Original Article

Performance Of Organic And Non Organic Farming In Theni District Of Tamilnadu

Dr. S. Thangamayan[1]*, Prof. Dr. Asha Sundaram, Dr. G.Mythili

[1]Assistant Professor, Department of Research and Development Saveetha School of Law SIMATS.
[2]Professor & Principal Saveetha School of Law, SIMATS Chennai, Tamilnadu.
[3]Associate Professor, Department of Research and Development Saveetha School of Law SIMATS.

***Corresponding Author:** Dr. S. Thangamayan

[1]Assistant Professor, Department of Research and Development Saveetha School of Law SIMATS.
DOI: 10.47750/pnr.2022.13.S05.07

Abstract

This study is discussing about impacts of organic farming in the research area. According to this study, affects are categorized in least expensive, environmental, organizational and subsequently others. This take a look at tries to bring together one of a kind problems inside the mild of latest trends for organic farming problems and prospective within the state of Tamil Nadu. The top vital is the advancement of a stable soil-plant-circumstance framework to diminish Land corruption and maltreatment of the information assets. The improvement of our hometown with a point of view to select up the individual success of the overall people is stated to be local improvement. Another methodology of advancing eco-accommodating cultivating is through the alternate of the prevailing frameworks of cultivating inside the zone of soil supplement rebuilding to empower the utilization of herbal substances, named herbal cultivating. Country's advancement is a effective strategy, which is basically confused with the neighborhood domain names. In view of the economic significance of natural farming, the present examine was taken up in Theni district of Tamil Nadu, India. The consequences of the study agriculture growers confirmed that chemical fertilizers cost had rather significantly effect on adoption of natural farming whereas in case of cotton growers, chemical fertilizers value and records obtained from NGO's especially influenced on adoption of organic farming. The most crucial constraints recognized with the aid of the natural growers in productiveness of natural banana and coconut were non availability of labour and organic certification whereas traditional growers' constraints have been non availability of labour and high wage rate.

Key words: Organic, Non-Organic Farming, Agriculture, Cultivation.

INTRODUCTION

Organic Farming as per the definition of the USDA study team on organic farming "organic farming is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc) and to the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection". In another definition FAO suggested that "Organic agriculture is a unique production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs".

ORGANIC AGRICULTURE

The British botanist Sir Albert Howard, often referred to as the father of modern organic agriculture, works as an agricultural adviser in Pusa, Bengal, (now in Bihar), where he documents traditional Indian farming practices, and came to regard them as superior to his conventional agriculture science. In the United States, J. I. Rodale begins to popularize the term and methods of organic growing, particularly to consumers through promotion of organic gardening. Organic agriculture must sustain and beautify the fitness of soil, plant, animal, human and planet as one and indivisible. Healthy soils produce healthful crops that foster the fitness of animals and people. Health is the wholeness and integrity of living systems. The role of natural agriculture, whether in farming, processing, distribution, or intake, is to maintain and decorate the health of ecosystems and organisms from the smallest inside the soil to humans. It can be more labour in depth. For organic farming considers organic, cultural and mechanical responses to manufacturing challenges. It focuses on plant and soil fitness thru right aeration, drainage, fertility, shape and watering. So there is greater above and underneath floor grunt paintings concerned. Organic farming methods aren't as mounted and significant - yet - as traditional manufacturing. So natural manage by using botanicals along with pyrethrin can be more costly than conventional controls by means of the longer installed, more to be had, and wider ranging artificial, industrial, artificial chemical pesticides. Organic farming also requires loads more inputs and extra red-tape than conventional farming because sure practices must be met in order for a farm to preserve the natural label. If whatever slips, then the farm loose natural certification just like that.

STATEMENT OF THE PROBLEM

The responsibility of agricultural sector in providing food and nutrition can hardly be overemphasized. The obligation of agricultural zone in imparting food and nutrition can infrequently be overemphasized. The delivery of food production now not simplest for the rural populace however additionally for the growing city population will pose astounding problems inside the future years. Even to hold the present degrees of ok consumption, food manufacturing has to be stepped up appreciably. Besides, adequate manufacturing of food grains in addition to supplementary protective foods is vital for enhancing the productiveness of labour. Since the productiveness of labour can enhance best while the human capital is endowed with the fitness and power. Thus, thru the adequacy of food both in amount and first-rate, the ability to paintings and earn can be considerably improved which can also result in multiplied production, welfare and happiness, and accelerate financial development of the u. S. Inadequacy of meals and malnutrition can seriously impair efficient effort and keep down improvement. Thus the obligation of presenting ok meals grains production and manufacturing of protecting meals in destiny lies upon the rural region which ultimately would be answerable for accelerating economic development.

