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Rules of Origin under Regional Trade Agreements

Ram Upendra Das*

Abstract: Rules of origin (ROO) have emerged as an area in which consensus is hard to achieve among negotiating countries within an RTA. Disagreements over rules of origin have often deferred the implementation of several trade agreements. One of the reasons for this is because ROO are viewed as those obstructing trade. Most of the literature on the subject too argues that ROO reduce efficiency costs in production and restrict market access. It is argued in this paper that both the negotiations and the analytical literature pertaining to ROO display a lack of sound understanding of the implications of rules of origin. Developing a comprehensive view on the subject, with a developmental perspective of ROO, could help prevent wastage of negotiating-time, avoid cumbersome procedures and implement the agreements with the intention to reap the economic benefits of ROO. The paper highlights the economics of ROO, focuses on the issue of near-optimum ROO formulation, presents a factual account of ROO as evolved in South Asia, empirically estimates of the effects of ROO on trade in an FTA and finally makes new policy suggestions relating to ROO implementation and enforcement.

I. INTRODUCTION

Recent times have witnessed an unprecedented growth in regional economic cooperation and the South Asian region is no exception. Initiatives for regional economic cooperation in the South Asian region have taken all forms of cooperation, viz. bilateral, sub-regional, regional and inter regional. The South Asian Association for Regional Cooperation (SAARC) was formed in 1985¹ with the objective of exploiting accelerated economic growth, social progress and cultural development in the region for the welfare of people of South Asia. SAARC countries subsequently decided to form a preferential trading agreement (SAPTA) in 1985. Further, the South Asian Free Trade Area (SAFTA) Treaty was negotiated which entered into force

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in 2006. Some South Asian countries are also a signatory of inter-regional FTA initiatives such as Bay of Bengal Initiative for Multisectoral and Technical Cooperation (BIMSTEC) FTA² and Bangkok Agreement. Many South Asian countries have also signed bilateral FTAs among themselves and with countries outside the region. Bilateral FTAs among South Asian countries, which currently operate in parallel with SAFTA, include (i) India and Nepal; (ii) India and Sri Lanka; (iii) India-Bhutan; (iv) Pakistan-Sri Lanka; (v) Pakistan-Nepal (limited to trade in tea). There are also on-going discussions for bilateral FTAs between India-Bangladesh, and Bangladesh-Sri Lanka.

The proliferation of bilateral and regional FTAs has necessarily been accompanied by overlapping Rules of Origin (ROO). The main reason for the existence of ROO in FTAs is to prevent trade deflection, by which is meant that the country with the lowest external tariff acts as port of entry for the entire bloc's imports, depriving partners of tariff revenue. However, the proliferation of ROO can lead to what Bhagwati termed as the "spaghetti bowl effect" which essentially emanates from the proliferation of RTAs.³

Multiple ROOs (e.g., value-added rules or changes in customs classification) arising from overlapping FTAs signed by South Asian countries, particularly under different bilateral FTAs among some countries in the region, under inter-regional FTA such as BIMSTEC FTA and that under SAFTA would have significant implications for enhancing trade and welfare in the region within SAARC framework. Depending upon how they are formulated, ROOs can have varying effects.

Against this backdrop, some of the important analytical insights into Rule of Origin are elaborated in Section II. A factual account of Rule of Origin provision pertaining to various regional economic cooperation agreements of South Asian Countries both within the region and outside is presented in Section III. Further, implications of different formulation of Rule of Origin in different RTAs of South Asian countries are empirically explored with a view to draw inferences for SAFTA and to an extent Nepal in Section IV. Major results are summarized in Section V. In Section VI,

issues relating to implementation and enforcement are highlighted whereas Section VI highlights the main conclusions of the paper and makes certain policy suggestions.

II. ANALYTICAL INSIGHTS INTO RULES OF ORIGIN

Rules of origin have emerged as an area in which consensus is hard to achieve among negotiating countries. Disagreements over rules of origin have often deferred the implementation of several trade agreements. One of the reasons for this is because ROO are viewed as those obstructing trade. The most of the literature on the subject too, argues that ROO induce efficiency costs in production and restrict market access.⁴

It is argued in this section that both the negotiations and the analytical literature pertaining to ROO display a lack of sound understanding of the implications of rules of origin. Developing a comprehensive view on the subject could help prevent wastage of negotiating-time, avoid cumbersome procedures and implement the agreements with the intention to reap the economic benefits of ROO.

Importance of Rules of Origin

A country would like to allow goods from a partner country on a preferential duty basis under a trade agreement provided the goods have originated in the partner country. Nevertheless, there is always a possibility that third-country goods enter the country's markets through the partner country and that too, on a preferential basis. This phenomenon is well known as 'trade deflection.' This phenomenon undermines the country's MFN-customs regime.

One of the main objectives of rules of origin is to check trade deflection. It is also important to bear in mind that rules of origin are not for safeguarding against imports *per se* instead they are to check import-deflection from third countries. Apart from checking trade deflection, ROO also help perform various other trade policy functions like imposition of anti-dumping duties, among others.

Rules of origin could influence both import patterns and export prospects. If they are too stringent they may provide import protection (including import-deflection) but in the process may also hamper export prospects. In the case of a too liberal set of ROO, the converse may be true. Consequently, an optimal ROO formulation can provide adequate policy space to balance the objectives of export promotion and efficient imports that actually originate in the partner countries while at the same time checking import-deflection. Thus, the question is to arrive at an optimal ROO formulation. But before that we briefly summarize the modalities of determining origin of a product.

Determining Origin of Products

The exact mechanisms of according originating status to products differ in NAFTA, agreements between the EC and its partners, MERCOSUR, and FTAs of Japan-Singapore, Australia-Thailand, and Singapore-USA, among others. However, generally different arrangements have combined the modality of change in tariff classification with local value addition norm, specific process test, regional cumulation and non-qualifying operations.

Whether or not a product has originated in a particular country is decided if the product has undergone substantial transformation. In other words, the final product should be distinct from its constituents. There are broadly three kinds of tests that are applied to determine this. Firstly, the change in tariff heading test (at HS 4-digit level), whereby the tariff heading of the final product is different from the tariff headings of its components. Second, the percentage test, according to which, a minimum percentage of total value addition should be achieved with the help of local inputs. Finally, specified process test that requires a product to undergo certain stipulated processes.

However, agreement on implementing these tests is often difficult due to their respective merits and demerits (Table 1). For instance, the extent of 'substantial transformation' for different products would depend on the level of disaggregation (i.e. HS 4- or 6-digit level) on which tariff-shift is envis-

aged. Similarly, fixing of percentages of minimum value addition varies between products, depending on the prevailing labour costs and the product-specific import dependence of the country in terms of intermediates. This brings us to a point where an optimum formulation of rules of origin becomes imperative.

Towards a Near-Optimum ROO Formulation

A combination of change in tariff heading (CTH) at HS 4-digit level and local content norm of 40 per cent is neither too stringent to be akin to non-tariff barrier nor too liberal to open the floodgates for trade deflection. In other words, it is a near-optimum ROO formulation. It is always possible to contest whether the above-mentioned ROO formulation is close to optimal criteria or not. To this several supporting arguments could be forwarded with a view to provide an objective view on this issue.

