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An Analytical Study of Economic Condition of People of Jafrabad after Taukte Cyclone

Dr. Kalpesh P. Gandhi¹, Dr. Viralkumar M. Shilu²

¹Assistant Professor, Government Arts and Commerce College-Jafrabad Opp. ITI, vapaliya, Jafrabad-365540, Dist. Amreli

²Principal, Government Arts and Commerce College-Jafrabad ,Opp. ITI, vapaliya, Jafrabad-365540, Dist. Amreli

Abstract— Post natural calamities are the crucial period for the people who have been affected by it, also for the administration to fulfil the requirements as comes in order with priority. Natural calamities of any in form create various crises like infrastructural damage, medical emergency, food and water shortage, disturbance in routine income etc. Administration role is the vital in post natural calamities whether in rebuild of infrastructure or quick supply of water and food or medicines etc. Though people have faced the trauma and they have been damaged by the calamities in various ways like damage of assets, loss of income, medical emergency etc. So economic conditions of the people of that region have been affected severely and post period is important for them to get normalcy as early as possible. Taukte cyclone had damaged the region on 17th May, 2021. The present study focuses on the post period of Taukte cyclone impact on economic condition with special reference to income of the people of Jafrabad tehsil which includes the Jafrabad city and surrounding villages. The researcher has collected primary data through closed ended structured questionnaire. Total 433 respondents have filled the form and on that basis Chi-square technique has been applied to test the hypotheses.

Keywords— Economic condition, Taukte, Cyclone

I. INTRODUCTION

Man-made disasters like war, terrorism, civil disorder etc. Have huge impact on the people and upto certain extent these can be controlled but when one talks about natural calamities, it cannot be controlled but its impact on damage can be mitigated upto certain extent like mobilization of people of that area before calamities like flood, heavy rainfall or storm or cyclone. Human beings have developed technologies beyond imagination and the development process is still going on but any inventive technologies cannot cease natural calamities. Sometimes it is very difficult that after natural calamities, situations will become again normal like pre natural calamities because of infrastructural damaged and other related factors, but history of various regions shows that the development speed after calamities have quicker than pre condition. This shows the dynamics of the society. Tunkte cyclone had hit the india and particularly more to the gujarat state and as it was cyclone, it reached first to costal area.

The Jafrabad region is located on costal area; its majority of the population are directly or indirectly connected with fishing activities and agriculture activities. Taukte cyclone had damaged many fishing boats and other infrastructural damages which had disrupted economic activities. Activities initiated in post natural calamities period like restore infrastructures and related activities, there will be a scope for the people of that region to get a chance of new source of income like in the Amreli district there was major electricity disruption which had created scope of new earnings like pole merchants, wage contractors, equipment suppliers etc. Though this type of people have been less but again it is the scope for the study, so the same has been covered in the present study whether any of the respondents have get any new opportunities.

II. REVIEW OF LITERATURE

Bahinipati C. et.al. (2015) have conducted a study on what causes economic losses from natural disasters in India. Researchers have mentioned that the reported economic losses due to natural disasters show increasing trend in India and stated three factors for this as bio-physical drivers, exposure and vulnerability. They have stated three categories for losses, direct, indirect and consequential losses. Researchers have considered period of study from 1964 to 2012. They have found and recommended for additional investment on infrastructure to strengthen the adaptive capacity of the vulnerable segments in accordance with socio-economic factors.

Keriwala N. (2021) has made a study on impact assessment of tropical cyclone tauktae on coastal region of Gujarat, India. Researcher has mentioned the cyclone as most destructive and stated its characteristics. Researcher has stated the history from the recognition by the metrological department to the landfall and post impact where various damages have been recorded in the form of human lives, household property damages, industrial loss, trees etc. Researcher has pointed out that from 2018 to 2021 consecutive four years cyclone formed in Arabian sea which happened in first time in 40 years.

Lal P. et. al. (2009) have carried out a study on relationship between natural disasters and poverty: a Fiji case study. researchers have mentioned various natural calamities faced by the region Fiji and from that cyclone had affected higher in cost in comparing other calamities. They have collected both qualitative and quantitative data for the research. The findings of the study stated that there is existence of complex two way relationship between disaster and socio-economic wellbeing in Fiji. Impact of natural calamities at household level stated that it increased the poverty of people and as they do not have financial assets to respond, recover and rehabilitate quickly.

III. OBJECTIVE OF THE STUDY

Primary objective of the study is to analyse the post taukte impact on the economic condition of the people of the Jafrabad region. For analysing economic condition, researcher has considered the impact of taukte on the present income of the respondents and post taukte scope for new sources of income.