OBJECTIVES OF THE STUDY

1. To analyze the profit functions of follow the organic farming in the study area.
2. To prove the yield and yield gap of organic farming in the study area.

HYPOTHESIS OF THE STUDY

Two sets of Hypotheses are formulated:
Null hypothesis Ho: Yield per acre does not differ with the two types of farms.
Alternative Hypothesis H_1: Yield per acre is greater in the case of non- organic farms.
There is significant difference in productivity of banana and coconut within different land size in organic farming. The medium farms are more productive in the production of banana than small and large farms between organic farmers. In the productivity of two types farms also medium farm has more output among organic farmers.

TABLE – 1: FARMERS REGARDING THE MEASURES TO PROMOTE ORGANIC FARMING

Measures to promote organic farming	Frequency	Percent
Provision of subsidy to organic farmers	151	45.5
Make organic certification free of cost	138	38.2
Provide organic manures and inputs	14	.3
Include NREGP in agriculture work	36	9.9
Provide regular training on farming practices	22	6.1
Total	362	100.0

Source: Primary data.

From the above data analysis and interpretation the researcher comes to the realization that natural farming is considerably better than inorganic farming in respect of financial and environmental elements. Organic farming is economically useful to farmers than inorganic farming, because the value of production in line with acre is lower and fees of organic merchandise are higher than inorganic farming. The socio-financial conditions of natural farmers are higher than inorganic farmers. In view of the environmental thing of organic farming, it is seen that natural farming is favourable to the surroundings since it improves soil fertility and minimises the contamination of air, water and soil via surroundings pleasant farming practices. Organic farming is useful socially, economically and environmentally. Therefore farmers ought to undertake organic farming so one can keep away from the negative influences of impacts of chemical farming.

TABLE – 2: COMPARISON OF COST OF ORGANIC MANURES WITH CHEMICAL FERTILIZERS' (IN %)

Type of farm	Response on price	Frequency	Percent
Organic	More	59	16.3
	Don't know	13	3.6
	Total	362	100.0
Non-organic	Less	33	66.0
	More	8	16
	Don't know	9	18.0
	Total	50	100.0

Source: Primary data

Comparison of Cost of between Organic Manures and Chemical Fertilizers'

The response of farmers on the prices of manures and fertilizers is given in the table. There are 80 per cent of organic farmers and 66 per cent of non-organic farmers with the opinion that the price of organic manures is less than that of chemical fertilizers. 16 per cent of farmers are of the view that organic manures are more expensive than chemical fertilizers. 18 per cent of non- organic farmers do not have any knowledge of price differences between organic and chemical manures.

TABLE – 3: PRICES OF THE PRODUCTS IN LOCAL MARKET COMPARED TOFOREIGN MARKET (IN %)

Response	Organic	Percent	Non-organic	Percent
Less	326	90	35	70
More	29	8	12	24
Equal	7	2	3	6
Total	362	100	50	100

Source: Primary data

Impact of Prices of Organic Products on Inorganic Products

In case of organic farming, 73 percent of farmers express their opinion that price of inorganic products does not have any impact on priceof organic products. 17 per cent of farmers do not know whether organic products' prices are influenced by non-organic products.

ADVANTAGES OF ORGANIC FARMING

There are numerous advantages that can be obtained from natural farming. They are improved soil fertility, decrease cost of farming, self-sufficiency, lower pollution, higher fitness of farmers, enhancements in social reputation and many others. The study reveals that 37.3 in line with cent of natural farmers declare that natural farming helped them to reduce the cost of farming. 26.5 according to cent of farmers could improve the fertility of soil by natural farming. Self-sufficiency is carried out through 11 in line with cent of farmers. Health circumstance advanced for nine. Four in step with cent of farmers as a result of natural farming.

TABLE – 4: BENEFITS RECEIVED FROM ORGANIC FARMING

Benefits of organic farming	Frequency	Percent
Better yield	25	6.9
Improved soil fertility	96	26.5
Low cost of production	135	37.3
Self sufficiency	41	11.3
Low pollution	21	5.8
Better health	34	9.4
Rise in social status	10	2.8
Total	362	100.0

Source: Primary data

PROBLEMS FACED BY FARMERS

Like the chemical farming, organic farming is not free from various problems. But problems of organic farming are completely different from problems of non-organic farming. Table 4 depicts the problems faced by organic farmers while cultivating organic farming in the study area. In the view of organic farmers, out of total farmers, around 52.5 per cent of farmers face the problem of low productivity, followed by 15 per cent of percent farmers who face the problem of finance. Only 8.6 per cent farmers face the problem of labour. Moreover, problems related to information and natural calamities are issues of 5.5 per cent of organic farmers, while the remaining problems are minor and negligible.

