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TRADE POLICY REFORMS FOR THE TWENTY FIRST CENTURY:

THE CASE OF NEPAL

Ashish Narain & Gonzalo Varela

Trade Policy Reforms for the Twenty-First Century: The Case of Nepal

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Acronyms

ASEAN	Association of Southeast Asian Nations
BBIN	Bhutan-Bangladesh-India-Nepal
CACM	Central American Common Market
CISE	Cash Incentive to Exporters
EU	European Union
EBA	Everything but Arms
FDI	Foreign Direct Investment
GATS	General Agreement on Trade in Services
GSP	Generalized System of Preferences
GVCs	Global value chains
LAFTA	Latin American Free Trade Agreement
NAFTA	North American Free Trade Agreement
PTAs	Preferential trade agreements
SAARC	South Asian Association for Regional Cooperation
SAFTA	South Asian Free Trade Area agreement
SATIS	South Asia Trade in Services Agreement
SPS	Sanitary and phytosanitary
TBT	Technical barriers to trade
TRIMS	Trade-related investment measures
VAT	Value-added tax
WTO	World Trade Organization

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I. Executive Summary

Nepal has been the slowest-growing country in South Asia, with growth over the past decade averaging 4 percent. Without a significant change in growth drivers, this growth is unlikely to exceed the 5 percent rate over the next several years that is necessary to reach the government's objective of achieving lower middle-income status by 2020. Further, Nepal's current growth pattern is failing to generate jobs domestically, especially for most of the population with low educational and skill levels. Three-quarters of workers remain stuck in the primary sector. Manufacturing employs a small 7 percent of the workforce, while services, the fastest-growing segment, has generated few jobs. Tepid growth and employment generation have led to more than a quarter of the workforce going overseas. The country is increasingly becoming dependent on their remittances for growth and poverty reduction.

For a small economy such as Nepal, strategically located next to two emerging powerhouses, and with preferential access to many high-income and fast-growing economies, trade and investment can be an important driver of growth. Through trade integration, firms in Nepal could take advantage of an enlarged market, and could be exposed to better technologies, more varied intermediates, and potentially become more competitive. Foreign direct investment (FDI), in turn, can help domestic firms overcome obstacles to successful internationalization. It often comes with increased access to sophisticated markets, permits absorbing foreign knowledge related to technologies and knowhow or managerial practices, and alleviates financial constraints local firms currently face.

Yet, Nepal has not fully taken advantage of integration. In terms of trade, integration indicators—both for exports and imports, and considering the country's characteristics—show export and import orientation that is below average. Indeed, the situation has worsened over the last decades. In 2003, Nepal accounted for $12 out of every million U.S. dollars of worldwide trade in goods and services. But by 2014, this number fell by 25 percent to just $9. Merchandise export growth collapsed from an average rate of 19 percent per year in the 1990s to 0.6 percent per year in the decade after. Further, few of Nepal's agricultural exports make it to lucrative markets. In terms of investment, Nepal has among the lowest participation in global value chains (GVCs) compared with other countries in the region, with foreign investment averaging just 0.2 percent of GDP over the last decade. As far as integration is concerned, Nepal seems to be missing the boat.

Not all of this can be blamed on geography or conflict alone. Many are policy related, including, among others, (i) trade policies that either are not supportive enough or impede firms from accessing foreign markets for their output or to source inputs (both goods and services); (ii) restrictive investment policies that prevent the attraction and retention of foreign investment, and its connection with domestic firms, (iii) barriers to service trade that affect the quality of key backbone services (transport, telecommunications, finance), and (iv) inadequate national infrastructure (both hard and soft), particularly quality infrastructure (World Bank, 2016). Reforming these policies to support and promote a greater outward orientation is critical for Nepal.

This report examines how Nepal could move away from a remittance-driven growth model by reforming its trade policies to increase competitiveness. In Nepal, remittances are a key source of income of foreign exchange. They help alleviate financial constraints of households, lifting many out of poverty. However, from a macroeconomic perspective, remittances also contribute to large trade deficits,

and to an appreciation of the real exchange rate (World Bank, 2016). Remittances put upward pressure on the prices of non-tradable goods, and with a nominal exchange rate that is pegged to the Indian rupee, the result is an appreciation of the real exchange rate. In turn, the appreciation of the real exchange rate favors imports, and biases against exports by making domestic goods uncompetitive. The impact is possibly largest on low-value, low-margin manufactured goods, which account for a large share of Nepal's export bundle. Further, from a political economy perspective, rising imports are an attractive taxation base and incentivize increased reliance on import taxes. This adds to the anti-export bias, as exporters rely on imported goods as key inputs for production. Nepal's current model of growth is not delivering the required growth and jobs, and is promoting a bias against domestic production that is likely to perpetuate the current vicious cycle. This report proposes several trade policy reforms aimed at increasing competitiveness to break this vicious cycle.

The report examines the extent to which Nepal has been tapping into its trade potentials, the underlying obstacles that it faces, and the type of policy reforms that could turn trade and investment into a vehicle for growth. Five key messages emerge from the analysis.

First, Nepalese exporters remain small, and struggle with increasing their shipments once they enter a new market, rather than with the fixed cost associated with entering. This is essentially due to severe supply-side constraints that affect their trade and production costs.

This is revealed by (i) a systematic analysis of export potentials, where Nepalese exporters perform on average in terms of number of products and destinations reached, but substantially below average in terms of shipment sizes, given their characteristics, and (ii) a case study on the use of preferences granted by the United States, where Nepalese firms seem to reach that market with very small shipments. The finding is likely associated both with high trade costs and with challenges to increasing production related to domestic supply chains. These include difficulties to secure energy at competitive prices, access to finance, and access to trained labor. In the short run the challenges could be offset, to some extent, through negotiating better preferences (because they increase firms' profit margins), and increased FDI flows (because they improve firms' financial conditions).

Second, Nepalese firms underutilize existing trade agreements and granted trade preferences.

Firms face untapped opportunities to reach markets with which Nepal has agreements or trade preferences. Evidence suggests that Nepal has only benefitted from the South Asian Free Trade Area agreement (SAFTA) as an importer, but hardly as an exporter. Likely, challenges of implementation of SAFTA along with an increase in trade frictions imposed by its member countries following the global crisis. Firms have also struggled to increase the utilization rates of trade preferences (under the Generalized System of Preferences, GSP) provided by high-income countries. On the latter, the opportunities are large because the European Union (EU) allows the diagonal accumulation of origin among South Asian countries under the GSP. This would allow the formation of regional value chains to produce exportable products to the EU.

Third, diversification opportunities lie in fast-growing economies in East Asia and the Pacific. Efforts regarding connectivity, trade facilitation and export intelligence could help firms get to those markets.

Nepal's trade complementarity indices suggest that dynamic export growth requires some diversification, particularly into fast-growing economies in East Asia and the Pacific. With these economies, it substantially under-trades relative to a benchmark, constructed based on both partners' sizes and distance. Strengthening the Bhutan-Bangladesh-India-Nepal (BBIN) transit agreement will help improve connectivity and reach some of these high-potential markets. With India, instead, evidence suggests Nepal overtrades, and in addition, that export complementarities have been declining. Thus, the concentration of the export basket in India may be impeding faster export growth.

Fourth, to reduce the anti-export bias of its trade policy infrastructure, Nepal needs to simplify its tariff code, reduce tariffs on crucial intermediates, and embrace deeper integration, starting with more openness to services and investment.

With respect to the simplification of the tariff code, a gradual approach could help stimulate export competitiveness without compromising tariff revenues in the short run, while comprehensive tax reforms are put in place. In the medium term, extensive tariff liberalization (i.e. eliminating import tariffs for all raw materials, intermediate goods, and capital goods) needs to be considered along with the design of comprehensive tax reforms. This is because the fiscal cost would be substantive, ranging from 2.6 to 9.9 percent of total revenues. However, a gradual approach that starts with tariff reforms targeting key intermediate inputs for export sectors would result in negligible revenue losses that range from 0.2 to 0.9 percent of total revenues, while substantially boosting the competitiveness of exporters. Interestingly, results show that a reduction in tariffs—particularly in sectors with significantly high tariff rates—could lead to increasing, rather than decreasing, revenues due to a reduction in incentives for misreporting of import values. Further, efforts to reduce tariffs need to be coupled with efforts to integrate more deeply with the world. Nepal's current integration agreements are 'shallow,' focusing only on tariff reductions at the border. As a starting point, services trade agreements and the attraction of FDI would be of utmost importance to help the private sector alleviate some of the binding constraints for growth.

Fifth, trade reforms in Nepal are welfare enhancing on average, and pro-poor.

Tariff reductions will not only increase export competitiveness, but are also likely to lead to income gains for households in every decile of the income distribution, and particularly for the poor. Preliminary work produced by the World Bank's research department combines data on agricultural and manufacturing tariffs with household surveys to simulate the impact of trade liberalization on household welfare. For Nepal, these simulations suggest average net welfare gains of 1.7 percent of a complete tariff liberalization. These gains are positive, on average, along different levels of expenditure of households, and greater for the poor than for the rich. These estimated gains assume a complete rationalization, rather than a partial one as suggested in this paper, so they likely indicate a ceiling for the *static* gains. However, they do not account for the *dynamic* gains from trade integration, through increased productivity gains, which, per international evidence, tend to be sizable.

Underlying these five main messages are several policy levers that can help alleviate constraints that are preventing firms from tapping into the opportunities of increased integration in Nepal. While challenging supply-side constraints associated with lack of infrastructure are making it difficult for Nepalese exporters to grow and diversify, it is also evident that an inadequate trade policy framework is not helping either. This report identifies policy actions to alleviate the constraints faced by reducing the anti-export bias of the tariff code; helping firms tap into the existing opportunities; improving the behind-

the-border export climate; and supporting firms' integration into GVCs. Clearly, the impact of these reforms is more impactful when they are combined. Still, each of them will contribute to reduce trade costs if applied on their own. These recommendations are summarized in Table 2 and discussed in detail in what follows.

To improve the import-to-export environment:

[1] Move away from import-based taxation, and reduce the anti-export bias by lowering tariff rates. Start with tariff reductions on crucial intermediates, which are key to producing priority products, and provide negligible tariff revenues to the government coffers in the short run. In the medium to long run, consider a comprehensive tax reform to offset potential revenue losses from eliminating import-based taxation.

This report provides detailed evidence of the revenue cost of alternative scenarios for tariff reform. These scenarios vary in product coverage, ranging from ample liberalization—scenarios (1), (2) and (3) in Table 1, which imply a relatively larger impact on forgone tariff revenues, to targeted reductions on inputs mostly used for the production of high-potential products—scenarios (4) and (5), focusing on cotton fabrics and on key intermediates imported by apparel, pashminas, and carpet producers.[1]

This report recommends that reforms be implemented gradually, starting with scenarios (4) and (5).

Table 1. Summary of Tariff Reform Scenarios and Associated Revenue Impact

	Scenarios	***Reduction in revenues from tariffs (%)***	***Reduction in revenues from all taxes on imports (%)***
(1)	Elimination of tariffs in raw materials	6.6	2.6
(2)	Elimination of tariffs in intermediate goods	27	9.9
(3)	Elimination of tariffs in capital goods	20.7	6.2
(4)	Cotton fabrics and intermediates for ready-made garments	0.6	2.5
(5)	Key intermediates for goods imported by apparel, pashminas and carpet manufacturers	0.2	0.9

Source: World Bank calculations based on Nepal's customs and tariff data.
Note: the reduction in revenues from tariffs is calculated as the percentage change by which tariff revenue falls following the tariff reductions as per each of the scenarios. The reduction in revenues from all taxes on imports is calculated as the percentage change by which **all** import-related tax revenues fall following the tariff reductions as per each of the scenarios.

[2] Simplify the duty-drawback system currently in place for exporters, while tariff reforms are in process.

The duty-drawback system for exporters needs to be simplified and made more transparent. It should be accessible to both direct and indirect exporters (sellers to tourists), with simpler certification rules and faster duty refunds for firms. Like many countries, Nepal offers a variety of duty and tax relief schemes

[1] In all scenarios, product choice is based on the understanding of input-output linkages for key products, and on alternative estimates for the elasticity of demand for imports with respect to tariffs.

designed to ensure goods imported for further manufacturing and later export are not required to pay the duties and taxes that would otherwise be applicable if they had been imported for home consumption. However, there is anecdotal evidence to suggest that the government finds it difficult to administer duty-relief schemes effectively and efficiently. Difficulties in administration may be due to a range of factors including poor legislation, inefficient business processes, and lack of skilled staff. Issues around the customs control regime that needs to be adopted, including the design of physical and documentary controls, must be carefully considered. The report recommends a careful evaluation of how the scheme could be made more effective and useful for exporters.

To tap into unrealized trade potentials:

[1] Support firms in the process of compliance with GSP-related rules of origin.

Results reported here show low utilization rates of GSP-related export opportunities by Nepalese firms. Firms exporting products that are in principle eligible to receive preferential treatment under GSP may not use the preference. This is likely related to challenges complying with rules of origin. There is ample evidence pointing to complex rules of origin in reducing GSP utilization rates. While there is little that Nepal can do to make rules of origin more user-friendly, the government can support exporters in complying with them by building firms' capabilities around bookkeeping, and management of input certification as requested by border agencies in the United States, EU, and other GSP-granting countries. For these purposes, the government of Nepal, and the Ministry of Commerce and Supplies could work together with the different trade representatives of each GSP-granting country or blocs.

[2] Improve the design of current export-promotion instruments, specifically, the Cash Incentive to Exporters.

To tap into the unrealized export potentials, and reach the government objective of market diversification, firms may benefit from better-designed export promotion instruments. The government has in place the Cash Incentive to Exporters (CISE) scheme. This incentive scheme was subject to a recent impact evaluation by the World Bank (see Defever et al, 2017), which revealed that: (i) the subsidy has not been reaching the firms it meant to support due to a lengthy and complex filing procedure, coupled with limited resources and a first-come first-serve allocation mechanism, (ii) it has focused on subsidizing firms that were already exporting, and (iii) it has not had any impact on export values or quantities. The funds allocated to this incentive could help tap into the unrealized export potentials if the incentive scheme was redesigned along the following lines.

First, the export incentive should apply to new export flows (either increments of exports by existing firms, or exports of new firms).[2] An exporter would be entitled for an incentive of X percent on the incremental growth (achieved by the exporter) on the free-on-board (FOB) value of exports. Incremental growth shall be calculated respective to each product-destination combination for each exporter. New firms would naturally be entitled to obtain the X percent incentive.

[2] The underlying market failure that the export incentive is trying to alleviate is one of high discovery costs. Specifically, the incentive aims at helping firms financing the informational costs at the beginning of the process. Therefore, it is important that the incentive targets new firms, or new export flows, rather than existing, well-established ones.

Second, the filing process needs to be simplified and the allocation mechanism needs to be transparent. This will also reduce the cost of administering the scheme for the government. Specifically, Nepal Rastra Bank should implement the fast track agreed with the Department of Industry, by which certain products do not need to prove domestic value-added content. This has been agreed in the Budget Speech of 2070, although, to-date, it has not been implemented. In addition, the government of Nepal needs to move towards electronic filing of the incentive. In terms of the allocation, if potential incentives accruing to eligible firms exceed available funds, the allocation of funds needs to be done in a transparent manner. An option is to make the allocation random through a lottery process.

Third, the government may gain from allocating part of the CISE funds to finance export intelligence and other promotion activities. These funds could be managed by business associations, and *subject to strict mechanisms of accountability, monitoring, and evaluation*. They could be allocated towards provision of export intelligence for small and medium enterprises, and support for participation in exhibitions and trade fairs.

[3] Focus the supply of export intelligence on high-potential products and markets.

This report identifies high-potential markets—that is, those in which Nepal is substantially under-exporting, with respect to the benchmark, based on trade costs and relative market sizes. Export promotion efforts would be more effective if focused on these high-potential markets, by providing exporters with information on shipment costs, consumer preferences, and compliance with key standards and rules in these destinations.

The report also identifies high-potential products in specific markets, particularly where there are preferences untapped. Here again, export promotion efforts could be focused, by first identifying challenges firms face to enter markets and designing interventions to overcome them.

To increase GVC participation:

[1] Increase integration in services, in investment, to secure "deep integration" with existing and potentially attractive trading partners.

If Nepalese firms are to enter regional and global value chains, they need policies that reduce trade costs at the border but also go beyond that. Integration initiatives are becoming "deeper" worldwide, including provisions on services, investment, competition, etc. This is crucial in a world in which production is fragmented internationally. Yet, Nepal's only full-scope free-trade agreement, SAFTA, is among the shallowest in the world, and with limited prospects for advancement in the deep integration arena. Nepal needs to seek deeper integration initiatives beyond the region, and including for example, the Association of Southeast Asian Nations (ASEAN)—a bloc including countries with which Nepal faces high unexploited export potentials.

[2] Strengthen BBIN transit agreement

The transit agreement including Bhutan, Bangladesh, India, and Nepal is crucial for improved connectivity and reduced transport and therefore trade costs. This is particularly the case for a landlocked country such as Nepal, and given that markets with untapped potential are within the route of that corridor

(including ASEAN members). Recent research shows the importance of combining infrastructure with trade policy reforms to maximize gains (Baniya et al, 2017).

In addition, two sets of complementary government actions are likely to make trade policy reforms more effective:

[3] Attract, retain, and connect FDI to the economy through reforms to the investment policy regime.

First, simplify processes for the repatriation of funds and for hiring foreign workers. Regarding the former, while the law does provide foreign investors the right to repatriate funds related to foreign investment, in practice repatriation is difficult and obtaining approvals is a lengthy process (World Bank 2015b). Introducing automatic notification systems would be helpful.

Second, consider removing or lowering entry barriers to foreign investment, including foreign ownership limitations, sector caps, a long negative list, and restrictions in nonequity modes of investment. For example, Nepal retains a foreign ownership limit of 51 percent in some selected sectors, such as legal, accounting, and engineering services. The country imposed an even lower foreign participation limit in banking and finance, a sector crucial for the private sector to flourish. Access to finance was among the top five constraints identified by exporters to grow. Restrictions in nonequity modes of investment, such as franchising, in which there is significant technology, training, and skills transfer, cause additional delays and costs during entry and operations in Nepal. Slow and arbitrary approval processes, dual registration procedures, delays in trademark registration, and difficulties in remitting royalties and technical fees are among several obstacles faced by these type of investments (World Bank 2015b).

[4] Continue efforts to reduce structural barriers for export competitiveness, focusing on high potential value chains.

To be sure, there are many other obstacles to export competitiveness beyond those imposed by trade policies that are the focus of this report, although results presented here suggest they play an important role in explaining Nepal's trade performance. These obstacles include, but are not restricted to: (i) the inadequate supply of electricity, leading to high energy uncertainty and costs, (ii) challenges to accessing finance at competitive prices, (iii) access to qualified labor, and (iv) lack of competition in key backbone input markets including transportation (that, for example, account for 20 percent of the input bill paid by agricultural exporters) and logistics services. Results presented here hint to these factors being impediments to increasing exports along the intensive margin—that is, to increase shipments within existing flows of a given product to a given market.

To improve the overall export climate behind the border:

[1] Continue efforts to attract investments in hydropower to ensure long-run supply of electricity at competitive prices.

This entails working towards reducing barriers to FDI as mentioned above.

[2] Promote competition in key backbone services markets.

Services are key for the efficiency of the productive sector, as they are crucial inputs for production. For example, in the agricultural sector, 20 percent of production costs is accounted for transport. Ensuring competition in the services is therefore paramount for overall competitiveness.

[3] Reduce rigidities in the labor market, and ensure access to qualified labor.

Part of the constraints identified by firms relates to rigidities in the labor market, as well as difficulties faced by firms to access qualified workers. The buildup of skills, and the reduction of rigidities will help boost job creation in the tradable sector.

