DOI: https://doi.org/10.46632/jdaai/1/2/2

REST Journal on Data Analytics and Artificial Intelligence
Vol: 1(2), 2022
REST Publisher; ISSN: 2583-5564
Website: http://restpublisher.com/journals/jdaai/

Understanding the behavior of Bancassurance service in India

[*1]Ruhiya Nazneen, [2]M Ramachandran, [2]Chinnasami Sivaji, [2]Ashwini Murugan.
Jazan University, Al Maarefah Rd, Jizan, Saudi Arabia,
REST Labs, Kaveripattinam, Krishnagiri, Tamil Nadu, India.
*Corresponding author Email: rnazneen@jazanu.edu.sa

Abstract. This study is in developing India to develop policy recommendations for bancassurance markets Banking and Insurance in Europe Coordination of sub-sectors Discusses functional benefits. In the 1990s in European countries banking and When financial consolidation of insurance services began, most banks and insurance companies already do Some are listed for a period of time. Efficient frontier portfolio in European bancassurance markets and We study pairwise combinations. The current investigation in selecting alternatives in the supply chain Based on ratio analysis (MOORA). including multi-objective optimization Fuzzy MCDM technique is used. For selecting supply chain strategies MOORA Method is applied to three relevant numerical examples. In the operational research field, many MCDM methods have been developed in the previous period, highly specific and No extension yet. Therefore, in this paper, Perfect for solving many complex real-world problems an extended to propose the MOORA method, Space gray numbers and We integrate the MOORA method. The present study investigates a new technique called multi-objective optimization based on Ratio Analysis (MOORA) Faced with real-time manufacturing industries Solves a variety of multi-purpose problems. It's with many benchmarking issues Solves some unconventional machining processes. The alternative is Life insurance (MEAN SR), Life insurance (STD SR), Life Insurance (CV), Non-life insurance (MEAN SR), Non-life insurance (STD SR), Non-life insurance (CV), Insurance broker (MEAN SR), Insurance broker (STD SR), Insurance broker (CV). Evaluation parameter is insurance percentage, 0, 10, 25, 50, 75, 90, and 100. In this paper Bancassurance with insurance companies for Non-life insurance (CV) is got the first rank whereas is the Insurance broker (STD SR) is having the Lowest rank.
Keywords: banks, insurance, MCDM

1. Introduction

Financial liberalization and Financial innovation includes banking and have brought insurance closer together and It has become an accepted norm for banks to sell insurance products. Indian Insurance Market Huge and underutilized. To address the diversity of the market, New distribution channels have emerged, one of them is Bancassurance and The charm of India Identified as one of the distribution channels. Bancassurance channel of distribution to all customer segments of banks Uses geographic access and penetration. Banks are big customer's portfolio, service quality, Extensive branch network and have technology, Because of this, bank insurance has become essential. Merger of banking and insurance companies Create a bigger market. Concept of bancassurance Originated in France spread across Europe, Canada and Successful in America. Bancassurance means banks and insurance companies A contract between two parties Considered as a one-stop shop offering insurance products and various banking and insurance services through the bank's distribution channel. A contract between two parties Insurance (in French) By combining the words Refers to Through banking channels Distribution of insurance products. The purpose of the present thesis is to evaluate and to improve the selection process and suggest an alternative approach. Method of Ratio Analysis (MOORA) Based on Multi-objective optimization, solve multiple choice problems in supply chain environment This article is about the MCDM approach Trying to explore the applicability of MOORA. selection is considered in this paper. This method results in similar problems performed by various previous researchers Compared to some works. Six decision problems are solved, And the results obtained are its applicability, Proven performance and flexibility. method, while solving a variety of complex decision-making problems in current manufacturing environment. used the MOORA method to solve a multi-criteria (objective) optimization problem in a crab milling process. in different grinding processes including selecting appropriate milling process parameters Six decision problems are considered, the results obtained are in a production environment Applicability of this method, with results obtained by previous researchers demonstrating feasibility and flexibility almost coincide. Kalibatas and Tarskis to address internal climate issues investigated by ratio analysis (MOORA) From multi-objective optimization standards Factors causing deviance are identified, Rational residential alternatives selected from the available options are explored. Kildiene to assess in EU member states Opportunities for construction companies proposed the MULTI-MOORA method. A dominance theory compares Three parts: Ratio system, reference point and Full multiplier form and as a consequence, according to their environment for business Countries are ranked. Energy in heating buildings to solve problems related to loss Used MOORA method in construction. For selection of exterior walls and windows of Buildings are the focus of his research is to develop technique.

