RESEARCH ARTICLE

COVID-19 pandemic: Experience in Calabar and Implication on the Economic Status of the People

Julius A. Ada\textsuperscript{1,1}, Pius U. Angioha\textsuperscript{2}, Egbe E. Tangban\textsuperscript{3}, Thelma A. Abang\textsuperscript{4}, & Pius A. Akam\textsuperscript{1}

\textsuperscript{1}Department of Business Management, Faculty of Management Sciences, University of Calabar, P.M.B. 1115, Calabar, Nigeria
\textsuperscript{2}University of Calabar, P.M.B. 1115, Calabar, Cross River State, Nigeria
\textsuperscript{3}Department of Social Work, University of Calabar, P.M.B. 1115, Calabar, Cross River State, Nigeria
\textsuperscript{4}Department of Sociology, University of Calabar, P.M.B. 1115, Calabar, Cross River State, Nigeria

Abstract: The Covid-19 caused by the SARS-CoV-2, which originated from the Wuhan Province of China during the last days of 2019, has become a global health issue unprecedented since the Spanish influenza of 1918. As of December 30\textsuperscript{th}, there were 86,576 recorded cases of Covid-19 and 1278 confirmed deaths in Nigeria. While the impact of the pandemic varies across societies, for most countries, available evidence reveals that it has increased poverty and inequalities. This study assessed the effect of the Covid-19 pandemic on the economic status of people in Calabar. The survey research method was used in collecting data from a sample of 400 from Calabar, Cross River State, Nigeria. The instrument of data collection was a self-developed unstructured questionnaire. Data were collected within eight days with the aid of five (5) research assistants. Out of the 400-instrument distributed, only 386 was returned and was used for the analysis. Data collected were coded and analyzed using descriptive statistics such as frequency distribution, tables and figures. The result from the descriptive statistics was then subjected to parametric statistics at the 0.05 confidence level. The result from the analysis revealed a significant impact of the covid-19 pandemic on the economic status of people in Calabar, Cross River, Nigeria. Based on the findings, the study recommends, among others, that the government at every level prioritize the distribution of stimulus packages equitably.

Keywords: Covid-19 pandemic, Economic status, Low income, restriction to the source of income

1. Introduction

With the continuous increase in infections, the World Health Organization declared the SARS-COV-2 Virus a pandemic (WHO,2020). The virus first discovered in the Chinese Province of Wuhan in late December 2019(Cucurotta & Vaneelli,2020; Fong & Larocci,2020; WHO,2020). has quickly spread across the globe, putting a strain previously unseen on the global health system and contributing to mortality and morbidity on a grand scale (Aljazeera,2020; Quareshin & Habeeb,2020). As of December 30\textsuperscript{th}, 2020, cases have surpassed 82 million with more than 1,795,214 mortalities (Worldometer, 2020; WHO,2020). To check and slow the spread of the virus, governments across the world took steps to minimize social interaction through the closing down of public places such as bars and clubs houses, asking that people keep social distancing from one another and, in
some cases enforcing a complete lockdown (Janssen, Kullberg, Verkuil, Van Zuacten, Weyer, Van Houturn, Wenthort & Elzinga, 2020; Omang, Angioha, Ojong-Ejoh, & Abang 2020; Verhoven Tsakitzdos, Philips & Van Royen, 2020).

Besides the health catastrophes caused by the pandemic, the quarantine, social distancing measures, lockdown and travel ban imposed to curb the spread of the virus have social and economic implications (Nicola, Alsafi, Solrabi, Kerwan, Al-Jahabir, Iosifidis, Agha, 2020; Mofifur, Fattah, Alam, Islam, Ong, Rahman, Najafi Ahmed, Uddin & Mahlia, 2021; Angioha, Ogar, Eteng, Okpilia & Iboro, 2021). According to Jophason, Kiwi & Mhehler (2020), the global economy has shrunk by 8 per cent. According to the UNDP (2021) report, tens of millions of people who already live-in fragile situations will fall into extreme poverty. The UNDP (2021) report maintain that the lockdown measures, the global recession as a result of the pandemic, and lower commodity prices are jeopardizing livelihood, increasing poverty level and decreasing the revenue level of government.

