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THE DIGITALIZATION OF AGRICULTURE AND RURAL AREAS

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ABSTRACT:

The literature about digitalization in agriculture and rural areas is incredibly vast. Both international institutions and practitioners have an interest in promoting digitalization of Agriculture and Rural Areas, indicating and describing potential benefits and risks. Meanwhile, academics analyse the particular and possible impacts of digitalization by using case studies and field works. Educated people and therefore the youths of the country should take main a part of this digitalization.

The feature of a scientific review of Agriculture and Rural Areas, helps us to extend theassembly of crops within the field of Agriculture and to extend the literacy rate of the countrywithin the rural areas.

Keywords: agriculture; digital technologies; digitalization; socioeconomic impacts; literacy.

Introduction:

Digitalization redefines people's lifestyle and may produce positive effects from both economic and environmental perspectives. However, because the literature stresses, the digital transformation could also cause social and ethical issues. The impacts of digitalization are investigated within the scientific literature to spot potential and controversial aspects to manipulate its settings or to adapt policies and practices. a good range of the literature contributes to unfold the impacts specializing in use cases supported the utilization of specific technologies and applied to specific scenarios.

What seems to be missing could be a more comprehensive analysis that proposes a taxonomy of the impacts thanks to the introduction and use of digital technologies. There are indeed some and up to date attempts within the literature aiming at shedding some light on the impacts of digital technologies. This paper aims at proposing some considerations on the digital, socioeconomic, and ecological impacts of digitalization in agriculture and rural areas. the most research question is unfolded in three levels:

- What are the most areas of impacts identified by scholars in agriculture and rural areas?
- What are the outcomes?
- What are the connectionsbetween digital solutions and impacts?

How digitalization is provoking a systemic transformation is emphasized. Possible limits identified within the existing literature are highlighted, opening to the proposal of a grid of impacts created to enhance both the analysis and therefore the consequent considerations on digital impacts. Then, the methodology used for the conducted literature review is described, followed by the look of a summary of impacts. Finally, the summary is detailed and discussed, and examples also are reported. The conclusions report both the scope of this work and its limits, highlighting the requirement for further investigations.

Digitalization in India:

With over 600 million internet users in 2019, India is one amongst the most important and therefore the fastest growing markets for digital consumers. This substantial growth of digital economy was largely led by consumers within the urban region. However, with the government's push towards financial inclusion, Rural India have also started embracing the digital economy. As per the TRAI report, rural internet subscribers account for over 38% of the whole internet subscribers within the country as of March 2020, increasing from about 32% in March 2017.Rural India is a vital a part of the country's economy and contributes about 46% of the value. it's estimated that about 66% of India's population is rural and despite the rapid rise of urbanization, rural India will still account for a major portion of India's population within the next decade.

Despite the growing number of internet users in rural India, there exists a major digital divide between urban and rural India. As per the most recent TRAI report, internet penetration in rural India was only about 33% compared to 99% in Urban India. This gap mainly stems from two factors – lack of infrastructure and awareness. To bridge the gap, the Indian government has launched the "Digital India" programme one in all the most important objectives of the programme is to boost digital infrastructure within the country and particularly in Rural India. a number of the initiatives undertaken as a component of this policy to spice up rural digital infrastructure are highlighted below.

Agriculture sector represents about 18% of India's GDP and accounts for over 50% of the entire workforce. Despite the sector's significant contribution, India's agriculture sector is very keen about human labour and good rainfall unlike the agriculture sector in developed economies that depend upon mechanized farming and better planning.

Realizing that technological agricultural systems are the necessity of the hour, the Indian government has launched the 'Kisan Suvidha' app which has about 100 million registered users. This app assists farmers with relevant information on the weather of this day and next five days, market prices, dealers, agro advisories, and plant protection. Sensing the large potential, some start-ups like SatSure, CropIn, Niruthi, AgRisk are entering the space. These startups together with the digital government programmes help the farmers in sowing and crop monitoring, capturing and analyzing various data points, including crop, soil, and weather data, all of which may assist in higher cognitive process and facilitate access to crop insurance and institutional credit.

While agriculture presents an enormous opportunity, the agricultural financial sector is additionally on the cusp of digital revolution. Over the last five to 6 years, several policy and financial initiatives geared toward inclusive rural growth are unrolled by the govt. Aadhaar, a novel biometric identifier, zero balance Jan Dhan savings bank accounts, direct transfer of social benefit payments, and also the digital payment infrastructure BHIM are some of them. The checking account penetration increased from 54% in 2014 to 80% in 2018 on the rear of those initiatives.

Objective of Digitalization of Agriculture and Rural Areas:

The most objective of the agricultural development is improving the living standards of rural people by utilizing the easily available natural and human resources. The opposite objectives of rural development programmers are as follow:

- Development of agriculture and allied activities.
- Development of village and cottage industries and handicrafts.
- Development of socio-economic infrastructure which includes setting up of rural banks, co-operatives, schools etc.
- Development of community services and facilities i.e. drinking water, electricity, rural roads, health services etc.
- Development of Human resource mobilization.
- Development of Schools and Colleges in Rural areas.

. Technological innovations have greatly shaped agriculture throughout time. From the creation of the plow to the world positioning system (GPS) driven precision farming equipment, humans have developed new ways to form farming more efficient and grow more food. We are constantly working to seek out new ways to irrigate crops or breed more disease resistant varieties. These iterations are key to feeding the ever-expanding global population with the decreasing freshwater supply.

