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EXPLORING THE ECONOMIC RIPPLE EFFECT OF CLIMATE-INDUCED DISASTERS: A CAPTIVATING EMPIRICAL INVESTIGATION ACROSS SOUTH ASIAN NATIONS

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Abstract

Climate disasters are becoming more frequent as the world's climate gradually changes. There is growing fear that as a result of climate change, weather events will occur frequently and severely. Disasters' long-term impacts and the repercussions of the subsequent policy decisions made by decision-makers are still not much effective. This study examines disastrous effects of economy circumstances by discussing how a disaster affects the uncertainty of economic policy (EPU), inflation and interest rates in addition to the impact of a calamity on output. An econometric panel Vector Autoregressive model using local forecasts is used for getting detail insights of the relationships between the variables of the models. Findings shows that EPU is linked to policy uncertainty behavior towards spending on disasters as an economic condition. Disaster-related outages have extra effects on the EPU. There was a negative correlation between catastrophe costs and outcomes. Production would be reduced as a result of the tragedy and there would be a brief rise in inflation. For the policy makers, this knowledge would be critical in the long term for creating stable policies that can be adjusted to climate change and natural catastrophes

Keywords: Climate Damages, Disaster Cost, Economic Policy Uncertainty, Vector Autoregressive, Panel Data, South Asia.

1. INTRODUCTION

The biggest dangers of the planet experiencing unfavorable climate change is a natural calamity. There is rising concern about how the global climate is changing and how this will affect the frequency and severity of weather events (An & Wang 2000; Athanasiou et al; 2000; Lee & Chen, 2001). Globally, the foundation of our ecological, social, and economic systems is seriously threatened by climate change. However, the impact of climate change is unpredictable. It is crucial to consider the increasing hazards posed by environmental changing by lowering disasters possibility. Risks of human health and damages to property are basic outcomes of climate change. Therefore, the natural disaster effects on economy and GDP growth have been investigated (Fomby et al., 2013; Loayza et al., 2012) among others.

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The effects of climatic disaster on an economy are still challenging for current growth theories to forecast with accuracy. Neoclassical theory holds that natural calamities have minimal impact on the advancement of technology. By diverting economies from their typical growth routes, disasters might momentarily enhance growth. Endogenous growth models disagree with the notion that natural shocks would negatively affect collective output and eventually economic development. The results of the current investigation should either validate or contradict those reported in previous studies of Loayza et al., 2012 & Noy, 2009, due to similarities in methodological approach. Disasters typically have localised consequences due to their nature. However, short-term direct damage to agricultural output (in the form of lost earnings and capital) and long-term indirect damage to agricultural output (in the form of deaths, injuries, property damage, etc.) can result from initial direct harm from natural disasters.

The macroeconomic collateral damage will affect the GDP of the nation. Natural catastrophes have become more frequent and intense, which is well-documented and accepted by the majority of stakeholders globally. Governments, international organizations and the corporate sector have invested a lot of money in educating the public about the vulnerabilities and gaps that might occur during natural catastrophes like earthquakes, storms, catastrophic collapses and other occurrences. With good cause, awareness grew in the 1970s when there were around 69 natural catastrophes recorded annually; by 2000, that number had risen to 350. Similarly, since 2000, annual economic losses have increased from an average of $12 billion in the 1970s to around $88 billion in the last forty years has tripled. Losses have reached above $25 billion only in the last five years.Natural catastrophes have a disruptive effect on the economy, therefore it stands to reason that they might affect the central bank's interest rate setting process, an area where little research has been done. The central bank faces a short-term policy conundrum when output declines and inflation rises; if interest rates are decreased to boost output, inflation will inevitably follow. In this manner, the bank fights inflation rather than the economy which would see even lower output. Using a calibrated DSGE model, (Klomp, 2020; Robins et al., 2021) found that increasing interest rates was the best course of action in the immediate aftermath of Hurricane.

The second issue is the economy's uncertainty. Several scholars have started looking into how commodity prices affect uncertainty in recent years. Most studies (Kang & Ratti, 2013b; Antonakakis, 2014) and Baker et al. (2016) indicates the impact of economic uncertainty by using economic policy Uncertainty (EPU) concept. He concentrated by understanding how it influences oil prices. According to Baker et al. (2016); Kang (2014); and You et al, (2017), uncertainty can have an impact on company investment, stock prices, and unemployment in the macro economy.