Although African Nations have reported lesser infection and death rates than western nations, the pandemic still had an economic impact on the continents and its people (Soy, 2020; Adnam, Edeh, Aboh, Pauno & Thoulow, Ojong-Ejoh, Angioha, Agba, Amah, Salmon, & Akintola, 2021). The world bank (2020), in a survey of four nations that includes Nigeria, founds that majority of families in rural and urban communities, estimated to be around 33 million, are using different coping strategies such as savings, reduction in food consumption, handouts from family members and government to deal with the socio-economic impact of the pandemic.

In Nigeria, A study by the Brooking Foundation found that 70 per cent of participants in rural and urban areas have been faced with food security (Lashitew & Karos, 2020; Adnam, Edeh, Aboh, Pauno & Thoulow, Ojong-Ejoh, Angioha, Agba, Amah, Salmon, & Akintola, 2021). In a longitudinal phone survey, the World Bank (2021) revealed that the covid-19 pandemic led to 42 per cent job loss in Nigeria, and the most affected are the poor, accounting for 42 per cent of the total job losses. According to the report, the most affected sectors are commerce, service provision and the agriculture sector.

Although there have been various national studies on the impact of the pandemic on the economic life of people, there is a shortage of studies that have assessed the effects of the pandemic at the state or local level. Therefore, this study assesses the impacts of the pandemic on the economic status of people in Calabar.

2. Research Method and Materials

2.1. Study Settings

The study setting is Calabar in Southern Senatorial district of Cross River. The area is the capital of Cross River State. Calabar covers two Local Government Areas: Calabar South and Calabar Municipality. The city covers an area that spans 427.05 square kilometres with a population density of 980 per square kilometre. The city was initially inhabited by the Ejagham, Efut, Efiks and the Quas. But the area has since seen a geometric rise in its population as a result of rural-urban migration. According to the official population records, the population of Calabar stands at 371,022 (NPC, 2006; Agba, Ikoh, Bassey & Ushie, 2010; Bassey, Ojua, & Ering, 2012).

2.2. Study Design

The descriptive survey design was adopted for the study. The design allows a researcher to describe specific characteristics of a population. It enables a researcher to collect quantitative information that can be tabulated (Bassey, Iji, & Abang, 2017; Bassey, Bassey, Ojua, & Otting, 2011). It involves gathering data relating to events and then organizing it by tabulating, depicting, and describing the collected data. Using descriptive design, a semi-structured questionnaire containing six items was used to elicit data on the topic under study.
2.3. Sampling

Four hundred (400) samples were selected and used for the study. The sample size was arrived at using the Taro Yamane sample size determinant technique at 95 per cent confidence level. The samples were selected using cluster, purposive and simple random sampling techniques. Calabar was divided into 21 clusters, according to the wards that make up the area. From the 21 clusters, the purposive sampling technique selected 11 clusters/wards. 6 clusters from Calabar south and five clusters from Calabar municipality. The wards selected are highlighted in table 1 from the 11 wards. 2 areas were purposively selected. The chosen areas are also highlighted in table 1. The areas were selected because they were primarily residential areas. From these areas, 18 participants were selected from 18 of the area, and 19 participants were selected from 4 regions using the simple random sampling technique.

2.4. Ethical Consideration

Prior permission was obtained from each of the respondents before the instrument was given to the respondents. This includes the written authorization attached to each instrument. The study's objective was explained to each of the research respondents, and the anonymity of their responses was assured.

2.5. Method of Data Collection

The researchers employed the assistance of three research assistants to gather information from the study area. The researcher and the research assistant divided themselves into two, three for each local government. The instrument was distributed and collected after the respondents had finished filling them. Data gathering took two weeks.

2.6. Method of Data Analysis

Data collected was analyzed using descriptive statistics such as frequency distribution, simple percentages and graphical illustration. The result from the descriptive analysis was subjected to parametric statistics (Multiple Regression) at 95 per cent confidence level. Out of the 400 instruments distributed, 386 was retrieved and used for analysis.

