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Study of **Agricultural Income Tax** in Federal Nepal

Ankshita Chaudhary & Ayushma Maharjan

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List of Acronyms and Abbreviations

ADB	Agricultural Development Bank
AHT	Agriculture Holding Tax
AKC	Agriculture and Knowledge Centre
BOR	The Board of Revenue
CBS	Central Bureau of Statistics
EUR	Euro
DFID	Department for International Development
DOA	Department of Agriculture
DOLS	Department of Livestock Services
FAO	Food and Agriculture Organization
FMD	Farm Management Deposit
GDP	Gross Domestic Product
GoN	Government of Nepal
ICAN	Institute of Chartered Accountants of Nepal
IMF	International Monetary Fund
INR	Indian Rupee
MLMAC	Ministry of Land Management, Agriculture and Cooperatives
MoAD	Ministry of Agriculture and Livestock Development
MoEAP	Ministry of Economic Affair and Planning
MoIAL	Ministry of Internal Affair and Law
NARC	Nepal Agricultural Research Council
NAS	Nepal Accounting Standards
NLFS	The Nepal Labor Force Survey
OECD	Organization for Economic Co-operation and Development
PPP	Public-Private Partnership
UAT	Unified Agricultural Tax
USAID	United States Agency for International Development
VAT	Value Added Tax

Paper at a Glance

The economic growth of developing countries predominantly depends on the agricultural sector. Considering that the sector contributes a substantial portion to the Gross Domestic Product (GDP) and is the principal source of livelihood, the developing countries have focused their efforts to increase farm productivity. In doing so, the governments have adopted targeted measures that are backed by huge public investment in the sector. Nonetheless, these countries often struggle to mobilize financial resources mainly because agriculture in such economies is untaxed. In an effort to shore up their revenue bases, developing countries have in recent times resorted to the imposition of agricultural income taxation.

Agricultural income taxation can be defined as the legal levies that are imposed on the income generated through the act of production and distribution of agricultural goods. While the definition varies across countries, the debates that surround it are essentially the same. The general notion that defends the imposition of agricultural income tax is that the sector entails small-scale subsistence farmers who operate in the informal sector and cannot afford tax payments. However, the benefits of agricultural income tax outweigh its disadvantages. This taxation allows an improved tax to GDP ratio, prevents tax evasion, results in both horizontal and vertical equity, and results in the provision of better agricultural development and extension services.

Agricultural income tax, just as other forms of tax, needs to comply with the standards of neutrality, efficiency, certainty, simplicity, effectiveness, and flexibility. Apart from these features, absolute prerequisites that allow an effective and efficient tax administration needs to be in place. The paper has studied six countries – Australia, Germany, India, Pakistan, Tajikistan, and the United States – based on which basic principles and fundamentals have been derived for the administration of agricultural income tax. To begin with, agricultural income needs to be defined. This needs to be followed by accurate identification of the tax collection authority and robust intergovernmental coordination, as well as adequate tax and expenditure planning. Similarly, concentration on the commercialization of agriculture, proper accounting methods and availability of data are present in countries that have successfully imposed this tax.

Along with the establishment of the aforementioned fundamentals, clear mechanisms need to be institutionalized. On the basis of the literature and the review of country cases, the paper attempts to identify popular models adopted by different countries. The popular models entail agricultural land tax, social security scheme-based tax, flat tax, income tax, and inefficiency tax. While the four former models of taxation are employed in many countries, inefficiency tax has not been implemented as of now. Nevertheless, theories suggest that it is suitable for governments that aim to achieve higher productivity in agriculture.

Against this backdrop, the paper summarizes the current status and structure of agriculture in Nepal. Despite the overwhelming potential of the sector, it is constrained by subsistence and small-scale farming, low productivity, limited technologies, minimal support facilities, and high informality. In order to combat these shortcomings, the provision of prerequisites - infrastructure, road, irrigation, storage, research and knowledge dissemination, capacity building and market support provision – that result in agricultural development need to be set up. However, this act requires huge financial resources. As agriculture has invariably been an untaxed sector and has been funded through the revenue generated from other economic sectors, there is a lack of substantial public investment in the agro-sector.

With the changed context of federalism, the Constitution has mandated three tiers of governments with both exclusive and concurrent powers. In the same manner, the state governments are mandated to collect and administer the agricultural income tax for the first time in the history of the country. While a few states have formulated legislations to determine agricultural tax base, its rate and administration, the remaining are yet to attain the same due to knowledge insufficiency and procedural hassles. Also, for those states that have prepared the legislations, haphazard imposition of the tax with no streamlined mechanism has hindered the process altogether.

This paper thus attempts to familiarize the stakeholders with the opportunities of agricultural income tax so as to facilitate an efficient and effective administration. As the Constitution gives a mandate to the state governments to impose such tax, all states are likely to devise legal and institutional mechanisms to do so within the short term. Agriculture tax will not only strengthen states financially through increased revenues but also enable them to contribute more effectively to boosting agricultural productivity at sub-national levels compared to the erstwhile unitary government via improved infrastructure investment and targeted plans and interventions. However, this is not without challenges. The lack of policy coordination among the three orders of government, insufficient tax and expenditure planning, unavailability of farm accounting methods and frameworks, lack of commercialization of agriculture, and limited data availability all need to be overcome at the same time. Hence, governments also need to direct their efforts towards plugging these loopholes.

Finally, this paper seeks to prescribe a few policy reforms. There is a need to strengthen the intergovernmental policy coordination at both vertical and horizontal levels. This should be accompanied with proper data mining that will facilitate policy decision making as well as ensure transparency and accountability. Moreover, contract farming needs to be boosted and it needs to be supplemented with capacity building of farmers, development of agriculture infrastructure and research and extension services.

Chapter 1: Introduction to Agricultural Income Tax

1.1 Background

The economic growth of developing countries largely depends on the contribution of their agriculture sector (FAO, 2002). The sector not only represents a significant portion of their GDP but also remains the prime source of employment for the majority of their population. Accordingly, developing countries have been focusing on increasing the production of farm goods so as to raise the income level of small and marginal farmers. In pursuit of achieving the objective, the governments have adopted a series of measures that include subsidies, tax exemptions, minimum price fixation, interest free loans and grants to insurance markets, among others (Barrett & Mutambatsere, 2008). Backed by huge public investment, the agriculture sector in developing countries experiences government intervention at almost all stages of production, consumption, and marketing.

While at that, it is important to realize that the many interventions advanced by the government require substantial public investment; yet mobilizing financial resources has indeed been a challenge for many countries. With regards to the agriculture sector in developing countries, there remains a mismatch in revenue and expenditure (Reva, 2015). The problem can mainly be attributed to the fact that the agriculture sector in these countries is untaxed whilst the paramount focus is directed towards the provision of subsidies and protection of the industry. It is precisely why the governments in such countries are now concentrating their efforts to shore up their revenue bases and to finance the ambitious projects set forth for accelerating the pace of development of the agriculture sector.

One of the fundamental methods wherein the governments fulfill these goals is through the imposition of tax on individuals. The primary objective of accumulating funds from the general public is to re-invest it in public goods and services that would promote industries and support economic activities (Anderson et al., 2002). The said approach is deemed to achieve the twin goal - employ the poor and facilitate development in the region. However, governments often face difficult trade-offs while increasing taxes as it often has repercussions in the form of discouraged investments and negative incentives in the region, jeopardizing the motive of poverty reduction altogether (Tanzi et al., 1981). Additionally, literature that provide the most effective tax policy design and administration framework for developing nations is minimal or non-existent.

Many-a-times, governments adopt methods such as high taxes for some sectors and tax exemptions or benefits to incentivize individuals to operate in certain other sectors. Nevertheless, evidence of its efficacy in developing countries shows mixed results (Reva, 2015). Several studies have concluded that selective taxation policies have a negative impact on the economy as they affect resource allocation and increase complexities for both government and private sector in terms of administration and compliance. Additionally, such distinctions in taxes affect the producer's decision regarding what and how to produce, which implies investment in the economy based on tax schemes rather than economic rationale. This form of taxation can thus be considered to have adverse effects on the economic growth of the region.

To address such problems that can arise due to inappropriate taxation methods, the International Monetary Fund (IMF) has suggested the developing countries to focus on broadening the tax bases while keeping tax rates at a minimum (Akitoby, 2018). In line with a study conducted by the World Bank in South Asian countries, expansion of tax base with a focus on the establishment of a level playing field on all types of firms will help improve the business climate, allow the government to reduce the overall tax rate and generate higher tax revenue (Reva, 2015). This increase in public revenue will provide the government with ample space to invest in the development activities of the region that will further attract greater investment in the sector. A simple and uniform tax will reduce myriad compliances and support business; all of which will incentivize unregistered enterprises to enter the formal sector.

In an attempt to increase the tax base, South Asian nations have recently experienced increased debate on the potential of collecting Agricultural Income Tax (Economic Time, 2017; Rana, 2019; Colombo Page, 2018). Despite agriculture providing a large portion of income to the majority in these countries and contributing significantly to their GDP, the taxation power of the sector has been very minimally experimented. The idea of collecting agricultural income tax is often frowned upon with arguments that it burdens small farmers. Nonetheless, evidence of successful and effective agricultural taxation aimed at enhancing the productivity of the sector and increasing welfare at the micro level exists (Naqvi et al., 2011).

1.2 Agricultural Income Tax

Agricultural income, in general, can be defined as any income generated in the process of production and distribution of agricultural goods - crops and/or animals – raised on farms. The legal levies imposed on farmers from the income generated by conducting agricultural activities or the income generated as a fee imposed on agricultural land can be considered as agricultural tax. However, the definition of agricultural income and the tax applicable to such a source of revenue varies across nations. Each nation has its unique definition of what it considers an agricultural income that is exempt or subject to tax.

The Income Tax Act, 1961 of India interprets agricultural income as the income derived from the cultivation of land and renting out of land for agricultural purposes. It completely rules out breeding and rearing of livestock, dairy farming and poultry farming from agricultural income. Similarly, Income Tax Ordinance 2001 in Pakistan also provides a narrow definition of agricultural income by incorporating only those incomes that are generated from crop farming and land rental. In the United States, there are no legal definitions for different forms of taxes and all types of income and capital gains are considered as taxable income. The farm income is not regarded as separate and is treated as any other business income. Correspondingly, many developed countries align agriculture income tax with the social security scheme.

