

Agricultural Modernization and Rural Development: Reference to Traditional Agriculture Transformation in Nepal

Mr. Bhupendra Bahadur Shahi

Lecturer Mid-West University and MPhil leading PhD Scholar TU

E-mail: Shahibhupendra45@gmail.com

Abstract

This study has aimed to analyze the process of agricultural modernization and rural development in Nepal that focused on the issue, the contribution of agricultural growth and rural development in the case of agriculture modernization. It is qualitative in nature based on secondary literatures such as theory of agriculture modernization and some relevant literatures of Nepalese economy were reviewed to analyze the level of agriculture modernization of Nepal; agriculture has significantly contributed in its national economy as one of the dominant sectors; the sector found not being transformed even the numbers of policy measures implementing for its modernization. Still the most of the Nepalese people depends upon traditional agriculture sector as their major source of income, struggling in a adverse situation in this sector both in economic growth and farm productivity. In the context of agriculture modernization, the country has brought various policy measures and programs before and after establishing democracy in 1990. Various policies and programs aimed, Nepal would go through the process of agricultural transformation even though, and the result found to be remained the same. It is happening because of the policy gap in the process of formulation and implementation; still most of the Nepali farmers are engaged in the traditional agriculture that is subsistence. There is also found the situation of high ratio of unemployment, underemployment, seasonal unemployment and disguised unemployment in the country. Thus, the country Nepal has probably found to be failing in the process of agriculture modernization and the ratio of economic growth contribution in the gross national economy has gradually been decreasing instead of being radical increase from a decade 2011 to 2021.

“Key words:” agricultural, modernization, rural development, Nepal

1. Introduction

Generally, the concept of development is conceptualized by the two major views on the basis of practices: first as traditional view of development was conceptualized of achieving high economic growth

concept it was taken as increase in economic phenomenon at the past before 1950s and till 1970s. It is called capable national economy whose initial condition been less to more for long time to generate and sustain an annual increase; and second as modern view of development is conceptualized of to raise and address the socio-economic level of life, after 1970s economic growth approach was re-engineered as a new and alternative concept 'economic growth with socio-economic transformation' of reducing poverty, inequality and unemployment; emphasized happy healthy and self-respect in the term of development (World Development Report, 1991) .

Agriculture is a dominant sector in many of the world's poorest countries the developing world since 1965. While it is clear that agriculture has played an important role in generating national income, it is also clear that the magnitude of that role has trended downward over time. Nonetheless, the challenge of accelerating economic growth becomes much more difficult if a large sector such as agriculture is left to lag behind the rest of the economy and even though having the key characteristics of the agricultural production function also distinctive. These features include seasonality, geographic dispersion, the sources of risk, and the sources of technical change and production is uniquely sensitive to seasonality (Perkins & et-al, 2013).

The logic of the classical model of economic growth as Timmer (1988) argues it is at least slightly puzzling that a second uniform and universal aspect of the development process also involves agriculture-the apparent requirement that rapid agricultural growth goes together with or come first the general economic growth.

Modernization of agriculture in the least-developed countries (LDCs) like Nepal faces a series of constraints. They include: low levels of productivity and technical skills; high natural and economic vulnerability; weak agricultural policy and support institutions; inadequate physical infrastructure; and shortages of production inputs (FAO, 2002).

In the context of our country Nepal, the primary Agriculture sector was increased by 2.13 percent whereas the secondary industrial sector was contracted by 3.76 percent. Over the last decade the growth rates of primary and secondary sectors were 3.07 percent and 4.95 percent only that development of the both sectors are very slow (Economy Survey, 2020). Thus, for a long-run modernization of traditional agriculture based on the issue of how to transform or modernize it in the context of developing countries like Nepal has been a relevant issue of discussion.

Objective and Methodology of the Paper

The objective of this study is to analyze the process and importance of agricultural modernization for rural development in Nepal in the issue of agriculture transformation.

