

Educational Equity and Terrorism:  
Association between Educational Equity and Terrorist Activity in the MENA Region

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## **Abstract**

The Middle East suffers from the most terrorist attacks in the world, and many of these countries have very inequitable education systems, as well. The issue of why this region suffers with so much violence has not been answered with one solution, as it is such a complicated problem. An equitable education system can have tremendous impacts on countries' success. This paper attempts to analyze the relation between the two.

My hypothesis is the higher equity of education that countries have will lower terrorism activity in the MENA region. In order to prove this hypothesis or find a relationship, I compare the two educational equity variables, impartiality and equality of condition, with terrorist attacks in the MENA region, mostly in 2018. Impartiality is measured through PISA test scores, and equality of condition is measured through the percent of government expenditure spent on education. These are then compared to my dependent variable of domestic attacks in the MENA region. I also offer some qualitative analysis on both the general attitude citizens have on terrorism and education in the Middle East as well as a case study on Afghanistan to provide a deeper look into one country with high rates of terrorism. Due to limited data, the conclusions and causations I could draw were restricted, however, there seems to be an association between a more equitable education system and less terrorist attacks. My hope is that this can motivate future research into the subject, so more data is available, and more concrete conclusions can be drawn.

## **Introduction**

Terrorism is an issue that especially affects the Middle East and North African (MENA) regions. This region has suffered the most terrorist attacks from 2002 to 2019, reaching 37,553 total incidents in this time period, and many attacks abroad have also been traced back to this

region (Statista 2020). Many scholars have sought to understand this issue, including Jitka Maleckova, Alan Krueger, Kartika Bhatia, Hafez Ghanem, and others, but it is much more complex than one answer. While it would be ignorant to assume one solution could end all terrorism, an equitable education could help to minimize it.

When looking at what the MENA region lacks, I chose an equitable education as the main condition. An equitable, quality education has been proven to help lead individuals, and countries, to success (OECD, 2012). Later on, equitable education will be defined in greater detail, however the definition used is highlighted by UNESCO as “considering the social justice ramifications of education in relation to the fairness, justness and impartiality of its distribution at all levels or educational sub-sectors” and measured through impartiality and equality of condition (UNESCO, 2018). UNESCO also states that education “is associated with better health, reduced maternal and child mortality, fewer disaster-related deaths, less conflict and increased civic engagement, among other benefits” (UNESCO, 2018). Whether the measurement of success is in developed countries leading to better job opportunities and increased income, or in developing countries relating to sanitation, hygiene, housing, and securing a stable job, education has the power to increase individuals’ standard of living. Not only does an equitable education provide pathways to all of the above, but it also builds critical thinking skills which provides individuals with skills to make better decisions, think independently, form educated opinions, and strengthen problem solving skills (WPI, 2014). While these factors may seem unrelated, they can help curb individuals joining terrorist organizations because they typically have a better quality of life and have the skills to make informed, objective decisions, which in turn would lower terrorist activity in the country as a whole. Critical thinking skills are not the infallible solution, as many terrorists believe they are making informed decisions, however, they

can help transition individuals to making other decisions and show them other options available besides joining terrorist organizations. Thus, I am looking at the relationship between equity in education and terrorist activity. In no way is increasing equity of education the solution to halting radicalization into terrorist groups, however, I will assess the degree to which there is a relationship between the two.

Other complicating factors tied in with education and terrorist activity in the MENA region are lack of opportunity after education and the idea of relative deprivation. A common misconception is that terrorists are uneducated. This is not the case in most instances, especially among terrorist organizations' leadership (Bhatia and Ghanem 2017). Most terrorists are highly educated. Sometimes the issue occurs after they receive an education. This phenomenon is called relative deprivation. Educated individuals are either ending up with a short-lasting, vulnerable job, or a job that they are overqualified to be doing, with very low pay. When highly trained and educated individuals are not reaching their full potential, thoughts of frustration and self-deprecation can lead to them becoming radicalized (Sas et al. 2020). Providing highly educated individuals with a stable job they are qualified for could have the capability to direct their intelligence and skills towards something other than terrorism. This paper focuses on equitable education, but it is worth noticing that relative deprivation and lack of opportunity are factors that may contribute to radicalization after education.

Throughout this study, I explore the connection between equitable education and radicalization into terrorist groups. I expect to find that higher levels of education equity will be associated with lower levels of radicalization and terrorist activity. I am also briefly looking into the puzzle of why highly educated individuals become terrorists, or even leaders in terrorist organizations. From this perspective, I take note of relative deprivation and the absence of jobs

for these qualified individuals. While neither of these will provide the all-inclusive solution, I hope to be able to find a relationship and provide a different perspective.

In order to do the above-mentioned things, I perform both a quantitative and qualitative analysis. My quantitative analysis assesses the relationship between education equity and terrorist activity. Impartiality and equality of condition, the two measurements of educational equity defined by UNESCO, are the two independent variables and they are compared to the number of terrorist attacks, my dependent variable, in various countries in the MENA region. I also look at support and attitude towards terrorism and the education system to uncover the general sentiment towards these issues. The quantitative analysis provides broad aggregate trends through this region. My qualitative analysis includes a case study of Afghanistan examining terrorist activity and educational equity variables, as well as the support and attitude towards terrorist activity in a country with relatively high levels of terrorism. This analysis provides a deeper, more specific look into one of the countries in this region. My quantitative analysis, using the limited available data, found a slight association with greater educational equity and lower terrorist attacks. My qualitative analysis on Afghanistan shows their lack of an equitable education system and how that has been associated with their terrorist activity.

Throughout the rest of this paper, I provide background, definitions of key terms, offer a literature review, explain my methodology, offer a qualitative and quantitative analysis and finally draw some observations on various relationships.

### **Background**

A common misconception is that terrorists are uneducated. Prior research, however, suggests this is untrue in most cases (Krueger and Maleckova, 2002). Many terrorists, especially leaders of these organizations, are highly educated individuals. For example, Osama Bin Laden

(the former leader of Al-Qadea), members of Hezbollah's militant wing and Palestinian terrorist groups, among others, are all very highly educated (Krueger and Maleckova, 2002). However, countries in the MENA region lack an education that provides critical thinking, a skill very important in quality education and helpful in inhibiting terrorism (Davies, 2009). These skills "hinder support of radical ideology and radical slogans" (Korotayev et al. 2019, 5). Another misconception is terrorists are always irrational actors. Rationality is extremely relative. One cannot dismiss these individuals as irrational, because much of the time they are acting rationally based on their beliefs.

Prior research suggests that there seems to be a discrepancy in these individuals and them being highly educated but still joining terrorist organizations. Why are these highly educated individuals becoming radicalized and acting irrationally? What is pushing them towards terrorist organizations? One possible reason for this is shown through the idea of relative deprivation. The MENA region has an incredibly high unemployment rate, approximately 26.7%, therefore, these highly educated individuals are stuck in jobs they are overqualified for, oftentimes leading to frustration and resentment (World Bank, 2020). This is one explanation for the discrepancy, however, a higher quality, and more equitable education could also help these countries through critical thinking skills, leading them to turn to alternative options, instead of terrorist organizations.

### *Definitions*

First, I will define how I am using terrorism throughout this paper. Alan Krueger, an American economist, and Jitka Maleckova, a professor of Middle Eastern Studies, defined terrorism in their well-known article on causal connections between terrorism and education as: "premeditated, politically motivated violence perpetrated against noncombatant targets by

subnational groups or clandestine agents, usually intended to influence an audience” (Krueger and Maleckova, 2002). Within terrorism, I specifically focus on Islamic fundamentalism and extremism in the MENA region as terrorist attacks and acts of extremism happen here, or are traced back to this region, much more frequently than other areas in the world.

Another important aspect to mention is how I measure equity of education. I am using UNESCO’s framework from *Measuring Equity of Education* (2018). This source focuses their attention on world peace and security through education which is highly relevant to my topic. This report highlights that equity should be measured through impartiality and equality of condition. Impartiality is explained as “educational goods being distributed equally with respect to differences which should be irrelevant, such as gender, race, wealth or location” (UNESCO 2018, 25). This provides a way of checking that minimum standards are being met across different types of population groups and ensuring that a system based on merit or talent is not the sole variable for educational success. The other measurement, equality of condition, is defined as the “distribution of educational variables across persons, regardless of their different circumstances” (UNESCO 2018, 30). This measurement is less concerned with certain population groups and more about the whole group. Education inputs should be distributed equally across the population so that each individual receives the same resources.

Finally, another important distinction is between the two terms, equity and quality in terms of education. Overall, I am analyzing the equity of education in the MENA region. I defined above how I measure equity of education, but I am also using UNESCO’s definition for equitable education which is: “additional resources for the most disadvantaged children to ensure that every child can enjoy the same educational opportunities” (UNESCO, 2018). The other term, quality of education, is one of the features of an equitable education, and therefore is



critical to define separately to ensure there is a clear distinction between the two. Quality of education, defined also by UNESCO is: “appropriate skills development, gender parity, provision of relevant school infrastructure, equipment, educational materials and resources, scholarships or teaching force” (UNESCO, 2018). Thus, equity combines both quality of education, along with making sure each student is getting various amounts of help depending on their various learning abilities. Both terms will be used throughout the paper, with quality being an important determinant of an equitable education.

### **Literature Review**

The literature motivating this project shows the relationship between terrorist activity’s connection to education and looks into various motivating factors of these individuals in the Middle East countries.