Despite myriad countries levying an agricultural income tax, its imposition continues to remain an extensively debated subject. The initial rhetoric associated with agricultural income tax is that it overlooks the notion that a significant part of the agricultural community comprises small farmers, simply eking out a subsistence living, who cannot bear the brunt of taxation (Khan, 2001). Another point of contestation is that the agro-sector, for the most part, is largely informal and is driven by cash-based transactions without a proper accounting framework. This impedes the assessment of the farmer's actual income, which further hinders tax collection. Alongside, the unavailability of records with the scattered system of landholding and tenancy makes it difficult to locate the assessee, complicating the imposition of agricultural income tax (Chatterjee, 1968).

Having said that, the desirability of agricultural income tax follows from several considerations of efficiency and equity. In economies where agriculture is a major contributor to the GDP, the imposition of agricultural income tax raises substantial revenue to finance the expenditure to improve agricultural infrastructure (Tanzi et al., 1981). It also mitigates the discrepancy between agriculture contribution to GDP and tax and results in an improved tax to GDP ratio. Simply put, the large untaxed potential of the agro-sector can be leveraged by taxing the income of the farmers, allowing the government to acquire sufficient funds and investing in agricultural development.

Apart from revenue considerations, agricultural income tax exemptions encourage individuals to under-report the taxable income, which further undermines revenue from taxable sources (Sengupta & Rao, 2012). As the agro-sector is heavily cash-driven, it acts as a tax shelter for a significant number of non-agricultural income holders. The tax exemption develops a channel for tax evasion as it encourages individuals to launder the non-agricultural income as agricultural income. Hence, taxing will plug the loophole that exploits agriculture as a tax shelter.

Similarly, the case for taxing agricultural income is made on the grounds that the exemption of agricultural income tax violates the principle of horizontal equity[1] and vertical equity[2]. The levying of an appropriate agricultural income tax removes the distinction between the income derived from the agriculture sector and the non-agriculture sector and ensures horizontal equity as those earning an equivalent level of income are taxed in like manner. Likewise, the agricultural income tax also results in vertical equity by imposing

1 According to the theory of horizontal equity, individuals with similar income and assets should be taxed at the same rate
2 According to the theory of vertical equity, individuals who earn more income should be taxed at a higher rate than those who earn less

progressive tax rates and distinguishing between the poor and the rich farmers (Khan, 2001).

Moreover, the benefit approach states that large farmers garner more advantages from the government's input subsidies, institutional credit and extension services than small farmers, who are the real intended beneficiaries of the support (Chaudhary, 1999). Hence, the benefits of taxing rather than subsidizing the agro-sector rest upon the fact that, taxing brings the farmers from the informal to the formal sector and allows them to demand improved services in the form of better road infrastructure, access to credit and insurance, output market, enhanced agricultural education and research. This further enables them to demand accountability from the government rather than remain mute beneficiaries of subsidies. Therefore, agricultural income tax not only results in economy-wide welfare indicators but also tends to be a real and potential tool to improve the utility of farmers (Naqvi et al., 2011).

Chapter 2: Principles of Collecting Agricultural Income Tax

Typical tax policy should entail neutrality, efficiency, certainty, simplicity, effectiveness, and flexibility as some of its fundamental features (OECD, 2014). While it is imperative that the tax policy conforms to the principle of horizontal equity, it is equally essential that the financial and administrative compliances are minimal, clear and simple to comprehend. Moreover, the rate of levy should be determined appropriately and attention must be accorded to avoid the imposition of double taxation or unintentional non-taxation.

As agricultural income tax is one of the many forms of taxation, it needs to comply with the same standards. Nevertheless, the aforementioned needs to be coupled with absolute prerequisites that need to be in place so as to effectively and efficiently administer the tax system. The following table enlists six countries that impose an agricultural income tax and based on the study of which basic principles and fundamentals for effective and efficient administration are derived.

Table 1: Features of Agriculture Income Tax Across Different Countries

Country	Size of Agriculture[3]	Administering Authority	Taxation Method	Accounting Method
Australia	2.46%	Federal	Farm Management Deposit	Not required
Germany	0.76%	State	Flat Tax and Corporate Income	Not required for flat tax. Standard book-keeping for corporate tax.
India	18%	State	Indirect tax, Land revenue, Income from certain plantation crops	Transactional Methodology[4]
Nepal	28.1%	State	N/A	N/A
Pakistan	18.8%	State	Land Tax	Not required
Tajikistan	19.2%	Federal	Export Tax, Unified Agriculture Tax (Land Tax), Water Use Fee, Corporate Tax	Not required except for Corporate Tax
United States of America (USA)	5.4%	Corporate tax - Federal Personal Tax - State	Individual and Corporate Income Tax	Cash Method[5] and Accrual Method[6]

Source: Authors' study of Agricultural Income Tax regimes in various federal countries

3 Size of Agriculture: Contribution of agricultural sector to GDP of the countries.

4 The transaction method refers to the concept wherein the financial result - profit or loss - of a particular business is derived by recording and aggregating the revenue, expense, and other purchase transactions.

5 Under cash method, the revenue and expenses are recorded in the income statement only when the cash transactions occur

6 Under accrual method, the revenue and expenses are accounted for at a time when the transactions occur rather than when the payment is received or paid.

Define Agricultural Income

The rationale behind defining statutory terms is to allow the economy of expression (Williams et al., 1968). This task of assigning a definitive meaning to the term puts the drafters and readers alike and limits any form of willful interpretation of the text (Price, 2012). In this context, as agricultural production and methods vary vastly across the world depending upon the climate, terrain, and conditions, the definition of the term agriculture differs among countries. Consequently, so does the statutory definition of the income earned from the same.

While some countries have expanded the statutory definition of agricultural income, others have narrowed the lens of its meaning. India, in particular, limits agricultural income to income derived from agricultural land and commercial products produced from the same.

The term is not extended to dairy and poultry farming as well as breeding and rearing of livestock. On the contrary, farm income in Australia is concerned with primary production activities that include plant and animal cultivation, fishing, tree farming. Nevertheless, in all cases, the definition restates the meaning in a way that sets forth a limit beyond which an interpreter cannot venture.

Administering Authority and Intergovernmental Coordination

Among the many sectors that constitute an economy, agriculture is deemed the hardest to tax (Bird, 1993); and the attempt to administer agriculture revenue by the wrong level of government poses additional difficulty (Rajaram, 2004). It is evidenced that the resistance towards agricultural tax is the least deplorable when collected by the sub-national governments as it is easier to convince individuals for voluntary participation (Bird, 2010). The effect can largely be attributed to the compliance incentive, where local farmers have some form of assurance that the paid taxes are jurisdictionally retained for conducting productivity-enhancing activity in their region (Rajaram, 2004). An argument most commonly used in favor of sub-national governments is that central collection is a more laborious and less efficient process. Besides, the revenue collection does not make huge contributions to the central treasury. As the central government will not hold enough incentives to collect tax efficiently due to its high cost and low revenue potential, the most rational option is to distribute the cost and labor requirement by devolving the power to subnational governments (Sebastian, 2004).

Most countries around the world have devolved the power of collecting agriculture tax to the state government. In India and Pakistan agriculture income is completely exempt from the federal income tax. However, the state government can enforce the tax (Reva, 2015). In countries that fall under the region of Sub-Saharan Africa, the tax on agriculture is levied by the national government, however, it is collected by the local government (Tanzi et al., 1981).

Commercialization of Agriculture

Commercialization of agriculture is concerned with the movement from subsistence-oriented patterns to increased market-oriented patterns (Wiggins et al., 2011). Farmers that struggle to stay afloat cannot bear the brunt of taxation and are coerced into the informal economy. The process of commercializing – linking production and consumption - not only results in a higher average farm income but also leads to lower farm income inequality. Thus, commercial farming is economically rewarding as it ultimately pushes a farmer's revenue. As can be assessed, in countries that successfully collect agricultural income tax, farm output is based on commercial agriculture rather than subsistence agriculture.

In the context of Australia, the majority of farm output is increasingly concentrated in larger commercial farms. The country's ever-increasing deposits in its Farm Management Deposit[7] (FMD) scheme substantiates that commercial farming is rather a pre-requisite for the collection of agricultural income tax. Likewise, New Zealand is one of

7 Refer to Case Study 4

the most effective success stories in agriculture commercialization and development around the world (Samriddhi Foundation, 2011). Their transition from subsistence to commercialized farming has enabled New Zealand to tax individual farmers and agriculture businesses and add substantial revenue to their coffers.

Agriculture Tax Planning

It is apparent that one common model for collection of agricultural income tax is not expected to fit all countries; rather it depends upon the respective country's social and institutional framework as well as relative size and productivity of agriculture. While taxation may solve the underlying problem persistent in the agriculture sector and benefit some countries, such proceedings might not work at all for others. This makes it even more imperative to conduct studies regarding the potential of tax imposition and mold it as per the country context.

Despite the discrepancies that exist in the method of tax collection, one common characteristic that can be observed in all countries is that agriculture tax has a proper and streamlined mechanism for collection. A certain form of clarity on how to tax, whom to tax and how much to tax exists in all countries that collect agricultural income tax.

Case Study 1
Agricultural Tax Planning in India

In India, agriculture and taxation of agricultural income is a state subject. The central government excludes agricultural income from the ambit of tax under Section 10(1) of the Income Tax Act, 1961. However, as per the Constitution, the state governments have the power to enact legislation and levy tax on agricultural income if the said amount exceeds INR. 5000 per year. Hence, six states in India – Assam, Bihar, Kerala, Odisha, Tamil Nadu, and West Bengal – have agricultural tax legislation on the books. These states levy tax on a limited base of income from plantation crops such as rubber, coffee, and tea.

Overall, the accounting of the income is based on the transaction methodology of each state wherein they have separate provisions of bookkeeping. While Tamil Nadu imposes a single rate of 55 percent in the agricultural income, the remaining states levy agricultural income tax on a progressive basis. The tax collected from agriculture income accounts for less than half of a percent of the tax revenue collected by each of the six states (James, 2004).

Assam is predominantly an agricultural state as it engages 75 percent of the population directly or indirectly and provides employment to more than 53 percent of the total workforce. The state of Assam effectively levies and administers the tax heading with the enactment of the Agricultural Income Tax Act in 1939. The Act is characterized in an order that all agricultural income derived from the land situated in the State of Assam will be taxed. The agricultural income tax is charged for every person for each financial year in accordance with and subject to the provision of the Act on the total agricultural income of the previous year provided the income exceeds the limit. The Government of Assam in the Finance (Taxation) Department administers the aforesaid Act through the Commissioner of Taxes who is also the head of the Department. Under the Commissioner, there are Deputy Commissioner, Assistant Commissioner, Assistant Commissioner for Appeal, and Superintendent of Taxes/Agricultural Income-Tax Officer. The existing tax rate under the Act is 45 percent of the agricultural income at the highest slab.

