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Economic influences of agriculture production and import mechanisms through commodity market in the nepalese context

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Abstract

Agriculture production not only manage food and domestic needs rather enhance nation's economy. Nepalese production is relying from neighbours through import due to insufficiency. This study design to analyse the impact of agricultural cereal production and import scenario in the Nepalese context. A mixed method approach, both Qualitative and Quantitative data utilized for this Doctoral study-based paper, Farmers of all Seven Provinces samples with HHs interview and secondary data of agriculture and Custom data used. The study was conducted from January to June 2023.

The findings revealed the major cereal crop production from own like paddy, maize, wheat and millet are limited for some season. In addition, import from India shifting large economy to India through import. The agriculture production meeting domestic needs like seasonal food and market stock. Whereas seeds, input and mechanization dependency largely depending on neighbours due to no manufacturing of own. The study concluded as agriculture production is a major source of income and food for Nepal. Limited month of sufficiency at the local production bounded Nepal depends on import. The cause was found as lack of sufficient input system, low priority of agriculture from all sectors, diversity and low-political priority. Food Diversity and local production enhancement is the ultimately way out to deal with this issue.

Keywords: Economy; Import; Agriculture production; Farmers; Sufficiency; Commodity market

1. Introduction

The commodity markets and the economies of developing countries are most innovative research in the development history now a days. The commodity markets involve the exchange of raw or primary products such as agricultural goods, metals, and energy resources, and they play a vital and lead role in determining the economic landscape of any nations. Commodity-dependent economies heavily rely on commodity exports as a vital source of revenue and foreign exchange earnings usually found in the land lock countries in the global practices. Such exports factors do not only contribute substantially to export pays but also influence gross domestic product (GDP) and overall economic growth.

Chaudhary and Ayoo found that an increased export earnings from commodities can be channelled towards critical sectors, including infrastructure development, public services, and investment in key industries, ultimately lifting living standards and promoting prosperity (Ayoo, 2022). Yet, the impact of commodity markets on evolving economies is not always straightforward. Such markets are characterized by price volatility and variations, which can significantly impact the economic progress of commodity-dependent countries. Rapid shifts in global demand, geopolitical events, and climatical situation may trigger drastic changes in commodity prices, exposing these economies to significant risks. Price declines can lead to severe economic recessions, fiscal constrictions, and shrinkage in GDP, as exemplified in recent instances of oil price shockwaves and their impact on oil-dependent countries (Olayeni et al., 2020; Chowdhury, 2023).

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Nepal is historically known for its agriculture-based economy, in the history and yet, the food import is growing at an alarming rate in the current years. The news report suggests that 65% jump in the import of key agricultural products between 2015/16 to 2019/2020 (Prasain, 2019). The prime reason was the lack of agriculture input supply and low human resources availability as well as minimum human resources.

Various national report of media also added that during 2020 fiscal year alone, the country imported agricultural products worth Nepali Rs 243 billion, out of which NRS 79 billion was for food commodities and the rice import was 75 % of the total food imports (The Himal Khabar, 2021). The media reports unquestionably signal Nepal's mounting dependency trends, but these also raise serious questions about the future of agricultural sector in Nepal, which theoretically could pose a peril to the national security and sovereignty and prestige. The increasing trend of food import increasingly as a reason of social-cultural, political and various diversification are the main reason of limited production from the own field. However, it was found that seasonally food production last but for the limited month and rest depends on the neighbours import mechanism that traditionally established (Adhikari et al., 2021).

Nepal is currently in an inconsistent position in terms of economic development. A huge majority of the population is affianced in agriculture, and yet, this sector's input to national gross domestic product (GDP) is declining fast. In 2019/ 20, the agriculture sector contributed 27.7 % to the GDP of about $ 22 billion as compared to 37.1% in 2010/11 (MoF 2020: 67). In 2008, the agriculture sector labouring/ employed 73.9% of the population, but this number declined to 60.4% in 2018 (CBS, 2008). The national economy was declined due to various revolution and clashes caused between Government and various Political parties like Maoist Insurgencies, Public protest to kick off Kingships and many others.

