

Understanding Resilience in a fragile and conflict-affected country: Lebanon

A Spatial Study on Lebanon, 2022

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CHALLENGES

Lebanon, a country marked with the second highest inflation rate in the world in 2021, is currently facing tremendous economic and social challenges. The Lebanese pound (LBP) has lost more than 90 percent of its value which led to more than 85 percent of the Lebanese population living under the poverty line between 2019 and 2021. These conditions have deteriorated since the start of the first revolution in the history of the country in October 2019, when Lebanese people took off the streets protesting for political regime change and basic human rights. Since then, Lebanon started experiencing hyperinflation (1 USD= 1,500 LBP before October 2019, 1 USD= 43,500 As of 16 December 2022). Studies looking at the relationship between inflation and violence (Rabia & Jehan, 2022 and Piazza, 2007) have shown positive correlations in the context of developing countries experiencing economic distress. With the current hyperinflation, a steady increase in crimes and violent events is expected in Lebanon. Additionally, as a source of accountability, peaceful protests might be the main indicator to a democratic society in which people use their voice asking for political change. This spatial study examines whether inflation can predict public outcry. The main aim is to understand whether inflation and other economic crises can be strong predictors for citizens to protest or engage in violent acts to enforce policy change.



Figure 1

RESEARCH QUESTIONS

Are inflation and economic crises strong predictors for public outcry?

THE APPROACH

The study is based on data gathered and stored by ACLED, a disaggregated data collection source on political violence and protest around the world. The spatial analysis was made using ArcMap GIS mapping software. In order to answer the research question, the study examines the density of violent events that occurred in 2022 across Lebanon while comparing it to US Dollar-Lebanese Pound (USD-LBP) exchange rates and the depreciation of the Lebanese Pound in this year. The violent events are instances of conflict, including battles, riots, violence against civilians, peaceful and non-peaceful protests and strategic developments. ACLED describes strategic developments as “contextually important events which may contribute to a state's political disorder and/or may trigger future events”. Figure 2 shows the distribution of violence and demonstrations across municipalities during the year of 2022 (1 January - 25 November), including all events. A choropleth map shows the regions mostly prone to such acts of violence, followed by a hotspot analysis. The hotspot analysis map shows the municipalities with a high value of events and violence that are statistically significant. Additionally, the hotspot analysis identifies colder areas. Hot spots and cold spots are identified with their respective confidence level bin (Gi_Bin). This tool uses the Getis-Ord Gi* statistics to identify statistically significant ‘hot spots’ and ‘cold spots’ (clusters of high or low rates) of events at the municipality level. Additionally, the study looks at the change in the acts of violence and demonstrations by limiting its scope to only three types of violence: battles, riots and protests. The 2022 year is divided over quarters. Finally, looking at the depreciation of the Lebanese pound, this study identifies key insights on understanding how citizens use accountability tools and on shaping a new understanding of resilience in fragile states.

FINDINGS

According to figure 2a, all types of events, including violence acts and demonstrations are concentrated in Beirut, the capital, Tripoli as well as North Baalbek and East Bekaa. The geographic information presented spatially illustrates several key insights. First, North Baalbek and East Bekaa are among the areas with lowest education levels and lowest socio-economic level. There, It seems rational to expect more public outcry. Second, since the start of the revolution (October 2019), Beirut has been the most popular and convenient location for people to gather and protest. Additionally, Tripoli, North West Lebanon, is another city with a high density of events. While Tripoli is one of the poorest cities in the country, poverty and public outcry seem to be highly correlated. Moving to the Hotspot analysis (Figure 2b), three governorates (Beirut, Baalbak, and North) are marked as hot spots with 95 and 99 percent significance levels. The hotspot analysis confirms the insights from the choropleth map (Figure 2a) of the most active regions in Lebanon, in terms of residents actively using their accountability tools to hold their government accountable and seek political change.