Firstly, given the entire spectrum of the HS nomenclature of trade classification and tariffs, a movement towards a change in tariff classification at 2-digit chapter level (CC) would be too stringent and conversely, a change in tariff at 6-digit sub-heading level (CTSH) would be too liberal. Any manufacturing at the CC level would essentially mean that *almost* all the inputs are sourced locally, with possible prevention of any import content. This could be problematic for countries with limited local inputs. This would be particularly a limiting scenario for lesser developed countries say, in the South Asian region, as they have import dependence for different raw materials and intermediate inputs. On the other hand, at the level of CTSH, the manufacturing process would be possibly less than substantial inasmuch as it would be prone to imported products being exported with *almost* minimal operations. This has the potential to check the process of industrialization by limiting the scope of generating backward and forward linkages.

Transformation of inputs into output at HS 4-digit level (CTH) thus provides the middle level balance inasmuch as it can check trade deflection and help achieving developmental objectives through enforcing a basic level of manufacturing without becoming a stringent non-tariff barrier. Experiences in various trade agreements as well as technologies used in

Table 1: Merits and Demerits of Different Rules of Origin

| Rule | Merits | Demerits | Policy dilemmas |
|---|--|--|---|
| Change of Tariff Classification (CTC)* | <ul style="list-style-type: none"> • Promotes value addition, checks trade deflection and enhances mutual trade. • Simple, clear and transparent. • Easy to implement. • Entails less administrative cost. | <ul style="list-style-type: none"> • It fails to confer origin in several cases as the HS was not designed for granting originating status. • On occasions, change in tariff classification does not ensure substantial transformation. • Sometimes substantial transformation can occur without CTC • Over a medium or long term due to change in technology, the processing methods change and hence the CTC also undergoes change | <ul style="list-style-type: none"> • Level of classification at which change required: higher the level the more restrictive is the rule. • How to combine other rules when CTC fails. • Ambiguity in several processes that cannot be captured by this rule. |
| Percentage Test | <ul style="list-style-type: none"> • Promotes value addition, checks trade deflection and enhances mutual trade. • If defined in terms of maximum import content, it can also be implemented easily. • Good complement for cases where CTC fails. | <ul style="list-style-type: none"> • Complex in application – requires firms to have sophisticated accounting systems. • Difficult to monitor at customs entry points. • Sensitive to changes in exchange rates, labour costs, input prices, etc. • High administrative costs of implementation. • Prone to accounting manipulations. | <ul style="list-style-type: none"> • The level of value added required to confer origin. • The valuation method for imported materials – methods which assign a higher value (eg CIF) than ex-factory price will be more restrictive on the use of imported inputs. • Calculation of value addition subject to malpractices. |
| Specific Process Test | <ul style="list-style-type: none"> • Promotes value addition, checks trade deflection and enhances mutual trade. • Straightforward. • Provides for certainty if rules can be complied with. | <ul style="list-style-type: none"> • Implementational problems due to documentary requirements. • Difficult to comply with. • Leads to product specific rules. • Depends on technology, which differs from sector to sector. | <ul style="list-style-type: none"> • Difficulty in pinning down formulation of the specific processes: the more procedures required the more restrictive. • Should test be negative (processes or inputs which cannot be used) or a positive test (what can be used) – negative test more restrictive. |

Notes: * **CTC** means change in tariff classification at different levels disaggregation of HS nomenclature for instance CTH (change in tariff heading is at HS 4-digit level). **CTSH** (change in tariff sub-heading is at HS 6-digit level) and **CC** (change in tariff heading at HS chapter level).

Source: Author's compilation (see also Brenton, 2003 and Vermulst, 1994).

different industries suggest that except for a small proportion of total tariff lines in HS, mostly products would be able to qualify for this CTH test of origin-determination⁵.

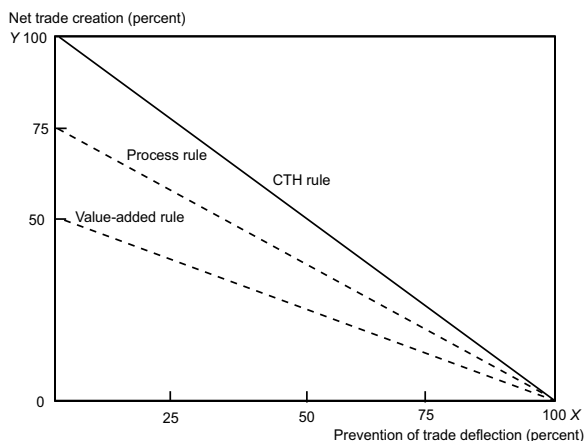
Second, a 40 per cent stipulation of local content is neither too stringent to scuttle the prospects of imported inputs used in manufacturing nor too liberal to pave ways for third-country imports coming into any country on a preferential basis without undergoing adequate manufacturing process. Let us understand this aspect fully.

Objectively and ideally, for a manufactured product to get accorded the originating status in a preferential agreement, it must have a least 51 per cent of local content. The moment a product has import content beyond 50 per cent it ceases to be a product made in the country of last manufacturing. At this stage an analogy from foreign investment could be given. As is well-known, ownership of investment to a foreigner is given when the FDI is allowed at least 51 per cent or more. By the same token origin to a product could only be given to a particular country when the local content is at least 51 per cent. Once again, considering that various developing countries, especially in the South Asian region are heavily dependent on imports for their manufacturing inputs this criterion could be relaxed downwards to 40 per cent, 35 per cent, and 30 per cent depending on a particular agreement. However, this is a less than optimal solution but has an element of differential treatment towards countries at relatively lower stage of development.

In this context, a major advantage of combining CTH with 40 per cent local content norm is that when used in conjunction they can counter the demerits of each modality applied in isolation (as highlighted in Table 1)⁶ and help moving towards a near-optimal ROO formulation while at the same time retaining their developmental character in favour of lesser developed countries.

Third, to further strengthen the objective assessment of the issue it may be further highlighted that the CTH criterion has been found to be the most effective in checking trade deflection while trade creation takes place

Figure 1 : Trade-off between net trade creation and prevention of trade deflection in an RTA with differing rule of origin



Source: Stephenson and James (1995)

(Figure 1). Finally, against this backdrop, thus, the twin criteria of rules of origin, viz. change in tariff heading (CTH) and value-addition percentage requirement of around 40 per cent) help to offset the well-known demerits of each of the two-criteria, given the technical feasibility of adhering to them in general and hence can be regarded as a near-optimal formulation of ROO. This formulation offers a classic example of optimizing an objective function subject to certain constraints like disparate stages of development among countries of a particular free trade grouping.

However, in cases where the above mentioned formulation is technically impossible to achieve, product-specific rules (PSRs) of origin could be worked out. Similarly, in a regional grouping with LDCs, a more liberal approach could be adopted. However, this needs to be worked out in the backdrop of any possibilities of trade deflection as well as the developmental imperatives and the extent of import dependence of an LDC as highlighted above.

A comprehensive approach towards rules of origin issues can therefore help solve several problems of RTA negotiations. Such an approach has yielded straightening of negotiating positions on several occasions in the

past including India-Nepal, India-Sri Lanka FTA, India-Thailand FTA for the Early Harvest Programme, India-Singapore CECA and SAFTA.