2. Bancassurance

In India, insurance companies sell their products Following the Bancassurance channel, this includes banks and insurance companies have become the main distribution channel, because banks have their existing infrastructure and Able to operate at low cost due to Well established systems. Bank Insurance with its customers Working in relation to the bank, it is built on Long

term relationship with the bank and to sell insurance products It is a very cost effective channel. Origin of Bancassurance and diffusion Retail in India Very much in the financial services industry One of the significant developments. The Indian insurance industry is growing at a very fast pace. Banks and insurance companies are looking at Bancassurance as the answer to future returns for the Indian retail finance sector. Banks in India have a customer base of over 120 million. A distinctive feature is the dominance of rural bank branches in sales processes and the closeness of bank employees to customers in rural areas. developed and developing countries Using the model company Focuses on determining bank insurance. Based on their empirical findings, many bancassurance properties That it applies in India The authors argue that Firstly, the banking sector in India Based on conservative growth, with insurance companies Incorporation of Bank Holding Company (BHC) reduces risks, At the same time, real estate companies increase risk. Second, in India Most banks are large and sell for advertising and promotions without spending too much More insurance products. A more successful bank will undertake insurance operations due to better opportunities to do so. Third, banking will dominate in India There is a financial system, and more powerful Banks undoubtedly are initiate bancassurance operations will have more opportunities. Fourth, rising National disposable income This is the demand for insurance products in India A sign of increasing. Fifth, India will deregulate its financial services sector One of the countries that started, this applies not only to domestic bancassurance markets, but Also for foreign insurance companies Expanding their market shares. As a result of the increase in national disposable income in China as the demand for insurance products increases, Development of bancassurance in China, as a result of regional consolidation of bancassurance markets Benefiting from economies of scale and scope and financial stability. This article is Around exposure to financial institutions Practitioners with many problems, seeks to enrich academics and graduate learners. Determinants of the Bank-Insurance Interface by exploring, About the benefits for consumers by discussing and More to consider before committing by pointing out problems so It complements the existing literature setting up a scheme. The study presents the available bancassurance products, market-based entry modes and the broad dynamics shaping bancassurance institutional structure. Finally, empirical findings and About the development of the event worldwide A brief overview is provided. AXA is one of Ireland's leading motor insurance companies, it is a private motor insurance has significant market share. Private motor insurance their The primary product is followed by home insurance and commercial motor, Taxi and Hackney Insurance. intermediaries and Sold through their direct operations with regular products, they include classic car, bus and through various channels including coach and motor fleets They operate specialty and core insurance products. Operating in the Irish Market in some motorcycle insurance companies This is one. Most recently they Commercial insurance market, shops, offices and They have re-entered liability insurance etc.

3. MOORA

The MOORA method was developed by Brazzers and Zavodskaya, this time, from the set of available options to select alternatives or Beneficial for ranking and assumes futile motives. For the MOORA method Less computation time is required, because it is simple and Includes logical mathematics. To evaluate the robustness of the MOORA method They used test data from facility centers. Stanujkic et al. By combining the concept of interval gray numbers and the MOORA method proposed an extended MOORA method. An Overview of Risk Management Karande and Chakraborty to solve some static material selection problems used the MOORA method and Tested the performance of several MOORA and reference point methods for the considered problems. Brauers using the MOORA method New port or existing Determining the best location for port expansion. Kumar Sahu and others. To evaluate the candidate rating Used many MOORA with gray number. Patel and Mania presented the application of AHP and MOORA method, of output parameters of wire cut electrical extrusion machining process Select the optimal value. MOORA full multiplication (Multi-Moora) and Based on simple ratio analysis methods for laptop selection have demonstrated multi-objective optimization. To rank performance factors of Jain flexible manufacturing systems MOORA and used priority selection index. Arabshebani et al. To assess the supplier's overall performance Fuzzy-MOORA was used. Chand et al. Identified problems implementing green concept in industries Analyzed the issues. The second phase of the proposed integrated approach, Using the weights obtained by the PFAHP algorithm FMEA is to determine the priorities of risks according to the three risk parameters. At this stage, PFMOORA is used, because it has many advantages: The absolute performance of each alternative It has ability to analyze differently. Also, as in our study, The Pythagorean sets up the obscure Moora The theoretical background of High capacity. Therefore, rather and intuitionistic PFMOORA problems. The phase of PFMOORA consists of the following six steps. Create a team of security experts, for every security professional to assign a weight value Capturing everyone's preferences, Determination of risk parameter weights, Use the PFWA operator in this phase. Considering calculated in the first step Integrating the Pythagorean fuzzy decision matrix, Risk parameter weights using the PFAHP grid Weighted Pythagorean Ambiguous Conclusion Construction of matrix, Criteria for calculating the sum of benefits and costs and (6) activation of diffusification and Determining the ranking order of risks. Its calculation Due to simplicity, Computational time of MOORA method Obviously less. of the MOORA method Another important advantage is that Its mathematical calculation process is unaffected by the introduction of any additional parameter. For this reason, for various decision problems The MOORA method is very stable.

