

An approach for entrepreneurship of agricultural sector

By

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Abstract:

The goal of this article is to compare and analyses agricultural transition periods in Maharashtra in order to establish a new paradigm for agricultural growth. In the near future, the outdated economy will be replaced by an advanced or knowledge-based economy. In this regard, the agriculture sector must respond to these changes in order to meet the challenges that have been raised. Multifunctional agriculture appears to be a more advanced choice, with entrepreneurship at its heart. The findings show that agricultural productivism is at the core of the nation's policies, as well as the assertion of developmental initiatives aimed at involving post-productivism in decision-making. Though it is understandable that there is a need to entertain and develop a more detailed understanding of Maharashtraian rural and agricultural thinking and practise. Multifunctional agriculture appears to have the potential to help India achieve sustainability and produce nutritious food. To step toward multifunctional agriculture, which is the same as entrepreneurial agriculture, the current economic theory must first be altered and taken in the direction of a creative economy. As a result, the agricultural system must be altered, and multifunctional agriculture must be considered, as well as environmental concerns, in order to achieve more entrepreneurial agriculture. Agricultural education, as a facilitator of cultivating non-traditional attitudes, entrepreneurial intentions, competencies, identities, and entrepreneurial experiences among young future farmers, must not be overlooked in order to achieve this goal.

Keywords:

Entrepreneurial agriculture, Productivism, Post-productivism, Multifunctionality

Introduction:

Sustainable and rapid economic growth and development has been one of the major policy goals in various countries over the last few decades, taking into account both developed and developing countries. Countries are divided into three groups in terms of economic development: factor-driven, efficiency-driven, and innovation-driven. Factor-driven countries do not create awareness for innovation, and self-employment rates in non-agricultural sectors are projected to be high in these countries. In this context, the factor-driven economy focuses primarily on improving economic results through the application of growth policies and the use of input variables such as labour, natural resources, and the promotion of foreign investment. When it comes to developing countries, they frequently have a strong agricultural sector, as well as economic production of natural resources and extractive industries, which has resulted in a rise in unsustainable migration of workers to these particular economic areas. In the aforementioned market, businesses compete on price and make use of unskilled labour and natural resources. In efficiency-driven economies, on the other hand, economic growth is achieved by adding value to primary output. Production efficiency approaches aid better

functioning in these types of economies. The greater one's level of education and willingness to use existing technologies, the greater one's chances of being successful. However, these countries' entrepreneurship rates are usually low. To build on this, innovation-driven economies are correlated with the production of new goods and services. The transition from manufacturing operations to service production occurs as the economy evolves to meet the needs of the increasing population. In this way, increased access to education affects the manufacturing sectors' ability to adapt and manufacture more diverse and complex goods. Companies in these types of economies use advanced technologies to create new goods, and innovation is the only way for businesses to succeed.

The traditional mechanisms of economic systems are noticeably altering and improving in most countries as a result of rapid proliferation of information technology and the growth of expertise in different dimensions. According to most analysts, conventional economics will be replaced in the coming years by an innovative-driven or information-based economy, in which knowledge and creativity are generated and used as a source of capital and competitive advantage. While knowledge-based economy is one of the more recent issues to emerge in the last decade, it was established coherently and scientifically by the Organization for Economic Cooperation and Development in 1996 as a prerequisite for those countries' development. As a result, these countries have committed to designing all of their infrastructure, social, and economic sectors in line with the growth of a knowledge-based economy, while still taking into account the creation and execution of a cohesive strategy.

