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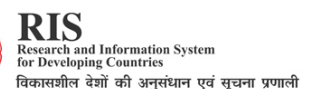
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TRADE FLOW PATTERNS IN NEPAL

Research Paper 7
October 2021

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FOOD SECURITY POLICY RESEARCH, CAPACITY, AND INFLUENCE (PRCI) RESEARCH PAPERS

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This study is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under the Feed the Future initiative. The contents are the responsibility of the study authors and do not necessarily reflect the views of USAID or the United States Government.

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This research is made possible, in part, by support provided by the U.S. Agency for International Development (USAID) Grant No. 7200AA19LE00001 through Food Security Policy of the Feed the Future Innovation Lab for, Research, Capacity and Influence (PRCI). The contents are the responsibility of the study authors and do not necessarily reflect the views of USAID or the United States Government.

The study on Trade Flow patterns in Nepal was conducted by the Institute of Integrated Development Studies (IIDS) with financial and technical support from the International Food Policy Research Institute (IFPRI). The project is implemented by consortium partners: Michigan State University (MSU), Cornell University, and Kasetsart University. We would like to convey our sincere gratitude to Dr. Suresh Babu, senior research fellow/head of capacity building, IFPRI, for always providing advisory support throughout the study. Furthermore, this study would not have been possible without the active support of IFPRI staff, professors at MSU, Cornell University, and Kasetsart University for guiding us in the BACI database. We also acknowledge the Ministry of Agriculture and Livestock Development (MoALD) Nepal officials and the agriculture expert's participation and feedback in this paper dissemination event. We would like to express our gratitude to Dr. Biswash Gauchan, Executive Director, IIDS, for his inspiring leading roles in this study, including concept note building, coordination, regular involvement, and guidance throughout the milestones. We would like to extend our deep appreciation to the research team at IIDS and the administrative staff for their cooperative support during the study. We also appreciate Mr. Sanjeev Adhikari, IIDS, for his feedback on the food security part.

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ACRONYMS AND ABBREVIATIONS

Acronyms	Definition
AFRE	Department of Agricultural, Food, and Resource Economics
BBIN	Bangladesh, Bhutan, India, Nepal Initiative
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
CISE	Cash Incentive Scheme for Exports
ESSE	Enabling Environment for Sustainable Enterprises
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
FDI	Foreign Direct Investment
FITTA	Foreign Investment and Technology Transfer Act
FSG	Food Security Group
GDP	Gross Domestic Product
GSP	Generalized System of Preferences
GVCs	Global Value Chains
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization
ISSER	Institute for Statistical, Social, and Economic Research, University of Ghana
LDC	Least Developed Country
LPI	Logistics Performance Index
MoALD	Ministry of Agriculture and Livestock Development
MFN	Normal non-discriminatory
MSU	Michigan State University
MT	Metric Ton
NeKSAP	Nepal Food Security Monitoring System
PRCI	Policy Research, Capacity, and Influence
ReNAPRI	Regional Network of African Policy Research Institutes
SAARC	South Asian Association for Regional Cooperation
SAFTA	South Asian Free Trade Area
SASEC	South Asia Sub-Regional Economic Cooperation
USAID	United States Agency for International Development
USD	United States Dollar
VECM	Vector Error Correction Model
WFP	World Food Programme
WTO	World Trade Organization

I. INTRODUCTION

Nepal's agriculture sector is characterized by low productivity and inadequate infrastructure, along with reliance on rain-fed traditional agriculture, and a feeble supply chain that precludes a swift supply of agriculture produce even within the country. These supply side constraints have hindered production, and in turn the export of agro-products, making Nepal a net-importer of agriculture goods.

Nepal is part of several regional integration frameworks such as South Asian Association for Regional Cooperation (SAARC), the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), the Bangladesh, Bhutan, India, Nepal (BBIN) Initiative, the South Asia Sub-Regional Economic Cooperation (SASEC), and the South Asian Free Trade Area (SAFTA). It has also signed bilateral treaties with 17 countries. However, inadequate compliance with international standards, poor trade infrastructure, high transaction cost, and bureaucratic hurdles have frustrated Nepal's export potential in both agro and non-agro products. Additionally, barriers such as free movement of capital along with harmonization of standards have also limited trade with partner countries.

While exports have largely remained poor, there has been steep increase in the imports. Rise in remittances, that form a major part of over half of Nepali households, as well as increasing reliance on foreign goods for meeting basic necessities caused by dismal domestic outlay are found to be the likely causes. Poor export performance has been exacerbated by supply side constraints such as inhospitable business environment, infrastructure bottleneck, and unreliable utilities such as water and electricity.

The study broadly suggests three policy recommendations that would help Nepal boost exports of agro-products. First, Nepal needs to formulate policies that enabled Nepali agro firms latch on to global value chains through promoting foreign investment in agriculture sector, including offering an environment where benefits of technology transfer can be absorbed. Second, it needs to invest in both hard (integrated port, roads, metrology, among others) and soft (treaties, agreements, custom integration, among others) infrastructure. Third, it must improve the business environment by addressing bureaucratic hurdles and lowering transaction costs through liberalizing tariffs on agriculture equipment, improving access to credit and sharing information on the trade preferences to exporters.

In this paper, we begin by exploring the trade flow patterns of Nepal, with a focus on agri-products. We then investigate the reasons for Nepal's low export performance on three pillars – incentive ecosystem; backbone services and factor inputs; and proactive policy measures, based on the World Bank's Trade Competitiveness Diagnostic Toolkit. Based on our analysis, we then propose three broad policy options that Nepal needs to implement to boost exports of agro products.

II. DATA AND METHODOLOGY

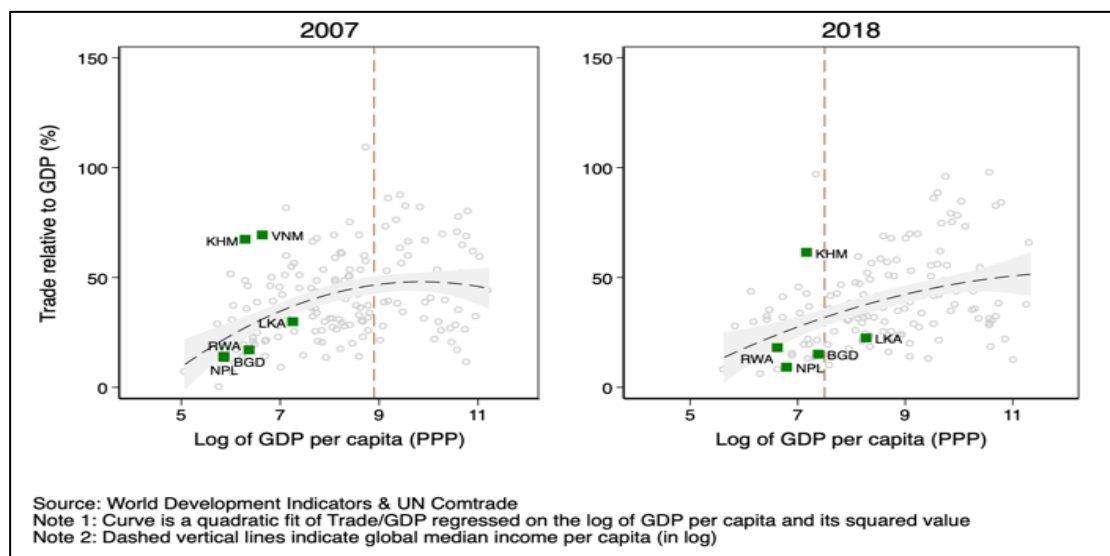
The study uses the BACI dataset at Harmonized System (HS) code 4 that captures all the exports and imports, agri-food exports, and agri-food imports outlined in a manner that this study could focus solely on the agri-foods as well as agricultural raw materials traded by Nepal. The available sample period was between 1998 and 2018. To account for possible missing values and abnormal performance years such as the 2008 financial crisis, most averaged data values and trends have been obtained by deriving a 3-year moving average dataset based on the original data. The values of exports and imports are in USD1000 (current price) units.

To diagnose the reason for poor export performance of Nepal despite being a beneficiary of trade preferences, we employ the World Bank's Competitive Diagnostic Toolkit. Under this framework we explore three pillars i) Incentive ecosystem; ii) Backbone services; and iii) Proactive policies and draw on quantitative benchmarks from internationally recognized indices. To compare Nepal with comparable countries we identify six economies – Bangladesh as a fellow South Asian Least Developed Country (LDC), Rwanda as a landlocked LDC in Sub Saharan Africa, Cambodia as a Southeast Asian LDC, Sri Lanka as an aspirational reference in the region, and Vietnam as a Southeast Asian example of a growing dynamic economy.

III. NEPAL TRADE PATTERNS

Overall, with regards to merchandise exports, relative to the size of the economy, Nepal has the lowest ratio (of two percent) among comparable countries. In trade openness, measured by total exports and imports of goods and services as a share of nominal GDP, Nepal performs ‘well’ among peers with an openness ratio of 55 percent. However, import penetration is high in the country; when imports are removed, Nepal’s rank among developing countries falls drastically. As illustrated in Figure 1. Nepal is an under-trader compared to its peer countries; under trading goods and services by 16 percentage points¹.