TABLE – 5: PROBLEMS ENCOUNTERED BY FARMERS: CROSS TABULATION

Problems faced byfarmers	Organic	Percent	Non-organic	Percent
Market related	16	4.4	9	18
Information related	20	5.5	2	4
Low productivity	190	52.5	5	10
Less Price	9	2.5	16	32
Disease Control	21	5.8	2	4
Labours	31	8.6	6	14
Natural Calamities	20	5.5	3	8
Finance	55	15.2	7	14
Total	**362**	**100**	**50**	**100**

Source: Primary data

The non-organic farming is also not free from various problems.Table 4 depicts the problems faced by inorganic farmers while cultivating inorganic farming. On reviewing the problems of inorganic farmers, out of total farmers, around 32 percent farmers face the problem low price whereas only 8 percent farmers face the problem of natural calamities. 14 percent of non-organic farmers face labour related problems whereas lack of market, less price, shortage of finance and disease controlare other major problems faced by them.

RESULTS AND DISCUSSIONS

The researcher has long gone thru extra than four hundred studies articles, books, reports and authorities' rules and

initiatives to collect the information on organic agriculture, its foundation, its theoretical historical past, contribution, demanding situations, possibility, sustainable version and study hole. The observe unearths that there is want of research to know the economics of natural farming and the socio-economic contribution of natural agriculture within the grass root level where farmers are doing the organic agriculture with the wish that they can earn correct go back from it. The goal of this take a look at is about to meet that hole. The study is primarily based on the deductive approach because it has set the studies hypothesis and deducted the idea of existing theory. The study has carried out the descriptive as well as exploratory studies design. The study has defined the reputation of natural agriculture and additionally examined the monetary components of natural agriculture. The cost of the t statistic particularly four.418 is sizeable at five percentage level and subsequently we reject the null speculation. That is fee of cultivation per acre is more within the case of non-natural farms compared to natural farms. The value of production of each banana and coconut is lower for organic farmers. It is Rs 6580 for coins crop and Rs 5978 for coconut. In the case of non-natural farmers the fee of banana is Rs 13455 and for natural agriculture it is RS. 8391. Organic farming is fee powerful in comparison to non-natural farming. Correlation is used to expose the relation among implicit price and overall value. There is powerful correlation between implicit fee and total cost within the case of espresso and moderate correlation among express price and total fee. There is powerful correlation between implicit value and total cost inside the case of banana and mild correlation among express value and total value. Regression of overall cost on express value in the case of espresso is predicted. The linear regression estimated is 26439.Fifty eight + zero.272 x, in which y denotes general value and x denotes explicit fee. The coefficient of determination is zero.243 which indicates that about 24 percentage of the variation in total cost is defined by way of explicit value and the closing 76% by way of other reasons inside the marketplace. The linear regression envisioned is y = -1572.33 + 1.769 x, wherein y denotes general fee and x denotes implicit price. The coefficient of willpower is zero.676 which indicates that approximately sixty seven percentage of the version in total price is defined by using implicit price and the closing 33 percentage by other reasons in the marketplace and regression of overall value on express fee in the case of banana and coconut. The linear regression estimated is y = 11022.22 + 1.482 x, wherein y denotes general cost and x denotes explicit value. The coefficient of dedication is zero.828 which shows that about 83 consistent with cent of the variant in general price is defined with the aid of express value and the ultimate 17 consistent with cent via different reasons in the marketplace regression of overall value on implicit price in the case of banana and coconut. The linear regression expected is y = -2608.19 + 1.697 x, in which y denotes general price and x denotes implicit value. The coefficient of willpower is 0.Seventy five which shows that about seventy five according to cent of the variation in total price is explained by means of implicit price and the ultimate 25 in line with cent by different reasons in the market.

The price of production varies from farmer to farmer, from place to region and among natural and non-organic farmers. The -pattern t exams are used to test the following hypothesis.

Null hypothesis Ho: Cost in keeping with acre does no longer differ with the two varieties of farms.

Alternative Hypothesis H1: Cost according to acre is more inside the case of non- natural farms.

The cost of the t statistic particularly 4.418 is widespread at five consistent with cent degree and for this reason we reject the null hypothesis. That is fee of cultivation in step with acre is more in the case of non-natural farms as compared to organic farms. Organic farming is cost powerful whilst in comparison to non-natural farming.