Agriculture in Assam is primarily divided into tea plantation and non-tea plantation sectors. Agriculture income is almost entirely derived from the tax on income from tea plantations as the contribution in terms of revenue amounts to 99 percent (Shodhganga, 2012). In the case of tea plantation, only a portion of the income derived from the cultivation, manufacture, and sale of tea is considered to be agricultural income. As the income from tea is a composite income, the apportionment of it is fixed at 60: 40 of which the former is taxable under the agricultural Income Tax Act and the latter is under the Income Tax Act.

Accounting Method

Majority of individuals employed in agriculture sector are uneducated and unskilled labor (Praburaj, 2018). This implies that book-keeping and accounting is not a widely used system in the sector. Accordingly, the majority of farm transactions go unrecorded, which makes it all the more difficult for the government to tax their profits. This problem holds true especially for least developed or developing countries.

Therefore, prior to collecting agriculture income tax, it is important to come up with a practical and rational solution to address the issue. In the case of Germany, farmers have the option to maintain accounting books and are taxed correspondingly. The farmers that possess the required skill set to conduct accounting pay taxes on the basis of their income and the remaining pay a flat tax on the basis of their agricultural land. On the contrary, it is mandatory for large farmers to maintain proper books of account.

The accounting methods used by corporate farms are stipulated in the legislation itself and it varies according to the nation.

Tax Expenditure Planning

The aim of tax expenditure is to provide financial assistance to certain taxpayers and to provide economic incentives that encourage specific taxpayer behavior (Hill & Blandford, 2007). The planning of tax expenditure and its role in revenue-based fiscal adjustment is a crucial element of macroeconomic management. The countries that do not have a well-established expenditure planning are not able to assess the policy outcome of the agricultural tax that is to be collected. This absence of provisions and benefits discourages farmers to pay taxes or voluntarily participate in the process. It, therefore, becomes imperative for countries to determine their expenditure plans well in advance so that farmers are incentivized to pay tax upon which they can accrue benefits.

Among the above-assessed countries, Australia is at the forefront of identifying and quantifying tax expenditures for agriculture. As part of its agricultural expenditure planning, the government of Australia provides continued access to incentives that support farming businesses' risk management. These services include major tax concessions in capital expenditure and assets, concessional loans and the FMD scheme. Similarly, Pakistan provides e-credit schemes, subsidies on fertilizers and seeds, tax exemptions on farm machinery and crop insurance.

Case Study 2
Tajikistan:
Agricultural Tax Collection and Expenditure Planning

The Republic of Tajikistan is an agrarian economy where agriculture employs about 48 percent of its workforce. Among the total workforce engaged in agriculture, 90 percent are small-scale subsistence farmers. In 2018, the sector contributed 23 percent to its GDP (World Bank, 2019). Tajikistan is the poorest country in Central Asia; however, agriculture has led the way for its economic recovery and has contributed significantly to maintain its balance of payments (Global Investment and Business Centre, 2016).

Agriculture revenue generates about 35 percent of the total tax revenue in the country. The key taxes imposed in agriculture are an export tax on cotton, Unified Agricultural Tax (UAT) on all agriculture land, Water Use Fee for irrigation and corporate income tax on agriculture business and processing industries (World Bank, 2012). The taxes in Tajikistan are collected by the national government, however, it is channeled to the local government for expenditure (Azizov, 2007).

Tajikistan imposes a 10 percent export tax on cotton fiber price, which is paid by the exporters. However, it has discouraged cotton farming and the production is decreasing. The UAT is paid by all producers and is levied on the basis of the cadastral value, quality, location and ecological characteristics of the land. The farmers covered under UAT are exempt from value-added tax, (VAT), road user tax, corporate income tax, small enterprise tax, minimum income tax, land tax and personal income tax. It thus simplifies the tax payment procedure for farmers and replaces numerous national and local taxes. The World Bank has stated that this system has made land use more efficient by encouraging owners to use their land optimally. It is not only easy to administer but also has provided an incentive for less productive farmers to lease their land for more efficient use (World Bank, 2012). The Water use fee is a flat tax levied on all farmers for the use of water in their agricultural land. 80 percent of drainage and irrigation projects are financed through the revenue collected from this source.

The agribusinesses and processing industries are levied corporate income tax. Large enterprises pay 25 percent tax (loss-making businesses pay one percent minimum corporate income tax), VAT and Social Fund Contribution, road tax, and land tax. Small enterprises pay 12 percent tax on gross revenue minus operating costs (excluding labour). It is a relatively high form of taxation. The cooperatives who accumulate small farmers to achieve greater economies of scale thus are at a disadvantage.

The government of Tajikistan provides financial credit assistance, seeds, material and technical resources, commodity credits and grants to the farmers. The state budget also consists of funding for repairs and rehabilitation of waterworks facilities, plant protection and quarantine, improvement and protection from epizootic situation and inspection.

Data Availability

As agriculture in itself is a diverse sector that is a blend of various biological, climatic, geographical and human activities (Ninomiya, 2004), information from the sector can be unpredictable, subjective and region-specific.

A general plan to collect agriculture tax and distribute benefits might not be suitable for all regions. Therefore, it is immensely important to accumulate data from agriculture. As a case in point, Assam – one of the 29 states in India - only taxes the income generated from tea plantations as other forms of plantations are minimal and do not account for a significant profit. Similarly, data availability is essential to support policymakers to plan benefits for the farmers. Data provides an impression on the necessities for increased farm production which makes decision making for policymakers easier and efficient. On the contrary, policies based on erroneous data or lack of data altogether run the risk of being inefficacious. For this purpose, prior to the implementation of the agricultural tax, the availability of data that reflects an accurate position of the agricultural status is fundamental.

Chapter 3: Alternative Models for Collecting Agricultural Income Tax

A vast majority of countries impose agricultural income tax but its provision and approach vary across them. Oftentimes, irrespective of the same approach, the countries call for variations in the tax form in accordance with their needs.

Agricultural Land Tax (Agriculture Holding Tax)

One of the significant tools for the imposition of agricultural income tax, in the context of developing countries, is to use the land as a basis for taxation (Khan, 2001). The agricultural land tax has been evolved and administered in various forms in myriad countries. In some cases, the land is taxed on the basis of the market value of land and in other cases, it is based on land quality such as the soil quality, source of irrigation and distance to the nearest paved road (Skinner, 1991). Nevertheless, the predominant measure to tax agricultural land is to simply assess the land area with no regard to its quality.

The tax on agricultural land area is levied on the basis of the size of the land parcel and the location. Under the area-based assessment, a per hectare of land area charge is levied which is further multiplied by the size of the land in order to approximate the tax on the agricultural land area. This form of taxation is easy to administer as the prerequisites are assessed in advance. Since the taxation is based on the landholding and not on the output or the yield of the land, it is considered to be inelastic in nature. This means that land tax is not related to changes in productivity improvements and inflation.

Moreover, it is stated that large farmers underutilize their farmlands due to which the cultivation intensity of the land varies inversely with the farm size (Chaudhary, 1999). Therefore, taxation will encourage farmers – large or small - to ensure that their land parcel is productive and not left idle.

The tax on agricultural land area can either be imposed as a progressive rate or as a uniform rate. A progressive rate ensures heavier taxation on the large farmers and tax exemptions for small farmers with no ability to pay. On the contrary, a progressive tax rate can result in large landholders to break their land into small farms which will thus induce tax evasion. While a uniform rate will control the problems associated with tax evasion as farmers will be taxed at a uniform rate irrespective of their income, this measure contributes to high inequity. As the income generating capacity of the land or the land productivity is not taken into account, a farmer with low productive land will undergo a greater tax burden as compared to a farmer with high productive land.

Several countries including Bangladesh, Ethiopia, Malaysia, Pakistan, and Sri Lanka have adopted this approach to tax the agricultural income of farmers.

Case Study 3
How Pakistan Levies Agricultural Tax on Land

The Constitution of Pakistan, 1973, provided the jurisdictional power for agriculture development and tax collection to the provincial governments. Following the mandate, all four provinces of Pakistan enacted legislation to collect agriculture income tax during 1996/97; however, it was not widely practiced for various political and social reasons. It was only in 2009/10 that Pakistan collected 1.2 billion in taxes from agriculture.

Agriculture income tax in Pakistan is collected in the form of land revenue rather than the actual incomes generated by farmers. This can be attributed to the fact that there is no inexpensive way to verify the agricultural income of individuals; almost nobody keeps records of farm revenue and expenses in the country. The Board of Revenue (BOR) at the provincial level is responsible for administration and collection of land revenue and preparation of land records. Under the BOR, the Chief Land Commissioner is responsible for agricultural income tax, Agricultural Development Bank (ADB) of Pakistan, and cooperative societies. The revenue officer is responsible for the collection of land revenue and other dues payable to the government. The officer is constantly on tour to observe the condition of crops on the basis of which the remission or suspension of revenue is decided.

The revenue generated through the sector is re-invested in activities like expanding credit facilities at a low interest rate, introducing schemes for the agricultural sector, providing subsidies on fertilizer and other inputs, providing tax exemptions on tractors and other farm equipment, providing cheaper electricity, and offering insurance coverage for crops and livestock. The imposition of agricultural income tax has been beneficial in terms of household and economy-wide welfare indicators. Some studies have suggested that the implementation of agricultural income tax tends to be a real and potential tool to bring improvement in a country's economic indicators and household utility at the micro level.

Social Security Scheme Based Taxation

Social security scheme-based taxation is largely used by developed countries - Australia, Canada, Poland, Germany, Italy, and Switzerland - as an alternative mechanism to tax agriculture in their respective nations. The system on the basis of which these schemes are developed however varies from country to country (Anderson et al, 2002).

A general concept of social security-based taxation is the imposition of tax or duty on farmers, and in return, provide them with various benefits - mostly in the form of financial security. The countries that impose such models, rather than levying direct tax on income do so through various schemes.

Firstly, the government, using a flat tax method or on the basis of agricultural holdings or the income of the farmers assesses a certain amount or rate that will be levied to the farmers. The majority of the countries ensure that only low-income earners participate in the scheme. Large scale agricultural businesses whose annual financial transactions exceed a certain threshold have to operate as a corporate entity and pay taxes accordingly.