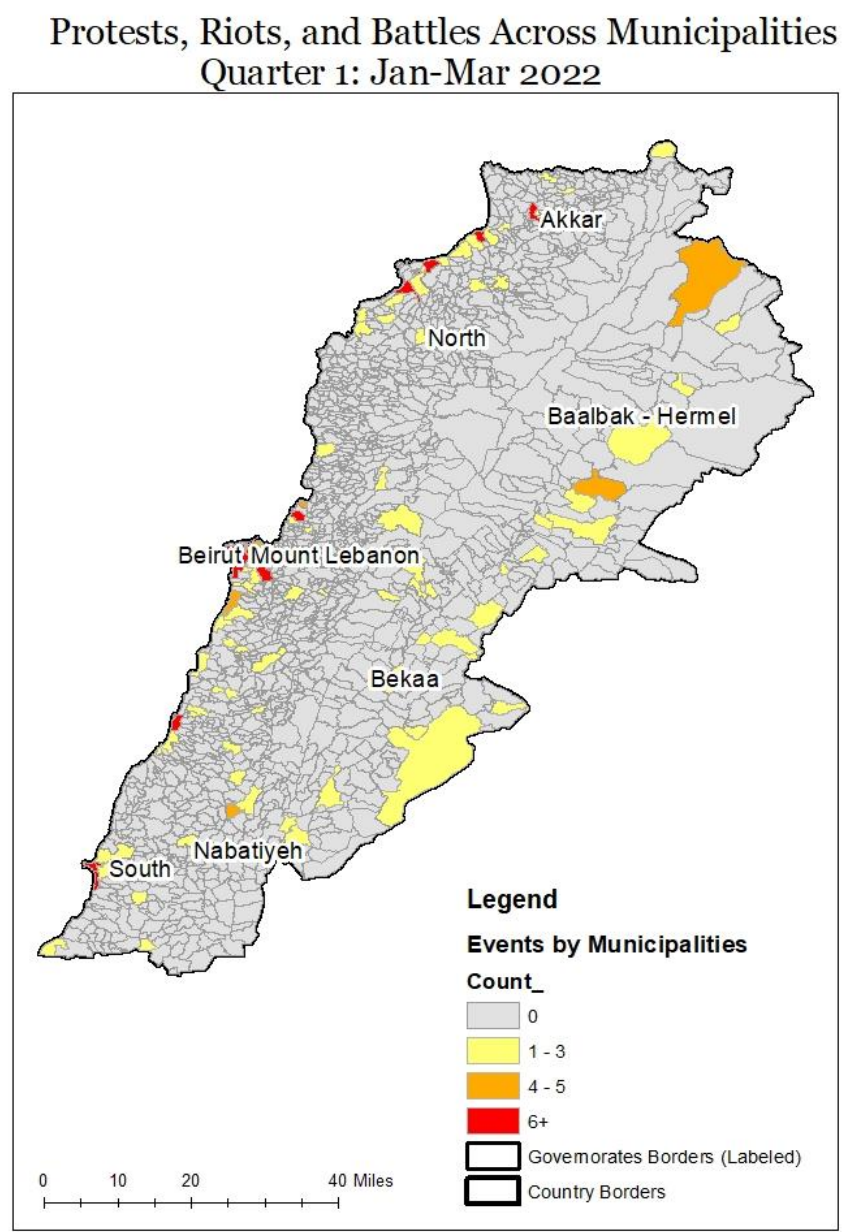