Figure 1. Nepal Trade Openness



Source: Neopane and Wagle (2020)

Top traded agro-products

Nepal’s top exports

The top 10 agri-foods exported by Nepal have mostly remained unchanged over the years. Water, nutmeg, cardamoms, animal fats, vegetables, legumes, and vegetable products, tea, oil cakes, other solid residues, nuts, plants and parts of plants, and pasta are the top 10 exports over the period of investigation. As seen in Figure 2, the volume of exports of most of the top exported items have increased. Animal fat which was in the top 10 list earlier was replaced by fruit juice in the last ten-year period.

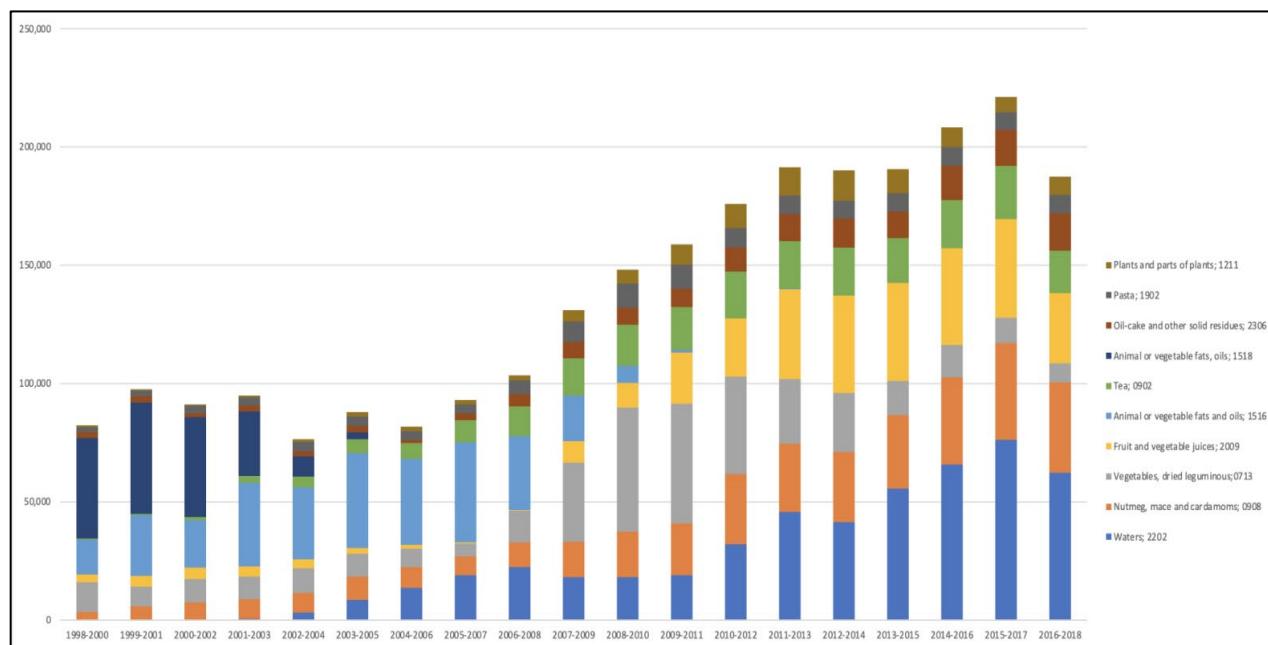
Nepal exported USD 46 million worth of large cardamoms between mid-2015 and mid-2016 making it the second largest export product overall and the largest amongst agri-foods. According to Nepal Trade Portal, large cardamom is mostly grown in the Eastern districts of *Taplejung, Panchthar, Illam,*

¹ Neopane and Wagle (2020).

and *Sankhuwasabha* and it involves around 70,000 families. The eastern districts of *Jhapa, Illam, Panchthar, Dhankuta,* and *Terathum* are also endowed with soil, climate, and topography for production of tea leaves that falls in the top exported agri-foods. Nepal produces about 24,000 metric tons of tea annually.

Bottled water market in Nepal boomed in the past decade and has taken over the export shares of vegetables and fruits. In 2015, Nepal’s bottled water market was as big as USD 54 million and is forecasted to triple in the next few years (Williams and Marshall Strategy, 2020).

Figure 2. Nepal’s top 10 agri-food exports (3-year moving average 1998-2018)

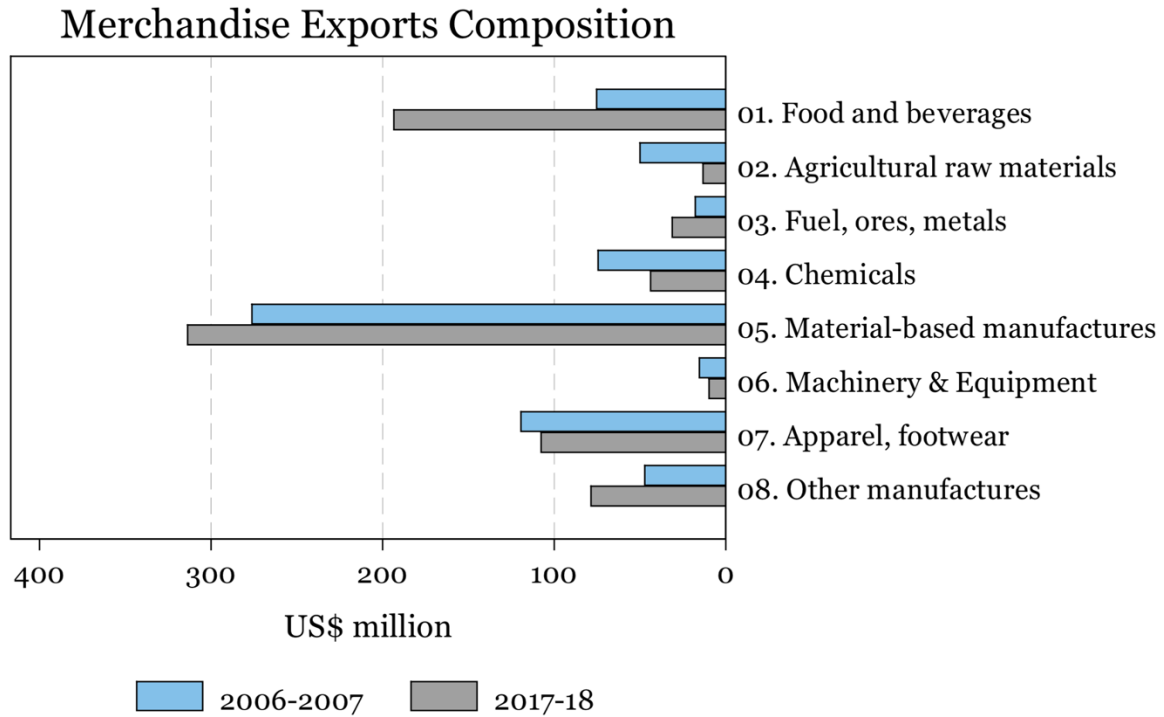


Source: Calculations based on BACI dataset

Food and beverages exports in nominal terms have almost doubled from a base of less than USD 100 million in a decade (Figure 3). Processed foods such as honey, juice and dairy products, fresh fruits and vegetables are known to fetch higher value in world markets than unprocessed agricultural items. They require some form of technological processing before being exported and are typically subjected to stringent food safety standards. This makes them stand out from traditional beverages and cereals which are generally exported in bulk.

According to Athukorala and Wagle (2014), there are three key reasons why processed food is important for inclusive growth. First, income and price elasticities of demand for processed food is much higher compared to most traditional primary agricultural products. Therefore, diversification of the export mix into this commodity category can bring in faster export growth combined with significant terms of trade gains. Second, final stages of food processing tend to be labour-intensive, in contrast to material-based manufacturing, helping create jobs. Third, processed food products typically have a greater domestic input content, and hence a greater domestic value added.