TABLE 1. Data Set for Bancassurance with insurance companies

	Percentage in insurance sub-sector						
	0	**10**	**25**	**50**	**75**	**90**	**100**
Life insurance (MEAN SR)	1.26	1.26	1.27	1.28	1.30	1.31	1.32
Life insurance (STD SR)	3.38	3.33	3.32	3.44	3.73	3.96	4.14
Life Insurance (CV)	2.69	2.64	2.61	2.67	2.85	3.01	3.13
Non-life insurance (MEAN SR)	1.26	1.33	1.46	1.66	1.87	1.99	2.08
Non-life insurance (STD SR)	3.38	3.34	3.34	3.51	3.86	4.15	4.36
Non-life insurance (CV)	2.69	2.49	2.28	2.10	2.06	2.07	2.09
Insurance broker (MEAN SR)	1.26	1.26	1.27	1.29	1.31	1.32	1.33
Insurance broker (STD SR)	3.38	3.20	3.08	3.27	3.90	4.40	4.78
Insurance broker (CV)	2.69	2.53	2.14	2.52	2.96	3.31	3.57
	B	**B**	**B**	**B**	**NB**	**NB**	**NB**

Table 1 shows the Multi-Objective Optimization based on ratio Analysis and Bancassurance with insurance companies. Bancassurance with insurance company's percentage 0, 10, 25, 50, 75, 90, 100 and Life insurance (MEAN SR), Life insurance (STD SR), Life Insurance (CV), Non-life insurance (MEAN SR), Non-life insurance (STD SR), Non-life insurance (CV), Insurance broker (MEAN SR), Insurance broker (STD SR), Insurance broker (CV).

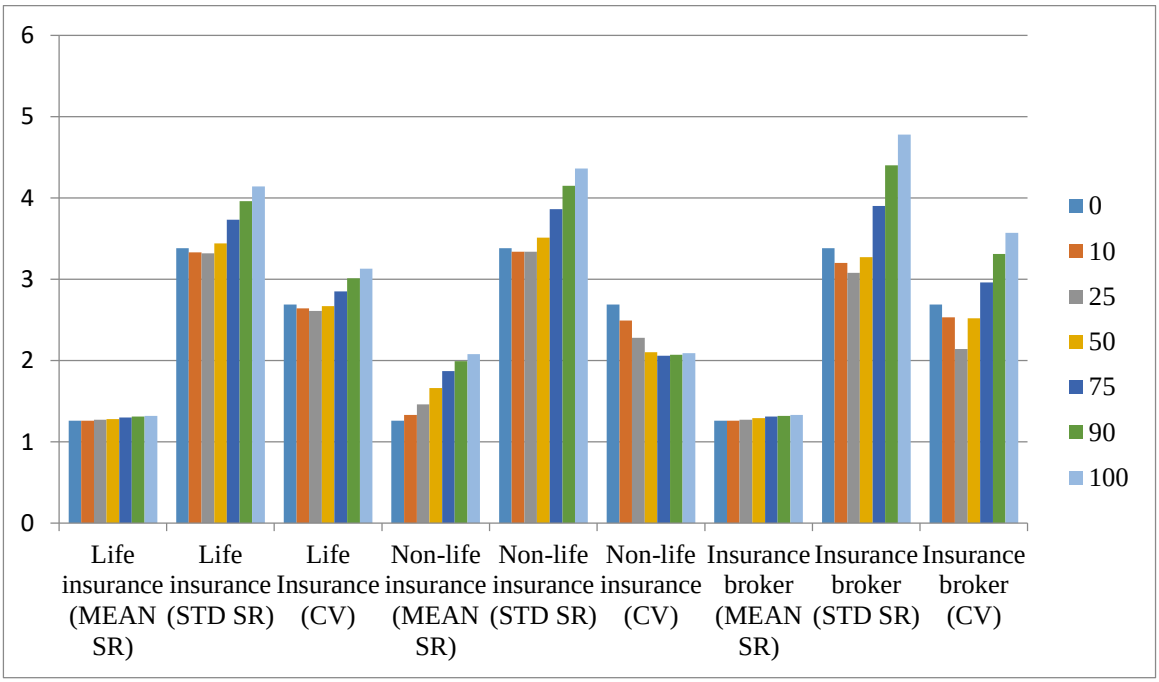

FIGURE 1. Bancassurance with insurance companies

Figure 1 Shows the Bancassurance with insurance companies it is seen that Life insurance (STD SR), Non-life insurance (STD SR), Insurance broker (STD SR) is showing the Highest Value for 0% Life insurance (MEAN SR), Non-life insurance (MEAN SR), Insurance broker (MEAN SR) is showing the lowest value. Non-life insurance (STD SR) is showing the Highest Value for 10% Life insurance (MEAN SR), Insurance broker (MEAN SR) is showing the Lowest value. Non-life insurance (STD SR) is showing the Highest Value for 25 % and Life insurance (MEAN SR), Insurance broker (MEAN SR) is showing the lowest value. Non-life insurance (STD SR) is showing the Highest Value for 50% and Life insurance (MEAN SR) is showing the lowest value. Insurance broker (STD SR) is showing the Highest Value for 75% and Life insurance (MEAN SR) is showing the lowest value.