Table 2. Summary of Main Policy Recommendations

Purpose		***Recommendation***
To reduce the anti-export bias of the tariff code	(1)	*Eliminate import tariffs for intermediates used for high potential export products following suggestions in scenarios 4 & 5 of Table 1.*
	(2)	*Simplify the duty-drawback system. Make it accessible for direct and indirect exporters (e.g. those that sell to tourists).*
To tap into unrealized trade potentials	(1)	*Support firms in complying with GSP rules of origin, through the provision of trainings on bookkeeping and management of input certifications. Liaise with main GSP-granting country trade representatives to support these efforts.*
	(2)	*Redesign the Cash Incentive to Exporters, by allocating the subsidy to new rather than existing flows, by implementing the fast track for certification of domestic value added, and by introducing clear rules of allocation of funds, such as a lottery.*
	(3)	*Allocate funds to provision of export intelligence services for high-potential markets and products as identified in this report and subject to strict monitoring and evaluation mechanisms.*
To increase GVC participation	(1)	*Seek increased integration in services and in direct investments, as well as on customs reforms and cooperation.*
	(2)	*Strengthen BBIN transit agreement to reduce transport costs and improve connectivity with the region and beyond.*
	(3)	*Seek to partner with regions exhibiting greater trade complementarities, and that offer deeper integration opportunities.*
	(3)	*Facilitate FDI attraction by:* *(i) simplifying processes for repatriation of funds of multinationals, introducing automatic notification systems;* *(ii) re-evaluating the rationale of low equity limits for*

		foreign ownership in selected business and professional services (e.g., legal, accounting and engineering) as well as banking and finance. Consider eliminating these limits; *(iii) reconsidering long negative list in the new foreign investment policy;* *(iv) removing restrictions in nonequity modes of investment for franchising;* *(v) increasing transparency in firms' approval, registrations, and trademark registration processes.*
To improve the overall export climate behind the border	(1)	*Continue efforts to attract investments in hydropower to ensure long-run supply of electricity at competitive costs.*
	(2)	*Promote competition in key backbone services markets, specifically in transport and logistics, as well as in finance (see below, on equity limits for foreign investment in finance).*
	(3)	*Reduce rigidities in the labor market, and ensure access to qualified labor.*
	(4)	*Identify regional value chains with maximum potential and focus efforts on strengthening these.*

Source: World Bank elaboration.

II. Introduction

The past decade saw Nepal as the slowest-growing country in South Asia. Averaging 4 percent per year, economic growth has not been enough to reach the government's objective of achieving lower-middle income status by 2020. In addition, Nepal's current growth pattern is failing to create jobs for most of its population, and has induced a quarter of the workforce to seek employment opportunities elsewhere, making Nepalese households highly dependent on remittances for consumption. Nepal needs to change its growth drivers if it is to unlock private sector growth and create more and better jobs.

For a small economy such as Nepal, embracing trade and investment is crucial for growth and development, and yet, Nepal seems to be missing the boat. Integrating further to the region and the world through trade will help domestic firms access a larger market, gain exposure to better technologies and more varied intermediate inputs, and become more competitive. Integration through investment may help firms secure access to sophisticated markets, absorb knowledge, learn about better managerial practices, and alleviate financial constraints. Yet, Nepal has not fully taken advantage of integration. Export shares have fallen, participation in regional and global value chains is low, and attraction of FDI is underwhelming. As far as integration is concerned, Nepal seems to be missing the boat.

Geography and conflict have not helped. Still, there is a role for policy reforms. The subpar integration performance cannot be blamed on geography and conflict alone. Trade policies have not been supportive enough or have impeded firms from accessing foreign markets for their output or to source inputs. Restrictive investment policies have prevented the attraction of FDI, its retention, and its connection to domestic firms. Barriers to services trade have had negative implications on the quality and cost of available backbone services, such as transport, telecoms, and finance.

This report looks at how Nepal could move away from a remittance-driven growth model by reforming its trade policies to increase competitiveness. While remittances have helped Nepalese households support consumption and have lifted many out of poverty, from a macroeconomic perspective, they have contributed to large trade deficits, and to an appreciation of the real exchange rate, leading to decreased price competitiveness. The report examines where the binding constraints are, identifies trade policy levers to alleviate them, and proposes specific trade policy reforms aimed at increasing competitiveness through the adoption of a new, outward oriented, investment and productivity-led growth model.

The report is structured in two sections.

The first one identifies unexploited trade potentials and assesses the extent to which Nepalese firms have been profiting from regional integration initiatives, and from granted trade preferences. It finds that there are substantial unexploited trade opportunities in the region and beyond. These opportunities have been largely untapped because of a combination of (i) supply-side constraints that increase trade and production costs and make export flows remain small—availability of electricity, access to finance, inadequate infrastructure, (ii) low firms' capabilities that make it difficult for firms to benefit from existing trade preferences, and (iii) policy barriers that prevent domestic firms from connecting to multinationals and that negatively affect the import-to-export environment. It proposes several reforms to reduce trade costs, while the longer-term agenda to address supply side constraints is implemented. Specifically, it argues that Nepal would benefit from (i) moving to deeper forms of integration that also focus on attracting investment and encouraging services trade, (ii) improving firms'

managerial capabilities to profit from preferences and link to regional value chains, and (iii) redesigning the export incentives framework to promote diversification, following international good practices.

But part of the problem with Nepal's anti-export bias in its trade policies lies with import taxes being an important source of government revenue. Therefore, the second section examines alternative scenarios for tariff reforms that would substantially improve the import-to-export environment, taking the fiscal restriction very seriously. It analyzes avenues to simplify its tariff code and reduce its anti-export bias and estimates the fiscal revenue cost. It finds that, contrary to expectations, the fiscal cost of a reduction of tariffs on raw materials, intermediates and capital goods is manageable in the medium run, while a more comprehensive tax reform is designed and implemented. In the short run, tariff reductions on key intermediates for the priority export sectors are found to have negligible effects on tariff and other trade related tax revenues. It proposes five alternative tariff policy reforms, as well as a feasible sequencing scheme.

The remainder of this report is structured as follows. Section III considers fully exploiting trade potentials. The first part of the section uses a gravity-founded framework to identify potentials, and identifies whether underperformance is explained due to challenges to diversify or challenges to increase shipments in existing destinations. It looks at patterns of trade and trade complementarities by region and trading bloc. Then, it assesses the extent to which Nepal benefits and uses existing trade agreements and trade preferences. Finally, it looks at how Nepal can benefit from moving to deeper integration schemes, particularly by further integrating with respect to investments and services trade. Section IV looks at improving the import-to-export environment. The first part of the section presents international evidence on the importance of trade policy reforms for competitiveness. Then, it carefully estimates the trade and tax impact of five alternative tariff reforms and presents a proposal for medium- and short-term changes, as well as alternatives to recouping potential tariff revenue losses.

III. Fully Exploiting Trade Potentials

The purpose of this section is to inform Nepalese policy makers on untapped trade potentials and on alternative avenues for realizing them.

Understanding where the largest untapped potentials for increased trade lie is important for effective policy making. Identifying dynamic markets with which trade is currently below potential and where trade complementarities could lead to mutual gains is helpful to guide public policy efforts in two ways: it can help prioritize trade agreements and reduce trading costs, and it can provide targeted trade intelligence to firms that may be well positioned to serve the identified markets.

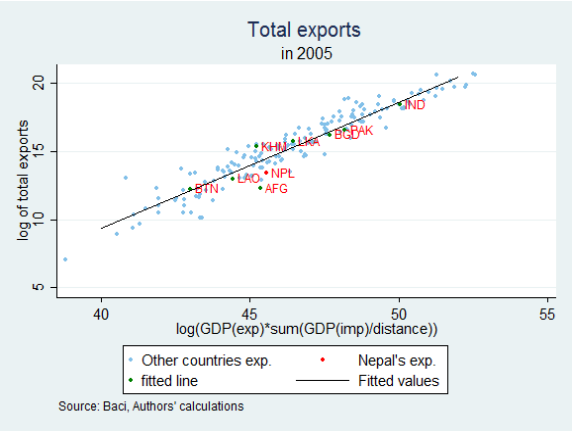
It is important to identify the trade policy instruments that permit realizing the potentials. This section first identifies Nepal's trade potentials. It then assesses how two instruments, regional trade agreements and trade concessions, have helped in realizing Nepal's trade potentials. The focus is on SAFTA membership and on the use of trade preferences granted by advanced economies. It argues that it is crucial for Nepal to go beyond shallow integration, and to seek deeper integration with the rest of the world if Nepalese firms are to take advantage of the powerful platform that GVCs constitute for export growth and job creation. In the next section, the focus is placed on the opportunities that an improvement of the import-to-export environment could pose for Nepalese firms interested in venturing into export markets. In that case, the instrument considered for realizing the potential consisted in unilateral trade policy reforms to reduce Nepal's tariff code anti-export bias.

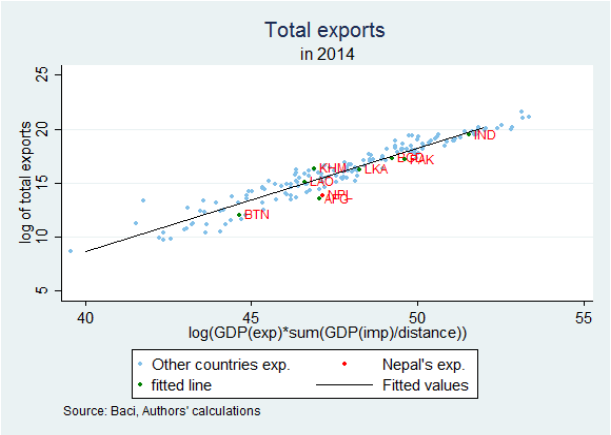
The remainder of this section is structured as follows: It starts with a snapshot of trade potentials based on a gravity modeling. It then looks at Nepal's trade performance within specific trading blocs and discusses how Nepalese firms have made use of concessions granted by advanced countries. The final part of the section looks at how Nepal can gain from deepening its integration with the world and how that deepening can help exporters enter in GVCs.

III.1 A Gravity-Founded Snapshot of Trade Potentials

Nepal has been trading under its potential over the last decade. Comparing Nepal's observed export pattern with its potential can assess trade performance. To calculate trade potentials, the report relies on a gravity model of trade, essentially considering the capability of a country and its market access (see Box 1 for details). Exports are expected to be higher when the capabilities of the exporter are high and when foreign demand is also high (market access). Figure 1 shows that Nepal has been underperforming, both from a global and regional perspective, since 2005, while other countries in the region—except for conflict-prone Afghanistan, or more recently, Bhutan—have been exporting in line with the conditional average (they are on the regression line). This low export performance observed in the aggregate is consistent with an inadequate investment climate, as well as with low FDI—a crucial conduit for market access and knowledge and technology transfers.

Figure 1. Multilateral Exports and Market Access for Nepal: 2005 and 2014





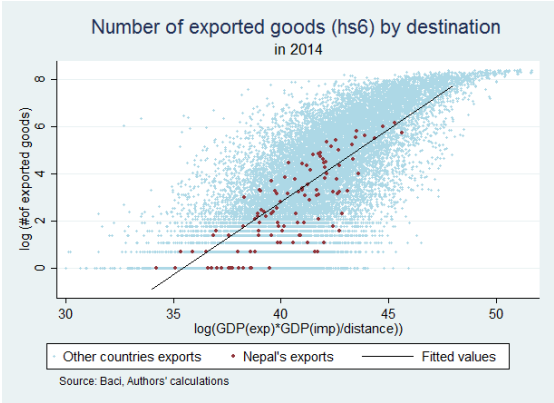
Source: World Bank calculations based on UN-Comtrade-BACI database (CEPII).
Note: The figure presents a scatter plot of actual exports (in logs, vertical axis) against potential exports (in logs, horizontal). Each point corresponds to a country as an exporter. Countries below the line show lower exports than potentials.

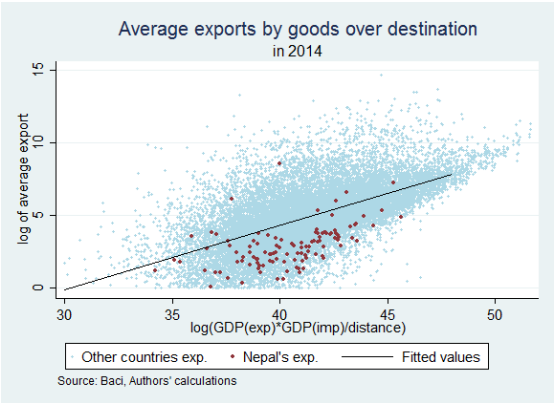
Underlying the poor performance are challenges to increase shipments of active export products to existing destinations rather than to export new products. That is, the challenge seems to be in the *intensive* rather than in the extensive margin. Indeed, results reveal that the number of exported goods by destination is on average aligned with potentials, while the average shipment size by destination is subpar, when compared to international competitors (Figure 2). This suggests that some of the challenges may lie with the variable costs of operations, associated with the scale of firms and their ability to secure working capital, energy, and qualified labor to expand shipments. It is also in line with responses provided by firms to the World Bank's Enterprise Survey of 2013: among exporting firms 24 percent identified electricity costs as their most important obstacle, while 17 percent identified access to finance. These two are the most important obstacles for exporters after political instability. In addition, Nepalese firms have shown sluggish growth over their lifecycle, not only when compared with firms in developed countries, but also when compared to others in the neighboring region of East Asia.[3]

Figure 2. Nepal's Performance in Export Markets Along Extensive and Intensive Margins

a. Number of Products Exported by Destination **b. Average Size of Shipments**

[3] See "South Asia's Turn: Policies to Boost Competitiveness and Create the Next Export Powerhouse," World Bank (2017), pp. 29-30.





Source: World Bank calculations based on UN-Comtrade-BACI database (CEPII).
Note: Panel a shows a scatter of the log of the number of exported goods (vertical axis) against the potential (horizontal axis). Dots in red correspond to Nepal's trading partners. Dots above the line indicate trading partners with which Nepal exports more product varieties than expected given potentials. Panel b shows a scatter of the log of the average export value (vertical axis) against the potential (horizontal axis). Dots in red correspond to Nepal's trading partners. Dots above the line indicate trading partners with which Nepal exports larger shipments than expected.

There are only a handful of countries with which Nepal exports at potential. Results reveal that both for 2005 and 2014, with most partners, Nepal has been exporting below potential.[4] A policy-relevant question to address is hence: which are the relatively unexploited and large export opportunities?

Box 1. Estimating Nepal's Trade Potential with Gravity Equations

In its general version (here adapted from Head and Mayer 2014), the gravity equation represents trade flows between two countries *i* and *j* by the following relation:

$$X_{ij} = A_i \varphi_{ij} M_j \ (1)$$

where X_{ij} represents the export value from i to j, A_i *captures* the *capability* of country i *to export to all destinations*, and φ_{ij} expresses bilateral accessibility between i and j. The M_j variable expresses the characteristics of the destination market *j* that affect imports from all sources. One can show further that $M_j = {E_j}/{\varphi_j}$, where E_j is the total expenditure of country *j* and φ_j measures the average accessibility of consumers in *j* to supplies from rest of the world (also referred to as the degree of competition in country *j*).

Equation 1 can be aggregated to express total exports of a given country, like Nepal, to the world. Summing over all destinations *j* and rearranging, one obtains the expression for total exports (X_i):

$$X_i = A_i x \ MA_i \ (2)$$

where $MA_i = \sum_j \left(\frac{\varphi_{ij}}{\varphi_j} . E_j\right)$ is the market access of country *i* to the world, as it represents the sum of expenditures addressed to *i*, weighted by the relative bilateral access between country *i* and *j*, compared to all other exporters to

[4] Figure 34 in the Appendix shows bilateral exports plotted against potential (again, using a simple gravity benchmark, here defined as capability and market access of each exporting country). The red dots are bilateral export flows for Nepal with every export partner.

j (that is, $\frac{\varphi_{ij}}{\varphi_j}$). Two elements determine total exports of a country I, its capability (A_i), and its market access to the world.

From theory to the data

To predict *total exports* of a country (that is, to estimate its potential exports), the capabilities of that country and its access to world markets are proxies by the multiplication of the GDP of the exporter and the sum of GDPs of importers, respectively weighted by the inverse of their distance to the exporter.

In the same manner, one could obtain another simple prediction of *bilateral exports* by multiplying the GDP of an exporter with that of the importer and dividing by distance between them. By comparing predicted (bilateral) values to actual (bilateral) flows, one could deduce over- or under-performance of a country.

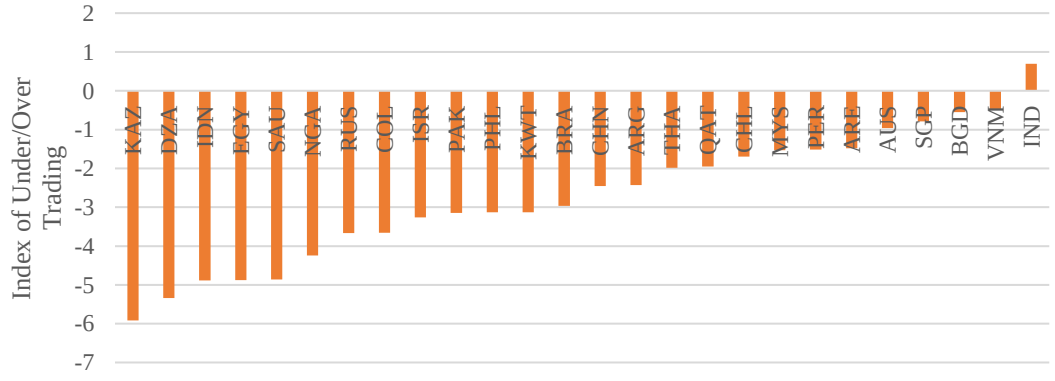
Note:

a. The gravity model has been extensively used in international trade due to its intuitive empirical and theoretical appeal. Anderson and van Wincoop (2003), Feenstra (2004), and Baldwin and Taglioni (2006), among others, present exhaustive literature reviews on the gravity equation as applied to international trade.

Source: Adapted from "Trade as a Vehicle for Growth in Afghanistan: Challenges and Opportunities," World Bank (2017).

There are 25 large and fast-growing economies with which Nepal could substantially expand exports. The results that emerge from the simple gravity benchmarking discussed above are combined with information on the size (GDP) and the dynamism (GDP growth) of Nepal's export partners to identify high-potential export markets. These export markets are those with which Nepal substantially underperforms and that are in the top half of the distribution of size, and in the top half of the distribution of GDP growth (Figure 3).[5] Among these high-potential partners are Indonesia, Philippines, Thailand, Singapore, and Vietnam—leaders in GVC trade, as well as other members of SAFTA such as Pakistan or Bangladesh, and countries that are linked with Nepal through intense migration flows, such as Saudi Arabia, Kuwait, Qatar, and United Arab Emirates.

Figure 3. High-Potential Export Markets for Nepal



[5] GDP growth is calculated for the period 2005-2014.

Source: World Bank calculations based on UN-Comtrade BACI database (CEPII). Note: The index is calculated as the residuals from the gravity equation described in Box 1.

Finally, India is the only large and dynamic economy with which Nepal is trading at its potential. Smaller and less dynamic partners in the region with trade at potential include Maldives, Bhutan, and Afghanistan. A follow-up question, considering these results, is: has the SAFTA integration initiative paid off? How has Nepal been profiting from these initiatives and other granted market concessions? This is the focus of the section that follows.

III.2 Agreements and Preferences in Place: Is Nepal Taking Advantage of Them?

Although Nepal's only full-scope international trade agreement includes a quarter of the world's consumers, it only accounts for 3.4 percent of consumers' purchasing power. As mentioned, Nepal is a member of SAFTA (and has a partial scope agreement with India). While SAFTA member countries account for a large portion of the world's population, they are also among the poorest. Still, Nepal's export opportunities are enhanced by the concessions it receives through the GSP system and the Everything but Arms (EBA) initiative.[6] What are the complementarities between Nepal's trade structure, SAFTA, and other trading blocs? How have the export flows been evolving and what is the evidence of SAFTA's success in generating export opportunities for Nepal?