The works of Alan Krueger and Jitka Maleckova and Kartika Bhatia and Hafez Ghanem both look at the relationship, if any, exists between education and terrorism. Both pieces are frequently cited by other scholars of this topic. Bhatia and Ghanem’s article looks at the impact education has on radicalization of young men and the educational backgrounds of terrorists. They explain that higher education tends to decrease the probability of an individual supporting violent extremism, however they do see a connection to relative deprivation. They define relative deprivation as “the absence of opportunities relative to expectations” (Bhatia and Ghanem 2017, 2). The authors argue that “lack of adequate employment opportunities for educated individuals is fueling support for violent extremism among general population” (Bhatia and Ghanem 2017, 3). Many of these individuals are highly educated, however, the lack of employment in these countries prevents them from using their knowledge in the way they expected. The primary limitation of this work is that the authors do not examine how equitable the education system is.

Instead, they only look at the extent and number of years individuals have attended a schooling system before joining or leading a terrorist organization. I push this a step further by also analyzing the equitability of the education because this fact could have an impact on how individuals deal with the lack of opportunity after attending school or university.

Krueger and Maleckova's piece is extremely beneficial in terms of understanding some trends between education and terrorism. Their main conclusion is that there is little direct connection between education and participation in terrorism. They do highlight a few trends between the two factors. The authors note that between their study and Russel and Miller (1983) they find that many terrorists are highly educated and are likely to come from the middle or upper classes. They explain this trend by relating terrorism to a violent form of political participation, which is more likely to come from people with more privileged backgrounds (Krueger and Maleckova 2002, 142). Another important trend Krueger and Maleckova note is the funds coming from wealthy industrialists is going towards madrasahs, instead of secular education. Stern (2000) says "Most madrasahs offer only religious instruction, ignoring math, science, and other secular subjects important for functioning in modern society," highlighting why secular education has become more important recently. Krueger and Maleckova also say that the international community "should not limit itself to increasing years of schooling but also must consider the content of education" (Krueger and Maleckova 2002, 142). Thus highlighting that simply increasing education without increasing quality of education will not help any situation. Both of these articles have helped to establish that there is little connection to the amount of school an individual has attended and participation in violent extremism, but they do not analyze the quality and equity of education. I build upon this to evaluate the connection between the specific quality of education and terrorist activity.

Djavad Salehi-Isfahani, Nadia Belhaj Hassine, and Ragui Assaad provide preliminary analysis of the equality of the education system in the MENA region. The authors used student test scores and compare them to students' socioeconomic statuses to understand the inequality of opportunity and how it affected inequality of education. They find, as in many other countries, that education in MENA countries is incredibly important for social mobility of citizens. As a result, recently these countries' governments have greatly increased the quantity or amount of education an individual goes through. Equitability, however, has not followed. There is a high disparity between students whose parents can afford private schooling and tutoring and those that cannot. Students that receive these better resources are at a much better advantage of students in poorer families or communities. While the government is investing more in education and focusing on increasing the quantity of education, they cannot do much in controlling the role of parental resources. Salehi-Isfahani et al. recommends that governments should be creating policies and allocating their investments in education equitably towards community areas that typically have less opportunities to create a better education system. This motivates the direction of my project to focus specifically on the quality of education and not just the amount of education individuals receive. This inequality of opportunity and thus education has also been drawn to unequal parental resources and community characteristics. Just as in Bhatia and Ghanem's piece, Djavad Salehi-Isfahani et. al. point to a significant trend towards lack of opportunity leading to lack of educational achievement. While this article helps establish that there is a lack of educational equality, it does not connect this back to participation in terrorism and extremist activities. I build my argument around this lack of equal resources, while also connecting it to terrorism.

Finally, Marlies Sas, Koen Ponnet, Genserik Reniers, and Wim Hardyns' source "The Role of Education in the Prevention of Radicalization and Violent Extremism in Developing Countries" looks into how education plays a role in extremist views. Sas et al. discusses the impact education can have on preventing violent extremism. They begin by stating that there is not a clear relationship between educational level and radicalism, which supports the conclusion from the sources already discussed. The difference is that Sas et al. do state there is a connection between access to and quality of education. By looking at these variables, the authors discovered that "unequal access to education often becomes a source of tension, which leads to radicalization, conflict, violence and rebellions" (Sas et al. 2020, 5). This explanation motivates my suspicion of a relationship between equity of education and terrorism.

Another important factor the literature discussed as it pertains to education and terrorist activity is the quality and curriculum of the education. Some education systems in the MENA region do the opposite of their purpose, leaving students susceptible to radicalization into terrorist groups. In Sas. et al.'s article they analyzed the education system in Pakistan's schools. They found that these schools "caused raised expectations of young individuals while the lack of skills hindered meeting these hopes in practice" (Sas et al. 2020, 5). When they try to find jobs, students notice they lack the skills required for the modern workplace. Often, this leads to frustration which can make students vulnerable to extremism. This is where the idea of relative deprivation ties in closely with an equitable education. They also state that educational systems in the Middle East are based on "rote memorization and the obligation to obey the authorities without asking any questions" and this often leaves "young students vulnerable to extremist narratives" (Sas et al., 2020). Sas et al. gives two specific examples of curriculum that produced a highly radicalized youth population. The first example was US textbooks that focused on anti-

communist ideas and the Soviet Union, specifically in Afghanistan. These textbooks were loaded with Islamist extremist narratives and meant to educate students with anti-Soviet propaganda so they would be influenced and encouraged to fight against these invaders. The other example is the curriculum and teaching methods in Rwanda. These methods “smothered critical thinking skills, which impacted individuals’ responses to the genocide” (Sas et al., 2020). While not directly in the MENA region, this example is still relevant as it shows the tremendous impact education can have on young minds. On the opposite side, students receiving even some quality education are more likely to view violence negatively and become less impressionable by terrorist groups. This study found that “the direct effect of education on radicalization depends on the content of the curricula and the values which are inculcated in the educational institutions” showing that an equitable education is incredibly important (Sas et al., 2020). This deeper look into curriculum exemplifies what schooling is like in the MENA region, and how there is a lack of quality education that should be explored. Sas et al. really conveys the message that the solution is not just any education for students or an increase of quantity of education, but rather the equity and quality of the education.

The main gap in the literature, and what I explore, is the relationship between equity of education and terrorist activity. These sources look at the relationship between education and participation in terrorism/terrorist activity and the lack of a quality education system, but never specifically at the equitability of education. Getting any education is important and definitely helps children to grow up to be more successful, however, an equitable education has the power to do this on a magnified scale.

## **Methodology**

My research explores whether greater equity of education is associated with lower levels of radicalization and terrorist activity in the MENA region. Overall, I analyze educational equity and terrorist activity on the region or country level. In general, my project starts with a broader understanding of the region to a more specific, intimate look into a country in the MENA region. I start with broad aggregate trends, measuring educational equity and terrorist activity quantitatively to see if there is a relationship between the two. Then, I dive deeper into a case study of Afghanistan in order to understand the deeper dynamics qualitatively. In this section of my project, I explain my choice of case study, discuss my hypothesis, along with describing my variables.

#### *Justification for Case Study: Afghanistan*

Afghanistan is used as my case study for a few compelling reasons. When looking at UN Development Reports, Afghanistan sits at 45.4% inequality of education (inequality in distribution of years of schooling based on household surveys), which is one of the highest in the MENA region (UN Development Reports, 2020). To put this number in perspective, the United States has a 5.5% inequality of education, even without having what many would call a particularly equitable education system (UN Development Reports, 2020). In comparison to other MENA countries, Iran has the lowest score at just 5%, and the average inequality of education in countries with data in the MENA region is 21% (UN Development Reports, 2020). The only country in this region with a slightly higher score than Afghanistan is Yemen, which has a 46.1% inequality of education (UN Development Reports, 2020). While I will be looking more into equity of education, as mentioned above, inequality of education corresponds to an inequitable education as well. In relation to my other variable, terrorist activity, Afghanistan has an extremely high rate of terrorist attacks. Being able to compare a country with an extremely

low equitable education system, and high terrorist activity, will be able to clearly show if there is a relationship between the two. Also, Al-Qaeda has a large presence in Afghanistan. It will be incredibly crucial for me to dive into one of the largest, and most well-known terrorist groups. Studying the background of this organization in the greater context of Afghanistan allows for a better understanding of the deeper dynamics. I am using a case study to further understand one country's unique dynamics as my quantitative analysis will be broader.

During my qualitative analysis, I supply background on the education system and terrorism in Afghanistan, then analyze terrorist activity compared to educational equity variables. For the educational equity variables, percent of government expenditure on education, secondary school life expectancy, percent of qualified teachers in secondary schools, and literacy rates, I used the World Bank Education Statistics database. The World Bank Education Statistics provides comprehensive data and analysis for key topics relating to education. For the terrorist activity data, I used the Global Terrorism Database. For the final section on attitudes and sentiments towards terrorism and education systems in Afghanistan, I used The Asia Foundation survey in Afghanistan from 2018. The Asia Foundation is the longest running barometer of Afghan opinion and has been doing surveys since 2004 on issues including security, elections, governance, the economy, essential services, corruption, youth issues, the Taliban, access to media, and political participation.

I do recognize that Afghanistan is a riskier decision in some respects because of the continued presence of the United States, and Afghanistan having a large population of one of the largest terrorist organizations. I keep these concerns in mind throughout the rest of this paper by ensuring the US' and al Qaeda's influence is addressed and how they have impacted both the education system and terrorist activity. Both of these powers have had a lot to do with both of

these variables and provides an interesting dynamic and perspective to a case study in Afghanistan. They have not had a detrimental impact on associations I am able to make. Another concern might be that Afghanistan is not part of the Arab world, and because of this may have cultural and geographical differences. However, since they are still a part of the Middle East, and thus a part of the MENA region, and 99% of their population is Muslim, it is still comparable to the rest of the countries in the MENA region for the purposes of my project.