Explore developments in agricultural technology and its impacts on civilization with this curated collection of classroom resources.

Promising the Rural People:

A government should promise to the people of rural areas that they're the most a part of responsibility for the event of Agriculture and rural areas by increasing the take into account the agricultural areas. this is often not only the a part of the govt. to require care of the thing promised, the people also make a main responsibility for the event of Agriculture and Rural areas.

At the identical time, rural communities suffer from several problems (difficulty in reaching markets, ageing, depopulation, lack of public and health services, etc.) which will also negatively affect sustainable food production. Considering these concerns, reports suggest that the digitalization process can contribute to both agriculture (e.g., contributing to efficient use of resources) and rural communities (e.g., defining new and enriched services) sectors. At the identical time, it's also stated that digitalization can contribute to achieving the Sustainable Development Goals (SDGs) in rural areas, the 17 interlinked goals like "no poverty", "zero hunger", and "climate action".

There'll be a mismatch between increase and food availability, which they assume are often solved by technological innovation, optimistically leading not only to technical, but also to social, political, and even moral progress and environmental protection.

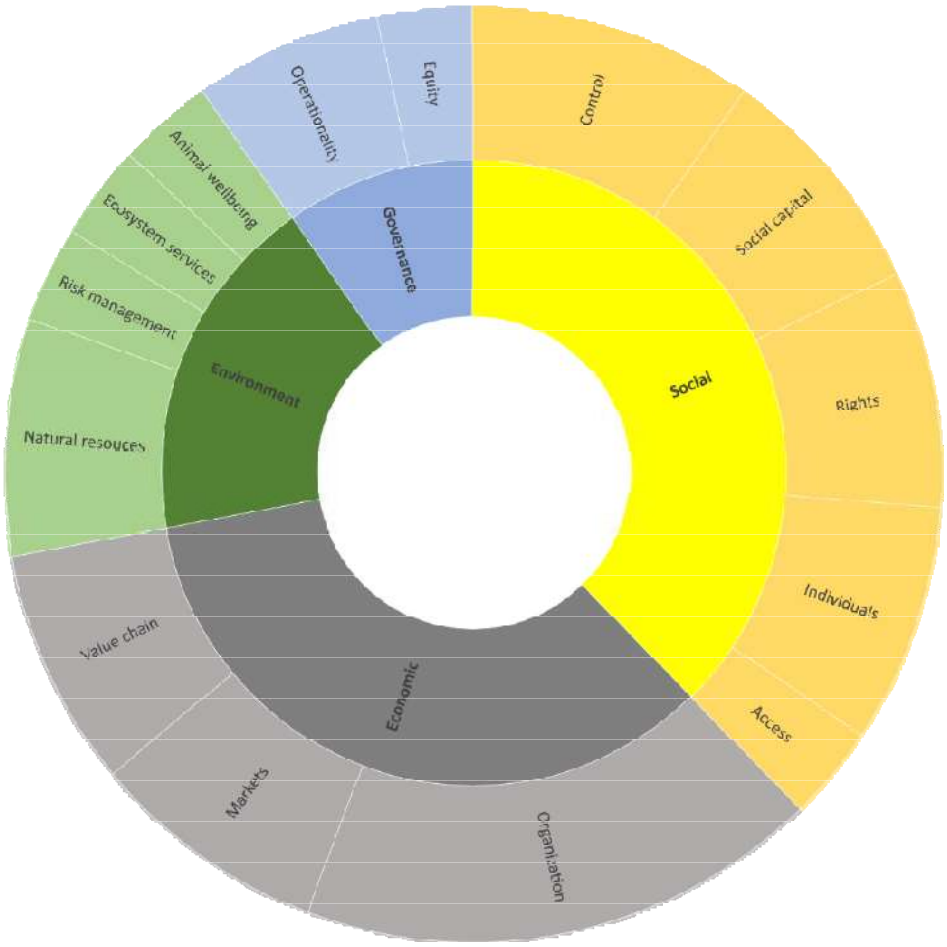
METHODOLOGY:

The "domains" represent macro-dimensions where the digitalization take place; the "areas of impact" sit down with sub-dimensions within each domain, identifying several areas where the clustered effects are allocated. For both clarity and comprehensiveness purposes, the terms were labelled, using the definitions found within the literature and therein cited. Through the elaboration, an exercise to attach the weather of the taxonomy to the digital technologies is proposed likewise, as reported within the grid. This grid may help to stimulate reflections on possible outcomes in specific situations and contexts. within the grid, the taxonomy is reported along with some digital technologies to point out plausible connections.

CONCLUSION :

This paper contributes to the present discussions on digital change and a grid that would help to see the way to face both predictable and unintended digitalization effects. Several digital technologies and further as an oversized set of applications (e.g., blockchain, computing and sensors) were considered. the most domains and areas of impacts of digitalization, additionally as their outcome, were identified and described.

This art of laborhave limitations that further investigations and reflections are needed. First, the literature on digitalization in agriculture and rural areas is consistently updated thanks to new technologies and innovation systems. Second, the grid directly identifies systemic effects. The outcomes reported can have a retroactive effect on other domains. Third, although both the taxonomy and therefore the grid concentrate on agriculture and rural areas, the work doesn't discuss all the possible application scenarios (which are hundreds, or perhaps thousands).



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