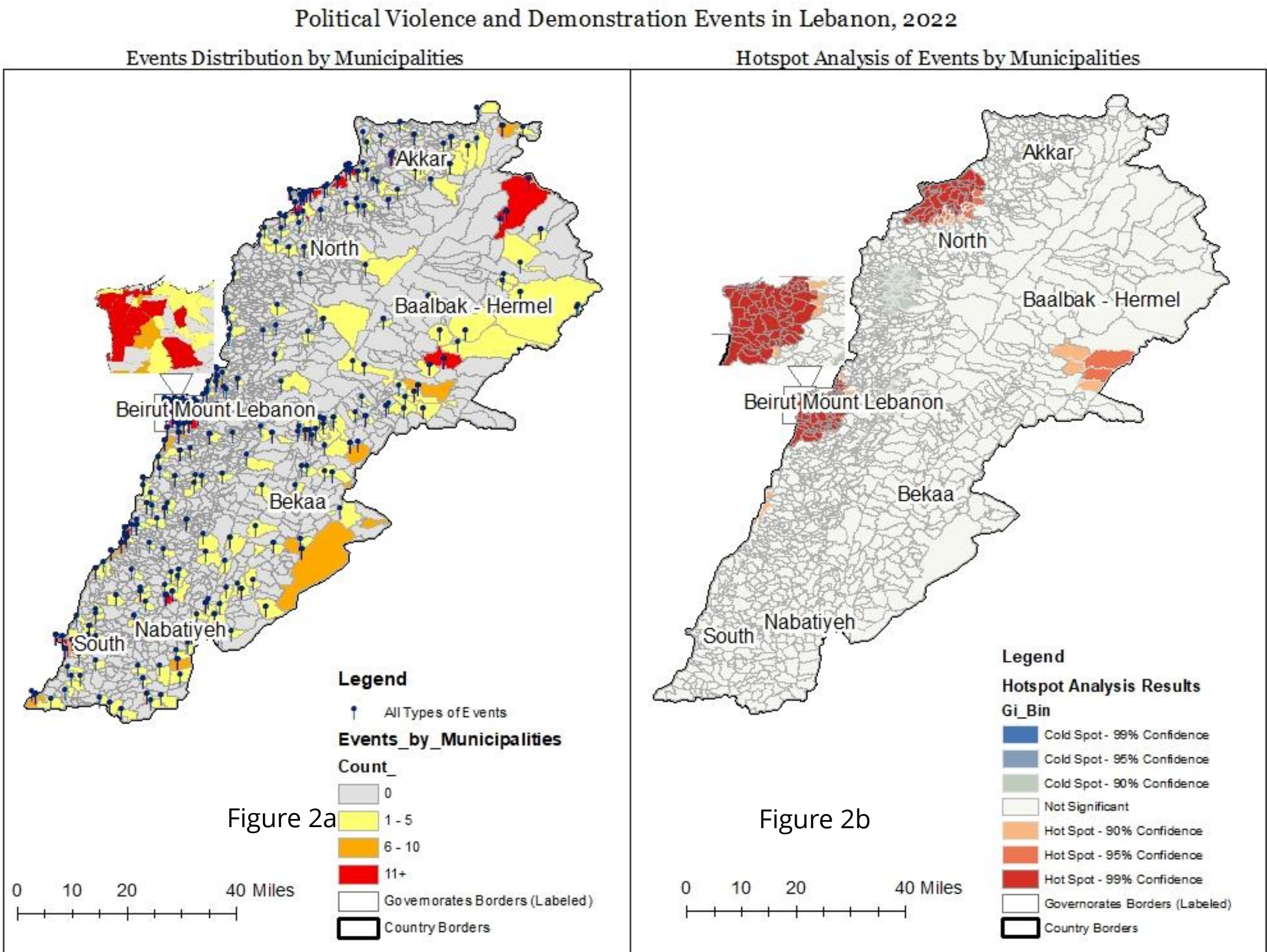