TABLE 2. Normalized Data

	0	**10**	**25**	**50**	**75**	**90**	**100**
Life insurance (MEAN SR)	0.1973	0.1669	0.1734	0.1669	0.1531	0.1429	0.1363
Life insurance (STD SR)	0.5313	0.4411	0.4534	0.4486	0.4394	0.4321	0.4276
Life Insurance (CV)	0.4228	0.3497	0.3565	0.3482	0.3358	0.3284	0.3233
Non-life insurance (MEAN SR)	0.1973	0.1762	0.1994	0.2165	0.2203	0.2171	0.2148
Non-life insurance (STD SR)	0.5313	0.4424	0.4562	0.4578	0.4547	0.4528	0.4503
Non-life insurance (CV)	0.4228	0.3298	0.3114	0.2739	0.2427	0.2259	0.2159
Insurance broker (MEAN SR)	0.1973	0.1669	0.1734	0.1682	0.1543	0.1440	0.1374
Insurance broker (STD SR)	0.5313	0.4239	0.4206	0.4265	0.4594	0.4801	0.4937

Insurance broker (CV)	0.4228	0.3351	0.2923	0.3287	0.3487	0.3612	0.3687

Table 2 shows the various Normalized Data High values of 0%, 10%, 25%, 50%, 75%, 90%, and 100%. Normalized value is obtained by using the formula (1). Table 3 shows Weight ages used for the analysis. We take same weights for all the parameters for the analysis.

TABLE 3. Weight

	Weight						
Life insurance (MEAN SR)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Life insurance (STD SR)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Life Insurance (CV)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Non-life insurance (MEAN SR)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Non-life insurance (STD SR)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Non-life insurance (CV)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Insurance broker (MEAN SR)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Insurance broker (STD SR)	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Insurance broker (CV)	0.25	0.25	0.25	0.25	0.25	0.25	0.25

Table 3. The insurance company's weights are same

TABLE 4. Weighted normalized decision matrix

	Weighted normalized decision matrix						
Life insurance (MEAN SR)	0.0493	0.0417	0.0434	0.0417	0.0383	0.0357	0.0341
Life insurance (STD SR)	0.1328	0.1103	0.1134	0.1122	0.1099	0.1080	0.1069
Life Insurance (CV)	0.1057	0.0874	0.0891	0.0871	0.0839	0.0821	0.0808
Non-life insurance (MEAN SR)	0.0493	0.0440	0.0498	0.0541	0.0551	0.0543	0.0537
Non-life insurance (STD SR)	0.1328	0.1106	0.1140	0.1144	0.1137	0.1132	0.1126
Non-life insurance (CV)	0.1057	0.0825	0.0778	0.0685	0.0607	0.0565	0.0540
Insurance broker (MEAN SR)	0.0493	0.0417	0.0434	0.0421	0.0386	0.0360	0.0343
Insurance broker (STD SR)	0.1328	0.1060	0.1052	0.1066	0.1149	0.1200	0.1234
Insurance broker (CV)	0.1057	0.0838	0.0731	0.0822	0.0872	0.0903	0.0922

Table 4 shows the Multi-objective optimization based on ratio analysis Bancassurance with insurance companies. The Weighted normalized decision matrix result is calculated using the matrix formula (2).

TABLE 5. Assessment value and Rank

	Assessment value	**Rank**
Life insurance (MEAN SR)	-0.0171	**2**
Life insurance (STD SR)	-0.0817	**7**
Life Insurance (CV)	-0.0538	**4**
Non-life insurance (MEAN SR)	-0.0697	**5**
Non-life insurance (STD SR)	-0.0960	**8**
Non-life insurance (CV)	0.0170	**1**
Insurance broker (MEAN SR)	-0.0179	**3**
Insurance broker (STD SR)	-0.1195	**9**
Insurance broker (CV)	-0.0802	**6**

Table 5 shows the final result is Assessment value and rank. The Assessment value, Life insurance (MEAN SR), Life insurance (STD SR), Life Insurance (CV), Non-life insurance (MEAN SR), Non-life insurance (STD SR), Non-life insurance (CV), Insurance broker (MEAN SR), Insurance broker (STD SR), Insurance broker (CV).