Future researchers are advocated to analyze why a few farmers keep to use methods of farming that are not economically sound. The effects of the modern look at can be used as the basis for quantitative research on a much wider range among organic farmers within the nation of Tamilnadu. The future researchers are endorsed to do the comparative study of natural and non-natural products to discover their consequences on the health of human beings. Future researchers also are endorsed to conduct studies at the sustainability of organic agriculture in Theni. It is recommended for establishing 'Organic Agriculture Board' to authorities of Kerala. It is recommended to Tamilnadu Government to establish the 'Training and Research Centre' of natural agriculture due to the fact have a look at reveals that extra than 50 consistent with cent farmers are doing the natural agriculture without any formal training that could create the hassle in making sure the high-quality of organic products. The crop yields and economics of natural structures, in comparison to conventional structures, appear to vary based at the vegetation, regions, and technologies employed in the studies. However, the environmental benefits on account of reduced chemical inputs, much less soil erosion, water conservation, and advanced organic count number in soil and biodiversity are continuously extra in the natural systems than within the conventional systems.

CONCLUSION

Organic farming is growing and spreading all over the world. Organic is not only a new venue for export earnings but also part of a culturethat values conservation of nature and life on earth. The export potential is a short-term reward; restoration of environmental health is the long-term reward which will influence all aspects of the life of the people. Therefore, action plans for developing organic farming should be part of a larger plan for nature conservation and health of the community and the land and shouldbe relevant to the social, economic and cultural environmental of Theni district of Tamilnadu . Ultimately organic farming is all about nature conservation. The major challenge of organic farming is yield. Productivity in organic farming is limited by both nutrient shortages and high weed populations. Organic farming

method is superior on account of increaseduse of natural manures, lower cost of cultivation, higher soil fertility, better input use efficiency and reduced risk, increased self-reliance and livelihood security of the farmers. Moreover, it has positive impact on soil conservation. Water is used efficiently demonstrating substantial potential for sustenance of soil and water resources. Thus, organic farming has better economic and environmental benefits. It is crucial to formulate policies and strategies to promote organic farming method in order to realise its full potential in Theni.

Theni district is the largest organic farming agricultural production in the state of Tamilnadu. The banana and coconut cultivation plays a vital role inthe socio-economic development in the rural areas by mobilizing rural resources and generating higher income and employment opportunities in Theni district. Organic production of banana and coconut can generate more export earnings and environmental preservation. The area of organic farming is less in Theni but it has a large potential to cultivate the land through organic farming. Because of Theni has large geographical andarable area, with a wide variety of Agro - Chemical Zones. Organic agriculture provides enhanced health of soil, animals and human beings. Thus it can be concluded that research in the field of organic agriculture has to be intensified both by the government and non- governmental organizations. This will help to bring out efficient adaptation strategies in organic farming which are tailor made for specific crops and regions. Moreover specific efforts have to be made to bring the research output into practice at grass root level.

