
3. Innovation in Green Technology with World Wide Window using Artificial Intelligence

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Figure 3.1: World Wide Window using Artificial Intelligence

Abstract:

The green innovation is the one of the different levels of collaboration between the organizations in the significant knowledge about international organizational networks on the human hand. The various research is aimed at green innovation of throughout the world about significant knowledge of review included in a wide range of green innovations like as products, services, processes, business models and marketing. The research discusses about the need to be understood and to study these green innovations. Three areas for future research directions are proposed the potential of horizontal collaborations in green innovation networks and cross sectorial partnerships in green innovation networks as well as users act as a green innovation networks. Green technologies are also known as clean technologies or environmental technologies refer the range of products, techniques and

processes to design and to provide sustainable solutions while minimizing the negative environmental impact. Green tech can also mean using clean energy sources, like solar, wind power or using wind power that are using that are better for the environmental than traditional ones. Artificial Intelligence development represented by industrial robot applications still has no obvious effect on green technology innovation. The condition that research and development investment and institutional environment intensity cross the threshold are growth effect increases gradually the rise of green technologies innovation of the environmental regulation. This paper explains the how to reduce the harm of nature and various way to protect our world planet using machine learning and artificial intelligence methodologies.

Keywords:

Economic Sustainability, Environmental sustainability, Green Technology Innovation, Artificial Intelligence.

3.1 Introduction:

The environmental challenges caused by a growing population, increased industrial production and the consumption. There is a growing interest in the area of green innovation that is evolving a new technology as well as materials that has become available. These green innovations can be included products, services, processes, business models and or marketing efforts. Green innovation involves a wide range of efforts for improving environmental sustainability called as eco-innovation. The developing of a new green innovation's firms needs to be collaborated to access knowledge as the green innovations often involves new technologies and knowledge that might need to be search beyond the regular network (Figure 3.1) collaborations and national and regional borders. The need for new green solutions as well as expectations for rapid market introduction increase the difficult for firms to access the required competences for green innovation in every house [6]. To collaborate the knowledge and competences that complement their own with new green technologies as well as new green technologies and new concepts knowledge and practices for improved sustainability. Based on the theoretical hypotheses are constructed a systematic generalized method of moments dynamic panel model for estimation to explore the effect of artificial intelligence on green technology innovation [4]. The dynamic panel model can only reveal the dynamic features of environmentally friendly technology innovation also overcome the errors caused by end genesis. Academics and practitioners as a multifaceted term and the result of bringing together the principles of sustainability and entrepreneurship and generally assumed that the goods or services being the good for the natural world people right to life and society. The idea of sustainable is based on the idea that sustainable goods would provide economic advantage or profits.

3.2 Related Works:

The academic studies have demonstrated that innovation and its subsequent application as well as promotion are closely related to the employment. The innovation is labor friendly depends on the perspective as well as level of research and the type of innovation and generates the innovation. Gohoungodji et al constructed a two-sector economic model to

explain the dynamic relationship between technological progress as well as employment. The allocation of labor force that might eliminate low skilled workers as well as technologically backward sectors as well as enterprises, benefits subjects with new technologies.

Wang et al reached similar conclusions in their empirical analysis of data from the technology innovation group that the employment effect of green technology was more effect of green technology was more obvious in enterprises in polluting industries. The application and development of 5G big data and artificial intelligence are examined many researchers such as theoretically and empirically examined the impact of electronic information technology progress on employment.

The research of Li et al shows that the application of robots has increased the labor demand of Indian enterprises. There is a significant heterogeneity in the employment effect of technological innovation. At present the impact of green technology innovation on job creation. For the purpose of green technology innovation green technology innovation is aimed at improving the competitiveness of enterprises as well as increasing market share can effectively expand the internal employment demand.

Janahiet.al are utilized from German industrial enterprises and confirmed that green technology innovation like other innovations can significantly improve the demand for highly skilled labor. In terms of green technology innovation type's cleaner production technologies are more conducive to job creation than end of pipe technologies [1]. The above study investigates the relationships between investments in green technology and involvement in sustainability of the investing in green technology is influenced by how involved they are with sustainability. Investments in green technologies do not seem to be primarily motivated by participation in environmental sustainability [7]. These papers also discussed about sustainability in management information systems has far been constrained by the field of green IT. These are reducing the energy consumption of corporate of IT resources to help business develop sustainability addressed in relation to the role of automate, inform, transform and infrastructure IT resources. The project calls for It to play a new role in sustainability that goes beyond lowering energy usage.