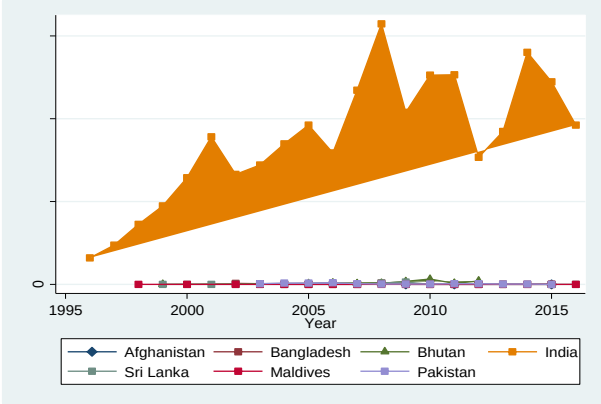
III.2.1 Aggregate Trade Patterns by Bloc of Destination and Origin

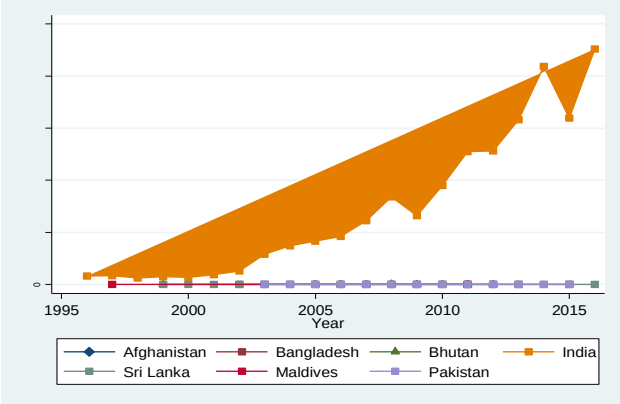
Figure 4 and Figure 5 display the trade patterns between Nepal and SAFTA member countries. India dominates both export and import sides. When looking at trade patterns with various trade blocs, most of Nepal's exports go to either SAFTA or GSP granting countries, namely United States and EU (Figure 6). Most of the products imported to Nepal come from SAFTA, namely, India (Figure 7). Exports to GSP granting countries, instead, have been decreasing since the early 2000s, with a minor pick up of exports to Turkey in recent years (Figure 8).

Figure 4. Nepal's Exports to SAFTA Member Countries

Figure 5. Nepal's Imports from SAFTA Member Countries

[6] The Generalized System of Preferences (GSP) allows developing countries to pay less or no duties on their exports to granting countries for approximately two-thirds of all product categories. Granting countries in the case of Nepal include Australia, Belarus, Canada, EU, Iceland, Japan, Kazakhstan, New Zealand, Norway, Russian Federation, Switzerland, Turkey, and the United States. The Everything but Arms (EBA) arrangement for least developed countries (including Nepal) grants duty-free, quota-free access to all products except for arms and ammunitions, being thus, more generous than the GSP arrangement.





Source: WITS, World Bank. HS1996 mirror data.

Figure 6. Nepal's Exports to Various Trade Blocs

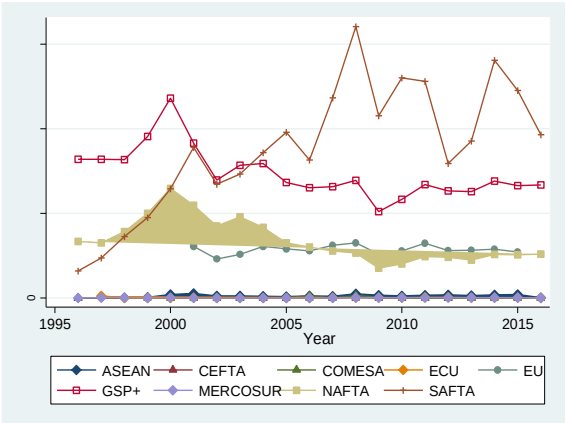
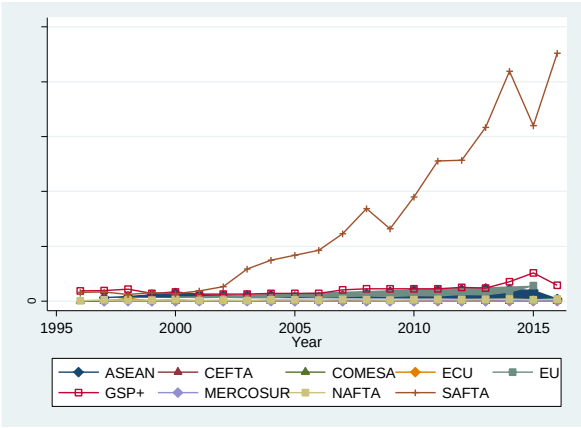
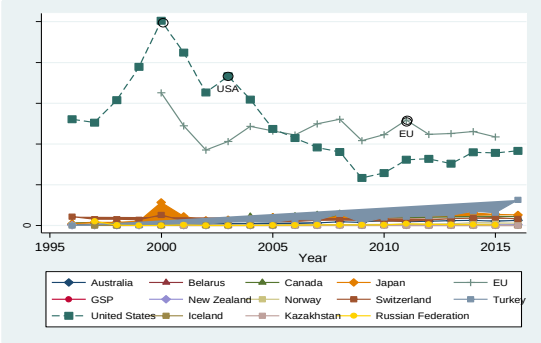


Figure 7. Nepal's Imports to Various Trade Blocs



Source: WITS, World Bank. HS1996 mirror data.

Figure 8. Nepal's Exports to GSP Granting Countries



Source: WITS, World Bank.

III.2.2 Trade Complementarities

The extent to which two potential trading partners have complementary production structures provides some information on the potential gains that can be obtained by reducing trade costs through an international trade agreement. There are several economic-theory grounded rules of thumb that help evaluate the potential gains from preferential trade agreements (PTAs). An important one is related to the differences in comparative advantage between partners and the initial share of trade between them. The higher these are the more likely an integration initiative will be welfare improving.[7] Trade complementarity indices can help shed light on this rule of thumb. The greater complementarity between the trading partners, the more likely it is that both gain from a trade agreement (and that protectionist vested interest can be contained (Piazolo, 1997)). Essentially, these indices measure the extent to which the export profile of a given country matches, or complements, the import profile of the partner.[8]

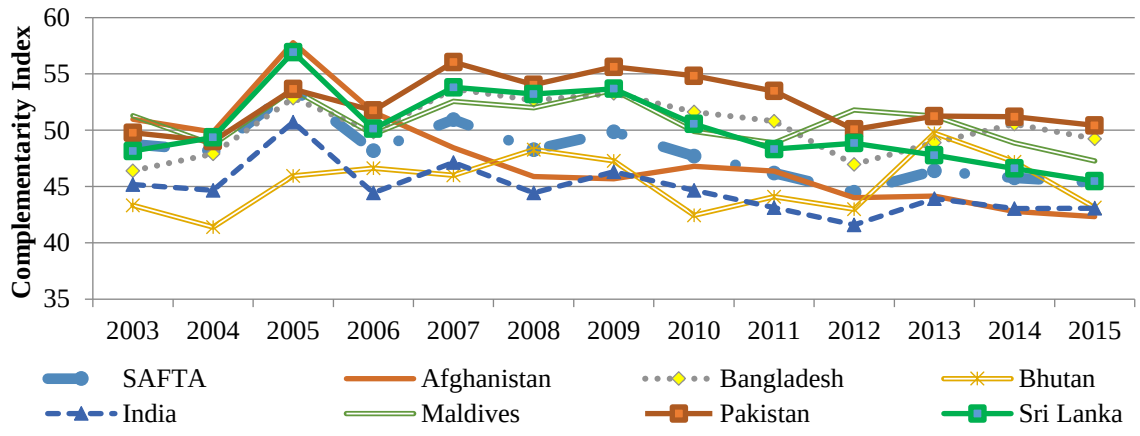
Nepal's export complementarity with SAFTA and with India in particular has been decreasing over time. For the period 2003-2015, the match between Nepal's export bundle and the import bundle of SAFTA member countries has been declining (Figure 9). While the series have fluctuated during the period, the complementarity between Nepal and SAFTA reached a peak of 54 in 2005, and declined by about 10 points to 45 in 2015. Patterns by country reveal that complementarities have fallen with all partners except for Bangladesh, with which the index increased by approximately 10 percent over the period, and, currently, together with Pakistan, are the two partners in the region with the greatest trade complementarities. Interestingly, India, Nepal's main trading partner, shows the lowest (and declining) value. This result emphasizes the importance of diversifying away from its main trade partner, if sustained export growth is to be achieved.

Some international comparisons are useful for benchmarking. Piazolo (1997), for example, assessing welfare implications of integration of Eastern and Western Europe reports that trade complementarity indices between candidates for EU enlargement at the time (Bulgaria, Hungary, Poland, Czech Republic and Slovak Republic) and the core EU ranged between 45 and 59. The indices for countries in the North American Free Trade Agreement (NAFTA), were an average of 56, 64 between the United States and Canada, and for other unsuccessful arrangements such as the Latin American Free Trade Agreement (LAFTA) or the Andean Pact (Bolivia, Colombia, Ecuador, Peru and Venezuela), 22 and 7 respectively. More recently, WTO (2007) calculates complementarities between the United States and Chile above 80, for Chile and Mexico close to 70, and with Canada just above 60.

Figure 9. Nepal's Export Complementarity Indices with SAFTA Members

[7] The Sussex Framework (Evans, et al, 2007) suggests three rules of thumb in evaluating the welfare gains associated with integration. Apart from the aforementioned, the other two are related to how large the tariff reductions are (the greater they are, the greater the likelihood of both trade diversion and trade creation), and the number of partners in the agreement, and their degree of similarity in their product mix (the greater these are, the more trade creation there will be because of more scope for specialization).

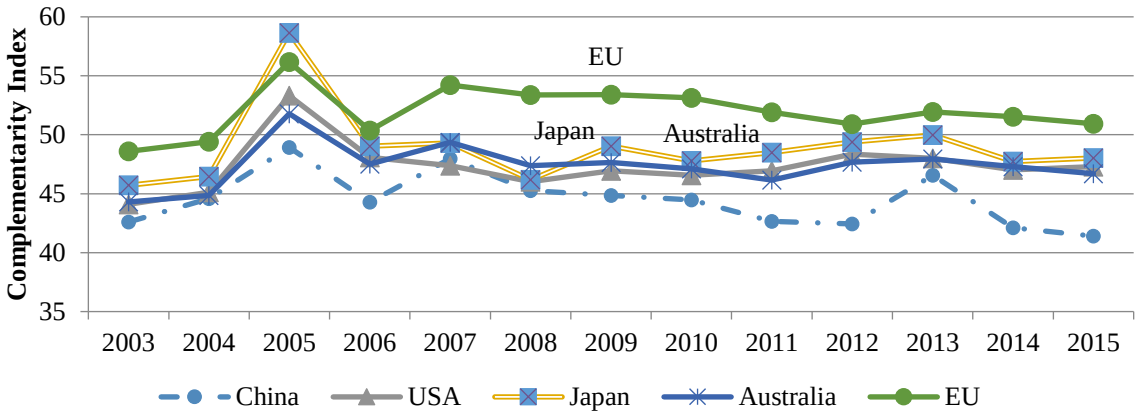
[8] The index values range from zero–when goods exported by one country are not imported by the potential partner, to 100, when there is perfect positive correlation. For details on the construction of the index see http://wits.worldbank.org/WITS/docs/TradeOutcomes-UserManual.pdf.



Source: World Bank calculations based on UN Comtrade.
Note: the figure plots complementarity indices that range from 0 (no complementarity) to 100 (perfect complementarity).

Complementarities with more advanced economies have increased slightly. With the EU, for example, complementarity is the highest, and increased slightly from 49 to 51 during the period (Figure 10). Increases are also observed for Japan and Australia, although in both cases these have been mild. With China, instead, Nepal's complementarity index is the lowest and declining to just above 40 percent. Interestingly, both of Nepal's neighbors—India and China—are the ones with lower complementarities. In addition, a comparison of Figure 9 and Figure 10 reveals that, considering complementarities only, there are some potential gains from deepening integration with large countries outside the region.

Figure 10. Export Complementarity Indices with Main GSP-Granting Countries and China



Source: World Bank calculations based on UN Comtrade.
Note: the figure plots complementarity indices that range from 0 (no complementarity) to 100 (perfect complementarity).

III.2.3 Is Nepal (and the Region) Profiting from SAFTA?

The trade patterns of Nepal with SAFTA members suggest increases mainly in imports, and also in exports, following the announcement of the SAFTA agreement in 2005/6.[9] Indeed, patterns shown in Figure 4 and Figure 5 reveal systematic increases in imports, and while more volatile, also some increases in exports. Can those increases be attributable to SAFTA? To answer this question rigorously, it is necessary to compare trade under SAFTA with a valid 'counterfactual.' The right counterfactual is an estimate of what would have happened with trade with SAFTA member countries had SAFTA not been in place. To do that the report follows a difference-in-difference approach within the framework of a structural gravity model that essentially consists of computing two differences: the difference in trade before and after SAFTA came into place and the difference in trade with SAFTA member countries and all other partners. The relevant effect to scrutinize is the coefficient on SAFTA*Before/After reported in Table 3.[10]

There is no clear effect of SAFTA on trade among member countries. Results from alternative specifications reveal no positive effect of SAFTA on trade within the region. Different specifications allow for lags both in implementation of the agreement, and in the process of adjustment of traders to the new set of rules, by comparing trade flows in 2001 with those in 2014 (column 2); flows in 2001 and 2002 with those in 2013 and 2014 (column 3); and flows in 2001, 2002, and 2003 with those in 2012, 2013 and 2014 (column 4). In all cases estimated effects are not significantly different from zero, suggesting that SAFTA had no effect on trade flows within the region. The only case in which a statistically significant result (although negative) is obtained is by looking at the whole period (column 1), which unrealistically assumes full implementation of SAFTA in 2006.

There are two potential explanations for null effect of SAFTA on members' trade. First, regional trade frictions have increased after the crisis—specifically, in the form of non-tariff barriers, offsetting to some extent the tariff reductions achieved through the agreement. Second, most important impediments to trade within the region may not be associated with market access but with barriers that require deeper forms of agreements to tackle them, including free movement of investment, harmonization of standards, and elimination of non-tariff related barriers to trade. This hypothesis will be more formally tested in the next section III.3, when, using the same methodology, the effect of the depth of agreements on trade patterns will be explored.[11]

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[9] SAFTA agreement was reached on January 2004, at the 12th SAARC summit. The agreement came into force in January 2006, with a multi-speed approach. India, Pakistan, and Sri Lanka committed to reduce duties to 20 percent in the first phase (by 2007), with subsequent annual cuts until duties reach zero (that was committed to happen by 2012). Nepal, Bhutan, Bangladesh, Afghanistan, and Maldives had an additional three years to reduce tariffs to zero. Notice that there have been previous integration efforts. Among the first initiatives was the agreement signed in 1985 among all the aforementioned countries except for Afghanistan, and known as the South Asian Association for Regional Cooperation (SAARC). Then, in 1995, SAARC launched the South Asian Preferential Trade Arrangement (SAPTA).

[10] The econometric model estimated to gauge the effect of SAFTA on trade flows is a structural gravity model that controls for time-invariant and country pair specific effects, country of origin, and time variant effects, and country of destination time variant effects. SAFTA is modeled as a step-dummy that takes value 1 for the countries that are signatories to the treaty, for the years in which SAFTA has been in place (allowing for different implementation timeframes). The estimation technique is a Pseudo Poisson Maximum Likelihood (PPML).

[11] There is little evidence on the ex-post effects of South Asia integration agreements and regional trade. An exception to this is Regmi, Devkota and Upadhay (2017). Instead of looking at the effects of SAFTA specifically, the authors focus on the effects of all the regional integration efforts in South Asia, comparing before and after 1995 (when the SAPTA was launched), within a gravity framework. They do find evidence of trade creation, and little

Table 3. Impact of SAFTA on Members' Exports

	All Period	2001 v 2014	2001/2 v 2013/14	2001/3-2012/14
	(1)	(2)	(3)	(4)
SAFTA Before/After	-0.200**	-0.0829	-0.182	-0.215
	-0.0966	-0.189	-0.177	-0.165
SAFTA Before/After*Nepal Exporter	-0.0271	0.416	0.385	0.0404
	-0.227	-0.378	-0.331	-0.288
SAFTA Before/After*Nepal Importer	0.154	0.586*	0.584**	0.318
	-0.185	-0.348	-0.296	-0.262
Observations	304,971	42,380	84,893	127,763
R-squared	0.975	0.976	0.974	0.974

Source: World Bank calculations. Note: (1) PPML estimations. All specifications include bilateral fixed effects and country-time fixed effects. (2) Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

The effects of SAFTA have been heterogeneous by type of traded good, although negative when it has been significant. When the effect of SAFTA is estimated by type of product traded, results show no effects for primary, processed, and consumer goods, and negative effects for capital goods and intermediates (Table 4).[12]

Effects of SAFTA for Nepal's formal trade have mostly worked through increased imports—mostly of intermediates—rather than increased exports. Both the aggregate trade and the product-specific estimations allow for Nepal-specific effects on exports and imports (the interactions SAFTA Before/After*Nepal Exporter; SAFTA Before/After*Nepal Importer, respectively). Results hint to some positive effects on the import side, mainly on increased imports of intermediates–indeed, import data at the transaction level revealed increased usage of imported intermediates. This may be associated with increased integration into regional value chains, although the effects on the export side are not visible in the data. Of course, these results refer to formal trade. However, one would expect that increased regional integration efforts lead to a decline in formal trade costs, and therefore, that trades that happened informally before, became formalized. For the case of Nepal, a country with a long porous border with India, and where informal trade plays a big role, this may be a sizable channel. However, results presented here do not suggest increases in formal exports to be traced to SAFTA. It is yet worth mentioning that survey results suggest that informal traders in Nepal and India have developed efficient mechanisms for enforcing contracts, exchange information, and sharing and mitigating risks. They tend to avoid formal channels since transaction costs are substantially lower when these are kept informal. This

trade diversion. However, their approach differs from ours. First, the authors do not use a structural gravity, failing to control, for example, for unobservable, time-varying and exporter and importer varying effects, which increases the scope of biases in the estimates due to omitted variables. They also do not allow for adjustments and implementation delays in the agreements, as they compare the before and after 1995, when a (very) shallow agreement was simply signed.

[12] Results by sector are reported when looking at the periods 2001, 2002, and 2003 versus 2012, 2013, and 2014. Alternative period choices yield analogous results.

suggests that if informality is to be reduced, integration initiatives need to be deepened further, so that transaction costs fall (see, for example, Taneja, N. and S. Pohit, 2001).

Table 4. Impact of SAFTA on Members' Exports by Type of Traded Good

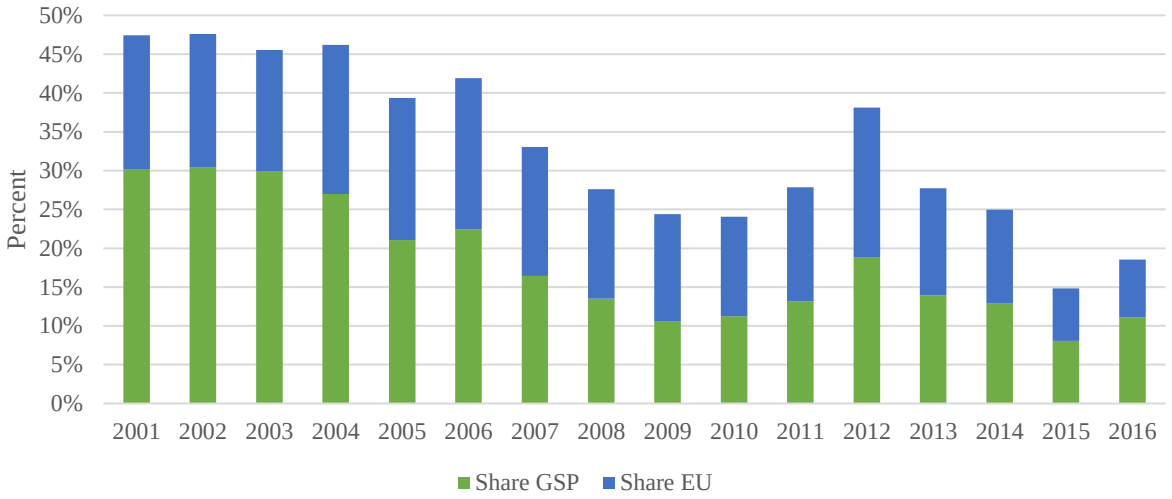
	2001/3-2012/14	2001/3-2012/14	2001/3-2012/14	2001/3-2012/14	2001/3-2012/14
	Primary	Processed	Capital Goods	Interm. Goods	Consumer Goods
SAFTA Before/After	0.380	0.721	-1.325**	-1.455***	-0.360
	(0.530)	(0.457)	(0.533)	(0.455)	(0.314)
SAFTA Before/After*Nepal Exporter	0.113	0.0147	-0.425	-0.707***	-0.287
	(0.294)	(0.203)	(0.357)	(0.136)	(0.211)
SAFTA Before/After*Nepal Importer	0.286	-0.159	0.0947	1.242***	-0.731**
	(0.518)	(0.354)	(0.362)	(0.459)	(0.346)
Observations	117,574	125,298	120,998	117,203	122,817
R-squared	0.982	0.950	0.983	0.977	0.984

Source: World Bank calculations.
Note: (1) PPML estimations. All specifications include bilateral fixed effects and country-time fixed effects. (2) Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

III.2.4 Is Nepal Profiting from GSP?