Having analyzed what could be a near-optimum formulation of ROO it is equally important to understand the differences between CTH and CTSH levels of origin determination in a nuanced manner. This is particularly important in the South Asian context as these aspects are less clearly understood. It is also important for putting the optimum formulation in a proper perspective.

Understanding Differences between CTH and CTSH

One of the major advantages of the CTH rule over CTSH formulation is that the CTH rule can enforce bilateral cumulation within a bilateral FTA and enhance bilateral trade. On the other hand, in the case of CTSH application such possibilities would be limited. This needs elaboration. Illustratively, if an FTA-partner of Nepal fulfils maximum of its raw material requirements through imports and technically the final product qualifies for a CTSH rule, then by stipulating a CTH rule would imply that the partner country necessarily imports its material from Nepal and qualifies for preference under the bilateral cumulation provision.

The CTH rule could also ensure, in the partner country, the usage of a particular kind of manufacturing-technology in a manner that the raw materials have to be necessarily sourced from other HS-4 digit level classifications.

Furthermore, the application of the CTH rule also ensures certain minimum amount of local value addition in the country of last manufacturing. Not all manufacturers in other countries produce the final product from basic raw material since different manufacturers are at different stages of production. Thus, CTH can ensure local value addition for granting originating status to products and extending tariff preferences. In case of CTSH, such value addition possibilities might be compromised. It may be mentioned, that in case only the percentage test is applied, the accuracy of value addition is not guaranteed because of likelihood of accounting manipulations (Table 1).

Hence, CTH can safeguard national economic interests, given the state of technology in different sectors, checking trade deflection in a more comprehensive way than CTSH. In other words, the CTSH rule should be applied only in cases when there is a technical impossibility to apply and adhere to a CTH rule.

This is further corroborated if a factual analysis is undertaken of the level of technology and manufacturing processes in those countries with which countries engage in RTA negotiations. This is evident from Table 2 which illustratively compares Indian and Singaporean manufacturing or state of technology in some products. They are distinctively diverse in terms of the manufacturing processes for the same product and such a situation can lead to a lack of consensus among trading partners. Such an exercise is crucial to safeguard a country's domestic interests both from the angles of export and imports. Hence, it may be reiterated that rules are applied at HS 4-digit levels rather than at 6-digit level in order to avoid any ambiguity in implementation.

Rules of Origin as a Development Policy Tool

Having explained the relevance of rules of origin as a trade policy tool in an RTA and its different modalities to determine origin, in this section it is argued that ROO can serve as a development policy tool.

It is often understood that rules of origin would be redundant once a country, which is a member of different trade agreements, reduces its MFN-tariffs considerably, to very low levels. In fact, there is evidence to suggest that stringent rules of origin and liberal tariff regimes are inversely related. An explanation to such a phenomenon possibly lies in the fact that rules of origin are not just trade policy instruments aimed at preventing trade deflection. They are used as a developmental tool. This is elucidated in terms of the effects of ROO on trade, investment, industrialization process and welfare, at large.

Table 2 Differences in Technology for Producing the Same Product at HS 6-digit Level: Some Illustrations

| S.No. | HS Codes | Product Description | Raw materials used in Singapore | Raw materials used in India |
|-------|------------|--|--|--|
| 1 | 2106 90 11 | Sharbat | Odoriferous alcoholic preparations (330210), Sugars and sugar confectionery (17), Soya sauce(210310) | No alcoholic content and no soya sauce to be added. |
| 2 | 2106 90 30 | Betel nut product known as “Supari” | Odoriferous alcoholic preparations (330210), Sugars and sugar confectionery (17), Soya sauce(210310) | Raw Materials should be betel nut and not as specified by Singapore. |
| 3 | 2106 90 80 | Custard powder | Odoriferous alcoholic preparations (330210), Sugars and sugar confectionery (17), Soya sauce (210310) | The raw materials are not truly reflected. Main source is Corn flour (HS 1102) and other items like sugar, colouring and flavouring matter (vanilla etc.). |
| 4 | 2903 11 10 | Chloromethane (methyl chloride) | Chlorine (280110), Gaseous Methane (271129), Liquified Methane (271119), Heavy Methane (284590) | Raw material “methanol - HS 290511” could be used alternative to Methane. |
| 5 | 2903 11 20 | Chloroethane (ethyl chloride) | Chlorine (280110), Ethane (271129, 271119, 290110) | Raw material is ethylene and not ethane. Second raw material can be - ethanol. |
| 6 | 2903 69 10 | Chlorofluorobenzene | Benzene (290220) Toluene(290230) o-Xylene(290241) m-Xylene(290242) p-Xylene(290243) Mixed xylene isomers(290244) | Additional raw materials- chlorine and fluorene. Only benzene is the correct raw material in Singapore’s specification, others are wrongly given. |
| 7 | 2906 11 00 | Menthol | Coal tar | Produced not from coal tar but from mint oil (HS 33012400). |
| 8 | 8419 60 00 | Machinery for liquefying air or other gases | Part of Machinery, plant or laboratory equipment (841990) | Additional raw material is compressor. |
| 9 | 8607 21 00 | Air brakes and parts thereOf | Rubber | Raw materials are parts and accessories of brakes HS 86072100 & 86079990. |
| 10 | 8714 94 00 | Brakes, including coaster braking hubs and hub brakes, and parts thereof | Rubber | Raw materials also include parts and accessories (HS 871494) & iron and steel components like nuts and bolts etc. |

Source: Based on Sectoral Consultations.

Impact on Trade

A regional preferential trading arrangement having the provision of cumulative rules of origin is more liberal than the one not having it. This is because under regional cumulation or bilateral cumulation facility, imports by a member country of the grouping from other member countries of the same grouping are considered as originating in the importing country and not as imports. It has the potential to engender intraregional trade flows of different categories of goods among the member countries. It also has a favourable trade balance effect for the country using the cumulation provision. Moreover, there is a possibility that the first round of trade diversion effects is converted into trade creation effects in the long run (Das, 2009).

It provides an impetus to the necessary commensurate supportive services sector activities. It can be argued that manufacturing activities brought about with the help of rules of origin stipulations in order to export the final product under a preferential trade agreement cannot be possibly executed without the existence of a supportive services sector. For instance, trade in goods is incumbent upon the presence of facilitative services like post-shipment credit, consignment-insurance, bank-guarantees, shipping services, etc. that not only facilitate trade but also contribute to the competitiveness of exports (Das, 2007).

Impact on Investment

Rules of origin have been used as instruments to promote investment to boost regional production. It has been highlighted by Rugman (1998) and Hirsch (2002) as to how rules of origin have been used in NAFTA to attract foreign investment for taking advantage of the regional market in NAFTA by the non-member countries.

Implications for Industrialization Process

These rules, executed through different modalities like change in tariff classification, value-addition norms, specific process tests and non-qualifying operations, enforce domestic manufacturing that is in essence substantial in nature. The three modalities of determining origin of a product aim at substantial transformation in inputs. Thus, rules of origin together facilitate value-addition in the country of manufacturing. Such requirements, checking

the import content of value addition, have the potential for generating backward and forward linkages in a country adhering to the rules. Thus, a member country is prevented from becoming a mere trading country as these requirements act as a deterrent to assembly kind of production activities. The rules of origin thus, have important implications for the development of the manufacturing sector as a whole, which in turn, contributes towards enhancing the export supply capabilities of the member country (Das, 2004a).

