other al-Qaeda factions. Once the US intervened a second time under the guise of OIR, the exploitation of these narratives skyrocketed.

Hence, Operation Inherent Resolve is demonstrative of a positive, yet complex relationship between foreign military intervention and the frequency of suicide bombings. The campaign did succeed in quickly diminishing the area controlled by Da'esh in Iraq, but simultaneously intensified the use of suicide bombings by the group as a tactical response to the significant power asymmetries caused by foreign military intervention. This case study underscores the need for foreign military interventions to consider the underlying sociopolitical grievances that drive the support for extremist violence whilst engaging in traditional anti-insurgent operations. Without this nuanced approach, foreign military interventions may serve to drive up suicide bombings.

7.4.5 Summary

This study has found that foreign military intervention plays a crucial role in the frequency of suicide bombings. An association of both strong and statistically significant highlights that foreign military interventions often create fertile environments for the proliferation of suicide terrorism. Rational Choice Theory is key to understanding this relationship, and foreign military intervention facilitates the use of suicide bombings as a high-impact, cost-effective means of offsetting power asymmetries. Insurgent groups are able to cause material losses and show symbolic defiance of foreign occupation, as shown through the case study looking at OIR in Iraq.

The sectarian policies of the Iraqi government partnered with the impact of the operations of coalition forces did create an environment that allowed Daesh to intensify its narrative and recruit operatives around the world. OIR as a case study underscores the unintended consequences of foreign military intervention, where military campaigns which do indeed degrade the military capacity of insurgent groups fail to address the pre-existing grievances that fuel suicide terrorism.

In conclusion, we observe that foreign intervention serves as a catalyst and enabler of suicide bombings, as it both intensifies grievances and provides insurgent groups with justifications both strategic and ideological for their actions. The effects of these dynamics ought to be considered by those in the counterterrorism field by minimising the destabilising effects of foreign military intervention and addressing the underlying sociopolitical conditions exploited by groups engaging in suicide terrorism. Without this approach, foreign interventions may intensify cycles of violence and reinforce the terrorist dynamics they often seek to dismantle.

7.5 Religious Fractionalisation

The results of the negative binomial regression note that religious fractionalisation is a strongly significant predictor of the frequency of suicide bombings, with a coefficient (β) of 3.4078 ($p < 0.001$). This strong and highly significant positive relationship indicated that religiously diverse Arab states, such as Lebanon, Iraq, and Syria, are uniquely prone to higher numbers of suicide bombings, a statement

reinforced by the 95% confidence interval ([2.274, 4.541]). Despite the significance of these findings, the age and nature of the data, which is sourced from Alesina et al.'s 2000 QoG data, present issues.

7.5.1 Key Findings

Religious fractionalisation is measured as the probability that two randomly chosen people from within a state belong to two different religious groups. This offers a picture of religious diversity within a state. The high coefficient revealed by the negative binomial regression analysis suggests that religiously pluralistic societies are more vulnerable to suicide attacks than religiously homogenous countries. Insurgent groups, particularly Salafi-Jihadist groups who often target religious minority groups, thrive in sectarian conditions.

7.5.2 Limitations of the Data

The age and coverage of the dataset introduce key limitations to exploring this variable further. The religious fractionalisation values used in this study are reflective of the year 2020 and offer no insight into how religious demographics may have changed since then. The score for Sudan and its religious fractionalisation score was a major issue here, since South Sudan, with a large Christian and Animist population, has not succeeded at that point. To combat this, I recalculated Sudan's religious fractionalisation score using open-source data, but this is prone to error.

The discrepancy outlined above serves to highlight how crucial the use of updates and precise data is in research. While on one hand, the adjusted religious fractionalisation score does increase the reliability of these findings, there is no guarantee that the data used is error-free and up to date.

7.5.3 Summary

The findings of this study highlight that religious fractionalisation is indeed a key predictor for suicide bombings, despite the issues with the applicability of the dataset. Further research ought to address these limitations by using up-to-date data and exploring interaction effects with key variables such as group ideology, which could reveal contextual insights into the use of suicide attacks by Salafi-Jihadist groups in sectarian conflicts.

8.0 Conclusion

The findings of this paper highlight first and foremost the multifaceted nature of nature of suicide bombings across the Arab world from 2011 to 2020. In doing so, this paper suggests that group ideology and foreign intervention play significant roles in the proliferation of suicide bombings across the region in the aforementioned period and that levels of state authoritarianism may be significant under alternative operationalisation. Through a comprehensive analysis using a Negative Binomial Regression model, I have tested and highlighted the roles that ideological, structural, and external factors may in predicting the frequency of suicide bombings across the region.

One of the most crucial findings of this paper is the dominant role that Salafi-Jihadist groups play in the proliferation of suicide bombings across the Arab world. The statistical significance of this variable's strong effect on the frequency of suicide bombings across the region highlights groups following this ideology as a major cause for concern across the region. These results were complemented by a Chi-Square test which also found more observed Salafi-Jihadist groups had engaged in suicide terrorism than expected.

Foreign military intervention in conflict zones across the Arab world creates an environment that insurgent groups are able to exploit to justify and proliferate the use of suicide terrorism. The significant association between foreign intervention and the frequency of suicide bombings variables reveal that insurgent groups frame their actions as resistance to occupation or foreign intervention, which serves to intensify the violence through the recruiting of more recruits willing to carry out suicide missions. The case study of Operation Inherent Resolve supports the findings of the study and illustrates that although a foreign military intervention can cause the effective military dismantlement of insurgent organisations, it may also exacerbate the frequency of suicide bombings.

State authoritarianism, which in this paper was operationalised inversely as levels of democracy, does not show a stylistically significant relationship with the frequency of suicide bombings as per the results of this study. Despite this, a negative coefficient was observed, and despite the p-value not being statistically significant by traditional definitions, it did approach the 5% interval. As such we can say that there is credit to believe that higher state authoritarianism can predict higher levels of suicide bombings. Through the reoperationalisation of this variable to account for regime type, instead of an indexed score, the results may indeed show that state authoritarianism does have a positive relationship with the count of suicide bombings.

Religious fractionalisation, although intended to be a control variable, emerged as a statistically significant and strongly positive predictor of suicide terrorism, highlighting that societies with greater religious diversity may also be at risk for greater quantities of suicide bombings. Further research into the relationship between these two variables, and its interaction with other variables such as authoritarianism and foreign military intervention is crucial to fostering a more nuanced understanding of the predictors of suicide terrorism. However, issues do exist with the nature of the data, being out of date and static. Should more reliable data be attainable, this should be a priority area of research.

This research has contributed to the broader academic field of political violence and terrorism due to the assessment of ideological, structural, and external variables as predictors of a unique and most-discussed

form of violence. The findings emphasise the importance of the interaction between variables being the natural progression of research into this field. The use of quantitative methods, complimented by three small case studies in the discussion, provides a solid foundation for this future research to occur.

In conclusion, this paper has highlighted that the frequency of suicide bombings is influenced by a variety of factors including ideology, foreign intervention, and religious fractionalisation. In doing so, this paper has furthered the academic understanding of the predictors of suicide bombings and has paved the path for academics to further refine the variables to achieve a greater understanding of the proliferation of suicide bombings across the Arab world post-Arab Spring.

9.0 Reference List

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