The GSP system has been in place for decades, with Nepal being one of the beneficiaries. The long-standing nature of the scheme implies that, given data availability, it is not possible to estimate its impact on Nepal's export flows in the same manner as it was done for SAFTA in the previous subsection. This is because the before/after comparison is not available. Instead, this subsection examines Nepal's trade patterns with GSP-granting countries and the conditions under which products are eligible, and identifies several products in which Nepalese exporters may benefit from utilizing the preferences more actively.

Figure 11. Export Shares to GSP-Granting Countries



Source: World Bank calculations based on UN Comtrade.

The importance of GSP-granting countries in Nepal's export basket has been falling substantially over the years. The shares of exports to GSP-granting countries (excluding the EU) and to the EU halved, from around 45 percent in the early 2000s to less than 20 percent in 2016 (Figure 11). This implies relatively stable exports to these groups of countries when measured in current dollars (at around $100-120 million USD per bloc).

For the case of exports to the United States, utilization rates of these preferences are low. For example, exports from Nepal to the United States in 2011 amounted to $78 million, with only $5.1 million (7 percent) being under GSP, and including silver jewelry, cigars, imitation jewelry, and national flags. This is because many of the products in which Nepal has a comparative advantage are ineligible for GSP (see Box 2).[13] Even among the list of eligible products, utilization rates are far from being 100 percent, as reported by the Office of the U.S. Trade Representative.[14] The utilization rate of the preference measures the share of imports of a given eligible product that enters using the preference. In the case of Nepal, the utilization rate in 2011 for hand-hooked carpets, for example, was of 49 percent. That means that about a quarter of a million USD of exports of these type of carpets, from Nepal into the United States failed to enter with a preference, and instead faced a 6 percent MFN tariff. Utilization rates for silk shawls and scarves are greater, at 60 percent, although still far below 100 percent.

Why would importers of Nepalese products that fall under GSP choose not to benefit from the preference? To qualify for duty-free treatment under GSP, the product needs to be eligible; it needs to comply with rules of origin (for the case of the United States, this implies either being fully produced or grown in Nepal, or containing local content accounting for at least 35 percent of the value of the product); it needs to be directly imported into the United States, with the importer claiming the benefit; and the exporter needs to be able to provide production and accounting records to verify the GSP claim. This

[13] For the case of the United States, this includes most textiles and apparel, watches, footwear, handbags, luggage, and some gloves and leather goods.
[14] See https://ustr.gov/sites/default/files/Nepal%20PP%20English%20August%202012.pdf

means that, apart from the firms' capabilities in keeping information to prove local content, the main binding constraint for utilization may be related to rules of origin.

Rules of origin matter for using GSP (and EBA). There are different rules of origin that Nepalese products (and products from other beneficiary countries) need to comply with to access GSP-granting markets at preferential tariff rates. In textiles and garments, for EU preferences, until 2011, the rule was one of double-stage conversion: from yarn to fabrics to apparel. For garments only, this rule was changed in 2011, to one of single transformation. An argument put forward in support of the double transformation rule is that it would lead to the establishment of backward linkages in beneficiary countries and contribute to the development of industrialization. While this may be restrictive in small and less developed countries such as Nepal, the GSP system allows for diagonal accumulation within four regional groupings: ASEAN, Central American Common Market (CACM), the Andean Community, and the South Asian Association for Regional Cooperation (SAARC). This means that originating materials from regional partners can be further processed in another country of the group (say, yarn from India processed and converted into a pashmina in Nepal), and treated as if the materials were originated where the processing is undertaken (Nepal).[15] This has facilitated the organization of regional value chains for the production and exports of textiles and apparel products in the region, although Nepal has not fully taken advantage of them.[16] In which products do GSP opportunities lay for Nepal? This is discussed below, with focus on the United States as a destination.

III.2.5 Identifying High-Potential Products in U.S. Markets

Despite a declining export share, the United States remains an attractive market for Nepalese exports. In which areas is there space for Nepalese exporters to take advantage of GSP preferences?

To answer this question, the report identifies products with high preference margins for Nepalese exporters. It combines the list of GSP eligible products, with the list of products for which the effective tariff rate is above 10 percent (that is, products for which, if imported from non-GSP countries would be taxed at the border with a 10 percent effective tariff, thus providing a preference margin to Nepalese exporters of 10 percent). Then, it checks whether U.S. imports any of these products from the GSP countries and whether Nepal exports any of these products to the world, the United States, and India.

For products already being exported to the U.S., the challenge is in Nepal's supply capacity. There is potential for Nepalese exporters to increase their existing shipments to the United States, further benefiting from GSP preferences. The products with the highest preference margin enjoyed by GSP-receiving countries are shown in Table 5. The table shows in bold, those lines of high potential. These are products with relatively high preference margins that are already exported to the United States and to other countries. The fact that they are already exported to the United States implies that the production

[15] See Brenton (2003) "Integrating the Least Developed Countries into the World Trading System: The Current Impact of EU Preferences under Everything but Arms."

[16] The literature on the effect of trade preferences on LDCs exports is also mixed. For example, Herz and Wagner (2011) find a negative effect of trade preferences on exports of LDCs (of about 4 percent on average). The authors argue that in the short run GSP-granting countries do benefit because GSP-receiving countries import intermediates from them (to comply with rules of origin), but these often complex and strict rules of origin have distortive effects in the LDC in the long run, leading exporters to use MFN tariffs rather than the GSP preference. Instead, Thelle et al (2015) focus on EU preferences only and identify a positive effect on LDCs exports (of about 6 percent on average, and cumulative during the period).

capabilities exist in Nepal, and that Nepalese firms are already producing per the standards required by American consumers. The challenge there lies in growing at the *intensive margin*—that is, increasing the

				GSP, GSP+ countries, Jan-Nov '16	Nepal's exports, FY15-16

size of shipments of these products, thus creating more job opportunities for the Nepalese, which are associated with production and trade variable costs.

Table 5. Tariff Lines with GSP, GSP+ Preferences above 10%

HS2	Sector	Number of tariff lines	Average effective rate	Import to USA, US$ mln	to world, US$ mln	to USA, US$ mln	to India, US$ mln, 2015
42	Articles of leather; saddlery	11	16%	1,503	2.2	1.20	
16	Preparations of meat, of fish	4	15%	506	0.0		
87	Vehicles other than railway or tram	2	10%	502	0.3		
70	Glass and glassware	24	15%	462	4.3	3.83	
81	Other base metals; cermets	4	13%	428	0.0		
85	Electrical machinery and equipment	13	13%	307	1.5		
69	Ceramic products	6	19%	158	0.5	0.19	
20	Preparations of vegetables, fruit,	7	14%	157	31.1	0.13	
4	Dairy produce; birds' eggs; natural	94	15%	137	2.0	0.37	
82	Tools, implements, cutlery, spoons	4	12%	77	0.1	0.02	
96	Miscellaneous manufactured articles	5	13%	75	1.5	0.05	0.0735
61	Articles of apparel and clothing	1	12%	58	18.6	3.89	
73	Articles of iron or steel	2	11%	48	10.2	0.04	
62	Articles of apparel and clothing	1	12%	39	64.0	15.25	
94	Furniture; bedding, mattresses,	2	11%	29	0.5	0.02	
7	Edible vegetables and certain roots	6	14%	14	15.4		
67	Prepared feathers	1	11%	14	0.2		
66	Umbrella, sun umbrellas	1	10%	10	0.0		
21	Miscellaneous edible preparations	9	16%	9	0.9	0.17	4.1082
91	Clocks and watches and parts	10	12%	7	0.0		
8	Edible fruit and nuts; peel of citrus	5	22%	6	1.8		
22	Beverages, spirits and vinegar	7	12%	4	0.4		85.3254
19	Preparations of cereals, flour	12	17%	2	6.6	0.76	
45	Cork and articles of cork	1	13%	1	0.0		
15	Animal or vegetable fats and oils	4	11%	1	1.0		
86	Railway or tramway locomotives	3	13%	1	0.0		
63	Other made up textile articles	3	10%	1	32.7	3.05	

17	Sugars and sugar confectionery	5	12%	1	0.6		
52	Cotton	6	16%	0	0.1		
12	Oil seeds and oleaginous fruits	3	27%	0	6.8	0.16	
27	Mineral fuels, mineral oils	7	11%	0	0.0		
64	Footwear, gaiters and the like	1	11%	0	15.4		
Total		264	14%	4,555	218.65	29.13	89.51

Source: World Bank calculations based on USITC, Nepal Customs and WITS data.

For new products, entering the United States poses different challenges for Nepalese firms, mainly associated with product certifications. Table 14 also shows products that enjoy high preference margins that are exported by Nepalese firms to all countries but the United States (highlighted in grey). In this case, the challenges that arise relate to the fixed costs of entering a new market that entail learning about the characteristics of foreign consumers, adapting the product to their tastes, and complying with certifications and standards required in the importing market. Indeed, the list of products identified in this category are mainly animal and vegetable products, subject to strict sanitary and phytosanitary controls in the importing market.

Box 2. Opportunities for Nepal after Expanded List of GSP-Eligible Products from United States

In February 2016, the U.S. president signed H.R. 2695, Nepal Trade Preference Act ("the Act"), which provides duty-free access for 66 Nepali products to the U.S. market through December 31, 2025.[17] Specifically, these products include certain carpets, headgear, shawls, scarves, and travel goods. The legislation also stipulates that the Nepali value added in the products should be, just as with other GSP-eligible products, of at least 35 percent of the appraised value of the article at the time it is entered the United States.

Table 15 in the appendix shows Nepal's current exports to the United States and the rest of the world of product categories included in the list of duty-free products mentioned above.[18] Two conclusions emerge:

(1) Most of the products have already been exported from Nepal to the United States with some exceptions (420291, 570231, 570291, 570500). In these cases, Nepal has exported these products to alternative destinations, suggesting that the capabilities to produce and successfully enter export markets do exist in the economy.

(2) There is potential for increased supply of many of these products under the new preferences granted by the United States. In some cases, this could happen through reorientation of exports away from other destinations and into U.S. markets (high-potential products are those which Nepal exports to the world but not to the United States).

[17] The list includes descriptions at 8 digits of the harmonized system (HS).
[18] The list of 66 products with duty-free access is defined at 8 digits of the HS system, while the table offers export statistics at 6 digits. Variations from 6 to 8 digits are minor, and it is reasonable to assume that if the capabilities to export exist for a product at 6 digits, these also exist for 8 digit products.

Source: Authors' elaboration.

III.3 Deepening Integration: Why is it Necessary and What Would It Take?

With GVCs being increasingly important, international integration needs to go beyond the elimination of trade barriers at the border, starting with more integration in services and investment. Previous sections of this report discuss alternative options of trade policy reforms. They start with a discussion of the extent to which existing agreements that focus on elimination of barriers to trade at the border (SAFTA) and trade preferences (GSP) have benefited Nepalese exporters. It is followed, in Section IV, by a discussion on how unilateral reforms of the tariff code could reduce anti-export biases thus increasing competitiveness while not compromising tariff revenues. Yet, with production processes being fragmented internationally, and most global trade being accounted for GVCs, the need for *deeper* integration, involving not only removal of border barriers but also focusing on behind-the-border impediments to trade has increased. Is it possible that the null effect of SAFTA on member countries and Nepal's trade identified in section III.2 is related to the shallowness of that agreement?

The expansion of GVCs is related to the proliferation of deeper forms of integration. Cross-border production creates needs for the harmonization of certain policies and standards across countries that were not existent when goods were produced in a single location. This is because now firms need to trade across borders, for example, customized inputs in a world in which contracts are incomplete, and there are costs of searching suitable foreign input suppliers.[19] Thus, the changing nature of trade, from trade in final goods to trade in intermediate goods, is responsible for the growing demand for deeper agreements that can address these new cross-border effects. For example, with GVC trade being intrinsically linked with investment, and with the movement of (often proprietary) ideas, agreements need to go beyond tariff reductions, to incorporate provisions on investment and intellectual property protection.

GVC-related trade and FDI are higher on average for countries that have signed deeper agreements. Figure 12 shows that GVC-related trade is higher on average for deeper agreements. Results from cross-country gravity models that include measures of depth reveal that adding one provision in an agreement is associated with a 0.8 percent increase in GVC-related trade. [20] Alternatively, GVC-related trade between countries that signed the deepest agreement is 38 percent higher than before signing the

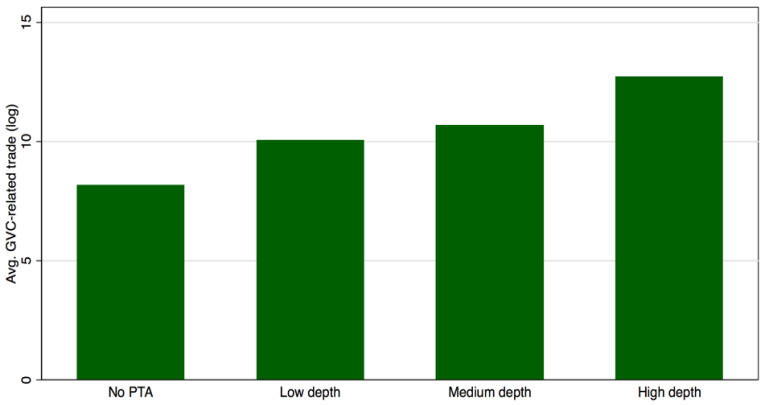
[19] Antras and Staiger (2012), Lawrence (1996).

[20] In addition, deep trade agreements have been found to be essentially trade creating compared to shallow agreements. This is because several provisions in deep agreements, such as those regulating competition policy, investment, or customs reforms are public goods and increase trade with all patterns. Other trading partners will also benefit from these provisions. This leads to more trade creation and less trade diversion away from efficient suppliers. Thus, it increases the scope for trade-induced welfare gains, and makes deep agreements an attractive instrument for reforms. Instead, a shallow PTA focusing on barriers to trade at the border between Nepal and a given country 'A' would imply only tariff reductions between Nepal and 'A'. While this will potentially create trade, being welfare increasing, it may also divert trade if it induces Nepal to reorient imports away from the most efficient supplier to 'A' because of preferences, while forgoing tariff revenues. This trade diversion effect would be welfare worsening.

PTAs. The relationship, of course, operates in both directions: higher levels of trade in GVC-trade increase the likelihood of signing deeper agreements.[21]

Cross-country empirical evidence suggests that deeper forms of integration are associated with increased FDI inflows. Analyses of the relationship between FDI and deep integration based on selected countries also suggest that the depth of PTAs is positively associated with vertical FDI flows. An increase in the depth of an agreement increases vertical FDI flows by 2 percent. In addition, evidence suggests that the positive link between the depth of PTAs and vertical FDI is driven by the regulatory disciplines that improve the contractibility of inputs provided by foreign suppliers.[22]

Figure 12. Deep PTAs and GVC-Related Trade



Source: Calculations based on World Bank PTA content dataset (2016).
Note: the figure shows the average GVC-related trade for countries with no PTAs, for countries with low-depth PTAs, with medium- and with high-depth PTAs, respectively. Low depth–agreements with less than or equal to 15 provisions; medium-depth agreements with 15 or more provisions but less than or equal to 30; high depth–agreements with more than 30 provisions.

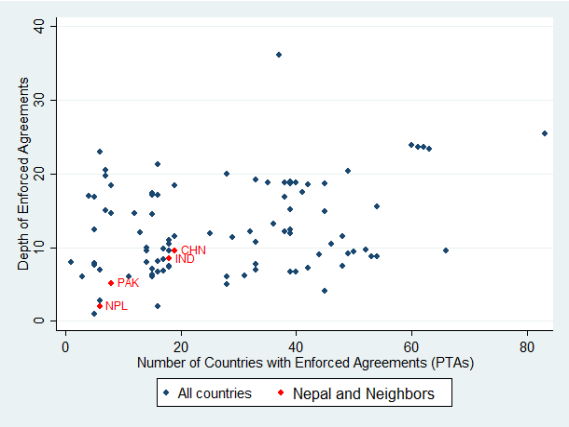
How can deeper integration help Nepalese exporters in leveraging the powerful platform of GVCs to increase trade, and through trade, create more and better jobs? Is the lack of deepness of SAFTA behind its negligible effect on regional trade? These questions are addressed in this section of the report.

III.3.1 Deep Integration: Where is Nepal in That Map?

Nepal is not deeply integrated with its region or with the world. A way to assess this is to look at the number of agreements that Nepal and other countries have, as well as at the provisions that are covered in these agreements. Across the world, the average number of agreements in which countries participate is 14. The EU participates in the largest number of agreements (37), followed by European Free Trade Association (EFTA) members (between 31 and 29), Chile (22), Singapore (21), Turkey (18), Mexico (10), Egypt (5) and other large emerging economies, such as India (8) and China (11) are not too far behind. In contrast, Nepal has only one full-scope PTA in force (Figure 13), placing it in a peripheral position in the network of agreements (Figure 14).

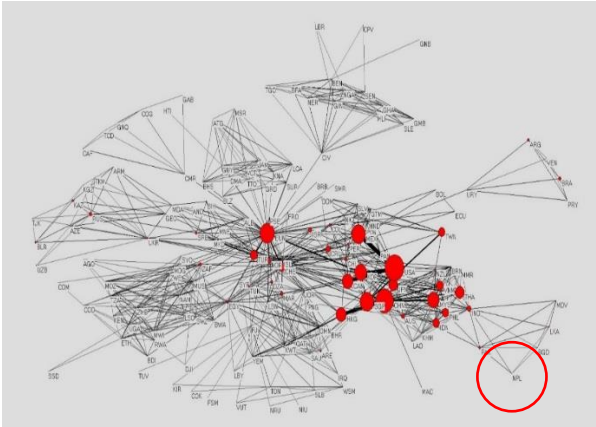
[21] Orefice and Rocha (2014), Osnago, Rocha and Ruta (2017).
[22] Osnago, Rocha and Ruta (2015) and (2017).

Figure 13. Number of Agreements and Depth – Nepal and Comparators



Source: World Bank elaboration based on Osnago et al. (2016).

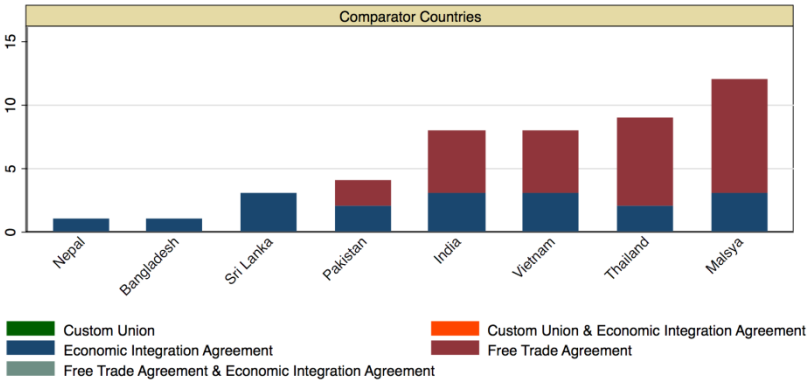
Figure 14. Network of Agreements



Source: World Bank calculations based on WTO RTA dataset.

