

## Analysis of Forest Fires for Hazard Management, Gilan-e Gharb

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### Abstract

A Forest fire is one of the hazardous events associated with atmospheric conditions. By studying atmospheric conditions during the fire event, it is possible to find this connection. The aim of this study is to analyze synoptic-dynamic natural hazards in West Gilan forest fire on July 21, 2016. This is by analysis of the environmental circulation properties. For this purpose, the data of the upper atmosphere, sea level pressure, geopotential, vertical velocity in atmosphere, wind in zonal and meridional atmospheric levels in 2 meters above the ground, atmospheric temperature and high radiation flux above the atmosphere and land surface with using GRADS software have been used in this study for analysis of the atmospheric fire hazards. The results of analysis on atmospheric maps indicate that the establishment of a secondary low pressure center on the western side of the Persian Gulf and its expansion to the northwest Iran in the middle of subtropical high in 500 hPa with the geopotential 5960 m could affect the parameters of the forest fires. Atmosphere's vertical velocity and vorticity maps based on high-altitude subtropical conditions in west Iran indicate that the stability of atmosphere and fall on the ground is considered as effective factor. Analysis of advection maps at the level of 1000 to 500 hPa indicated the source of heat entering the west Iran. Advection of warm, dry air from the land of Saudi Arabia, North Africa, Iraq and the northern half of the Persian Gulf make the water warm. That makes it the hottest day of the summer that causes massive fires in large areas of forests in Gilan Gharb.

**Keywords:** advection temperature, forest fire, Gilan-e Gharb, Persian Gulf, Synoptic–dynamic analysis.

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**Analysis of the possibility to predict the likelihood of timely awareness of Thunderstorm and flood in July 2015 in Tehran for vulnerability reduction**

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**Abstract**

Thunderstorm and flood occurred in July 2015 in Tehran have also covered 10 other provinces at the same time. Not a local phenomenon was occurred on a large scale. There were no synoptic events in the general circulation atmosphere or large-scale phenomena such as changes in the polar vortex. In the warm season, convection provides synchronization of the dynamic conditions of the atmosphere. This can provide the potential for thunderstorms. In this study, station information about upper atmosphere, synoptic conditions and indicators of thermodynamics such as PW, CAPE, SWEAT, LI, TT, K were analyzed to evaluate predictability of happening thunderstorms dated 19 July 2015 in Tehran. The results indicated that the synoptic conditions and thermodynamic parameters of the upper atmosphere at Tehran Mehrabad Airport stations have represented to predict potential flood risk at moderate to high level. Therefore, access and timely monitoring of upper air and also early warning system to inform thunderstorms are associated with rainfall and weather conditions. The prediction can reduce the damage caused by the hazards.

**Keywords:** prediction maps, synoptic conditions, thermodynamic parameters, thunderstorms, upper station.

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## Implementation of comprehensive quality management systems to reduce vulnerability in banking industry

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### Abstract

Enhancing product and service quality have a direct relationship with reduction in vulnerability and costs. Given that recent organizations management is mainly focused on Total Management (TM), the survival of Total Quality Management (TQM) cannot be ignored in organizations. The purpose of this study is an identification and review of the obstacles of the successful implementation of TQM in the banking industry in order to reduce vulnerability and risks. For this purpose, Tejarat Bank as one of the largest private bank in Iran with more than 2,400 active branches is selected as an example for this study. There were 47 branches and by Morgan Sample Size (MSS) case 42 samples were selected. These samples covered 62 persons of managers and supervisors. Research tools are general questionnaire (personal information) and dedicated questionnaire (With five main components of the cultural and employees, infrastructure, managers, competitiveness and organizational characteristics). Statistical software SPSS.16 and Excel is used for data analysis. We discussed about the factors affecting unsuccessful implementation of TQM and the impact of these components and factors. The factors of organizational, infrastructure, cultural properties and employees and managers had the greatest impact on unsuccessful implementation of TQM. Due to the direct impact of successful implementation of TQM on the quality and vulnerability reduction on increasing quality, the quality can be considered as a purpose for vulnerability reduction in this industry to lead to cost control, growth, and continuous improvement.