The research is qualitative in nature thus, the required data were gathered by the secondary source of information that were collected from related theories, articles from different books and online literatures through internet. The study has been interlinked with the concept of modernization of the traditional agriculture sector for rural development. This study is based on the analysis of major factors affecting the agriculture development in Nepal. The descriptive method of textual analysis has been mainly used for analyzing the data.

2. Review of Literature

Various theoretical perspectives in the field of development of agriculture sector have been emerged over

time but in general sense they can be studied from the broad lance of the classical views in the 1950s and 1960s of agriculture as a passive contributor to economic growth, and the agricultural-led industrialization school of the 1970s and 1980s. However, the historical evidences show that agriculture sector contributes a large share of national output and employment in the early stages of development. The agricultural transformation has been a remarkably uniform process when viewed from outside the agricultural sector itself. As documented by Clark (1940), Kuznets (1966), and Chenery and Syrquin (1975), the share of agriculture in a country's labor force and total output declines in both cross-section and timeseries samples as incomes per capita increase. The declining importance of agriculture is uniform and pervasive, a tendency obviously driven by powerful forces inherent in the development process, whether in socialist or capitalist countries, Asian, Latin American, or African, currently developed or still poor (Timmer,1988)

Classical economic thought led by William Arthur Lewis developed a prominent theoretical model of development for developing countries which focused on structural transformation of economy. According to him development takes place when capital accumulates as a result of the withdrawal of surplus labour available from the subsistence sector to capitalist sector because traditional agriculture sector is passive contributor to economic development. The most obvious feature of the dual economy is the conceptualized difference in productivity between the agricultural and modern sectors that relatively low marginal product of agricultural laborers suggests that some improvement to living standards could be achieved by the transfer of labor into the modern sector because according to Lewis there is disguised unemployment in traditional subsistence sector having almost a zero marginal productivity as the challenging issue for transformation (Lewis, 1954).

The theory of Schultz has suggested the main concerning subject matter of transformation of traditional way of agriculture production in to modern way of production. He has also presented the scientific method of how to increase the developing countries sources of economy or growth rate investing in agriculture sector of UDCs by the investment & reinvestment of factors of production efficiently to maximize the production in agriculture sector (Schultz, 1964).

Agriculture was the mainstay for economic development, underpinning their food security, export earnings and rural development in least developed countries. But, the agricultural production for the domestic and export market has lagged behind, with growth in per caput output declining from the decade of 1990s because of its lack of proper transformation (Gauchan, 2008).

Agriculture sector modernization can be the basis for overall development of the country. The sector is pivotal to increase income, alleviate poverty and uplift living standard of Nepalese people. Recent evidence consistently shows that agricultural growth is highly effective in reducing poverty. Gross Domestic Product (GDP) growth originating in agriculture is about two times more effective in reducing poverty than GDP growth originating outside the sector (World Bank, 2008).

Thought of Agriculture as a Major Source of Economic development thinking started in the beginning of 1960s which argued for a central role for agriculture in the economic growth process especially in the early stages of industrialization. This thought viewed agriculture as having an active role, better understood by the theory of Schultz 'Transformation of Traditional Agriculture' that he has opined investment & reinvestment of factors of production efficiently to maximize the production in agriculture sector as a major source of economic growth (Schultz, 1964). Thus, the two major thoughts on the contributions of agriculture sector were identified: first,

traditional agriculture could be transformed into a modern sector through the adoption of improved technology, thereby making a large contribution to overall growth and second, the strong growth linkages and multiplier effects of agricultural growth to the non-agricultural sectors. Agriculture has strong, direct forward linkages to agricultural processing and backward linkages to input-supply industries. Thus, the strong forward and backward linkages of agriculture within the rural sector and with other sectors of the economy provides added stimulus for growth (Briones and Felipe, 2013).

3. Result and Discussion

Traditional Agriculture

The common characteristic is the position of the family farm in all three areas: Latin America and Asia have very different heritages and cultures but peasant life is similar. Rural cultivators' prime aim is survival. Farming techniques are scaled to his level of capital: human and animal power rather than mechanization. Food crops are dominant and they have followed the traditional way of farming using traditional techniques of cultivation, socio-cultural characterization, use of animal and human power instead of modern techno-centric method of cultivation are as the problematic attributes of the traditional agriculture sector in developing countries (Todaro & Smith, 2015).