REFERENCES

1. Aiyappan, A. (1992). The Paniyas: An Ex-slave Tribe of South India. The University of Michigan: Institute of Social Research and Applied Anthropology. pp. 20, 28–29, 80.
2. Chandrashekar, H. M. (2010). Changing scenario of organic farming in India: An overview, International NGO Journal. Vol.5 No.1, pp.34- 40.
3. Colman, D. and Tinker, P.B. (2000), Shades of green - a review of UK farming systems, J. Br. Agric. Vol. 32No. 4, pp 42-58.
4. Dan Rigby, Daniel Cáceres (2001) Organic farming and the sustainability of agricultural systems Agricultural systems Vol.68 No.1, pp 21-40.
5. David Pearson, Joanna Henryks, Hannah Jones (2011) Organic food: What we know (and do not know) about consumers, Renewable Agriculture and Food Systems Vol.26 No.2, pp 171-177.
6. Erik van der Werf (1993) Agronomic and economic potential of sustainable agriculture in South India, American Journal of Alternative Agriculture Vol. 8 No.4, pp 185-191.
7. Gunjal S.S. (1991), "Organic and Natural Farming: Principles of Organic Fanning", Kisan World, June 1991, P. 10, pp. 139-149.
8. GV Ramanjaneyulu (2012) Adapting smallholder agriculture to climate change, IDS Bulletin 43, pp.113-121.
9. Jerome Irving Rodale (1945) Pay Dirt: farming and gardening with composts, Soil Science Vol.60 No.6, pp.491.
10. John Paull (2011) Organics Olympiad 2011: Global indices of leadership in organic agriculture, Journal of Social and Development Sciences 1 Vol. No.4, pp 144-150.
11. MS Gill, Kamta Prasad (2009) Network Project on Organic Farming Research Highlights,Organic Farming News Letter, Vol. 5, No.2, pp 1-30.
12. Pandey J. and Singh A. (2012) Opportunities and Constraints in Organic Farming: An Indian Perspective, Journal of Scientific Research, Varanasi, Banaras Hindu University, Vol. 56, pp 57 93.
13. Ramanjaneyulu (2012) 'Government favouring fertilizer companies not Farmers', The Times of India, 26 July, 2012.
14. Ramesh, P., Singh, M. and Rao, A. S. (2005). Organic Farming: It's Relevance to the Indian Context. Current Science, Vol.88, No.4, pp561-566.
15. Stanhill G. (1990) The comparative productivity of organic agriculture, Agriculture Ecosystem and Environment, Vol.30, pp 1–26.
16. Swaminathan, M. S. (2007) Dealing with the Agrarian Crisis, The Hindu, 28-5- 2007, p: 10.
17. Rathore, M. S., Poongodi, M., Saurabh, P., Lilhore, U. K., Bourouis, S., Alhakami, W., & Hamdi, M. (2022). A novel trust-based security and privacy model for Internet of Vehicles using encryption and steganography. Computers and Electrical Engineering, 102, 108205.
18. Gupta, S., Iyer, S., Agarwal, G., Manoharan, P., Algarni, A. D., Aldehim, G., & Raahemifar, K. (2022). Efficient Prioritization and Processor Selection Schemes for HEFT Algorithm: A Makespan Optimizer for Task Scheduling in Cloud Environment. Electronics, 11(16), 2557.
19. Balyan, A. K., Ahuja, S., Lilhore, U. K., Sharma, S. K., Manoharan, P., Algarni, A. D., & Raahemifar, K. (2022). A Hybrid Intrusion Detection Model Using EGA-PSO and Improved Random Forest Method. Sensors, 22(16), 5986.
20. Ramesh, T. R., Lilhore, U. K., Poongodi, M., Simaiya, S., Kaur, A., & Hamdi, M. (2022). PREDICTIVE ANALYSIS OF HEART DISEASES WITH MACHINE LEARNING APPROACHES. Malaysian Journal of Computer Science, 132-148.
21. Ramesh, T. R., Vijayaragavan, M., Poongodi, M., Hamdi, M., Wang, H., & Bourouis, S. (2022). Peer-to-peer trust management in intelligent transportation system: An Aumann's agreement theorem based approach. ICT Express.
22. Hamdi, M., Bourouis, S., Rastislav, K., & Mohmed, F. (2022). Evaluation of Neuro Image for the Diagnosis of Alzhimer's Disease Using Deep Learning Neural Network. Frontiers in Public Health, 35.
23. Sahoo, S. K., Mudligiriyappa, N., Algethami, A. A., Manoharan, P., Hamdi, M., & Raahemifar, K. (2022). Intelligent Trust-Based Utility and Reusability Model: Enhanced Security Using Unmanned Aerial Vehicles on Sensor Nodes. Applied Sciences, 12(3), 1317.
24. Muniyappan, A., Sundarappan, B., Manoharan, P., Hamdi, M., Raahemifar, K., Bourouis, S., & Varadarajan, V. (2022). Stability and numerical solutions of second wave mathematical modeling on covid-19 and omicron outbreak strategy of pandemic: Analytical and error analysis of approximate series solutions by using hpm. Mathematics, 10(3), 343.
25. Rawal, B. S., Manogaran, G., & Poongodi, M. (2022). Implementing and Leveraging Blockchain Programming.
26. Bourouis, S., Band, S. S., Mosavi, A., Agrawal, S., & Hamdi, M. (2022). Meta-Heuristic Algorithm-Tuned Neural Network for Breast Cancer Diagnosis Using Ultrasound Images. Frontiers in Oncology, 12, 834028.
27. Lilhore, U. K., Poongodi, M., Kaur, A., Simaiya, S., Algarni, A. D., Elmannai, H., & Hamdi, M. (2022). Hybrid Model for Detection of Cervical Cancer Using Causal Analysis and Machine Learning Techniques. Computational and Mathematical Methods in Medicine, 2022.
28. Dhiman, P., Kukreja, V., Manoharan, P., Kaur, A., Kamruzzaman, M. M., Dhaou, I. B., & Iwendi, C. (2022). A Novel Deep Learning Model for Detection of Severity Level of the Disease in Citrus Fruits. Electronics, 11(3), 495.
29. Dhanaraj, R. K., Ramakrishnan, V., Poongodi, M., Krishnasamy, L., Hamdi, M., Kotecha, K., & Vijayakumar, V. (2021). Random Forest Bagging and X-Means Clustered Antipattern Detection from SQL Query Log for Accessing Secure Mobile Data. Wireless Communications and Mobile Computing, 2021.
30. Maurya, S., Joseph, S., Asokan, A., Algethami, A. A., Hamdi, M., & Rauf, H. T. (2021). Federated transfer learning for authentication and privacy preservation using novel supportive twin delayed DDPG (S-TD3) algorithm for IIoT. Sensors, 21(23), 7793.
31. Rawal, B. S., Manogaran, G., & Hamdi, M. (2021). Multi-Tier Stack of Block Chain with Proxy Re-Encryption Method Scheme on the Internet of Things Platform. ACM Transactions on Internet Technology (TOIT), 22(2), 1-20.
32. Rawal, B. S., Manogaran, G., Singh, R., Poongodi, M., & Hamdi, M. (2021, June). Network augmentation by dynamically splitting the switching function in SDN. In 2021 IEEE International Conference on Communications Workshops (ICC Workshops) (pp. 1-6). IEEE.
33. M. M. Kamruzzaman, ""New Opportunities, Challenges, and Applications of Edge-AI for Connected Healthcare in Smart Cities,"" 2021 IEEE Globecom Workshops (GC Wkshps), 2021, pp. 1-6, doi: 10.1109/GCWkshps52748.2021.9682055."