According to LaNasa (1995), ROO can be treated as a factor of production, “Because rules of origin are an essential part of applying country-specific or trading group-specific trade preferences or restrictions, rules of origin have a significant impact on the strategic planning of profit-maximizing firms. For this reason, profit-maximizing firms should analyze the different rules of origin, quantify their cost, and treat them as a factor of production in determining where to source their investments, purchase their raw materials, produce or purchase intermediate materials, and assemble their final products.”

Welfare-inducing ROO

Incorporating intermediate inputs into a small-union general-equilibrium model, Duttagupta and Panagariya (2003) develop the welfare economics of preferential trading under the rules of origin demonstrating that a welfare reducing FTA that was rejected in the absence of the ROO becomes feasible in the presence of these rules. Second, a welfare improving FTA that was rejected in the absence of the ROO is endorsed in their presence, but upon endorsement it becomes welfare inferior relative to the status quo. This could happen because ‘the ROO increases the price of the regionally produced intermediate input and hence effectively provides protection to it. The FTA that was unattractive to the input exporter in the absence of a ROO can now become attractive. Therefore, the ROO could make a previously infeasible FTA feasible.’ One may argue that a combination of different origin-rules contributes to such an effect.

Falvey and Reed (2002) also demonstrate that ROO have the potential for improving an importing country’s terms of trade and therefore can be welfare-improving, under certain circumstances.

To sum up, through ROO regional/bilateral trade flows can be augmented. Their combined positive effects on manufacturing (and on agriculture, through agriculture-industry linkages), services and investment have important implications for employment and income generation, foreign exchange earnings and regional integration. Thus, ROO can help achieve developmental objectives.

Rules of origin are important also in the context of imposition of anti-dumping duties and countervailing duties. They are also important in collecting trade statistics.

It is against this analytical backdrop that the prevailing ROO formulations in various Agreements entered into by the South Asian countries need to be understood. A snapshot of them is presented in the next section.

III. RULES OF ORIGIN IN SOUTH ASIA: A FACTUAL ACCOUNT

This section presents an overview of rules of origin in the current regional economic engagements among SAARC countries. It also compares them with a particular SAARC country's economic cooperation agreement with countries in the extra-SAARC region.

As Table 3 suggests, different agreements have differences in terms of ROO formulations; however, broadly they are uniform towards a formulation of CTH plus 40 per cent value addition.⁷

Table 3: South Asian FTA Commitments in ROO

| FTA / PTA | | Rules of Origin | |
|----------------------------------|------------------------|--------------------------------------|-------------------------------------|
| A. Intra-South Asian FTAs | Bilateral | SAFTA (For Non-LDC's Exports) | SAFTA(For Partner's Exports) |
| India-Afghanistan PTA | CTH + 40 % | CTH + 40 % (Non-LDCs) | CTH + 30 % (LDCs) |
| India-Bhutan FTA | Manufactures of Bhutan | CTH + 40 % (Non-LDCs) | CTH + 30 % (LDCs) |
| India-Nepal FTA | CTH + 30 % | CTH + 40 % (Non-LDCs) | |

Table 3 continued

Table 3 continued

| | | | |
|--|-----------------------------|--------------------------|---------------------------------------|
| India-Sri Lanka FTA | CTH + 35 % | CTH + 40 % (Non-LDCs) | CTH + 35 % (Sri Lanka) |
| Pakistan-Sri Lanka FTA | CTSH + 35 % | CTH + 40 % (Non-LDCs) | Not yet Committed (Afghanistan) |
| B. Extra regional South Asian FTAs | | | |
| BIMSTEC FTA | CTH + Value Added Undecided | | |
| Pakistan-Malaysia FTA | CTH + 40 % | | |
| India-Thailand FTA (Early Harvest Scheme) | CTH + 40 % | | |
| India-Singapore FTA | CTH + 40 % | | |

Source: Author's compilation.

While the table gives a snapshot of the present status of ROO formulations in different RTAs of South Asian Countries, it is important to highlight the evolution of such formulation that are near about an optimal construct as highlighted in the earlier section. This can be done by presenting two case studies from the region pertaining to trade deflection. The first one relates to trade deflection in the absence of ROO in the case of India-Nepal Treaty and another one relates to circumvention of ROO in the context of the India Sri Lanka FTA.

Rules of Origin and Trade Deflection: Two Case Studies

India-Nepal

The 1996 Trade Treaty contained no value addition norm for duty free entry of articles manufactured in Nepal into India. This had resulted in a surge in imports of some products from Nepal with little or no value addition such as acrylic yarn, zinc oxide, vanaspati and copper products. Representations were received from Indian industry regarding the surge in imports of these commodities from Nepal into India, and its adverse impact on our domestic industry.

The India-Nepal Trade Treaty was renewed on March 2, 2002 after incorporating suitable modifications to the protocol to the Treaty without changing the basic spirit and framework of the Treaty. Nepal would continue to enjoy non-reciprocal duty free access for its manufactures in the Indian market.

A very reasonable value addition norm of 25 per cent in the first year and 30 per cent in the subsequent years for Zero duty access has now been built into the Protocol to the Treaty to ensure that the provisions of the Treaty facilitate the accrual of benefits to genuine industries of Nepal and are not used as a conduit for third country exports to the detriment of Indian Industry.

In the revised Trade Treaty, ceilings have been fixed for duty-free import of vanaspati, acrylic yarn, copper products and zinc oxide, in such a manner as to avoid disrupting Nepal’s existing exports to India while simultaneously addressing the concerns of the Indian industry. There is no ceiling on exports of these commodities on MFN basis. The quota figures for the four sensitive items for duty-free import are given in Table 4.

Table 4: Tariff-rate Quota under India-Nepal Trade Treaty

| S. No. | Product | TRQ (MT Per Year) |
|--------|----------------------------|-------------------|
| 1 | Vegetable fats (Vanaspati) | 100,000 |
| 2 | Acrylic Yarn | 10,000 |
| 3 | Copper Products | 7,500 |
| 4 | Zinc Oxide | 2,500 |

Source: Ministry of Commerce and Industry, Government of IndiaGovernment of India has subsequently agreed to the request from Government of Nepal for increasing the quota for import of copper products from Nepal by 2500 MT per year.

It is worth noting that after the introduction of ROO and TRQ provisions the problem of trade deflections from Nepal into India was controlled in an effective manner. While this could address the concerns of Indian industries it has had developmental implications for Nepal in terms of greater manufacturing activities in these areas. Moreover, such a step has also contributed to building of a better manufacturing ambience in Nepal due to which local business are in a position to focus more on setting up industrial units rather than engaging themselves in near trading in third country goods.

