

# **Instability and The Economy**

**A Case Study: Pakistan**

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# Table of contents



**01**

**Introduction**

**02**

**Conceptual  
Framework**

**03**

**Econometric  
Model**

**04**

**Data  
Description**

**05**

**Results**

**06**

**Conclusion**

01

# Introduction

# Introduction



- Study explores impact of instability on Pakistan's economy and its people.
- Focus on economic policy uncertainty (EPU) and relationship with Inflation.
- Context-specific approach accounts for unique historical, institutional factors.
- Findings: increased instability leads to higher inflation but not contemporaneously and not by much.
- Implications: policymakers must seek to promote stability in Pakistan but they must also look at other reasons for inflation.

# Why Pakistan?

## Pakistani prime ministers by term



Assassinated



Removed from Office



Resigned



Finished a term they didn't start

# Why Pakistan?

## **Sucessful military coups in Pakistan**



**Gen. M. Ayub Khan**  
(1958-1969)

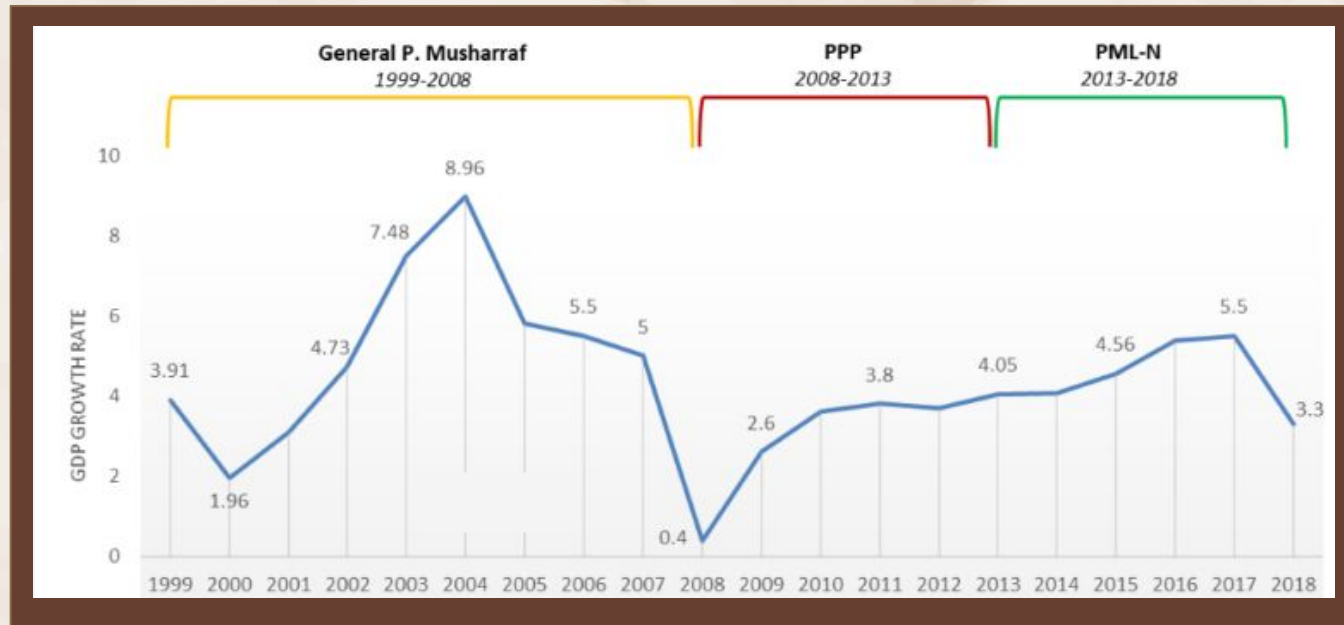


**Gen. M. Zia-ul-Haq**  
(1978-1988)

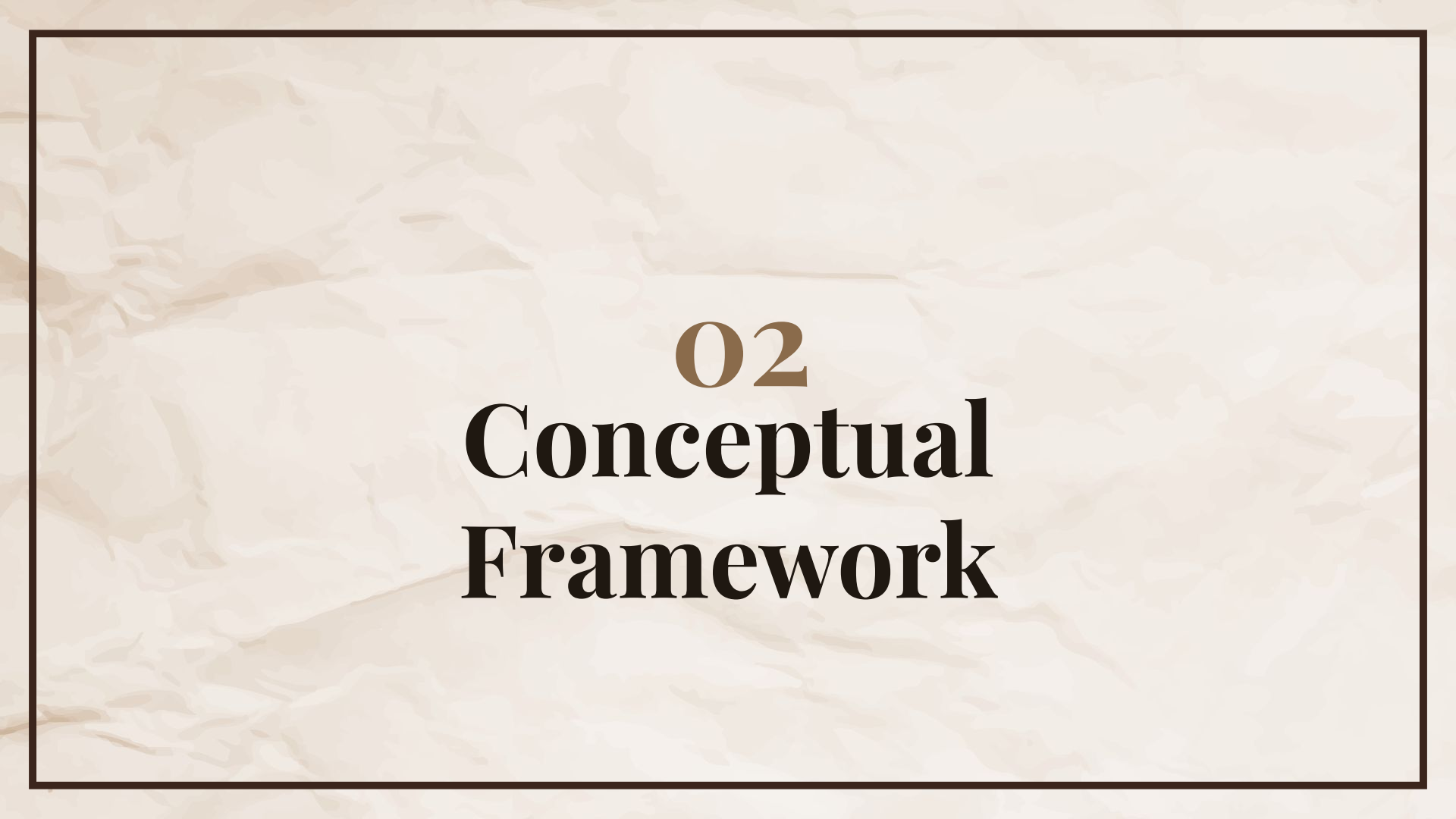


**Gen. P. Musharraf**  
(2001-2008)

# Why Pakistan?





The background of the slide is a light beige or cream color with a crumpled paper texture. A dark brown border frames the entire slide.

# **02**

# **Conceptual Framework**



# Literature Reviews

## Qureshi, Ali, Khan (2010)

- Studied Pakistan's Economy.
- Data from 1971 – 2008.
- OLS found negative relationship between economic development and instability

## Asteriou, Price (2000)

- Studied UK's Economy.
- Data from 1961 – 2000.
- Used, OLS, GARCH models and found negative relationship between instability and the economy.