34. Md Selim Hossain, MM Kamruzzaman, Shuvo Sen, Mir Mohammad Azad, Mohammad Sarwar Hossain Mollah, Hexahedron core with sensor based photonic crystal fiber: An approach of design and performance analysis," Sensing and Bio-Sensing Research, 32, 100426
35. Mingju Chen, Xiaofeng Han, Hua Zhang, Guojun Lin, M.M. Kamruzzaman, Quality-guided key frames selection from video stream based on object detection, Journal of Visual Communication and Image Representation, Volume 65, 2019, 102678, ISSN 1047-3203
36. M. M. Kamruzzaman: Performance of Decode and Forward MIMO Relaying using STBC for Wireless Uplink. JNW 9(12): 3200-3206 (2014)
37. M. M. Kamruzzaman, "Performance of Turbo Coded Vertical Bell Laboratories Layered Space Time Multiple Input Multiple Output system," Computer and Information Technology (ICCIT), 2013 16th International Conference on, Khulna, 2014, pp. 455-459.
38. Yan Zhang, M. M. Kamruzzaman, and Lu Feng "Complex System of Vertical Baduanjin Lifting Motion Sensing Recognition under the Background of Big Data," Complexity, vol. 2021, Article ID 6690606, 10 pages, 2021. https://doi.org/10.1155/2021/6690606
39. Md Hossain , MM Kamruzzaman , Shuvo Sen, Mir Mohammad Azad, Mohammad Sarwar Hossain Mollah , Hexahedron Core with Sensor Based Photonic Crystal Fiber, 2021
40. Md Nazirul Islam Sarker, Md Lamiur Raihan, Yang Peng, Tahmina Chumky, MM Kamruzzaman, Roger C Shouse, Huh Chang Deog, "COVID-19: Access to Information, Health Service, Daily Life Facility and Risk Perception of Foreigners during Coronavirus pandemic in South Korea," Archives of Medical Science, 2021, https://doi.org/10.5114/aoms/141164
41. Y. Shi, S. Wang, S. Zhou and M. M. Kamruzzaman. (2020). Study on Modeling Method of Forest Tree Image Recognition Based on CCD and Theodolite. IEEE Access, vol. 8, pp. 159067-159076, 2020, doi: 10.1109/ACCESS.2020.3018180
42. Guobin Chen, Zhiyong Jiang, M.M. Kamruzzaman. (2020). Radar remote sensing image retrieval algorithm based on improved Sobel operator, Journal of Visual Communication and Image Representation, Volume 71, 2020, 102720, ISSN 1047-3203 https://doi.org/10.1016/j.jvcir.2019.102720.
43. Yuanjin Xu, Ming Wei, M.M. Kamruzzaman, Inter/intra-category discriminative features for aerial image classification: A quality-aware selection model,Future Generation Computer Systems,Volume 119,2021,Pages 77-83,ISSN 0167-739X,https://doi.org/10.1016/j.future.2020.11.015.
44. Xing Li, Junpei Zhong, M.M. Kamruzzaman, "Complicated robot activity recognition by quality-aware deep reinforcement learning", Future Generation Computer Systems,Volume 117, 2021, Pages 480-485.
45. Bin Yuan, M. M. Kamruzzaman, Shaonan Shan, "Application of Motion Sensor Based on Neural Network in Basketball Technology and Physical Fitness Evaluation System", Wireless Communications and Mobile Computing, vol. 2021, Article ID 5562954, 11 pages, 2021. https://doi.org/10.1155/2021/5562954
46. Chi, Z., Jiang, Z., Kamruzzaman, M.M. et al. Adaptive momentum-based optimization to train deep neural network for simulating the static stability of the composite structure. Engineering with Computers (2021). https://doi.org/10.1007/s00366-021-01335-5
47. Mehraj, Haider, D. Jayadevappa, Sulaima Lebbe Abdul Haleem, Rehana Parveen, Abhishek Madduri, Maruthi Rohit Ayyagari, and Dharmesh Dhabliya. "Protection motivation theory using multi-factor authentication for providing security over social networking sites." Pattern Recognition Letters 152 (2021): 218-224
48. Everingham, M., Van Gool, L., Williams, C.K.I. et al. The PASCAL Visual Object Classes (VOC) Challenge. Int J Comput Vis 88, 303–338 (2010)
49. C. Farabet, C. Couprie, L. Najman and Y. LeCun, "Learning Hierarchical Features for Scene Labeling," in IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 35, no. 8, pp. 1915-1929, Aug. 2013
50. Geoffrey E. Hinton, Simon Osindero, Yee-Whye Teh; A Fast Learning Algorithm for Deep Belief Nets. Neural Comput 2006; 18 (7): 1527–1554
51. G. Ameta, D. B. (2017, February 1). An efficient algorithm for mining frequent itemsets from compressed transactions using matrix approach. A UGC Approved and Indexed with ICI, DOI, Research Gate, Google Scholar, DPI Digital Library, Scopus (under review), Thomson Reuters (under review)). Retrieved September 17, 2022, from https://www.ijcseonline.org/pdf_paper_view.php?paper_id=1177&10-IJCSE-01969.pdf