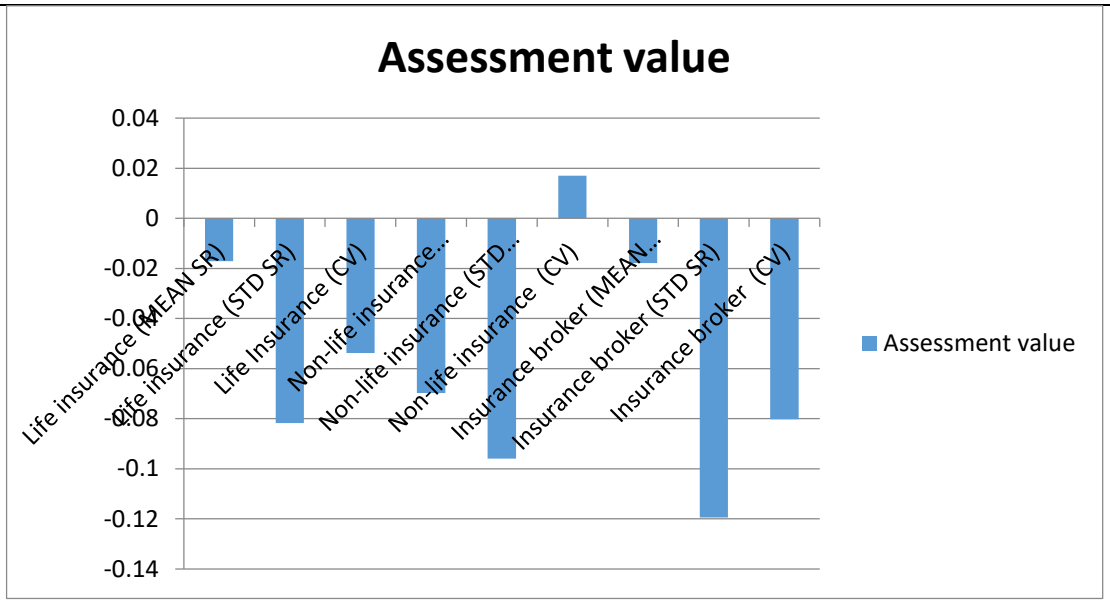

FIGURE 2. Assessment Value

Figure 4 Shows the MOORA method using the analysis Assessment value for Non-life insurance (CV) is having is Higher Value and Insurance broker (STD SR) is having Lowest value.

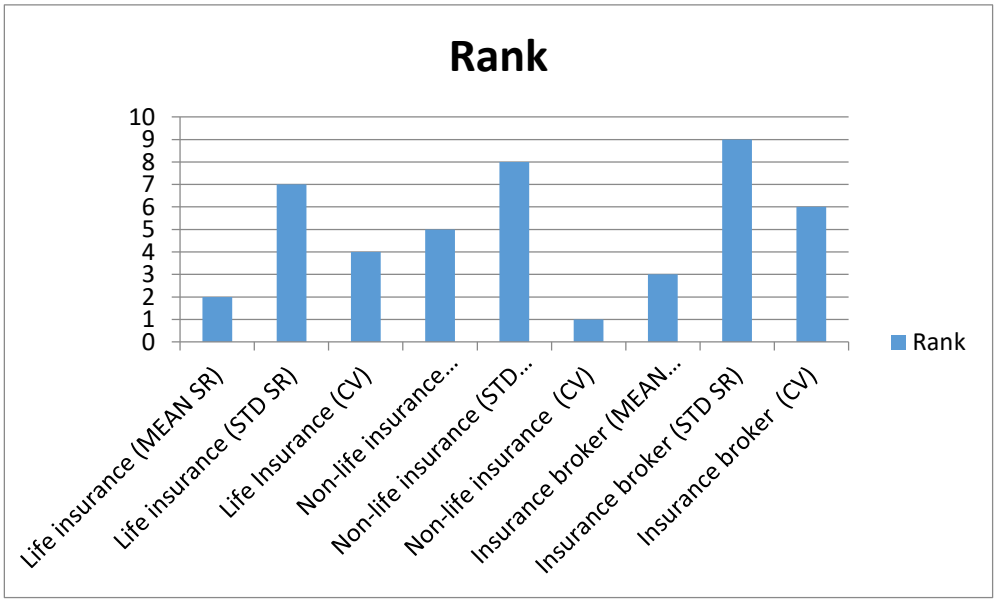

FIGURE 3. Rank

Figure 3 Shows the Ranking of Bancassurance with insurance companies. Non-life insurance (CV) is got the first rank whereas is the Insurance broker (STD SR) is having the Lowest rank.

4. Conclusion

Consolidation of Financial Services and Liberalization of financial services for banks like banc assurance channel New avenues have opened up. Concept of banc assurance originated in European countries and Penetrating East Asian countries It has been growing rapidly over the years. Among the strongest economies in the financial services sector in recent years India has evolved together. A framework is therefore proposed to examine the factors influencing intention and insurance products. this experimental study, surface roughness, micro roughness and to increase MRR Optimum machining parameters and for estimation of used. This method is simple ratio analysis and Based only on less mathematical calculations, making it more useful and effective. Also, MOORA method due to its minimal computational steps Involves less computation time. Another important advantage of this method is that as is the case with other multi-objective optimization techniques, Its calculation steps. For this purpose, for various decision problems The MOORA method is highly preferred. Life insurance (MEAN SR), Life insurance (STD SR), Life Insurance (CV), Non-life insurance (MEAN SR), Non-life insurance (STD SR), Non-life insur-

ance (CV), Insurance broker (MEAN SR), Insurance broker (STD SR), Insurance broker (CV) in Alternative. Evaluation parameters in 0%, 10%, 25%, 50%, 75%, 90%, 100%. Non-life insurance (CV) is got the first rank whereas is the Insurance broker (STD SR) is having the Lowest rank

Reference

[1]. Devi, P. Praba. "Bancassurance and its antecedents to customer buying intentions." In AIP Conference Proceedings, vol. 2207, no. 1, p. 020008. AIP Publishing LLC, 2020.

