ASSESSMENT OF MARGINAL WORKERS IN TAMILNADU A SOCIOECONOMIC ANALYSIS :

Perform the demographic analysis :

To perform demographic analysis, you typically need demographic data related to a specific population or group. This data may include information about age, gender, ethnicity, income, education, and more. Depending on the context of your analysis, you can use various statistical methods and tools to explore and understand the demographic characteristics of the dataset. If you have a specific dataset or analysis in mind, please provide more details so I can offer more precise guidance.

Calculate the distribution of marginal workers based on age, industrial category, and sex :

Data Collection:

Ensure you have a dataset that includes information on workers' age, industrial category, sex, and their work status (marginal or non-marginal).

Data Preparation: and organize the dataset, removing any inconsistencies or missing values.

Filter Data:

Filter the dataset to include only marginal workers.

Grouping:

Group the data by age, industrial category, and sex. You can use software like Python with libraries like pandas for this task.

Counting:

Within each group, count the number of marginal workers. You can use the "count" or "sum" function in your data analysis tool.

Calculate Distribution:

Calculate the distribution of marginal workers as a percentage within each group. This can be done by dividing the count of marginal workers in each group by the total number of workers in that group.

Visualization (Optional):

You can create charts or graphs to visualize the distribution of marginal workers based on age, industrial category, and sex.

Here's a simplified example in Python using pandas:

Python

Import pandas as pd

Assuming you have a DataFrame called 'data' with columns 'age', 'industry', 'sex', and 'work_status'

Marginal_workers = data[data['work_status'] == 'marginal']

Group by age, industry, and sex

Grouped_data = marginal_workers.groupby(['age', 'industry', 'sex'])

Calculate the count and distribution

Distribution = grouped_data.size() / len(marginal_workers) * 100

Using data aggregation and manipulation :

Assuming you have a dataset in a CSV file named "data.csv" with columns: 'age', 'industrial_category', 'sex', and 'work_status' (where 'work_status' identifies marginal workers):

Import Libraries:

```python
Import pandas as pd
```

Load the Dataset:

```python
Data = pd.read_csv('data.csv')
```

Filter Data for Marginal Workers:

```python
Marginal_workers = data[data['work_status'] == 'marginal']
```

Group Data and Count:

```python
Grouped = marginal_workers.groupby(['age', 'industrial_category', 'sex']).size().reset_index(name='count')
```

Calculate Distribution Percentage:

```python
Total_marginal_workers = grouped['count'].sum()
Grouped['distribution'] = (grouped['count'] / total_marginal_workers) * 100
```

View the Result:

You can now view the distribution of marginal workers based on age, industrial category, and sex in the `grouped` DataFrame.

This code will group the data by age, industrial category, and sex, count the number of marginal workers in each group, and calculate the distribution as a percentage of the total marginal workers.

Create visualizations using data visualization libraries :

Import Libraries:

Create Visualizations:

- To create a bar plot for the distribution of marginal workers based on age and sex:

```python
Plt.figure(figsize=(12, 6))

Sns.barplot(x='age', y='distribution', hue='sex', data=grouped)

Plt.xlabel('Age Group')

Plt.ylabel('Distribution (%)')

Plt.title('Distribution of Marginal Workers by Age and Sex')

Plt.xticks(rotation=45)

Plt.show()
```

- To create a similar plot based on industrial category:

```python
Plt.figure(figsize=(12, 6))

Sns.barplot(x='industrial_category', y='distribution', hue='sex', data=grouped)

Plt.xlabel('Industrial Category')

Plt.ylabel('Distribution (%)')

Plt.title('Distribution of Marginal Workers by Industrial Category and Sex')

Plt.xticks(rotation=45)

Plt.show()
```