























The next figure (11) shows the complaints according to states where some states are excluded since they had the minimum number of complaints. The states with the maximum number of complaints are California 8000 complaints, Florida 5300 complaints, New York 3700 complaints, and Texas 4700

complaints. From this figure, the decision-makers should make the strategic decisions to find the reasons behind the complaints and try to quickly response them in order to eliminate them or at least reduce them.

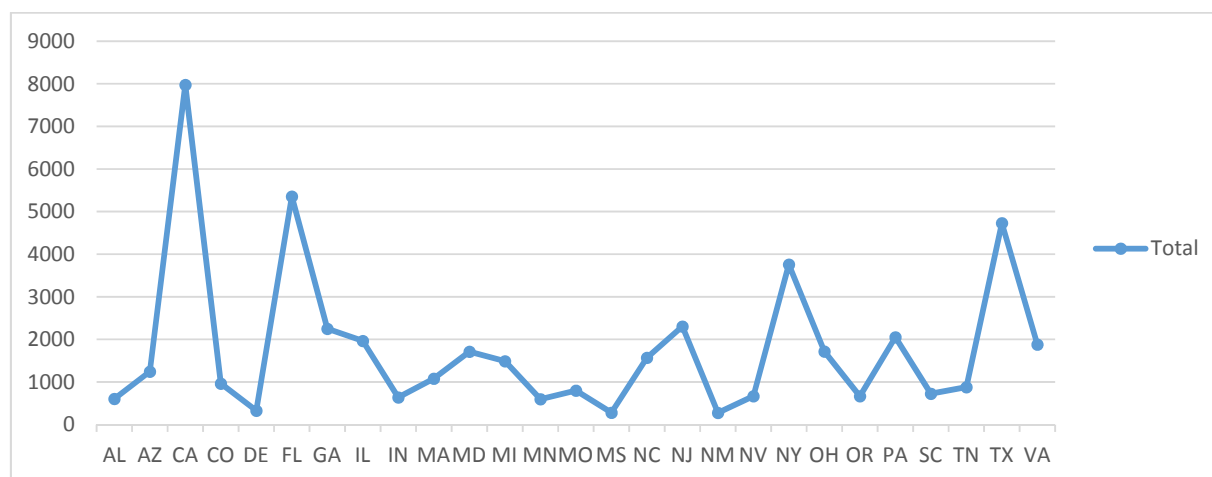


FIGURE 11. COMPLAINT ACCORDING TO STATES.

This category of reports can help the analysts and decision-makers to get very fast and customized results. The analysts can easily select the dimension and determine the chart style to get a deep view about the general performance of the companies for all states.

#### IV. CONCLUSION AND FUTURE WORKS

The paper presents a roadmap to construct a compliant data mart to support decisions related to customer's service quality. Although the source of the data provides a platform to submit and retrieve the complaint's status, the model of implementing data mart can be considered as an addition where the analysts can present the results from different perspectives. The analysts and decision-makers can present the results based on the cubic data form where the data are constructed based on multidimensional form.

The design approach used for data mart implementation is bottom-up for many reasons such as fast implementation and delivery process, providing a standalone application that can be used to measure success factors of DW, and getting the

analysis results and reports for the department data before implementing the organizational DW. SSMS is used to store the data of data mart in data mart tables (fact and dimensions). SSIS is used to implement ETL stages while SSAS is used to create a complaint cube to perform all OLAP queries. SSRS finally is used to construct web OLAP reports. All the processes of SSIS, SSAS, and SSRS are performed through the SSDT project.

The multidimensional cube is constructed based on the fact table and seven dimension tables. The dimensions represent the candidate queries that can be performed to answer all questions as an OLAP query. There are two types of implemented OLAP report, offline and web OLAP reports. The major difference between them is the way of access where the web OLAP can be accessed remotely while offline OLAP can be used locally. The reports vary from listing the complaints number according to date, address, company, issue, or even state. The reports can help all stakeholders and decision-makers to select the dimensions and get customized reports. Offline OLAP reports provide flexibility to select chart type and determine measurement and dimensions and perform different OLAP operations.

The data mart gives the analysts and decision-makers the ability to investigate the importance of enterprise DW and how can it affect the decision making on the strategic decisions. The best way to improve service quality is to provide a high level of quality of services and fast response to consumers' dissatisfaction. It is also better to provide the consumers with a platform that educates them and gives them a top view of all companies' performance. Handling customers' complaints can improve the future behavior of customers and enhance service quality. The proposed future work is implementing a mobile application to get notifications when the number of complaints of specific issues or for a specific company, month, or state exceeds the previous number of complaints. In this case, it will be very helpful to implement key performance indicators (KPI) for each case to measure the performance of companies and consumer satisfaction.

Trust factor and the reputation of the financial seller are important factors. However, studies in this field are few. It is recommended that future work investigate the influence of trust and reputation on the financial customer satisfaction. Traditional or offline customer satisfaction has linked the satisfaction to the quality. However, online customer satisfaction differs in term of the service. Thus, an investigation of the influence of service quality.

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