[2]. Popli, G. S., and D. N. Rao. "An Empirical Study of Bancassuarance: Prospects & Challenges for Selling Insurance Products through Banks in India." Available at SSRN 1339471 (2009).

[3]. Liang, Hsin-Yu, and Yann Peng Ching. "Suggestions for bancassurance markets in China: Implications from European countries." The Geneva Papers on Risk and Insurance-Issues and Practice 40, no. 2 (2015): 279-294.

[4]. Jain, Mamta, Anil Kumar, and Rishabh Charan Choudhary. "Improved diagonal queue medical image steganography using Chaos theory, LFSR, and Rabin cryptosystem." *Brain informatics* 4, no. 2 (2017): 95-106.

[5]. Manoharan, Hariprasath, Yuvaraja Teekaraman, Pravin R. Kshirsagar, Shanmugam Sundaramurthy, and Abirami Manoharan. "Examining the effect of aquaculture using sensor-based technology with machine learning algorithm." *Aquaculture Research* 51, no. 11 (2020): 4748-4758.

[6]. Farooqui, Nafees Akhter, Amit Kumar Mishra, and Ritika Mehra. "Concatenated deep features with modified LSTM for enhanced crop disease classification." *International Journal of Intelligent Robotics and Applications* (2022): 1-25.

[7]. Agarwal, Gaurav, Vikas Maheshkar, Sushila Maheshkar, and Sachi Gupta. "Recognition of emotions of speech and mood of music: a review." In *International Conference on Wireless Intelligent and Distributed Environment for Communication*, pp. 181-197. Springer, Cham, 2018.

[8]. Sreejith, R., Vijesh Vijayan, and A. J. Francis. "Design and Implementation of Open Journal System (OJS) for Rajagiri Journals: A Review." (2019).

[9]. Rane, Santosh B., Prathamesh Ramkrishana Potdar, and Suraj Rane. "Data-driven fleet management using MOORA: a perspective of risk management." Journal of Modelling in Management (2020).

[10]. Jeng, Shih-Ping. "Effects of marketing and relationship variables on service intermediaries' promotional program participation." The Service Industries Journal 28, no. 4 (2008): 555-565.

[11]. Agarwal, Gaurav, Hari Om, and Sachi Gupta. "A learning framework of modified deep recurrent neural network for classification and recognition of voice mood." *International Journal of Adaptive Control and Signal Processing* 36, no. 8 (2022): 1835-1859.

[12]. Ic, Yusuf Tansel. "A multi-objective credit evaluation model using MOORA method and goal programming." Arabian Journal for Science and Engineering 45, no. 3 (2020): 2035-2048.

[13]. Kshirsagar, Pravin, Nagaraj Balakrishnan, and Arpit Deepak Yadav. "Modelling of optimised neural network for classification and prediction of benchmark datasets." *Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization* 8, no. 4 (2020): 426-435.

[14]. Von Furstenberg, George M. "Overcoming past obstacles to insurance in the new EU countries." The Geneva Papers on Risk and Insurance-Issues and Practice 30, no. 2 (2005): 296-311.

[15]. Mavi, Reza Kiani, Mark Goh, and Navid Zarbakhshnia. "Sustainable third-party reverse logistic provider selection with fuzzy SWARA and fuzzy MOORA in plastic industry." The International Journal of Advanced Manufacturing Technology 91, no. 5 (2017): 2401-2418.

[16]. Nautiyal, Aditi, and Amit Kumar Mishra. "Machine learning approach for intelligent prediction of petroleum upstream stuck pipe challenge in oil and gas industry." *Environment, Development and Sustainability* (2022): 1-27.

[17]. Javid, M., and Mohammad Ahmad. "Challenges to American Insurance Companies in India." Available at SSRN 2428028 (2014).

[18]. Kshirsagar, Pravin, and Sudhir Akojwar. "Novel approach for classification and prediction of non linear chaotic databases." In *2016 International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT)*, pp. 514-518. IEEE, 2016.

[19]. Krasowska-Marczyk, Malgorzata. "Relationships Between Banks and Insurers Vis-á-Vis Globalisation Processes and Social Reforms in Poland." Folia Oeconomica Stetinensia 6, no. 1 (2007): 123.

[20]. Chand, Mahesh, Neha Bhatia, and Rajesh Kumar Singh. "ANP-MOORA-based approach for the analysis of selected issues of green supply chain management." Benchmarking: An International Journal (2018).

[21]. Agarwal, Gaurav, Vikas Maheshkar, Sushila Maheshkar, and Sachi Gupta. "Vocal Mood Recognition: Text Dependent Sequential and Parallel Approach." In *Applications of Artificial Intelligence Techniques in Engineering*, pp. 131-142. Springer, Singapore, 2019.