## Pasha (2020)

- Studied Guyana's Economy.
- Data from 1961 – 2018.
- Used, GARCH models and found that changed in leader, strikes have significant relationship with the economy.
- Other instability indicators don't

# This Paper



- Uses monthly data since 2012.
- The data is more recent and therefore relevant.
- We expect our results to be inline with the majority of research done.
- Yet, the questions this paper answers differs from existing literature. These questions ares:
  - In the short term, how does instability impact inflation in Pakistan?
  - How much of an impact does instability have on the people of Pakistan?

03

# Econometric Model

# The Econometric Model

## Lagged Multiple Regression Model

$$InflationDiff = \alpha + \beta_0 EPU_{0,t} + \beta_1 EPU_{1,t-1} + \gamma_0 FDI_{2,t-2} + \delta_0 InterestDiff_{3,t-1} + \lambda_0 IndustrialProd_{4,t} + \kappa_0 PKRUSDDiff_{5,t-1} + \varepsilon_t$$

InflationDiff: The Inflation Rate (First Difference).

InterestDiff: The Interest Rate (First Difference).

EPU: Economic Policy Uncertainty (Proxy for Instability).

IndustrialProd: Industrial Production.

FDI: Foreign Direct Investment.

PKRUSDDiff: USD to PKR Exchange Rate (First Difference).

# Analysis



- Initially, our data was not stationary, it exhibited autocorrelation.
- Stationary variables were adjusted by differencing.
- ADF tests were conducted to confirm stationarity of all variables.
- Lag structure was decided upon by using: Auto-correlation graphs, minimizing AIC and examining VIF results.
- Parameters of Interest:  $\beta_0$  and  $\beta_1$ .
- Robustness checks were conducted by performing Granger causality tests, examining VIFs
- Heteroskedasticity was addressed by using HAC standard errors..



