CHAPTER V

CONCLUSIONS
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In the present study, an attempt is made to predict infant mortality rates and the prediction limits for the estimates. They are based on the assumption of linear model which fairly explains the behavior of different infant mortality rates \{CDR, IMR, NNMR, PNMR, PENMR\} in the three categories rural, urban, rural and urban in India.

The predicted values serve as a guide in formulating policies of the Government, to reduce infant mortality rates by taking necessary health care measures at different levels.

The study also provides the methodology and its applications in Bayesian forecasting with special reference to infant mortality in India. This work is based on the data retrieved Sample Registration System, and other factors which influence infant mortality rate have not been taken into consideration.

When estimating the predicted values of the data, we included the other two forecasting models namely first order auto regressive moving average model \(\text{ARMA}(1,1)\) and linear regression model.

Finally, the predicted values by using the above three methods, compare well with the observed data. The two models –ARMA(1,1) and regression, are used for prediction and the regression model is found to a good fit compared to ARMA(1,1).
PLAN FOR FUTURE RESEARCH WORK

The present work has brought out forecasting methods for estimating parameters using some models. It can be extended by considering other types of forecasting models such as Lee-Carter method, Kalman-Filter approach, and ARIMA process, particularly for time series data with the help of Bayesian forecasting methods. The procedures can be extended for predicting other demographic variables such as mortality, fertility, migration and urbanization. This analysis will be useful for planners and demographers in formulation population policies.