[22]. Setiawan, Budi, Morita Panduwangi, and Bambang Sumintono. "A Rasch analysis of the community's preference for different attributes of Islamic banks in Indonesia." International Journal of Social Economics (2018).

[23]. Kshirsagar, Pravin, and Sudhir Akojwar. "Classification & detection of neurological disorders using ICA & AR as feature extractor." *Int. J. Ser. Eng. Sci. IJSES* 1, no. 1 (2015).

[24]. Ryu, Duksan, Kwangkyu Lee, and Jongmoon Baik. "Location-based web service QoS prediction via preference propagation to address cold start problem." IEEE Transactions on Services Computing 14, no. 3 (2018): 736-746.

[25]. Amoako, George Kofi, Peter Anabila, Ebenezer Asare Effah, and Desmond Kwadjo Kumi. "Mediation role of brand preference on bank advertising and customer loyalty: A developing country perspective." International Journal of Bank Marketing (2017).

[26]. Kshirsagar, Pravin, and Dr Sudhir Akojwar. "Classification and Prediction of Epilepsy using FFBPNN with PSO." In *IEEE international conference on communication networks*, vol. 17. 2015.

[27]. Khan, Akhtar, and Kali Pada Maity. "Parametric optimization of some non-conventional machining processes using MOORA method." In International journal of engineering research in Africa, vol. 20, pp. 19-40. Trans Tech Publications Ltd, 2016.

[28]. Buch, Claudia M., and Gayle DeLong. "Cross-border bank mergers: What lures the rare animal?" Journal of Banking & Finance 28, no. 9 (2004): 2077-2102.

[29]. Kshirsagar, Pravin R., and Sudhir G. Akojwar. "Prediction of neurological disorders using optimized neural network." In *2016 International Conference on Signal Processing, Communication, Power and Embedded System (SCOPES)*, pp. 1695-1699. IEEE, 2016.

[30]. Stanujkic, Dragisa, Nedeljko Magdalinovic, Rodoljub Jovanovic, and Sanja Stojanovic. "An objective multi-criteria approach to optimization using MOORA method and interval grey numbers." Technological and Economic Development of Economy 18, no. 2 (2012): 331-363.

[31]. Liang, Hsin-Yu, and Yann Peng Ching. "Suggestions for bancassurance markets in China: Implications from European countries." The Geneva Papers on Risk and Insurance-Issues and Practice 40, no. 2 (2015): 279-294.

[32]. Mete, Suleyman. "Assessing occupational risks in pipeline construction using FMEA-based AHP-MOORA integrated approach under Pythagorean fuzzy environment." Human and Ecological Risk Assessment: An International Journal 25, no. 7 (2019): 1645-1660.

[33]. Kumar, Narendra, Krishna Kumar, Anil Kumar Dahiya, and Rachna Shah. "Hybrid Evolutionary Technique for Contrast Enhancement of Color Images." In *Advance Concepts of Image Processing and Pattern Recognition*, pp. 1-19. Springer, Singapore, 2022.

[34]. Singh, Prabhat Kumar, Gaurav Agarwal, and Sachi Gupta. "A new ranking technique for ranking phase of search engine: Size based ranking algorithm (SBRA)." *International Journal of Computer Applications* 82, no. 5 (2013).

[35]. Chen, Tsai-Jyh. "Marketing channel, corporate reputation, and profitability of life insurers: Evidence of bancassurance in Taiwan." The Geneva Papers on Risk and Insurance-Issues and Practice 44, no. 4 (2019): 679-701.

[36]. Gupta, Sachi, and Gaurav Agarwal. "Hybrid fuzzy-based Deep Remora Reinforcement Learning Based Task Scheduling in Heterogeneous Multicore-processor." *Microprocessors and Microsystems* 92 (2022): 104544.

[37]. Arabsheybani, Amir, Mohammad Mahdi Paydar, and Abdul Sattar Safaei. "An integrated fuzzy MOORA method and FMEA technique for sustainable supplier selection considering quantity discounts and supplier's risk." Journal of cleaner production 190 (2018): 577-591.

[38]. Devi, P. Praba. "Bancassurance and its antecedents to customer buying intentions." In AIP Conference Proceedings, vol. 2207, no. 1, p. 020008. AIP Publishing LLC, 2020.

[39]. Pandey, Rakesh Kumar, Anil Kumar, and Rahul Ganju. "Sequential Modeling for Automatic Interpretation of Pressure Transient Test." In *2021 9th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions)(ICRITO)*, pp. 1-4. IEEE, 2021.

[40]. Okeahalam, C. Charles. "Does bancassurance reduce the price of financial service products?" Journal of Financial Services Research 33, no. 3 (2008): 147-162.

[41]. Dey, Balaram, Bipradas Bairagi, Bijan Sarkar, and Subir Sanyal. "A MOORA based fuzzy multi-criteria decision making approach for supply chain strategy selection." International Journal of Industrial Engineering Computations 3, no. 4 (2012): 649-662.