Figure 3a

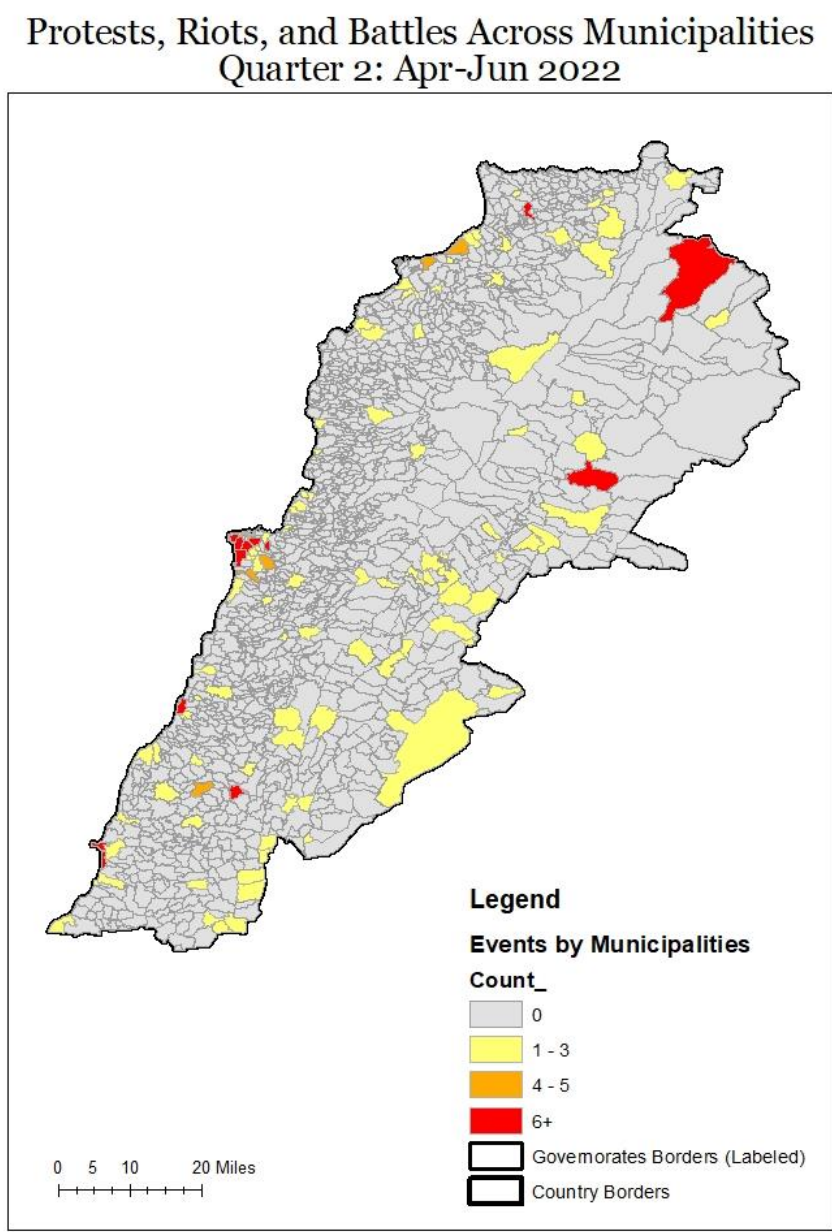


Figure 3b

