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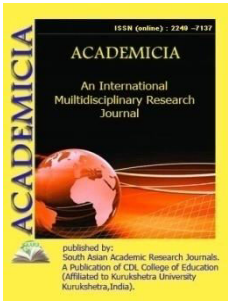

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CRS RESULTS IN DMUS – DEA

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ABSTRACT

Data Envelopment Analysis (DEA) is a nonparametric method in operations research and economics for the estimation of production frontiers. It is used to empirically measure productive efficiency of Decision Making Units (DMUs). The DEA is a mathematical programming technique that finds number of practical applications to measure the performance of similar units.DEA is a methodology based upon an interesting application of linear programming technique and it was originally developed for performance measurement. The present research study is to measure the CRS results in DMUs for random data.

KEYWORDS: *CRS (Constant Returns to Scale), DEA (Data Envelopment Analysis), DMUs, Efficiency.*

REFERENCES

Abhiman Das (2000), "Efficiency of public sector banks, An application of DEA model", Prajnan, Vol. XXVIII, No. 2, pp. 119-131.

Afriat, S.N., (1972), "Efficiency Estimation of Production Functions", International Economic Review, Vol. 13, pp. 568-598.

Andreas C. Soteriou, and Stavros A. Zenios (1999), "Using data envelopment analysis for costing bank products", European Journal of Operational Research, Vol.114, pp. 234-248

Banker, Cooper, Sieford, Thrall and Chu (2004), "Returns to Scale in Different DEA models", European Journal of Operations Research, Vol. 154, pp.345-362.

Banker, R.D., A. Charnes and W.W. Cooper (1984), "Models for the Estimation of Technical and Scale Inefficiencies in a Data Envelopment Analysis", Management Science, Vol. 30, pp. 1078 - 1092.

Charnes, A., W.W. Cooper and E. Rhodes (1981), "Evaluating Program and Managerial Efficiency: An Application of Data Envelopment Analysis", Management Science, Vol. 27, pp. 688-697.

Charnes, A., W.W. Cooper and R.M. Thrall (1986), "Classifying and Characterization Efficiencies and Inefficiencies in Data Envelopment Analysis", Operations Research Letters, Vol. 5, pp. 105-110.

Charnes, A., W.W. Cooper and E. Rhodes (1978), "Measuring the Efficiency of Decision Making Units", European Journal of Operations Research, Vol. 2, pp. 429-444

Farrell, M.J. and M. Fieldhouse (1962), "Estimating Efficiency in Production Fucntion Under Increasing Returns to Scale", Journal of Royal Statistical Society, Series-A, Vol. 125, pp. 252-267.

Farrell, M.J., (1957), "The Measurement of Productive Efficiency" Journal of Royal Statistical Society, Series A, Vol. 120, pp. 253-281.

Forsund, F.R., and Hjalmarsson, L (1979), "Frontier Production Functions and Technical Progress, a study of general milk processing in Swedish dairy plants", Econometrica, Vol : 47, PP 883-900

Forsund, F.R., C.A.K. Lovell and P. Schmidt (1980), "A Survey of Frontier Production Functions and their Relationships to Efficiency Measurement", Journal of Econometrics, Vol: 13, pp. 5-25.

Milind Sathye (2003), "Efficiency of Banks in a Developing Economy: The case of India", European Journal of Operational Research, Vol. 114,pp.662-671.

Nunamaker, T.R. (1985), "Using Data Envelopment Analysis to measure the efficiency of Non-profit organizations : A critical evaluation", Managerial and

Schmidt, P and C.A.K. Loveil (1980), "Estimating Technique and Allocative Inefficiency Relative to Stochastic Production Function and Cost frontiers", Journal of Econometrics, Vol. 13, pp:83-100,Decision Economics, Vol. 6, pp. 50-58.

Timmer, C.P., (1971), "Using a Probabilistic Frontier Function to Measure Technical Efficiency", Journal of Political Economy, Vol. 79, pp. 776-94.