### *Hypothesis*

From current research and my analysis of sources related to the relationship between education and terrorism, I offer the following hypothesis:

H1: Higher equity of education that countries have will lower terrorism activity in the MENA region.

While it is shown that there is no clear connection between years, or levels of education, and terrorist activity, increasing the quality and equity of education could have an impact on critical thinking and other necessary life skills that individuals may not be receiving otherwise. I use data in order to potentially uncover this relationship.

### *Variables*

In order to test the above hypothesis, I have defined the primary independent variable as educational equity, which will be represented through impartiality and equality of condition. Impartiality will be specifically measured by the Programme for International Student Success (PISA) test. The PISA test is the Organisation for Economic and Co-operation and Development's assessment for 15-year-olds taken worldwide to test their knowledge of reading, math and science. I have chosen this assessment as my main data source for impartiality because it is a test taken by many countries around the world, so it provides comparative test scores that



make sense relatively with other countries, not solely in the Middle East. It was also the only data source that had the most data for Middle Eastern countries.

Finding educational data from the Middle East was a huge obstacle. In an ideal situation, I would have wanted a data source with test scores from every country in the Middle East, and a more detailed breakdown of the individual countries' scores, like location and wealth quintile. Unfortunately, this data does not yet exist or is not publicly available.

My other independent variable is equality of condition. This is measured through the percent of government expenditure on education. The World Bank provides this data, making it easier to find than my impartiality variable. Assessing how much individual countries spend on education in relation to total expenditure suggests how important education is in the country. It also shows whether or not countries are willing to invest in education in this area. Both of these measurements will provide an overarching idea of educational equity by analyzing country by country to get a broad sense of trends in the MENA region.

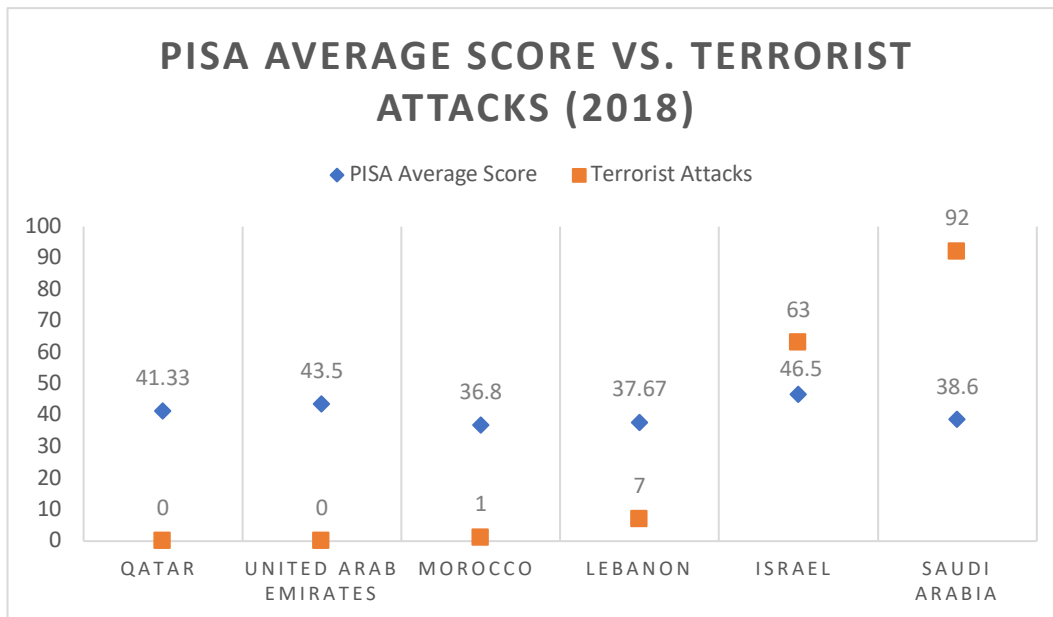
The main dependent variable is terrorist activity. This will be measured in two ways: domestic attacks and analyzing the support and attitude towards terrorism. Domestic attacks will be measured in order to see the frequency of terrorist activity in each country. I am using the Global Terrorism Database (GTD) for my data on terrorist activity. This data source provides systemic data on more than 113,000 domestic and international terrorist events from 1970 to 2018. This source is from the National Consortium for the Study of Terrorism and Responses to Terrorism (START) based at the University of Maryland and is part of the collection of Centers of Excellence supported by the US Department of Homeland Security's Science and Technology Directorate. It is headed by terrorism experts, including Dr. Gary LaFree and William Braniff, and is funded by a number of federal agencies, private foundations and universities. The other

aspect of terrorist activity is the general sentiment citizens have towards these acts of violence. This is measured through support and attitude towards terrorism through a survey from the 2018-2019 Arab Barometer, the largest repository of publicly available data on citizens' views to investigate the attitudes of citizens towards terrorism through a public opinion survey across the Arab world. This survey covers Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Palestine, Saudi Arabia, Sudan, Tunisia and Yemen. Arab Barometer is directed by a Steering Committee with members from four institutions in the Middle East and North Africa as well as researchers Dr. Amaney Jamal from Princeton University and Dr. Mark Tessler from the University of Michigan. While sentiment and attitude are not determinants as to whether an individual will become a terrorist, it is important to see these opinions from citizens in a region with high levels of terrorism.

My quantitative analysis covers the broad aggregate trends over education equity and terrorist attacks in the Middle East. I understand each country has its own specific trends, but because the MENA region is such a hot spot for terrorist activity as a whole, I have chosen to analyze the whole region to see some general trends. Then, my qualitative analysis will dive deeper into one country to assess some deeper dynamics.

### **Quantitative Analysis**

### *Test Scores vs. Terrorist Activity*

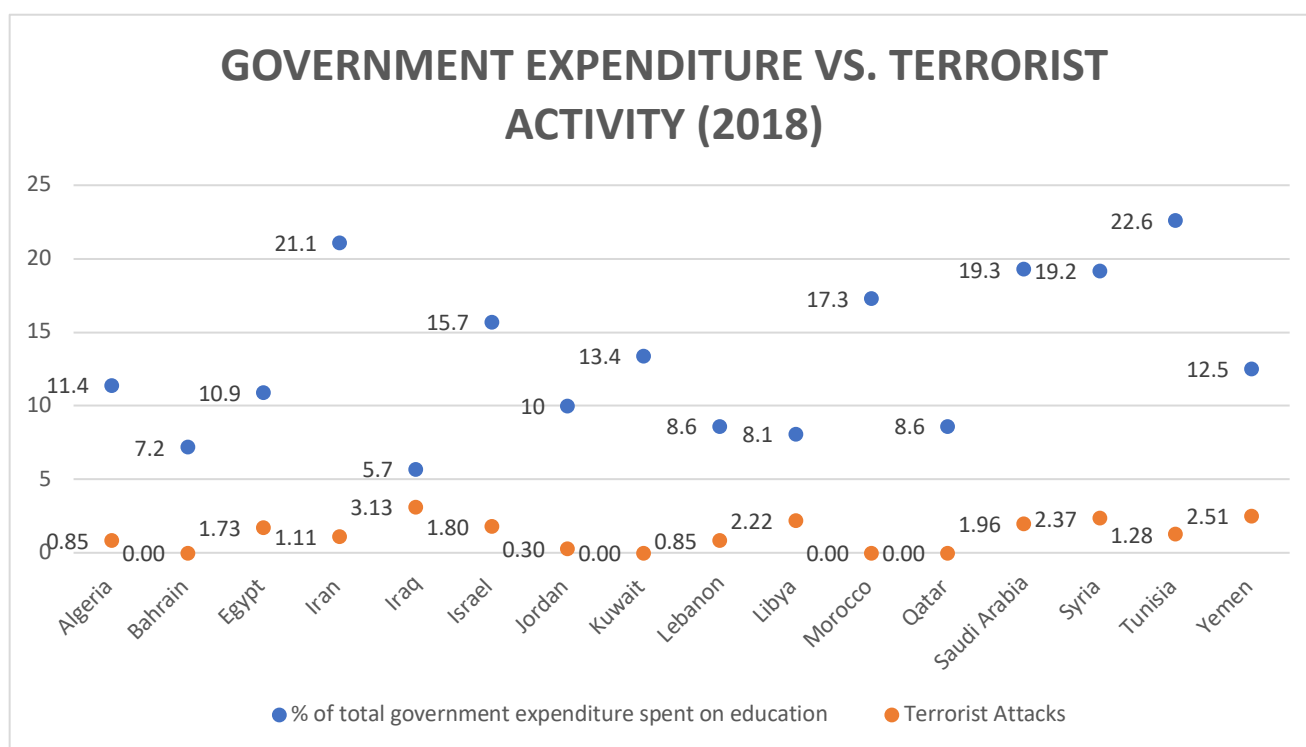


The graph above compares the average PISA (Programme for International Student Success) scores on educational impartiality to the number of terrorist attacks in 2018, the most recent year with the most data, in six countries in the Middle East from the GTD. PISA scores are represented with the blue diamond and terrorist attacks are represented with the orange square. PISA scores can reach to the upper 500s so, for the purpose of this graph, I have divided the scores by 10 to normalize the variable. For example, the average PISA score for Israel is 465 and the number of terrorist attacks is 63, and United Arab of Emirates PISA score is 435, and had 0 terrorist attacks in 2018. Unfortunately, due to data limitations, there was only data on these 6 countries, Israel, Lebanon, Morocco, Qatar, Saudi Arabia and United Arab Emirates. Ideally, I would have wanted data from all countries for the past 20 years, but there was no available data for PISA scores from prior years. This limits the conclusions I can draw from this analysis, but it nonetheless provides a proxy for the quality of an educational system.