52. Ameta, G., & Bhatnagar, D. (1970, January 1). [PDF] an efficient model for secure data publishing: Semantic scholar. undefined. Retrieved September 17, 2022, from https://www.semanticscholar.org/paper/An-efficient-model-for-secure-data-publishing-Ameta-Bhatnagar/069d6012f3da70eb37696007b4ff12d4136c6b0c
53. Ameta, G. K., & Bhatnagar, D. (2019). Development of an Association Rule Hiding Algorithm for Privacy Preserving in Market Basket Databases. International Journal of Innovative Technology and Exploring Engineering (IJITEE), 8(6S), 525–530. Retrieved September 17, 2022, from https://www.ijitee.org/wp-content/uploads/papers/v8i6s/F61080486S19.pdf.
54. Arya, A. D., & Ameta, G. K. (2017). Substitution Based Encryption Model for Cloud Data Storage. International Journal of Research and Scientific Innovation (IJRSI), 4(12), 23–27. Retrieved September 17, 2022, from https://www.rsisinternational.org/journals/ijrsi/digital-library/volume-4-issue-12/23-27.pdf.
55. Arya, A. D., & Ameta, G. K. (2018). 2-Key Based Substitution Encryption Model for Cloud Data Storage. International Journal of Research and Scientific Innovation (IJRSI), 5(3), 142–147. Retrieved September 17, 2022, from https://www.rsisinternational.org/journals/ijrsi/digital-library/volume-5-issue-3/142-147.pdf.
56. Syed Omar and Ch. Mallikarjuna (2016), "Analysis of the Macroscopic Relations for No-Lane Based Heterogeneous Traffic Stream", International Conference: Sustainable Development of Civil Urban and Transportation Engineering (CUTE'2016), Ho Chi Minh City, Vietnam, April 11 – 14.
57. Syed Omar and Ch. Mallikarjuna (2016), "Analysis of the Macroscopic Relations for No-Lane Based Heterogeneous Traffic Stream", Procedia Engineering, Vol.142, Pages 244–251.
58. Syed Omar B., Pranab, K.,and Mallikarjuna, C (2018), "Determination of the PCEs for multilane divided rural highways under heterogeneous traffic conditions". TRB Paper No. 18-02596, Transportation Research Board (TRB), 97thAnnual meeting. Washington, DC. USA, January, 2018.
59. Syed Omar B., Pranab K., and Mallikarjuna, C., (2018), "Passenger Car Equivalents for the Heterogeneous Traffic on Divided Rural Highways based on Simulation Model". Transportation in Developing Economies (TIDE), Vol 4 (14).
60. Dr. Syed Omar Ballari.,(2019), "Estimation of Passenger Car Equivalents for Heterogeneous Traffic Stream", International Journal of Innovative Technology and Exploring Engineering (IJITEE), April 2019, Vol.8 (6), Pages 1026-1031.
61. Syed Omar B., Pranab K., and Mallikarjuna, C., (2019), "Passenger Car Equivalent Estimation for Rural Highways: Methodological Review, 15th World Conference on Transport Research
62. Dr. Syed Omar Ballari.,(2019), "Area Occupancy characteristics in Traffic flow on Urban Highway: A case Study",Journal of Advanced Research in Dynamical and Control Systems (JARDCS), November 2019, Vol.11 (10), Pages 18-26.
63. Dr. Syed Omar Ballari., (2020), "Passenger-car equivalent estimation methods of trucks in traffic stream", International Journal of Recent Technology and Engineering (IJRTE). January 2020, Vol.8 (5), Pages 710-716.
64. Syed Omar Ballari (2022), "An Empirical Approach for Evaluation and Improvement of Roundabouts in Hyderabad", Yantu Gongcheng Xuebao/Chinese Journal of Geotechnical Engineering, February 2022, Vol 44 (02), pp. 6– 13.
65. S.V. Priyakumari, Dr. S. Karthik (2017), Microfinance through Neighborhood Group- Empowerment Mantra for the sustainable Development. Journal of Advanced Research in Dynamical and control system, 05-Special issue, July 2017, 57-61.
66. Dr. S. Karthik, Dr. R. Selvakumar, Customer satisfaction towards Hyundai Car in Virudhunagar District. International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Volume-9 Issue-2S2, December 2019 460-463.
67. Dr. N. Kanimozhi, Dr. S.Karthik, S.Umamaheswari,Customer Preference and Customer satisfaction Towards Life Insurance Policy in Coimbatore. Journal XI AN university of Architecture andTechnology, Volume XII, Issue V, 2020, ISSN No: 1006-7930, Page No. 1938-1942.
68. Chinoy Danesh Dinyar (2013), "Latest Improvements and Treatment Implications of Serious Musculoskeletal Pain", Journal of Advances in Science and Technology, ISSN 2230-9659, Vol. V, No. IX, May-2013.
69. Chinoy Danesh Dinyar(2017), "Ideal work Rest Scheduler for Computers Users" , International Journal of Current Research, ISSN: 0975-833X, Vol. 9, Issue, 06, pp.53055-53059, June, 2017.