3. Results and Discussion [11pt, Garamond, Bold, Justified]

3.1. Descriptive statistics

The questions used to elicit information from the respondents was derived from the objective of the study. Data elicited was subjected to descriptive statistics such as tables, simple percentages, frequency distribution and graphical illustration.

| Table 1: Percentage distribution of participants by view of whether covid-19 measures affected them(N=386) |
| --- |
| Did Covid-19 affect you | Frequency | Percentage (%) |
| Yes | 386 | 100.0 |
| No | 0 | 0.0 |
| I don’t know | 0 | 0.0 |
| Total | 386 | 100.0 |

| Table 2: Percentage distribution of participants by view of how the Covid-19 affected them economically(N=386) |
| --- |
| Economic impact | Frequency | Percentage (%) |
| Loss of income | 42 | 10.9 |
| Loss of job | 33 | 8.5 |
| Reduced wages | 113 | 29.3 |
| Restriction to income source | 186 | 48.2 |
| others | 12 | 3.1 |
| Total | 386 | 100.0 |
Table 1 shows the response of participants on if the covid-19 pandemic affected them. All the participants, 386 (100.0%), reported yes.

Table 2 shows the response of participants on how the covid-19 affected their economic status; 42 participants representing 10.9 per cent reported loss of income, 33, representing 8.5 per cent reported loss of job, 113 representing 29.3 reported reduced wages, 186 representing 48.1 per cent reported restriction to income source and 12 representing 3.1 reported others.

**Table 3:** Percentage distribution of participants by view of how much income did they lost as a result of the Covid-19 (N=386)

| Level of income loss (N) | Frequency | Percentage (%) |
|-------------------------|-----------|----------------|
| 0 -50,000               | 134       | 34.7           |
| 50,001 – 100,000        | 112       | 29.0           |
| 10,001 -150,000         | 76        | 19.7           |
| 150,001 – 200,000       | 41        | 10.6           |
| 200,001 & Above         | 23        | 5.9            |
| **Total**               | **386**   | **100.0**      |
Figure 3: Participants response Level of income loss

Table 3 shows the response of participants on level of income loss; 134 participants representing 34.7 per cent reported a loss of 0 - 50,000 naira, 112 representing 29.0 per cent reported a loss of 50,001 – 100,000 naira, 76 representing 19.7 per cent reported a loss of 10,001 -150,000, 41 representing 10.6 per cent reported a loss of 150,001 – 200,000 and 23 representing 5.9 per cent reported a loss of 200,001 and above.

Table 4: Percentage distribution of participants by view of coping strategy during the Covid-19 measures (N=386)

| Coping strategy (N)         | Frequency | Percentage (%) |
|-----------------------------|-----------|----------------|
| Reduced food ratio          | 116       | 30.1           |
| Savings                     | 101       | 26.2           |
| Hands out from family       | 24        | 6.2            |
| Sale of assets              | 71        | 18.4           |
| Acceptance of lower wages   | 37        | 9.6            |
| Palliatives from govt       | 4         | 1.0            |
| Others                      | 33        | 8.5            |
| **Total**                   | **386**   | **100.0**      |

Figure 4: Participants response on Coping strategy during covid-19

Table 4 shows the response of participants on coping strategy during Covid-19; 116 participants representing 30.1 per cent reported reduced food ratio, 101 participants representing 26.2 per cent reported from their savings, 24 representing 6.2 per cent reported handout from family members, 71 representing 18.4 per cent reported the sale of...
assets, 37 representing 9.6 per cent reported accepting lower wages, 4 representing 1.0 per cent reported palliatives from government and 23 representing 6.0 per cent reported others.

Table 5: Percentage distribution of participants by view of type of distress as a result of the economic impact of the Covid-19 pandemic (N=386)

| Distress as a result of the economic impact of the pandemic | Frequency | Percentage (%) |
|-----------------------------------------------------------|-----------|----------------|
| High-stress level                                         | 94        | 24.4           |
| Loss of happiness                                         | 64        | 16.5           |
| Reduced family interaction                                | 32        | 8.3            |
| Loss of leisure                                           | 51        | 13.2           |
| Feeling of insecurity                                     | 113       | 29.3           |
| Others                                                    | 29        | 7.5            |
| No distress                                               | 4         | 1.0            |
| **Total**                                                 | **386**   | **100.0**      |

![Figure 5: Participants response on type of distress as a result of the economic impact of the Covid-19 pandemic](image)

Table 5 shows the response of participants on type of distress as a result of the economic impact of the Covid-19 pandemic; 94 participants representing 24.4 per cent reported High-stress level, 64 representing 16.5 per cent reported the loss of happiness, 32 representing 8.3 per cent reported a reduction in family interaction, 51 representing 13.2 per cent reported loss of leisure, 113 representing 29.3 per cent reported feeling insecure, 29 representing 7.5 reported others and 4 representing 1 per cent reported no distress.