Secondly, the money accumulated from the farmers is not considered as tax revenue but as deposits that will be used entirely for the provision of financial support to the farmers (Schoukens, 2007). The government focuses on providing various benefits to the farmers who join the scheme. Some of these benefits include crop insurance, life/health insurance, exemption from other implicit taxes, allowance on fertilizers, diesel and oil, and old age pension.

Thirdly, given that the country does not include the old age pension scheme in the benefits, the farmers can withdraw certain percent of the amount deposited in the scheme, as and when required. However, the deposits should be made for a certain stipulated time.

Successful implementation of social security schemes has been known to guarantee safety nets for low-income and vulnerable farmers while reducing the financial burden of the government. Also, such a scheme is deemed to be most effective in ensuring the voluntary participation of the majority of farmers. Thus, countries struggling to formalize its agriculture sector can incentivize farmers through the scheme to operate as a registered farm. Additionally, this form of taxation is a great tool for financial risk management as it ensures that farmers have liquidity even during the least productive years.

Case Study 4
Australia: Agricultural Taxation as Social Security Scheme

Instead of taxing the primary producers, the Australian government practices Farm Management Deposit (FMD) for tax management purposes. The FMD is a tax-linked, financial risk management tool for primary producers that enables them to set aside pre-tax income in a high-income year only to withdraw it in a low-income year. Under the scheme, the income deposited into an FMD account is tax deductible when the deposit is made but is subject to taxation in the financial year it is withdrawn. With the intent to smoothen the tax liability, the primary producers are allowed to elect to pay tax on the average income earned over the previous five years. This scheme thus assists primary producers to deal more effectively with the cash flow fluctuations by building up cash reserves, improving their liquidity, and lowering their tax progression.

The government of Australia provides several schemes and concessions to the primary producers affected by drought, natural disasters and other hardships wherein they are waived interest charges, as well as provided with extra time to pay tax debts and debt installments. Moreover, the primary producers can use their FMD deposits as loan offsets to reduce their bank interest costs. Along with this, primary producers can claim deductions on varied capital expenditures or assets that include water facilities, discounted valuation of stock from natural increases, telephone lines, and electricity connections, among many.

The Department of Agriculture manages its accounting policy who is also responsible for the FMD's administration. This scheme is quite popular among the Australian farmers which is substantiated by the fact that there were 53,790 accounts, and the total amount deposited was AUD 6.8 billion as of June 2019 (OECD, 2019).

Flat Tax Method

One of the most popular ways to calculate and levy agriculture income tax is through a flat tax method (Anderson et al., 2002). Germany and the UK are among the many countries that practice this form of taxation.

The flat value is determined by the government on the basis of various factors - land value, plantation value, potential land quality or average farm income of the area - whichever is suitable for the region. The amount determined is usually lower than that calculated by standard book-keeping. Of those countries that levy a flat tax model, the majority employ it for farmers who earn the lowest level of income wherein the income threshold is determined by the government. The farmers whose income exceeds the threshold are liable to conduct standard bookkeeping while income valuation should be undertaken by a financial administrator. Alongside, a corporate tax rate that is levied on other businesses is levied on such farmers.

Case Study 5
A Blend of Flat Tax, Income Tax and Social Security Scheme in Germany

The federal state of Germany is best-known for providing generous support to its farmers through the special tax system which includes social security schemes. The agricultural income in Germany is calculated on the basis of four different methods - bookkeeping, inventory keeping, flat method, and income valuation by financial administrators.

The most popular form of taxation - used by 66% of the farms - is the flat method. Farmers with less than 20 hectares or less than 50 livestock units are eligible to apply for the flat rate method. Under this method, the tax amount is calculated on the basis of the economic value of the land. The administrators ensure that the amount derived through the flat method is lesser than that derived from any other method. Farmers do not have any obligation to conduct bookkeeping, which

An alternative method to this is to levy a flat rate on the potential profit of farmlands. Prior to its imposition, the government has to analyze the different types of land and plantations that are made in the corresponding land. Based on the observations, an estimate of the potential farm profit has to be determined. However, for Nepal, given the inadequate human resource capacity and technological backwardness at the local level, the estimates might be difficult to calculate.

A flat tax amount is, therefore, the simplest form because of the ease to administer it. The model eliminates the preparation cost associated with taxation such as bookkeeping and auditing, allowing the uneducated farmers to comply with it. A major advantage of this model is that it incentivizes farmers to increase their disposable income as an extra amount of earning is not taxable. This will further induce farmers to produce more and decrease their relative tax burden. As opposed to its efficiency, the small farmers might struggle to afford it as it does not take into account the actual revenue earned by them. Another matter of concern is that the tax system might be unfair for low-income farmers as their tax proportion will be higher than those with high-income, within the same threshold.

has increased its attractiveness amongst small and marginal farmers.

Large businesses who generate farm income greater than EUR 60,000, or turnover greater than EUR 600,000 or that have an imputed 'economic value' of greater than EUR 25,000 are obliged to use standard bookkeeping and pay corporate income tax. The farmers not eligible for flat or standard book-keeping methods, need to calculate income on the basis of inventory.

All farmers in Germany who pay the above-mentioned taxes are included in the social security system. Almost 85 percent of the revenue generated through the tax is spent on the social security scheme. The scheme covers old age pension, health insurance, and accident insurance. The scheme is also applicable to the employees and family members of the farmers. Additionally, the government also provides an allowance on diesel oil tax and gas used for greenhouse.

Income Tax

Under this form of taxation, the agricultural income is taxed just as any other individual income tax or corporate income tax. Thus, this is a uniform form of taxation on gross income. The tax on income may or may not be accompanied by added tax incentives. In addition to general tax provision, farmers are offered preferential tax treatment to the agricultural sector that allows them to reduce their tax liability.

While the actual income of a farmer or an agribusiness as a basis for taxation supports the criterion of horizontal equity and the ability to pay, it poses serious problems in determining the income and assessing the income earners (Khan, 2001). n this form of taxation, agricultural production is not undertaken on a commercial scale due to which the income and expenditure

Case Study 6
The Income Tax Structure of Farm Businesses in the United States

Farm business is taxed under the current income tax structure wherein it either falls within the federal individual income tax or the corporate income tax. The farm business can take the form of C corporations[8], sole proprietorships, partnership, limited liability company, and subchapter S corporations[9]. While the majority of the large-scale agribusinesses are taxed under the corporate income tax structure, sole proprietorships, partnerships and subchapter S corporations are taxed at the individual level. A total of 97% of the farm businesses fall under the individual income tax bracket.

The farmers take advantage of both the tax benefits available to all taxpayers as well as the benefits that are particularly devised for farmers. The various features that are available to the farmers entail capital gain treatment for the sale of assets used in farming, current

8 Under the United States Federal Income Tax law, C corporation refers to a legal structure wherein the owners, or the shareholders are taxed separately from the entity. It is also known as C-corp.

9 Under the United States Federal Income Tax law, S corporation refers to a legal structure wherein corporations can pass their corporate income, losses, deductions, and credits to the shareholders. It is also known as Subchapter S corporation or Small Business Corporation.

records are not maintained. Similarly, as the majority of farmers in the developing countries operate in the informal economy, the administrative problems of determining tax liability are heightened.

deduction of capital costs, and current deduction for soil and water conservation expenditures. Besides, other provisions include farm income averaging as well as cash method and accrual method of accounting for individual taxpayers and businesses respectively.

Inefficiency Taxation

Inefficiency taxation is a model developed to mitigate various social and institutional components that prevent farmers from achieving their maximum potential output. Rather, this model provides a greater incentive to more productive farmers.

The model was suggested by Chatterji and Junakar (1986), in an attempt to resolve the short-comings of AHT and tax on income. As under AHT, farmers with equal and comparable landholding pay the same amount of tax, there exists no incentive for greater commercialization and production. Similarly, taxation on income acts as a disincentive for more productive farmers. Thus, researchers suggest that the most preferable model to tax farmers should entail higher taxes to less efficient farmers.

Under the inefficiency taxation model, the tax is levied on the deviation between potential output and actual output. The potential output is defined as the output that can be achieved with the use of the existing practices and techniques prevalent in the area. It takes into account the quality of land, resources, and technologies available, as well as the ecological and geographical factors along with the suitable crop to be planted on the land. Based on these factors a potential yield is derived. The actual output is the total production of the farmland throughout the year.

Although this system of taxation has not been implemented to date, theories suggest that it is best suitable for governments that aim to achieve higher productivity in agriculture. The model incentivizes farmers to produce more in order to decrease their relative tax burden. However, the determination of the potential output and the derivation of the taxable inefficient amount requires substantial effort and resources in part of the government. Moreover, the derivation of potential output might not be accurate as the production depends upon several factors that are subject to change. This is followed by the fact that accurate information on land holdings is difficult to attain in developing or least developed countries.

The model thus requires further refining, however, in the context of Nepal, inefficiency taxation can be an alternative method to accelerate commercial agriculture and productivity.

Chapter 4: Agricultural Income Tax in Nepal

4.1 Nepal Country Context

Agriculture in Nepal remains the mainstay of the national economy, accounting for 28.1 percent of the country's total GDP (Ministry of Finance, 2019). While agriculture's share in Nepal has progressively declined over the recent years, the importance of this sector to the country's economic and social fabric goes well beyond this indicator. Agriculture not only dominates the economic output but also deems to be the prime source of food supply, income, and employment for the majority. The sector provides the livelihood for 68 percent of the Nepalese population and is pivotal to alleviate poverty whilst uplifting the standard of living of the people (USAID, 2019). Likewise, the country's total commodity export, by and large, feeds on agriculture with a total of 31.1 percent (Ministry of Finance, 2019).

Despite the overwhelming potential of the agro-sector to add more to the national growth of Nepal, it still continues to lag in various segments. One such monumental challenge associated with agriculture is the high degree of land fragmentation that has created an unfavorable environment for the commercial production of agricultural goods and has limited the sector for mere subsistence. Moreover, the lack of access to credit and finance to the farmers along with the persistent use of traditional farming system, low mechanization, lack of knowledge of new and advance farming techniques among farmers and limited irrigation facilities pose an acute threat for the growth of the agro-sector (Samriddhi Foundation, 2012).