When looking at the data and the above graph, most countries are around the same PISA score from 368 in Morocco up to 465 in Israel. Most of these countries have very little terrorist

attacks, besides Israel with 63 and Saudi Arabia with 92. Generally, countries with higher PISA rates tend to have lower, or no, terrorist attacks in their country, besides Israel. However, the correlation coefficient is 0.18775336, showing a very weak positive correlation. This is because this dataset is noisy, as I do not have enough data. Based on my limited data, I can see there is some association between a higher PISA score and lower terrorist activity. However, I cannot fully draw this conclusion without further data availability. This graph uses PISA scores to represent impartiality (variable of educational equity) and compares them with terrorist attacks to demonstrate the relationship between terrorist activity and educational equity in the Middle East.

### *Money Spent on Education vs. Terrorist Activity*

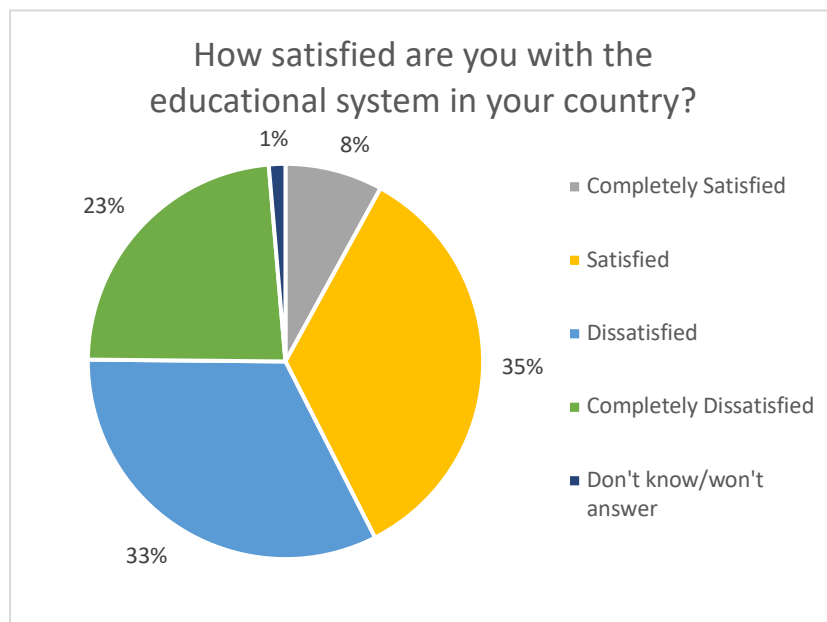


In this graph, I compare the percent of government expenditure spent on education from the World Bank with the total number of terrorist attacks in various countries in the Middle East in 2018 from the GTD. Iraq's number of terrorist attacks was substantially higher, partly due its

status as a constant active conflict zone. Therefore, I have taken the log of terrorist attacks of these countries to normalize the data and make the graph more readable. For context, Iraq had 1,362 terrorist attacks, and 5.7% of government expenditure was spent on education, while Lebanon had only 7 terrorist attacks, and 8.6% of government expenditure was spent on education in 2018.

Associated with my hypothesis, Iraq has the highest number of terrorist attacks, and simultaneously the lowest government expenditure on education. The percent of government expenditure spent on education in these countries fluctuates between Iraq's at 5.7%, and Tunisia at 22.6%. The average percent of government expenditure spent on education in these above countries is 13.23%, much higher than most of the countries. Terrorist attacks fluctuate from none to 1,362 attacks in 2018, with an average of 146.5 terrorist attacks. Just as in the previous graph, I calculated the correlation coefficient, which comes out to -0.337566. This shows a negative correlation, meaning, based off this data, countries, like Iraq, with low government expenditure have a higher number of terrorist attacks in their country. I understand this is not diving into one country and that not all of the countries in the Middle East are the same, however, this allows me to find and observe some patterns for the region as a whole.

### *Education System*

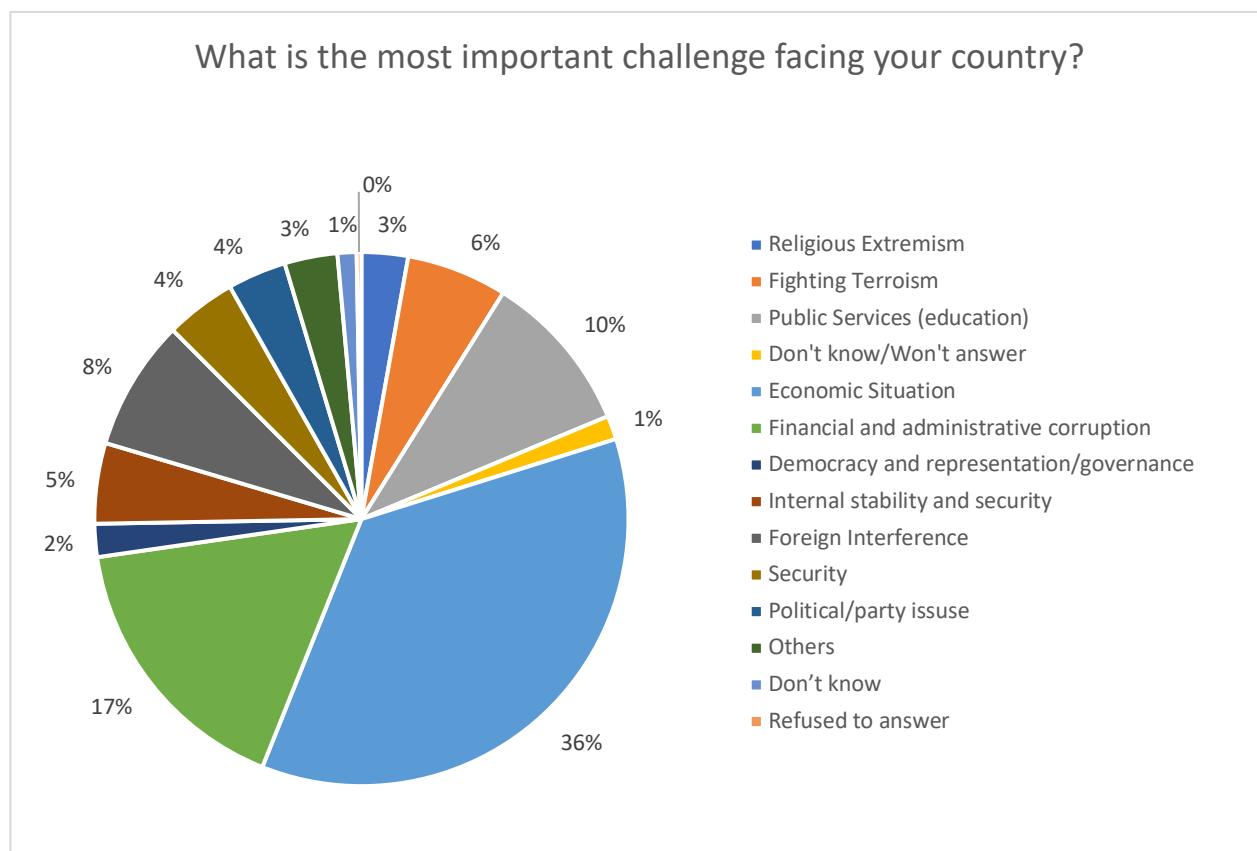


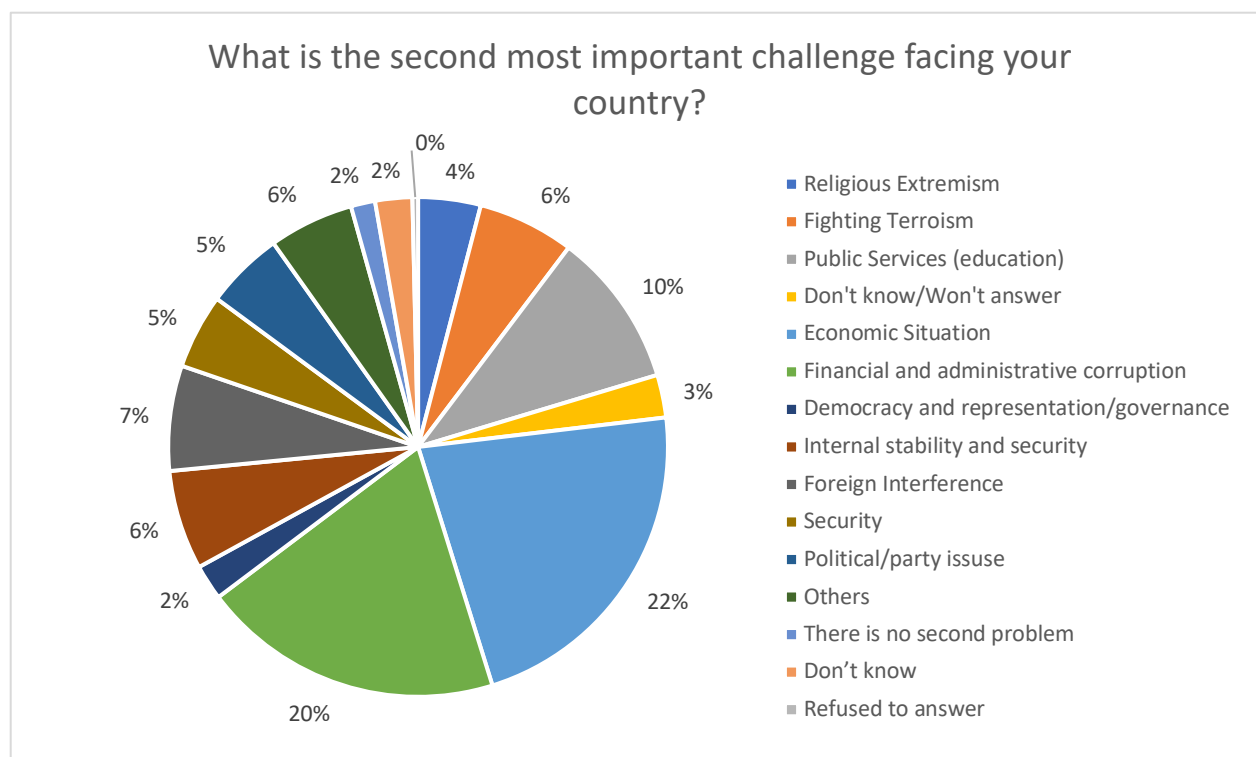
The next section of the quantitative analysis explores attitudes and citizens' views on both the education system and terrorism in their countries. Analyzing how citizens feel towards these two subjects highlights their perspective on what their countries are doing well, and what they could improve upon. The above graph uses data from the 2018-2019 Arab Barometer Survey. This graph depicts how citizens in various countries in the Middle East feel about the education system in their respective countries.