A study by Adhikari 2021et al () added that the non-agriculture sector contributed about 72.3% to the GDP in 2019/20, of which only about 13% came from the industrial sector and the rest (about 60 %) came from the service sector. It is widely believed that the growth in the service sector has been possible because of the growing remittances from migrant workers working in foreign countries (e.g., Gulf countries, Malaysia) (Adhikari et al.,2021).

After launching of three-tiers of Government following Federalization in Nepal during 2015, the administrative powers and legislation has been distributed to Federal, Provincial and Local Palikas and the services started from the grass root levels. The agriculture production remains potential for the locals but due to unstable politics and monopoly of the political parties the focus on substantial farming has turned policy makers to the infrastructure development and teaches to earn in a very short span of time. Foreign employment became more popular earning mechanism as result of this out migration to earning has increased and agriculture plantation and production started down due to lack of youth in the areas, Availability from the own production remain limited for the months and import mechanism specially for the India rapidly increased, however, government investment and policies were high prioritized for agriculture through words but in reality infrastructure development demands priority given high than promotion of agriculture (Chhetri et al., 2021).

Both China and India located at the North-South ongoing importing commodities to Nepal and this attempting weakening framework through import-export, the political system and low production and diverse demands are the basic reasons of dependencies of agriculture productions.

Nepal's laws and approaches are limited only on paper. For agriculture promotion, the government does not have an adequate mechanism of input mechanism, supportive markets and low monitoring mechanism at the ground level. In this situation, the import is the ultimate way,

Nepal has now become a net importer of food. Its ability to produce enough food has been hampered by several factors, some of which are small farm sizes, remoteness of farms, insufficient support to farmers in terms of access to inputs like seed, fertilizer, irrigation, and technically know-how (Adhikari, 2020; Chhetri et al., 2021; Dhungel et al., 2024).

Thus various review summarized to evalaue the import and localproduction situation of the agriculture farming situationin the Nepalese context. Hence this study further set to analsze the primary cereal production and import mechanism of the Nepalese commopdity system and to overall review of the economy situation stands from such commodity transection.

2. Methods

This study is designed and purely- based on the mixed method approach, where the data of various imports through Nepal-India boarder, production and agriculture commodity of Nepal deeply reviewed and analysed further cross-verified through HHs farmers interview by field survey that was done in 2023 (*Jan to June*) as a part of Ph.D. study of

author. A total of 1062 sample of farmers (*Table-1*) taken across the seven Provinces of Nepal that set purposively for such farmers who are more in number and are commercial across the seven Province and representative for this study.

Table 1 Strata of sample site for the farmers survey across the Nepal

Provinces	District	Sample size of Farmers sample
Kosi	Solukhumbu	25
	Dhakuta	29
	Jhapa	130
Madhesh	Dhanusha	109
	Bara	110
Bagmati	Rasuwa	7
	Dhading	100
	Chitwan	97
Gandaki	Mustang	5
	Kaski	89
	Nawalpur	52
Lumbini	Bardiya	71
	Rukum east	15
Karnali	Mugu	12
	Surkhet	58
Sudurpashchim	Bajura	25
	Kailali	128
Total	17	1062

(Source: Self-selected using various population data, 2023)

After selection of district, famers were identified after consulting with many agencies working in the field of agriculture sectors like Provincial Ministry, Directorates, District Office, Local Government and Cooperatives working locally.

As part of the secondary analysis, data from the Ministry of Agriculture and Livestock Development (MoALD), Trade Ministry, Custom Department and various secondary data from the Central Bureau of Statistics-CBS and different commerce and trade organizations were contracted and consulted during study. The Focus Group Discussion-FGD and Key Informant Interview-KII was done with multiple stakeholders of the study area within timeframe (*Figure-1*)