There has been a lot of academic discourse in recent decades about the role and importance of the agricultural sector in economic growth and planning. In this regard, planning experts agree that agricultural development is the catalyst and impetus for rural development, and agriculture has invariably played a key role in rural development. Agriculture is the most significant element in resource management, self-sufficiency (in each country's basic products), agricultural production, and social and cultural benefits. Because of problems such as job inequity and chaos, a lack of entrepreneurial orientation and sustainable activity in the agricultural sector, policy inefficiency, unmotivated and dysfunctional private sectors, technical backwardness and infrastructure underdevelopment, inefficiency of the supporting mechanism, erosion of natural resources and production capacities, and inefficiency of the supportive system, the failure of agricultural sector beneficiaries to perform constructively in regional and foreign markets due to a lack of proper use of relative advantages and growth of agricultural chains to gain value added, as well as the unplanned evolution of output and utilization, agricultural sector structure, and other causes. area of agriculture and rural areas still lags far behind its real potential in Maharashtra. Entrepreneurial practises are used as a way to resolve these problems. As a result of the above, policymakers should place a high emphasis on the production of novel agricultural goods and new enterprises. So, in the not-too-distant future, an advanced or knowledge-based economy will take the place of the outdated economy. In this regard, the agriculture sector must respond to these changes in order to meet the challenges that have been raised.

The aim of this paper is to compare and evaluate agricultural transformation cycles in Maharashtra in order to establish a new paradigm for agricultural development. Three moves were considered in this respect. In the first phase, researchers studied the literature on various cycles of agricultural change around the world, and then contrasted and examined the characteristics of three transition periods from four perspectives: theory, policy and intention, researchers, and agricultural extension, as well as a viewpoint on farm and farmers. The agricultural condition in Maharashtra was studied in the second phase, and finally, the material of six Maharashtra developmental plans was considered according to the categories and subcategories of agricultural transition cycles, and the focus rate of different agricultural periods during the six development plans was established and compared with each other.

Periods of transformation in agriculture:

The agricultural method has undergone major transformations over time. Agriculture has gone through profound and often "revolutionary" improvements over thousands of years. "From 1945 to the mid-1980s, the dominant agricultural regime was known as 'productivism,' a phrase that refers to policy principles aimed at maximising agricultural production." At this period, practises were based on the hypothesis of modernization as the foundation for agricultural growth, and it was believed that agricultural development would occur during the transition from conventional and subsistence agriculture to new and commercial agriculture. Modernity is characterised by the thinkers of this time as a general paradigm of social progress with the objective of economic growth. In this paradigm, humans, regardless of their ethics, are only interested in increasing their financial and market wealth. In this context, the green revolution was one of the most significant agricultural activities of the time. Green revolution supporters believed that agricultural production was reliant on the use of standard- ized input packages such as fertilisers, chemicals, and advanced pest control. The government should provide the requisite funds for this. This tried-and-true process was perfect for government bureaucracies. The green revolution resulted in a rapid and widespread rise in agricultural productivity, widespread labour demand, and the emergence of the belief that starvation was no longer a problem. While the modernization hypothesis and the green movement proved to be successful in general, the question emerged as to whether or not this progress could be continued. Is this, in effect, addressing the demands of communities? The response, it seems, was no. In turn, this way of thought resulted in a widening of the wealth divide between the wealthy and the poor, a surge in consumerism, a rise in environmental issues, an overuse of inputs and imported technology, and, eventually, a deterioration of traditional values in rural communities. In reality, in the mid-1980s, the justification or foundation of productivism, as well as its values, became heavily challenged due to ideological, environmental, economic, and social issues; as a result, some scholars claimed that productivism's philosophy was inconsistent, and a growing trend toward post-productivism was established. As a result, over the last few decades, the observation of existing shortcomings of development thinking has stressed the expansion of a human development model and the application of more participatory development approaches. In comparison to productivism, it is impossible to pinpoint the particular dimensions of post-productivism. As a consequence, there are theoretical, analytical, and methodological controversies about the nature, tempo, and even the nature of the post-productivist transition. Since the 1990s, the term "post-productivism" has been used. The post-productivism period is thought to have started in the 1980s for some industrialised countries. In a continuum, post-productivism and productivism are on opposite ends. Farmers can pursue non-agricultural uses of their land and resources to increase their incomes under post-productivism, which is environmentally conscious. Owing to a lack of a consistent meaning and an emphasis on agriculture, its introduction in some countries and minimal discussion on the term's applicability in other countries, as well as a lack of empirical evidence, the concept has received little attention.