Eight percent of survey respondents feel completely satisfied, 35% feel satisfied, 33% are dissatisfied, 23% are completely dissatisfied and 1% did not know or would not answer. This means that 56%, or more than half, of the surveyed population feel either dissatisfied or completely dissatisfied with the system, and only a select few were completely satisfied. I am including this graph to show the general attitudes towards education in this region. As citizens are the ones going through the education system, their satisfaction with this system is important.

The satisfaction citizens feel towards this system shows how they feel about the quality and equitability.

### *Sentiment Towards Terrorism*





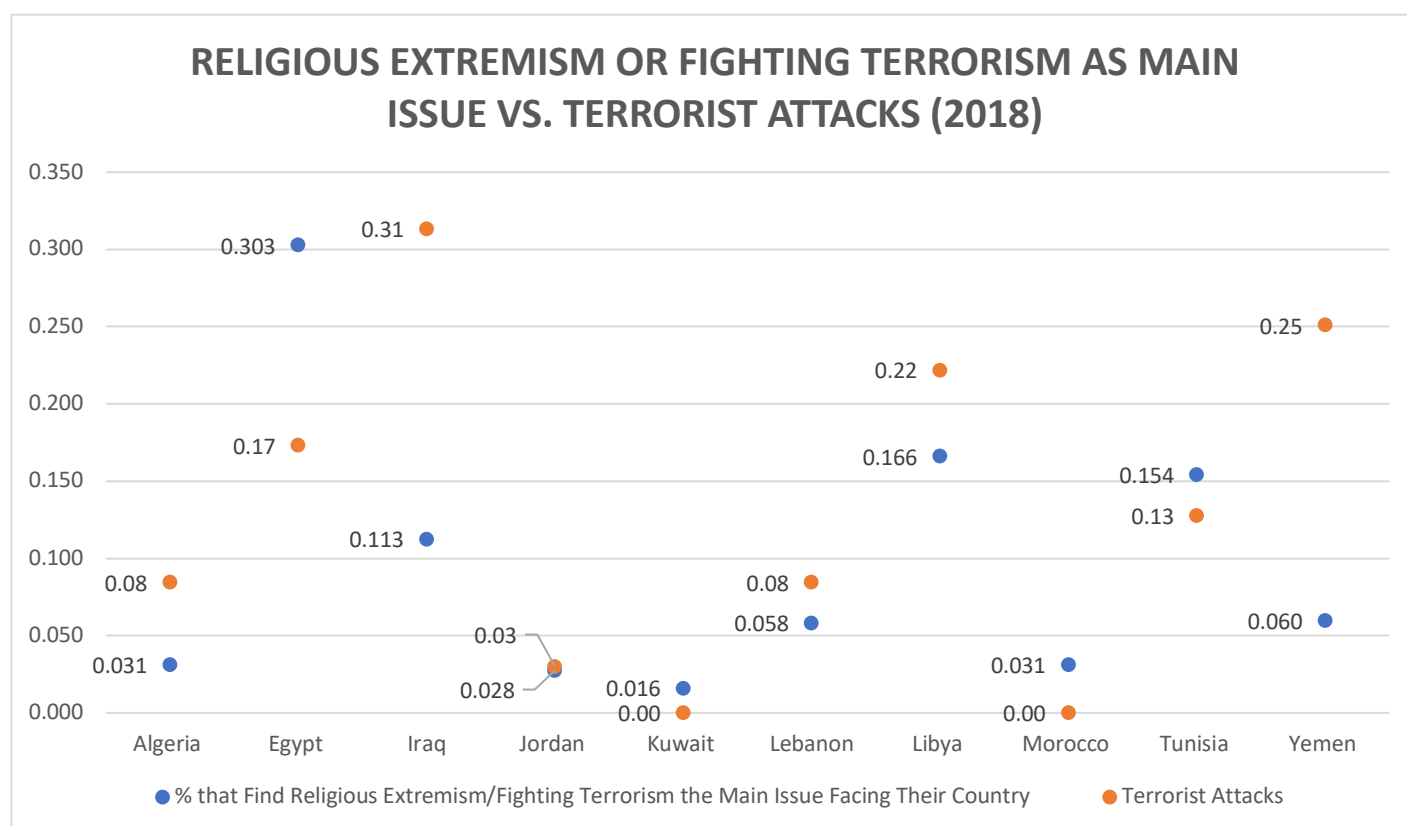
These next two graphs asked the same respondents from Middle Eastern countries what they find is the most important challenge facing their country and then followed up with what they thought was the second most important challenge. This data is from the 2018-2019 Arab Barometer survey. Both graphs are relatively similar, meaning respondents found the same issues either the most important or at least the second most important. The top three challenges in the legend are the most relevant for my project—fighting terrorism, religious extremism and public services (including education).

The biggest sections of this pie chart deal with economic and financial situations, with 36% saying the economic situation was the most important challenge, and 17% saying financial and administrative corruption being the most important. While not paramount to my hypothesis, this ties in with the idea of relative deprivation, and the lack of jobs for educated citizens. I still felt it was important to mention as many citizens found this as the biggest concern and relative deprivation and an equitable education are closely tied as shown in much of the literature.



Generally speaking, the economic situation in the Middle East is unstable leaving many with jobs they are overqualified for. When looking at those top three challenges, many respondents did not see religious extremism or fighting terrorism as the biggest issue. This was an unforeseen observation given the relatively high volume of terror attacks in the MENA region compared to other areas in the world. Also interestingly enough, 10% of respondents found public services as the main challenge, which includes education. Based on this graph, and the graph before (satisfaction towards the educational system) quite a few citizens are unhappy and concerned with how the education system is being run. Both of these graphs show the attitude respondents have towards extremism and the education system, among other issues. This in no way means that the other part of the population that does not see terrorism or religious extremism as a challenge will become terrorists, but it shows a general trend and the attitudes citizens in this region feel towards these issues. This is important in understanding why terrorism happens much more frequently in this area than any others.

*Sentiment Towards Terrorism by Country*



In addition to providing the broad attitudes towards terrorism in the Middle East, I also wanted to break it down by each country included in the available data. For the data in this graph, I have used the 2018-2019 Arab Barometer survey, as well as the data from the Global Terrorism Database in 2018. This graph shows the percent of citizens in each country that find either religious extremism or fighting terrorism as the main challenge facing their country, compared to terrorist attacks in that country in 2018. For the purpose of my project and hypothesis, I have combined both religious extremism and terrorist activity. The blue dots show the percent that find religious extremism or fighting terrorism as the main issue facing their country, and terrorist attacks are shown with the orange dots. This graph shows Algeria, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Tunisia and Yemen. I had to normalize this data in two ways. First, due to Iraq having a much higher rate of terrorist attacks, I took the log of terrorist attacks of all countries. For example, Iraq had 1,362 terrorist attacks, and Algeria had 7

attacks in 2018. Then, because the percentage each countries' citizens who felt that religious extremism or fighting terrorism as the main challenge was so low, I divided the terrorist activity amount by 10 to also normalize this. As context, this means 11.26% of citizens in Iraq felt that religious extremism or fighting terrorism was the main challenge facing their country.

This graph shows that generally, places with higher terrorist activity, feel more strongly about fighting terrorism in their country. The exception is Iraq, which has the highest terrorist activity, and not nearly as high of a number of citizens feeling as if terrorism is the main issue. This relationship could be due to the fact that Iraq is an active conflict zone, and citizens are numb to extremism in their country, so they see other issues as their main concern. I took the correlation coefficient from this data and it came out as 0.098105013, which means there is a slight positive correlation, which is evidenced by the graph above. This shows an association between a higher percentage of citizens thinking religious extremism or fighting terrorism as their main challenge relates to higher terrorist activity. However, because I only have 10 countries this may be a bit noisy.

### *Summary*

After reviewing these graphs and the available data, there a few relationships that have been shown. Due to limited data, there are no solid conclusions I am able to make, however these associations I hope will inspire future research into this issue. The first being that education is not seen as equitable, nor do the data sources show it being equitable. More than half of the population are dissatisfied or extremely dissatisfied with the education system, meaning the governments in the Middle East are not meeting the needs of the citizens in regard to the education system. While the percent of government expenditure spent on education is going up, it needs to continue to rise, but the quality of the education needs to rise, as well. The other

observation is few respondents felt that terrorism or religious extremism were important challenges facing their country, even though two-thirds of terrorism deaths are connected back to the Middle East and northern Africa (Washington Post, 2016). This does provide the general attitudes of citizens in a highly active terrorist region and shows they do not feel it to be the most important challenge facing their country despite the fact that they are in an actively dense terrorist area. However, this only represents citizens' attitudes towards terrorism. It does not suggest that citizens' who do not find terrorism an important challenge are all also terrorists.