Figure 3. Merchandise exports composition

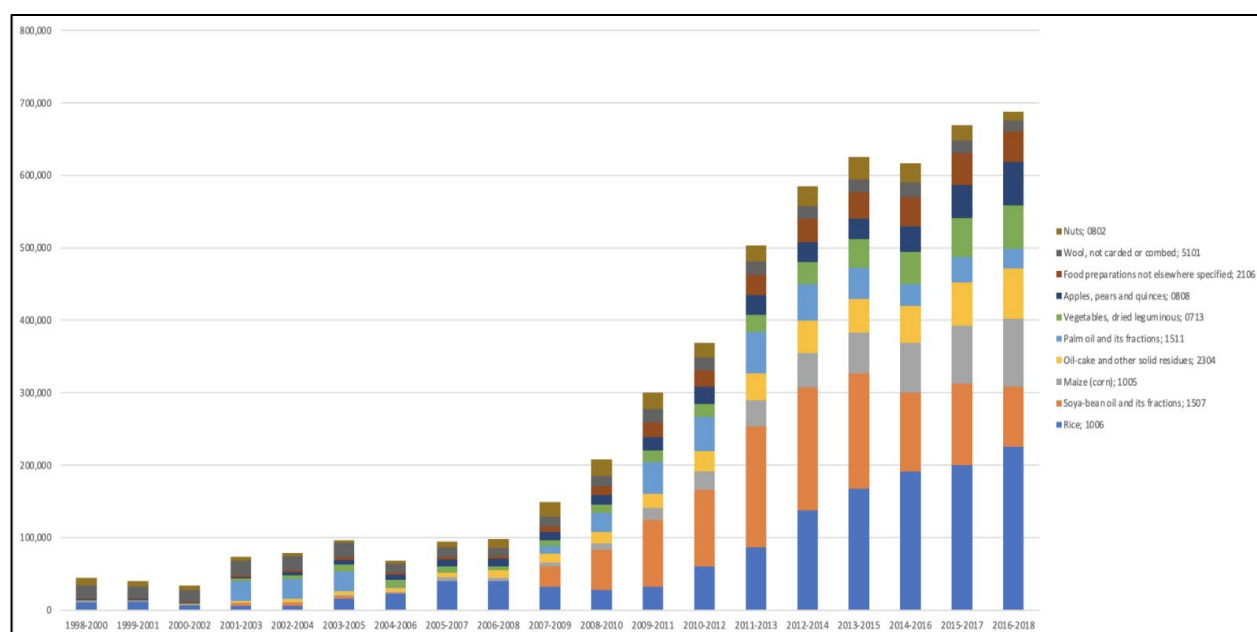


Source: Neopane and Wagle (2020)

Nepal's top imports

Nepal's top 10 imports in agri-food commodities are rice, soybean oil and its fractions, maize, oil cakes and other solid residues, palm oil and its fractions, vegetables and dried legumes, apples, pears, and quinces, other food preparations, raw wool, and nuts. Figure 4 below shows the trend imports of these top 10 commodities and indicates that there has been a steep increase in the volume of imports of almost all top traded items. Over the last ten years, Nepal has seen an increased imports in potatoes and tobacco replacing wool and nuts from the top 10 list.

Figure 4. Nepal's top 10 agri-food import in USD 1000s (3-year moving average 1998-2018)



Source: Calculations based on BACI dataset

Some observations can be made from the above data on Nepal's top 10 exports and imports. Despite being primarily an agriculture country, Nepal's top imported item is rice, of which, the average value imported over the sample period was USD 74,897.7 thousand and over the last ten years was USD 137,306.72 thousand.

Similarly, there are other items such as vegetables, oils, and legumes that appear on both—the top 10 exports and imports list. This is not just indicative of the typical diet in Nepal which comprises rice, vegetables, and legumes, but also the concentration of trade activity in these highly consumed items. Out of the vegetables and leguminous plants (HS-4 code 0713), Nepal exports about 93% shelled and dried lentils and the rest of broad beans, horse beans, kidney beans, small red beans, peas and chickpeas. On the other hand, Nepal imports peas the most (27%), followed closely by chickpeas (20%) and shelled and dried lentils (19%).

Nepal exports most of animal and vegetable fats, non-alcoholic beverages, ginger, juices, sugars, lentils, and residues of rice to India. In the first decade (1998-2008), Nepal exported most of inedible mixtures of animal and vegetable fats but in the later decade (2009-2018), their exports dropped close to zero². Instead, the most exported commodity in the second decade is non-alcoholic beverages with an increase of threefold from the first decade. Decline in the average exports of ginger, lentils, rice residues, prepared foods like pasta, and cereal straws and husks to name a few. On the other hand, the second decade saw an increase in average exports of oil cakes and solid residues, juices and mixes, sugars, vegetable oils, and beet pulp to name a few. Fluctuations in the export composition of Nepal over time are mainly due to the lack of strategic and long-term vision of the government for trade promotion. For instance, some of the actively traded goods were not

² This could be because of the tariff exempted for Nepal on the import of soybean and palm oil. Based on imported raw materials, Nepal exported processed oil to India, which could have shifted the export pattern.

subject to preferential tariffs. Similarly, tariff cuts on some of the main exported goods were not deep enough (Pant, n.d.). In order to have a consistent export performance the government needs to actively identify goods that the country has comparative advantage on, and facilitate them with robust physical infrastructure, human resources and provide them with subsidies and tax cuts where possible.

Additionally, certain sections of the private sector exports goods based on short-term gains which creates temporary changes in Nepal's export composition. For instance, export of oil to India has increased not because of Nepal's supply side competitiveness, but due to India's duty-free access to Nepali goods along with higher tariff for other countries' oil exports, that has made Nepal's export cheaper.

Imports from India throughout the period of the data is dominated by cereals like rice and maize followed by potatoes, rice in husks, oil cakes, onions, wheat and meslin, jute, and fruits. Imports in the second decade, unlike exports, have increased significantly for most commodities with exceptions like broken rice whose import fell in the second decade. The top 5 imports in the second decade have remained rice and maize, potatoes, husks of rice, oil cakes, wheat and meslin, all of which have increased by over 5 times in comparison to the first decade.

Top trading partners

Nepal is an import dependent country, especially with its regional neighbors. Among its top ten trading partners in agri-foods, India is the highest by volume as well as by value. After India, Nepal's highest trade frequency is with Bangladesh and China. In fact, Bangladesh is the only country in the top 10 list where Nepal's exports outweigh imports, resulting in an average trade surplus.

Import concentration in Nepal has changed over the years amongst the top 10-12 trading partners as outlined by the following geo-maps. The following maps capture a 3-year average of three points in time: 1998-2000, 2008-2010, and 2016-2018 (See Figure 5). As can be observed, top imports are concentrated in the same few countries over the years, namely India and Bangladesh. Agri-foods imports from China have diluted over the years as import strengthens in parts of South America and the Pacific Islands.

Similarly, export concentration in Nepal has changed over the years amongst the top 10-12 trading partners as outlined by Figure 6. The following maps capture a 3-year average of three points in time: 1998-2000, 2008-2010, and 2016-2018. Like imports, exports also have not changed significantly over the decades. Some increase in exports can be noticed with South American countries in the last two decades but hefty trade export is mostly concentrated among India, China, and the US throughout the period.

Table 1. Top 10 Bilateral Trade Partners in Agri Products 1998-2018

	Avg Imports	Avg Exports	Trade difference	Net
India	308,836	149,616	-159,220	Deficit
Bangladesh	7,703	13,240	5,537	Surplus
China	32,533	6,098	-26,435	Deficit
Egypt	10,630	4,003	-6,627	Deficit
Thailand	12,705	1,009	-11,696	Deficit
USA	6,245	2,423	-3,822	Deficit
Vietnam	3,819	1,882	-1,937	Deficit
Singapore	8,741	988	-7,753	Deficit
Malaysia	8,380	797	-7,583	Deficit
UAE	2,067	1,179	-888	Deficit
UK	3,064	612	-2,452	Deficit

Source: Calculations based on BACI dataset (values of imports & exports in USD 1,000 current prices)