In order to curb such existent anomalies and to boost the agro-sector, over the course of the years, the Government of Nepal (GoN) has launched several periodic plans, programmes, and policies. As the past and ongoing interventions are polycentric in nature, service delivery is not mutually supportive and often competing and duplicating. This, therefore, results in an ineffective implementation in terms of transforming the Nepalese agriculture into an economically viable commercial agriculture. At a similar front, policies in the form of subsidies have not adequately increased the poor's access to the products. (Samriddhi Foundation, 2012)

With an allocation of 0.84 percent of the GDP, the agro-sector of Nepal is a principal recipient of government subsidies (Pathak, 2020). The agricultural subsidies aim to avail inputs, credit, and interest below the market rate to increase productivity. The GoN offers significant financial support through subsidies in agricultural insurance wherein 75 percent of the premium is borne by the government. Moreover, the government also provides subsidized loans at 6 percent for the agro-sector. These subsidies typically transfer income from taxpayers to relatively wealthy farm households rather than the actual beneficiaries; the support granted by the government does not converge very well with the productivity accrued by the ago-sector, prompting debate regarding the effectiveness and efficiency of the subsidy.

A major point of contention is that the small farmers have been a victim to frequent price and product distortions as the market prices of agricultural products are based on subsidized goods produced by large farmers with high economies of scale. This tendency has, in fact, decreased the income of these subsistence farmers. Additionally, given that the government changes its policy to provide subsidies on different farm goods with each passing year, farmers are prone to changing the crop cultivation in line with the subsidies. This has not just hindered effective farm production but also affected their economic welfare.

Moreover, research suggests that government interventions in the form of high rates of subsidies lead to additional complexities in the public finance sector of developing countries. In Nepal, this can be attributed to the fact that new and increased investment in agriculture is required year on year. This increased expenditure not only harms the fiscal position of the government but also disproportionately benefits the large farmers, accentuating vertical inequality within the sector.

In order to raise agricultural productivity, policies and programmes entail extensive subsidies but a host of other requirements - including better infrastructure, road, irrigation, storage, research and knowledge dissemination, capacity building, and market support provision – are seemingly moderate. Hence, there is an ever-widening need to develop instruments that solve the many and varied problems underlying low agricultural productivity in the country. While the need is recognized, the initiation of such programmes requires huge amounts of financial resources. At present, agriculture is largely an untaxed sector and the required funds to finance agriculture development are pooled from the revenue generated from other economic sectors. This current practice of over-subsidizing yet under-taxing agriculture not only induces fiscal indiscipline but also disproportionately benefits the large farmers as it is practically impossible to identify the small farmers – the real beneficiaries - operating in the shadow economy.

With the changed context of federalism, Nepal retains a framework wherein the key revenue sources rest with the federal government, and the state governments only have an agricultural income tax in their entirety[10]. To top it off, Nepal has no history of collecting agricultural income tax. With this highly constrained and weak fiscal base coupled with the state governments' weak administrative and revenue generation capacity, a vertical fiscal imbalance is inevitable.

10 Other taxes – house and land registration fee, motor-vehicle tax, entertainment tax, and advertisement tax - are shared taxes of state and local government. Whereas, VAT, excise duty, and royalty from natural resources are shared among all three orders of government.

The copious amount of revenue lodging in the central government's coffers owing to its high tax bases will call for a significant volume of transfers to address this imbalance. Perhaps, this low tax system with ever-increasing financing needs of the state governments will spur a vicious cycle of perpetual fiscal deficit as well as reliance on debt and transfers.

On one hand, in a manner that ensures increased autonomy and reduced dependency, the state governments need to ensure that the tax revenue source is exploited to its full potential. On the other hand, lack of prior experience in the area along with numerous challenges - considering that agriculture in Nepal is characterized by low-income generation and highly volatile output - the potential of the state government to maximize revenue from this source is dramatically limited, while the threat of repercussions from haphazardly introduced and implemented tax remains.

4.2 Post Federalism Administrative Changes

As Nepal adopted federalism that replaced the erstwhile unitary structure of governance, the sub-national governments – state and local - are recognized as autonomous spheres and are devolved with administrative, legislative, and financial power. As agriculture is a shared subject among the three orders of government, the new federal system has been accompanied with the setting up of key institutional structures, as well as their governing mechanisms and administrative roles & responsibilities within and among the jurisdictions.

Based on the constitutional provisions, the following table outlines the primary responsibilities in governing the agricultural sector. Schedule 5 of the Constitution reserves a few functions exclusively for the federal government including major irrigations projects, national ecology and forestry management, land use policy, water use policy, and quarantine services. The state power for agriculture entails state-level environmental and forest management as well as agriculture and livestock. Alongside this, one major power distributed to the state is the collection of agricultural income tax. The concurrent powers of central and state, enlisted in Schedule 7, comprise scientific research and human resource development besides the management of contracts, cooperatives, and partnerships. Schedule 8 comprises the exclusive local level powers over local roads, local irrigation projects, and the management and control of agriculture extension services. In a similar manner, Schedule 9 lists agriculture as a whole as a concurrent function of federal, state, and local governments as a means to remain relatively open to the administration of different aspects of agricultural policy.

Table 2: Distribution of Power Among Three Tiers of Government

Absolute Federal Function (Schedule 5) - Federal Projects related to Agriculture - International Treaty and Agreement related to Agriculture - Central Statistics related to Agriculture (National and International indicators and quality) - Quality Control and Monitoring - International Trade related to Agriculture - Quarantine - Intellectual Property Rights, Patent - International Climate Management - Insurance Policy - Land use policy, climate resilience - National commission, Farmers commission being formulated - Social Security and Poverty alleviation
Absolute State Functions (Schedule 6) - State Statistics - State Trade - State Research - Land Management - State level environment management - Agriculture and Livestock Development - Agriculture Income Tax

Concurrent Functions of Federal and State (Schedule 7) - Quality Control and Monitoring - Contract, Cooperatives, Partnerships - Environment Protection and Biodiversity - Veterinary service and other services - Insurance service operation and management - Poverty alleviation - Scientific Research and Human Resource Development - Land Policy and Act
Absolute Functions of Local (Schedule 8) - Local level Statistics - Local level development Projects
Concurrent Functions of Federal, State and Local (Schedule 9) - Agriculture

The following functional analysis of agriculture is based on the principles of subsidiarity, economies of scale, social inclusion & national priority, equity and economic stability, and unbundling for achieving clear assignment. As can be seen from Table 3, some responsibilities are exclusively assigned to the three orders of government, others are concurrent in nature.

Table 3: Role of Government at Various Level of Services

S. N	Functions	Role of government at various level of services				
		Regul-ations	Finan-cing	Staff-ing	Provision	Production
1	Agriculture regulatory services	F,S	F,S	F	F	F
	1.1 Inspection services	F,S	F,S	F,S,L	F,S,L	F,S,L

	1.2 Quarantine services	F	F	F	F	F
	1.3 Licensing services	F,S,L	F,S,L	F,S,L	F,S,L	F,S,L
	- Products standards development services	F	F	F	F	F
	1.4 Agriculture information regulatory services	F	F	F	F	F
	1.5 Risk Analysis and Biosecurity	F	F	F	F	F
2	Research and Development (by commodity and by discipline)	F,S,L	F,S,L	F,S,L	F,S,L	F,S,L
	2.1 Up-streams (Basic and Strategic research)	F	F	F	F	F
	2.2 Mid-streams (Technology development research)	S	S	S	S	S
	2.3 Down streams (Technology testing at farmers field) Research	S,L	S,L	S,L	S,L	S,L
	2.4 Collaborative or partnership research	F	F	F	F	F

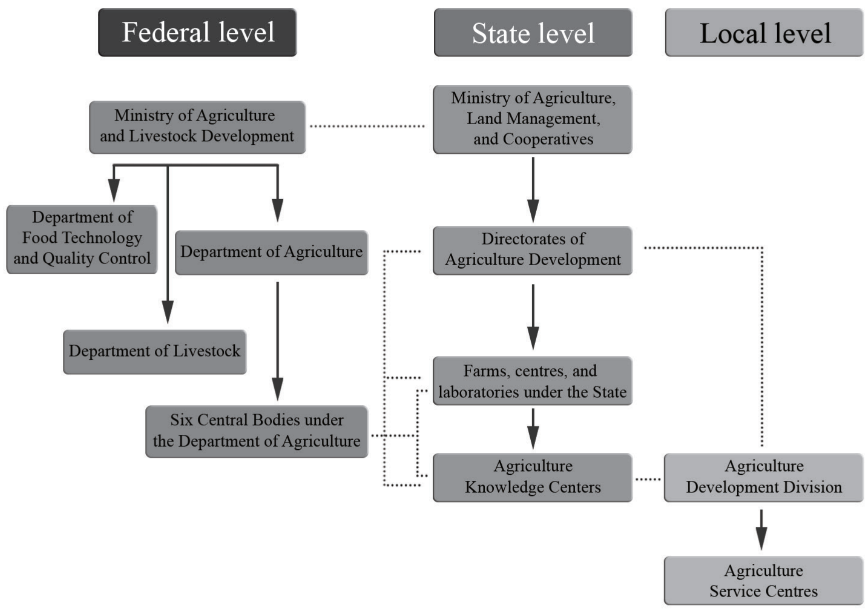
	2.5 Development of agriculture knowledge package for extension as regards new knowledge and technology	F	F	F	F	F
3	Information, communication and extension	F,S,L	F,S,L	F,S,L	F,S,L	F,S,L
4	Soil health care services	F,S,L	F,S,L	F,S,L	F,S,L	F,S,L
5	Land Reform and Management	F,S,L	F,S,L	F,S,L	F,S,L	F,S,L
6	Agriculture education	F,S,L	F,S,L	F,S,L	F,S,L	F,S,L
7	Agriculture credit	S,L	S,L	S,L	S,L	S,L
8	Irrigation	F,S,L	F,S,L	F,S,L	F,S,L	F,S,L
9	Rural Infrastructure	F,S,L	F,S,L	F,S,L	F,S,L	F,S,L
10	Agriculture statistics	F,S,L	F,S,L	F,S,L	F,S,L	F,S,L

Source: Functional analysis and Assignment of Government Consolidated Report, 2015, PREPARE, MoGA

Note: F, S, and L mentioned in Table 3 stand for Federal, State, and Local respectively.

While federalism spurred the need to restructure and reorient governmental units along the federal lines, agriculture was decentralized well before the transition (Department of Agriculture, 2018). Figure 1 illustrates the new structure in the agricultural sector.