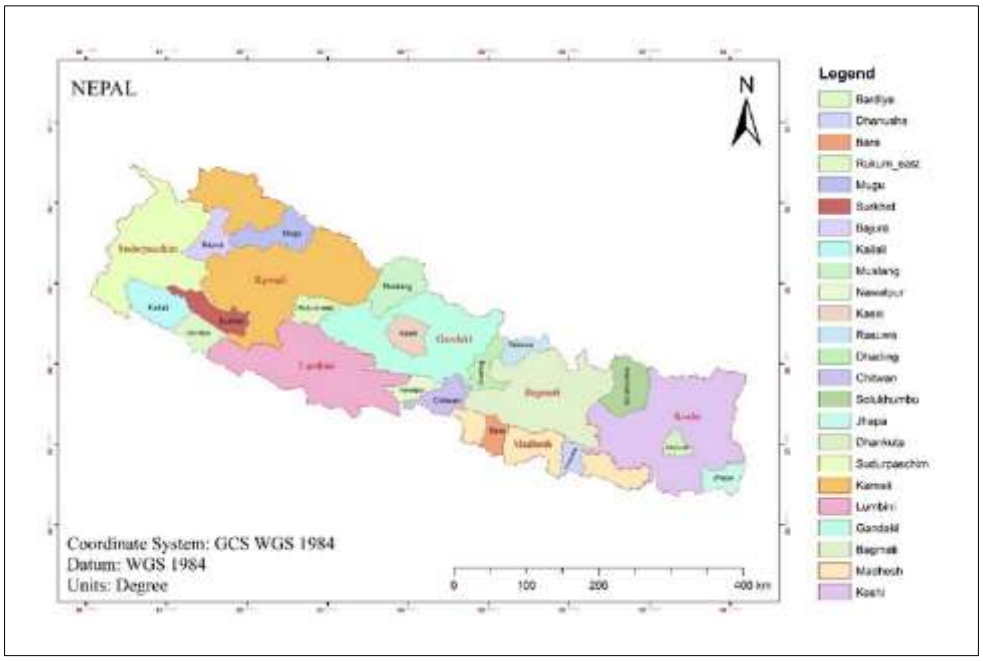

Figure 1 Study area covering district within all seven Province of Nepal

In addition, the secondary review the library, internet-based documents and local consultation also supported evidence of the agriculture practices through standard formats. Later, the collected data were set into SPSS and MS-Excel were used for the analysis.

3. Results

A trend history of Cereal production illustrating data from the 2010 to 2020 of last ten years that was obtained from the Ministry of Agriculture and Livestock Development-MoALD, Kathmandu Federal Ministry shows that the crop production from the own production is increasing trend in Metric Tons. As per Fiscal year 2019/ 20, 1,09,35,665 MT itself (*Figure-2*) production remain in Nepal that is incline trend compared to last year, normal and baseline year (Normal year is the comparison of last 5 years and baseline year is a data of last ten years).

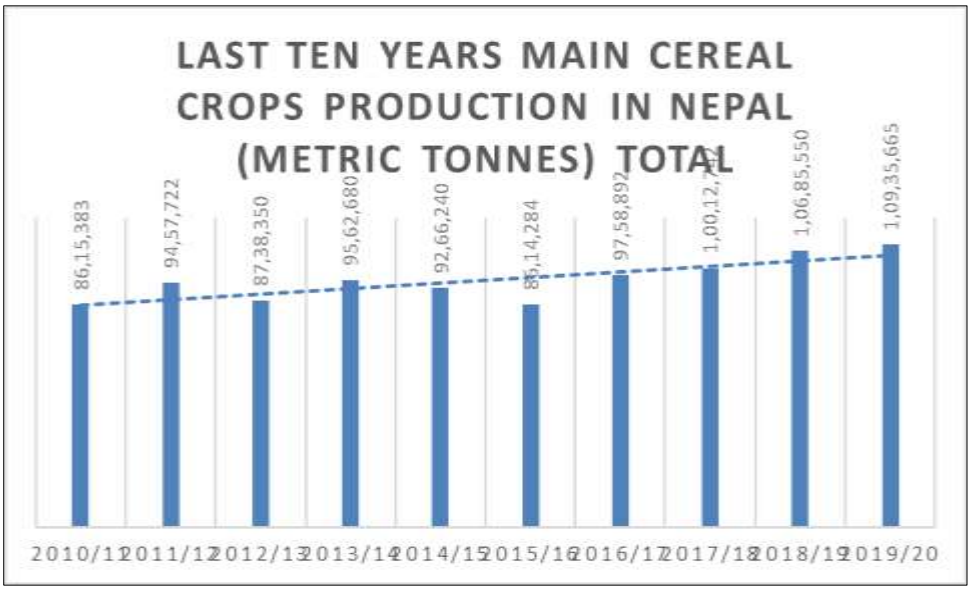

Figure 2 Last ten-year cereal production trend in Nepal, Source: - MoALD last ten years data