In behaviour and thinking, the agricultural culture in the European Union reveals that the majority of participants are somewhere between productivist and post-productivist. To place that in perspective, many farmers still have productivism thoughts despite their sustainable attitudes or participation in environmental programmes. As a result, rather than using the idea of post-productivism, a newer concept known as multi-functional agriculture is used. The idea of multifunctionality was first introduced in 1992 at the Rio Earth Summit, and it was further strengthened in 1998 by members of the Organization for Economic Cooperation and Development. Since then, it has been increasingly quoted in policy and science debates about the future of agriculture and rural development. Agricultural

practises, beyond their primary function in supplying food and fibre, will lead to the creation of environmental perspectives and benefits, such as soil protection, sustainable use of renewable natural resources, biodiversity restoration, and rural economic and social stability, according to the OECD. Furthering this sense, agriculture would have a variety of functions, including food and fibre processing, as well as one or two other functions. The MFA definition is crucial in creating a new revolutionary viewpoint on key issues such as the emerging relationship between agriculture and society and the shifting role of agricultural practises in achieving long-term sustainability. Multifunctionality is a term that "best encapsulates the diversity, nonlinearity, and spatial heterogeneity of rural society."

Agricultural transformation cycles are compared and contrasted:

Philosophy of three transitional periods:

The metaphysical understanding of the environment is one of the most noticeable variations between productivism, post-productivism, and multifunctional agriculture. When it comes to PA, it comes from a period of modernization when it was seen as contributing to 'progress' in the positivist and materialistic worldviews. This school of thought defines modernity as a broad paradigm of social progress with economic growth as its primary goal. Rather than the recognised terms homogeneous, general, comprehensive, or normative in productivism, post-productivism and multifunctionality stress the plurality, multiplicity, individuality, and dispersion of concepts. Indeed, postmodernism rejects unification and synthesis in favour of different realities and pluralism. Post-productivism and multifunctionality necessitate a shift of emphasis from economic growth to long-term sustainability. Productivism focuses on increasing income and has a farming-based viewpoint, and the village is seen as a place of production, while in post-productivism, agriculture loses its central role in rural societies, and the village is viewed as a place for consumption rather than production.

According to the post-productivism model, farming would no longer be the primary engine of a rural economy, with other land uses taking precedence. Environmental principles are at the core of post. It is important to update the village's semantic and physical-spatial objectives in order to observe multifunctional agriculture. While paying attention to the agriculture sector, the multifunctional framework recognizes emerging activities in rural areas and emphasises a new balance of productivity, demand, and conservation objectives. Multifunctional agriculture, according to Wilson, is a continuum between production and non-production thinking and behaviour. Non-production thinking and action focuses on creating additional sources of revenue through the expansion of new enterprises, while production thought and action focuses on the production of food and fibres. Ecosystem services, emerging opportunities for environmental services, and diversification are at the forefront of multifunctional agriculture.

Three transitional stages have different strategies and goals:

Productivism's aim was to maximize productivity in order to achieve national and local self-sufficiency. The ability to achieve self-sufficiency was weakened in post-productivism. Food protection and self-sufficiency are inextricably connected in multifunctional agriculture, which is why achieving self-sufficiency was re-emphasized. Productivism is linked to specialisation, and the transformation and expansion of mixed agricultural units into concentrated agricultural units or livestock farming enterprises is the focus of agricultural production. In the one hand, this expanded the opportunities for big, lucrative farms, while on the other hand, it decreased the opportunities for small, family-run farms. In post-modern agriculture, the focus has moved from rural development to local and residential areas, with a greater focus on the role of those who have been ignored in previous programmes (such as the