Farming in Under Developed countries is a way of life based a long established tradition, has become the institutional set up which deals with the ownership of land legality & share of home consumption of agricultural production and cultural values relating to work of thrift and aspiration for higher living standard and farmers using the knowledge adopted of old and indigenous traditional technology which has been transmitted one after another from their past generations as technical characterization (Jhingan, 2009).

Statement for Transformation of Agriculture Sector in the Economy

Traditional agricultural can be as a major source of economy by modernizing it with the provision of efficient investment of capital, skilled labor, agriculture credit, Investment on human capital, increasing the value of form products, expansion of irrigation and transportation, reducing the coast of factors of production, adopting new technology, using developed seed quality and modern instruments, land reform, provision of agricultural Market and economic & Price Incentives (Schultz, 1964).

Concept of Transformation of Traditional Agriculture

Various concepts and principles have been purposed to transform the traditional agriculture for under developed countries. IISD (2019) purposed four broad policy categories for agricultural modernization that are: (i) public Investment, (ii) price interventions, (iii) macroeconomic Policies, and (iv) land and other Institutional reforms. The Nine sub-categories are: Research and Development (R&D) and Extension, Rural Infrastructure, Rural Health and Education, Anti-Agricultural Bias, Trade Policy Reform, Monetary and Exchange Rate Policy, Economic Diversification, Land Reform, and Credit.

And other some propositions purposed by other scholars have been briefly synthesized in this study as:

Statement of Zero Marginal Productivity in Traditional Agriculture

The historical record to which Lewis (1954) refers supports the strong link between agricultural and industrial growth, at least in market-oriented economies. The English model is often held up as the case in point and claimed, there is zero marginal productivity in the traditional agriculture sector which makes the causes of existence of disguised unemployment. Then Schultz (1964) experimented his hypothesis in Influenza year (1918 to 1919) and refused critic by saying productivity may be very low but not zero marginal productivity because agriculture production is diminishing and rule dimensions when some applicable part of labor is withdrawn.

Proposition High return on traditional Agriculture

In the economy, each and every economic activities are done to achieve high rate of return or to get optimal benefits. Schultz's has suggested it as the sector of high return. According to the Schultz's there is mass availability of resources in the traditional agriculture of UDCs. If there is done the micro analysis of demand and supply in traditional agriculture of UDCs, it could be the sector of high return. Because of the shortage of capital for investment, there is inequality in traditional agriculture sector in the rate of return and to investment among factors of productions. The sources of capital formation are not well identified and role of foreign capital is almost absence in this sector that leads the situation of high factor pricing and low rate of return. Low rate of return is the result of less management and not modernize of traditional agro sector therefore there is relatively low stock of capital and low rate of profitability. But traditional agriculture can be as the source of high return if UDCs do more and efficient investment of capital, skilled labor, new technology, improved irrigation, developed seed quality, redistribution and reinvestment of factors of production in the sector.

Schultz (1975) Proposition of Efficient Allocation of Factors of Production for Agricultural Modernization characterized as traditional agricultural communities save small part of income and their investment is also low because they miss-utilize the factors they possess. They are not concern with change in cost of production & its factors which has been played the catalytic role in increasing the growth of production. There is not proper farm management and alternatives way of production about cultivation. Only they are adopting traditional way of farming instead of modern one from where they achieve small part of production or income in it that is not sufficient to secure the food deficiency of UDCs; the situation can be modernized through efficient allocation of factors of production.

Proposition of Traditional agricultural as the source of economic growth through Modernization Traditional agricultural can be as the source of economic growth and Agriculture Modernization but political power, law and order (SOC) is not suitable for developing the traditional agriculture in developing countries with instance of the market approach there is also the shortage of incentives and appropriate market. Schultz's purposed the market approach as the better system of transformation because all the transformational components of agriculture like incentives, information, required agriculture reform and development of market are only be possible in the existence of that system in the transformation process, he added market will also be autonomous for facilitating the agriculture inputs. He argues freedom of market approach is little bit appropriate than controlled trickle-down policy for the transformation but for the issue of socio-cultural and politically stable situation of the pace of development; and command approach is also essential for its balance regulation. The traditional agriculture can be the sources of economic growth of UDCs and it is possible through following approaches: Command approach: it is the aspect of political power, law & order; market approach: it is closely associated with economic incentives (Schultz, 1964).