Figure 1: Post-Federalism Restructuring of Agriculture Sector



Source: Agricultural Extension in South Asia, 2019

The Federal Ministry of Agriculture and Livestock Development (MoAD) is the apex body for agriculture development in Nepal. Since its inception in 1966, the authority has been subject to frequent organizational restructuring with the integration and disintegration of its departments. As of now, it comprises three central departments – Department of Agriculture, Department of Livestock Services, and Department of Food Technology and Quality Control – central laboratories, commodity development centres, and national priority projects. In total there are nine central agencies, out of which three directly fall under MoAD and six under the departments.

At the state level, the Ministry of Land Management, Agriculture and Cooperatives is established. Each of this ministry operates directorates related to agriculture and livestock development, state laboratories, Agriculture and Knowledge Centres (AKCs), Veterinary Hospital and Livestock Expert Centres at the district level. One of the most notable changes in federalism for agriculture is associated with the institutionalization of AKCs. There are now 51 AKCs under the State Directorate of Agriculture Development; each AKC is an authorized unit that conducts field research and disseminates innovative and essential farming technology and provides support services in the form of regular training to farmers and agribusinesses.

Likewise, an Agriculture Development Division is established within each local government office, each of which has an Agriculture Service Centre which is the grassroots institution that provides agriculture extension services to farmers.

4.3 Post Federalism Developments in Agricultural Income Tax

The promulgation of the Constitution of Nepal 2015 provided the state governments with the jurisdiction for the collection of agricultural income tax. While it implies that the heading is completely exempt from the purview of the federal government, the state governments are responsible for the determination of the agricultural tax base, its rate, and administration.

The federal law has not defined the agricultural income tax and only four out of seven states have provided a brief definition of agriculture income that is taxable.

Table 4: Definition of Agriculture Income Across States

State	Definition of Agriculture Income
3 (Bagmati)	The income earned from the production and sale of cereal crops, cash crops, meat and fish products, dairy products, oil cultivation, and other food products.
4 (Gandaki)	The income earned from the production and sales of paddy, wheat, millet, buckwheat, corn, fruits, vegetables, potato, egg, meat and fish products, dairy products, oil cultivation, lentils, and other food products.
6 (Karnali)	The income earned from the production and sales of paddy, wheat, millet, corn, fruits, vegetables, potato, meat and fish products, dairy products, oil cultivation, and other food products.
7 (Sudurpaschim)	The income earned from the production and sales of paddy, wheat, buckwheat, millet, corn, fruits, vegetables, meat and fish products, dairy products, oil cultivation, lentil, other food products, and cash crops.

Source: Tax and Non-tax Revenue Act, 2018 of State Bagmati, Gandaki, and Sudurpaschim; Finance Act, 2019 of Karnali State

Similarly, as of March 2020, only four out of seven states have made the legal provision for the collection of agricultural income tax from farmers that produce and sell primary agricultural products-plantation and livestock. The rates and policies in the mandates vary across states.

Table 5: Rate of Agricultural Income Tax Levied by Different States

States	State 3 (Bagmati)	State 4 (Gandaki)	State 5	State 7 (Sudur Paschim)
Exempted Amount	Revenue up to 0.5 million rupees	Revenue up to 1.0 million rupees	Revenue up to 0.45 million rupees	Revenue up to 1.0 million rupees
Tax Rate	On revenue between 0.5 million and 5 million: 1.5% On revenue between 5 million and 10 million: 1.75% On revenue between above 10 million: 2%	On revenue between 1 million and 3 million: 1% On revenue above 3 million: 2%	On revenue between 0.45 million and 1.05 million: 5% On revenue between 1.05 million and 2.05 million: 10% On revenue between above 2.05 million: 15%	On revenue between 1 million and 2 million: NRs. 5,000 On revenue between 2 million and 4 million: NRs. 10,000 On revenue between 4 million and 10 million: NRs. 25,000 On revenue between 10 million and 50 million: 1% On revenue above 50 million: 2%

Source: Finance Acts of State 1, State 2, Bagmati, Gandaki, State 5, Karnali, Sudur Pacchim, 2019

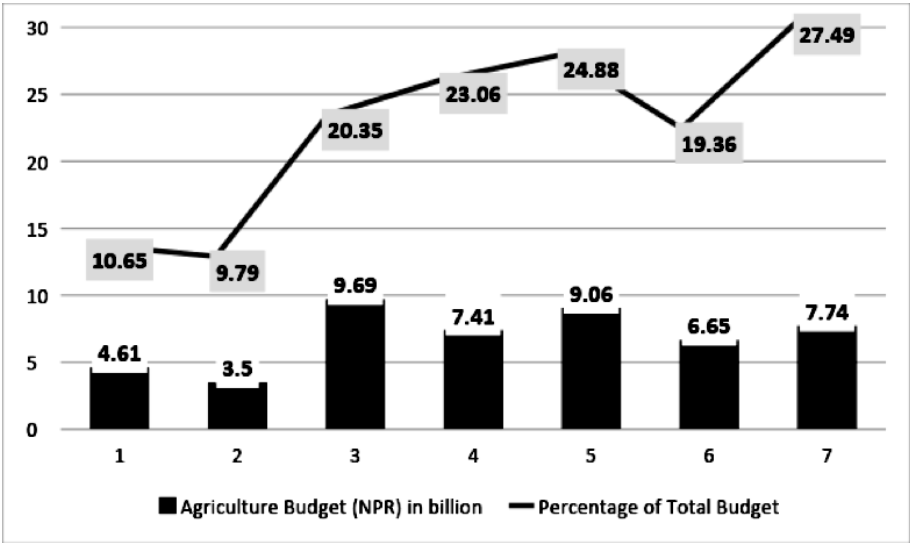
In accordance with the Finance Act of Bagmati, agricultural income tax will be collected on a voluntary basis. However, the state has not incorporated the revenue collection from agriculture in its budget.

The Finance Act of Gandaki sets out that the revenue will be collected at the time of sales and estimates the revenue collection to be NRs. 15,00,000. It has also prepared a detailed action plan for tax collection and has suggested that the revenue will be collected at the local level until the concerned institutions are not established at the state level. Similarly, Karnali has also devolved the power of collection to the local government. Karnali has further stated that the collected income will be divided in the ratio of 60:40 between local and state governments respectively. However, it does not plan to collect the tax in 2020, and hence has not published any regulations for its collection.

State 5, on the other hand, has made legislative provision for the administration of agricultural income tax but has not defined the term 'agricultural income' in any of its Acts. The Finance Act stipulates that the tax will be levied on the sale of agricultural products. Additionally, it imposes a regulation wherein the tax will be collected as per the income disclosed by the farmers and the tax amount will have to be paid within three months after the closure of the fiscal year. Besides, none of these documents point out the accounting method that farmers have to adopt whilst the budget fails to estimate the collection of agricultural income tax.

4.4 State Level Plans and Policies

Figure 2: State-wise allocation of budget for expenditure in the agriculture sector



Source: Budget, 2019/20 State 1, State 2, Bagmati, Gandaki, State 5, Karnali, and Sudurpaschim

Although State 1, 2, and 6 (Karnali) have refrained from the collection of agricultural income tax, each state has allocated worth NRs. 4.62 billion, 3.5 billion, and 6.65 billion worth of funds respectively for expenditure related to agricultural development.

With regards to the annual development plans of all the seven states, agriculture modernization through mechanization, technology enhancement and marketization are accorded with the highest priority investment. The state governments have provided considerable attention to the implementation of the Prime Minister Agriculture Modernization Programme. Additionally, the initiation of various skill development training for farmers as well as the establishment of warehouses, cold storages, markets, soil and pesticide testing centres are high on the state government's agenda.

In order to accelerate the pace of development of the agro-sector, the states are determined towards enhancing commercialization through contract farming. For the same, the government has taken targeted measures to manage the land effectively through the creation of land banks, utilization of land use policy, segregation of pockets and super zones. Besides that, various packages of seed, credit and interest subsidies are also offered to the farmers. Apart from these aforementioned initiatives, other state-specific plans and programmes are also carried out.

Table 6: Annual Agriculture Development Plan Across States

State	Annual Agriculture Plan
1	1. Establishment of a research centre 2. Organic Agriculture Expansion Campaign 3. Establishment of organic fertilizer and pesticide manufacturing centre
2	1. Establishment of an organic fertilizer factory 2. Establishment of Custom Hiring Centre to encourage the use of agricultural machinery
3	1. Initiation of Agro-Tourism Expansion Programme 2. Establishment of Agricultural Information Centre, Veterinary Hospital along with Farmer Insurance and Loan Desk 3. Promotion of livestock farming 4. Expansion of irrigated areas through solar irrigation, lift irrigation, deep boring, construction of artificial lakes and ponds 5. Construction of Agriculture Road
4	1. Introduction of insurance schemes 2. Relief during disasters 3. Research and commencement of irrigation projects

5	1. Initiation of micro irrigation programmes and protected horticulture programmes 2. Establishment of research centres for advanced crops and livestock; and veterinary hospitals, mobile centres and ambulances 3. Establishment of Tissue Culture Plant 4. Relief funds during natural disasters 5. Establishment of SMS and call centre services to provide information to farmers
6	1. Enhancement of irrigation facilities through rainwater harvesting, pump technology and man-made water resources 2. Construction of agricultural roads 3. Provision of crop insurance
7	1. Establishment of a laboratory for crop, seed and fertilizer testing, and livestock disease control 2. Establishment of Agriculture research centre 3. Initiation of micro irrigation support programme 4. Promotion of agriculture tourism.

Source: Budget Speech, 2019/20 of State 1, State 2, Bagmati, Gandaki, State 5, Karnali, Sudurpaschim

Chapter 5: Observation: Opportunities and Gaps in Nepal

The explicit taxation on agriculture is already a socially, economically, and politically difficult affair. Regardless of the fact that the collection of revenue in this tax heading is a completely new phenomenon for Nepal, its imposition has significant opportunities.

To begin with, the imposition of the tax will induce small and marginal farmers who are operating informally to make their transition to the formal sector. This will have several advantages as this verified form of taxation will provide credibility to the farmers which can further be factored by means of adequate credit and loans to the farmers. Additionally, the identification of the possible differences between small and large farmers will allow the government to formulate and roll out targeted programmes. Moreover, the imposition of taxation in the agro-sector will discourage the laundering of non-agricultural income as agricultural income. It will increase government revenue and consequently contribute to infrastructural development. This way, even the economy will witness the spillover effects of agricultural income tax. Considering that the state government is responsible for the collection of this tax, there will be greater transparency and accountability. This power devolution at the state level will also induce rational planning and allow states to undertake specific projects.

While there are possible opportunities for the stakeholders, myriad gaps that hinder the collection of the agricultural income tax are prevalent. Therefore, these shortcomings that will arise during and after the collection need to be addressed for smooth process implementation.