Agriculture ministry added that the paddy, maize, wheat, millet and barley are counted in cereal crops and aggregate data of production is noted accordingly, this data represent the overall estimated grain production of Nepal. This further explain that the paddy and maize are only consumable cereal that used in in daily meal. Whereas, Barley and millet are not used in consumption rather this is cash crops and sale in market for religious and brewing purposes. The statistics in *Figure-2* silently indicating that the consumable cereals could be 30 to 40 % of the counted production which is used in consumption Like paddy and wheat both after processing reduced in amount and maize, millet and buckwheat large portion sale and used in cattle feeds.

From the above summary it is clear that the desirable cereal and distribution across the nation is insufficient and a large portion of import is the last way out to survive.

From the Federal analysis to the Provincial system, *Figure-3* illustrating that the Cereal production is higher in Koshi followed by Madhesha and Lumbini as the Eastern and Terai region of Nepal considered as the Cereal corridor of Nepal and large amount of paddy, Maize and Wheat producing in the area. Whereas in other hilly regions (figure-1) maize and millet are largely produced and this is why the overall cereal production for Karnali and Sudur Paschim is lower than other Provinces because the Terai Belt are the food corridor of Nepal due to plenty of plain land and well irrigation mechanism available.

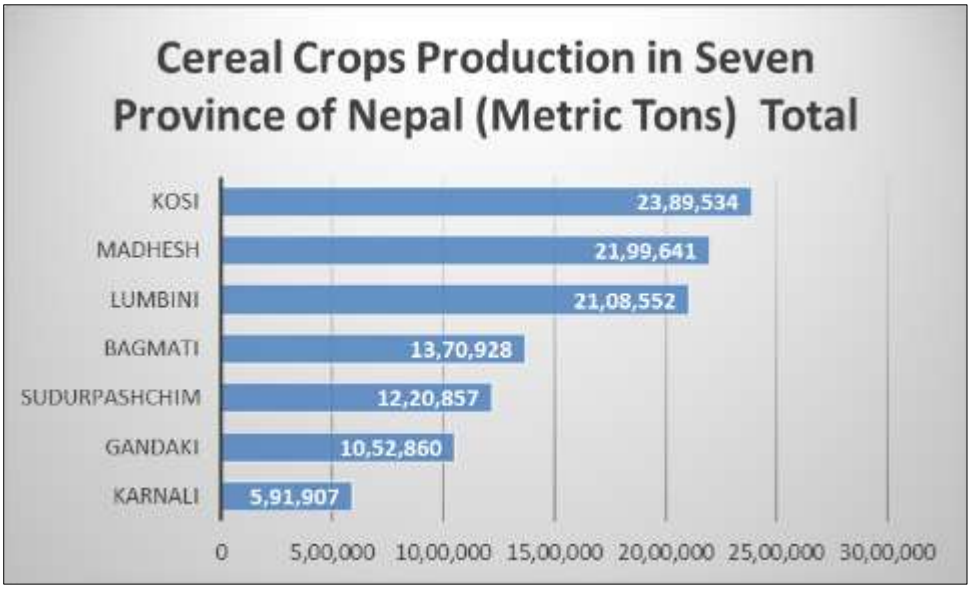

Figure 3 Province wise status of cereal production in Nepal, Source: federal and Provincial Agricultural Ministries

Agriculture Ministry and Directorates added that the Terai portion is attached with open Indian boarders and this is challenging for Nepal from the agriculture commodity lenses that to captured the data of transection because open boarder swift the cereals to any markets based on the price of the commodities. For example, of the farm gate price of Wheat or rice is lowering in Nepal than Indian traders immediately procure and purchased and the same rice after some polishing and furnished packaging it again import to Nepal, this indicate that a cheap rice ultimately worth buying costly.