poor and smallholder farmers). The use of external inputs declined in this form of agriculture. Agriculture promotes diversification and creative entrepreneurship in MFA. A multifunctional framework provides a more holistic and global perspective, which suggests that agricultural practises can produce commodities that are not only delivered for domestic demand, but are generated because of agricultural activities. Environmental issues have a major impact on multifunctional cultivation. Consideration of open areas and environmental views, as well as good diet, are among the most significant considerations in this regard. In other words, multifunctional agriculture allows for the exploration of topics and techniques related to sustainable growth that go beyond production and market competitiveness. Productivism has put a greater focus on quantities than on consistency. The modernization and industrialization of agricultural systems during this time period culminated in an overproduction of many essential foodstuffs. Farmers also increased their production and specialised in smaller businesses. As a result, until the early 1980s, the common agricultural agenda was almost exclusively focused on developing a political system for increasing agricultural production and fostering agricultural intensification. Farmers have been placed on a treadmill as a result of this process, in which the fall in food demand compared to income levels allows production prices to increase higher than income levels.

After 1985, the political climate in agriculture shifted from intensification to non-limited and extensification, from an emphasis on production to maintaining diversity, and from quantitative maximisation to less production but higher quality. One of the key reasons for post-productivism proponents to embrace the transition from agricultural productivism to post-productivism is the recent rise in concern and commitment to food safety. The close relationship with the market in the MFA system, as well as the turn away from a subsistence approach, has resulted in a fundamental shift in agricultural production structure. Under the challenge of market mechanisms and technical and mechanisation improvements, a series of informal reforms are taking place, with the potential to combine and integrate certain agricultural processes while dissolving others that are unable to balance the successful changes. The growth of agricultural companies to cover all agricultural chains with an entrepreneurial approach can be traced in tandem with shifts in the traditional production and consumption structure, as well as traditional utilisation structures. These industries are interconnected and dynamic universality, process-oriented, and program-oriented, and are developed in line with sustainability, value-added, dual equilibrium of supply and demand dimensions with demand dimension prioritisation (demand-basis), strategic and consumer alignment operations, creativity, and the convergence of technology and business models.

Externally produced advances in mechanisation, animal and plant breeding, and pasture management are the subject of productivity decisions. The strategies of agricultural productivism are the intensification and pursuit of production through investments in equipment, facilities, and the use of chemicals and biotechnology. Productivism is characterised by a decrease in agricultural labour force as a result of increased farm mechanisation. Farmers needed to maximise the size of their land, their productivity, and their external inputs while reducing their labour force per hectare in order to prosper economically. Farmers will select their own focus and guiding forces, as well as take separate directions for food production, thanks to post-productivism and multifunctional agriculture. As a result, post-productivism and multifunctional farming can lead to divergence and new rural spaces.

As agricultural entrepreneurs, multifunctional farmers participate in practises such as flowering, horticulture, medicinal plants, planting cash farming crops, poultry, aquaculture, livestock raising, dairy processing, food mills, and other agricultural industries, all while employing advanced production techniques, irrigation facilities, fertilisers, mechanised processing lines, and new management system. In this method, the rise in agricultural production is largely attributed to the productive utilisation of

inputs and sources, as well as the introduction of new technology and the maintenance of agricultural systems. This necessitates the right mix of expertise and technologies in agricultural supply chains from cultivation to distribution.

Agricultural companies are agricultural commercial units that link numerous agricultural chain rings, and their management necessitates advanced expertise and ability, as well as the application of emerging technology for value addition, continuous production growth, and enhancement of the quality of goods and services provided to the consumer. Furthermore, understanding of the value and reputation of indigenous technological skills, as well as the poor people's capacity to solve their problems, developed during these two years.