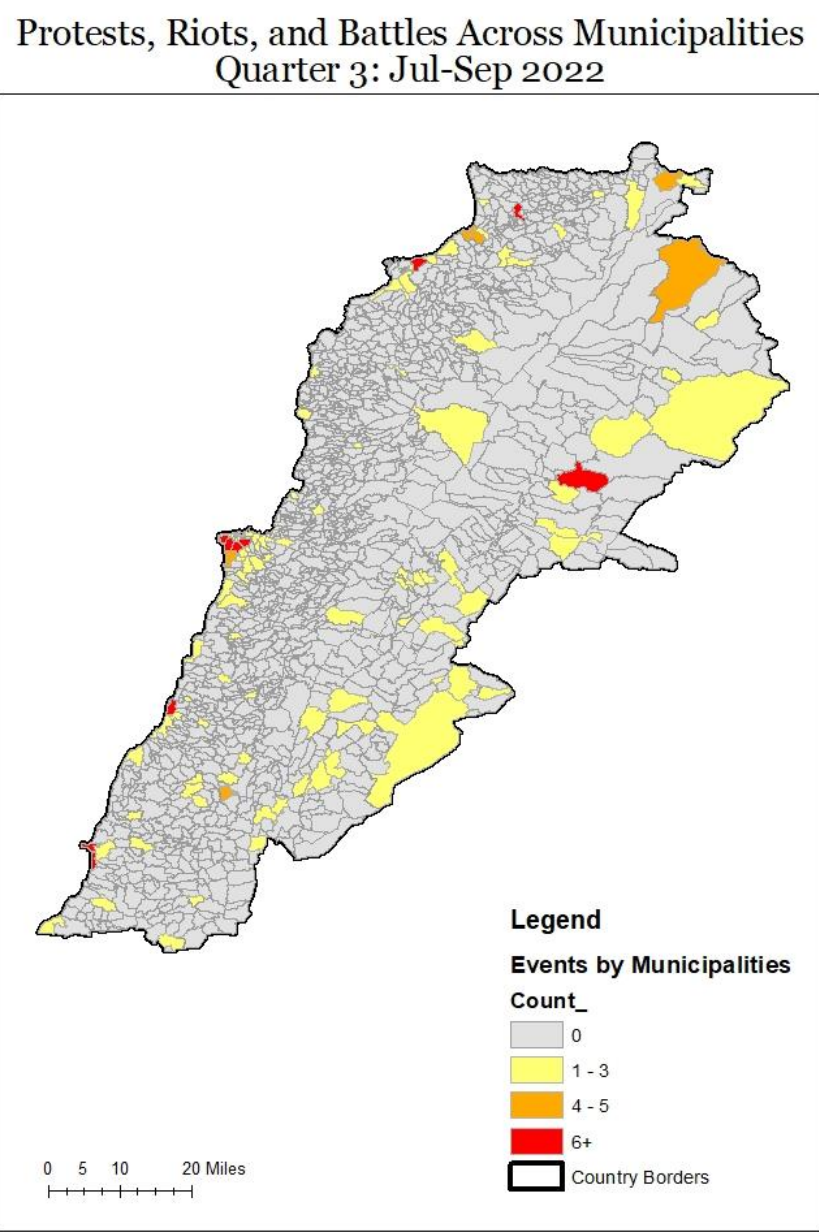


Figure 3c