Definition of Agricultural Income Tax

The federal government has not provided any definition for agriculture income tax; and although three out of seven state governments have provided definitions, they appear to be ambiguous. The use of the term 'other food products' leaves room for speculation. For example, it is difficult to assess whether the income earned from the production and sale of both fruits and vegetables is also subject to taxation in State 3.

Collecting Authority

The Constitution distinctly mandates that agricultural income tax will lie within the purview of the state government. Despite the clarity in the collection authority, challenges still persist. As a matter of principle, large farmers who are formally registered are liable to pay a 25 percent corporate income tax to the federal government. However, there exists no clarity in terms of whether the tax will be accounted for agricultural income tax or the enterprise has to pay a separate tax to the state government. This act may thus result in double taxation of these firms as the collection will conflict with the federal tax law. On the contrary, provided that the state government decides to levy agricultural income tax on the basis of land characteristics, the collection will conflict with the local tax law as land tax falls under the jurisdiction of the local government.

Commercialization

It is certain that agriculture in Nepal is largely informal (Sigmund, 2012); the Nepal Labor Force Survey (NLFS) reveals that 99.7 percent of those working in the agro-sector are informally employed. This occurrence can be accredited to the lack of commercial farms in Nepal. The average parcel of land per farmer in the country is insignificant. A farmer owns only 0.7 ha of land while 50 percent of farmers have land possessions below 0.5 ha; and the figure has been declining over time (CBS, 2012). Moreover, the geographically dispersed land has resulted in a high number of small producers scattered across the country. This disintegrated land, as well as diversified crop production, has severely limited the commercialization of agriculture in the country. Alongside, farming in Nepal is mostly subsistence wherein products are consumed by families themselves or at most, locally (Paudel, 2016). Farmers grow crops and raise livestock depending upon the agro-ecology and the household needs and priorities (Nepal Agricultural Research Council, 1995). This is accompanied with little or no knowledge on part of the farmers, regarding technical innovations and modernization in agriculture that has further hindered the productivity of farmlands.

The Ministry of Agriculture reports that the average annual income of a farmer approximates to NRs. 82,500 that equates to the absolute poverty bracket of $2.16 per day. The fact that farmers do not earn a taxable income implies that collection of the concerned tax heading will be difficult and to a large extent, impractical.

Tax Planning

Agriculture tax planning in the case of Nepal is proven to be inadequate. The failure to provide clarity in defining the term 'agricultural income' and the inability of states to provide detailed information on agricultural products that are subject to taxation has created disorderliness for both the farmers and the collecting authorities. Moreover, a proper modality for the collection of the agricultural income tax seems to be unclear despite its inclusion in the Finance Act. A case in point is that of State 3 wherein the Act stipulates that agricultural income tax will be collected on a voluntary basis. This means that only those farmers who deliberately claim the income and pay the tax are likely to be taxed. To begin with, this clause will serve as a disincentive for farmers to pay tax and will further increase confusion among the collecting authorities. As is mentioned in the previous chapter, a few states posit that the tax will be levied on the sale of agricultural products but the process of doing so has not been established so far. To make matters worse, the Ministry of Agriculture and the Department of Agriculture are still uninformed about the entire process.

Accounting Method

In Nepal, farms are operated and maintained by an individual or a family of farmers who practice subsistence agriculture. These farmers more often than not, have low levels of education and therefore insufficient knowledge about farm accountancy. As a consequence, a proper financial accounting system is not maintained. Moreover, a standard framework to record farming transactions that entails the order of treatment of various crops, its value assignment, preparation of income statements, among many, is yet to be developed. This has thus hindered farmers at an individual level to adopt accounting in their daily operations. Likewise, the large farmers or agribusinesses produce at a commercial scale. As their nature of the operation is for commercial or business purposes, the transaction compliance needs to be in line with the Nepal Accounting Standards (NAS). The financial statements based under the NAS require a complete set of financial statements that normally include a balance sheet, an income statement, a statement of cash flows, and other statements or explanatory material that is an integral part of a financial statement (ICAN, 2019). On a similar note, the state governments fail to clearly mention the accounting method that is to be adopted by the farmers. This should thus be explicitly mentioned in the Finance Act of the respective state governments.

Expenditure Planning

In Nepal, the absence of explicit tax in the agricultural domain induces the government to pool tax funds from different sectors so as to disseminate benefits to the farmers and agribusinesses. As outlined in the preceding chapter, although the state governments have enacted plans and policies, not all states have directed their efforts towards the infrastructural development that supports agriculture.

While plans and policies indicate the transition from subsistence to commercial agriculture through contract farming, a specific plan of action that induces and facilitates this change is not in place.

Despite the importance held by research and extension services, the state governments have not prioritized funds for its expenditure. Only four out of seven states have prepared a plan regarding the establishment of a research centre. All the states have focused on marketization of various agricultural products, yet the construction of agro-roads that is a prerequisite for connecting the farmers those markets is only visible in the plans of State 3 and State 6. Regardless of the fact that there is a lack of irrigation schemes and farmers have to depend upon rainwater for their harvests, the governments of State 1 and State 2 have not prioritized its establishments. In order to protect both farmers and crops from any unforeseen shock and/or vulnerability, insurance schemes need to be put into place. Provided that Nepal is prone to natural disasters, the insurance policy is not incorporated in all the state government plans. Also, except State 3 and State 5, the remaining states lack expenditure for agricultural information centres.

The rationale behind the failure to materialize the plans and policies into actions is that agriculture spending entails a larger share of recurrent expenditure as compared to the capital expenditure (DFID, n.a). Similarly, the impact of these plans and programmes do not trickle down and provide benefits to the real beneficiaries - the small farmers. Principally, subsidies and agriculture extension services form the largest portion of the agricultural spending. Yet the seed and fertilizer subsidies that are introduced for the small and marginal farmers are either delayed or not supplied at all. Moreover, the policy of providing partial grants for road connectivity, storage facilities, irrigation and collection centres, all of which promote commercial agriculture, are not synchronized with the local development plans and programmes (Samriddhi Foundation, 2012). This lack of synergy among the different service providers and the substandard allocation of resources for the promotion of the agro-sector exhibits inadequate expenditure planning by the responsible authorities.

Data Availability and Research

The Ministry of Agricultural Development issues their annual publication - Statistical Information on Agriculture – that highlights the time series data on major agricultural commodities at national level and crop statistics that is disaggregated at ecological and district level. Similarly, the approved crop varieties, major inputs, irrigated land and food balance sheet are presented in the report. Apart from that, the data limitations are considerable, both in terms of availability, reliability and data management.

The absence of robust data in the agricultural sector coupled with the absence of proper indexing that can be used to measure the replica of agricultural income taxation. In an interview conducted with a government officer, it was mentioned that the existing records in Nepal are largely assessed under the presumptive basis and are not assessed regularly. While the records of agribusinesses and agricultural cooperatives can be traced easily, there is an utter lack of data about the small and marginal farmers. The fact that subsidies that are the most effective measure carried out by the government, have no data regarding their utilization speaks volume about the limited data availability.

The status of data production that has severely limited the potential for data usage is mainly due to the fact that there exists no strong mandate from the leaders at the official level to use, work or learn data skills. The lack of data analysis skills in the workforce, value addition of data for decision making and accountability, and the existing practices to inform future efforts have posed strong implications in the development of the agro-sector and have hindered tax planning.

Chapter 6: Way Forward

1. Intergovernmental Policy Coordination

The achievement of a well-established agriculture income tax system in Nepal is a gradual process. A fundamental tool that can facilitate the transition is policy harmonization among the three-tiers of government. This will not only ensure clarity and efficiency in the collection and distribution of agricultural income tax but also serve to mitigate any potential conflict between the government agencies.

In a bid to avoid potential challenges in the form of inconsistent or unstandardized policies - all three tiers of government are responsible for agriculture development programmes, agriculture education, credit distribution, irrigation, infrastructure, soil and health care, land reform and management, extension services, and inspection - that might induce conflict or duplication in expenditure assignment, the government should introduce clarity in the jurisdictions, mandates, roles, and responsibilities at all three levels. Similarly, this should be coupled with the establishment of a formal mechanism for direct communication and coordination among the different government institutions.

While clarity in the aforementioned components is essential to carry out efficient service delivery in the agro-sector, clarity on the tax bases and its collection mechanism is equally important to pool resources so as to finance the same. As mentioned in the previous chapter, policy incoherence might result in double taxation or conflict between governments. To avoid circumstances that possibly disincentivize formal and commercial farming in general, a proper decision should be made and implemented immediately.

A rational approach to incentivize farmers can be to provide registered agricultural businesses with a complete exemption from the federal income tax law. These enterprises should nevertheless, be liable to follow the state agricultural tax law and should pay tax accordingly. In line with the current plans of the state governments, the tax rate in the agricultural sector is lower than that of the corporate income tax. This will thus act as a stimulus for enterprises to formally register themselves and conduct large scale commercial agriculture. For the same, it is imperative for the federal and state government to coordinate with one-another in creating a clear legislative framework about the collection of agriculture income tax. This also implies that the Finance Act and Income Tax Act of the federal government should be amended accordingly.

If the state government decides to impose agriculture tax on the basis of land, taxation should be imposed solely on the land area that is engaged in agriculture production rather than the agricultural land itself, like in the case of property tax. However, while implementing the said method, the state government should coordinate with the local government units and devolve the collection authority to them. The state governments can incentivize the local governments by paying a certain collection fee. This process will not only ensure that the collection of tax on agricultural land does not conflict with the land tax that falls under the jurisdiction of the local government, but also prevent landholders who are not producing in their agricultural land from being double taxed. Therefore, it needs to be clear that the land area is used as a proxy for agricultural income tax, and those who do not produce in their agricultural land will not be taxed unnecessarily.

2. Strengthening Agricultural Research and Extension Services

Agriculture research in Nepal is dominated by public institutions - Nepal Agriculture Research Council (NARC), Department of Agriculture (DOA), Department of Livestock Services (DOLS) – that lack the capacity and resources to address the diverse demand of farmers, agro-entrepreneurs, and agro-industries (Babu & Sah, 2019). At the private front, agriculture research remains minimal (Samriddhi, 2012). This implies that decision making and policy development in the agro-sector are conducted in an uncertain environment where the policymakers are not acquainted with the economic and behavioral impact of new and changing policies, plans and programmes. The strengthening of agricultural research can help the government in two priority areas revealed in this study - identifying the most suitable model for collecting agricultural income tax and reinforcing decision making for effective and efficient agriculture service delivery mechanism.