In the case of proposition of role of farm size, control & incentives, Schultz (1978) has suggested as the prominent view about role of farm size, control & incentives that it is not important issue to change the size and nature of agricultural land because land is not the source of transformation. Equally it is important to manage the key sources of development that efficient use and allocation of factors of production provide appropriate incentives and control mechanism to raise the growth in agriculture. However, the inadequate control and incentives becomes the cause of low productivity in traditional agriculture in most of the under developed countries.

Proposition of Technological Change & Human capital Investment for Agriculture Modernization

Today & Smith (2015) argued that adapted instruments of cultivation in traditional agriculture in UDCs are unproductive, old and indigenous based on their socio-cultural aspect that hampers the development and assume technological change in the traditional agriculture is an approach for high production and no doubt for this that productive investment is indispensable.

Scultz (1965) suggested the need of capital investment on human is prime concern for transforming the traditional agriculture skilled human capital as an important for accelerating; they are key factors of modernizing it as the source of knowledge and new ideas about how to use the modern technological equipments and how to raise the agro production to achieve high rate of return.

Timmer (1988) suggests the both historical and contemporary cross-section viewpoints about agricultural transformation evolved through at least four phases that are roughly definable (i) the process starts when agricultural productivity per worker rises, (ii) this increased productivity creates a surplus, which in the *second phase* can be tapped directly, through taxation and factor flows, or indirectly, through government intervention into the rural-urban terms of trade. This surplus can be utilized to develop the nonagricultural sector, and this phase has been the focus of most dual economy models of development, (iii) For resources to flow out of agriculture, rural factor and product markets must become better integrated with those in the rest of the economy. The progressive integration of the agricultural sector into the macro economy, via improved infrastructure and market-equilibrium linkages, represents a third phase in agricultural development, and (iv) when this phase is successful, the fourth phase is scarcely noticeable; the role of agriculture in industrialized economies is little different from the role of the steel, housing, or insurance sectors. Even the integration is not successfully accomplished and most countries have found it extremely difficult for political reasons.

Land Resource and Status of Food Supply in Nepal

Two-thirds of the population of Nepal is engaged in agriculture, contributing to 26% of national GDP. Due to its flat lands, rivers and fertile soil, most of the country's agriculture takes place in the Terai area, though each of Nepal's ecological belts has its more favored crops and crop calendars.

While Nepal's overall demand for food increases over time, unregulated urbanization of plains and fertile land, particularly in the Terai, has put downward pressure on the food supply in the country. Nepal is importing more agricultural goods than ever (food imports have increased fourfold from 2011 to 2018), and this makes domestic agriculture crucial to the country's food security. About 43% of total land of Nepal is covered in forest and 24% (3.56 million ha) is agricultural land but over half of all farmers cultivate on less than a hectare of land. The land distribution per person however is varied across Districts and also depends on the ecological region (WFP, 2019).