Figure 5. Nepal's Import Concentration in various time periods

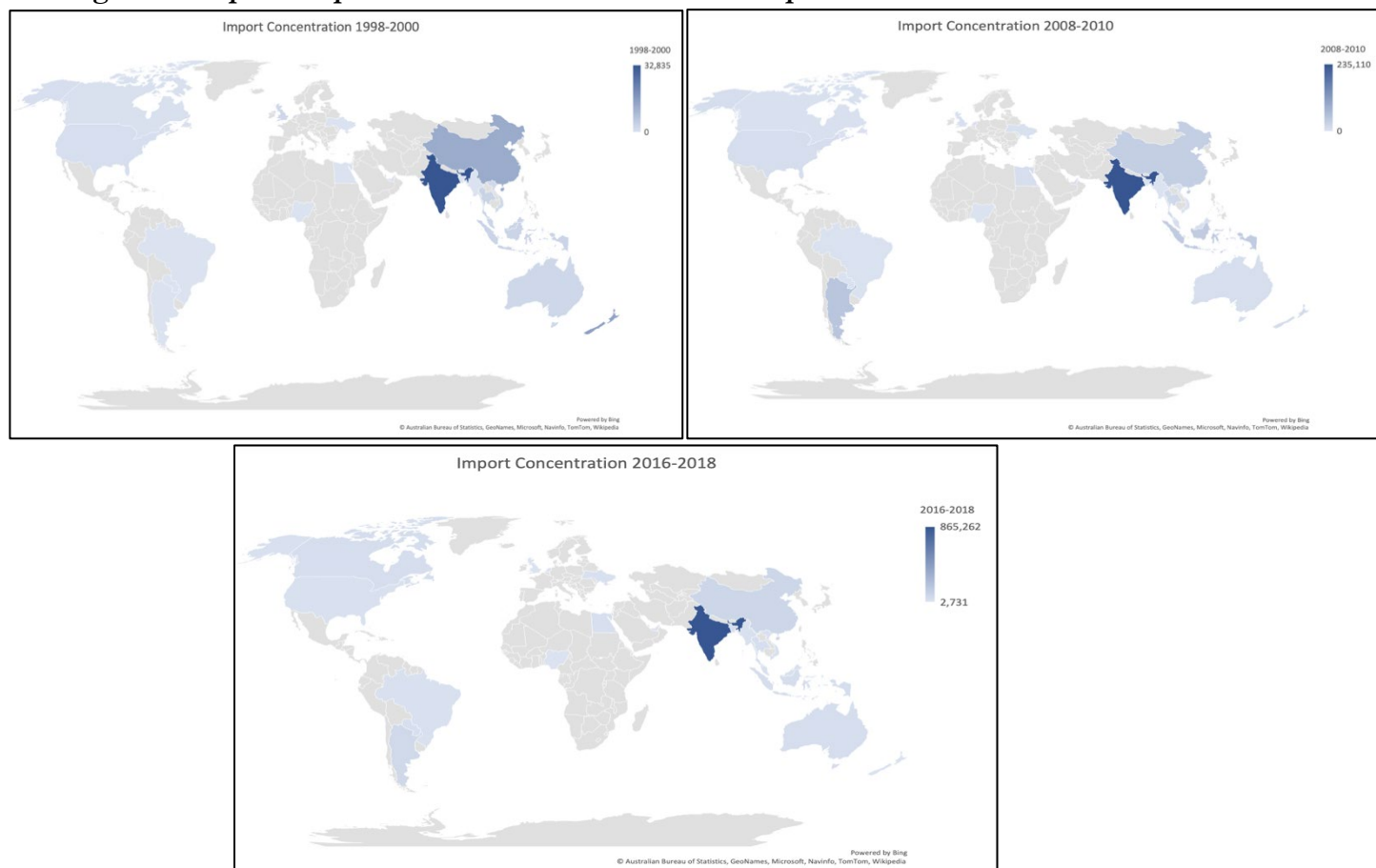


Figure 6. Nepal's Export Concentration in various time periods



Signed Treaties

The main trade agreements that have guided Nepal's history and status of trade are with India, China, Bangladesh, USA, SAARC, and the World Trade Organization (WTO).

Nepal's bilateral trade relationship with India was formalized in 1950 with the first trade treaty and continues till date with periodic revisions. Nepal exports over 80% of its top 10 agri-food products to India. The trade agreement between the two countries allows for primary goods such as agricultural products to be sold duty free and quota free in India. The last revision of the treaty in 2019 called for duty free and quota free access of the Indian markets for primary and agricultural goods with some quantitative restrictions on vegetable ghee, acrylic yam, copper, and zinc oxide. On top of the trade agreement, Nepal and India have also signed a treaty on trade transit for Nepal to use Indian railway and land territories to import and export goods. Last revisions of the treaty on transit outline over 15 land routes including *Banbasa*, *Sonauli*, *Bhitamore*, *Jogbani*, *Sukhiapokhari*, and *Naxalbari* that grant Nepal access to trade with India and the rest of the world.

Nepal and China also have a long history of trade despite the mountainous region being a geographical hurdle before the transportation system flourished in both countries. In 1981, the two

countries signed the Trade and Payments Agreement to enable fluent transport of certain goods between the two. China also allows Nepal to use different ports for international trade and there is no tariff on various Nepali products. In May 2010, China granted Nepal zero-tariff access to over 8000 Nepali non-agri and agri products from live animals to frozen foods, nuts, seeds, minerals, and vegetables.

Nepal's trade agreement and relationship with the United States is also an impactful agreement in Nepal's trade behavior. In 2011, USA and Nepal signed the Trade and Investment Framework Agreement to reduce trade barriers so that Nepal can export a compiled list of goods such as handicrafts, shawls, and travel goods to the US duty free. As such, the US is one of Nepal's top export destinations for a long stretch of history. According to the Office of US Trade Representative, US exported a total of USD 74 million agricultural products to Nepal in 2019, namely soybeans, soybean meal, planting seeds, tree nuts, and live animals. Likewise, US imported USD 12 million in agricultural products in 2019 namely essential oils, spices, snack foods, tea, and feeds and fodders.

Besides the neighboring countries and the USA, SAARC region remains the most important trade area for Nepal. The South Asian Free Trade Area agreement was signed in 2004 by the South Asian countries to reduce trade barriers like customs and tariffs. On top of the SAFTA terms, Nepal enjoys special privileges in the SAARC region as a least developed nation, getting a longer list of unrestricted items for trade. SAARC countries also signed the SAARC Agreement on Trade in Services in 2010 to enhance and increase trade services in the region in areas such as tourism, banking, telecommunication and airlines.

Nepal also trades heavily with/via Bangladesh ever since signing an agreement in 1976 which enlisted the trade of primary commodities like rice, wheat, pulses, mustard seeds and oil, oilseeds and oilcakes, raw cotton, tea, and fresh, dried, and salted fish. Nepal uses trade ports and land routes in Bangladesh for bilateral trade as well as international transit of which the *Kakarbitta-Phulbari-Bangalabandha* routes have been the most prominent. Since September 1997, Nepal has been using the port facilities at Bangladesh's *Mongla* port. Nepal also has access to *Chittagong* and *Mongla* sea ports and four land port stations: *Birol*, *Banglabandha*, *Chilabati* and *Benapole*, for bilateral trade with Bangladesh and third countries.

SAFTA helps Nepal connect with the South Asian region through low tariff rates, deepened trade and economic cooperation, and encouragement of free competition. Likewise, the Bay of Bengal Initiative for Multi-Sectoral, Technical and Economic Cooperation (BIMSTEC) connects South Asia with South-East Asian countries to liberalize trade and facilitate cross border investments. Nepal has played an active role in the cooperation by hosting the BIMSTEC Summit on a rotation basis.

WTO agreements were ratified by Nepal in 2004 as the first least developed country to do so. Though under WTO rules Nepal can trade with over 164 countries, it remains heavily reliant on its neighboring and regional partners for most of its trades. WTO identifies India, USA, the European Union, UK, and Turkey as Nepal's top trading partners within its member countries. According to Food and Agriculture Organization (FAO), Nepal's heavy trade reliance on India is indicative of Nepal's lack of competitiveness in the global trade market. Hence, with progressive measures implemented by WTO's membership status, it is hoped that the dependency can be reduced, and Nepal can emerge as a favored trade partner by other nations.

IV. Factors limiting Nepal's exports

Despite number of preferences given to Nepal as part of bilateral and multilateral treaties, Nepal has not been able to fully utilize the benefits. Part of the reason relates to supply side bottlenecks such as unavailability of credit, dearth of skilled labor, and inadequate infrastructure. Demand side factors such as trade complementarities along with information heterogeneity regarding the offered benefits and exporter's inability to comply with those requirements also contribute to poor export performance. In this section we use the World Bank's Trade Competitiveness Diagnostic framework to analyze the factors limiting Nepal's export performance in detail.

While this analysis takes into account the entire economy, we have discussed the nuances of the agriculture sector where possible. Nevertheless, it is important to note that these findings are also valid for agriculture sector.³

Incentive ecosystem

One can argue that Nepal's *de-jure* regulations are comparable to its counterparts, but it is *de-facto* applications that tend not to foster an ideal business environment. Take the World Economic Forum's Global Competitiveness Report, that assesses set of policies, institutions and factors that determine the level of productivity of a country, for instance. Nepal stands 108th out of 141 economies. Vietnam and Sri Lanka are much more competitive, ranked 67th and 84th respectively.

Table 2. Global Competitiveness Index

Country	GCI Rank (out of 141) 2019	GCI Rank 2018 (out of 140)
Bangladesh	105	103
Cambodia	106	110
Nepal	108	109
Rwanda	100	108
Sri Lanka	84	85
Vietnam	67	77

Source: : Global Competitiveness Report, World Economic Forum (2019)

In the World Bank's Doing Business Report 2020, a disaggregated proportion of surveying regulatory measures that influence the lifecycle of small businesses, Nepal ranks 94th out of 190 economies. This is below its peers, Rwanda (38th) and Vietnam (70th); however, better than Sri Lanka (99th), Cambodia (144th) and Bangladesh (168th). Nepal performs considerably well in Trading Across

³ This section draws on Neopane and Wagle (2020)

Borders (60th), where it is comparatively better than all its counterparts. On the other hand, paying taxes in Nepal is cumbersome, as it positions at 175th rank, which is 137 slots below Rwanda (38th).

Table 3. Doing Business Report 2020

Measures	Bangladesh	Cambodia	Nepal	Rwanda	Sri Lanka	Vietnam
Doing Business 2020 rank	168	144	94	38	99	70
Starting a Business rank	131	187	135	35	85	115
Dealing with Construction Permits rank	135	178	107	81	66	25
Getting Electricity rank	176	146	135	59	89	27
Registering Property rank	184	129	97	3	138	64
Paying Taxes rank	151	138	175	38	142	109
Trading across Borders rank	176	118	60	88	96	104
Enforcing Contracts rank	189	182	151	32	164	68
Resolving Insolvency rank	154	82	87	62	94	122

Source: Doing Business Report 2020, World Bank (2019)

Nepal's product market is highly incompetent. In the overall GCI ranking under the Product Market section, Nepal ranks 132nd out of 141 economies. Nepal ranks the worst amongst its peers under the domestic market contest, the distortive impact of taxes and subsidies on competition, and degree of market dominance, positioning at 118th, 94th and 124th, respectively. Under the same benchmark, Rwanda places 48th, 22nd and 54th, respectively. A below-average score of 43 (out of 100) under domestic market competition in Nepal is well reflected by the presence of cartels across several sectors of the economy that seek to erect barriers against entry of new competitors and enable a goods market where incumbents can get away with poorer service at higher price.