Post-productivism and multifunctional agriculture are moving away from physical inputs and toward environmentally sustainable activities and the use of information inputs (knowledge-based). The ideas of post-productivism and multifunctional agriculture provide a move toward sustainable agriculture (organic agriculture and precision farming). Since such programmes, technology, and practises are knowledge-based, they necessitate more delicate, accurate, and nuanced ways of observation, field study, and farm-level intervention.

One of the major factors for the shift from productivism to post-productivism, according to many professionals, is the environmental component. According to some scholars, the post-productivism phase is primarily an environmental transition, characterised by significant environmental imbalances between food production and environmental conservation. In reality, the solution to the agricultural sector's environmental concerns was the obligation of the sector, which was conceptualised beyond productivism and rejects the prospect of improving environmentally sensitive agriculture through the development of productivism's values. Even if these priorities clash with maximum economic development, postmodern philosophies prioritise financial, ideological, and cultural concerns, and a transition from materialism to extra-material ideals is advocated. Multifunctional agriculture, on the other hand, recognises environmental problems and puts a high priority on biodiversity and ecological care, and it is claimed that there is no dispute between economics and the environment.

In three transitional stages, agricultural extensionists and researchers:

Productivism's political system is focused on export subsidies and financial assistance. As a result, the government is the primary actor. Post-productivism is a political movement that manifests itself in the elimination of government subsidies and reflects a step away from state-based development structures. The loss of the community's core agricultural role is a hallmark of post-productivism. In this respect, rural development practises are moving from a top-down, blueprint-based approach at the national level that is focused on external technology and government policy to a bottom-up, local-level planning approach. Production was seen as a mechanism rather than a commodity in this approach. This strategy transforms rural development into a participatory mechanism that allows farmers to set their own goals and effect progress. The emphasis on structural change and market liberalisation, as well as the exclusion of governments from large-scale agricultural management, are some of the main developmental features of this perspective. Government funding has declined in postproductivism, competitiveness in the farming sector has increased, and the future earnings on many farms have dramatically decreased.

Agriculture was valued and significant for its multifunctionality, but it was thought that agriculture was a multi-component operation rather than a single product. The government's position and participation in the development of markets for non-commodity goods should not be ignored in multifunctional agriculture. Politics, according to the Organization for Development and Cooperation, will aid market control while compensating farmers by subsidies. MFA's conceptualization aids in a

clearer analysis of "potential causes of consumer loss for non-commodity outputs, as well as theoretical reasons for correcting these situations of government interference."

Technological advances were established in research centres under the philosophy of productivism. The researchers were not interested in moving to the field and learning about the local methods in this regard. Furthermore, study conditions with fertile soils, desirable infrastructure, and a strong population may not possibly represent the realities of the rural region, which, in most situations, faces a labour shortage and a lack of fertility. In such circumstances, scientists were mostly responsible for the development of information and technologies, and there was widespread belief that this mechanism was driven. In such circumstances, the development of information and technologies was largely regarded as the responsibility of scientists, and there was widespread expectation that researchers supervised and ruled over the operation. Researchers can be partners in farmers' research or a catalyst for farmers in the post-productivism period. Multifunctional agriculture researchers can serve as invention brokers. Innovation brokers are paid for forecasting, diagnosing, and analysing information and expertise, as well as mixing and recombining it, checking and validating, protecting, commercialising, and assessing the findings. Brokers in creativity double as facilitators (supporting the innovation process, but innovation is not created or transmitted by a specific provider). In comparison, researchers play an important role in the initiation and advancement of creativity in other interventions.