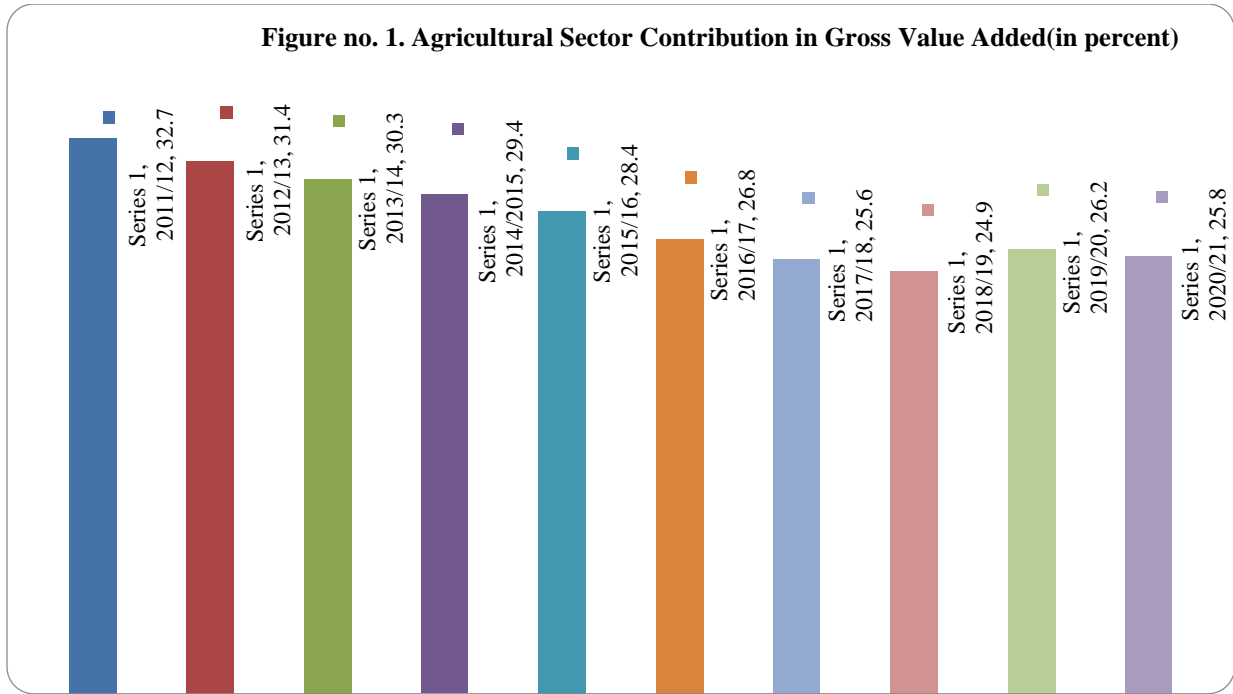
Contribution of Agriculture Growth in the National Economy of Nepal

The gross value added of agriculture and non-agriculture sector is estimated to increase by 2.64 percent and 4.57 percent, respectively in fiscal year 2020/21. In the last fiscal year, the gross value added of agriculture sector was expanded by 2.23 percent while the gross value added of nonagricultural sector was negative by 3.91 percent.

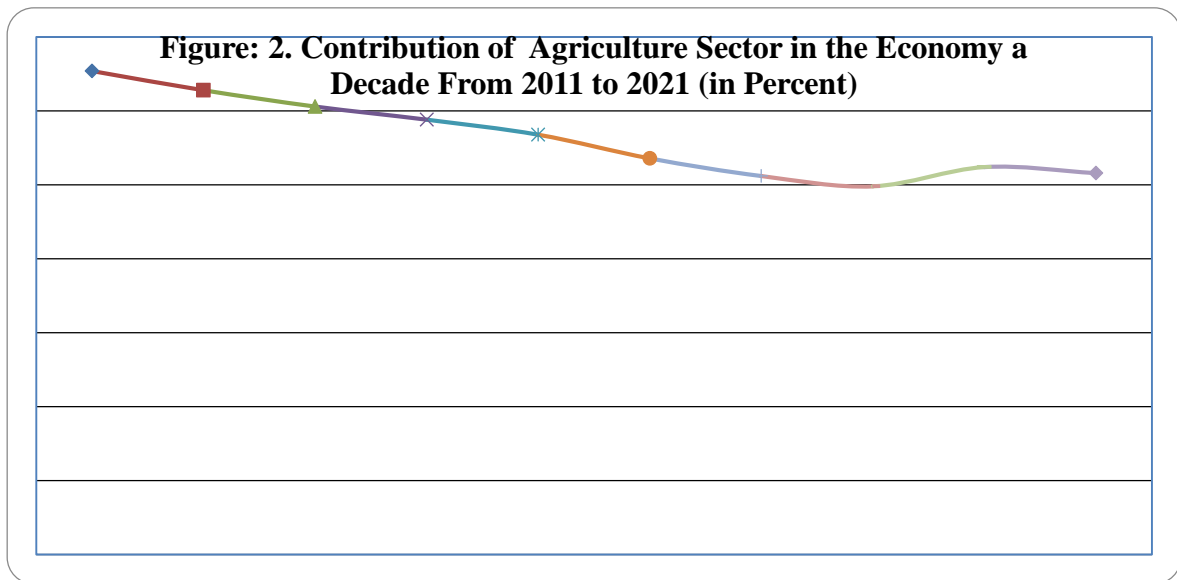
The contribution of agriculture sector (agriculture, forest and fisheries) to GDP is projected by 27.7 percent in FY 2020. This contribution was 37.1 percent in the FY 2008. During the past two decades, Nepal's agricultural sector's production has increased by 3.2 percent. While the growth rate of agriculture sector was 5.1 percent in FY 2018/19, it is expected to stand at 2.6 percent in FY 2021. The growth in agricultural sector has been supported by the increase in the production of the major food grains and vegetable crops. Moreover, availability of seeds, fertilizers and other agricultural inputs, expansion in irrigation facility and favorable weather condition also supported the growth. Twenty-Year Agricultural Development Strategy has been implemented since FY 2016/17 with the goal of making the country self-dependent on food by the year 2035 through increasing agricultural production and productivity, making arrangements for storage, making processing and distribution system more effective, increasing employment through the development of competitive and commercial agricultural system, maintaining food and nutrition security, and conserving of sustainable environment (Economic Survey, 2020).