India-Sri Lanka FTA

Copper exports from Sri Lanka to India have also been controversial, since businesspersons have imported copper scrap to Sri Lanka without paying

any import duty, and then melted and re-shaped this into ingots for sale to users in India. Sri Lanka has no copper mines of its own, and there have been allegations that these smelters violated the rules of origin in the FTA by not adhering to the stipulated value addition norms of around 35 per cent. Twenty secondary copper smelters were set up in Sri Lanka by Indian businesspersons after the FTA. After India slashed import duties on copper scrap in 2006, most of these smelters became unviable and had to shut down. Imports of copper items by India from Sri Lanka subsequently jumped from less than USD 2 million in 2000-01 to nearly USD 19 million in 2002-03 and USD 82 million in 2003-04.

The above presents a general view about any FTA-implementation. The issue which needs to be examined in this context is whether the rules pertaining to different dimensions are necessarily bad. This needs to be approached with a balanced perspective. Such an approach would also bring to the fore as to the content and direction of modification of rules. It is this approach which has broadly guided the ROO formulation in Trade Agreements entered into by the South Asian countries as in Table 3.

Given the factual position on ROO in different RTAs of the South Asian countries, an attempt has been made to examine the possible effects of ROO empirically in the next section.

IV. EMPIRICAL EXPLORATION

Against the background of analytical insights into Rules of Origin and their present formulation in the South Asian Region, two methodologies have been used to empirically explore the implications of present combination of tariff regimes and ROO for their effects on trade deflection possibilities as well as on trade levels. While trade deflection possibilities are empirically probed in the context of bilateral trade relations between India and Nepal, the effects of ROO on trade levels have been analyzed in the context of SAARC and BIMSTEC.

Trade Deflection Ratio⁸

Trade deflection in any regional preferential trading arrangement could be

evaluated by taking cognizance of customs tariff regimes of the member countries, the stages of development of member countries and the realities of the regional market.

At HS 4-digit level an index of trade deflection can be calculated, on an illustrative basis, say between India and Nepal, by considering the difference in their respective customs regimes. The trade deflection ratio (TDR) can be expressed:

$$TDR = (1+t_i)/(1+t_N)$$

Where t_i is India's external tariff and t_N is Nepal's external tariff. Higher the TDR, greater is the possibility of trade deflection. Any product of a third country would be prone to trade deflection say, for instance, from Nepal into India if the cost of importing from Nepal is less than the cost of importing the same product directly from the third country source into India.

If the FoB price of the product X is P_X and CIF factor between a third country and Nepal is R_1 and it is subjected to Nepal's tariff rate t_N the price would become $P_X R_1 (1+t_N)$. If the product faces another factor R_2 of CIF while reaching the point of entry into India and it is further subjected to the SAFTA preferential tariff rate, its price would become $P_X R_1 (1+t_N) R_2 (1+t_{SAFTA})$, where India's tariff rate under SAFTA to LDCs is given as t_{SAFTA} . Similarly, the price of the same product imported directly into India would be subjected to a CIF factor R_3 and the Indian tariff rate t_i . The price would then be $P_X R_3 (1+t_i)$.

Therefore, the price of a product being imported into Nepal from a third country source and further imported into India under SAFTA from Nepal would be $P_1 = P_X R_1 (1+t_N) R_2 (1+t_{SAFTA})$, and the price of the same product imported directly into India from the same third country source would be $P_2 = P_X R_3 (1+t_i)$.

Under the scenario of no trade deflection $P_1 = P_2$.

$$\text{or, } P_2/P_1 = P_X R_3 (1+t_i) / P_X R_1 (1+t_N) R_2 (1+t_{SAFTA}) = 1$$

$$\text{or, } \frac{R_3}{R_1 R_2} \frac{(1+t_1)}{(1+t_N)(1+t_{\text{SAFTA}})} = 1$$

Assuming that the CIF factors R_1 , R_2 and R_3 are constant at a given point of time since they are structural variables and tariff rates under SAFTA would tend to be zero or near-zero in the immediate future, the trade deflection ratio would be:

$$\text{TDR} = (1+t_1)/(1+t_N) = 1$$

If TDR is greater than one it would suggest possibilities of trade deflection and vice versa.

The trade deflection ratio for different products (covered under India's SAFTA schedule) at HS 4-digit level, could be analyzed vis-à-vis products' shares in India's imports as well as in Nepal's imports. With the help of these three vectors of information, one could arrive at three groups of 4-digit HS products. Firstly, items that would be characterized by high trade deflection ratio and associated with high share in India's imports as well as high share in Nepal's imports would form the category in which rules of origin are the most relevant. Secondly, items that are characterized by low trade deflection ratio and are associated with low share in India's imports as well as Nepal's imports would represent the category in which rules of origin could be rather less important. Rest of the items studied together with the three vectors of information would have to be studied on a case- by -case basis. Such an analysis would be especially relevant for the SAFTA regime with zero or near-zero tariffs.

However, the inferences would have to be drawn in a dynamic setting. In which case, the TDR needs to be juxtaposed with changes in the shares of imports in both the countries.

TDR: An Extended Approach

For a more accurate and realistic estimate of trade deflection, the conceptual

basis needs to be extended further. To begin with, consider trade deflection possibilities from Nepal into India, as captured above as TDR_{NI} . In the same vein, trade deflection possibilities from India into Nepal would be denoted as TDR_{IN} .

It needs to be highlighted that TDR_{IN} is not only a function of the tariff-differentials between the two countries, as traditionally perceived by the existing literature. Instead, TDR_{IN} would also depend upon the possibilities of trade deflection between India and her other RTA partners. In which case,

$$TDR_{IN} = f(TDR_{SLI}, TDR_{SI}, TDR_{TH}, \dots, TDR_{ni})$$

where, SL stands for Sri Lanka, S for Singapore, TH for Thailand and n for n number of India's RTAs. These countries have been chosen to be denoted since these are all India's existing RTA partners.

The trade deflection possibilities would be uniform between one RTA pair and another if the tariff differentials and rules of origin formulations are uniform between them for a specific product. Quite often tariff differentials may not be uniform for a product; hence there is a strong case for ROO harmonization across RTAs in order to have the minimum possibilities of trade deflection - which has been the basic objective of ROO.

Empirical Estimation of the Effects of ROO on Trade in an FTA

One set of the existing literature focuses on assessing the degree of market access in the context of rules of origin. These approaches entailed creating an index to assess the degree of restrictiveness of ROO (see Estevadeoral, 2000; Brenton, and Manchin, 2002; Augier, Gasiorek and Lai-Tong, 2005; Estevadeoral and Suominen, 2004, Australian Productivity Commission, 2004). Indexes developed in these studies have focused on particular provisions of ROO – for example, whether a change in tariff classification is at the level of tariff items (HS 8-digit), sub-heading (6-digit), heading (4-digit) or the chapter (2-digit). Factors affecting the restrictiveness of ROO have included tariff phase-out schedules, cumulation, duty drawback, tolerance, and outward processing provisions in an FTA. Some of them

have expanded the list of factors by including regional value added content requirements and those influencing market access while calculating the index.

Studies have also estimated gravity equation with ROO Restrictiveness Index as an explanatory variable (e.g. Estevadeor and Suominen 2004; Carrere, J.de Melo and Pondrad, 2006; Cadot, J.de Melo and Perez, 2006).

Against this background, an attempt has been made to empirically examine the issue in the context of SAARC (SAFTA) and BIMSTEC FTA.