Table 4. Goods Market Efficiency

Measures	Bangladesh	Cambodia	Nepal	Rwanda	Sri Lanka	Vietnam
Product Market	119	113	132	66	131	79
Domestic Competition	113	107	118	48	95	64
Distortive Effect of Taxes and Subsidies on Competition	91	92	94	22	78	72
Extent of Market Dominance	122	100	124	54	86	47
Competition in Services	105	118	117	90	119	72
Trade Openness	119	115	135	94	140	91

Source: Global Competitiveness Report, World Economic Forum (2019)

Even though Nepal's tariff regime is considerably liberal, there is strong lobbying for the protection of certain products through tariffs and temporary quantitative restrictions. The simple average applied MFN tariff in FY 2018-19 was 12%, a minor decline of 0.02 percentage points since 2011-12. Specifically, non-agribusiness items have a normal tax-rate of 11.90%, while agrarian items have an average of 12.60%. Tobacco, in addition to some motor vehicles, and arms and ammunition items has the greatest ad valorem rate of 80%.

Nepal's pace of tariff liberalization has been slowing. The average MFN tariff has declined by a small margin of 2.2 percentage points, from 14.2% to 12%, between 2000 and 2019. Nepal applies high duties on key item groups such as, capital and intermediates merchandise. It had a simple average tariff of 10% on intermediate products, which was much higher than Vietnam (3.3 percent); and a simple average tax of 7.8 percent in 2015 on capital products, which was very high in comparison to Malaysia (2.3 percent) and Vietnam (3.1 percent). With a reduction in the average preferential tax within SAFTA (from 10% to 7%), Nepal's average applied tax rate has successfully decreased from 12% to 10% between 2008 and 2018. Nepal has effectively decreased applied tax since 2002 across a wide range of products; more noteworthy reductions can be identified in sections that at first had higher tariffs. For instance, miscellaneous category of different products saw a reduction from 66% to 21% between the years of 2002 and 2018, while on the opposite end, industrial supplies saw a fall in levy by only 2 percentage points.^{4 5}

Nepali firms' capacity to stay competitive is obstructed by higher tariffs. To be competitive in the global market, Nepali firms should have the option to have wide access to intermediate goods from suppliers that offer the best incentive for cash; with steep taxes, they face a significantly high price. For instance, Nepali firms pay 36% duty in addition to VAT while purchasing filter bags from Germany. Similarly, in excess of 90% of Nepali exports use inputs from foreign nations— footwear exporters import inputs like leather, glue, soles, among others, from China, India, and Thailand; while pashmina exporters use wool and silk from China and India. Evidence suggests that higher use

⁴Narain and Varela (2020)

⁵Ganz and Varela, Presentation on 'Nepal's tariff structure and import duty revenue', World Bank.

and variety of imported intermediate input is correlated with higher exports, higher quality of exports and diversification of destinations.

Factor input and backbone services

Nepal's export volume remains small due to supply-side constraints that affect trade and production costs. As argued by Narain and Varela (2017), Nepali exports perform modestly in terms of the number of products exported and the number of export destinations reached, but average shipment size is insignificant. This is unmistakably obvious in Nepali export to the US which awards trade preferences to Nepal. This shows that there are high trade and production costs, particularly on energy, credit, and skilled labor. Nepal positions low on globally benchmarked logistics of performance and trade facilitation. On the Logistics Performance Index (LPI), that aggregates six indicators on logistics framework, customs, global shipments, logistics competence, tracking-tracing and timeliness, Nepal performs poorly among peer nations. Overall, Nepal ranks 114th out of 160 economies, well behind Rwanda, the best performing peer country. On infrastructure, and tracking and tracing, it performs comparatively better (123rd and 98th, respectively) than Cambodia (130th and 111th, respectively) yet lower than other benchmarked nations. Nevertheless, Nepal improved its general LPI rank from 124 in 2014 to 114 in 2018. This was seemingly determined by a tremendous improvement in the logistics capability that improved from 140 to 105 in a similar timespan. Over the past few years, there have been some efforts at simplifying customs procedures as well. ⁶

Table 5. Logistics Performance Index

Measure	Bangladesh	Cambodia	Nepal	Rwanda	Sri Lanka	Vietnam
LPI	100	98	114	57	94	39
Customs	121	109	122	64	79	41
Infrastructure	100	130	123	65	85	47
International shipments	104	71	129	29	112	49
Logistics competence	102	111	105	60	109	33
Tracking & tracing	79	111	98	86	78	34
Timeliness	107	84	89	61	122	40

Source: Logistics Performance Index, World Bank (2018)

Similarly, markers of compliance time and cost of trading across borders are equivalent to peers but shroud enormous domestic distortions. Nepal's best performance among doing business

⁶One notable improvement is the implementation of the Customs Reform and Modernization Strategies and Action Plans (CRMSAPs) and an E-customs Master Plan that is intended to create a web-based paperless system of customs clearance using Automated System for Customs Data (ASYCUDA) World. Another improvement is the implementation of a Single Administrative Document in the Nepal Customs Automation System (NECAS). As of the end of August 2018, over 12 customs offices, covering 95 percent of Nepal's trade, have implemented NECAS.

components is in the trading across borders segment, with a position of 60th, which is superior to peer nations. It costs USD 190 for border compliance and requires 11 hours at the border to import in Nepal. This is better compared to Bangladesh, where it costs USD 900 for border compliance and requires 216 hours to import.

Despite land transportation being the most common method of transportation, carrying 90% of all travellers and cargo, Nepal has the least road-density in South Asia, with 0.90km of road per 1000 individuals. Five percent of districts' core network roads are black-topped and 23% are graveled. Also, out of 31,904 kms of village streets interfacing with the district network, 2% are black-topped. As indicated by the Quality of Port Infrastructure Index that outlines the degree of advancement of inland waterways and port facilities inside the scope of 1-7, Nepal has a poor score of 1.6.

Poor and deficient infrastructure has meant a greater expense of operating businesses – in Nepal 39% of the cost of processed food exports is incurred by logistics when contrasted with 9% for the main production task⁷. Nepal's landlocked location naturally implies an exorbitant access to regional and world markets. The significant cost of mobility eases back the course of technological dispersion. Unintegrated market sectors limit the degree for division of labor, which is a precondition for specialization and productivity gains.

Some of the major constraints faced by firms are the access to finance, electricity and skilled workers. While electricity was cited by 68% of Nepali firms as a major constraint, electricity supply has improved in recent years with outages being less frequent. Yet, access to electricity services is limited. In terms of access to electricity, Nepal ranks 137th while other countries such as Rwanda ranks 68th, Sri Lanka (84th) and Vietnam (27th).

Table 6. Major constraints for firms (%)

	Bangladesh (2013)	Cambodia (2016)	Nepal (2013)	Rwanda (2011)	Sri Lanka (2011)	Vietnam (2015)
Access to finance	22.8	16.9	40.1	35.1	30.2	10.8
Inadequately educated workforce	15.7	17.6	9.1	28.4	16.0	8.1
Electricity as a major constraint	52.0	6.1	68.8	15.4	25.6	3.7

Source: World Bank, Enterprise Survey various years

Access to finance is another problem with 40% of Nepali firms citing constraint. It is more than peer countries such as Bangladesh (22%), Sri Lanka (30%), Rwanda (35%) and Vietnam (10.8%). World Bank (2012) finds 25% of micro, 4% of small and 16% of medium-sized firms cite access to finance as a serious constraint, while none of the larger firms view access to finance to be a barrier.

Insufficient collateral is the main challenge faced by businesses in order to access finance as 36% of the firms face this problem according to the Enabling Environment for Sustainable Enterprises (ESSE) survey by International Labour Organization (ILO). A few explanations behind this are

⁷ IFC (2018)

stated here. First, the necessity of land or building that will be considered as collateral must be in proximity to banks' catchment region and with road access. If the region is away from the catchment area, banks either don't acknowledge it as collateral or give it a lower-than-market-value. This diminishes the likelihood of entrepreneurs, including agro-entrepreneurs, who are positioned in provincial or peri-metropolitan regions getting credit.

Secondly, ownership of movable assets is common for agro-entrepreneurs, however, there are gaps in the legal, administrative and institutional structure alongside the execution of movable asset-based financing.⁸ Thirdly, the worth of collateral required for a credit is incredibly high, at 356% of the standard on an average.⁹ This is higher than comparable nations, such as Cambodia, Pakistan and Vietnam, which have 165.1%, 153.4% and 216% of the principle on an average, respectively.

Bank density is another reason for low access to finance – there are 3,233 branches of commercial banks dispersed throughout Nepal, out of which 33% are situated in Province 3. Merely 149 branches are situated in *Karnali* Province, 234 in *Sudurpashchim* Province, 372 in *Gandaki* Province and 388 in Province 2. Lesser number of bank branches mean lower access to finance and subsequently lower loanability.

Moreover, access to finance also has a gender dimension. Only eleven percent of women own land and buildings, 22% own just land and 11% own houses. In circumstances when the two generally acceptable assets – land and buildings – can't be vowed as collateral by women, potential women entrepreneurs are penalized.