Compared to countries that are economically similar, Nepal is less integrated in terms of number of agreements signed.[23] In comparison to other SAFTA countries such as India, which has signed eight agreements, Nepal only has SAFTA. In East Asia, where countries have been key players in GVCs, Malaysia, Thailand, and Vietnam, for example, have each more than five agreements (see Figure 15).

Figure 15. Active Agreements by Country for Selected Economies (2015)

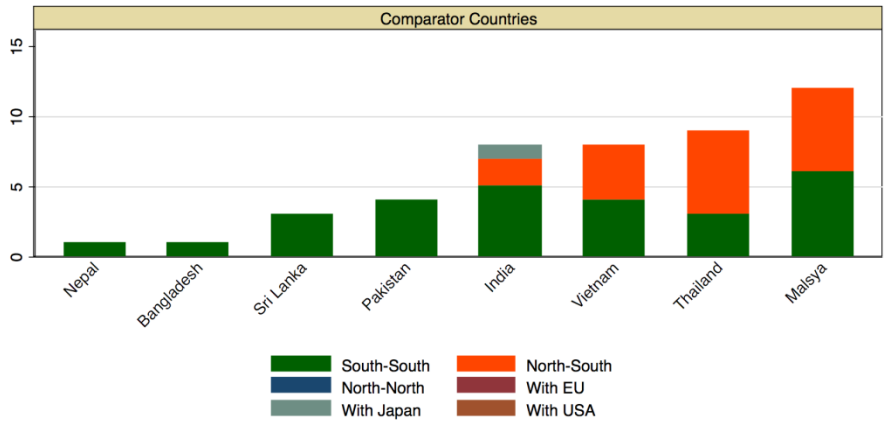


Source: Calculations based on World Bank PTA content dataset (2016).

Nepal and Bangladesh have not participated in deep agreements with other regions and with developed economies. In comparison to Malaysia, Thailand, and Vietnam, have signed substantially more agreements, and almost half of them have been North-South (see Figure 16).

[23] For this analysis, the World Bank dataset on the content of PTAs has been used. This dataset excludes partial scope agreements (such as the one Nepal has with India) and agreements that have not been notified to the WTO.

Figure 16. Active North-South and South-South Agreements for Selected Economies (2015)

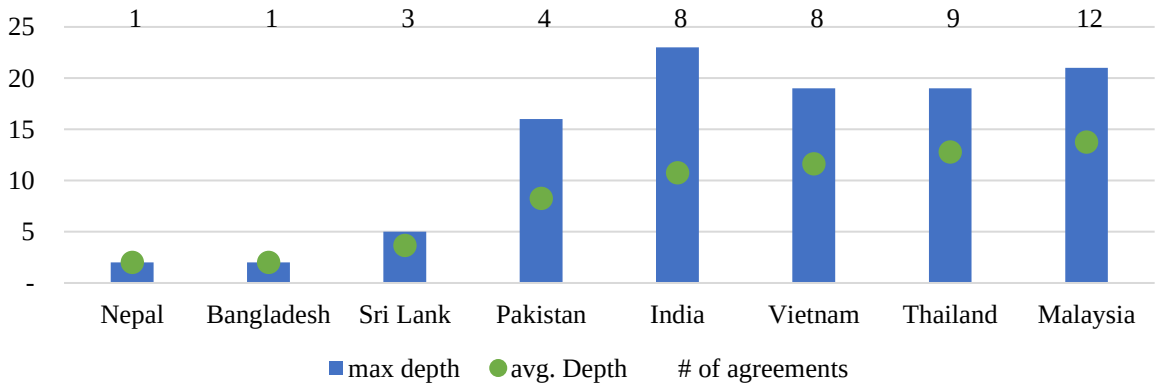


Source: Calculations based on World Bank PTA content dataset (2016).

How deep is SAFTA?

SAFTA covers a total of four provisions, with only two of them being legally enforceable.[24] SAFTA covers four WTO+ provisions: FTA agriculture, FTA industrial, Customs and TBT. Taking the depth of agreements—measured by the number of enforceable provisions—and comparing Nepal to those that are economically similar, Nepal has one of the lowest levels of depth. Except for Sri Lanka and Bangladesh, other comparators have agreements that cover more or far more than 10 disciplines (Figure 17).

Figure 17. PTA Coverage, Selected Economies (2015)



Source: Calculations based on World Bank PTA content dataset (2016).

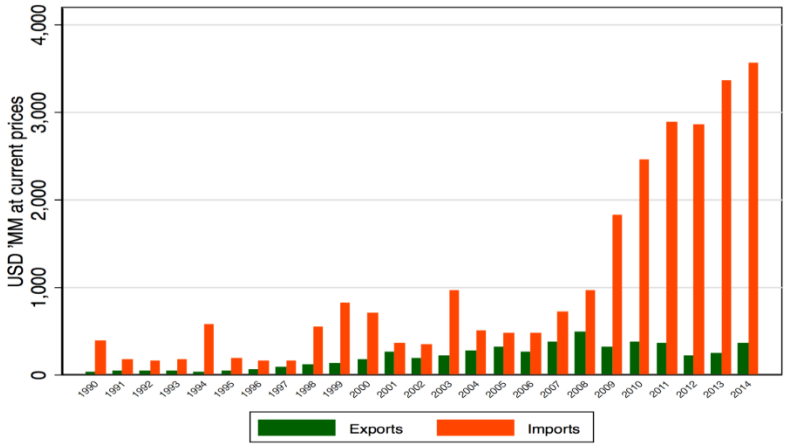
III.3.2 Nepal in GVCs

Nepal has not fully taken advantage of the GVC platform for export growth. The position of Nepalese firms and their challenges in participating in GVCs have been carefully discussed in the World Bank (2016). Here the report will highlight a couple of stylized facts.

[24] For a definition of enforceable provision see Hoffman, Osnago and Ruta (2017).

First, Nepal has been better integrated in GVCs as an importer than as an exporter. One simple indicator of this is the evolution of Nepal's GVC-related trade balance that not only is in deficit, but also has been increasing exponentially since 2009, with imports being 10 times larger than exports in 2014. The difference in GVC import and export growth rates is revealing. During the 1990s GVC-related exports grew at 20 percent per year, while imports at 9 percent per year. But during the 2000s exports growth was at 6 percent, whereas imports grew at 11 percent (Figure 18).

Figure 18. Nepal GVC Trade Over Time



Source: WITS, World Bank.

Second, and reflecting overall trading patterns, Nepal's main GVC partner is India. More than three-quarters of GVC related exports go to India, while about two-thirds of imports originate in India. (Figure 19 and Figure 20).

Figure 19. Nepal GVC-Related Trade, by Region (1990-2014)

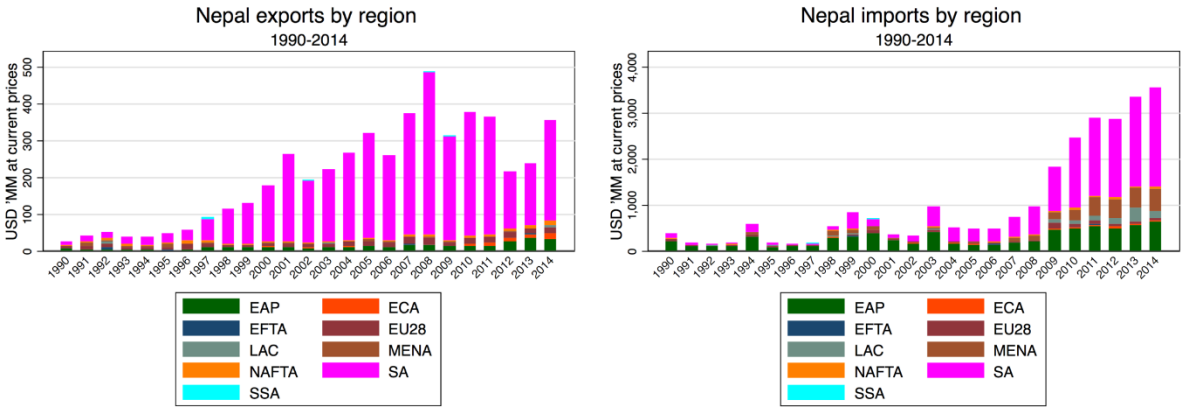
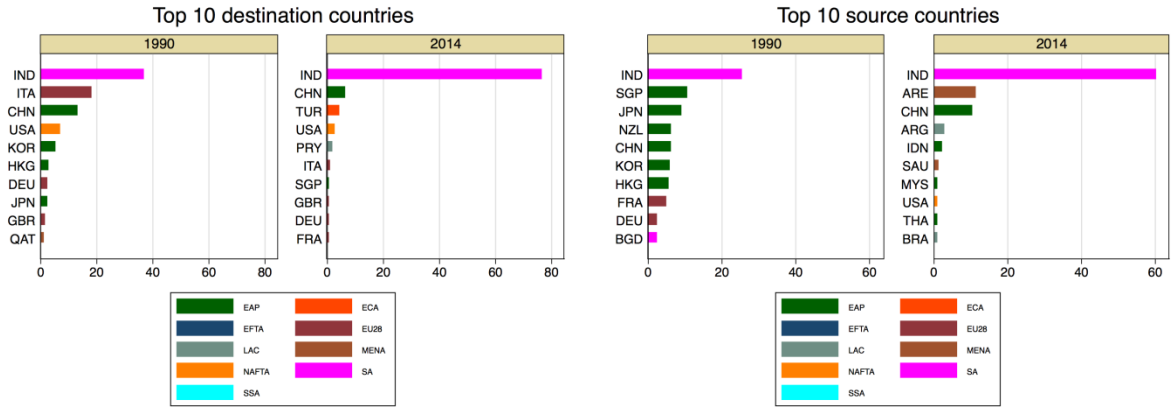


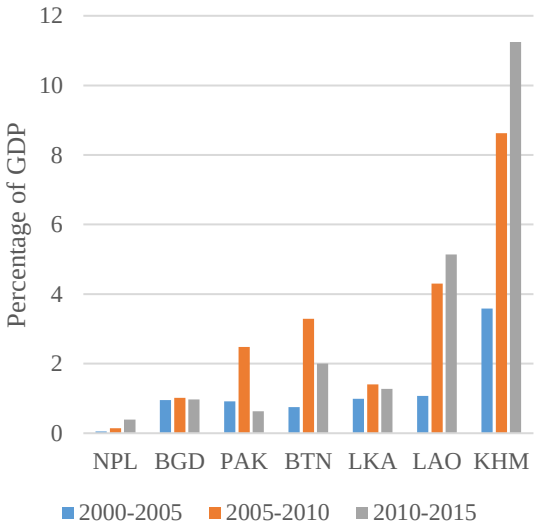
Figure 20. Top 10 GVC-Related Trade Partners



Source: WITS, World Bank.

FDI inflows into Nepal have been negligible and not directed to GVC-prone sectors. Another metric to understand Nepal's participation in GVCs is its performance in attracting FDI. In this respect, Nepal has done poorly in comparison with other countries in the region, and with other comparator economies outside the region (Figure 21). Most of announced foreign investment projects are in the hydropower generation sector (renewable energies), or in communications and transportation. Relatively more GVC prone sectors such as textiles and apparel, food products, or business services have received negligible amounts in the recent years.

Figure 21. FDI Inflows as Percentage of GDP – Nepal and Comparators



Source: World Bank calculations based on UNCTAD.

Figure 22. Top Announced FDI Projects by Sector in Nepal (2003-2012)

Sector	Investment
Alternative/Renewable energy	461.5
Communications	298.1
Transportation	218.7
Metals	129.2
Financial Services	104.4
Non-Automotive Transport OEM	102.5
Coal, Oil and Natural Gas	60
Pharmaceuticals	44.84
Ceramics & Glass	37.2
Textiles	18.1
Consumer Electronics	11.4
Business Services	9.7
Food & Tobacco	5.28
Healthcare	4.8
Real Estate	1.9
Hotels & Tourism	1.8

Source: World Bank calculations based on UNCTAD.

In this respect, and in addition to trade policy reforms, Nepal needs to implement substantial investment policy reforms if it is to attract more FDI. There are several *de facto* and *de jure* barriers that discourage foreign investors from investing in Nepal. The structural hardships that Nepal exhibits for attracting FDI include its landlocked boundaries, and its propensity to natural disasters, which must be more than offset with a top-class investment climate. However, this does not seem to be the case. For example, World Bank (2016) reveals cumbersome procedures to repatriate profits, low equity limits for foreigners on crucial GVC-prone sectors such as business and professional services (in accounting, and legal), or in others that are crucial inputs for GVC players (banking, transport, logistics), as well as a long negative list introduced with the new Foreign Investment Policy that include some agricultural activities, thus making it more costly for the agri-business sector to insert itself in global markets. Gradual improvements in these areas are imperative (see Policy Recommendations in the Executive Summary for some suggestions).

Nepal in GVCs: What is there to gain from Deep Integration?

International evidence discussed above suggests that deepening trade agreements is associated with increased GVC trade. Is this the case for SAFTA members, and specifically for Nepal too? To answer this question, analogously as done to assess the effect of SAFTA on overall regional trade, the report relies on a structural gravity model of GVC trade, augmented to allow for a measure of depth of agreements as defined above (see Box 3 for details on the methodology).

Results confirm the findings of the literature: deeper integration is associated with increased GVC trade, and Nepal is no exception. Every additional provision included in trade agreements is associated with a 1 percent increase in GVC-related trade.[25] When it comes to the effect on Nepal's exports, evidence suggests that Nepal is no different from the average country in the sample. For imports, instead, Nepal shows a greater sensitivity to increased depth (see Table 13). This suggests that the lack of effect of SAFTA on regional and Nepal's trade is to some extent related to the shallow nature of that agreement.

Deepening SAFTA is expected to reduce trade costs, thus facilitating integration into regional value chains. Including provisions related to, for example, capital movements or competition policy, will further increase Nepal's exports to and imports from its PTAs partners. Table 6 presents some back-of-the-envelope calculations based on alternative scenarios that vary in their realism. For example, under the scenario in which SAFTA increases its depth to the "EU" level, Nepal would export on average 1 percent more ($2.4 USD million) with SAFTA members. However, this scenario will of course require a strong change in institutions as it would include 42 new disciplines, and it is unrealistic to materialize. An alternative scenario is one in which SAFTA matches its content to the "ASEAN-India." That would lead to increased exports from Nepal to its partners by, on average, 0.2 percent, while imports would increase by average 9.1 percent. This scenario will require an addition of six new disciplines such as: agreements on customs procedures, export taxes, SPS (streamlining of sanitary and phytosanitary regulations), TBT

[25] One caveat from this estimation model is that the marginal effect of an additional provision is the same regardless of what type of provision is included. It is well possible that provisions in deep trade agreements have a different impact depending on how relevant they are for trade. Relying on the literature, it is possible to say that typically, it is provisions associated with movement of capital, competition policy and intellectual property protection that tend to have greater effects on GVC trade.

(streamlining of technical barriers to trade), trade-related investment measures (TRIMS–agreements on cross-border investment) and the General Agreement on Trade in Services (GATS).

However, the political economy of SAFTA makes its deepening unrealistic in the short to medium term. The bloc has stumbled in its efforts to liberalize trade in goods, so it appears relatively unfeasible for it to progress into deeper forms of integration. For example, in services, the South Asia Trade in Services Agreement (SATIS) has not gone beyond some initial (and modest) offers. Therefore, to deepen its integration with the world, Nepal needs to look beyond the region and start with encouraging trade in services – crucial for diversification, and for supporting the productivity of other sectors that use services intensively, on investment – to attract, retain and connect FDI, and on trade facilitation, by strengthening, for example, its stance in Bhutan, Bangladesh, India and Nepal's transit agreement.

Table 6. Change in Nepal's GVC-Related Bilateral Trade with SAFTA Under Different Scenarios

	(a)	(b)	(c)	(d)	(e)
	"ASEAN-India"	"ASEAN-Australia-New Zealand"	"Mercosur"	"Korea - ASEAN"	"EU Deepest"
	scenario	scenario	scenario	scenario	scenario
Depth	8	16	17	19	44
(USD'000)					
GVC-related Exports (2014)	0.2%	0.3%	0.3%	0.4%	0.9%
Bangladesh	$0.6	$1.3	$1.4	$1.5	$3.5
Bhutan	$1.1	$2.2	$2.3	$2.6	$6.0
India	$432.6	$865.8	$920.0	$1,028.4	$2,387.6
Sri Lanka	$0.0	$0.0	$0.0	$0.0	$0.0
Maldives	$0.0	$0.0	$0.0	$0.1	$0.1
Pakistan	$0.7	$1.4	$1.5	$1.7	$4.0
Total Outflows	$434	$869	$924	$1,033	$2,397
(USD'000)					
GVC-related Imports (2014)	9.1%	19.0%	20.3%	22.9%	61.2%
Bangladesh	$905	$1,892	$2,022	$2,285	$6,108
Bhutan	$318	$664	$710	$802	$2,144

India	$195,180	$408,071	$436,007	$492,796	$1,317,230
Sri Lanka	$43	$89	$95	$108	$288
Maldives	$11	$22	$24	$27	$72
Pakistan	$115	$241	$258	$291	$778
Total Inflows	$196,445	$410,717	$438,834	$495,991	$1,325,770

Source: Authors' calculations.

Note: the counterfactual analysis is done using the coefficient from the estimation of the specification described in Box 3, and the depth measures from each of the counterfactual integration schemes.

The different magnitude of effects of trade policy reforms on exports and imports calls for complementary reforms to boost export capacity. The results described above suggest that exports react less to deep integration reforms than imports. This was also the case when–in an even stronger form, the previous section explored the effect that SAFTA had on Nepalese trade. This hints to the need of complementing trade policy reforms with interventions that boost export capacity. These include improved infrastructure, specifically, improved electricity availability at competitive prices–the main obstacle exporters face per private sector surveys; increased competition in input markets to improve transport and communication costs; and access to competitively priced financing. In addition, it is also important to build capacity for firms to better take advantage of existing preference schemes.

Box 3. Methodology for the Estimation of the Impact of Deep Integration on GVC Integration

Gravity equations are derived from models that seek to explain or predict the relationship between a (dependent) variable (in this case bilateral trade in parts and components) and a set of other (independent or explanatory) variables whose values can be estimated (in this case elements of deep integration).

An augmented gravity equation is estimated for 93 countries, using data from 1990 to 2014, to investigate the effect of deep integration on GVC-related trade. This methodology has been extensively used by economists to test empirically the determinants of trade flows, and to estimate the effect of preferential trade opening on trade flows. Estimating the effects of PTAs on bilateral trade flows using a gravity equation is, however, susceptible to an endogeneity problem.

Endogeneity arises when an explanatory variable in an equation is correlated with the error term of the equation, and the error term is the unexplained deviation of sample data from their unobservable "true" value. Studies such as Baier and Bergstrand (2007) show that omitted variables, and to a lesser extent simultaneity, are the two most important sources of endogeneity bias caused by PTAs. The omitted variables problem of PTAs arises since the error term may retain the effect of some unobservable country-specific policy variables, which at the same time affect both trade and the probability of forming a PTA. If, for example, the formation of a PTA also induces reforms in trade-restrictive domestic regulation, the likelihood of an FTA is higher (since the expected gains from the FTA are higher), and the omission of the domestic regulation variable will bias the PTA coefficient downwards. A simultaneity problem can arise, for instance, when governments of two countries that trade more than their "natural" level of trade may be induced to form a PTA, as there is less probability of trade diversion. In

this case, the PTA coefficients will be upward biased.

To take account of this, the approach used by Baier and Bergstrand (2007) is followed.[26] Specifically we estimate a fixed-effect gravity regression[27]:

$$GVC_{ijt} = \exp\{\beta_1 Depth_{ijt} + \beta_2 Depth_{ijt} * NPL + \delta_{ij} + \delta_{it} + \delta_{jt} + \varepsilon_{ijt}\}$$

Where $GVCijt$ is a measure of GVC-related trade between country i and j. GVC-related trade is proxied with trade in parts and components.[28] $Depth_{ijt}$ is a measure of the depth PTAs. A statistically significant and positive coefficient β_1 implies that signing a deeper agreement is associated with greater GVC-related trade. This variable is calculated as the number of enforceable provisions that are included in a certain agreement (normalized between o and 1).[29] $Depth_{ijt} * NPL$ is an interaction term between depth and a dummy variable equal to one if the exporting or importing country is Nepal. This variable captures the heterogeneous effects of deep PTAs for Nepal. A positive (negative) and significant coefficient implies that for the same level of depth Nepal exported or imported relatively more (less) than the average country in the sample. The δs are a series of fixed effects: i for importer, j for exporter and t is 5 years' periods from 1980 to 2014. Finally, εijt is the error term.