The key extension trajectory within the modernization framework was based on a classic paradigm in which extension agents were treated as well-known and well-informed persons, while farmers were regarded as ignorant and uninformed. Farmers were regarded as passive people who can understand what extension agents know, according to the conventional extension model. In this regard, the modernization paradigm's extension function was a mechanical one, involving the transition of new concepts from the government or businesses to farms and agricultural training centres. The role of extension has been attracting the active involvement of villagers in the development, appraisal, and dissemination of ideas in line with their biological, environmental, and psychological conditions in the philosophy of post-productivism. Agricultural stakeholders have been identified as the general public, growers, extension agents, NGOs, and environmentalists. In this context, it is assumed that the most effective means of strengthening and enhancing farmers' science resources is to improve their learning ability to study and experience for themselves (i.e., to promote exploratory and experimental learning), with extension agents serving as facilitators of individual and mutual learning processes. Other supporting and capacity-building roles that help foster entrepreneurship in the agricultural sector must be recognised in multifunctional agriculture, in addition to technology transfer. If agricultural extension is to shift beyond increasing production and toward inclusive topics, it is crucial that the players who make up the agricultural extension structure, who are made up of interactive elements, recognise the requisite improvements and make concerted efforts to introduce and institutionalise them.

"Institutional Economic Analysis (IEA)" and "Sociological Network Analysis (SNA)" are two applicable approaches in multicultural agriculture that should be found in extension. Both approaches propose developments for agricultural actors, but not as an exogenous aspect, but as a co-production among different actors such as farmers, extension services, applied research institutes, and so on. Agricultural developments are not exogenous or sequential in nature, and they are not passed on from researchers to farmers. In both systems, participatory methods are strongly recommended for gaining useful information.

Extension services in productivism are often supply-driven and focused on a linear model of growth. However, in MFA, a "one-size-fits-all" model of entrepreneurship and innovation funding is insufficient. This, along with the privatisation of applied agricultural research institutes and agricultural

extension programmes, has resulted in significant improvements in agricultural innovation and entrepreneurship funding, with farmers now benefiting from a pluralistic advisors scheme. Agricultural expansion, on the other hand, has come under fire for being a part of a sequential innovation scheme. As a result, agricultural businesses must establish and sustain new partnerships with external actors who must build and leverage new social networks. Farmers' advancement of creativity (both technological and institutional) necessitates extension agents' expertise and information feedback. In digital training streams and participatory learning-teaching systems (farmers, researchers, educators, and extension agents, for example), knowledge and information are shared and stored. Extension agents must respond to the unique needs of farmers in terms of receiving information and participating in the process of generating awareness and applying it in a participatory, dependent, and versatile manner. Strengthening farmers' entrepreneurship expertise and skills in order to combine information, experience, and technology with a contingency approach and change it to an optimum mix of production tools is one way to boost agricultural productivity. It goes without saying that engaging multiple parties necessitates a mechanism that is directed and regulated by a facilitator. Learning, negotiation, and decision-making processes are expected to be supported and guided by these facilitators, who should have the skills and experience to do so. Most significantly, it entails a process of negotiation among stakeholders. Because any substantial improvement and exit from the current situation is likely to be followed by friction between those involved and impacted by the crisis, this is the case.

Rural people were regarded as passive and naive of productivism, and communication and growth theorists such as Rogers, Lazarsfeld, and Lasswell claimed that a linear one-way communication paradigm and mass media could boost people's understanding and attitudes toward creating new ideas. Farmers should be told what to produce and how to protect their livestock and crops from pests and diseases. Farmers are classified as either farmers (engaged in farm-based economic activity) or people who are reluctant to participate in a variety of activities and are reliant on pressure factors during this period. Agricultural performers, according to this view, train to behave as craftsmen, creating food and fibres while also cultivating an entrepreneurial identity, talents, and actions that are not readily apparent. Postmodern logic places a premium on cultural concerns and the individuality of the person and local experience; as a result, farmers are often expected to play an active role. Multifunctional means that the farmer is not only a provider of products and services, but also a manager of the environment and rural space, as well as one of the most important players in local growth, and that he or she seeks out new market possibilities, builds business networks, and measures and captures opportunities. Farmers are increasingly regarded as entrepreneurs when diversification is considered an expected agricultural activity, and they must learn new skills and technologies to remain successful. Farmers are entrepreneurial in the sense that they are able to innovate in order to change consumer offerings, take chances and test out new goods, services, and industries, and be more proactive in understanding market prospects than their rivals.