Rising natural catastrophe costs are having an effect on society, even if the scientific community is divided on whether there is a causal relationship between anthropogenic consequences like those outlined in climate globally changing impacts (Bouwer, 2011). Dietrich et al., (2021) showed that there has been an increase in the volatility of disaster expenses as a percentage of GDP. According to Estrada et al. (2015), there is a rising slope of data which would not account for by social impacts of economic factors and it is

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impossible to rule out the possibility that climate change has had an impact on historical natural disaster losses. The concept of climate change needs clarity by analyzing disaster-related information. It is crucial to test a theory that is being developed by putting into practice the ideas. It needs evaluation of disasters impact with increase in awareness of economic concepts. So it is dire need, to study in detail the impacts of climate disasters on macro economy of developing countries using latest techniques and historical data sets. The primary goals of this study are to investigate whether or not climate disaster has an impact on economic conditions through economic uncertainty and to evaluate the effects of climate disaster shocks on the macroeconomic environment.Due to the geographical and climatic features of the region, South Asia faces many disasters. Avalanches, earthquakes, glacial lake outburst floods (GLOFs), droughts and floods on the plains, as well as cyclones with their origins in the Bay of Bengal and Arabian Sea, are some of these dangers.

Notably, environmental dangers frequently cross international borders and several nations in the region share geological formations and river basins. The Himalayas and the Indian Ocean's coastal waters which include the Bay of Bengal and the Arabian Sea, are the region's two most dangerous geographical features. Nearly 1.5 billion people depend on the ecosystems of the Himalayas, many of whom reside on the floodplains of large rivers like the Brahmaputra, Ganges, Indus, and Koshi. Large volumes of sand-filled water are transported by these rivers from their mountainous sources to the plains of Pakistan, India, and Bangladesh.

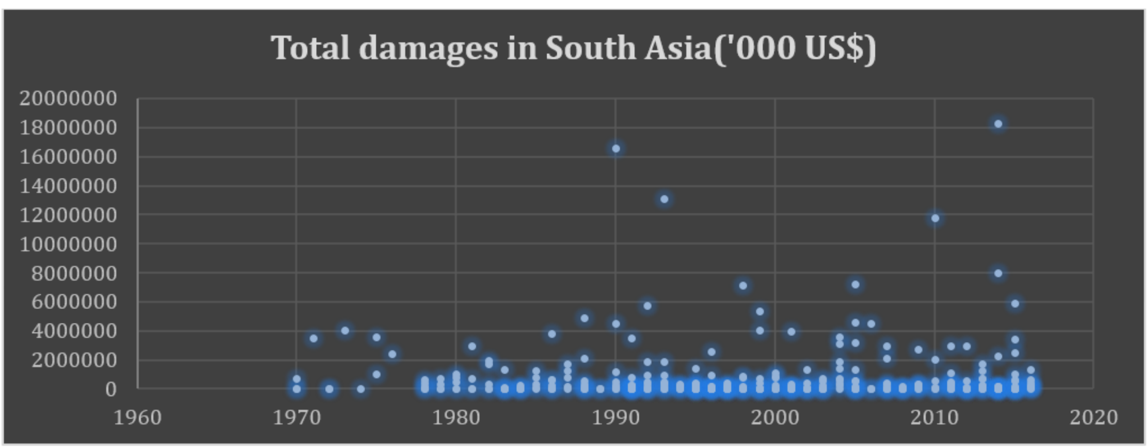

Figure 1: Total Damages in South Asian Region

The monsoons deliver more than 70% of South Asia's yearly rainfall in only four months. When the monsoon is timed well, it leads to bountiful crops and economic security but when it isn't, it may lead to economic loss and human misery due to floods or droughts. The intensity of rainfall at brief times can have a significant influence in addition to the timing of rainfall for agricultural reasons. For instance, high precipitation can cause watersheds to become oversaturated and perhaps trigger flash floods, necessitating the construction of long-lasting flood protection infrastructure and early warning systems.

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Given that around 60% of the region's arable land is rain-fed, inadequate or even delayed rainfall can have a significant impact on agricultural productivity.