In order to reinforce the national agriculture research system, coordination and linkages between various stakeholders and research institutes need to be enhanced. The involvement of research and development officers from different agricultural research institutes in policy making and planning activities should be registered. This act will facilitate evidence-based policy making in the sector and simultaneously hold institutions such as NARC accountable. While the government run research institutes should be capacitated with adequate funding and skill enhancement training, those operating in the private sector should be incentivized through various schemes.

Moreover, the federal government should gradually devolve the authority of research, information and knowledge creation to the state governments. This will not only ensure state-specific and effective research programmes, plans and policies in the state level, but also improve the national extension services. Additionally, the state government should promote private extension service providers to work in areas related to farm commercialization, supply of inputs, agribusiness promotion, among others.

The government should also ensure a proper linkage between research and extension services (Paudel, 2016). For the same, the government should speed up the implementation of agricultural research, extension, and education linkages model in federal Nepal' proposed by NARC, which suggests joint involvement of research, extension, and education personnel at different levels of government (Timsina et al., 2018). This will ensure both vertical and horizontal interaction between different institutions.

3. Facilitating Decision Making, Transparency, and Accountability

One of the factors that poses a challenge to initiate effective plans and policies in the agriculture sector is reliable data availability. Despite the availability of certain useful data types, no proper tools to analyze it has been adopted.

The Ministry of Land Management, Agriculture and Cooperatives (MLMAC) that operate at the state level should leverage their authority over agriculture development and start creating, consolidating and computerizing the available data for policy making. Doing so, will not only result in availability of different data types - location, fertility of land, crop mix, inputs and technology used, market information, infrastructure, and access to capital - but also help research organizations and policymaking bodies to design and implement impactful modules for the agro-sector. This will further make the authorities aware about the agricultural status of all state and local levels and encourage them to draft plans and programmes accordingly. In a similar vein, the MLMAC should ensure that these data sets are available to farmers as well as the general public.

As all the institutions that are established at the three tiers of government operate independently, each one has to go through a series of long processes and paperwork so as to communicate with one another. Therefore, a proper coordination and an effective communication mechanism should be established in place for the collection and utilization of the scattered data across Nepal.

4. Boost Contract Farming for Agriculture Commercialization

As agriculture commercialization positively correlates with increased income that furthers the collection of taxable income, contract farming can be a significant tool to assist this transition in Nepal. Contract farming is a vertical coordination strategy between farmers and firms; it involves production by farmers under forward contracts with the firms for their agro-outputs. This agreement allows the provision of a particular agricultural commodity at a predetermined price, quantity, quality and time.

The arrangement of contract farming will facilitate the majority of small and marginal farmers, engaged in subsistence farming, to move towards commercial agriculture. As Nepalese farmers with fragmented lands practice a disaggregated level of production, contract farming will integrate the small farmers into the modern agricultural value chain by providing them with improved access to high quality inputs, technical assistance, storage facilities and assured markets. This will subsequently allow the farmers to adopt new production techniques and practice market-oriented production so as to achieve mass production of high value agro-products. The assured sale of crops will not only lower the price risk for farmers but also contribute to their welfare and increased income.

The government can also reduce its fiscal burden associated with agricultural development through the adoption of contract farming. The support provided by the agro-businesses in the form of training, assistance, book keeping of inputs & outputs, will allow the government to reduce spending on these services whilst ensuring efficiency. From a policy perspective, the government needs to promote contract farming to increase the supply of agro-products in both the domestic and international markets, boost rural economic development and develop the agricultural private sector. In a bid to create an impetus for agriculture commercialization, the government needs to enact a functional, pragmatic and implementable legal framework, for its wider acceptance, related to contract farming.

5. Prioritize Infrastructure Development

The agriculture sector in Nepal is dependent on subsidies; however, this subsidy-driven agriculture system has unfairly undermined small farmers and promoted unsustainable agriculture. Nevertheless, rather than scraping subsidy support all together, there is a need to blend the short-lived subsidies with investment so as to make the agriculture sector more sustainable.

Agricultural infrastructure is considered to have a positive correlation with increased farm yields (Patel, 2010). As Nepal does not have a sound infrastructure in place that favors agriculture, there is a need to invest heavily on the same. The current subsidy in the form of seeds, fertilizers and pesticides, and farm equipment should be augmented with the provision of resource-based infrastructure as well as physical infrastructure. While the former entails construction of irrigation channels, development of watersheds, transmission of power supply, the latter is concerned with road connectivity, transport and storage facilities, among many. The above components in close coordination with the provision of credit institutions will contribute to the improved agricultural output in the country and attract farmers to voluntarily participate in tax payments.

Thus, the government should focus its efforts to strengthen commercial banks, microfinance institutions and cooperative based saving and credit functions that will ease the access of credit for the small farmers. Moreover, custom duty relaxations and tax exemptions can be introduced in the import of agricultural equipment to mechanize the agro-sector. While an increase in the budget expenditure can contribute to the development of agro-roads, irrigation channels and power supply, the government can attract private sector investments via public private partnership models. The private sector can be involved to overcome the lack of proper storage facilities and cold storage in strategic market centres throughout the country by providing tax subsidies and cash incentives (Samriddhi Foundation, 2012).

Considering that the need for agricultural development requires adequate infrastructure, a comprehensive strategy and plan is necessary. Therefore, the government should prioritize increased and synchronized investment at all levels, vertically from the national to grassroots level and horizontally across the public, private, and non-government organizations.

6. Strengthening Capacity Building

Regardless of subsidies and investment in the agro-sector, the farmers are unable to optimally utilize it. This is mainly because the transfer of knowledge regarding the use of goods and service is proposed and advocated but often overlooked. There is an utmost need to disseminate the appropriate practices and mechanisms regarding the various technical, institutional and financial interventions. Therefore, the government needs to supplement infrastructure with capacity building opportunities for the farmers.

The government needs to create avenues to train farmers who lack basic knowledge and skills on bookkeeping and farm accounting. For this, the government can establish a public-private partnership (PPP) framework by outsourcing the training to private companies. Doing so will also ensure cost efficiency for the government as it will not have to host a training division in the Ministry year-round.

Likewise, farmers have poor to no knowledge of the composition, use, handling and safe disposal of fertilizers and pesticides. Hence, trained personnel who can disseminate improved knowledge of fertilizer and pest management are required. To achieve this, the government can reinforce cooperative farming, promote networks of farmers, and set up local level forums; all of which will strengthen benefit sharing arrangements and will prompt farmers to cultivate the information and experiences through training programmes. The government can introduce courses and schooling as central elements to facilitate these changes in a practical manner.

7. Ensuring Voluntary Participation from Farmers

The most difficult aspect of collecting agriculture income tax is ensuring the voluntary participation of the farmers in this entire process. While voluntary participation is difficult, it is not impossible. The farmers can be incentivized in the form of greater benefits that exceed the amount they pay as tax. As per the economic efficiency justification (Newber, 1992), in order to finance infrastructure development and productivity enhancing activities for agriculture development, there needs to be within-sector retention of resources and the benefits provided can be a catalyst that incentivize farmers to participate.

Additionally, collecting agriculture income tax on the basis of a flat method, where the farmers do not have to comply with the standard book keeping method, and linking the revenue with the social security scheme can incentivize farmers to participate in the process, which will not only ensure increased tax revenue but also will bring majority farmers in the formal sector.

Chapter 7: Conclusion

In view of the fact that agriculture is the predominant profession for the populace, its planned development has often been prioritized in Nepal. While abundant plans and policies directed to uplift the sector have been instituted, their efficacy has historically remained questionable. The failure to deliver desired results has posed a serious concern in the maintenance of fiscal balance as the sector is one of the largest receivers of public finance. As agriculture remains untaxed and its expenditure is financed through the revenue generated from other economic sectors, effective implementation of plans and policies is necessary to strengthen the sector.

Economists have argued that, within-sector retention of resources to finance development needs has a multitude of benefits. Imposition of adequate tax rate with simple compliance procedure and proper expenditure plan can not only help increase aggregate revenue of the government but also create space for additional development efforts in the sector, whilst keeping the fiscal balance in check. Many countries have thus chosen to expand their tax base and collect the agricultural income tax.

Agricultural income tax was introduced in 2015 after the promulgation of the new interim constitution wherein the state government was appointed as the concerned authority for its collection and administration. However, procedural uncertainties as well as poor knowledge among the federal and state officials have obstructed the process so far. Nevertheless, four out of the seven states have incorporated the collection of agriculture income tax in their

Finance Act and have fixed the rate of levy. While it is a notable development, a major threat lies in the fact that the haphazard imposition of tax might have several repercussions in and beyond the sector.

This study is thus conducted with the objective to help the policymakers and administrators acquaint themselves with the concept of agriculture income tax. The paper provides basic principles of collecting agriculture income tax by analyzing the agriculture income tax structure of six developed and developing countries. It also describes different models wherewith agricultural income tax can be adopted in Nepal.

The research identifies tremendous opportunities in the form of improved infrastructure, impactful plans and policies, increased benefits, higher rate of commercial farming and increased farm income, provided that Nepal adheres to the most suitable form of taxation in agriculture; all of which can perhaps induce welfare reforms for the taxpayers. However, prior to the achievement of these results, there are many challenges that need to be addressed and mitigated. Although the paper presents a delineated picture of agriculture income tax and its potential in Nepal, it does not provide answers to the many questions associated with its collection. Therefore, there exists both scope and need to conduct studies under the headings such as cost of administering agriculture income tax in Nepal, revenue potential of agriculture income tax, etc.

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With the changed context of federalism, the provincial governments are now liable to carry out various responsibilities assigned to them, for which they need to generate sufficient revenue from various tax and non-tax sources. However, the central government still holds the major tax headings and retains the maximum amount of revenue generated while the provincial government has been assigned limited tax headings and one such is agro-income tax. This spurs the need for provincial governments to expand the agro tax base to strengthen their tax capacity. While a few states have formulated legislations to determine agricultural tax base, its rate, and administration, the remaining are yet to attain the same due to knowledge insufficiency and procedural hassles. Against this backdrop, the paper has summarized the current status and structure of agriculture income tax in Nepal and has attempted to familiarize the stakeholders with the opportunities of agricultural income tax so as to facilitate an efficient and effective administration. The paper has borrowed examples from various countries that have successfully adopted the policy and has prescribed reform measures for Nepal to improve the tax administration at the provincial level.

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