Nepal's labor market is characterized by skill inefficiency and high redundancy costs. Export-oriented firms prefer relatively liberal regulations in terms of costs and procedures to govern hiring and redundancy practices. Although the minimum wage rates are comparable to Indian states, the average worker productivity is much lower. This compels firms to import skilled workers and thereby increases production costs.

Proactive policies

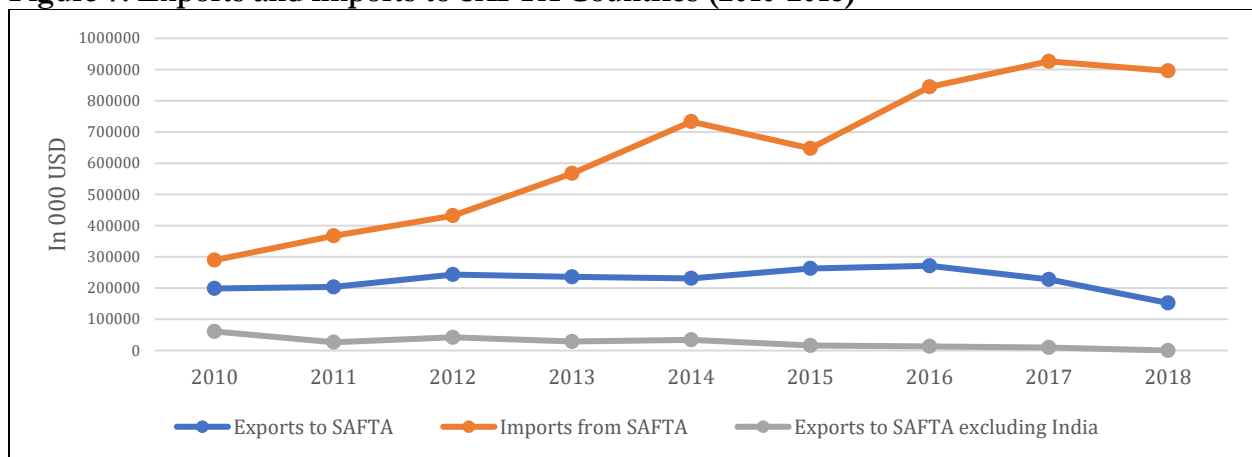
Despite being party to several trade agreements and preferences, Nepal underutilizes the benefits. It is crucial to understand where the largest untapped potential lie in order to create effective international agreements that aid in boosting exports. For instance, Nepal has only benefited as an importer, but hardly has it benefited as an exporter from SAFTA.

Figure 7 shows Nepal's exports and imports of agriculture products to SAFTA countries. While imports have grown by 200%, exports have decreased by 25% between 2010 and 2018. Moreover, if we remove exports to India, the exports have declined more recently after remaining somewhat stagnant in the entire decade.

⁸ According to the Afram et al. (2012), 70 percent of the firms take personal assets. This is followed by accounts receivable (25 percent), land and buildings of the company (14 percent) and machineries and equipment (10 percent).

⁹ NRB has tried to improve financial inclusion by mandating increased lending to productive sectors and deprived sectors, as well as branch expansion, but the results have been mixed.

Figure 7. Exports and imports to SAFTA Countries (2010-2018)

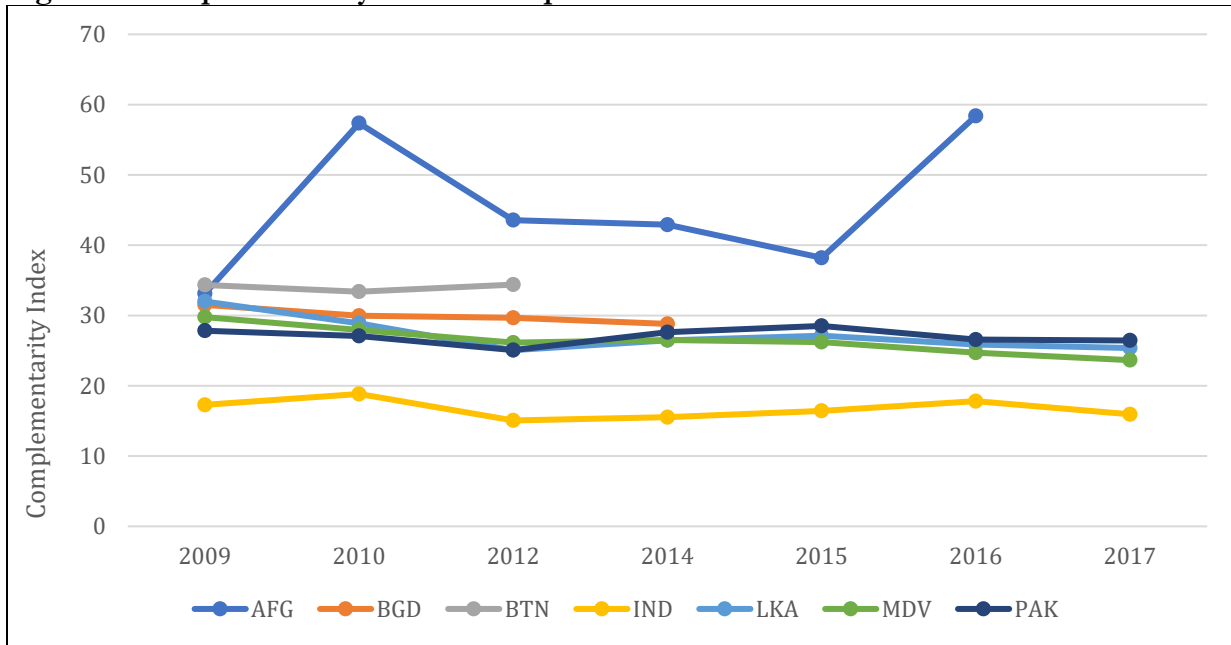


Source: BACI Dataset (2018)

Part of the reason is due to non-tariff barriers that offset the reduction in tariff that the agreement offers. Likewise, barriers such as lack of free movement of capital and lack of harmonization of standards have also limited trade within the region.

A general rule of thumb in evaluating the benefits of a trade agreement is related to the differences in comparative advantages between partners and the initial proportion of trade between them. A higher value indicates higher welfare improvement following the agreement. In other words, an important question that needs to be explored before any agreement is – does it make sense for countries to trade with each other? A common measure used to assess the complementarity in trade between partners is the Trade Complementarity Index. The greater the index value, the more likely are the agreeing countries to benefit from the trade agreement. This index measures the extent to which the export profile of a given country matches, or complements, the import profile of the partner.

Figure 8. Complementarity Index of Nepal with SAFTA countries



Source: WITS, World Bank (2021)

Note: Data for later years were not available.

Figure 8 illustrates the Trade Complementarity Index between Nepal and SAFTA countries. The largest complementarity in trade across all products is with Afghanistan – reaching about 60% in 2016. This is followed by Pakistan, Sri Lanka and Maldives – countries that receive less than 30% of Nepali exports. Despite receiving over three-quarter of export share, India has the least Trade Complementarity Index. To set a perspective on Trade Complementarity, countries in the NAFTA had an average of 56%, with the US and Canada scoring 64%. Likewise, the US and Chile have complementarity index of 80%.

Narain and Valera (2020) find the SAFTA agreement to have no clear effect on trade among members. Their reason is two-fold. First, increase in regional trade frictions in the forms of non-tariff barrier.¹⁰ Second, they argue that the problem is not related to market access but to barriers that require deeper forms of agreements such as free movement of investment, harmonization of standards, and elimination of non-tariff barriers to trade.¹¹ Moreover, other implementational factors are also responsible for poor trade between SAFTA countries – even after 36 years of establishment of SAARC, basic tenets of regional cooperation such as free trade on goods are far from being fully implemented.

¹⁰ Although these have had been offset to some extent by the agreement.

¹¹ When the effect of SAFTA is estimated by type of product traded, results show no effects for primary, processed, and consumer goods, and negative for capital goods and intermediates.

In addition to this, Nepal has also not been able to maximize benefits from the Generalize System of Preferences (GSP) provisions provided by high-income countries such as the United States. For instance, in 2011, Nepal's exports to the US under GSP provision was merely 7%. Among other products, Nepal's export of hand-hooked carpets had a utilization rate of 49%, while the utilization rate for silk shawls and scarves stood at 60%. Part of the problem lies in that in order to qualify for duty-free treatment under GSP, the products need to be eligible i.e., products have to comply with the rules of origin. This eligibility varies across products and countries. For example, in the case of the US, local content should be at least 35% of the value of the product or has to be fully produced or grown in Nepal. While in case of the EU, it requires a double stage conversion for textiles and garments (from yarn to fabrics to apparel). Additionally, for garments, the EU allows diagonal accumulation within SAARC where content addition within the region is treated as if the materials originated from Nepal. Although this should incentivize regional Global Value Chains (GVCs), Nepal has not been able to take advantage of it.

Additionally, lack of awareness on part of the exporters (existing and prospective) about the benefits is another reason for low levels of utilization rate. Likewise, compliance with rules of origin related documents is also challenging for smaller firms.