The most frequent calamity in the area that also has the greatest human impact is flooding. Floods, which happen more frequently than earthquakes and hurricanes, are frequently referred to as gradual catastrophes. These incidents not only occur most frequently but they also have the greatest human impact. Over the past 40 years, floods have been responsible for roughly half of all catastrophes in South Africa, affecting 82% of the population and resulting in 80% of all economic losses in impacted regions. Flood losses in the SAR only represent 15.4% of the total yearly worldwide flood expenses due to the cheap cost of capital in the area. The second most frequent threat in the area is cyclones. Particularly devastating were two storms that hit Bangladesh; the 1970 cyclone claimed the lives of almost 300,000 people and the 1991 cyclone claimed the lives of around 140,000 people. Although human susceptibility to storms was 225 times more in low-income nations in 2010 than it was in OECD countries, it was still 20% lower in low-income countries in 1980. Economic damages brought on by tropical cyclones have grown while human susceptibility to storms has reduced. Hurricanes in South Asia cause yearly GDP losses of $4.3 billion on average, a 14-fold increase since 1970.

Although climatic disasters are happening more frequently, it is still unclear what their effects will be, especially if climate change affects how monetary policy is implemented. According to the NGFS, "one of the most significant structural drivers driving the global economy" is climate change (Breitenfellner & Pointner, 2021). Firstly, this study examines how disaster shocks are transmitted to economic conditions using a VAR model technique. The VAR model provides an econometric formulation by using consequences of a climate disaster that depends on the state of economy by examining the dynamic interaction between varieties of variables, including disaster costs. Thus, the study of natural disasters offers startling insights into the significance of vulnerability in describing loss patterns among populations and geographical areas. When a perturbation outweighs a population's or a location's ability to adapt or cope, hazards turn into disasters. It helps identify and map regional risk management capabilities. The analytics techniques used ultimately contribute to effective disaster response while reducing the likelihood of natural disasters reoccurring. Also, by removing or re-introducing critical vulnerabilities, it ensures that our emergency response is not compromised.

2. LITERATURE REVIEW

The economics of catastrophes, an area of empirical study where there is controversy is the subject of the first line of investigation of current research. There is disagreement over how to measure the effects of catastrophes (e.g; number of occurrences, unknown fatalities, unexpected injuries, total economic and social damages, uninsured economic destruction or a combination of these).The current research is based on several time frames, according to a literature analysis by (Mochizuki et al., 2014) that explains annually 2-3 years and 5 years decades. The fact that different studies have found either positive, negative or no effects of disasters on economic growth just makes the situation worse.

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The empirical data are still ambiguous. Understanding and making broad generalizations remain difficult.

According to Albala-Bertrand (2007), inflation remains constant even when output increases. Based on cross-sectional data of 89 countries between 1960 and 1990, (Skidmore & Toya, 2002) establish a long-term positive correlation among natural disasters and growth in addition to overall factor productivity. Strobl (2011) claims about climate change disaster lowers the per capita income. Natural disasters, according to Noy (2009), have a favorable effect on developed economies while negatively affecting economic growth in developing nations. (Hsiang & Jina, 2014) show a negative connection between cyclone disasters and country using data from 20 countries.

A small body of research suggests that the state of the economy is connected with reasoning of disaster affects the output level. According to Hallegatte & Ghil (2008), a disaster could result "vulnerability paradox," where "economies under recession are more resilient to the repercussions of natural disasters" . One viewpoint contends that because some resources are being idled, an economy that isn't going through a recession may be more susceptible to a catastrophe than one that is Albala-Bertrand\ (2007).

Since it is believed that climate change increased the frequency of extreme weather phenomena like floods which cause immediate economic harms. According to Wang et al. (2013), Bindoff (2013), Rogelj et al. (2012), climate events are a pathway for impacting the climate change. Rahmstorf & Coumou 2011; Stott, 2016; Frame et al., 2020 highlighted weather anomalies and extreme weather events caused by climate change. Understanding the repercussions of these events becomes a crucial part of economic studies because they have a big impact on economies and communities. Although there is still much to learn about the "macroeconomics of natural disasters," weather trends and temperature patterns influenced by climate change mentioning the reason they referred to as climatic variables in the literature. Thus there are many concerns about the potential effects of economy as a whole which may depend on a country's level of development (Howe et al., 2021). By this way, changing climate may be influenced on economic growth in response to variations in temperature and alarming destructions. The empirical assessments by Li et al. (2020) seek to quantify the social economic consequences of climate change. Olper et al., (2021) assess the difficulty of determining economic effects of climate change showed that doing so is a crucial first step in creating sound policy recommendations. Based on assumptions about potential future climatic conditions, they predict future economic outcomes.