3.2. Parametric statistics

The result from the descriptive analysis was subjected to parametric statistics using multiple regression. The predictors (economic status) are loss of income, loss of job, restriction on source of income, and reduced wages to be checked on the Covid-19 pandemic. The analysis was carried out at 0.05 level of significance, and the results is presented in Table 6. The use of Multiple Linear Regression (modelling application) was to help explain the linear relationships between and among the predictor variables at p < 0.05. The results are presented in Tables 6 and 8.

The regression equation is expressed thus:

\[ Y_i = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + e_i \]  

(1)

Where:

- \( Y \) is the predicted value of Covid-19 pandemic
- \( X_1 \) is Loss of income
X₂ = restriction to source of income
X₁ = loss of job
X₄ = reduced wages
B₀ = is the Y-intercept and
eᵢ is the error of prediction known as residuals

The upper part of Table 6 presents the correlation matrix, while the second part presents the variables' mean values and standard deviations. The correlation matrix is extremely useful for getting a rough idea of the relationships between predictors and the outcome and a preliminary look for multicollinearity. If there is no multicollinearity in the data, there should be no substantial correlations (r > .9) between predictors.

Let's look only at the predictors (ignore Covid-19 pandemic). The highest correlation is restriction o source of income and loss of income which is significant at .005 level (r = .582, p = <.005), the correlation is significant. The coefficient is moderate, so it looks as though our predictors measure different things (there is little collinearity). We can also see that of all of the predictor's economic status best with Covid-19 pandemic (r = .675, p < .001), so it is likely that this variable will best predict Covid-19 pandemic. Table 7 shows that multicollinearity does not exist among the four (4) predictor variables: loss of income, restriction to source of income, loss of job, and reduced wages., this is because the zero-order correlation is less than 0.85. More importantly, none of the correlations between the predictor variables is greater than 0.80.

Table 6: Inter-correlation Matrix of all the Variables

| DV                | Loss of income | Restriction to source of income | Loss of job | Reduced wages |
|-------------------|----------------|---------------------------------|-------------|--------------|
| Loss of income    | .215           | 1.00                            | .582        | 1.00         |
| Restriction to source of income | .056         | .056                            | .520        | 1.00         |
| Loss of job       | .903           | .436                            | .003        | .045         |
| Reduced wages     | .675           | .008                            | .057        | 1.00         |
| Mean              | 59.99          | 1.50                            | 1.25        | 1.64         |
| SD                | 19.27          | .500                            | .435        | .718         |

KEY: DV = Covid-19 pandemic

Table 7: Regression Model Summary of Covid-19 pandemic on all the predictor variables: loss of income, restriction to source of income, loss of job and reduced wages

| Model                        | R    | R square | Adjusted square | R | Std error of the estimate |
|------------------------------|------|----------|-----------------|---|--------------------------|
| Source of Variance: Sum of Squares | 0.733 | 0.537 | 0.534 | 1.15 | Sig. |
| Regression                  | 127496.245 | 4 | 31874.061 | 184.207 | .000 |
| Residual                    | 109876.741 | 635 | 173.034 | |
| Total Variables             | 237372.986 | 639 | |

| B                             | Std error | Standard. (βeta) | Coef. | t-value | Sig. |
|------------------------------|-----------|------------------|-------|---------|------|
| (Constant)                   | 27.703    | 3.518            | 7.876 | .000    |     |
| Loss of income               | 13.551    | 1.304            | .352  | 10.393  | .000 |
| Restriction to source of income | 9.551   | 1.581            | .216  | 6.041   | .000 |
| Loss of job                  | .386      | .865             | .014  | .446    | .656 |
| Reduced wages                | 4.778     | .194             | .665  | 24.590  | .000 |

The first part of Table 7 shows the regression model summary, the second part of the Table shows an ANOVA that tests whether the model is significantly better at predicting the outcome than using the mean as a 'best guess'. Specifically, the F-ratio represents the ratio of the improvement in prediction that results from fitting the model relative to the inaccuracy that still exists in the model.
The result in Table 6 shows that the predictor variables had a moderate positive correlation with the Covid-19 pandemic. The combination of all the predictor variables (loss of income, restriction to source of income, loss of job and reduced wages) are joint predictors of the Covid-19 pandemic. Overall, the model accounts for 53.7% of the variance in the Covid-19 pandemic and is a significant fit of the data (or, put another way, the 53.7% variance that can be explained is a significant amount).