IV. DATA COLLECTION

The research is considered as precise analysis of data available with researcher and gives findings from that data. The research is mainly based on two types of data primary data and secondary data. The present study is based on primary data and secondary data have been used for review of literature purpose. The data have been collected from 433 respondents of the predefined region. The convenient sampling has been used for data collection. Various methods are available for collecting primary data but researcher has used questionnaire form, closed ended questionnaire has been circulated in digital form through social media platforms.

V. SCOPE OF THE STUDY

Functional scope of the study describes as the post taukte impact on economic condition of the people of Jafrabad. Geographical scope of the study should be like the area where taukte had hit but the whole region is very vast, so the present study covers the Jafrabad tehsil as city and villages around it. This region is one of the worst affected places, as it is located in costal place on the west side of Gujarat, from where the cyclone had entered with extreme speed.

VI. HYPOTHESES TEST AND DATA ANALYSIS

Ho There is no significant association between impact on income due to taukte and gender of the respondents.

Table no. 1 Cross tabulation between Impact on Income due to Taukte and Gender of the respondents.

Impact on Income / Gender	Male	Female	Total
Increase	4	1	5
Decrease	231	124	355
No Change	36	37	73
Total	271	162	433

(Source: Primary Data)

	Value	DF	P
χ^2	7.07	2	0.029
N	433		

(Source: Jamovi)

The cross tabulation between the impact on income due to taukte and gender of the respondents shows in Table No.1. For checking the relationship, null hypothesis has been set as there is no significant association between them. The result states that null hypothesis is rejected as the calculated value is lower than 0.05 at 5% level of significance. Thus there is significant association between impact on income and gender of the respondents. It can be observed that from the above table, only in case of 'no change' the horizontal distribution between male and female are nearly equal, in other two categories male respondents are more in percentage than female, although the total male members are more as respondents but when compares in within raw analysis male are more than female, so association between impact on income and gender can be viewed.

Ho There is no significant association between new sources of income after taukte and gender of the respondents

Table no. 2 Cross tabulation between New Sources of Income after Taukte and Gender of the respondents.

New Sources of Income / Gender	Male	Female	Total
Yes	13	7	20
No	258	155	413
Total	271	162	433

(Source: Primary Data)

	Value	DF	P
χ^2	0.0522	1	0.819
N	433		

(Source: Jamovi)

Table No.1 highlights the cross tabulation between the new sources of income after taukte and gender of the respondents..

For checking the relationship, null hypothesis has been set as there is no significant association between them. The result states that null hypothesis is accepted as the calculated value is higher than 0.05 at 5% level of significance. Thus new sources of income after taukte and gender has not any association which means any one gender has not been impacted more while compares with other gender towards new source of income.

Ho There is no significant association between new sources of income after taukte and occupation of the respondents

Table no. 3 Cross tabulation between New Sources of Income after Taukte and Occupation of the respondents.

Recovery period/ Occupation	Business	Job	Agriculture	Fishing	Daily wages	Other	Total
Yes	5	1	10	1	1	2	20
No	88	21	204	20	52	28	413
Total	93	22	214	21	53	30	433

(Source: Primary Data)

	Value	DF	P
χ^2	2.45	5	0.934
N	433		

(Source: Jamovi)

Table no. 3 explains the cross tabulation between new sources of income and occupation of the respondents. The null hypothesis has been set as there is no significant association between new sources of income and occupation of the respondents. As there will be some new scope for some occupation after the natural calamities like specific business people may get chance of new order, scope for clearance of old storage goods, some workers may get instant and higher wages etc. But in the present case the association between new sources and occupation cannot be observed, as null hypothesis is accepted because the value is higher than the 0.05 at 5% level of significance. It may also happen that there is very less numbers of people in the category of 'yes' in each category.

VII. CONCLUSION

Natural calamities always terminate the speed of development of the region where it arrived. It pulls back the progress of the territory to some period of time. The further speed of growth depends on the people of the region affected by the disaster and the administration body.

Various examples exist for the said matter and in the present covered region it may also happen. Gujarat state had faced various natural calamities and has been recovered from it faster than expected time. Tukte cyclone had disrupted the people of the affected area and specifically Jafrabad region had countered various problems like electricity failure for longer time, infrastructural damage, interrupted communication etc. The economic condition has also been affected by it due to cease of economic activities like employment, business or profession. The present study focused on the income of the people and scope for new sources of income. For that researcher has tested three hypotheses and found that impact on income and gender has relationship, it because of various reasons like difference in occupations between male and female, availability of more than one sources etc. New sources of income has not been available to the larger group upto the data of data collection, it may happen that after that period more people got chance in enhancement in their income which is the scope for further study.

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