**04**

**Data**

# Data Sources



## State Bank of Pakistan

1. Foreign Direct Investment
2. Interest Rates
3. Industrial Production
4. Consumer Confidence

**Investing.com**

## Investing.com

1. KSE Stock Price
2. USD to PKR Exchange Rate



## Pakistan Bureau of Statistics

1. Imports
2. Exports
3. Inflation Rate



## Economic Policy Uncertainty

1. EPU



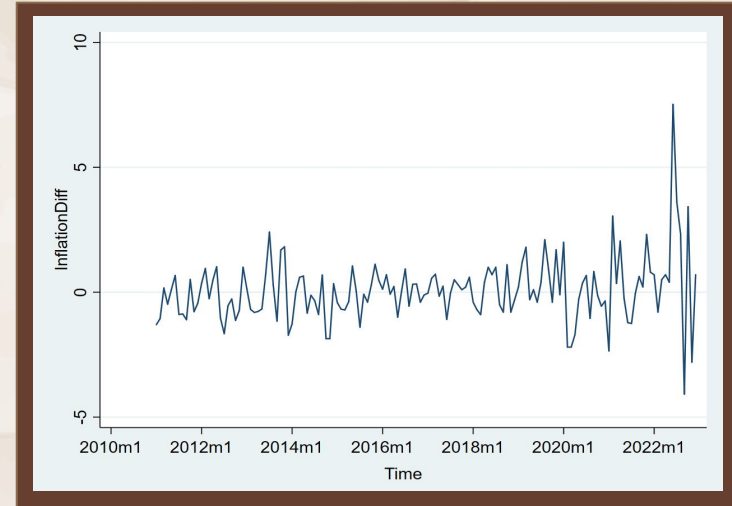
# Variables

<u>Variable</u>	<u>Description</u>
EPU	Economic Policy Uncertainty Index
FDI	Foreign Direct Investment (USD Million)
Interest	Interest Rate (Percent)
IndustrialProd	Change in Industrial Production (Percent)
PKRUSD	USD to PKR Exchange Rate (PKR)

# Important Variables: Inflation

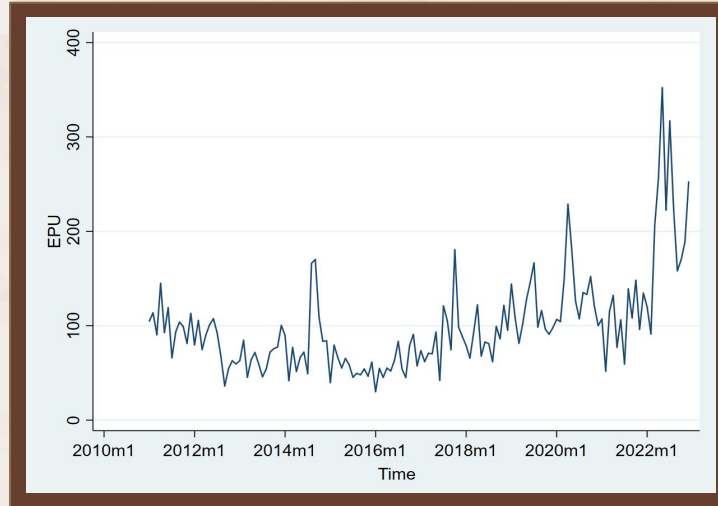


<u>Variable</u>	<u>Obs</u>	<u>Mean</u>	<u>SD</u>	<u>Min</u>	<u>Max</u>
<u>Inflation</u>	144	8.41	4.89	1.32	27.26



<u>Variable</u>	<u>Obs</u>	<u>Mean</u>	<u>SD</u>	<u>Min</u>	<u>Max</u>
<u>InflationDiff</u>	144	0.065	1.30	-4.08	7.52

# Important Variables: EPU



<u>Variable</u>	<u>Obs</u>	<u>Mean</u>	<u>SD</u>	<u>Min</u>	<u>Max</u>
<u>EPU</u>	144	100.00	52.28	30.06	352.24

05

# Results

# Regression Results

Variable	(0)	(1)	(2)
EPU	-0.0032 (0.0026) 0.224	0.0073 (0.004) 0.073	-
FDI	-	-	0.0015 (0.00073)
InterestDiff	-	0.29 (0.10)	-
IndustrialProd	0.019 (0.0077)	-	-

# Regression Results

- Surprisingly, our results show that the coefficient of EPU cannot be concluded to be statistically different from 0.
- EPU with lag is significant only at the 10% level
- .
- A one unit increase in EPU from the previous period lead to only a 0.0073 unit increase in inflation rate first differenced.
- The model assumes linear relationship between variables, furthermore, the data is limited to September 2021 and may not hold up to current times.

06

# Conclusion



# Conclusion

- The questions we answered were:
  - In the short term, how does instability impact inflation in Pakistan?
    - We saw that instability leads to decreased inflation but the contemporaneous effect is negligible.
    - Instability in the previous period does somewhat impact inflation.
  - How much of an impact does instability have on the people of Pakistan?
    - Instability has a limited impact on inflation.

**Thanks for  
Watching!**