Furthermore, the regression ANOVA revealed that there was a moderate joint linear association (contribution) of the predictor variables to the Covid-19 pandemic given by the F-ratio \( (4, 635) = 184.207; p < 0.05 \). We can interpret these results as meaning that the model significantly improved our ability to predict the outcome variable (because the F-ratio is significant). The adjusted \( R^2 \) (0.534) shows some shrinkage of the unadjusted value (0.537), indicating that the model could be generalized to the population. Based on the result, it was revealed that when all the predictor variables (loss of income, restriction to source of income, loss of job and reduced wages) are used together, the Covid-19 pandemic significantly impacts economic status.

The b-values tell us about the relationship between the Covid-19 pandemic and each predictor. If the value is positive, we can tell that there is a positive relationship between the predictor and the outcome, whereas a negative coefficient represents a negative relationship. For these data, all four predictors have positive b-values indicating positive relationships. The b-values tell us more than this, though. They tell us to what degree each predictor affects the outcome of the effects of all other predictors are held constant:

Loss of income (standardized \( \beta = 13.551 \)): This value indicates that as loss of income increases by one standard deviation (.500), the Covid-19 pandemic affects loss of income by 13.551 standard deviations. The standard deviation for the Covid-19 pandemic is 19.27, and so this constitutes a change of 261.12 in the Covid-19 pandemic (13.551 \times 19.27). This interpretation is valid only if the effects of restriction to source of income, loss of job and reduced wages are held constant.

Restriction to source of income (standardized \( \beta = 9.551 \)): this value indicates that as restriction to source of income increases by 1 standard deviation (.435), Covid-19 pandemic also impacts by 9.551 standard deviations. The standard deviation for the Covid-19 pandemic is 19.27, and so this constitutes a change of 184.0 increase in the Covid-19 pandemic (9.551 \times 19.27). This interpretation is valid only if the effects of loss of income, loss of job and reduced wages are held constant.

Reduced wages (standardized \( \beta = 4.77 \)): This value indicates that as reduced wages increase by one standard deviation (2.68), Covid-19 pandemic impact also by 4.77 standard deviations. The standard deviation for reduced wages is 19.27, and so this constitutes a change of 91.9 in the Covid-19 pandemic (4.77 \times 19.27). This interpretation is valid only if the effects of loss of income, loss of job and reduced wages are held constant.

Each of these beta values has an associated standard error indicating to what extent these values would vary across different samples. These standard errors are used to determine whether or not the b-value differs significantly from zero. In multiple regression, a significant value of t indicates a measure of whether the predictor is making a significant contribution to the model. Therefore, if the t-test associated with a b-value is significant (if the value in the column labelled Sig. is less than .05), the predictor contributes to the model. The smaller the value of Sig. (and the larger the value of t), the greater the contribution of that predictor. For this model, loss of income (t(638) = 10.393, \( p < .005 \)), restriction to source of income (t(638) = 6.041, \( p < .005 \)) and reduced wages (t(638) = 24.590, \( p < .005 \)), are all significant economic status predictors impacted by Covid-19.
pandemic. From the magnitude of the t-statistics, we can see that loss of income, restriction to source of income and reduced wages. While loss of job ($t(638) = 0.446$, $p > .005$), does not a significant predictor of Covid-19 pandemic.

In terms of the individual variables’ prediction: loss of income alone is significantly impacted by the Covid-19 pandemic ($\beta = .352; p < 0.05$), there was a positive relationship. Also, restriction to source of income alone is significantly impacted by Covid-19 pandemic ($\beta = .216; p < 0.05$), there was a positive relationship. Similarly, reduced wages alone significantly affected by the Covid-19 pandemic ($\beta = .665; p < 0.05$), there was a positive relationship indicating more reduced wages results in the Covid-19 pandemic.

