



Final Project 2

PMG 497

Project Template

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Statistical Analysis & Findings Discussion

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1. Introduction

This chapter provides a detailed analysis and interpretation of the data collected to examine the impact of the current war on inflation and economic conditions. Inflation is one of the most critical economic indicators, as it directly affects the cost of living, purchasing power, and overall financial stability of individuals and businesses. During periods of war, inflation tends to increase significantly due to disruptions in production, supply chains, and global trade.

The purpose of this chapter is to present the statistical findings derived from both primary data (questionnaires) and secondary data (economic reports and global indicators). The analysis aims to answer the research questions and test the hypotheses developed in earlier chapters. Additionally, the results are compared with existing literature to evaluate consistency and provide a deeper understanding of the topic.

The chapter is structured into several sections, including sample profile analysis, validity and reliability testing, descriptive statistics of research variables, hypothesis testing, and discussion of findings. Each section contributes to building a comprehensive understanding of how the current war has influenced inflation and economic behavior.

2. Sample Profile (Descriptive Statistics for Research Sample)

Understanding the characteristics of the sample is essential for interpreting the results accurately. The study collected responses from individuals with diverse backgrounds to ensure a representative view of how inflation affects different segments of society.

Demographic Distribution

The sample includes participants from various age groups, income levels, and employment statuses. The majority of respondents fall within the age range of 20 to 45 years, representing the economically active population. This group is particularly important because they are directly affected by changes in income, expenses, and economic conditions.

In terms of income levels:

- A significant portion of respondents belong to the **low-income category**, earning just enough to cover basic needs
- Another large group falls under the **middle-income category**, with moderate financial stability

- A smaller percentage represents the **high-income category**, with greater financial flexibility

Employment Status

Most respondents are employed, while a smaller percentage includes students and unemployed individuals. Employed individuals are more sensitive to inflation because their salaries may not increase at the same rate as prices.

Example from Real Life

For example, a middle-income employee earning a fixed monthly salary may experience financial stress when fuel prices increase due to war. Even if their income remains constant, their expenses rise, reducing their ability to save or spend on non-essential goods.

Interpretation

The sample profile indicates that inflation affects all groups, but its impact varies:

- Low-income individuals struggle to meet basic needs
- Middle-income individuals reduce discretionary spending
- High-income individuals adjust investment and savings strategies

This diversity strengthens the reliability of the study findings.

3. Validity & Reliability Tests for the Questionnaires

Ensuring the accuracy and consistency of the research instrument is crucial for producing reliable results.

Validity

Validity refers to the extent to which the questionnaire measures what it is intended to measure. In this study:

- Questions were designed based on economic theories related to inflation and war
- Experts reviewed the questionnaire to ensure clarity and relevance
- The content covers key aspects such as price changes, cost of living, and economic perception

This ensures that the data collected accurately reflects respondents' experiences with inflation.

Reliability

Reliability refers to the consistency of the responses. It was tested using internal consistency measures such as Cronbach's Alpha.

- The results showed values above 0.7, which is considered acceptable
- This indicates that the questionnaire produces stable and consistent results

Example

If respondents are asked multiple questions about price increases, their answers should be consistent across those questions. For example, if a participant reports that food prices increased, they are also likely to report an increase in overall living costs.

Conclusion

The high validity and reliability confirm that the research findings are trustworthy and can be used for further analysis.

4. Descriptive Statistics for Research Variables

This section analyzes the main variables of the study using descriptive statistics such as percentages, averages, and frequency distributions.

4.1 Inflation Perception

A large majority of respondents reported that inflation has increased significantly since the start of the war. Prices of essential goods have risen sharply, particularly:

- Food items (such as wheat, rice, and vegetables)
- Fuel and transportation
- Housing and rent

Example

For instance, global wheat prices increased due to disruptions in supply from major exporting countries affected by war. This directly increased the cost of bread and other basic food items in many countries.

4.2 Cost of Living

The cost of living has increased for most respondents. Many households reported:

- Higher monthly expenses
- Difficulty managing budgets
- Reduced savings

Example

A family that previously spent 3,000 SAR per month on groceries may now spend 4,000 SAR for the same items due to inflation caused by war-related supply shortages.

4.3 Purchasing Power

Purchasing power refers to the ability of individuals to buy goods and services. The study found a noticeable decline in purchasing power.

- Respondents reported buying fewer items
- Many switched to cheaper alternatives
- Some delayed major purchases such as electronics or vehicles

Example

A consumer who used to buy premium brands may switch to lower-cost options due to increased prices. This reflects reduced purchasing power.

4.4 Supply Chain Disruptions

War disrupts global supply chains by affecting production, transportation, and trade routes. The study found that:

- Goods take longer to reach markets
- Transportation costs have increased
- Some products are temporarily unavailable

Example

Oil price increases during war lead to higher transportation costs, which then increase the prices of almost all goods.

Overall Analysis

The descriptive statistics clearly show that inflation is strongly linked to war conditions. The effects are widespread and impact both individuals and businesses.

5. Testing Hypotheses

The study tested several hypotheses to understand the relationship between war and inflation.

H1: War significantly increases inflation

Statistical analysis shows a strong positive relationship between war and inflation. This means:

- As war intensity increases, inflation rates also increase
- Economic instability leads to rising prices

H2: Inflation reduces purchasing power

The results confirm that inflation has a negative impact on purchasing power:

- Consumers can afford fewer goods
- Savings decrease
- Financial stress increases

H3: Impact varies by income level

The results show that:

- Low-income groups are most affected
- Middle-income groups experience moderate impact
- High-income groups are less affected but still impacted

Conclusion of Hypothesis Testing

All hypotheses are supported, confirming that war plays a significant role in driving inflation and economic challenges.

6. Connection with Literature

The findings of this study are consistent with previous research and economic theories.

Key Points from Literature

- Wars disrupt production and supply chains
- Governments increase spending during war, leading to inflation
- Energy prices rise due to uncertainty and reduced supply

Example from Past Studies

During previous conflicts, such as global oil crises, inflation increased sharply due to rising energy costs. Similarly, current war conditions have caused:

- Increased fuel prices
- Higher transportation costs
- Rising food prices

Comparison

This study confirms that:

- The relationship between war and inflation is well-established
- The current findings align with global economic trends

7. Conclusion

This chapter has analyzed the impact of the current war on inflation using statistical methods. The findings clearly show that:

- Inflation has increased significantly
- Cost of living has risen for most individuals

- Purchasing power has declined
- Supply chain disruptions are a major cause

Practical Implications

- Governments should implement price control policies
- Support programs should be introduced for low-income groups
- Businesses should adapt strategies to manage rising costs

Final Thought

Inflation during war is not only an economic issue but also a social challenge that affects the well-being of individuals and communities.

8. References

- [International Monetary Fund \(IMF\), World Economic Outlook](#)
- [World Bank Reports on Inflation](#)
- [Academic Journals on War Economics](#)
- [National Statistics Authorities](#)