Source: World Bank elaboration.

[26] As an additional robustness check for endogeneity the regressions are estimated using an Instrumental Variables approach. The variable of interest, depth between country i and country j is instrumented with the (weighted) average depth of all the agreements signed by i and j with any other country excluding the agreement(s) they have in common.

[27] To account for the presence of zeroes in trade flows, the report estimates equation (1) using the Poisson pseudo maximum-likelihood (PPML) estimator proposed by Santos Silva and Tenreyro (2006).

[28] Parts and components are defined as: BEC 21,22 42 and 53.

[29] Other indices based on principal component analysis are used to calculate the depth of PTAs (see Osnago, Rocha Ruta, 2016).

IV. Improving the Import-to-Export Environment through Trade Policy Reforms

The purpose of this section is to inform Nepalese policy makers on the costs and benefits of alternative trade policy reforms aimed at reducing costs for Nepalese firms that rely on imported intermediates and capital goods to produce exportable goods.

Specifically, this section focuses on the impact of unilateral tariff reforms conducive to reducing the anti-export bias, on export competitiveness. While the previous section focused on how Nepal can gain through open, deeper regionalism, and through taking better advantage of trade concessions granted to it, this section focuses on how certain unilateral tariff reform decisions can help firms increased competitiveness. There is substantive evidence for Nepal and other countries in the world—large and small, advanced and developing—that links tariff reductions with productivity and export competitiveness outcomes. These reductions stimulate competition in the home economy, inducing local firms to increase productivity to survive, while also increasing their choice in terms of the available input mix through cheaper, more varied, and better quality intermediate inputs. This leads to an improved import-to-export environment, which, in a world where most trade happens through global value chains, becomes crucial.

Yet, in developing countries, and particularly in Nepal, any proposal for tariff reforms needs to consider revenue costs. Given the importance of taxes on imports for government revenue, this section assesses potential trade policy reforms that enhance the import-to-export environment and minimize revenue losses. Five alternative scenarios are analyzed that consider different intermediates on which to reduce tariffs. For the choice of products, we follow different approaches: (i) a scenario of ample liberalization (scenario 1 on raw materials, 2 on intermediates, and 3 on capital goods), (ii) identification of crucial inputs for high-potential sectors based on international classification of inputs (in turn based on cross-country input-output links, scenario 4), and (iii) identification of crucial inputs for high-potential sectors based on import patterns of Nepalese firms (scenario 5).

There are three main conclusions that emerge from this section.

First, Nepal would benefit from a gradual approach to reduced tariffs if it is not going to compromise tariff revenues. To improve the import-to-export environment in a fiscally responsive manner, targeted tariff reductions on intermediate inputs for key export sectors are recommended since they can be achieved with negligible revenue losses. These reforms are likely to help increase export competitiveness through access to better technologies and increased competition.

Second, high tariffs may be counterproductive to increase revenues because they increase incentives to misreport. There is a positive association between misreporting and tariff rates. The higher tariff rates are, the higher the evidence of importers misreporting import flows, likely to avoid paying the high tariffs.

Third, preliminary analysis conducted by the World Bank's Research Department suggests trade liberalization leads to positive welfare effects in Nepal, and in addition, that these gains are higher among the poorer households. Preliminary estimates suggest gains of about 1.7 percent in welfare, on average, with this effect being driven by lower prices for tradables and non-tradables, and greater for poor

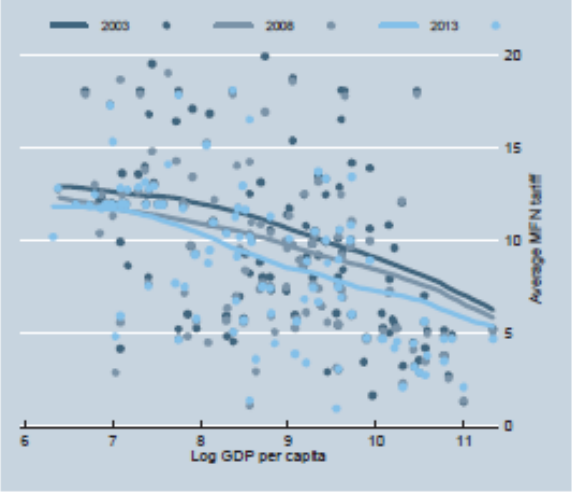
households. It is likely that these estimates are a lower bound for the true effect of trade liberalization on welfare in Nepal, since they do not consider the dynamic gains that take place when, after opening to global markets, firms become more productive through increased exposure to a wider set of technological options, and through increased competition.

The reminder of the section is structured as follows. After describing the evolution of tariff liberalization in Nepal and the South Asia region, this section introduces international and country-specific evidence that links reductions in tariffs with increased productivity and enhanced export outcomes. The importance of imports as a source of tax revenues in Nepal is then discussed. The impact of five potential tariff reform scenarios are assessed with the goal of finding reforms that minimize revenue losses. Finally, we briefly describe two potential policy options to recoup revenue losses arising from tariffs liberalization.

IV.1 Trade Policy Reforms in the Region: A Snapshot

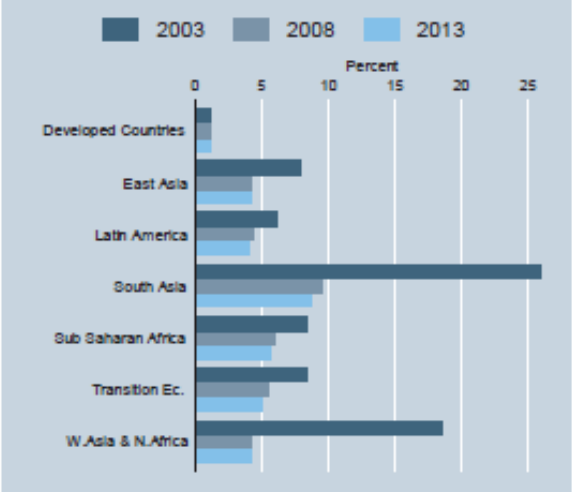
Trade liberalization resulted in a significant worldwide reduction in tariffs during the last decades but South Asia still exhibits one of the highest average tariffs in the world. Figure 23 shows that, despite the decline in tariffs over the last decades, tariff restrictiveness is still substantially higher in developing countries, where it adds about 5 percent to the cost of traded goods relative to developed countries. However, tariff liberalization has not been equally achieved across the developing world with tariff restrictiveness relatively higher in South Asia than in any other region. Figure 24 shows that average tariff restrictiveness in South Asia (around 9 percent) is almost double that in other regions like Sub-Saharan Africa (around 5 percent), Western Asia and North Africa (about 4 percent), and Latin America (4 percent).[30]

Figure 23. MFN Tariffs and GDP Per Capita



Source: UNCTAD (2014).

Figure 24. Import Restrictiveness (TTRI)

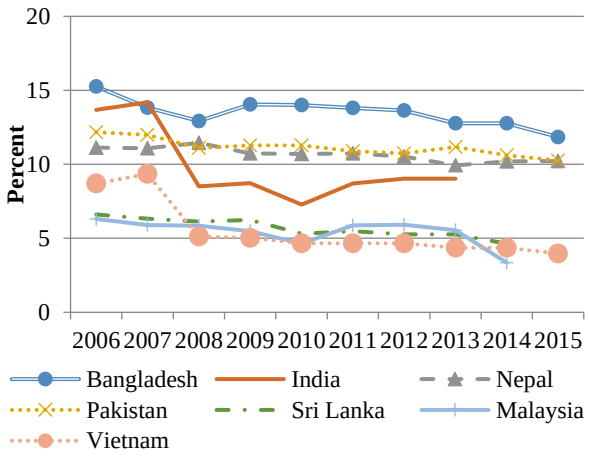


Source: UNCTAD (2014).

[30] Figure 24 portrays the tariff trade restrictiveness index (TTRI), which measures the average level of tariff restrictions imposed on imports and which is calculated based on applied tariffs (ad-valorem and specific), including tariff preferences.

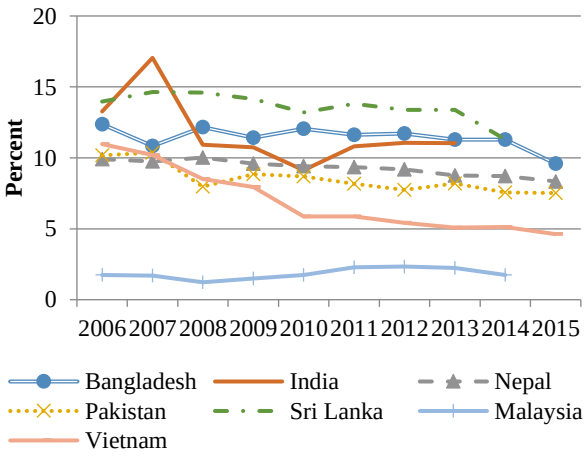
The pace of tariff liberalization in Nepal has been slow and the country still applies significantly higher tariffs on key product groups such as intermediate and capital goods. Nepal's simple average tariff declined only 2 percentage points (from 14.2 percent to 12.2 percent) between 2000 and 2017. Nepal has consistently applied higher tariffs on the import of intermediate and capital goods than countries that benefit from integration into global value chains such as Vietnam and Malaysia. For instance, in 2015, Nepal had a simple average tariff of 10.2 percent on intermediate goods, which was 6.3 percent higher than Vietnam's and 6.9 percent higher than Malaysia's simple average tariff on intermediate goods, which stood at 3.9 percent. Likewise, Nepal's average tariff on capital goods was 7.8 percent in 2015, which is more than double that of Vietnam and Malaysia, which had average tariffs on capital goods of 3.1 and 2.3 percent, respectively.

Figure 25. Simple Average Tariff on Intermediate Goods, 2006-15



Source: World Integrated Trade Solutions Database.

Figure 26. Simple Average Tariff on Raw Materials, 2006-15



Source: World Integrated Trade Solutions Database.

Figure 27. Simple Average Tariff on Cotton Fabrics, 2006–1

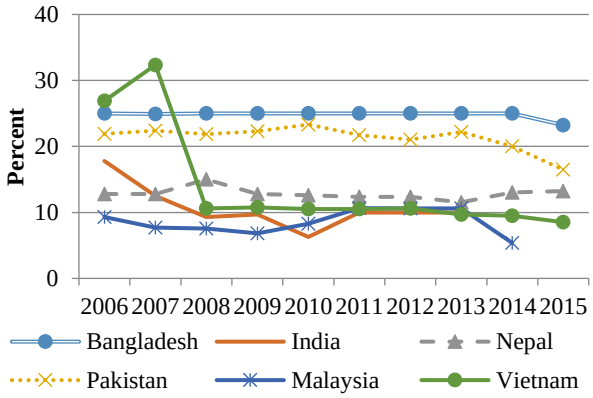
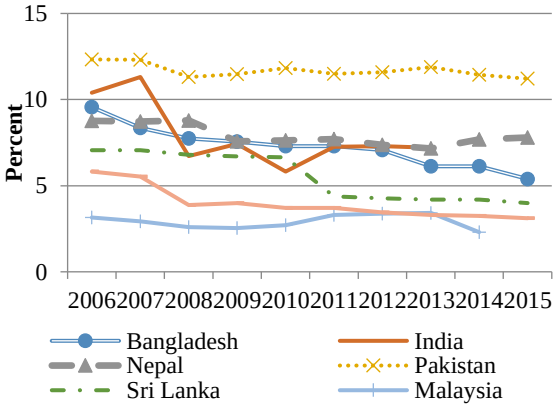


Figure 28. Simple Average Tariff on Capital Goods, 2006–15



Source: World Integrated Trade Solutions Database.
Note: Cotton fabrics includes HS chapters 52.08-52.12 and 60.01-60.06.

IV.2 Import Tariffs, the Import-to-Export Environment, and Competitiveness

In most developing countries, imported intermediate inputs are of higher quality than domestic varieties and embody technology and knowledge that lead to higher firm productivity and improved quality of final products. Since imported inputs enhance firm productivity, they also play a role for firm export performance. This is important in the context of Nepal because more than 90 percent of Nepalese exporters directly import some of the products necessary for production of exports. For example, footwear exporters import more than 20 types of raw materials (leather, glue, soles, accessories, etc.) mainly from India, China, and Thailand; pashmina exporters import wool and silk from China and India; and hand-woven carpet manufacturers source most of their wool, silk and dyes from New Zealand, China and Switzerland, respectively.

Increasing use of imported intermediate inputs is necessary for participation in international production networks. According to a recent survey by the Organization for Economic Cooperation and Development (OECD) and the World Trade Organization (WTO) of 250 lead firms and suppliers in the agri-food sector, more than 80 percent of businesses in global value chains perceive imports of goods and services as being important or critical for their exports.[31] In a world in which 80 percent of world trade happens within international production networks, export competitiveness is increasingly dependent on efficient sourcing of imported intermediate inputs, as well as access to final producers and consumers abroad.

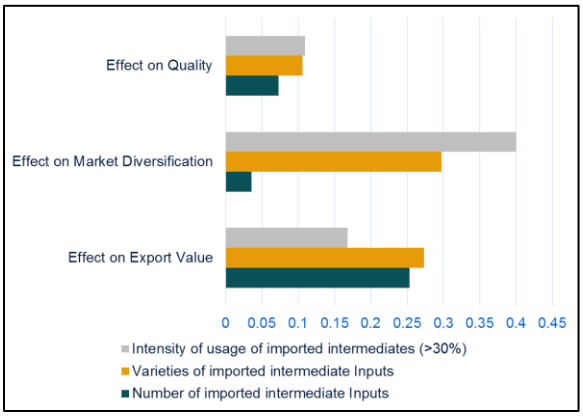
For Nepalese firms to be competitive in international markets, they need to be able to access the widest set of intermediates from a supplier that offers the best value for money ratio. High input tariffs, para-tariffs, or other forms of protection, add to import costs and restrict the choice that firms face when making technological decisions. Currently, restrictive trade policies are increasing the production costs of Nepalese firms. This implies that Nepal's tariff code needs to be streamlined, and tariffs on key intermediates need to be reduced. For example, producers of pashminas, a traditional Nepalese export product, need to import yarn from China, paying a 5 percent tariff. This cuts into their competitiveness. In another example, Nepalese tea producers that opt to add value through professional packaging and branding are more heavily burdened since they need to pay 36 percent in tariffs plus value-added tax to buy filter bags from Germany.

In Nepal, greater use and variety of imported intermediate inputs is correlated with higher exports, diversification of destination markets, and higher quality of exports. Evidence from firm-level analysis indicates that Nepalese firms that import more than 30 percent of intermediates from outside members of the SAARC have 16.8 percent larger export values, export to 40 percent more destinations, and have unit values that are 10 percent higher on average than other firms (see Figure 29).[32] These estimates, which control for firm and year fixed-effects, provide some evidence that the foreign

[31] Organization for Economic Cooperation and Development and World Trade Organization (2013a). *Aid for Trade at a Glance 2013: Linking to Value Chains*, Paris: OECD.
[32] "Nepal's Integration into Value Chains – Stylized Facts and Policy Options." World Bank Group (2016).

technology embodied in imported intermediate inputs and their higher sophistication have a beneficial effect for exporter performance in Nepal. Similar evidence was found in Pakistan (World Bank 2017) where firms that directly import intermediate inputs had 5.3 percent larger export values, export to 7.2 percent more destinations overall and to 4.3 percent more destinations outside of the region, on average, than other firms.

Figure 29. Export Performance Premia for Exporter-Importers in Nepal



Source: World Bank (2016). Note: the figure shows the marginal effects on quality, diversification and export values, of increasing the intensity of usage of imported intermediates, the varieties of imported intermediate inputs used and the number of imported intermediates used, respectively.

International evidence suggests that much of the gains from trade liberalization result from increased productivity of domestic firms that have greater access to a wider variety of inputs. Empirically, most studies have found imports of intermediates or declines in input tariffs to be associated with sizable productivity gains. Halpern et el. (2009) find that importing inputs increases firm productivity by 11 percent, while Kasahara and Rodrigue (2008) predict that a 100 percent decrease in the share of domestic intermediates may lead to a 0.5-13 percent increase in firm productivity. Amiti and Konings (2007) suggest that a 10-percentage point fall in input tariffs leads to a 12 percent productivity gain for importing firms, which is at least twice as high as any gains from reducing output tariffs. Topalova and Khandelwal (2011) find that a 10-percentage point decline in input tariffs increases productivity by 4.8 percent.

Several studies have found that decreases in input tariffs lead to either a higher probability of a firm exporting its products and increasing the value of exports as well. Using Argentinean data, Bas (2012) found that a 10-percentage point decrease in input tariffs resulted in a 6 percent increase in the probability of exporting for the average firm. Likewise, Chevassus-Lozza, Gaigné, and Le Mener (2013) find that a 10-percent decrease in input tariffs would increase total export values by 1.1 percent and employment by 0.1 percent if no firms exit the export market. Feng, Li and Swenson (2016) found a 1 percent increase in a firm's imports of intermediate inputs lead to a 1.7 percent increase in export value in China. Table 7 offers a detailed compilation of recent studies that show a positive impact of a tariff reduction in intermediate inputs on several firm level outcomes (productivity, probability of export, export value, etc.).

Table 7. Potential Effects from Changes to Import Tariff on Intermediate Inputs

Trade policy change	Potential effect	Source	Country
10 percentage point reduction in input tariff	12 percent productivity increase for importing firms	Amiti and Konings (2007)	Indonesia
10 percentage point reduction in input tariff	4.8 percent productivity increase	Topalova and Khandelwal (2010)	India
10 percentage point reduction in input tariff	1.1 percent increase in total export sales and 0.1% increase in employment	Chevassus-Lozza, Gaigné, and Le Mener (2013)	France
10 percentage point reduction in input tariff	5.1 percent productivity increase	Yu (2015)	China
10 percentage point reduction in input tariff	6 percent increase in the probability of exporting for the average firm, and, similarly, 8 percent for the average importing firm	Bas (2012)	Argentina
100 percent decrease in the share of domestic intermediates	0.5-13 percent increase in firm productivity	Kasahara and Rodrigue (2008)	Chile
1 percentage point reduction in input tariff	1 percent increase in probability of producing high-quality products	Rahardja and Varela (2014)	Indonesia
10 percentage point increase in the share of imported intermediates in total inputs	1.22 percent increase in product variety	Rahardja and Varela (2014)	Indonesia
Increase in the number of imported inputs from 0 to 100 percent	9.6 percent increase in productivity	Bas and Strauss-Kahn (2014)	France
Increase in the share of imported inputs from 0 to 100 percent	11 percent increase in productivity	Halpern, Koren and Szeidl (2011).	Hungary
1 percent increase in import value of intermediate inputs	1.65 percent increase in export value	Feng, Li and Sweson (2016)	China

Source: Authors' elaboration.

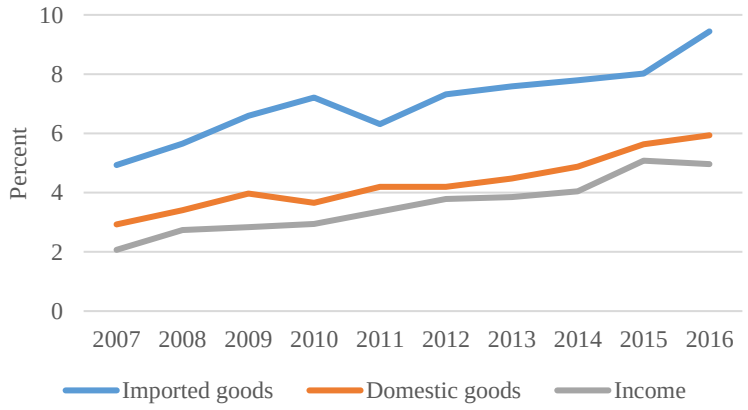
IV.3 Imports Tariffs and Taxes, and Revenues: What is the impact in Nepal?