Agricultural Sector Contribution in Gross Value Added in the Economy of Nepal

The latest data from the given table shows, in fiscal year 2011/12, the contribution of agriculture sector to GDP was 32.7 percent whereas it has been gradually decreasing in recent years and is remain on 25.8 percent in fiscal year 2020/21. The share of population depending on the agricultural sector is gradually declining due to the modernization and commercialization of agriculture as well as the expansion of services in non-agriculture sectors.



Source: Economy Survey, (2020/21).



Source: Economy Survey, (2020/21).

The above line figure has clearly mentioned the slow and negative growth rate of the agricultural sector of Nepal from 2011 to 2021 in which data shows the agricultural transformation is not up-warded in the right path of implementation; and also, according to the Nepal Labor Force Survey of 2008, 73.9 percent of the population was engaged in agriculture sector, but in 2018 the proportion has decreased to 60.4 percent.

Agricultural Productive Gap and Trade Deficit in Nepal

ASD (2012) depicts the data of 80 percent cultivated land in Nepal is used to grow cereals crops. Yet considerable potential for other types of agricultural land use is possible including horticultural products,

forages, agro forestry, livestock and fishery production. The productive gap shows the lack of proper transformation in the agriculture sector in Nepal that one set of constraints to the realization of such potential is the availability of inputs.

In spite of agriculture playing a strong role in livelihoods and the economy, Nepal's agricultural trade is in deficit. The growth of imports has outpaced exports and the agricultural trade deficit has increased Nepal imports primary and industrial raw materials due to declining domestic raw material production, and processed agriculture products due to limited investment and competitiveness in high-quality, the range of exports is concentrated in a narrow set of manufactured and agricultural products such as carpets, readymade garments, pashmina, handicrafts, pulses, jute goods and vegetable ghee. Export market concentration has increased and most of the exports are destined to few markets such as India, United States of America and Europe ASD, (2012). This result also depicts the proper need of transformation in the agriculture sector of Nepal.

Situation of Agriculture Modernization and Rural Development in Nepal

Nepal is among the list developed countries in the world, with about a quarter of population living below the poverty line. Its economy is heavily dependent on remittance that has amounted to as much as 30 percent of GDP. Agriculture sector of the country is major in the economy, providing a livelihood for almost two third of the population but has contributed less than a third of the GDP. Industrial activities mainly involve in the processing of agricultural products, including pulses, jute, sugarcane, tobacco and grain (Nepal Economy, 2020).