70. Chinoy Danesh Dinyar (2017), "Comparing the effectiveness of motor control exercises versus Mckenzie exercises for work related back pain in Wolaitasodo University staff", International Journal of Current Research, ISSN: 0975-833X ,Vol. 9, Issue, 07, pp.55177-55180, July, 2017
71. Chinoy Danesh Dinyar (2013), "Musculoskeletal Pain: A Study on Various Contributory and Alternative Remedy Methods", Journal of Advances in Science and Technology, ISSN 2230-9659, Vol. V, No. X, August-2013.
72. D Arunkumar, V Ramesh, Skanda M G, "Implementation of Rapid Upper Limb Assessment Technique in Automotive Parts Manufacturing Industry" International Journal of Recent Technology and Engineering ISSN: 2277-3878, Volume-8, Issue-3, September 2019.
73. Skanda M G, V Ramesh, "Industrial Accidents and Individual Differences: A Review on Personality Traits and Accident Proneness in Manufacturing Sectors", Journal of Advanced Research in Dynamical & Control Systems, Vol. 10, 05-Special Issue, 2018, ISSN 1943-023X.
74. Kashid, A. A., Patil, D. J., Mali, R. D., Patil, V. P., Neethu, T. V., Meroliya, H. K., ... & Iyer, S. (2021). Bimetallic Ni–Pd Synergism—Mixed Metal Catalysis of the Mizoroki-Heck Reaction and the Suzuki–Miyaura Coupling of Aryl Bromides. Catalysis Letters, 151(2), 353-358.
75. Bangar, P. G., Nahide, P. D., Meroliya, H. K., Waghmode, S. A., & Iyer, S. (2021). Oxime ligands for Pd catalysis of the Mizoroki–Heck reaction, Suzuki–Miyaura coupling & annulation reactions. Synthetic Communications, 51(2), 308-316.
76. Deshmukh, J. M., Mahind, L. H., Waghmode, S. A., & Dagade, S. P. (2017). Study of catalytic activity of silica supported Schiff base complexes. Asian Journal of Chemistry, 29(7), 1455-1458.
77. Pawar, S., Kalyankar, V., Dhamangaonkar, B., Dagade, S., Waghmode, S., & Cukkemane, A. (2017). Biochemical profiling of antifungal activity of betel leaf (Piper betle L.) extract and its significance in traditional medicine. J Adv Res Biotech, 2(1), 1-4.
78. Gauri, B., Vidya, K., Sharada, D., & Shobha, W. (2016). Synthesis and characterization of Ag/AgO nanoparticles as alcohol sensor. Res J Chem Environ, 20(10), 1-5.
79. Joshi, P. N., & Waghmode, S. (2016). Graphene quantum dot-based on-chip electrochemical DNA hybridization sensor for pancreatic cancer. Reports in Electrochemistry, 6, 31.
80. Kalyankar, V. K., Gadale-Dagade, S., & Waghmode, S. (2015). Biosynthesis of Silver nanoparticles using isolated superoxide dismutase enzyme from novel source Papaverum somniferum L. Res. J. Chem. Environ, 19(3), 44-48.