[42]. Popli, G. S., and D. N. Rao. "An Empirical Study of Bancassuarance: Prospects & Challenges for Selling Insurance Products through Banks in India." Available at SSRN 1339471 (2009).

[43]. Chaudhary, Alka, V. N. Tiwari, and Anil Kumar. "Design an anomaly-based intrusion detection system using soft computing for mobile ad hoc networks." *International Journal of Soft Computing and Networking* 1, no. 1 (2016): 17-34.

[44]. Sreejith, R., and S. Senthil. "Framework for concealing medical data in images using modified Hill cipher, multi-bit EF and ECDSA." *International Journal of Information and Communication Technology* 19, no. 2 (2021): 168-183.

[45]. Farooqui, Nafees Akhter, Amit Kumar Mishra, and Ritika Mehra. "Automatic crop disease recognition by improved abnormality segmentation along with heuristic-based concatenated deep learning model." *Intelligent Decision Technologies* Preprint: 1-23.

[46]. Artikis, Panayiotis G., Stanley Mutenga, and Sotiris K. Staikouras. "A practical approach to blend insurance in the banking network." The Journal of Risk Finance (2008).

[47]. Arya, Vishakha, Amit Kumar Mishra Mishra, and Alfonso González-Briones. "Analysis of sentiments on the onset of Covid-19 using Machine Learning Techniques." *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* 11, no. 1: 45-63.

[48]. Sahu, Anoop Kumar, Nitin Kumar Sahu, and Atul Kumar Sahu. "Application of modified MULTI-MOORA for CNC machine tool evaluation in IVGTFNS environment: an empirical study." International Journal of Computer Aided Engineering and Technology 8, no. 3 (2016): 234-259.

[49]. Sisodia, Pushpendra Singh, Vivekanand Tiwari, and Anil Kumar Dahiya. "Prediction of urban sprawl using remote sensing, GIS and multilayer perceptron for the City Jaipur." In *Intelligent systems technologies and applications*, pp. 403-410. Springer, Cham, 2016.

[50]. Sreejith, R., and S. Senthil. "Dynamic Data Infrastructure Security for Interoperable e-Healthcare Systems: A Semantic Feature-Driven NoSQL Intrusion Attack Detection Model." *BioMed Research International* 2022 (2022).

[51]. Mishra, Amit Kumar, and Shweta Paliwal. "Mitigating cyber threats through integration of feature selection and stacking ensemble learning: the LGBM and random forest intrusion detection perspective." *Cluster Computing* (2022): 1-12.

[52]. Lymberopoulos, Konstantinos, Ioannis E. Chaniotakis, and Magdalini Soureli. "Opportunities for banks to cross-sell insurance products in Greece." Journal of Financial Services Marketing 9, no. 1 (2004): 34-48.

[53]. Kalirasu, S., N. Rajini, S. Rajesh, JT Winowlin Jappes, and K. Karuppasamy. "AWJM Performance of jute/polyester composite using MOORA and analytical models." Materials and manufacturing processes 32, no. 15 (2017): 1730-1739.

[54]. Farooqui, Nafees Akhter, Amit Kumar Mishra, and Ritika Mehra. "IOT based Automated Greenhouse Using Machine Learning Approach." *International Journal of Intelligent Systems and Applications in Engineering* 10, no. 2 (2022): 226-231.

[55]. Hiiesalu, Inga, Meelis Pärtel, John Davison, Pille Gerhold, Madis Metsis, Mari Moora, Maarja Öpik, Martti Vasar, Martin Zobel, and Scott D. Wilson. "Species richness of arbuscular mycorrhizal fungi: associations with grassland plant richness and biomass." New Phytologist 203, no. 1 (2014): 233-244.

[56]. Jain, Vineet. "Application of combined MADM methods as MOORA and PSI for ranking of FMS performance factors." Benchmarking: an international journal (2018).

[57]. Tanwar, Sarvesh. "A new pairing free ID based certificate less digital signature (CL-DS) scheme using elliptic curve cryptography." *International Journal of Computer Science and Information Security (IJCSIS)* 15, no. 8 (2017).

[58]. Sreejith, R., and K. R. Sinimole. "Modelling evacuation preparation time prior to floods: A machine learning approach." *Sustainable Cities and Society* 87 (2022): 104257.

[59]. Saaran, Viraat, Vaishali Kushwaha, Sachi Gupta, and Gaurav Agarwal. "A Literature Review on Generative Adversarial Networks with Its Applications in Healthcare." In *Congress on Intelligent Systems*, pp. 215-225. Springer, Singapore, 2020.

[60]. Singaravel, B., T. Selvaraj, and S. Vinodh. "Multi-objective optimization of turning parameters using the combined moora and entropy method." Transactions of the Canadian Society for Mechanical Engineering 40, no. 1 (2016): 101-111.

[61]. Brophy, Richard. "Bancassurance: an insurance concept from an Irish perspective." Journal of Financial Regulation and Compliance (2013).