Data and Methodology

In order to analyse empirically the effect of ROO in South Asian RTAs (i.e. SAARC and BIMSTEC) on regional/bilateral trade (as the case may be), trade data has been matched with industry data. This was done with a view to fit an export function⁹, explained by supply-side industrial characteristics with ROO index being one of the variables. A demand side-variable as proxied by partner country's GDP was also included.

Bilateral exports of each country to another country of the grouping are taken as the dependent variable¹⁰. The independent variables that have been used to explain the dependent variable include GDP of the importing partner (GDP), Value Added by each industry (VA), Number of employees in each industry (LAB), Wages and salaries of employees (WAG) and Level of investment in each industry (INV) and ROO Restrictiveness Index (RI). For each bilateral, for instance India-Sri Lanka, India-Nepal and so on, we have industry level data on each of the variables for the years 2007.

Thus, we have a pooled cross section data and the empirical estimation is done using pooled regression method through the equation:

$$X_{ijk} = a + \hat{\alpha}_1 (GDP)_j + \hat{\alpha}_2 (RI)_{ik} + \hat{\alpha}_3 (VA)_{ik} + \hat{\alpha}_4 (LAB)_{ik} + \hat{\alpha}_5 (WAG)_{ik} + \hat{\alpha}_6 (INV)_{ik} + m_{ik}$$

where, X_{ijk} is exports from country i (e.g. Nepal) to country j for the 3-digit level industry k .

Data Sources

Trade data was taken at HS 6-digit level from UN PCTAS CD-ROM (various years) and industry data at International Standard Industrial classification (ISIC) 3-digit level from the UNIDO Industrial Statistics CD-ROM (various years). The explanatory variables include ROO Restrictiveness Index as developed by Australian Productivity Commission (2004)¹¹

The ROO restrictiveness index was also calculated at an aggregate level for the regional groupings of the sample and summarized in Table 5.

Table 5: Rules of Origin Restrictiveness Index (RI) in South Asian FTAs

| S. No. | FTAs | Restrictiveness Index |
|--------|---------------------------|---|
| 1. | India-Nepal | 6.0 |
| 2. | India-Sri Lanka | 6.2 |
| 3. | Pakistan-Sri Lanka | 4.0 |
| 4. | SAFTA | 6.5 (NLDCs), 6.0 (LDCs), 6.2 (Sri Lanka) |
| 5. | BIMCTEC | 6.5* |

Note: * Assuming CTH + 40 % formulation since it is not yet finalized.

The ROO restrictiveness indices for different relevant bilaterals were taken into account in the empirical estimations of trade effects under SAFTA and BIMSTEC. It may be added that the methodology of calculating ROO restrictiveness index has its own inherent subjectivity while assigning weights to different aspects of change in tariff shifts and value addition at a more disaggregate level (see references to the literature on the restrictiveness index). Thus, the aggregate values need to be considered as indicative. However, their relevance lies in the fact that there is still not better alternative to capturing the restrictiveness of rules of origin, which may be a future area of research (Das and Ratna, 2010 forthcoming).

V. RESULTS

Possibilities of Trade Deflection

As per the methodology discussed in the preceding section products prone

to trade deflections both from India to Nepal and from Nepal to India were identified. The number of some of the common products at HS six digit level is summarized for different HS two digit chapter level in Table 6. It is noticeable that approximately 977 tariff lines at HS six digit level are prone to trade deflection between the two countries, mainly belonging to textile and clothing sector.

Table 6: Products Prone to Trade Deflection between India and Nepal

| S. No. | 2-digit code | Description | No. of tariff lines at HS 6-digit Level |
|--------|--------------|--|---|
| 1 | 04 | Dairy produce; birds' eggs; natural honey; edible prod. of animal origin, not elsewhere spec. or included. | 2 |
| 2 | 09 | Coffee, tea, mate and spices. | 2 |
| 3 | 15 | Animal or vegetable fats and oils and their cleavage products; pre. edible fats; animal or vegetable wax. | 10 |
| 4 | 28 | Inorganic chemicals; organic and inorganic compounds of precious metals, of rare earth metals, of radioactive elements of isotopes. | 6 |
| 5 | 32 | Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and mastics; inks. | 43 |
| 6 | 40 | Rubber And Articles Thereof. | 2 |
| 7 | 50 | Silk | 2 |
| 8 | 52 | Cotton | 131 |
| 9 | 53 | Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn. | 29 |
| 10 | 54 | Man made filaments. | 64 |
| 11 | 55 | Man made staple fibres. | 115 |
| 12 | 56 | Wadding, felt and non-wovens; special yarns; twine, cordage, ropes and cables and articles thereof. | 33 |
| 13 | 57 | Carpets and other textile floor coverings. | 23 |
| 14 | 58 | Special woven fabrics; tufted textile fabrics; laces; tapestries; trimmings; embroidery. | 41 |
| 15 | 59 | Impregnated, coated, covered, or laminated textile fabrics; textile articles of a kind suitable for industrial use. | 24 |
| 16 | 60 | Knitted or crocheted fabrics. | 30 |
| 17 | 61 | Articles of apparel and clothing accessories, knitted or crocheted. | 117 |
| 18 | 62 | Articles of apparel and clothing accessories, not knitted or crocheted. | 118 |

Table 6 continued

Table 6 continued

| | | | |
|--------------|----|---|------------|
| 19 | 63 | Other made up textile articles; sets; worn clothing and worn textile articles; rags. | 59 |
| 20 | 64 | Footwear, gaiters and the like; parts of such articles. | 25 |
| 21 | 66 | Umbrellas, sun umbrellas, walking-sticks, seat-sticks, whips, riding-crops and parts thereof. | 3 |
| 22 | 68 | Articles of stone, plaster, cement, asbestos, mica or similar materials. | 2 |
| 23 | 69 | Ceramic products. | 4 |
| 24 | 70 | Glass and glassware. | 5 |
| 25 | 83 | Miscellaneous articles of base metal. | 6 |
| 26 | 84 | Nuclear reactors , boilers, machinery and mechanical appliances; parts thereof. | 18 |
| 27 | 85 | Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers and parts and accessories of such articles. | 7 |
| 28 | 87 | Vehicles other than railways or tramway rolling-stock and parts and accessories thereof. | 43 |
| 29 | 95 | Toys, games and sports requisites; parts and accessories thereof. | 7 |
| 30 | 96 | Miscellaneous Manufactured Articles. | 6 |
| Total | | | 977 |

Source: Author's calculations.

Effects of ROO on Trade

The results of pooled estimation for fixed effects are presented in Table 7 for SAFTA and Table 6 for prospective BIMSTEC FTA¹². As can be observed from Table 7, the coefficient of the ROO Index is positive (though not significant). Positive but insignificant importance of ROO is possibly due to the fact that intra-regional trade levels in SAARC is still at modest levels. Nevertheless, it supports our argument that rules of origin could act as a catalyst to trade in an FTA like SAFTA given its near-optimal formulation as argued earlier which balances the imperatives of differential treatment to lesser developing countries and at the same time retains the sanctity of ROO as instruments to check trade deflection and achieve developmental objectives.

All the other variables are with expected signs with partner country's GDP, employment and values added being significant determinants of trade.