The annual data published by the government of Nepal shows the economic growth rate in the fiscal year 2018-19 at 14%. While the growth rate seems encouraging from a macro perspective, the details become blurry as we streamline the scope of analysis. Expectedly, the service sector remains the dominant contributor with approximately 57%, agriculture with 27% and industry only with 16%. This figures reveal that Nepalese economic growth has followed with atypical path. Thus, the agriculture sector is in slow notion of commercialization (Kathmandu Post- 5th Sep. 2019).

Causes of Low Agricultural Productivity in Nepal

The key factors associated with the low productivity in agricultural sectors and subsequently food insecurity and high poverty incidence are subsistence nature of agricultural production, low adoption of modern technologies and inputs, limited irrigation facilities, low levels of marketing and commercialization, unfavorable domestic policies to agriculture and rural sectors and competition from Indian producers who are supported by large subsidies. As a result, competitiveness in domestic markets is continually undermined, and import dependency is growing over time. Poor investment in agricultural research, irrigation, rural road network, market infrastructure and public support services in inputs and technical services have hampered the expected growth of agriculture sector (Gauchan, 2008).

Steps for Agriculture in Nepal

Various steps for agriculture modernization have been introduced although the sector is not being transformed having implemented the numbers of policy measures for its modernization. The country has brought various policy measures and programs: *Prime Minister Agriculture Modernization Project (PMAMP)* has been implemented since FY 2016/17 as a complementary project of Agricultural Development Strategy with the aim of modernization of agriculture through different activities such as arrangement of advanced agricultural technology and production inputs, mechanization in the production of crops and materials, and arrangements of necessary infrastructure for processing and marketing.

In addition, grants have been mobilized for carrying out different programmes through local levels on various areas of agriculture system in public-private partnership including infrastructure development of agricultural marketing. Till mid-March of FY 2018/19, Agricultural Commercialization and Trade Project, High Mountain Agro business and Livelihood Improvement (HIMALI) Project, and High-Value Agriculture Project have been completed. Total complimentary grants of Rs. 2.944 billion was provided for the development of 1,218 agricultural commercial farms during the project period of Agricultural Commercialization and Trade Project started from 2009.

The contribution of agriculture sector in total gross domestic product is 26.2% in the current FY 2019-20 and 2020-21 which was 25.8. In the past two decades, the production of Nepalese agriculture sector has been increased by 3.2%. This growth has been 3.2% of India, 3.9% of both China and Bangladesh during this year. (Economy Survey, 2019/20 and 2020/21).

Above all different policy measures have formulated with the spirit of modernizing and commercializing the subsistence agriculture sector however it couldn't get the satisfactory result in the field of agricultural modernization and industrialization. The country is poor, the large portion of the people are engaged in the agriculture which is remained subsistence till 21th century with prevailing the situation of unemployment, underemployment seasonal unemployment and disguised unemployment in the country.

4. Conclusion & Implications

In the conclusion, the process of modernizing agriculture in Nepal is not considered to have been properly implemented, and the situation is adverse. Because the majority of people are still working in agriculture, which has remained a subsistence industry into the 21st century despite the country's ongoing problems with underemployment, disguised unemployment, and unemployment. Thus the development of agriculture sector has found to be gradual and adverse in the field of both rural development in particular and development of the nation in general. However, ADS (2014) has proposed one possible scenario will be for GDP/capita of Nepal to increase substantially over the 20-year period 2015-2035, and Nepal will move towards middle income country status. This scenario is consistent with the potential of the country and given an improvement in policies and institutions that will result in accelerated growth. During this movement towards middle income country status, Nepal will go through the process of agricultural modernization, a process whereby the economic structure of a society changes from one based on agriculture to industry and services and thus, this research will help to understand the issue of agriculture not being modernized in Nepal.