Another aspect I would have been interested to research is the nationality of the perpetrator of attacks to get a better idea of where the perpetrators tend to be from. Unfortunately, the Global Terrorism Database only collects this data as an auxiliary variable, but do not make it available for distribution. This is another limitation to my data; however, I do not believe it made a huge impact on my findings.

Finally, the last relationship is that there seems to be some association between an equitable education and terrorism. The countries that invested more into education tended to have lower terrorist attacks. While the countries that invested less of their total expenditure on education tended to have more terrorist attacks. This shows that it there might be some merit in raising equality of condition (key factor in an equitable education) in order to lower terrorist attacks. Also, while I encountered quite a few limitations when looking at test scores due to the lack of availability of this information from this region, the data that I was able to gather, seems to show a relationship between higher PISA scores and lower terrorist attacks and vis versa. This suggests that perhaps there could be an impact of raising impartiality (the other factor of an equitable education) on lowering of terrorist attacks.

### **Afghanistan: Case Study**

Throughout this section of my paper, I provide a case study on Afghanistan. I begin by providing a brief look at both the history of education and terrorism, then present data on education and terrorist activity, and finally conclude with how these all associate an equitable education with terrorist activity in Afghanistan.

#### *Background of Education*

In order to begin this case study, it is important to briefly discuss the background of education in Afghanistan. Their education system consists of primary (grades 1-6), secondary (grades 7-12), vocational, religious and higher education. Primary and secondary school curriculum includes religious studies, local languages, mathematics, natural sciences, foreign languages and physical education. At the end of primary school students choose whether to pursue a religious or general track, with most choosing general. Between lower and upper secondary school, students may choose to go to vocational school as to focus on a specialized field or continue on to get their 12<sup>th</sup> grade graduation certificate. Then they can decide to continue onto higher education, if they choose.

Despite a seemingly organized educational structure, the education system has suffered due to Afghanistan being a constant conflict zone. Most children born since 1980 have not had any formal schooling and this was only made worse when the Taliban seized power in 1994 (Economist, 2002). Afghanistan struggles with lack of teachers and facilities, quality textbooks, violence from the Taliban, and insufficient transportation, among others. In 2001, USAID, UNICEF, the World Bank and international donors all pledged billions of dollars in aid for the education system. However, Afghanistan will still need to raise money as well, and the fragile economic and financial situation prevents Afghanistan from reaching these goals. Since 2011,

the education system has suffered with the gradual withdrawal of the United States. 50% of the Afghan budget came from international donors, allowing the central government access to external support. However, with this withdrawal, public services (education and health and security) are struggling as the central government does not have access to this external support (Dobbins et al., 2019). USAID has continued training teachers, distributing textbooks and establishing schools. In addition, in 2019, UNICEF launched a multiyear education response program. Hopefully, these international donors will continue to develop an equitable education system, however, the lack of resources, both physically and financially, inhibit Afghanistan from consistently working towards an equitable education system.

### *Afghanistan's History with Extremism*

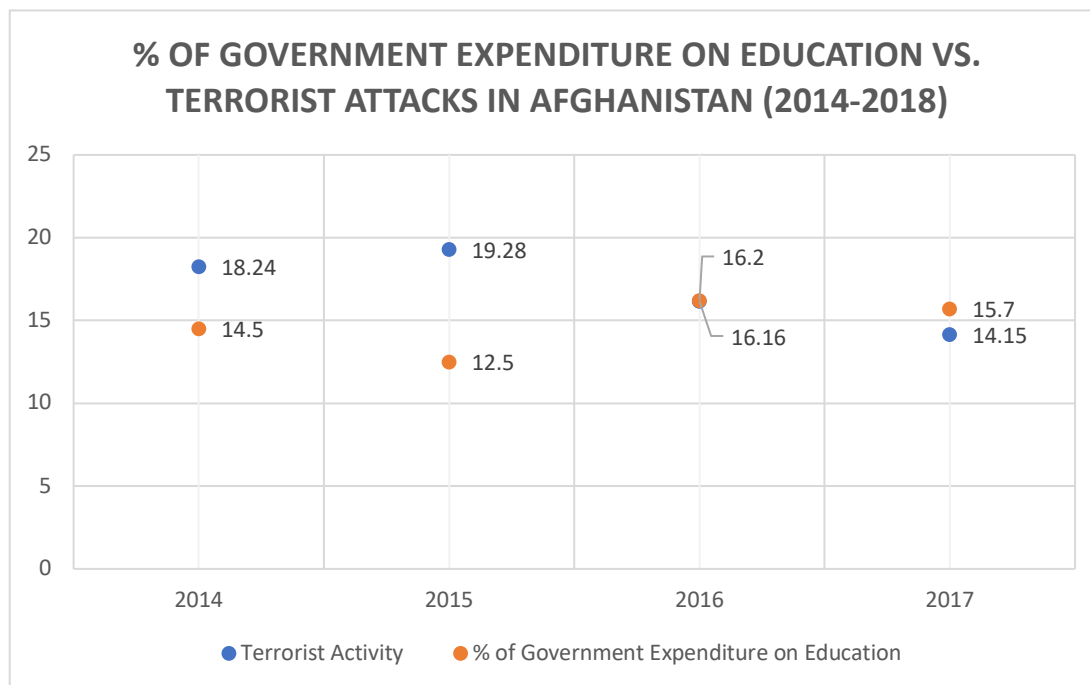
In order to connect Afghanistan's education system with terrorism, it is important to do a brief history of terrorism in this country as well. According to the Global Terrorism Database, 8% of all terrorist attacks from 1970-2019 were in Afghanistan. This is quite a large number when thinking about terrorist attacks globally—one of the reasons I have chosen this country as my case study. For comparison to a MENA country, Lebanon was responsible for 1.24% of all terrorist attacks from 1970-2019.

Going back to recent history, the Soviet-Afghan War from 1979-1989 was an important turning point for extremism and violence in Afghanistan. When the Soviets invaded Afghanistan, Afghan mujahideen, holy warriors, assembled to fight off the invaders. Osama bin Laden, one of the thousands from outside Afghanistan who came to fight in this war, created the terrorist organizational, al Qaeda, to organize the mujahideen. This terrorist organization was founded on replacing the corrupt, “Western” regime, with a true Islamic government. The Taliban, who took control of the government in 1994, has been known to support and provide safety for this

organization. Even after bin Laden was killed, the terrorist organization survived. This is the main group in Afghanistan but as many as twenty other organizations are also present. The next piece of the case study examines specific terrorist activity data to parallel my quantitative analysis section of MENA countries and provide factual-based evidence of educational and terrorist activity variables.

### *Quantitative Analysis of Afghanistan*

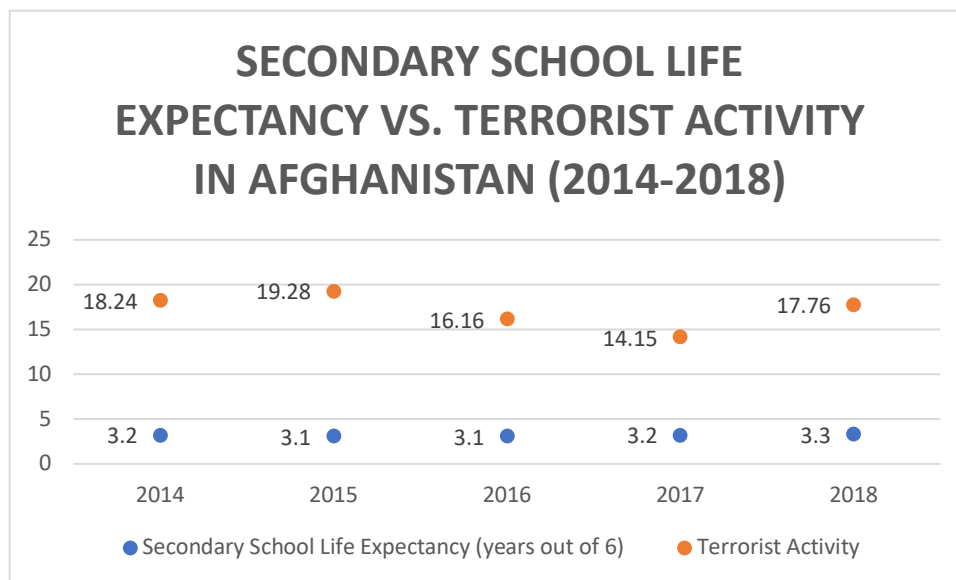
Just as I have done with the rest of the MENA region, I am analyzing specific education and terrorist activity variables in relation to Afghanistan. These variables include: school life expectancy (primary and secondary education), percentage of qualified teachers (primary and secondary education), literacy rates (youth and adult), government expenditure on education and number of terrorist attacks. While these variables are not exactly parallel to my quantitative analysis on MENA countries as the data was not available, they will provide insight into educational equity and terrorism in Afghanistan from 2014 to 2018.



First, I examine the relationship between the percent of total government expenditure spent on education and terrorist attacks in Afghanistan from 2014 to 2017. I found the percent of total government expenditure spent on education from the World Bank Education Statistics, and terrorist activity from the Global Terrorism Database. Terrorist activity is shown with the blue dots and percent of government expenditure spent on education is shown with the orange dots. To normalize the terrorist attacks variable so it was not substantially higher than the percent of total government expenditure spent on education, I divided it by 100. For example, in 2014, there was 1,824 terrorist attacks in Afghanistan and 14.5% of total government expenditure was spent on education. This graph only shows the years 2014 to 2017, as they were the only years where the data for the percent of total government expenditure spent on education was available for Afghanistan, so the data is noisy when it comes to correlation.