Farmers added that the improved seed and input system all coming through India, Nepalese farm capacity is significantly low and dependency is high for fertilizer and many mechanizations as Nepal has no fertilizer production and bilateral agreement has only option to procure from India. this also delaying in timely deliver, so timely availability is a bid issue of fertilizer from the last many years.

The data and statement enough to focused on that Nepalese agriculture system is not self-sufficient and depending on neighbouring and India is the larger commodity supplier for Nepal.

Table 2 Data from 2019/20 import summary of commodities from India

Cereal commodity	Kg	Value in NRS	Value in USD (billion)
Paddy	34,61,45,333	10400910000	78.79
Paddy seed	21,91,012	78803000	0.59
Rice	41,09,23,776	22237759000	168.46
Broken rice	2,92,31,572	933957000	7.07
Buckwheat.	1,04,612	5806000	0.043
Millet	21,72,625	71517000	0.54
Wheat Seed	1,64,112	4870000	0.036
Wheat and Flour	23,88,17,618	7918842000	59.99
Wheat starch	15,81,082	24,78,35,000	1.87
Barley	1,84,334	6808000	0.051
Maize seed	44,84,42,514	14753048000	111.76
Maize Flour	15,79,954	74760000	0.56
Maize oats	4,01,318	21146000	0.16
Maize (corn) starch	1,56,87,765	85,75,05,000	6.49
Total	1,49,76,27,627	57613566000	436.466

(Source: - Custom Department, Government of Nepal, 2019/020 Fiscal year)

Data from the Custom Department, Government of Nepal for the Fiscal year 2019/ 020 shows that the Rice (USD 168.46 billion), Maize seed (USD 111.76 billion) and Paddy (USD 78.79 billion) are the largely imported from India showing highest figure in table-2. The Overall cost of import stands 57,613.566 billion Nepalese Rupees (USD 436.466) for the Fiscal year 2019/ 020 this indicate that a huge amount is outgoing for the import mechanism to manage from the cereal commodities.

KII with Custom Department of Government of Nepal added that the listed commodities in table-2 is just few samples of import and a huge amount is importing immensely from India and a huge amount is outgoing.

Custom Office, Farmers, local cooperative added that apart from the cereal crop's pulses, Vegetables, spices, fruits, different seeds and huge amount transferring to India itself by import. Nepalese agriculture does not meet the demands of Peoples due to demands is diverse and based on the Provincial area. The boarder-based district has distinct demands and supply proceed accordingly but insufficient production and challenging logistic system are evidences of hills and Mountain region. Thus, import and further distribution is managed through market system.

Table 3 Production mean/ Min to Maximum of different types of food grains from farmers selected in the survey

Food producing farmers	Paddy	Corn	Millet	Wheat
Mean (Product Cereal Crop by one farmer)	2984.11	2038.76	601	2892.31
Minimum (Product Cereal Crop by one farmer)	200	50	4	50
Maximum (Product Cereal Crop by one farmer)	30000	40000	1000	20000

(Source: Field Survey 2023, N-1062)

In contrast to the primary survey with farmers across the Country (Table-1) data of farmers shows that the mean value of paddy stands 2984.11 (Min -200 to Maxi of 30,000 Kg) the priority of paddy is higher in the cereal crops followed by Maize-corn mean stands 2038.76 and wheat stands 2892.31. The trend shows that the paddy, wheat and maize plantation priority is high and millet priority is significantly low in the cereal production.

KII and FGD with agricultural Official and local Farmers added that paddy is the first largest priority cereal of Nepal followed by Wheat and Maize as a second and third cereal crops this the production ad import both associate with each.