Import Tariffs in Nepal

Revenue generated by taxing imports continues to be the dominant source of tax revenues in Nepal. Besides tariffs, Nepali Customs also raises a substantial share of additional revenue at ports of entry by levying a range of domestic taxes like the value-added tax (VAT), excise, agricultural reform fee, and road construction fee. Some of these taxes and fees raise nontrivial amounts with respect to tariffs. For instance, for every rupee collected in tariff revenue, Rs. 1.2 was collected in VAT and Rs. 0.4 in excise duty in 2016. Thus, about half of the government's tax revenue in Nepal has come from trade-related taxes over the last decade (between 46 percent and 52 percent from 2007 to 2016). The difficulties in enforcing the tax code domestically and several exemptions to domestic production has also meant that imports account for a significant share of VAT (66 percent) and excise duty (45 percent) revenues compared to domestic activities.[33]

The impressive increase in tax revenues as percentage of GDP in the last decade relied significantly on revenue from imports. Tax revenues as percentage of GDP increased from 9.9 percent to 20.3 percent in the last decade in Nepal. Although taxes on domestic goods and income increased significantly over the last decade, a large share of the increased revenue mobilization was supported by revenue arising from tariffs and VAT charged on imports (Figure 30). The fact that the tax reforms over the last decade have not been able to change the tax revenue mix is not surprising in a low-income country with a substantial informal sector like Nepal. In such settings, whenever short term needs for revenue arise, it is easier to collect revenues by taxing imports that are channeled through fewer physical points and better controlled than domestic sources.

Figure 30. Tax Revenue as Percentage of GDP, 2007-2016



Source: World Bank Calculations.

[33] Using data from the Ministry of Finance, Wagle (2011) shows that VAT revenue coming from imports exceeded 60 percent in the 10 years before this study.

Most tax revenue from imports comes from consumer goods. When looking at Nepal's import revenue in detail, consumer goods account for the bulk of import revenue (43 percent), while intermediate and capital goods account for 27 percent and 25 percent of tariff revenue, respectively (Figure 32).

Box 4: Expenditure gains for trade policy reform in Nepal along the income distribution

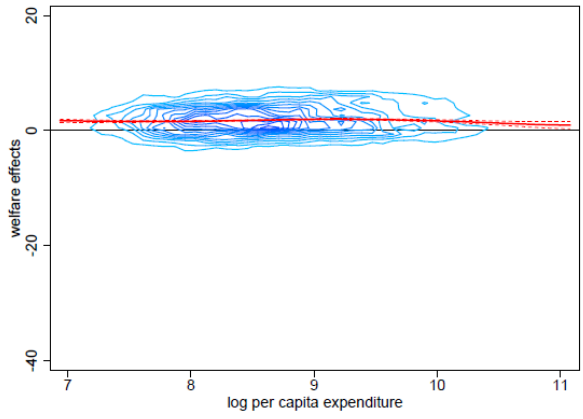
By affecting the price of the goods and services that are traded in an economy and the revenues the government collects, tariff reforms are likely to affect household incomes. And these effects are not likely to be distributionally neutral. This report argues that a simplification of the tariff code, implying tariff reductions, particularly for intermediate inputs would help firms become more competitive, by having access to a wider set of technological choices. But what is the evidence on the effects of trade on average welfare gains, in the case of Nepal, and how different are these gains at different points of the income distribution?

In a recent contribution, Artuc, Porto and Rijkers (2017), look at income gains and inequality costs of trade reforms using survey data for 54 developing countries including Nepal. They combine tariffs on agricultural and manufacturing goods with household survey data on income and expenditure patterns, and estimate the first order effects of the elimination of tariffs on household welfare. They examine the effects of trade liberalization on real income along different points of the distribution by estimating the impact on consumption of traded and non-traded goods, on wages, on farm and non-farm income and on government transfers.

What do the results show for Nepal?

Preliminary results for Nepal suggest that in that country, households would gain an average of 1.7 percent welfare from a trade reform that brings all tariffs to zero. This net gain of 1.7 is the result of (i) a gain in purchasing power, leading to increased expenditures by 6.3 percent, and driven by cheaper tradables and non-tradable goods, and (ii) a loss of 4.6 percent in nominal incomes both in the tradables and non-tradable sectors (as both tradable and non-tradable prices fall after the reduction in tariffs) as well as through reduced transfers from the government (as their tariff related income has fallen).

Figure 31. Patterns of Distributional Impact of Tariff Reform Induced Welfare Gains - Nepal



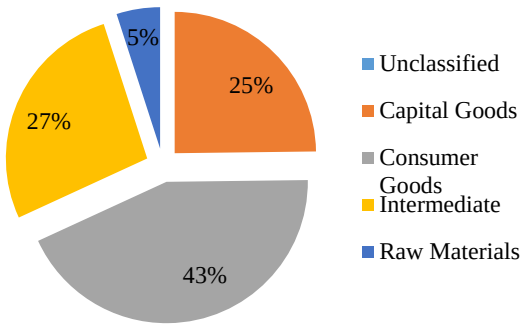
The welfare gain of tariff reforms is on average stronger for the poor than for the rich. Figure 31 shows the average kernel (in red) and the bivariate kernels. First, results reveal that, on average there are positive welfare gains along different levels of expenditure. This is evidenced by the red curve (the average kernel) being above zero. Second, even if there are average gains along different levels of expenditures, there are some households that lose from the reform, while others gain (some, although a relatively small fraction, of the area of the bivariate kernel falls under zero). Losers are likely net producers of tradables, whose price would have fallen with the reform, while winners are likely net consumers of tradables.

These preliminary results are likely to underestimate the gains from trade. This is because they only consider the gains from trade that arise through the static price effect on tradables, and endogenous reactions of non-tradables that also lead to wage changes. However, the results do not consider the dynamic gains associated with reduced tariffs, and therefore increased trade integration through a greater scope for technological progress, as discussed in the literature, and summarized in Table 7 of this report.

Source: World Bank based on Artuc, Porto and Rijkers (2017).

Table 11 in the Annex displays the list of top 10 revenue-generating import products in every category (consumer, capital, intermediate goods, raw materials and cotton fabrics). The bulk of intermediate products that generate a larger portion of fiscal revenue seem to be construction materials while imports of cotton fabrics constitute less than 1 percent of import revenue.

Figure 32. Import Tax Revenue by Product Type, 2016



Source: World Bank calculations based on data from the Nepalese Customs Office.

IV.3.1 The Fiscal Cost of Reducing the Tariff Code's Anti-Export Bias: Some Simulations

Any proposed tariff reform would need to consider Nepal's fiscal restrictions and the importance of imports for tax revenues. Short-term revenue losses arising from trade liberalization are negligible when considered in the broader context of welfare gains due to trade creation, productivity enhancement, and economic diversification. In the short term, trade liberalization might lead to a high reduction in tax revenues in a country like Nepal, but these concerns do not need to stymie trade and fiscal reforms. However, if the cost of revenue loses is not adequately addressed, trade reforms are not only unlikely to be undertaken but they can be promptly reversed. Buffie (2001) cites at least 12 episodes where revenue shortfalls triggered partial or full policy reversals in recent decades.

This section develops five trade reform scenarios in which tariffs can be cut with the least impact on revenue and discusses the results.[34] In the first three scenarios, tariffs are eliminated for all products within three groups separately, namely raw materials, intermediate goods, and capital goods. The essence of this reform is to eliminate the tariffs faced by these product groups for all importers and assess the feasibility (in terms of revenues) of facilitating access to inputs for the domestic industry and consumers. In the next four scenarios, tariffs are eliminated only for intermediate inputs used by selected export oriented industries (mainly textile and apparel), namely cotton fabrics, intermediate inputs for ready-made garments, and key intermediate goods imported by apparel, pashminas, and carpet manufacturers.

Extensive tariff liberalization would result in revenue losses without additional measures aimed at enhancing the tax base and improve tax collection domestically (Table 8). In scenario 1, which eliminates tariffs for raw materials, tariff revenues drop by 6.6 percent from Rs. 83.3 billion to Rs 77.8 billion and total revenues drop by 2.6 percent from Rs. 199.1 billion to Rs. 193.8 billion. In scenario 2, which eliminates tariffs for intermediate goods, tariff revenues drop by 27 percent from Rs. 83.3 billion to Rs. 60.9 billion and total revenues drop by 9.9 percent from Rs. 199.1 billion to Rs. 179.4 billion. In scenario 3, which eliminates tariffs for capital goods, tariff revenues drop by 20.7 percent from Rs. 83.3 billion to Rs. 66.1 billion and total revenues drop by 6.2 percent from Rs. 199.1 billion to Rs. 186.7 billion.[35] The main message from Table 8 is that these reforms result in significant loss of revenue and that such an extensive tariff reduction (all raw materials, intermediate goods or capital goods) cannot be accomplished without adversely affecting total government revenues.

A more detailed tariff reform that focuses on key intermediate inputs for export sectors would result in negligible revenue losses. The impact of reducing tariffs on cotton fabrics, intermediate inputs for ready-made garments, and key intermediate goods imported by apparel, pashminas, and carpet manufacturers seems to be almost negligible in terms of total revenues. In scenario 4, which eliminates tariffs for cotton fabrics (71 tariff lines), tariff revenues drop by 0.6 percent from Rs. 83.3 billion to Rs. 82.8 billion and total revenues drop by 0.2 percent from Rs. 199.1 billion to Rs. 198.6 billion. In scenario 5, which eliminates tariffs for intermediate inputs for ready-made garments (295 tariff lines), tariff revenues drop by 1.4 percent from Rs. 83.3 billion to Rs. 82.2 billion and total revenues drop by 0.5 percent from Rs. 199.1 billion to Rs. 198.1 billion.

In scenario 6, which eliminates tariffs for a wider definition of intermediate inputs for ready-made garments (480 tariff lines)[36], tariff revenues drop by 2.5 percent from Rs. 83.3 billion to Rs. 81.3 billion and total revenues drop by 0.9 percent from Rs. 199.1 billion to Rs. 197.2 billion. In scenario 7, which eliminates tariffs for key intermediate goods imported by apparel, pashminas, and carpet manufacturers (48 tariff lines), tariff revenues drop by 1.2 percent from Rs. 83.3 billion to Rs. 82.3 billion and total

[34] Simulations, carried out on integrated customs duty data and import values and revenues from FY15/16. The simulations do not consider revenue gains expected due to increases in firm level productivity, decrease in misreporting and other revenue-enhancing channels. As such, the estimates above represent are a lower bound.

[35] The lower reduction in total revenues relative to tariff revenues stems from the fact that the tariff elimination would reduce import prices and stimulate demand for those products. Additional VAT and excise taxes are charged on that induced demand. Those additional domestic taxes partially compensate for the tariff revenue losses.

[36] This first definition of intermediate inputs for ready-made garments used in the simulations is based on Ferrantino and Schmidt (2017). Because this classification leaves out some products imported in Nepal by the RMG industry, the second classification includes all products in HS chapter 50-6, which traditionally encompass all textile and apparel intermediates.

revenues drop by 0.5 percent from Rs. 199.1 billion to Rs. 198.1 billion. As can be seen from Table 8, the reduction in total revenues arising from these narrower reforms range from 0.2 percent to 0.9 percent–a significantly lower and more manageable loss than the wider set of reforms simulated in the previous step.

The effect of the proposed reforms on firm productivity and exports could be substantial given the high level of tariffs in Nepal. The average tariff for intermediate products in Nepal was 10.2 percent in 2016. Given the elasticities reported in Table 7, eliminating tariffs on intermediate inputs (even if only for some selected industries) could result in a 5 to 12 percent increase in productivity and 6 percent increase in the probability of exporting for the average firm using these intermediates. If the estimated revenue losses for the more targeted tariff reforms result in less than a 1 percent decline, the benefits of such reforms seem to outweigh their costs. In addition, if tariff reforms are undertaken gradually, the revenue gains through increased exports (and thus, economic activity) could rapidly offset the initial revenue loss due to lower tariff rates.

Box 5: Simulating Trade & Revenue Impact of Tariff Reforms Using TRIST

TRIST (Tariff Reform Impact Simulation Tool) has been developed by the International Trade Department of the World Bank Group, which allows estimates of the impact of tariff reform scenarios based on a partial equilibrium model. Import responses to tariff changes are modeled in a partial equilibrium framework considering substitution of imports from different sources, substitution of domestic production with imports and the effect of tariff liberalization on overall demand. TRIST is only relevant for partial equilibrium analysis of short-term impacts of trade reform since it treats demand for each product in isolation from the rest of the economy. Hence, it does not consider inter- and intra-sectoral linkages or the economy- wide impacts of tariff changes. TRIST cannot be used to provide an overall (medium to long term) estimate of the impact of a reform scenario.

In practical terms, the trade response to a tariff change is modeled in three consecutive steps. First, the model allows for the substitution of imports from one trading partner for imports from another trading partner following changes in relative prices of different suppliers due to preferential changes in tariffs. Second, the model allows for substitution between imports and domestic production as the relative price of overall imports of the product changes relative to the price of domestic production. Third, the model allows for a demand (real income) effect according to which the overall consumption of a product changes in response to a change in the

Table 8. Impact of Tariff Reforms on Revenue

	Scenario 1		Scenario 2		Scenario 3	
Reform: Elimination of tariffs for:	Raw Materials		Intermediate Goods		Capital Goods	
In millions of NPR	I	II	I	II	I	II
Impact on imports:						
Imports pre	774,640	774,640	774,640	774,640	774,640	774,640
Imports post	782,165	778,805	816,317	806,609	794,749	807,943
Change in imports	7,524	4,165	41,677	31,968	20,108	33,302
% change in imports	1.0%	0.5%	5.4%	4.1%	2.6%	4.3%
Impact on Revenue:						
Tariff revenue pre	83,338	83,338	83,338	83,338	83,338	83,338
Tariff revenue post	77,835	77,835	60,858	60,858	66,068	66,068
Change in tariff revenue	-5,503	-5,503	-22,479	-22,479	-17,270	-17,270
% change in tariff revenue	-6.6%	-6.6%	-27.0%	-27.0%	-20.7%	-20.7%
Total Tax Revenues on Imports						
Total revenue pre	199,092	199,092	199,092	199,092	199,092	199,092
Total revenue post	193,819	193,590	179,404	178,226	186,649	194,233
Change in Total revenue	-5,273	-5,502	-19,688	-20,866	-12,443	-4,859
% change in Total revenue	-2.6%	-2.8%	-9.9%	-10.5%	-6.2%	-2.4%

Source: World Bank calculations based on data from Nepal's Customs.
Note: e= product-spec. demand elasticity. I = Kee, Nicita, Olarreaga (2008); II= SMART.

Table 9. Impact of Tariff Reforms on Revenue

	Scenario 4		Scenario 5		Scenario 6		Scenario 7	
Reform: Elimination of tariffs for:	Cotton Fabrics		Intermediate Apparel		Textile Apparel (HS 50-60)		Inputs for Pashminas, Carpets & Apparel	
In millions of NPR	I	II	I	II	I	II	I	II
Impact on imports:								
Imports pre	774,640	774,640	774,640	774,640	774,640	774,640	774,640	774,640
Imports post	775,569	775,359	776,804	776,512	777,977	777,745	776,002	776,175
Change in imports	929	719	2,163	1,872	3,337	3,105	1,362	1,535
% change in imports	0.1%	0.1%	0.3%	0.2%	0.4%	0.4%	0.2%	0.2%
Impact on Revenue:								
Tariff revenue pre	83,338	83,338	83,338	83,338	83,338	83,338	83,338	83,338
Tariff revenue post	82,812	82,812	82,145	82,145	81,296	81,296	82,335	82,335
Change in tariff revenue	-526	-526	-1,193	-1,193	-2,042	-2,042	-1,003	-1,003
% change in tariff revenue	-0.6%	-0.6%	-1.4%	-1.4%	-2.5%	-2.5%	-1.2%	-1.2%
Total Tax Revenues on Imports								
Total revenue pre	199,092	199,092	199,092	199,092	199,092	199,092	199,092	199,092
Total revenue post	198,618	198,591	198,023	197,986	197,215	197,187	198,135	198,158
Change in Total revenue	-474	-501	-1,069	-1,106	-1,877	-1,905	-957	-934

% change in Total revenue	-0.2%	-0.3%	-0.5%	-0.6%	-0.9%	-1.0%	-0.5%	-0.5%

Source: World Bank calculations based on data from the Nepalese Customs Office.

Note: e= product-specific demand elasticity. . I = Kee, Nicita, Olarreaga (2008); II = SMART.

IV.3.2 Alternatives for Recouping Tariff Revenue Losses

A reduction in tariffs, particularly in sectors with high tariff rates, could lead to increasing revenues due to a reduction in misreporting of import values. Research shows that importers have an incentive to understate the value of imports to evade tariffs, with the incentives decreasing in intensity of enforcement (see Box 6). In some cases, lowering of particularly high ad-valorem tariffs decrease the incentives for misreporting and smuggling and encourages more goods to flow through normal channels, thus increasing tariff revenue. The discrepancy index, to assess the level of misreporting, is calculated as the difference between import values reported by importers in Nepal and exported values reported from the origin country where the merchandise is coming from. A value of the discrepancy index equal to zero means there is no under-reporting (the import values reported by both the exporter and the importer coincide). Negative values of the index suggest under-reporting (the imported value reported by the importer are smaller compared to the ones reported by the exporter). This inverse relationship between under-reporting and tariff rates at the sectoral level also holds in Nepal (Figure 33). As such, a general decrease in tariff rates can be expected to lead to a reduction in misreporting leading to an increase in revenues. The list of top import products with under-reported values is listed in Table 10 in the Annex.

Box 6. Misreporting and Discrepancy Gap

Ferrantino, Liu and Wang (2010) analyzed simultaneous misreporting to authorities in two countries (China and the United States) and find statistical evidence of under-reporting exports at the Chinese border to avoid paying the VAT).

Historically, China's reported exports to the United States have been smaller than the United States' reported imports from China. Many researchers have attributed it to re-exports of Chinese goods from Hong Kong to the United States. As the role of Hong Kong as an entrepôt for China-U.S. trade has decreased in recent years, discrepancy has become increasingly large to suggest different causes for misreporting.

Ferrantino et al. have used a variation across disaggregated trade data at the Harmonized System subheading level (HS-6) between 1995 and 2008 to identify statistically significant and economically important correlations between the observed discrepancies and the incentives for misreporting. The analysis concentrates on discrepancies between China's reported direct exports to the United States and the United States' reported direct imports from China. The explanatory variables capturing the economic incentives for misreporting include the tariff imposed at the U.S. border, the difference between the Chinese VAT collection rate and rebate rate, the shares of different enterprise types, and trade regimes in China in reported direct exports to the United States, and the share of related-party trade in the United States reported imports from China.

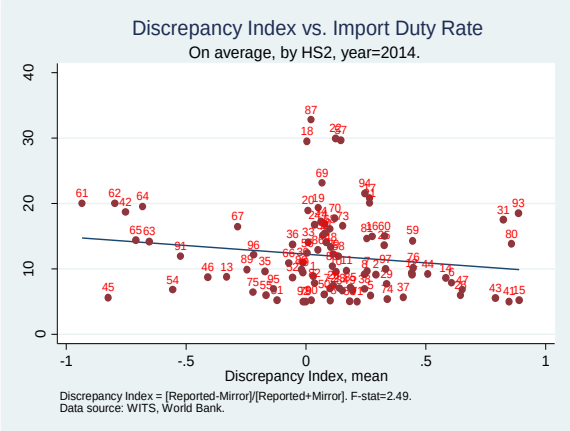
The measure of statistical discrepancies between U.S.-reported direct imports from China and China-reported direct exports to the United States is computed as: $GAP_{it} = \ln(M_{it}^{US})-\ln(X_{it}^{CH})$, where M is U.S.-reported direct imports from China; X is China-reported direct exports to the United States; i represents product; and t represents year. They find the average discrepancy for products with high tariff rates to be much lower than the average discrepancy for products with low tariff rates, which implies a negative association between the GAP and U.S. tariff rates. This is consistent with the tariff evasion hypothesis: higher U.S. import tariffs lead to under-reporting imports at the U.S. border, and hence, lower GAP.[37]

Source: Ferrantino, Michael; Xuepeng, Liu; Wang, Zhi (2012). Evasion behaviors of exporters and importers: Evidence from

[37] In a recent paper, Kee and Nicita (2017) report a similar relationship between relatively highly trade restrictive NTMs (as measured by their ad-valorem equivalent) and misreporting between China and the United States.

the U.S.-China trade data discrepancy, *Journal of International Economics 86, pp.141-157.*

Figure 33. Tariff Rates and Misreporting, 2014



Source: World Bank calculations based on UN Comtrade Data.