If we replace the b-values in equation (1.0) we find that we can define the model as follows:

$$\text{Covid-19 pandemic}_i = b_0 + b_1 \text{loss of income}_i + b_2 \text{restriction to source of income}_i + b_3 \text{reduced wages}_i$$

$$= 27.703 + (13.551 \text{loss of income}_i) + (9.551 \text{restriction to source of income}_i) + (4.778 \text{reduced wages}_i)$$

From the magnitude of the t-statistics, we can see that loss of income, restriction to source of income and reduced wages had a higher impact, whereas loss of a job does not have a significant effect. Therefore, we can conclude that the null hypothesis stated that there is no relative and composite effects of loss of income, restriction to source of income, loss of job and reduced wages on the Covid-19 pandemic in Primary schools in Calabar education zone was rejected while the alternate hypothesis was retained.

### 3.3. Discussion of Finding

Data collected to check people's COVID-19 experience implications on their economic status was analyzed using descriptive and parametric statistics. The COVID-19 pandemic and the measures adopted by the government affected everyone economically in the study area. This is because all the participants reported being affected by the pandemic. The impact was felt economically, in the area of loss of income (10.9%), reduced wages (29.3 per cent), restriction to source of income (48.2 per cent), and the loss of job (8.5 per cent). In terms of the amount of income that was lost, 29.0 per cent of the participants in this study reported losing between 50,001 and 100,000 naira monthly. Because of the restriction, loss of income source and lack of government social protection program, people had to look for other means off survivor. According to the data gathered, a large amount of the participants, 30.1 per cent had to survive on reduced food ratio, 26.2 per cent survived on their savings, 4 per cent had to survive by selling some of their assets, with just 1.0 per cent surviving on government palliatives.

As a result of their income being affected by the pandemic and the measures put in place by the government, many people were distressed. According to studies such as that of Jassim, Jameel, Brennan, Yusuf, Hasan, and Alwatani (2021), Fornili, Petri, Berrocal, Fiorentino, Ricceri, Macciotta, Bruno, Fariella, Baccini, Severi and Baglietto (2021) and Nishimura, Ochi, Tokumasu, Obika, Hagiya, Kataoka, and Otsuka (2021), all reported that the isolation, quarantine, and other measures adopted by government cause distress for people in affected nations. for this study, the participants reported suffering from one form of distress or the other. 29.3 per cent reported feeling insecure, 24.4 per cent reported high stress levels, 16.5 per cent reported loss of happiness, 13.2 per cent reported loss of leisure and 8.3 per cent reported reduce family interaction.

The result from the descriptive analysis was subjected to parametric statistics using multiple regression at 0.05 confidence level. The analysis was to check the impact of the COVID-19 on the economic status of people in Calabar. Loss of income, restriction to
source of income, loss of job, reduced wages were used to measure financial status. From the analysis, the result revealed that individually, the pandemic costs loss of income (standardized $\beta = 13.551$), restriction to source of income (standardized $\beta = 9.551$), reduce wages (standardized $\beta = 4.77$), but did not affect job loss in the study area but when analyzed together, the result is revealed that all predictor variables (loss of income restriction to source of income, reduce wages, and job loss) we are significantly affected by the COVID-19 pandemic. Based on this finding, the study concludes that the COVID-19 pandemic has significantly impacted the socio-economic status of people in Calabar.

Similar studies reported similar findings. Surni, Nendissa, Abdul Wahib, Haryulin Astuti, Arimbawa, Miar, Kapa, and Feronika Elbaar (2021) study findings revealed that the COVID-19 had impacted the economic status of chicken farmers in Indonesia. Safiyo, Mohammed, Jakada, Kallah, and Mika'il (2020) India study on the empirical analysis of the COVID-19 looked down on the Nigerian economy found that the economic impact of the pandemic includes job loss, increased to the vices, rising poverty level, and fall in economic activities. Daoda, Akinleye, Iwegub, and Popogbe (2020) found that income declined among Nigerian households due to the pandemic.

4. Conclusion and Recommendation

The findings of this study have revealed that the COVID-19 pandemic has significantly impacted the economic status of the people in terms of loss of income, restriction to income, reduced wages. The restriction imposed by the government has affected the income and livelihood of the people; hence there is a further need for the government to ensure that stimulus and relief packages for the vulnerable in the society are equitably distributed. There is also a need for the government to increase and expand credit supply, especially to the less vulnerable groups in this society.

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