The percent of total government expenditure spent on education from 2014 and 2015 was lower compared to terrorist activity. In 2016 and 2017, the two variables, percent of total government expenditure spent on education and terrorist activity, are closer to being on the same plane. Terrorist activity goes from around 1,800 to 1,900 attacks in 2014 to 2015, to approximately 1,600 and 1,500 attacks in 2016 and 2017, respectively. With this decrease in terrorist activity, there is also a steady increase in the percent of total government expenditure spent on education. It starts at 14.5% in 2014, drops down to 12.5% in 2015 then increases to 16.2%, where it then slightly drops off again to 15.7% in 2017. The correlation between these two variables is -0.83, suggesting a negative correlation relationship. This negative relationship shows that a lower percent of total government expenditure on education correlates with a higher number of terrorist attacks, and vice versa.

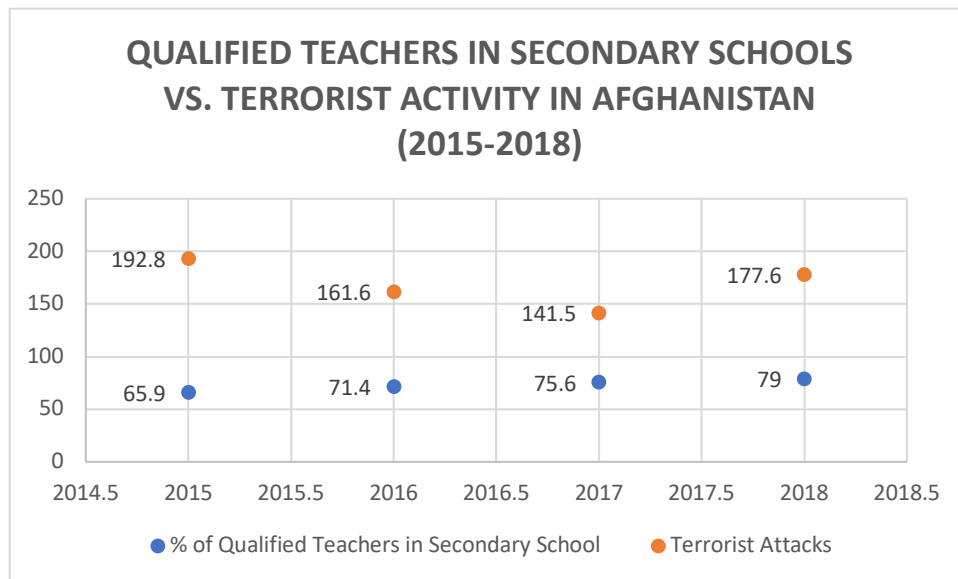




In this next graph, I compare secondary school life expectancy to terrorist activity in Afghanistan from 2014 to 2018. Secondary school in this country is 6 years, grades 7 through 12. The data on secondary school life expectancy comes from the World Bank Education Statistics, and the data on terrorist attacks is from the Global Terrorism Database. Secondary school life expectancy is shown with the blue dot, and the orange dot represents terrorist activity. To normalize the terrorist activity variable so the graph was easily readable, I divided it by 100. For example, in 2014, there was 1,824 terrorist attacks and the secondary school life expectancy was 3.2 years. I chose the years 2014 to 2018 because I wanted the data to be representative of modern Afghanistan's situation and it was the only years where data for both variables was available. This dataset may be noisy due to the limited information.

The secondary school life expectancy did not fluctuate much in these five years. It only went from 3.2 years in 2014 to 3.1 years in 2015 to 2016, back up to 3.2 years in 2017 and reached its peak of 3.3 years in 2018. Terrorist activity was declining from 2014 to 2017, from 1,824 attacks to 1,415 attacks, however in 2018, it spiked up again to 1,776 attacks. They are not starting to decline either. There were 1,804 terrorist attacks in Afghanistan in 2019, not shown on

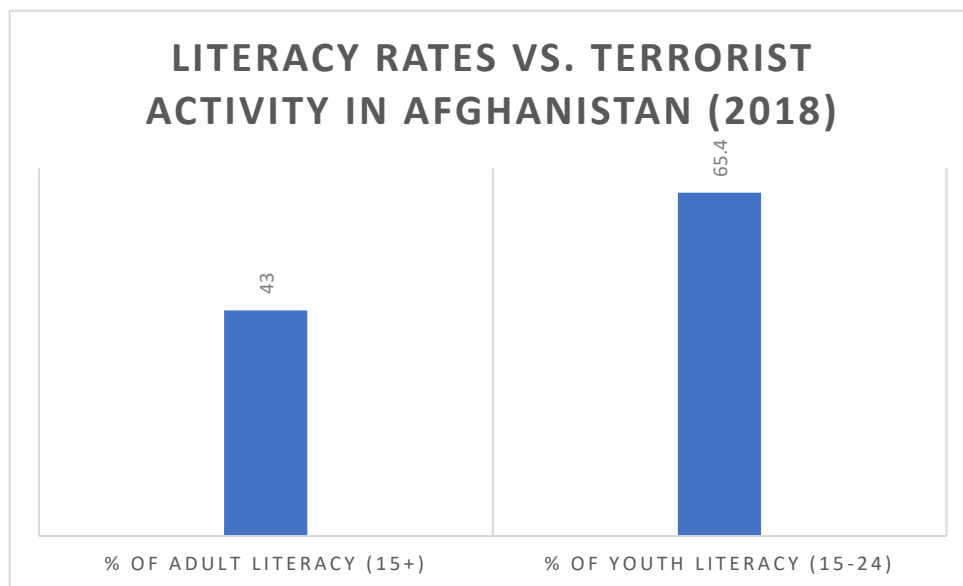
this graph. The relationship of the two variables next to each other stays relatively constant throughout the years, however there are small changes in the distance of the two variables when the number of terrorist attacks are higher. The correlation of these two variables is  $-0.08$ , suggesting a very slight negative correlation. This shows that a shorter secondary school life expectancy relates to a higher amount of terrorist attacks, and vice versa.



This graph shows the relationship between the percent of qualified teachers in secondary schools and terrorist attacks in Afghanistan from 2015 to 2018. The percent of qualified teachers in secondary schools' variable is from the World Bank Education Statistics, and the terrorist attacks variable is from the Global Terrorism Database. The blue dot represents the percent of qualified teachers in secondary school, and terrorist attacks are shown with the orange dot. Just like the other previously presented graphs, the number for terrorist attacks was substantially higher than the percent of qualified teachers in secondary schools. To normalize the data and make the graph more appealing, I divided the number of terrorist attacks by 10. For example, in 2015, there were 1,928 terrorist attacks and 65.9% qualified teachers in secondary schools. 2015

through 2018 were the only available years with data on qualified teachers, so the graph only shows those in order to compare accurately.

The percent of qualified teachers in secondary schools steadily increases from 2015 to 2019. It starts out at 65.9%, and eventually grows to 79% by 2018. Terrorist attacks started falling from 1,926 attacks in 2015 to 1,415 attacks in 2017, but then spiked back up to 1,776 attacks in 2018. The gap between terrorist attacks and the percent of qualified teachers in secondary schools gets tighter as terrorist attacks fall and percent of qualified teachers in secondary schools rises. In 2018, the gap starts to widen again with the increase in terrorist attacks, even though the percent of qualified teachers in secondary schools was rising. The correlation of these two variables is -0.48, suggesting a negative correlation. This shows that a higher percentage of qualified teachers in secondary school relates to a lower amount of terrorist attacks, and vice versa.



This final graph shows both youth (ages 15 through 24) and adults (ages 15+) literacy rates in Afghanistan in 2018. The youth and adult literacy rates are both from the World Bank Education Statistics. The only available literacy rate data from Afghanistan was from 2018, thus

why I am only showing one year on this graph. These numbers are quite low for literacy rates compared to other countries in the world, but also in comparison to the MENA region. For context, the countries from the MENA region with the available data from 2018, the lowest literacy rate for the youth population is 97.4% in Algeria, and for the adult population is 73.8% in Morocco. The highest youth literacy rate is 99.8% in Lebanon and the highest adult literacy rate is 98.2% in Jordan. Afghanistan's youth and adult literacy rates fall much below even the lowest literacy rates in other MENA countries.

There is a pretty large difference in literacy rates between the youth and adult population. In 2018, 43% of adults (ages 15+) were literate, while 65.4% of the youth population (ages 15 through 24) were literate. This is more than a 20% difference. This may be attributed to the growing attention surrounding education and the more enrollment of children into schools as the years have gone by. Enrollment in school was not as available to the older generation, so this is why they have a lower literacy rate. Due to the extremely limited data, I cannot compare it to terrorist activity to show any association between the two. However, it is important to show the literacy rates because they have a strong relationship to education in a country.

#### *Attitude and Sentiment Surrounding Education and Terrorism*

The attitude and sentiment that Afghan citizens feel is important to compare to the above numbers and graphs. The Asia Foundation has created a survey of Afghanistan citizens' opinions in 2018. Attitudes towards certain areas provides a better view of the gaps and successes in this country.