A stronger shift to domestic taxation (whether domestic consumption or income taxes) could also help pay for tariff reform in Nepal. In the case of Nepal, Wagle (2011) shows that tariffs can be reduced without adversely affecting total government revenues by implementing domestic taxes like VAT and excise effectively. More specifically, he found that a single rated VAT with no exemptions is a highly effective form of modern taxation and can negate substantial losses in tariff revenues. There is however a powerful assumption behind the advocacy of a switch from tariffs to a broad-based consumption tax, namely, that countries have the capacity to enforce a complicated system like VAT even when it is easier and less costly to collect taxes at fixed border points. Wagle (2011) finds that low income countries have had a mixed record of achievement in offsetting reductions in trade tax revenue, partly because of their weak enforcement of domestic taxes like VAT.

Table 10. List of Top Under-Reported Import Products (Discrepancy Index<0), 2014

Product code	Product description	Reported '000 USD	Mirror '000 USD	Discrepancy Index	Import Tariff		Total Applicable Duty	
					SAARC	Other	SAARC	Other
710812	Gold (incl. gold plated with platin	0.165	163294.5	-0.99	5	5	5	5
720825	Flat-rolled products of iron/non-al	0.023	13681.96	-0.99	5	5	18.65	18.65
610323	Men's/boys' ensembles, knitted/croc.	0.037	19626.62	-0.99	20	20	35.6	35.6
720826	Flat-rolled products of iron/non-alum.	0.011	3030.558	-0.99	5	5	18.65	18.65
722620	Flat-rolled products of high speed	0.141	30980.76	-0.99	7	10	20.91	24.3
610422	Women's/girls' ensembles, knitted/croc.	1.109	65505.38	-0.99	20	20	35.6	35.6
871110	Motorcycles (incl. mopeds) & cycles	0.006	350.411	-0.99	30	30	105.6	105.6
611241	Women's/girls' swimwear, knitted/croc.	0.004	195.891	-0.99	20	20	35.6	35.6
520811	Woven fabrics of cotton, unbleached	0.6	13217.88	-0.99	5	15	18.65	29.95
910212	Wrist-watches, electrically operate	0.425	8489.057	-0.99	9	15	23.45	29.95
841122	Turbo-propellers, of a power >1,100cc	0.078	1114.362	-0.99	7	10	20.91	24.3
611231	Men's/boys' swimwear, knitted/croch.	0.099	963.601	-0.99	20	20	35.6	35.6
722100	Bars & rods, hot-rolled, in irreg.	0.611	5171.083	-0.99	7	10	20.91	24.3
720390	Spongy ferrous products	1.359	9857.187	-0.99	5	5	18.65	18.65
610322	Men's/boys' ensembles, knitted/croch.	27.728	191705.9	-0.99	20	20	35.6	35.6

Source: WITS, World Bank; Nepal Customs Data.

Note: Discrepancy Index = [Reported-Mirror]/[Reported+Mirror].

V. Appendix

Table 11. Top 10 Revenue-Generating Products, by Category

HS code	Description	Imports Revenue, mln NPR	Share of revenue, %
Consumer goods			
87032200	Vehicles of a cylinder capacity exceeding 1000	11,653	6.06%
87032300	Vehicles of a cylinder capacity exceeding 500 cc but not 1000	8,287	4.31%
27101930	Diesel	6,686	3.47%
27101210	Petrol	5,682	2.95%
87032190	Other vehicles of a capacity up to 1000 cc _	3,143	1.63%
27111900	LP GAS	2,575	1.34%
85171200	Telephones for cellular networks or for other wireless net	2,365	1.23%
87033200	Vehicles with diesel engine of cylinder capacity 1500-2500	1,817	0.94%
21069040	Concentrate of non-alcoholic soft drinks _	1,605	0.83%
69089000	Glazed ceramic flags and paving, hearth or wall tiles, etc.	1,124	0.58%
Capital Goods			
87112000	Motorcycles with reciprocating engine of capacity 50-250cc	12,779	6.64%
87060080	Chasis of Bus & Trucks _	6,684	3.47%

87042110	Goods Vehicles, pick-up with capacity of more than two per	2,759	1.43%
87042120	Delivery Van	2,289	1.19%
87112090	Motorcycles with reciprocating engine of capacity 50-250 cc	1,695	0.88%
87042300	Goods vehicles, with diesel or semi-diesel engines, gvw >2	1,409	0.73%
87042290	Others diesel or semi diesel motor vehicle gvw 6-20 tonn.	1,325	0.69%
85072000	Lead-acid accumulators (excl. for starting piston engines)	1,078	0.56%
87112010	Motorcycles with reciprocating engine of capacity 50-250 cc	812	0.42%
87089900	Other parts & accessories of motor vehicle of 8701 to 870	765	0.40%
Intermediate Goods			
25231000	Cement clinkers	5,240	2.72%
72071900	Semi-finished products of iron or non-alloy steel, <025% c	4,948	2.57%
15071000	Crude soya-bean oil	1,991	1.03%
71081300	Gold	1,752	0.91%
72083900	Flat/hot-rolled iron/steel width >=600mm	1,482	0.77%
39021000	Polypropylene, in primary forms	1,424	0.74%
39012000	Polyethylene having a specific gravity >=0 4, in primary form	1,327	0.69%
72139110	Bar & rods, hot-rolled circular cross-section	1,298	0.67%
72091800	Flat/cold-rolled iron/steel, in coils, width >=600mm	1,270	0.66%
25232900	Portland cement (excl. white)	1,063	0.55%

Raw Materials			
27011900	Other coal, not agglomerated, not elsewhere specified (nes).	2,108	1.10%
24012000	Tobacco, partly or wholly stemmed/stripped	1,308	0.68%
8029000	Others nuts	773	0.40%
26219000	Other slag and ash, including seaweed ash, Kelp)	754	0.39%
12051000	Low erucic acid rape or colza seeds	661	0.34%
25151200	Marble and travertine merely cut into blocks or slabs	617	0.32%
70109000	Carboys, bottles, flasks, jar, pot, phials, etc., of glass	596	0.31%
8028000	Areca nuts	402	0.21%
74040000	Copper waste and scrap	315	0.16%
26180000	Granulated slag (slag sand) from the manufacture of iron	289	0.15%
Cotton Fabrics			
52121500	Printed woven fabrics of cotton, =<200g/m2 by weight, nes	230	0.12%
52121300	Dyed woven fabrics of cotton, =<200g/m2 by weight, nes	146	0.08%
52121400	Colored woven fabrics of cotton, =<200g/m by weight, nes	96	0.05%
52121100	Unbleached woven fabrics of cotton, =<200g m2 by weight, n	92	0.05%
52094200	Colored denim cotton weave, with >=85% cotton, >=200g/m2	90	0.05%
52102900	Bleached woven cotton fabrics, nes, with < 5% cotton, =<20	70	0.04%
60032000	Knitted or crocheted fabrics of cotton	56	0.03%

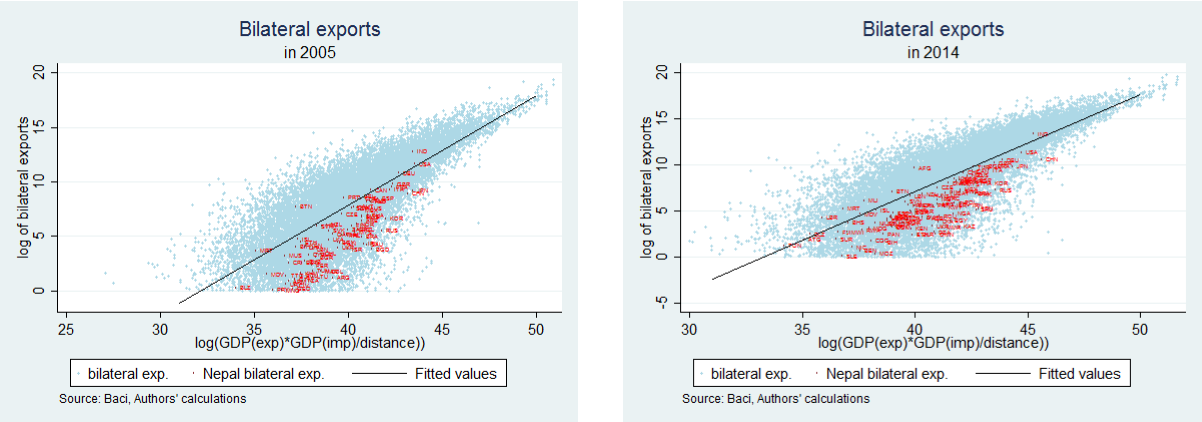
52121200	Bleached woven fabrics of cotton, =<200g/m _ by weight, nes	46	0.02%
52083900	Dyed woven cotton fabrics, with >=85% cotton, <200 g/m2 by	41	0.02%
60062200	Dyed knitted or crocheted fabrics of cotton	39	0.02%

Table 12. Nepal's Top Export Products at hs6-level, 2015

Product Code	Trade Value in '000 USD	Product Description	Share of total, %
220290	85325.39	Non-alcoholic beverages	10.55%
570110	60963.26	Carpets & other textile floor cover	7.54%
090830	46598.72	Cardamoms	5.76%
392690	40165.28	Articles of plastics	4.97%
550951	27713.97	Yarn other than sewing thread	3.43%
640419	26755.16	Footwear (excl. waterproof)	3.31%
621420	18367.3	Shawls, scarves, mufflers, mantilla	2.27%
630510	18221.27	Sacks & bags	2.25%
080290	18119.68	Nuts, n.e.s. in 08.01 & 08.02, fresh	2.24%
721720	16647.53	Wire of iron/non-alloy steel, plate	2.06%
550921	13905.13	Yarn other than sewing thread	1.72%
570190	13567.85	Carpets & other textile floor cover	1.68%
380610	12694.09	Rosin & resin acids	1.57%
550932	12623.73	Yarn other than sewing thread	1.56%
531010	12231.54	Woven fabrics of jute/other textile	1.51%
090240	12169.26	Tea, black (fermented) & partly fermented	1.51%
730690	11501.49	Tubes, pipes & hollow profiles	1.42%
Total	808529.5		100.00%

Source: WITS, World Bank. Note: mirror data, HS2007.

Figure 34. Bilateral Exports and Market Access in Nepal: 2005 and 2014



Source: World Bank calculations based on UN-Comtrade-BACI database (CEPII).

Table 13. Deep Agreements and GVC-Related Trade, Regression Results

VARIABLES	(1) export_pcnew	(2) export_pcnew	(3) export_pcnew	(4) export_pcnew
Depth	0.00869***	0.00869***	0.00875***	0.00874***
	(0.00276)	(0.00276)	(0.00276)	(0.00276)
Depth* Nepal Exporter		-0.0945		-0.0937
		(0.0961)		(0.0961)
Depth*Nepal Importer			0.469***	0.469***
			(0.108)	(0.108)
BIT	0.117***	0.117***	0.118***	0.118***
	(0.0348)	(0.0348)	(0.0348)	(0.0348)
PTA	-0.163**	-0.163**	-0.165**	-0.165**
	(0.0821)	(0.0822)	(0.0822)	(0.0822)
PTA not in force	0.0898**	0.0898**	0.0902**	0.0902**
	(0.0428)	(0.0428)	(0.0428)	(0.0428)
Observations	685,991	685,991	685,991	685,991
R-squared	0.988	0.988	0.988	0.988

Source: World Bank calculations. Note: 1) Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. 2) Results from a PPML using bilateral fixed effects, year effects, and country of origin*time and country of destination*time fixed effects.

Table 14. List of Individual Products with Preference Margin Above 10%

			GSP, GSP+ countries	Nepal's Exports to:					
product code	HS2	Effective Rate	Import to USA, US$ mln	world, US$ mln	USA, US$ mln	India, US$ mln 2015	average price (USITC)	average price NEPAL (across all countries)	product description
420292	42	15%	937.45	2.509	1.41			0.30	With outer surface of plastic sheet
871200	87	10%	502.32	0.003			121.97	1.63	Bicycles and other cycles
160414	16	16%	495.67	0.000			4.35		Tunas, skipjack and bonito
420212	42	17%	405.81	0.079	0.03			0.76	With outer surface of plastics
851310	85	12%	297.42	0.011			1.97		Lamps
691110	69	17%	148.44	0.015			17.99	0.43	Tableware and kitchenware
701399	70	18%	134.23	0.038	0.00		2.34	6.53	Glassware
40690	4	16%	113.90	0.428	0.01		5.02	0.82	Other cheese
420232	42	17%	86.52	0.960	0.33		1.17	0.25	With outer surface of plastic sheet
420222	42	16%	65.52	1.659	0.73	0.00		0.23	With outer surface of plastic sheet
611780	61	12%	57.82	1.031	0.23		5.16	3.10	Made up clothing, other than shawls
961519	96	10%	55.73	0.023				0.00	Combs, hair-slides
821599	82	12%	45.73	0.003			0.11	0.14	Spoons, forks, ladles

621710	62	12%	38.56	0.538	0.28		3.88	16.22	Made up clothing, exc. knitted
200840	20	12%	33.88	0.000			1.21		Pears
940591	94	11%	29.03	0.002	0.00				Of glass
820320	82	11%	28.90	0.000			29.56		Pliers (including cutting pliers)
811100	81	13%	23.78	0.000			2.11		Manganese and articles thereof, inc
670290	67	11%	13.95	0.136	0.01			0.02	Artif. flowers, foliage, other than plastic
960719	96	10%	10.23	0.003			0.16		Slide fasteners, other
691200	69	25%	9.69	0.070	0.02		9.28	0.37	Ceramic tableware, kitchenware
961590	96	10%	8.80	0.020				0.07	Combs, hair-slides, other
420239	42	18%	7.94	0.058	0.01		0.65	0.44	Trunks, suitcases, other
80232	8	17%	5.63	0.000			1.37		Shelled nuts
220600	22	11%	3.61	0.004			1.25		Other fermented beverages
200850	20	23%	3.03	0.000			1.25	0.28	Apricots
190110	19	17%	1.72	0.000			7.12		Preparations for infant use, put up
701310	70	24%	1.30	0.000			1.50	0.89	Of glass ceramics
701391	70	15%	1.09	0.002			1.30	0.87	Glassware of lead crystal
630499	63	10%	0.79	1.229	0.97		13.51	0.32	Not knitted or crocheted, of other
170490	17	12%	0.63	0.056	0.05		4.36	0.27	Other
960899	96	10%	0.41	0.000			2.92		Other
220290	22	13%	0.39	85.325		85.33	1.15	0.08	Other

520300	52	16%	0.25	0.000			2.02		Cotton, carded or combed
210690	21	19%	0.25	1.247		0.68	0.79	0.22	Other
210690	21	19%	0.25	1.247		0.68	0.79	0.20	Other
210690	21	19%	0.25	1.247		0.68	0.79	0.41	Other
210690	21	19%	0.25	1.247		0.68	0.79	1.06	Other
210690	21	19%	0.25	1.247		0.68	0.79	0.84	Other
210690	21	19%	0.25	1.247		0.68	0.79	0.35	Other
80410	8	27%	0.21	0.000			0.25	0.08	Dates
71490	7	17%	0.03	0.003			0.95		Other
960310	96	23%	0.01	0.073		0.07	0.88	0.01	Brooms and brushes
640610	64	11%	0.01	0.000			5.17	0.40	Uppers and parts thereof

Source: USITC, Nepal Customs and WITS data.

Table 15. Nepal's Exports of Products Included in List of Concessions from U.S. to Nepal, by destination (2010-2015)

HS 6-digit Code	Category	U.S.		Rest of World	
420211	Trunks, suit-cases, vanity-cases, executive-cases, brief-cases, school satchels and similar containers :--With outer surface of leather, of composition leather or of patent leather	6454.578	18.25%	28917.63	81.75%
420221	Handbags, whether or not with shoulder strap, including those without handle :-- With outer surface of leather, of composition leather or of patent leather	19677.39	17.70%	91505.76	82.30%
420222	Handbags, whether or not with shoulder strap, including those without handle :-- With outer surface of plastic sheeting or of textile materials	3,274,295	51.97%	3,025,479	48.03%
420229	Handbags, whether or not with shoulder strap, including those without handle :-- Other	407,787	40.44%	600,476	59.56%
420231	Articles of a kind normally carried in the pocket or in the handbag :-- With outer surface of leather, of composition leather or of patent leather	40,904	78.06%	11,500	21.94%
420232	Articles of a kind normally carried in the pocket or in the handbag :-- With outer surface of plastic sheeting or of textile materials	71,259	35.54%	129,265	64.46%
420291	Other handbags:-- With outer surface of leather, of composition leather or of patent leather	-	0.00%	16,497	100.00%
420292	Other handbags :-- With outer surface of plastic sheeting or of textile materials	424,077	69.60%	185,246	30.40%
420299	Other handbags of materials wholly or mainly covered with paper	29,908	49.37%	30,674	50.63%
570110	Carpets and other textile floor covering of wool or fine animal hair	149,000,000	44.35%	187,000,000	55.65%
570231	Carpets and other textile floor coverings, woven, not tufted or flocked, whether or not made up, including "Kelem", "Schumacks", "Karamanie" and similar handwoven rugs other, of pile construction, not made up :-- Of wool or fine animal hair	-	0.00%	20,870	100.00%
570291	Carpets and other textile floor coverings, woven, not tufted or flocked, whether or not made up, including "Kelem", "Schumacks", "Karamanie" and similar handwoven rugs -Other, not of pile construction, made up :-- Of wool or fine animal hair	-	0.00%	2,582	100.00%
570310	Carpets and other textile floor coverings, tufted, whether or not made up - of wool or fine animal hair	7,739	11.57%	59,137	88.43%
570390	Carpets and other textile floor coverings, tufted, whether or not made up - of other textile material	8,475	21.42%	31,088	78.58%
570500	Other carpets and other textile floor coverings, whether or not made up	-	0.00%	83,138	100.00%
611710	Shawls, scarves, mufflers, mantillas, veils and the like	132,587	15.46%	724,786	84.54%
611780	Other made up clothing accessories, knitted or crocheted parts of garments or of clothign accessories - other accessories	188	1.28%	14,451	98.72%
621410	Shawls, scarves, mufflers, mantillas, veils and the like: Of silk or silk waste	270,895	19.52%	1,116,801	80.48%
621420	Shawls, scarves, mufflers, mantillas, veils and the like: Of wool or fine animal hair	10,800,000	11.82%	80,600,000	88.18%
621440	Shawls, scarves, mufflers, mantillas, veils and the like: Of artificial fibres	20,133	29.55%	47,989	70.45%
621490	Shawls, scarves, mufflers, mantillas, veils and the like: Of other textile materials	546,448	37.36%	916,278	62.64%
621600	Gloves, mittens and mitt	16,170	16.19%	83,687	83.81%
621710	Other made up clothing accessories and parts of garments - Accessories	51,867	5.74%	851,365	94.26%
630190	Other blankets and travelling rugs	2,363,189	42.91%	3,143,663	57.09%
650400	Hats and other headgear, plaited or made by assembling strips of any material, whether or not lined or trimmed	549,519	15.68%	2,954,022	84.32%
650500	Hats and other headgear, knitted or crocheted or made up from lace, felt or other textile fabric.	13,600,000	21.86%	48,600,000	78.14%
650699	Other headgear, whether or not lined or trimmed	10,600,000	40.15%	15,800,000	59.85%
	Total (2010-2015)	192,241,572		346,169,415	

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