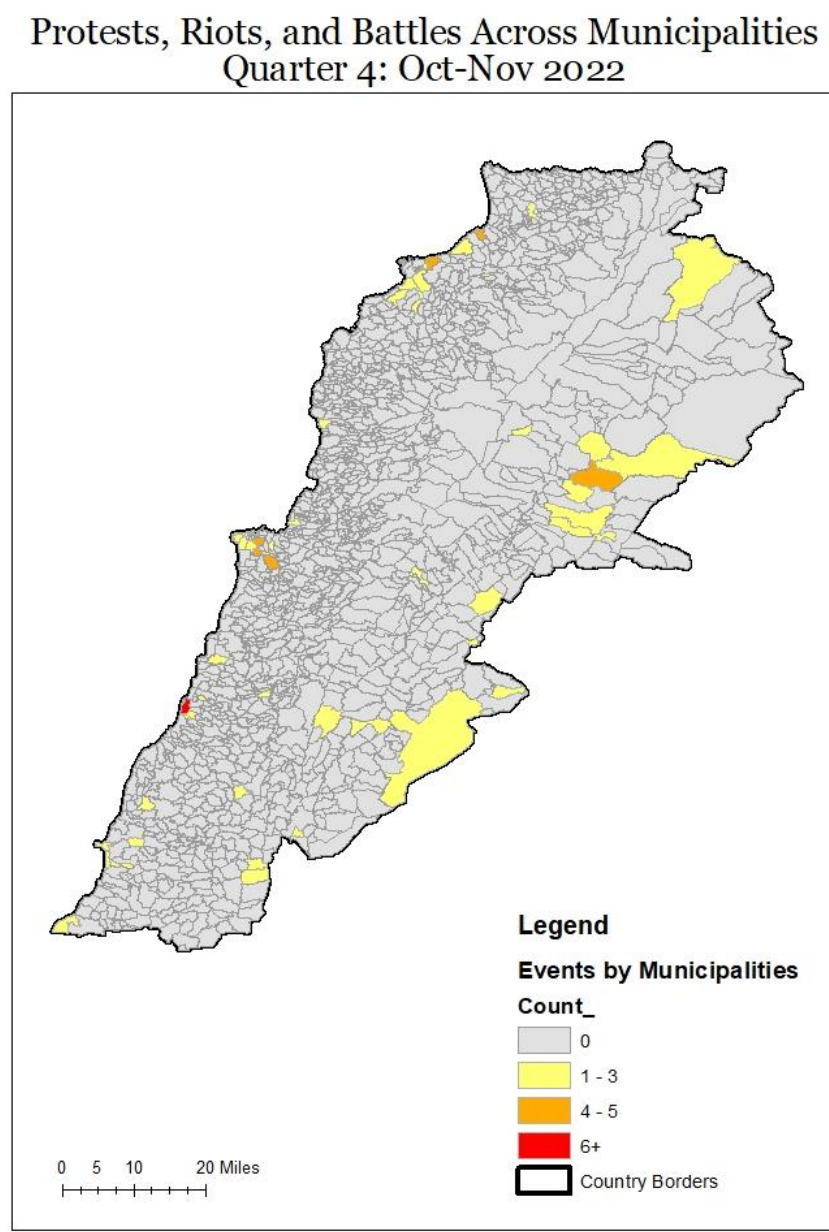
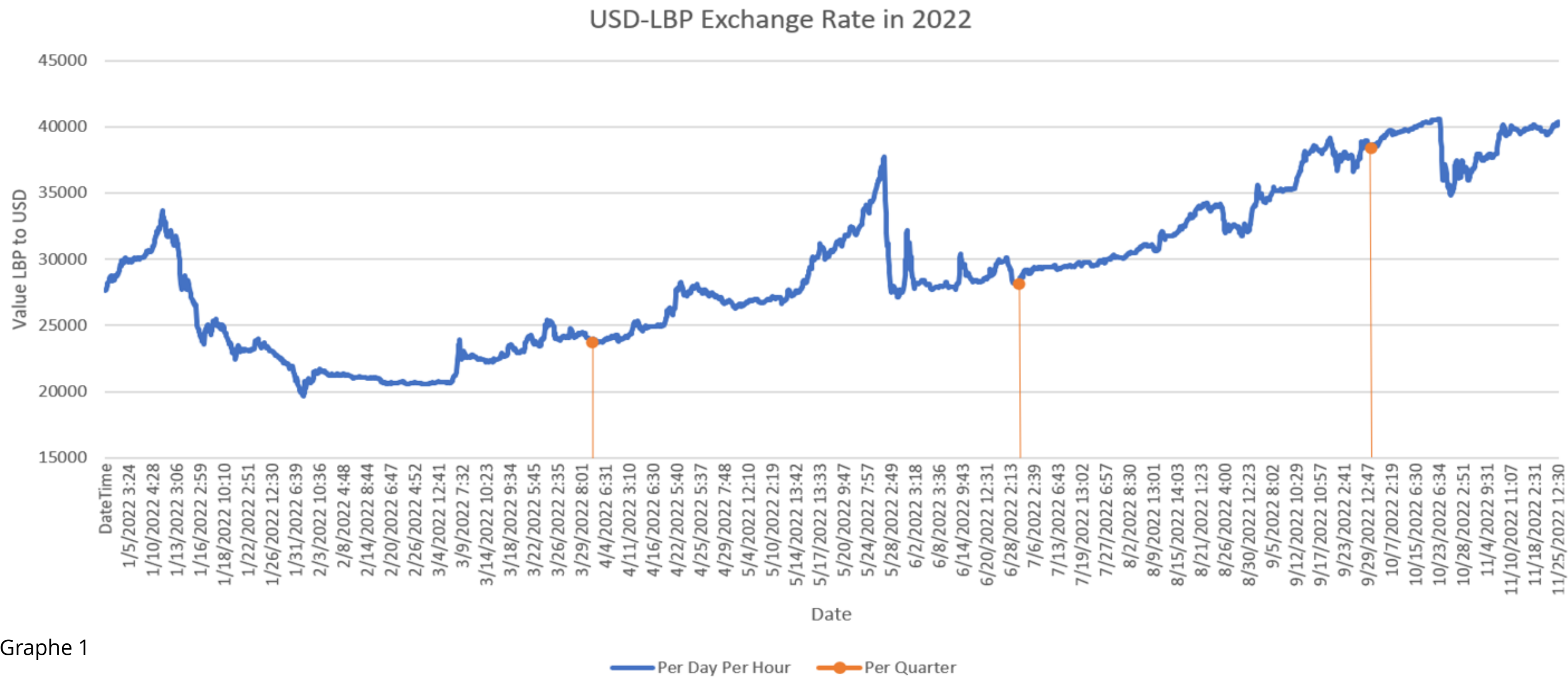