Right Direction	4,520
Reconstruction/rebuilding	31%
Good security	25%
Peace / end of the war	16%
Improvement in education system	8%
Reduction in level of administrative corruption	8%
Economic revival	8%
Schools for girls have opened	8%
Road reconstruction	6%
Good government	6%
Democracy/elections	5%
Having active ana and anp	4%
Removing taliban	4%
More electricity supply than before	4%
International assistance	3%
Women can now work	3%
Having legal constitution	3%
More job opportunities available	3%
Development of agriculture	2%
Prevention/elimination of crimes	2%
Presidential elections	2%
National unity	2%
Improved justice	2%
Disarmament	2%
Clinics have been built	2%
Don't know	1%
Reduction in poppy cultivation	1%
Freedom / free speech	1%
Clean drinking water	1%
Establishing high peace jirga/shura	1%
Having a legitimate president	1%
Having parliament	1%
Women have more freedom	1%
Good communication system	1%
Decrease in crimes	1%
Removing terrorism	1%
Refugees return	1%
Prevention/elimination of suicide attacks	1%
More attention to human rights	1%
Free movement / travel possible	1%
Development in health-care system in general	1%
Foreign forces leaving afghanistan	1%

Wrong Direction	8,518
Insecurity	49%
Unemployment	24%
Corruption	14%
Bad economy	12%
Suicide attacks	9%
Bad government	7%
Innocent people being killed	6%
Ethnic problems	5%
Poor leadership	5%
Presence of taliban	5%
Administrative corruption	5%
No reconstruction has happened	4%
Injustice in the country	4%
High prices	3%
Poor education system	3%
Lack of aid / no development assistance	2%
Too many foreigners are getting involved	2%
Increase in crimes	2%
Lack of implementation of the law	2%
Neighboring countries cause problems	2%
Water & power supply problems	2%
Presence of ISIS	2%
Increase in drug trade	1%
Lack of unity	1%
Presence of warlords	1%
Kidnapping of children	1%
People disillusioned with the government	1%
There is no progress	1%
Pakistan's rocket attacks on afghanistan	1%
Migration	1%
Foreign aid causes problems	1%
Don't know	1%

The two most relevant questions from this survey for the purposes of this paper deal with what citizens feel are the biggest challenges facing Afghanistan in 2018. The first question was, “overall, based on your own experience, do you think things in Afghanistan today are going in the right direction, or do you think they are going in the wrong direction?” 32% of respondents

felt that Afghanistan was going in the right direction, and the breakdown of that is to the left above, and 61% of respondents felt Afghanistan was going in the wrong direction, which is shown to the right above. From this initial question, respondents from their respective directions were then asked, “what are the two reasons you think that Afghanistan is going in the right/wrong direction?” For people that believed the country was going in the right direction, most believed it was due to reconstruction/rebuilding, good security, or peace/end of the war. However, just below these top three, 8% of respondents believed it was due to improvement in the education system, and 1% thought it was due to removing terrorism. This shows that improving the education system can have drastic effects on a country’s well-being, according to citizens. It also shows that even though only 1% of respondents felt that removing terrorism was beneficial, it is important to citizens for their security. Insecurity, unemployment and corruption were the top three reasons for respondents who felt that Afghanistan was moving in the wrong direction. However, reasons that are tied to terrorism and education in Afghanistan like, innocent people being killed (6% of respondents), presence of Taliban (5% of respondents), poor education system (3% of respondents) and presence of ISIS (2% of respondents), were also mentioned. This again shows how important an education system is to a country’s growth and how detrimental citizens feel terrorism, or terrorist related reasons are, as well.

All Respondents	13,943
Unemployment	31%
Security issues /attacks / violence	23%
Drinking water	22%
Electricity	20%
Roads	15%
Education/schools/literacy	9%
Health care / clinics / hospitals	8%
Poor economy	7%
Poverty	6%
High prices	5%
Crime	4%
Corruption	4%
Reconstruction/rebuilding	3%
Taliban	3%
Pollution	2%
Drugs smuggling	2%
Ethnic problems	2%
Water for agricultural irrigation	2%
Presence of warlords	2%
Injustice	1%
Lack of agricultural tools/equipment	1%
Government / weak government / central authority	1%
Addiction to drugs	1%
No problems at all	1%
Transportation problems	1%
Innocent people being killed	1%
Lack of (proper) shelter	1%
Theft	1%
Don't know	1%

The other question that relates to this paper focuses more specifically on respondents' problems in their local areas within Afghanistan. Respondents were asked "In your view, what are the biggest problems in your local area?" The breakdown of responses for this question are in the table above. Unemployment, security issues/attacks/violence and drinking water were the top three responses. This may demonstrate that while some feel the education system has improved, there might not be the employment necessary to meet these needs, bringing in the idea of relative deprivation. It also emphasizes the continued security issues and violence going on in local areas. This source does not list where the violence is coming from, so it may not all be tied to terrorist organizations, however, it is most likely related.

### *The Connection Between Afghan Education and Terrorism*

Afghanistan is a country torn with violence and instability. The Soviet-Afghan War sparked extremism and violence in this country relating to Afghanistan being responsible for 8% of terrorist attacks globally from 1970 to 2019. Due to this instability and constant conflict, the education system suffers. They lack multiple resources necessary in reaching an equitable education system, like teachers, school-buildings, textbooks, and transportation. These are only exasperated by violence towards modern schooling from the Taliban, as well as terrorist organizations.

The quantitative analysis demonstrates these struggles of their inequitable education system. Impartiality is shown through average literacy rates among the youth and adult populations and secondary school life expectancy, and then compares both of these variables to terrorist attacks in the country. The correlation of school life expectancy and terrorist activity from 2014 to 2018 is negative, meaning a shorter secondary school life expectancy relates to a higher amount of terrorist attacks, and vice versa. Literacy rates were much more difficult to compare to terrorist activity because there was only available data from 2018, but when compared to other MENA countries, it is by far the lowest by about 30%. These variables show that resources are not being distributed equally throughout Afghanistan, and due to their correlations, could be associated with higher terrorist activity.

Equality of condition is represented through the percent of qualified teachers in secondary school and the percent of government expenditure spent on education, and then compares this to terrorist attacks in Afghanistan. The percent of qualified teachers in secondary school is on a general upward trend which is promising for Afghanistan. However, so are terrorist attacks. This relationship had a negative correlation, meaning higher percentage of qualified teachers in



secondary school associates to a lower amount of terrorist attacks, and vice versa. Both the percent of government expenditure spent on education, and terrorist attacks fluctuate throughout 2014 to 2017 quite a bit, with terrorism eventually declining by 2017, however it has begun to increase in years since. This relationship, just like the others, also has a negative correlation, suggesting a higher percent of total government expenditure spent on education correlates with a lower number of terrorist attacks, and vice versa. Afghanistan will need to continue investing money and using foreign donations to improve the equitability of their education system. Both of these variables demonstrate whether or not students are getting resources distributed equally, regardless of their demographic group.

Unfortunately, there is still many data limitations for education equity in Afghanistan from recent history. The most recent data available for many of these variables was from 2014 to 2018. However, some of the data was not even available for all of those four years so it was inconsistent. This limits the conclusions and causations I can draw from this data analysis in Afghanistan. However, many of the correlations suggest there may be a relationship between education equity and terrorist activity in this country.

It is paramount for Afghanistan's development that it continues working toward educational equity. Afghanistan lacks skilled teachers and has high rates of illiteracy, two key factors in an equitable education. These two shortcomings can breed extremist attitudes (Shirazi, 2008).

### **Conclusion**

Education has been proven to lead people to success. It provides students with a greater understanding of the world, and critical thinking skills, among other topics. Unfortunately, many students in the MENA region do not have access to an equitable education. The MENA region is

one of these places. It is also a place that is disproportionately affected by terrorism and extremism. Based on these two observations, I began researching whether or not they were related to one another. Based on other research, I discovered the education in general, or amount of education, was not correlated with terrorism. Most terrorists actually turned out to be very highly educated. However, there was no information on the relationship between an equitable education and terrorist activity.

In order to look into the relationship between an equitable education and terrorism, I used various variables connected with an equitable education defined by UNESCO. These include impartiality, where I used PISA test scores, and equality of condition, where I used the percent of government expenditure spent on education and compared them to terrorist activity in these countries. Based on these two variables and terrorist activities, there seems to be some relationship between terrorist activity and an equitable education. Following this, I created graphs showing the data on attitudes and sentiment towards the education system and terrorism in the Middle East to see how citizens felt towards these issues. These graphs do not conclude anything about causation between education or terrorism, but rather offer some background on how citizens feel about these two very important issues. Surprisingly, not many found terrorism or the education system to be the main issues facing their country, but more often found economic situations more pressing. Even when comparing terrorist attacks to these sentiments, countries with high terrorist attacks didn't seem to view terrorism as the main issue. They did seem to think education was more of an issue in these places with high attacks.

Following this quantitative data analysis, I analyzed Afghanistan's education system in relation to terrorism for my case study. Due to my quantitative analysis being a broader look at the relationships in this region, I also included this case study to get a better sense of the deeper

dynamics. Due to the struggle between secular and religious instruction, Afghanistan does not have an equitable education system. Education in Afghanistan was also heavily influenced by extremism and violence. Throughout my case study, I compared total government expenditure spent on education, school life expectancy, percentage of qualified teachers and literacy rates with terrorist attacks in Afghanistan. All of these educational equity variables compared with terrorist attacks showed that greater educational equity was associated with less terrorist attacks.

Unfortunately, I did not see as clear of a causation between equitable education and terrorism as I would have liked. There were many data limitations not allowing me to draw conclusive findings. There is a huge lack of data on education in this region which makes analyzing any potential connection difficult. However, I am hopeful that the general trends and relationships that I uncovered could be used by future researchers in gaining a better understanding of equitable education and the potential to help curb radicalization in the Middle East.

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