According to majority of recent research (Cavallo and Noy's, 2010; Xiang and Jina 2014; Hsiang and Jina, 2014) evaluation of the research, natural disasters often have a detrimental effect on the short term growth of economy.

Several studies have demonstrated that, in contrast to data indicating negative consequences of natural disasters, natural catastrophes may also have a beneficial influence on economic growth in the short and medium term. After a disastrous occurrence, growth may be accelerated by reinvesting in fixed assets and technological advancements. This theory is supported by a number of earlier research (Fomby et al.,

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2013; Loayza et al., 2012), while some more recent studies demonstrate that the beneficial impacts of natural disasters are restricted to certain economic sectors.

Both conceptually and experimentally, the long-term economic effects of natural catastrophes are not well understood. According to Noy & DuPont (2016), natural catastrophes can have a positive, negative or no effect on long-term economic growth and development. Natural catastrophes are anticipated to have a detrimental influence on long-term economic growth in addition to their immediate repercussions. Growth trajectories are altered when human and physical capital are damaged.

An endogenous growth model built on Schumpeter's theory of creative destruction can be used to explain the long-term beneficial consequences of natural catastrophes. Such models (Hallegatte and Ghill, (2008) predict that growth in disaster-affected regions is likely to accelerate following adverse shocks, as reconstruction efforts lead to increased investment and long-term "productivity effects" in the economy. Numerous studies have demonstrated that in addition to both positive and negative impacts, the long-term consequences of climate impacts on growth are often lower the growth (Cavallo et.al. 2013; Shakoor et.al. 2017; Salman et.al. 2018; Rashid et. al. 2020; Klomp, 2020).

As previously indicated, the macroeconomic effects of natural catastrophes remain a relatively understudied area of study, partly because it is difficult to construct trustworthy statistical associations because of the lack of data and other methodological issues.

The true effects of catastrophes are seldom examined in research. According to (Loayza et al., 2012), only a small number of businesses saw development as a result of mild catastrophes. Only "very large" disasters and only adverse effects in the case of political instability, according to Fomby et al. (2013) discovered that when VAR models are applied to cross-sectional panel data and time-series data, the denser the events, the higher the negative economic impact on the outcome. According to a study (Klomp & Valckx, 2014), natural catastrophes have a significant negative impact on output, particularly in underdeveloped, impoverished nations. They utilized the DSGE model of the US economy to depict the economic and financial size of Hurricane Katrina's impact in order to determine the inflationary effect of the temporary decline in production owing to capital losses in reaction to catastrophic shocks. It was discovered that the earthquake and tsunami in Sendai and Chile in 2011 caused major goods shortages, they did not have the same effect on prices as Cavallo. Retail costs for essential commodities, personal care items and home goods have somewhat grown in recent years,

Natural catastrophes that destroy fixed assets lower overall supply, although rehabilitation operations could raise overall demand. The central bank may think about tightening monetary policy if a natural disaster results in a positive output gap and inflationary pressures (Keen and Pakko, 2010). However, a disaster may have a significant and long-lasting negative impact on demand, resulting in a negative output gap, if it substantially harms the balance sheets of people and businesses in the afflicted area and lowers their spending and investment. Natural catastrophes can also undermine investor demand for

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new investments by lowering corporate confidence and causing abrupt sell-offs in the financial markets.

While economists continue to disagree on the subject, disregarding the consequences of global warming might cause central banks to misjudge changes in output and inflationary pressures. If only localised temperature rises are constrained throughout this time, the impact of climate change on productivity in the majority of advanced economies is expected to be mild. Authorities in charge of monetary policy may have to take these consequences into consideration for decades to come if rising global temperatures cause international inflationary pressures on food and other commodities.

3. DATA AND METHODS

As the South Asia is the most affected region from various disasters, so this study mainly focused on the countries from South Asia region. It Includes India, Pakistan, Bangladesh, Srilanka and Afghanistan. The panel data is used ranging from 2005 to 2021. Costs associated with disasters, real GDP, the consumer price index (CPI), interest rates, Inflation and EPU are all taken into account and their logarithmic form is used after adjusting seasonally.