3.3 Green Innovation with Artificial Intelligence:

Green and sustainable Artificial Intelligence refers to the use of machine learning technologies to address environmental issues and promote sustainability that can be considered as a two-sided research area [8]. The green AI focuses on the development of AI and ML algorithms and systems to improve resource efficiency as well as develop cleaner technologies. These applications such as utilizing artificial intelligence to optimize energy consumption in building and factories, helps to improve efficiency and reliability of renewable energy sources, optimize supply chains, manage traffic flow in big cities besides the reduce the waste in farming [15]. The term pursues green technology innovation world-wide green window have a positive impact on employment. The various benefits offered by green and intelligent buildings have to led an increase their building construction. In parallel various artificial intelligence techniques have been recognized as relevant for these types of buildings to rationalize, optimize and innovate their operation [17].

The green and smart buildings with Artificial Intelligence have been recognized as relevant for these types of buildings to rationalize, optimize and innovate their operation. The green and smart buildings with AI techniques hold remarkable potential to ensure greater structural stability and minimize negative ecological impacts on the environment and society. The application of AI of green and smart buildings exists, and our understandings of the utility of the benefits of its integration remain fragmented. To address these methods aims to examine the relevance and benefits of the convergence of AI technique in green and smart buildings.

The leading edge of green innovation is new as well as rapidly developing technologies that take advantages of digitalization and connectivity. The Artificial Intelligence is to green hydrogen to bio fuels highlighting their potential economic benefits and assessing country capabilities to utilize, and adopt and adapt these innovations. These technologies have been experienced tremendous growth in the last two decades in 2020 the total market value was 1.67 trillion dollars [19]. At the year 2030 that could reach 9.5 trillion dollars. The latter is for the Internet of Things (IoT) which embraces vast ranges of devices across multiple sectors. Most of the Western countries are applied these Green Innovation World Wide Window methodologies.

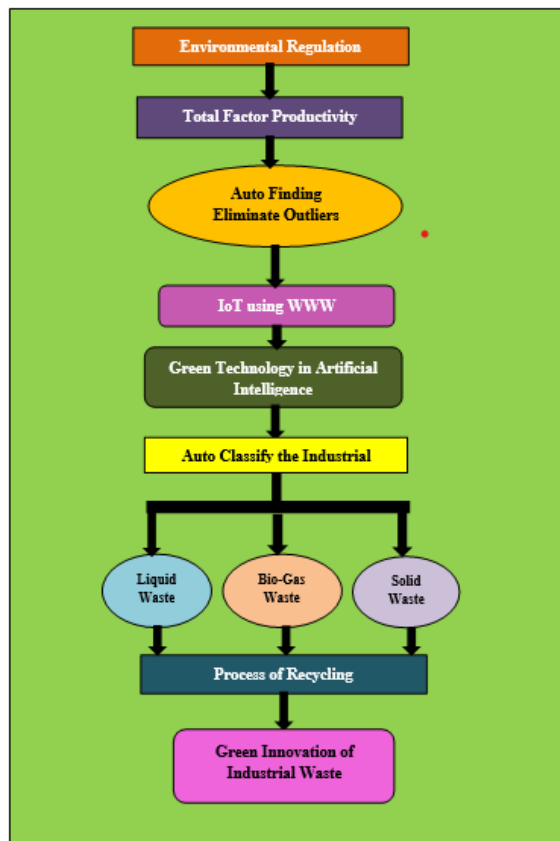


Figure 3.2: Green Innovation using Artificial Intelligence Methodologies of Industrial Waste

Taking into account factors such as unfavorable climate changes, shrinking fossil fuel resources, low energy efficiency, and the pace of population growth, the transformation towards green and renewable energy is one of the most important goals and challenges facing the world. The energy sector is the source of about 75% of global greenhouse gas emissions and energy-related emissions are reaching new record levels. For the energy transition to succeed, innovation at the level of technology, business processes and policies (local, national, and international) are necessary. Therefore, the aim of this article is to analyze the size, structure, and dynamics of research on innovations in the field of green and renewable energy in the last decade in order to identify the main topics and research trends in this field.

Artificial Intelligence almost every Industry as the tech becomes more widespread many are turning their attention to the sheer power is required to execute all the AI models. This takes a large of number of energy as well as computational costs train the deploy AI's drawing more power of the grid. Environmental concerns are at the forefront of many business minds landing to high demand for green tech. Green artificial intelligence is an AI that utilizes the lesser computational costs to support decrease carbon emissions. It combines the immense value of artificial intelligence with the green values are need to lower carbon emissions and protect our planet from further climate change.

Green Artificial Intelligence as the solution to our carbon heavy processes and that can maximize the positive impact of the artificial intelligence can offer us without damaging the environment. AI is to maintain and manage an intelligent grid system to reduce wastage (Figure 3.2).

