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Editorial

I am glad to release the January-March 2021 issue of PRAJNAN – Journal of Social and Management Sciences (Vol. XLIX, No. 4). I would like to thank you all for your continued support and guidance. This journal is a place for exchanging original research based results on banking and finance and other areas of Social & Management Sciences that have relevance in building a new body of knowledge and improvement in practice of banking operations. I request you to use this forum to discuss policy issues, research findings to relate banking and finance to broader national economic and social objectives. Established in 1972, the journal focuses on publishing original research papers that have high academic and professional standards to the readers and our endeavour will continue. The rigorous double blind peer-review process and the thorough care taken in copyediting and production by our team ensure the journal's place as a premier venue for scholarly publishing in the area of banking and finance in India. The journal is indexed and abstracted in EBSCO & ProQuest.

In this issue we publish three full-length research papers and two book reviews. The first paper **"Factors Influencing Access to Formal Credit of Unincorporated Enterprises in India",** by Shivani Badola and Sacchidananda Mukherjee address the problem of access to formal credit faced by unincorporated financial enterprises. The Micro, Small and Medium Enterprises (MSMEs) has significantly contributed in employment generation and economic development in India. Access to credit enables the sector to remain as the most dynamic and vibrant participants for the national development. The authors have attempted to empirically examine the critical factors that determine their access to formal credit by specifying a HetProbit model using large NSSO cross sectional data. Heteroskedastic Probit (HetProbit) model is the generalisation of the binary probit model which allows the variance of the error terms in the probit model to vary as a function of independent variable. Results show that various operational and economic characteristics influence access to formal credit. The study highlight the potential of Information and Communication Technology (ICT) in expanding formal credit networks by reducing information asymmetries that exist in credit markets. Furthermore, the study detects key variables such as annual gross value added, annual turnover, maintenance of written statement of accounts, bank account, market value of total asset, enterprises located in rural areas, years of operation, registration under various acts/authorities and establishments (mainly directory establishments) significantly and positively influence the access to formal credit. The key findings of the paper may help enterprises to improve their performance to become credit worthy and/or for creditors it may help to broad base the selection criteria to disburse credit more homogenously. The authors also claims that spatial heterogeneity (across States) in accessing formal credit is another aspect which requires the attention of policymakers.

The second paper **"Does Capital Adequacy Rule Influence Efficiency? An Empirical Evidence from Indian Public Sector Banks",** by Nupur Moni Das and

Joyeeta Deb attempts to assess if there is any relationship between capital adequacy ratio and technical efficiency of public sector banks in India. The concept used is that a decision making unit is considered as technically efficient if from basket of inputs it holds, it produces the maximum of output possible. It is similar to performance metric like Risk Adjusted Return on Capital (RAROC). The authors have used censored tobit regression model to investigate the effects while keeping the bank size, income diversification and other macroeconomic variables in their multivariate models. The empirical regression results reflect a positive but insignificant effect of CAR on technical efficiency of public sector banks. However, the panel Generalized Methods of Moments (GMM) regression results reveal that the impact of CAR on Technical Efficiency (TE) is positive and significant. The GMM results can resolve the endogeneity issue in panel regressions. The robustness of this relationship was again checked by excluding SBI group from the sample and the study observes that the empirical relationship is positive but not significant. It may be noted that the capital adequacy ratio is an important indicator of bank solvency. Infusion of capital is expected to provide financial stability and improvement in growth of a bank. Authors therefore, suggest that consistency of the results must be rechecked in further research as one of the models showed significant association.

The third paper **"The Efficiency of Indian Banks: A Non-Parametric DEA Approach with Panel Regression Based Feedback"** by Ather Hassan Dar and Somesh Kumar Mathur analyse the technical efficiency and scale efficiency of both public and private sector banks in India *via* Data Envelopment Analysis (DEA) using panel data framework. Further, the study also tries to explore the changes in total factor productivity in terms of Malmquist index. Based on the results, the authors commented that the private sector banks were relatively more efficient during the period (2014-2019). Analysis of Malmquist total factor productivity change suggests that except for the first one year, total factor productivity has declined for the banks under observation. The authors have used panel tobit regression method to further investigate the critical bank specific factor that determine their efficiency. The study tries to find out the impact of bad loans, size and profit on technical efficiency in terms of Tobit regression analysis. A robustness check has also been done by the authors for validating the results.