For Nepal, core regulations governing Foreign Direct Investment (FDI) and their implementation remain restrictive by global standards.¹² FDI inflow into developing countries as a share of global FDI increased from 34% in 2016 to 46% in 2017 with 33% of FDI going to developing Asia alone.¹³ Out of the 33% of FDI inflows that developing Asia absorbed, the SAARC region got 9%; Nepal's share was a meagre 0.22% in 2017. Given its size and economic dynamism, India's share of FDI in South Asia grew from 75% between 2000 and 2005 to a whopping 87% between 2012 and 2017.

While Nepal ranks below average on 'Investing Across Borders' indices, it has liberal Foreign Equity Ownership provisions. The Investing Across Borders indices measure, among other things, openness to FDI through equity ownership permitted in various sectors, ease of starting a foreign business, arbitrating commercial disputes, and accessing industrial land. Based on Investing Across Borders (2010) and Waglé & Neopane (2020), Nepal's restrictions on average foreign equity ownership in both greenfield ventures as well as mergers and acquisitions are comparatively liberal. On foreign equity ownership, Nepal is relatively open, as complete ownership is allowed in most sectors except mass media, telecommunication services, tourism, health care, and waste management.

With regards to FDI in agriculture, the Foreign Investment and Technology Transfer Act (FITTA) Act restricted any forms of FDI into the sector until 2020. On a landmark decision on 4th January 2021, the Government of Nepal decided to allow FDI in the agriculture sector, albeit with a clause such that they should export 75% of the production. Nevertheless, the foreign equity ownership requirement for agriculture is 100%. However, due to the pandemic, foreign investment into the agriculture sector has not yet gained momentum.

¹² This section draws on Waglé and Neopane (2020).

¹³ Author's calculation based on UNCTAD (2018) dataset.

Table 7. Permitted foreign equity ownership across sectors

	Bangladesh	Cambodia	Nepal	Rwanda	Sri Lanka	Vietnam
Mining, oil & gas	100	100	100	100	40	50
Agriculture & forestry	100	100	100	100	100	100
Light manufacturing	100	100	100	100	100	75
Telecom	100	100	80	100	100	50
Electricity	100	85.7	71	100	71.4	71.4
Banking	100	100	100	100	100	65
Insurance	100	100	100	100	100	100
Transport	100	69.8	65	100	..	69.4
Media	100	100	0	100	40	0
Construction, tourism & retail	100	100	93	100	100	100
Health care & waste management	100	100	66	100	100	75.5

Source: Investing Across Borders, World Bank (2010) and Waglé & Neopane (2020)

Note: Highlighted cells represent sector/ country that does not allow foreign ownership of more than 50 percent

On compliance, the average number of procedures required to set up a foreign-owned subsidiary is higher in Nepal (11) as compared to peers, except Vietnam (12). Similarly, the average number of days it takes to set up a foreign company compares favorably with other comparable countries, except Rwanda—the latter providing the best practice on FDI procedures among peers. An important caveat is that, while officially it takes 27.5 days, anecdotal evidence suggests it takes much longer.¹⁴

¹⁴ See Waglé and Neopane (2020).

Table 8. Selected indicators of trading across borders

Measures	Bangladesh	Cambodia	Nepal	Rwanda	Sri Lanka	Vietnam
Starting a foreign business (number of procedures)	9	10	11	3	6	12
Starting a foreign business (time in days)	55	86	27.5	4	65	94
Strength of lease rights index (0-100)	100	92.9	70.9	89.2	85.7	77.3
Strength of ownership rights index (0-100)	100	N/A	75	87.5	87.5	N/A
Access to land information index (0-100)	26.3	41.7	42.11	38.5	31.6	37.5
Availability of land information index (0-100)	73.7	52.5	68	50	75	75
Strength of laws index (0-100)	84.9	92.4	92.4	93.1	95.4	84.9
Ease of process index (0-100)	67.5	48.6	86.6	80.1	71.3	61.8
Extent of judicial assistance index (0-100)	55.3	46	61.9	73.3	38	57.2

Source: Investing Across Borders, World Bank (2010) and Waglé & Neopane (2020)

On the resolution of commercial disputes involving foreign investors, under the sub-component Ease of Process index, Nepal fares favorably compared to its peers. Likewise, Nepal's judiciary is favorable towards arbitration and mediation as compared to its peers, reflected by a score of 61.9, but is lower than Rwanda's (73).

On access to land information index and availability of land information index, Nepal scores on par with peers. Yet there is still a room for improvement. For example, while the cadaster provides information about land parcels, it is not accessible remotely. Likewise, integration between attribute and spatial data maintained by the Department of Land Management and Archives and Department of Survey, respectively, is also lacking.

FDI can potentially contribute to investment and jobs, but it is the spill over potential—the productivity gain resulting from the diffusion of knowledge and technology from foreign firms to local firms and workers—that is perhaps the most valuable contribution to long-run growth.¹⁵ This is even more pertinent in the agriculture sector in Nepal that largely practices rain-fed and traditional agriculture. Moreover, with low investment agriculture related infrastructure – only 56 percent of the arable land has an irrigation facility out of which only one-third receives water round the year. This has greatly dampened agricultural productivity in Nepal, a country with abundant water resources.

While ‘Export promotion’ is a government mantra worldwide, the literature recommends taking a nuanced approach as the results across countries have so far been mixed. In the case of Nepal, a promotion tool introduced by the government in 2012 is the Cash Incentive Scheme for Exports (CISE) program. Under this program, exporters are offered two-four percent *ad-valorem* subsidy on export sales to firms. Defever et al. (2017) find that subsidies given under this scheme has not had any significant effect on firms’ export value, quantities, prices, and growth rates. Nevertheless, they find a rise in the number of CISE eligible products exported to destinations other than India. The study also pointed out the targeting problems of the scheme – larger firms (based of their export value) were more likely to receive the subsidy along with a higher probability of receiving the subsidy if the firms had received the subsidy in the previous year. Similarly, due to first come first serve basis; and lengthy and complex filing procedures, it reached limited number of firms.

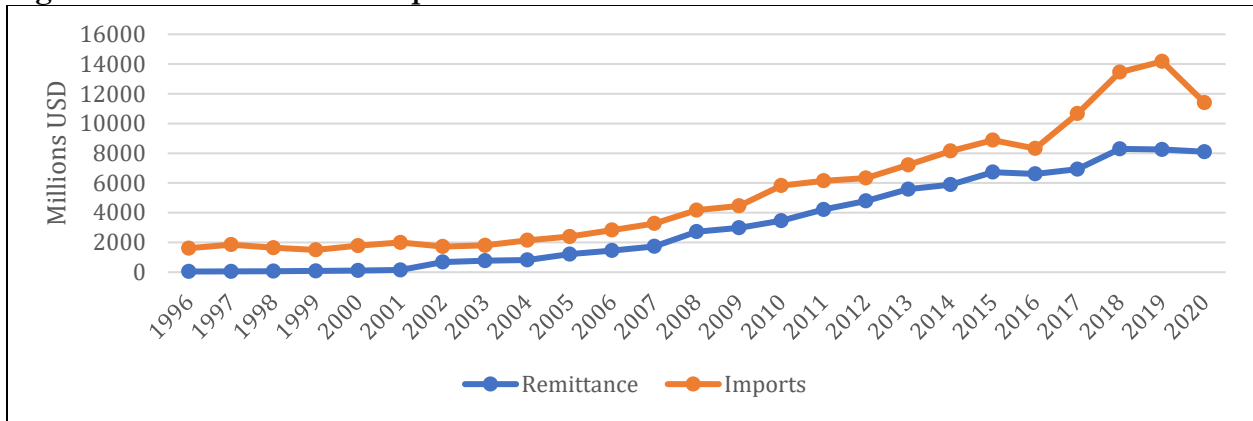
The role of remittance in the Nepalese economy is well known. Contributing to around a quarter of GDP, remittance in Nepal has provided much-needed liquidity to households during decades of political instability and widespread unemployment. With one in every two household receiving remittances,¹⁶ they have aided in consumption smoothing, augmented human development through investment in education and health, contributed to poverty reduction and offered an alternative mode of social protection by shielding family members from the risks and vulnerability such as the earthquake in 2015, and now the COVID-19 pandemic.

In contrast to Nepal’s poor export performance, imports on the other hand have risen sharply – growing by eight folds between 1996 and 2018; remittances are part of the reason for it. As illustrated in Figure 9, import growth seem to have a shaper trajectory after 2002 – the year where migrant workers from Nepal started leaving the country in record numbers and the country started receiving large volumes of remittances. Between 2001 and 2002, Nepal’s inward remittances saw a fourfold increase, while after a lag of one year, imports grew by 18 percent. As seen in Figure 9, until 2018, imports and remittances have largely moved together.

¹⁵ Farole and Winkler (2014).

¹⁶ [https://www.mdpi.com/2227-7099/5/2/16/pdf/#:~:text=About%2057%20percent%20of%20rural,and%20bill%20\(46.3%25\)%20belts](https://www.mdpi.com/2227-7099/5/2/16/pdf/#:~:text=About%2057%20percent%20of%20rural,and%20bill%20(46.3%25)%20belts) .