EPU measures were created by Baker et al. (2016) and they have significantly influenced macroeconomic research. But what factors primarily determine EPU? It's interesting that this issue has been covered in various research. The vulnerability paradox hypothesis serves as the backdrop for our inquiry into whether catastrophes have an impact on EPU. The model adopts the following functional form to represent the temporal link between input variables and economic policy uncertainty (EPU), which appears to be complicated.

$$\text{Ln } EPUt = \alpha+\beta 1 \ln Dt+\beta 2 \ln Yt+ \beta 3 \ln Pt+\beta 4Rt+\gamma \tau t +ut$$

Economic policy uncertainty (EPU) is the dependent variable, whereas natural catastrophe losses, real GDP, inflation, and interest rates are the control variables. A linear trend term (t) will also be included in the research. In line with Hailemariam et al. (2019), measures of production, inflation, and interest rates are among the variables used. Multiple regression, is used to identify the variables affecting EPU. EPU is calculated from the total number of publications published each month in the fields of political science, economics, and uncertainty. By averaging across one month and normalizing for newspapers across the nation, we then modified the raw data and normalized for the variety of each newspaper.

Economic Policy Uncertainty (EPU) is the term used to describe variations brought on by shifts in the economic policies of the government which may create delays or changes in key choices including employment, investment, consumption and corporate savings. Based on the frequency of the news, an indicator of policy-related economic uncertainty. Our objective is to capture uncertainty regarding who will make judgments regarding economic policy, what actions will be done in terms of economic policy and when those actions may be performed. The results show that the Disaster management and Inflation the variables which significantly affecting the Economic uncertainty in south Asian region.

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Table 1: Panel Regression Results:

LNEPU	C	LNDM	LNGDP	LNINF	IIR	T
Coefficient	0.056	0.001	-0.139	0.006	0.033	0.047
t values	0.023***	0.080*	-1.640	0.048**	0.729	1.928

*, ** and *** denote significance at 10%.5% and 1% respectively.

As the main objective of this study is to find out the impact of Disaster's cost on the whole economy. To achieve this objective Vector Autoregressive Model (VAR) by Sims (1980) is the best choice to evaluate the relationship between Disaster cost and other important macroeconomic variables. A multivariate time series model called a vector autoregressive model (VAR) connects the present observations of a variable to its historical observations as well as historical data of other variables in the system. For explaining and forecasting the dynamic behavior of economic and financial time series, VAR models have shown to be very helpful. It frequently offers more accurate predictions than intricate theoretical models that use simultaneous equations and time series models. Multivariate time series are utilized with VAR models. The vector of macroeconomic variables includes the following;

$$Y^T_t = [\ln D_t, \ln Y_t, \ln P_t, R_t, \ln EPU_t]$$

Where Y^T_t includes disaster cost, output growth, inflation, interest rates, and EPU.

Ludvigson et al. (2020) addresses specifically how disaster costs come before outcomes. The order of the variables for output growth, inflation, and nominal interest rate is the accepted order in the literature. Economic Policy Uncertainty (EPU), the dependent variable in this study, will be obtained from the Federal Reserve Economic Data Office of Foreign Disaster Assistance (OFDA)/Center for Natural Disaster Epidemiology Research (CRED), which will be used to gather information on the frequency of natural disasters. Contrarily, real GDP and consumer price index (CPI) statistics will be derived from global development indicators using rates from the World Bank database. For the initial research, annual data for the longest time span available will be used. Real GDP, the Consumer Price Index (CPI), interest rates, and the EPU are examples of factors that are deemed disastrous. Interest rates are excluded from all log and seasonally adjusted variables. Information on actual catastrophes is provided by NOAA. Data from the EPU indicate economic volatility. Statistics on losses due to natural disasters include those from South Asian forest fires, severe droughts, floods, cold temperatures, storms, and tropical cyclones.

4. RESULTS AND DISCUSSION

Cross-sectional correlation (CD) tests are run on panel data. On a panel with pool equalization and order adjustment, you may run the Pesaran (2004) LM measure and CD test. The many others tests used are named as the Baltagi, Feng, and Kao (2012) bias-corrected LM test measure. For panel data, the findings of cross-sectional correlation test revealed no cross-sectional association.

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Table 2: Cross Dependence test

Test	Statistics
Breusch-Pagan LM	16.595*
Pesaran scaled LM	1.474
Pesaran CD	0.481

*, ** and *** denote significance at 10%.5% and 1% respectively.