References

- Agricultural Development Strategy. (2012). Agricultural development strategy assessment report. *Ministry of Agriculture and Cooperatives, Government of Nepal*. <http://www.dls.gov.np>
- Agricultural Development Strategy. (2014). Agricultural development strategy assessment report. *Ministry of Agriculture and Cooperatives, Government of Nepal*. <http://www.dls.gov.np>
- Agricultural Development Strategy. (2015-35). Agricultural development strategy assessment report. *Ministry of Agriculture and Cooperatives, Government of Nepal*, <http://www.dls.gov.np>
- Briones, R., and Felipe, J. (2013) Agriculture and structural transformation in developing Asia: Review and outlook. *Asian Development Bank, Philippines*. www.adb.org/sites/default/files/publication/30380/ewp-

363.pdf

- Clark, C. (1940/1957). *The conditions of economic progress (3rd ed)*. London: Macmillan.
- Chenery, H.B. & Syrquin, M. (1975). Patterns of development, *London: Oxford University Press*. 1950-1970.
- Ministry of Finance. (2019/20). Economy survey report. Ministry of Finance, Government of Nepal, <https://www.mof.gov.np/1633341980.pdf>
- Ministry of Finance. (2020/21). Economy survey report. *Ministry of Finance, Government of Nepal*, <https://www.mof.gov.np/1125024153.pdf>
- Food and Agriculture Organization. (2002) Food and nutrition security in Nepal: A Status Report. *Food and Agriculture Organization of the United Nations, Nepal*.
- Gauchan, D. (2008). Agricultural development in Nepal: Contribution to economic growth, food security and poverty reduction. *Socio Economic Development Panorama*, 1 (3), www.researchgate.net/publication/284165940
- Industrialization is Key to Development* Published at: Kathmandu post.com September, 2019.
- Jhingan, M. L. (2009). *Micro economic theory*. New Delhi: Vrinda Pub. House (p) Ltd.
- Kuznets, S. (1966). *Modern economic growth*. New Haven, CT: Yale University Press.
- Laborde, D., Lallemand, T., McDougal, K., Carin Smaller, C., & Traore, F. (2019). Transforming Agriculture in Africa and Asia: What Are the Policy Options? *IIDS (International Institute for Sustainable Development) and IFPRI (International Food Policy Research Institute)*, <https://www.iisd.org/system/files/publications/.pdf>
- Lewis, W.A. (1954). Economic development with unlimited supplies of labor. *Manchester School of Economic and Social Studies*, 22,139-191. <https://la.utexas.edu/users/hcleaver/368/368lewistable.pdf>
- Perkins, D. H., Redelet, S., Linduer, D. L., & Block, S. A. (Eds.). (2013). *Economics of development*. W. W. Norton & Company, New York, London.
- Sapkota, M. (2018). Locating development as a new 'Discipline'. *Nepalese Journal of Development and Rural Studies*, 15, 42-51.
- Schultz, T. W. (1964). Transformation of traditional agriculture, *Scandinavian economic history*, 35:1, 108-129, <https://doi.org/10.1080/03585522.1987.10408083>
- Schultz, T.W. (1964). *Transforming traditional agriculture*. New Haven, CT: Yale University Press.
- Schultz, T.W. (1975). The value of the ability to deal with disequilibria. *Journal of Economic Literature*, 13,827-846.
- Schultz, T.W. (1978). Distortions of agricultural incentives. *Bloomington, IN: Indiana University Press*.
- Timmer, C.P. (1969). The turnip, the new husbandry, and the English agricultural revolution. *The Quarterly Journal of Economics*, 83, (375-395), <https://academic.oup.com/qje/article1927825pdf>
- Timmer, C. P. (1988). The agricultural transformation. In H.B. Chenery & T.N. Srinivasan (Eds.), *Handbook of Development Economics*, 1 (276-331). <https://eclass.uoa.gr/modules/doc.pdf>
- Todaro, M.P., & Smith, S. C. (2015). Economic development (12th ed.). (Part 2, Chapter 9: Agricultural transformation and rural development): *Boston/New Delhi: Pearson*
- World Bank. (2008). World development indicators. *Washington D.C.* <https://documents1.worldbank.org/587251468176971009/pdf>
- World Food Program. (2019). Annual country report: Nepal Country Strategic Plan. *WFP Nepal, Kathmandu*, (2019-23). <https://docs.wfp.org/85108050995de293>