The surveyed farmers across the provinces (Figure-1) further added that paddy, wheat and Maize are the seasonal crops. Farmers with large land size usually produced more than 12 months food from the own production, such commercial farmers keep stock for self-consumption and rest of the production sold in market. This production further distributing to other part of Nepal through market channels. Not only this in agriculture production like vegetables, legumes, oilseeds, fruits, meat products and many consumable foods are usually produced at the local levels and such production utilized from the local production and the large portion of desired food commodities are demanded and import accelerates and market played a role on this.

From the economic perspectives, farmers added that from each season, commercial farmers earned up to 0.2 million Nepalese rupees from the paddy and other seasonal crops. Similarly, farmers added that sale of vegetables, legumes, oilseeds, fruits and locally produced foods generating income for the surveyed farmers. This clearly indicates that agriculture system is the primary earning source of Nepal but as per demands the sufficiency is limited seasonal and huge amount is importing from India as a larger supplier followed by China and other neighbour countries.

4. Conclusion

The study concluded as cereal crops like paddy, wheat, maize and millet are key cereal crops produced locally. The sufficiency from the own production is limited and huge production of importing from the India itself because of many social, agricultural, economic, Political and technological reason that dependent Nepal to import globally as well as diverse demands has no alternatives than supply from outside. The government and Political system priority towards infrastructure is higher than agriculture. The Provincial analysis also stated that the Country diversity and demands are another challenge from the distribution mechanism. From the local production, farmers contribution in national economy playing a vital role sustaining life and market both. Whereas, huge amount is shifting as a part of import mechanism that can be locally managed eating local verities because the availability and diversification may be challenging and this could be an opportunity in future to manage food at local levels. Hence, the study suggesting to increase local production and manage a patterns of food diversification in the newly established Federal system that encouraging peoples to demand-provide support at the local levels.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

References

[1] Adhikari, J., Shrestha, M., & Paudel, D. (2021). Nepal's growing dependency on food imports: A threat to national sovereignty and ways forward. *Nepal Public Policy Review, 1*, 68-86.

[2] Adhikari, K. (2020, Apr 19). Vegetables worth millions rotting in farms amid lockdown in Dhading. Dhading, Bagamati, Nepal. Retrieved from https://thehimalayantimes.com/nepal/vegetables-worth-rs-millions-rotting-in-farm-amid-lockdown-in-dhading

[3] Ayoo, C. (2022). Poverty reduction strategies in developing countries. *Rural DevelopmentEducation, Sustainability, Multifunctionality*.

[4] CBS. (2008). *National Sample Census of Agriculture Nepal.* Kathmandu, Nepal: HMG.

[5] Chhetri, R., Vaidhya, M. J., & Basnet, S. K. (2021). Cereal production is imperative to strengthen the availability of the mid-hills of Nepal: a case study on agriculture situation of bagamati province. *Green Rep, 2*(6), 1-5. doi:DOI: 10.36686/Ariviyal.GR.2021.02.06.025

[6] Chowdhury, E. (2023). *The Impact of Commodity Market on the Economy of Developing Countries.* MPRA. Retrieved from http:/mpra.ub.uni-muenchen.de/119462/

[7] Dhungel, L. N., Mahat, K. B., & Panta, S. K. (2024, March). Empowering Economic Development: A Case Study Analysis of Agricultural Commodity Production in Nepal's Local Markets with a Focus on Farmers and Traders (2021/ 22). *Journal of advanced academic research (JAAR), 11*(1), 24-35. Retrieved from www.phdcentre.edu.np

[8] Olayeni, O. R., Tiwari, A. K., & Wohar, M. E. (2020). Global economic activity, crude oil price and production, stock market behaviour and the Nigeria-US exchange rate. *Energy economics, 92*(104938).

[9] Prasain, S. (2019). *Alarm bells are ringing as agro imports bill reaches Rs220 billion.* Retrieved from The Kathmandu Post: https://kathmandupost.com/money/2019/07/28/alarm-bells-areringing-are-ringing-as-agro-imports-bill-reaches-rs220-billion

[10] The Himal Khabar. (2021). *Ek barshma 3 kharba 23 arbako krishi janya bastu kharid, chamal.* Retrieved from The Himal Khabar: https://www.himalkhabar.com/news/125184