We have also published two book reviews in this issue of PRAJNAN written by two faculty members of NIBM. Professor Sanjay Basu reviews the first book *"An Economist's Miscellany : From the Groves of Academe to the Slopes of Raisina Hill"*, authored by Dr Kaushik Basu published by Oxford University Press. The second book review is done by Dr Rakesh Gupta. The book title is *Six Lenses – Vignettes of Success, Career and Relationships*, by R Gopalkrishnan, published by Rupa Publication, Delhi.

The journal invites submission of original research based articles in the specified subject areas but not limited to *(a)* Analysis of Financial Markets and Institutions, *(b)* Technology & Innovations in Banking & Financial Services Sector, *(c)* Macroeconomic policy based analysis, *(d)* Risks, capital management, stress testing and bank performance.

Finally, on the behalf of the journal's editorial team, we would like to express our gratitude to our esteemed panel of subject experts who have extended their generous support as reviewers for the journal during 2020-21. Many thanks for all the timely responses, very insightful and thorough comments that you have put in on the journal's behalf.

Dr Arindam Bandyopadhyay
Editor (PRAJNAN), Associate Professor, Dean Education, Associate Dean (Consultancy & Training), NIBM.

Factors Influencing Access to Formal Credit of Unincorporated Enterprises in India

Shivani Badola
Sacchidananda Mukherjee

Unincorporated enterprises significantly contribute to India's GDP and generate large scale employment. Lack of access to formal credit often constrains these enterprises to scale up. Understanding factors influencing access to formal credit of unincorporated enterprises is important which may help enterprises to improve performance and become credit worthy. For creditors, present analysis may help to broad base the criteria in selection and disbursement of credit. The present paper explores the factors which influence access to formal credit of unincorporated enterprises across states in India. Results show that various operational and economic characteristics influence access to formal credit. The analysis indicates that size of an enterprise (measured in terms of number of workers, total assets, etc.), gross value added, turnover, maintenance of bank account and written statement of accounts, years of operation, adoption of Information and Communications Technology (ICT), female entrepreneur, registration under various statutory acts/ authorities, ownership type, enterprise type, type of activities (manufacturing, services or trading), enterprises facing problems, receiving government assistance, state-specific variables, etc. are statistically significant factors.

Does Capital Adequacy Rule Influence Efficiency? An Empirical Evidence from Indian Public Sector Banks

Nupur Moni Das
Joyeeta Deb

The importance of stability and efficiency in operations of banking sector has motivated to make an attempt to investigate the impact of Capital Adequacy Ratio (CAR) on Technical Efficiency (TE) of the Banks. The study has considered 25 public sector banks in India for the period 1996-2016 for carrying the analysis. The result of Tobit model showed insignificant impact of CAR on TE. Some robustness

checks are also done for checking consistency in the results through Generalized Method of Moments (GMM) which also showed positive but insignificant association except in one model the coefficient is positive plus significant.

The Efficiency of Indian Banks: A Non-Parametric DEA Approach with Panel Regression Based Feedback

Ather Hassan Dar
Somesh Kumar Mathur

There has been a shift towards the privatisation of public sector banks in the recent times in India. Therefore, an analysis of efficiency of the public and private sector banks is necessary to evaluate the effectiveness of the recent shift in the policy. We make use of the most recent data extracted from the website of the Reserve Bank of India. We analyse the technical efficiency and scale efficiency scores of various Indian banks using the non-parametric Data Envelopment Analysis (DEA) technique. We especially account for NPA in our non-parametric DEA model by incorporating it as an input that the banks want to minimise. Findings suggest that the nationalised banks have consistently been performing badly, on average, while their private sector counterparts have performed relatively better with or without NPA incorporated in our model. A small proportion of nationalised banks had a positive total factor productivity change over the time period of the study. We use a panel regression framework to get a feedback on the factors determining the efficiency of these banks. The second stage regression results confirm the underperformance of public sector banks. However, when the NPA are included in the DEA model as inputs the results show a greater adverse impact on efficiency of public sector banks. We also make use of the conventional Tobit regression so as to ensure that our results are robust.

Book Reviews

An Economist's Miscellany: From the Groves of Academe to the Slopes of Raisina Hill

Kaushik Basu

New Delhi, Oxford University Press, March 2020, pp. xxi + 332, Rs. 995

Reviewed by **Prof Sanjay Basu**, Faculty, National Institute of Bank Management, Pune.

Six Lenses – Vignettes of Success, Career and Relationships

R Gopalakrishanan

Delhi, Rupa Publication, December, 2015, pg. 194, Rs. 395.

Reviewed by **Dr Rakesh Gupta**, Faculty, National Institute of Bank Management, Pune.