This is also expected as trade within South Asia is in labour-intensive products and it is important to note that trade is getting determined by value added activities. In an indirect sense, this is also a reflection that rules of origin focusing on value addition either through change in tariff heading or local content requirements have a determining role in trade.

The developmental role of ROO is amplified by the fact that the process of intra-SAARC trade is employment-based. Conversely, this is also corroborated by the insignificant investment variable as the tradables could be less capital-intensive.

Table 7: Role of ROO in Determining Trade in SAFTA

Number of Observations: 138

| Independent variables | Coefficient (Fixed Effects) | t-statistic |
|------------------------------|--|--------------------|
| C | -4343.558 | -0.130353 |
| GDP | 33.051 | 4.693041 |
| ROO Index | 1998.447 | 0.293372 |
| Number of employees | 0.051 | 2.639633 |
| Value Added | 2.34E-07 | 2.636760 |
| Wages and salaries | -9.67E-07 | -2.087725 |
| Level of investment | 6.44E-09 | 0.083412 |
| R-squared | 0.749640 | |
| Adjusted R-squared | 0.717430 | |

Similar observations can be made in the context of the proposed BIMSTEC FTA (Table 8), provided that ROO formulation is CTH plus 40 per cent value-addition.

Table 8: Role of ROO in Determining Trade in BIMSTEC

Number of Observations: 145

| Independent variables | Coefficient (Fixed Effects) | t-statistic |
|------------------------------|--|--------------------|
| C | -19533.80 | -0.432187 |
| GDP | 41.902 | 4.044 |

Table 8 continued

Table 8 continued

| | | |
|---------------------|-----------|-----------|
| ROO Index | 4543.354 | 0.500335 |
| Number of employees | -1.642771 | -1.602320 |
| Value Added | 5.58E-05 | 1.058396 |
| Wages and salaries | 2.14E-06 | 1.460819 |
| Level of investment | 4.14E-06 | 0.321571 |
| R-squared | 0.795577 | |
| Adjusted R-squared | 0.75135 | |

To conclude, rules of origin if formulated in an optimal manner can serve as the instruments of development and they need not be viewed only as a trade policy variable.

Having analysed the trade deflection possibilities of ROO and also its developmental role, both analytically and empirically, the paper wishes to address some of the implementation issues relating to rules of origin in the next section.

VI. IMPORTANCE OF ROO IMPLEMENTATION AND ENFORCEMENT

First and foremost, the most important issue relating to ROO implementation is the issue of harmonization. This is particularly important in the South Asian region where bilateral FTAs, in future, have the potential to have cross-cutting ROO with deleterious effects on the regional integration process. Fortunately, so far the ROO in the region are quite harmonized; however, there needs to be a conscious effort to keep the SAFTA ROO as the best possible benchmark, for the reasons argued for in the paper (due to its near-optimal formulation).

Further, the issues relating to rules of origin implementation and enforcement are of crucial importance if they are to serve as developmental tools. The comprehensive treatment of the subject should not lose sight of the fact that rules of origin at times can be used as non-tariff barriers and this needs to be discouraged. In addition, adequate care must be taken to ensure that rules of origin are implemented in a manner that minimizes the

scope for its misuse and malpractices, given some such evidence in the South Asian region. Efforts geared towards minimization of cost of compliance through procedural simplifications also warrant priority-attention. All these together would truly make rules of origin a set of instruments to achieve developmental goals through strengthening trade-investment-development linkages.

It is often argued, world over, that the enforcement costs of rules of origin are quite high and this is why exporters do not utilize RTA preferences. This is a fallacious argument. Just as any section of the civil society, the business community too, does not always adhere to the best practices, as observed illustratively in the case of India-Nepal and India-Sri Lanka. In order to evade the rules, arguments have always been against the rules. It is in this sequence that adherence to certification is argued against as it being costly. In India, for instance, only Rs. 100 (US \$ 2.5) is charged as fee for issuing certificate of origin. Hence, administrative cost of getting origin-certificates need not be as it is made out to be.

The field-trips for the present paper have revealed that FNCCI (Nepal) is evolving a sound system of certification with the help of latest information technology. This is already having positive effects in terms of fact-track certificate-issuance with greater accuracy. However, this needs to be extended to more customs check-points as out of 29 of them 21 still need modern facilities and an integrated computerized customs system.

In order to improve the efficacy of ROO implementation the following policy-measures could be considered:

Institutional cooperation between ADB and WCO for a project on a South Asian ROO Certification and Implementation Programme needs to be launched, which may include *inter alia*:

E-ROO

A web-based system could be installed and developed wherein clients could fill the requisite forms online. The facilities should allow online-clearance

of requests, subject to inspection. This could be a part of a broader frame of e-governance. A ROO Web-clearance Portal (RWP) could be established. It could have three components of ROO: (i) Online Application System (OAS), (ii) Online Tracking System (OTS), and (iii) Online Clearance System (OCS). In addition, the programme could focus on developing and instituting a Common Regional ROO Certification Software. Regional IT connectivity among Certificate-issuing Institutions/Authorities and Customs Check-posts to facilitate online clearance of consignments needs to be evolved.

Validity-Period for Certificate of origin

Once inspection is done and a certificate of origin is issued, it should have certain period of validity. It may be made valid for one or two years to begin with, considering that technologies to produce an item are not changed by enterprises every year or two. By introducing validity in origin-certificates not only that the businesses would find a hassle-free operational compliance of ROO but it will also build trust and goodwill among different stakeholders and the government officials.

Capacity-Building and Technical Cooperation

Capacity-building modules for personnel handling certification and for customs officials need to be carried out. These could be customized, covering dimensions such as conceptual, empirical and operational.

Penalties and Surveillance

Whenever there is any infringement of any rule or circumvention of ROO, an argument is put forth is that the rules need to be modified or done away with. It must be highlighted that violation of a particular rule need not necessarily be a poor reflection on the rule *per se*. Any circumvention of even a well-formulated rule could be a reflection on the enforcement of the particular rule. In fact, in NAFTA such cases are dealt with by imposing heavy penalties (Box 1). This aspect has been missing from the South Asian region.

Box 1: Customs Steps Up NAFTA Enforcement

Customs has increased the profile of its enforcement activities under the North American Free Trade Agreement. In a notice posted to its web site, Customs makes clear that it views NAFTA enforcement as a priority. Under the NAFTA, goods that meet stringent rules of origin to qualify as “North American” (i.e., Canadian or Mexican) are entitled to duty-free or reduced duty entry into the United States. These rules may require that raw materials or parts undergo a qualifying change in tariff classification, that there be a specified level of value added in North America or both. In addition, the importer must have a signed Certificate of Origin at the time it claims NAFTA benefits. In its notice, Customs identifies transshipment as an illegal means of circumventing the rules of origin. Transshipment occurs when non-North American products are sent to Canada or Mexico and then, on importation to the United States, improperly claimed to be originating. These and other means of making false or invalid NAFTA claims may result in substantial penalties to the importer. Customs notes that a recent investigation led to a civil penalty of more than \$500,000.

Importers making NAFTA claims should understand the rules of origin and ensure that the NAFTA procedures suppliers and brokers apply to its entries are consistent with the rules and regulations. Where violations are suspected, the importer should seek expert professional advice to determine whether the circumstances warrant a prior disclosure to Customs. Importers should also be aware that Customs is actively looking for confidential informants who may have information relating to NAFTA and other Customs violations. Thus, internal compliance controls over NAFTA and other Customs processes are increasingly important.