Describing the unit root test, a differentially initially stationary data-generating process is referred to as a unit root process. To put it another way, the stationary process is the source of unity for the process yt. A unit root test aims to establish the existence of a unit root process in a given time series. If a series has a unit root, it is not stationary. The series is unstable if the p-value is non-significant. For empirical panel series including independent mistakes or weak dependencies, a number of unit root testing approaches have been developed. For all variables taken into consideration at the 10%, 5%, and 1% significance levels respectively, the Levin and Pesaran unit root tests' levels and initial differences are shown in the table 3 below. Both the tests result. Some series are stationary at level and other are stationary at difference.

The majority of VAR models have symmetric lags which means that each variable's lag length is the same throughout all model equations. Most frequently, some implicit statistical methods like AIC or SIC is used to select this lag time.

The results of the lag length criterion are shown in the table below and the irony* is that the majority of lags predicted by these criteria are for the 7th lag, which was selected for VAR estimation as the FPE, AIC, and HQ values. Estimation is started using VAR with seven lags as recommended by information criterion. However, after estimation the diagnostic test are implied which showed autocorrelation in the estimated model.

Table 3: Panel Unit Root Tests:

Variables	Levin		Pesaran	
	Levels	Fist Difference	Levels	Fist Difference
EPU	-1.442*	-3.855***	-1.712**	-4.862***
DM	-2.840***	-6.130***	-2.347***	-7.127***
GDP	-0.350	-0.532	1.196	-2.084**
INF	-1.314*	-6.884***	-1.111	-5.653***
IIR	-1.740**	-8.781***	-0.957	5.890***

*, ** and *** denote significance at 10%.5% and 1% respectively.

After hierarchically estimating the model, VAR model with three lags is selected as it had no diagnostic issue. The results of the root test and autocorrelation test are calculated and given in figure 2 and table 4.

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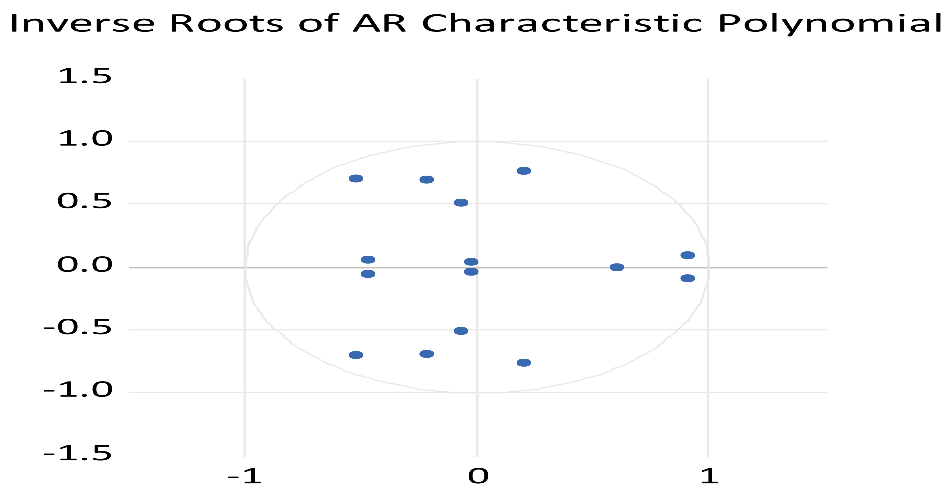

Figure 2: AR Roots test

The process is stationary because the point or root equivalency within the unit circle is represented by the inverse root of the AR characteristic polynomial. This AR inverse root graphic is based on lag 3, which serves as the foundation for the estimation of the VAR (3) model.

Table 4: VAR Residual Serial Correlation LM test

	At lag 1		At lag 1 to 3	
Residual LM Test	**LRE Stat**	**Rao F-stat**	**LRE Stat**	**Rao F-stat**
No serial Correlation at lag h	71.912***	3.199***	92.389	1.28

*, ** and *** denote significance at 10%.5% and 1% respectively.