Figure 3d



Graph 1

FINDINGS

Figure 3 shows the density change of three types of events: protests, riots, and battles across quarters in 2022. During quarter 1 (Jan-Mar 2022), the events mainly occurred in Beirut, Baalbek-Hermel, Bekaa and North Governorates. In the second quarter, the number of the same events escalated in the same governorates with some additional events across the country. This increase is most likely due to the parliamentary elections that took place in May 2022. During this period, citizens became more active to stress on the need for political change and on the dissatisfaction with the current leadership. However, quarters 3 and 4 (Figures 3c and 3d), remarkably show a decrease in the number of protests, riots, and battles. Looking at the US Dollar - Lebanese pound exchange rate (Graph 1), there is a clear increase in the Lebanese pound depreciation. The rise of inflation was not reflected by the escalation of protests, riots and battles. This is a key insight which leads to raise crucial questions on understanding people coping mechanisms and resilience in fragile states.

DISCUSSION

The spatial analysis shows that with the increased inflation rate, public outcry did not escalate, opposing previous studies and findings. This information highlights key understanding of a population with a history of economic crises. First, it is crucial to note that public outcry is highly correlated with time. Time might force citizens to cope with major economic crises and build a habitat of acceptance which makes them less willing to protest or engage in acts of violence.

Second, this study helps raise new questions for potential future research: What coping mechanisms is the Lebanese population developing in order to have a decreased reliance on demonstrations? What are some impacts on resilience if a fragile state starts building endurance?

Most importantly, missing socio-demographic data on the Lebanese population, including crimes reported by policy offices, high school dropouts and so on, is a major factor that hinders any future research trying to understand citizens' behaviors in times of crisis.

Therefore, this partial study helped pointing out that inflation might not be a good predictor for public outcry. However, this study non-inclusively provides one aspect of understanding the impact of lacking hope being reflected on citizens' decisions. Yet, various variables are in need to be studied to further find learnings on why and when citizens engage in protests and what variables should be strong predictors. Inflation might predict future violence, but time seems to be a stronger variable.

References and Data Sources

Haroon, Rabia, and Zainab Jehan. 2022. “Measuring the Impact of Violence on Macroeconomic Instability: Evidence from Developing Countries.” *Portuguese Economic Journal* 21 (1): 3–30. https://econpapers.repec.org/article/sprportec/v_3a21_3ay_3a2022_3ai_3a1_3ad_3a10.1007_5fs10258-020-00188-y.htm.
Piazza, James A. 2007. “Draining the Swamp: Democracy Promotion, State Failure, and Terrorism in 19 Middle Eastern Countries.” *Studies in Conflict & Terrorism* 30 (6): 521–39. <https://doi.org/10.1080/10576100701329576>.

Data Sources:

Black Market source for the USD-LBP Exchange Rate Data
The Armed Conflict Location & Event Data Project (ACLED). Available at: <https://acleddata.com/data-export-tool/>
The Database of Global Administrative Areas (GADM). Available at: <https://gadm.org/>