**Keywords:** banking industry, continuous improvement, Total Quality Management (TQM), vulnerability reduction.

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### Ethical hazard in usury-free banking operation

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#### Abstract

Ethical hazard in economics and banking refers to any economic operation in which ethical criteria have been ignored. In order to render our research manageable, we only deal with two ethical concerns that are found to be most basic and prevalent, namely “moral hazard” and “adverse selection”. They are related to operations of the usury-free banking system in Iran. The best way to measure ethical risk is to review outcomes of existing procedures. For example, we know that ethical risks in banking are reflected in overdue claims of banks. In the present study, we evaluate the extent of non-performing loans as a measure of ethical risk. In banking operations, we normally make association between adverse selections with misallocation of bank resources. The moral hazard is defined as the borrower does not observe his obligations with the bank regarding how he uses the loan. The latter typically leads to non-performing loans. Our study discovers the highest degree of ethical risks amongst private banks and the lowest level of ethical risks amongst specialized public sector banks. Among the different facilities provided, interest free loans are found to have the least ethical risk.

**Keywords:** adverse selection, ethical risk, Islamic Economics, moral hazard, usury-free Banking.

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**The role of publisher in journals grade  
(Case study: University of Chicago Press, Oxford University Press,  
and University of Tehran Press)**

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**Abstract**

In scientific publishing, the researchers make a new way of research for others and find more ways to improve their researches. The necessity of entrusting articles to a journal by a researcher makes the journal to join to a publisher to promote and present itself in scientific world. This review essay attempts to describe three university publishers: The University of Chicago Press, Oxford University Press, and The University of Tehran Press. The aim of this research is to identify the role of publisher in scientific journals publishing. University of Tehran Press can achieve high international grades, if it changes its approach from official business to publisher business.

**Keywords:** e-publishing, improving the role of scientific journal, scientific journals publishers, scientific publishing.

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## Thermodynamic and synoptic analyses of pick floods caused by shower rainfall in mountainous regions, Ghare Sou Basin

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### Abstract

Ghare Sou basin is one of the sub-basins of Karkeh River located in Kermanshah, West Iran. In spite of not being a flood-prone area in terms of physiography, severe floods have occurred in this region. The main aim of the present study is to present an overview of thermodynamic and synoptic conditions affecting precipitations causing extreme flows. Accordingly, two databases were made: a) data including discharge and daily precipitation measured at the basin area in the period of 1972-2010 and b) data including air temperature, air pressure, geopotential height, zonal and meridional wind speed, specific and relative humidity related to the levels of 1000, 850, 700, 500, 600, 400, 300, 250, 150, and 100 hPa provided on the NCEP / NCAR for each six-hour monitoring. Then, with application of the probability distribution method, the ultimate limit of type I, with a ten thousand-year return period of a given discharge threshold, 02.247 cubic meters per second per day, was specified as diagnostic criteria for exceptional flows. Finally, five floods were extracted for explanation and one sample was analyzed in this study. The obtained results revealed that during rainy days, blocking systems such as Rex, Omega, cut-off low, and high-pressure stack systems in the middle levels of the atmosphere were dominant over Mediterranean and Middle East region. The mentioned patterns revealed disruption of normal atmosphere. Moreover, analyses of the indices and thermodynamic charts were indicative of non-modular arithmetic of maximum indices and maximum conditional instability with maximum precipitation. Hence, familiarity with synoptic conditions of the systems leading to floods can be of great significance in presenting flood warnings before occurrence of any crises.

**Keywords:** blocking system, Ghare Sou basin, indicators of instability, Sudanese system, synoptic analysis, thermodynamic analysis.

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