Agriculture of Maharashtra

By 1960, Maharashtraian agricultural system was traditional and subsistence. There was no particular ideology on this agricultural system. Agriculture had a central position in the villages, and the technologies were too simple and elementary. This agricultural system was based on the daily needs of farmers. The agricultural cultivation pattern in traditional agricultural systems was based on the diversity of cultivation and the purpose of production was more to meet the household needs and self-consumption. Their planting and harvest were carried out on the basis of traditional activities, which were incorporated into their custom by parents and ancestors. Innovations were not continuously profitable, and their rate of adoption was slow. Biodiversity was a part of traditional practices which had

been rooted in the need of farmers to be self-sufficient with greater diversity. This agricultural system could be called sustainable. This sustainability was not achieved consciously; indeed, it was because of the lack of knowledge of farmers in accessing the tools for harming the nature. In this period, the system of land utilization called landlord-peasant. Land ownership belonged to the Sharma, and the farmers named peasant was under the domination and guardianship of Sharma by giving their workforce in the process of farming production and small amount of production was allocated to them, and agricultural production was carried out in the traditional system called Nashik in the agricultural and rural sectors. The main function of Nashik was the efficient exploitation of the land with the precise use of the available water in which, all of the members of each Nashik had the same social class including peasants and poor rural with low accessibility to the resources. Irrigator as Nashik's head, two assistants, and three sharecroppers were shaped the Nashik's members.

In 1962, land reform took place in Maharashtra. Land reform aimed at eliminating the power and influence of landlords and replacing state domination on rural areas led many farmers get landowner and created a small holding. This led each of them cultivate independently and structure of the Nashik subsequently collapsed. Therefore, the family farm utilization system expanded in Maharashtra. In this type of utilization system, the main combination of cultivation is determined based on a mix of household livelihood and production needs for the market. The commercial utilization system and capitalism continued in two ways: first, through private sector investment in the area of personal and nationalized land belonging to the natural resources provided by the government to these units, and the second from 1968 is the current government decided to invest directly in agriculture through taking high quality and fertilizer agricultural land and using the modern and advanced technologies, through the established farm corporations and agro-industry units.

Green revolution as a subset of high pay-off input model was the dominant agricultural policy at that point of the time. This has been accompanied by the replacement of subsistence farming patterns with crop production for export and the simultaneous elimination of a sustainable traditional farming system. At this time, the main concern of agriculture was maximum food production to ensure national or regional self-sufficiency. Policy structures were top-down and high inputs and heavy machinery was used as an agricultural technique. Thus, Maharashtra experienced a double setback. One by industrialization of agriculture and using modern agriculture's package of high yield varieties, fertilizers, pesticides and heavy irrigation and the other with occurrence White Revolution's land reforms.

The modernization was not as a result of society natural transformation in Maharashtra, since the emphasis of modernity was on universality and integrity; the technologies that were created in the rainy areas of Europe and the USA were prescribed for a climate and a relatively unfavorable environment of Maharashtra. Oil revenue countries intend to use capitalist technologies. With use of these technologies, not only the income of other economic sector did not increase, but also the income of some sectors such as agriculture had stagnation. For this reason, modernization of agriculture has left many adverse effects on the Maharashtraian agricultural sector.