3.4 World Windows Opening and Closing Using IoT:

The developing countries as well as specific renewable energy products that rapidly changing technological scene offers green windows of opportunity and countries that take advantage of these marketing activities. It depends on the national preconditions as well as capacities besides the willingness to take the opportunities as well as respond strategically as they came to arise. The global value chains can fit and producing and exporting parts and to be the components of final products or by upgrading existing output to have greater value added [21]. The greening of global value chain in manufacturing industries is driven by first national environmental legislation and trade agreements including environmental provisions, second new patterns of demand preferences and consumer behavior and third new technologies including efficiency gains to meet greener demand requirements of the green innovation. These world windows are always open to all the countries anytime they can be added into this community. Global value chains seizing these opportunities involved in not automatic and the failure to do so leave the enterprises should not maintain the harmful production activities.

The two main routes of global value chain become greener routes the first one is manufacturing the goods utilized for green production like as solar PV panels and wind turbines. The second is by greening traditional manufacturing industries such as food garments and textiles, leather, shoes and furniture [14]. Greening of traditional global value chain can be achieved by switching to digital frontier technologies associated with smart

manufacturing offered by the industry 4.0. The above countries are connected together from the online connected sensors and the data collected from GPS tracking systems can optimize logistics as well as significantly reduce the carbon emissions.

Manufacturing companies helps to utilize the industry 4.0 technologies are found in the more advanced economies. Largely lower skilled labor is less and the larger companies tend to adopt digital technologies and the majority are still confined to analogue production. To promote the twin transition of green as well as digital activities. Recently added countries will need to develop the digital competency along with the necessary infrastructure as well as institutions while building innovation capacity as well as overcoming financial barriers [10]. The value of chains the governments can consider targeted policies such as support for small and medium size enterprises with finance for new machinery as well as other requirements for upgrading.

3.5 Regenerating Natural Resources for Green Innovation:

Green innovation has its roots in the idea of a green techno-economic paradigm is researched initially represented 25 years ago by economist Christopher Freeman. A techno-economic paradigm can be distinct as a set of common-sense guidelines for technological and investment decisions as pervasive new technologies mature. A Sustainable new techno-economic paradigm involves switching to greener technologies as well as modes of production [12].

Regenerative agriculture is quickly swapping the agriculture industry as well as countless environmental and productivity related benefits. Green AI can also amplify the precision farming efforts. Precision farming is a series of strategies and tools that allow farmers to optimize and increase the soil quality. Precision farmers can see a generous increase in the productivity while still protecting the environment [2].

Recycling efforts are less than ideal and lot of waste still happening and the key goals within the plastics industry into close the loop. Materials such as aluminum and many plastics can be recycled indefinitely reducing the need for new raw materials [15]. There is a closed loop recycling is the standard because it reduces waste and energy needs in manufacturing new products. There is a hope that integrating artificial intelligence with other tools can offer the ability to track, aggregate as well as close the loop on secondary materials as it moves through the supply chain. The renewable energy can be truly effective as well as alarming amount of wastage involved in the green energy sector are the renewable energy sources are over producing energy. The green model is renewable energy such as wind power, solar power, and hydroelectric power using bio fuels to produce energy. These are the technologies not only to reduce the greenhouse gas emissions and also create a clean and sustainable source of energy.

3.6 Results and Discussions:

Renewable energy can be truly effective and the alarming amount of wastage involved in the green energy sector as renewable energy sources over produce energy and the artificial intelligence are able to identify areas of greater need and automatically divert energy.

This will help to ensure all the types of energy produced actually instead of building up the training a stage of AI model can produce the same carbon foot print as a commercial. Green AI is a desperately needed upgrade to our recent artificial intelligence technology. The probabilistic programming is the key to environmentally friendly activities using ChatGPT. Green technology plays an important role in solving environmental problems and protecting natural resources. These technologies are designed and developed to minimize the negative impacts on the environment, economically efficient products and services.

3.7 Conclusions:

Artificial Intelligence will give important for helps to improve the green technology. Artificial intelligence that improves production productivity, minimize waste and increase resources efficiency across the industries that can create a disruptive transformation in the approach to green manufacturing helps to analyses and manage the environmental data helping to measure besides the track advances in green technology. Green innovation technology is one of the most important to save our planet from the natural disasters. World-wide countries alert and ready for change for developing countries to catch up the best opportunities for both the policymakers and to firms to supporting institutions. Artificial Intelligence development helps to increase the green technology innovation and the intensity of environmental regulation and institutional environment of the threshold value.

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