

**STUDY OF WEATHER AS A CAUSATIVE PHENOMENON
FOR FLIGHT DISRUPTION, AND ITS SOCIO-ECONOMIC
CONSEQUENCES**



**A thesis submitted to Bahria University, Islamabad in partial fulfillment of
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ABSTRACT

This research was carried out to study how weather influences flight disruptions, and to identify the consequent impacts on airline passengers. Weather conditions were studied for the period of 10 years and general climatic trends were analyzed. The recent months of April, May and June (2012) were studied specifically and a correlation was developed between the flight cancellations, delays & diversions and the weather conditions responsible for these disruptions, for this period of 3 months. Accordingly, the contributory weather factors for each flight disruption were identified and percentages were calculated to assess the extent of weather's influence. A socio-economic assessment was carried out to evaluate the resulting impacts via interviews and questionnaires. The undertaken study has opened up new horizons of research for the scientific community. The basic methodology utilized in this study can be expanded by researchers to develop a more comprehensive research and implement it on a larger scale. The outcomes can potentially help decision-makers and airline authorities to manage the influence of weather on air travel and subsequently, our society.

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ABBREVIATIONS

A/C: Air Craft
ASSL: Aircraft Sales & Services Ltd
BIA: Benazir Bhutto International Airport
DEP: Departure
DIS: Dust in Suspension
DLY: Delay
DLYD: Delayed
DSTN: Destination
ETA: Estimated Time of Arrival
ETD: Estimated Time of Departure
Kn: Knots
KPH: Kilometers per Hour
Mm: Millimeters
MPH: Miles per Hour
PIA: Pakistan International Airlines
PKR: Pakistan Rupee
PMD: Pakistan Meteorological Department
RH: Relative Humidity
UAE: United Arab Emirates
WX: Weather
XXLD: Cancelled

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