Impulse Response Function:

The output of a dynamical system given a brief input signal is known as the impulse response or impulse response function (IRF) in the field of signal processing. An impulse response, in general, denotes any dynamic system's reaction to an outside change. Impulse response analysis is an important step in econometric analysis using the vector autoregressive model. Their main purpose is to explain the evolution of model variables in response to the influence of one or more variables. From the below graph of Impulse response functions it is evident that by giving one standard shock to any one variable & can see the noticeable impact on other variables period wise. In different graphs Impulse gradually increasing or declines and hits steady state value. At the end, if an impulse after hitting the steady state level rises above steady state value then it remains in the positive region. In other case if impulse after hitting the steady state level declines below steady state value then it will remain in negative region. There are 25 resulting responses of impulse response functions taking in consideration five variables disaster damages, GDP, inflation, interest rate, EPU. By giving one standard deviation shock to any one of above mentioned variable, it shows impact on other variables which can be evaluated through different graphs one by one. All the graph showed stability and convergent to the equilibrium state.

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Annexure 1: Results of Impulse Response Function

5. CONCLUSION

This paper analyzes the impact of the cost of natural disasters on economic situation in South Asian countries from 2005 to 2022. The macroeconomic consequences of natural catastrophes, including their influence on production, prices, and interest rates, are estimated in this research using a local forecasting technique. In three different ways, this work adds to the limited body of research on the "new climate economics" (Dell et al., 2014).

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The first goal of this article is to show how natural catastrophes affect EPU using a linear regression control of the endogenous connection. Our findings imply that EPU is linked to policy uncertainty behavior towards spending on disasters as an economic condition. Disaster-related outages have extra effects on the EPU.

Second, this article evaluates the effects of the collapse on productivity, including inflation, interest rates, and EPU, similar to the majority of previous studies. Using a panel VAR model, it was demonstrated that there was a negative correlation between catastrophe costs and outcomes. Production would be reduced as a result of the tragedy and there would be a brief rise in inflation. The nation won't face political difficulties if the impact on earnings is minimal and the impact on inflation is brief. According to empirical findings, financial institutions' interest rates can cause severe shocks. Therefore, the central bank's response is inversely correlated with the rate of change in production growth and the rate of the brief increase in inflation.

The fact that this study deviates from the linearity assumption in the impact of catastrophic shocks is a third contribution. To account for nonlinear interactions in data throughout economic expansion, baseline models are expanded. The catastrophe's effects are fading and inflation is starting to spread more widely. The linear model predicts that the crash influences changes in Asian bank rates which is consistent with the linear model. The EPU remains in expansionary mode as a result of catastrophic shocks, signaling lower (higher) production (inflation). Economic factors, in our opinion have a significant role in how catastrophes affect EPU. EPUs are hence subject to the dilemma of fragility.

According to Lael Brainard, "Climate change is anticipated to raise average temperatures, increase sea levels and increase the frequency and intensity of extreme weather events. The economy and financial system are expected to be significantly impacted by climate concerns. It's crucial that we carry out our fundamental duties as a nation. It is crucial to take into account how climate change will affect the economy and adjust our activities accordingly.

The results of this study have historical significance and broad ramifications for both immediate and long-term policy. Finding potential points of vulnerability that might result in economic risk is the first step in developing short-term policy. The research presented in this paper offers fresh perspectives on regeneration processes that might help us comprehend how catastrophes affect people's sensitivity to economic situations.

This knowledge will be critical in the long term for monetary policymakers to create stable policies that can be adjusted to climate change and natural catastrophes. Climate change is a significant issue since it is predicted to increase risk and extreme weather events' frequency and intensity.

To lower the danger of disasters, climate change must also be tackled (Van Aalst 2006). Natural catastrophes have an influence on output and inflation which in turn affect central bank interest rates and in this way which in turn has an impact on stock markets and investment choices. Ignoring how a value decline may affect future inflation may undermine the central bank's monetary policy, causing inflation to vary from the objective set by the central bank. The influence of natural catastrophes on the business cycle should be contained and mitigated by central banks through the development of suitable policies. The study makes it clear that economic policy uncertainty is caused by disaster damage and that inflation is fed by economic uncertainty. Financial institutions are making adjustments in response to inflation which lowers the economy's financial availability productivity. The country's gross domestic product offsets economic policy uncertainty by taking the financial toll of disasters.

Our main focus in this paper to identify the areas that are severely affected by disasters caused to economic unsustainability and forced the management institutions to strategically plan to overcome the economic policy uncertainty. Climate change becoming the challenge for the society to hit geographical surroundings to disturb the life patterns of their livings and definitely correlate the disaster costs with economic policy uncertainty.

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