Figure 9. Remittances and Imports 1996-2020



Source: World Bank (2020)

Bhatta (2013) uses Vector Error Correction Model (VECM) to derive the remittance and trade deficit nexus in Nepal. Using monthly data of merchandise imports, worker's remittance, and trade deficit for 10-year period, the paper explores whether remittance causes the merchandise imports and trade deficit to rise in the long run. It is found that remittance causes merchandise import to rise and trade balance to deteriorate.¹⁷

Likewise, job deficiencies along with ubiquity of retail and low value-added services leading to insufficient domestic production of goods, have compelled Nepalese to consume imported goods that are funded by remittances.

¹⁷ https://www.nrb.org.np/contents/uploads/2019/12/NRB_Economic_Review-Vol_25-1_April_20133_Remittance_and_Trade_Deficit_Nexus_in_Nepal_A_VECM_ApproachGuna_Raj_Bhatta.pdf

V. LOW AGRICULTURE EXPORTS AND FOOD SECURITY IN NEPAL

When food and agriculture products need to be imported from other countries, in a condition where domestic produce are inadequate, the problem of food security tends to exacerbate. The World Food Programme (WFP) estimates Nepal's population to be 28.5 million of which 36% of children under 5 are stunted and 25% of people live on less than USD 0.50 per day. The Zero Hunger Strategic Review in 2017-18 declared that severe food insecurity is still deep rooted in Nepal. Alongside WFP, Nepal aims to achieve Zero Hunger by 2023. However, WFP consistently recognizes that more work needs to be done.

The FAO is also another organization working to promote Zero Hunger in Nepal with various initiatives such as the Hand-In-Hand to adapt to climate-smart agriculture and investments. FAO estimates the number of people with severe food insecurity in Nepal in the years 2017-19 to be 2.9 million, which equates to roughly 10% of the total population. While the availability of food supplies such as various proteins have increased over the years, especially in the last decade, the share of population with food insecurity has remained around 10% during the same period.

According to Chemjong and KC (2020), in 2016, 4.6 million people in Nepal face food-insecurity, of which 22% face moderate and 10% face severe food-insecurity. They also found that people living mostly in Western Nepal and Terai regions are more vulnerable to food insecurity resulting from susceptibility towards natural disasters such as drought, floods, landslides, and earthquake, governance, civil turmoil, disease, poor infrastructures, and vulnerability to fluctuations in global prices. As discussed earlier, most of the top traded agri-goods are grown and exported out of Eastern districts indicating availability of fertile soil, water, as well as the know-how of commercial agriculture. Production led by exports in these areas show a strong relationship with food security. However, the Western regions have not yet been able to engage in export activities and perhaps as a result suffer from higher food insecurity.

Adding to the already severe food insecurity, COVID-19 proved to be consequential in Nepal. The COVID-19 lockdown remained effective in restricting population movement with only essential shops allowed to open. Markets functioned partially with limited supply because of which vegetable prices increased by up to 70% while fruits have increased by 40% (The Rising Daily, 2021). Foods were distributed depending upon the province and the "most affected rates". The data indicates that prices were rising as the availability of the foods were limited (Mahato et al., 2020).

Due to the lack of agricultural production, Nepal generally faces nutrition deficiency and malnutrition. Many of the districts in the western and far-western hilly regions of the country have faced food scarcity and malnutrition that has become a common phenomenon (Maharjan & Chaudhary, 2021). The World Food Programme quotes that the Western districts of Nepal such as *Kalikot*, *Mugu*, *Humla*, and *Bajura* are highly food insecure (Chemjong and KC, 2020). These districts as well as other Western regions of Nepal are technologically and infrastructurally challenged along with low agricultural productivity and poorly functioning markets. Consequences of COVID-19 such as decrease in remittances and lack of job opportunities have made the western region even more food insecure in the recent years. Given the difference between the two regions of Nepal, it can be extrapolated that to reduce food insecurity, the western region can target export-oriented

agri-businesses. For instance, tapping into products that already have a good brand value in international markets such as *Jumli Marsi* rice could be an ideal way to start.

The loss of income source and reduction in income is more prevalent in particular households belonging to daily wage laborers both in farm and off-farm sectors, households receiving remittances and those involving in small businesses and trade (Government of Nepal, 2020). According to ADB (2020) remittance in Nepal is estimated to decline by 29% in 2020 – highest decline in Asia. Between 400,000 and 750,000 Nepalese migrant entered Nepal from India via land borders and this migration had been the main coping mechanism, especially for the food-deficit and food-insecure households in *Karnali* and *Sudurpaschim* Province.

Nepal is experiencing a steady decline in food security due to the collision of domestic, national, and international crises viz. poor agricultural growth, decline in national agricultural priority, global climate change, global food crisis, and political instability. Although the share of agriculture in the country's GDP is decreasing, it is still 33%, and is the highest among the South Asian countries. Cereals are the most important staple food crops in Nepal with rice being the number one crop in terms of area coverage and production, followed by maize, wheat, millet and barley (MoALD, 2019).

The Nepal Food Security Monitoring System (NeKSAP) is a government initiative that operates in all districts under the leadership of Ministry of Agriculture and Livestock Development and the strategic guidance of the National Planning Commission in Kathmandu to monitor the status of food insecurity as well as the impact of aids and support programs. NeKSAP report in 2017 outlined that 37 villages in 5 districts of *Kalikot*, *Humla*, *Dhading*, *Sindhupalchowk*, and *Gorkha* are highly food insecure because of their mountainous topography. NeKSAP also outlines that the summer crops like maize and paddy, produced in low quantities locally, need to be maintained throughout the winter seasons to revive food security.

Feed the Future's Nepal country plan 2018 for Global Food Security Strategy identifies that agriculture trade flows with India are extremely volatile which contributes to a lack of interest in farm level investment and other forms of domestic productivity. For instance, agriculture imports from India surged by 40% in 2016-17 after the 2015-16 border blockage (Feed the Future, 2018). Fluctuations like that turn Nepali markets feeble and cause short- and long-term food insecurity especially with commodities like cereals, vegetables, and fruits.

VI. WAY FORWARD AND POLICY SUGGESTIONS

Nepal's agriculture sector is characterized by low productivity, inadequate infrastructure, and reliance on rain-fed traditional agriculture. The feeble domestic supply chain precludes a swift supply of agriculture produce even within the country. These supply side constraints have hindered production and in turn the export of agro-products making Nepal a net-importer of agriculture goods.

Nepal is part of several regional integration frameworks such as SAARC, BIMSTEC, BBIN, SASEC, and SAFTA. It has signed several bilateral treaties and is a beneficiary of GSP. Despite the progress made, the country still faces barriers to free movement of capital, issues of compliance and governance, and poor infrastructure.

Reforms that can show quick results are an ideal way to start transforming the agriculture sector. For instance, Nepal can start by reviewing areas where it lags behind its peers in the Doing Business Report. The increase in the pace of border compliance and the resulting improvement in the Trading Across Borders Component following opening of the Integrated Check Post is an example that shows reforms undertaken on a 'piece-meal' basis can bring in large benefits. Other reforms such as increasing investment in infrastructure, enhancing supply chain networks and creating a favorable business environment through better access to credit, capacity development and reducing red tape would also go a long way in boosting Nepal's export.

Similarly, based on the conclusions from Diao and Li's paper and our analysis, an important policy option for a small country like Nepal is to form deeper bilateral relationships with trade giants. If Nepal could elevate the level of trade with China, US, and some European countries that are already on the list, it would reduce the vulnerabilities stemming from dependency with India, and more importantly, reap benefits outlined by Diao and Li (2020).

Based on the analysis in the previous section, the following policy suggestions are put forth to enhance export of agro-products:¹⁸

- i. **Formulate policies that enable Nepali agro-firms to latch on to GVCs through promoting foreign investment in agriculture sector.**
 - Attract GVCs to locate in Nepal or encourage competitive domestic firms to join production networks.
 - Identify selective industries where Nepal actively seeks GVCs including niche areas such as honey, cardamon, and apples.
 - Establish Special Economic Zones and promote set up of agro-processing firms.
 - Attract FDI to foster competition, transfer technology and enhance productivity in agriculture, and agro-manufacturing; and get rid of prohibiting threshold for inward FDI.
 - Create a foundation by upskilling human resource, channelizing funds towards capital investment in agriculture, and fostering a business environment where new technology in agriculture is nurtured and enable Nepal to absorb the benefits of technology transfer from the incoming FDI.
 - Investment in both hard and soft infrastructure.

¹⁸ This section draws on Neopane and Wagle (2020)

- Investment in standards, metrology, testing, certificates, and accreditation along with harmonizing it with trade partners.
 - Invest in hard infrastructure such as roads, trading ports, railways, among others.
 - Invest in soft connectivity such as a deeper platform for economic interactions through preferential trade agreements, bilateral trade and investment treaties, and custom integrations.
 - Focus on formulating bilateral agreements with large countries instead of entering into a regional or sub-regional agreement.
- ii. Improve business environment through addressing bureaucratic hurdles and lowering transaction costs**
- Improve access to finance by introducing alternative instruments such as non-collateralized loans; widen banking coverage to rural areas where agriculture is ubiquitous; and provide loans at subsidized rates.
 - Waive or reduce tariffs on machines and agriculture equipment in order to encourage modernization of agriculture.
 - Support exporters to comply with rules of origin for eligible products through awareness and management of certificates and documents that are required to avail GSP benefits (eg: input certification).

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