Source: <http://www.barnesrichardson.com/news/overview.aspx?NewsID=320910105>

For infringement of ROO, heavy penalties need to be imposed along with internal surveillance and monitoring.

VI. CONCLUSIONS AND POLICY SUGGESTIONS

The paper examines some of the analytical aspects of rules origin and presents a factual account of the prevailing rules of origin formulations in the economic cooperation initiatives of the South Asian countries both within the region and with partners from outside the region. It empirically explores the issues of trade deflection and the developmental role of ROO.

Analytically, the paper concludes that ROO has a developmental role and it needs to be formulated to maximize this role. This conclusion emanates both from the analytical insights and empirical explorations. In the end, it is worth reiterating that rules of origin, if devised and understood adequately, could serve as a development policy tool within the ambit of a regional economic cooperation agreement. It can contribute to trade and investment expansion and through its emphasis on value addition; it has rich potential for employment and income generation.

For policy purposes, what comes out to be the optimal is a change in tariff classification at HS 4-digit level plus 50 per cent local content stipulation as a general rule. This is broadly the case in South Asia. As an exception, wherever this is not possible product-specific rules (PSRs) need to be evolved, at times by considering change in tariff subheading at HS 6-digit level and/or lower local content requirement, as the case may be.

Given relatively higher import dependence among LDCs, a more flexible approach needs to be adopted. However, this needs to be worked out in the backdrop of any possibilities of trade deflection as well as the developmental imperatives. To the extent, harmonization across FTAs is possible it should be undertaken; however FTA-specific considerations cannot be wished away.

In order to prevent rules of origin to act as non-tariff barriers and to enhance their developmental outcomes it may be concluded that a more adequate policy-attention should be given to the implementation and enforcement issues. Some of which are outlined in the paper as given below.

Institutional Cooperation between ADB and World Customs Organization for a Project on a South Asian ROO Certification and Implementation Programme could be launched, which may include inter *alia*:

- **E-ROO:** ROO Web-clearance Portal (RWP) could be established. It could have three components of ROO: (i) Online Application System (OAS), (ii) Online Tracking System (OTS), and (iii) Online Clearance System (OCS).

- Developing and instituting a Common Regional ROO Certification Software.
- Regional IT Connectivity among Certificate-issuing Institutions/ Authorities and Customs Check-posts to facilitate online clearance of consignments.
- Capacity-building for personnel handling certification and customs officials.
- Instituting a system of validity to a certificate of origin based on a sound system of inspection and verification. A Certificate may be valid for 3 to 5 years, since in such a short span of time, the technology and methods of manufacturing may not necessarily change.
- Evolving a system of heavy penalties along with internal surveillance and monitoring.

ROO Restrictiveness Index

Rules of origin are mostly defined using three methods:

1. Change in Tariff Heading (CTH): The first criteria can be specified requiring a change at the section level (2-Digit HS), heading level (4-Digit HS), sub-heading level (6-Digit HS), or item level (higher than 6-Digit HS).
2. Domestic Value Added (DVA)
3. Technical Requirement(TECH)

The three methods could also be combined under the same ROO, for example, a change of subheading plus specific regional value content. Moreover, there are many cases where the agreement defines alternative ROO for the same product. To obtain this restrictiveness index each rule or set of rules according to those different criteria has been codified. Then, a qualitatively ordered index is constructed under the following assumptions. First, a change of tariff classification at the section level tends to be more stringent than at the heading level, a change at the heading level more than at the subheading level, and so on.

Second, a regional content requirement adds more restrictiveness to a given rule, as does the technical requirement. For each pair of alternative rules being applied to the same product, we selected the one with the higher restrictiveness index. Finally, the categorical variable ROO ($y1^*$) has been constructed assigning to each 4-Digit HS product category an ordered numerical value according to the following observation rule:

| | | |
|---------|----|--|
| $y = 1$ | if | $y^* \geq CTH$ (Item) |
| $y = 2$ | if | CTH (Item) < $y^* \geq CTH$ (Sub-heading) |
| $y = 3$ | if | CTH (Sub-heading) < $y^* \geq CTH$ (Sub-heading) & DVA |
| $y = 4$ | if | CTH (Sub-heading) & DVA < $y^* \geq CTH$ (Heading) |
| $y = 5$ | if | CTH (Heading) < $y^* \geq CTH$ (Heading) & DVA |
| $y = 6$ | if | CTH (Heading) & DVA < $y^* \geq CTH$ (Section) |
| $y = 7$ | if | CTH (Section) < $y^* \geq CTH$ (Section) & TECH |

SAFTA

The ROO in SAFTA is given by the following criteria:

1. Change in Tariff Heading at 4-digit level (that is, CTH (Heading)), and
2. 40% Domestic Value Addition (30% for LDCs, viz., Nepal, Bangladesh, Bangladesh and Bhutan).

In addition, there is a list of 191 commodities on which Product Specific Rules (PSRs) are applied. The ROO index for such commodities therefore will be different and could not be included in the econometric application. The ROO index, which is applied at 4-digit level in SAFTA, is aggregated and brought to 3-digit level of ISIC.

BIMSTEC

Since BIMSTEC FTA is still not concluded in terms of ROO, alternative scenario of ROO formulations were taken with respect to their index value. The results for CTH plus 40 per cent are presented.

Endnotes

- ¹ Seven South Asian countries including Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka are the initial members of the SAARC. Afghanistan has recently become the new member of the SAARC.
- ² BIMSTEC FTA comprises five South Asian countries, viz., Bangladesh, Bhutan, India, Nepal, and Sri Lanka and two South-east Asian countries, viz. Myanmar and Thailand.
- ³ For a concise treatment, see Bhagwati (2002).
- ⁴ There is small but expanding literature on this subject - see for example, Krueger (1993), Krishna and Krueger (1995), Krishna (2005), Vermulst, Waer and Bourgeios (1994), Brenton, (2003). Ghoneim, Ahmed Farouk (2003), Hockman (1993), Inama, Stefano (1995), Mattoo, Aditya (2002), Palmeter, N. David (1993), Satapathy, C. (1998), WTO (2006).
- ⁵ Das (2004b)
- ⁶ However, there is always a scope to build product-specific derogations from such general rules.
- ⁷ It may be mentioned that in the context of SAFTA there are around 191 HS 6 digit items where Product-specifics Rules (PSRs) are also included as derogation from the general rules of CTH+40%. Essentially these PSRs are more liberal than the general rule, formulated on the basis of such products' inability (technical impossibility) to meet the general criteria.
- ⁸ See Panchamukhi and Das (2001) for an initial exploration of the concept. For its extension see Das (forthcoming).
- ⁹ Since export and import functions are different, focus has been on exploring the developmental role of ROO rather than focusing narrowly on the import side of trade deflection effects, which in any case was explored in the previous section with the help of a different methodology.
- ¹⁰ Data not available for Bhutan and Maldives
- ¹¹ See Technical Appendix
- ¹² For choosing fixed effects, Hausman Test was applied and Breusch-Pagan Test for assessing heteroskedasticity in the alternative scenarios.

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