Research method:

In order to evaluate the six development plans of Maharashtra regarding different agricultural transition periods, quantitative content analysis method was used for the objective, regular, and quantitative description of communication messages. In a quantitative content analysis approach, the goal is to measure the number of the subject concepts. The stages of content analysis in this study, according to Gallet al., include six steps: "Identification of research documents,"

“Formulation of questions, hypotheses and research purpose,” “Selection a sample of documents,” “Set classification method,” “Account frequency of each category,” and “Interpretation of results.” It should be noted that researchers have used “Deductive category application.” Because development plans have been analyzed with respect of extracted categories and sub-categories about agricultural transition periods. Deductive content analysis is often used in cases where the researcher wishes to retest existing data in a new context. This may also involve testing categories, concepts, models, or hypotheses. If a deductive content analysis is chosen, the next step is to develop a categorization matrix and to code the data according to the categories. Researchers’ approach to content analysis was quantitative. In quantitative content analysis methods, the text or documents are counted according to a quantitative number of categories. In this research, the text of development plans has been counted and compared with each other according to the frequency of each categories and sub-categories of agricultural transition periods. Descriptive criteria are categories and sub-categories related to agricultural transition periods. The research analysis unit of this study includes each development plans and the recording unit contains phrases, propositions, sentences, and words of the development plans that include the contents and concepts related to the categories and subcategories of the agricultural transition periods. In order to increase the processing power of data in content analysis and to determine the priority and process of attention to the triple periods of agriculture in the six planning development periods of Maharashtra, a Hierarchical Additive Weighting Method of decision-making models was used. These models are the basis for prioritizing a number of options based on some indices. In the HAW method, effective factors and sub factors in decision-making are expressed in a hierarchical order.

Results and discussion:

Maharashtra development plans in three agricultural transition periods

Shows the emphasis on each agricultural periods. The highest emphasis on productivism was in the first program with 98.51%, and the second program with 76.25% was in second rank. In next programs, the emphasis has decreased, but the percentage of emphasis has been higher than post-productivism and multi-functionality. In sixth program, multifunctional agriculture (38.98%) has been emphasized more than other programs, and the most emphasis on post-productivism agriculture was in the fourth plan.

The focus of six programs has been on productivism (67.37) and multifunctional agriculture (23.95) and post-productivity (8.68) have been ranked second and third respectively.

In order to determine the priority and the process of paying attention to agricultural transition periods in agricultural policies of development plans based on the HAW method, decision-making matrix of the existing situation consists of three indicators in the row (productivism, post-productivism, and multifunctional agriculture) and six options in the columns (programs) were formed and then the standard matrix (W3) was calculated.

The calculated weights of each index by the entropy method shows. According to these results, productivism has the lowest and post-productivism has the highest weight, which means that the emphasis of development plans is moving toward the further involvement of post-productivism in decision-making.

Conclusion:

In the next few years, an innovative or knowledge-based economy, which consider the production and use of knowledge and innovation as a source of wealth and competitive advantage

will replace the traditional economy. This movement affects all sectors, and agriculture is no exception to this rule.

Abbreviations

HAW: Hierarchical Additive Weighting Method; MFA: Multifunctional agriculture; OECD: Organization for Economic Cooperation and Development; PA:Productivism agriculture; PPA: Post-productivism agriculture

Acknowledgements

We acknowledge the support from Shiraz University School of Agriculture, Department of Agricultural Extension and Education and Trento university, Department of Economics and Management.

Availability of data and materials

The datasets generated and/or analyzed during the current study are not publicly available due [Because all of the data was gathered by the research team] but are available from the corresponding author on reasonable request.

Duplicate publication policy

The authors declare and confirm that the content of manuscript has not been published, or submitted for publication elsewhere.

Authors' contributions

Both authors contributed to the writing of the manuscript and analyzed data. Both authors read and approved the final manuscript.

Competing interests

In the previous research, productivism and post-productivism periods have been investigated but we developed categories and subcategories and compared multifunctional farming with the two previous periods and investigated that how multifunctional agriculture can help develop entrepreneurship in the agricultural sector. Also, the content of six developmental plans of Maharashtra was considered according to the categories and sub categories of agricultural transition periods; the emphasis rate of various agricultural periods during the six development plans has been identified and compared with each other which has not been considered in previous studies.

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Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

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Publishing URL : <http://www.researchreviewonline.com/issues/volume-7-issue-94-february-2021/RRJ359895>

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