Hindrances Caused by Rising NTMs to Potential Gains in Market Access: *The case of India-APEC Trade*

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Introduction

The Multilateral Trade Negotiations (MTNs) process since the 1947 has led to a rather one sided world in terms of liberation of the border measures like the tariff (Ad valorem terms only)[1] and living the disciplining of other barriers like the non-tariff measures see also WTO (2012) and Kallummal *et.al.*, (2013). To add to this imbalance was the stalemate of the Doha Round which began in 2001 and only to partially achieve its mandates with Bali Ministerial Mandate in December 2013. Therefore, the trade liberalisation efforts were increasingly directed towards smaller and manageable regional initiatives, nearly all the countries of the world had witnessed a surge in terms, with the numbers of RTAs touching close to 600 hundred in number. To quote WTO:

> *Regional trade agreements (RTAs) have become increasingly prevalent since the early 1990s. As of 8 January 2015, some 604 notifications of RTAs (counting goods, services and accessions separately) had been received by the GATT/WTO. Of these, 398 were in force. These WTO figures correspond to 446 physical RTAs (counting goods, services and accessions together), of which 259 are currently in force.*[2]

It is not surprising that regional efforts, are still on supporting the formation of new RTAs and mega-RTAs like the Trans-Pacific Partnership (TPP), Transatlantic Trade and Investment Partnership (T-TIP) and Regional Comprehensive Economic Partnership (RCEP). There is some effort by the Pacific countries also in this direction of a regional grouping. In this paper, we would be discussing briefly about the market access situation of Asia-Pacific Economic Cooperation (APEC). This short note discusses the market access challenges in the Intra-APEC countries while trading with each other.

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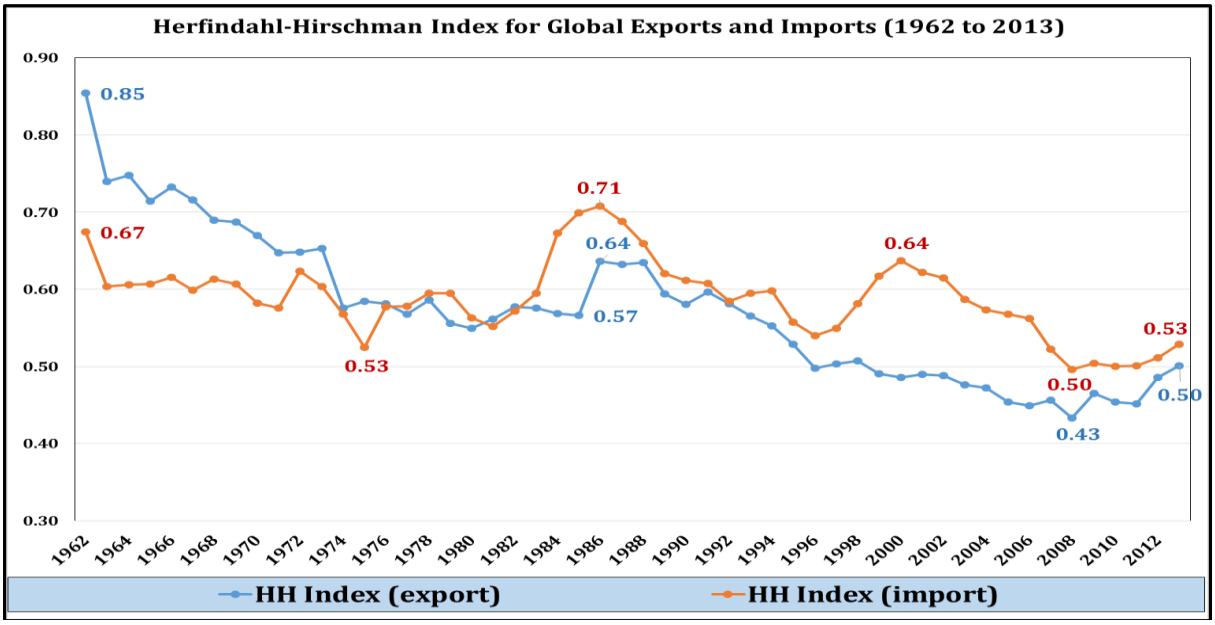
1 Kallummal Murali, 2015, "Imbalance in Doha Round and Agricultural Trade: Prospects for Market Access for Developing Countries", **Agrarian South: Journal of Political Economy**, vol 4, no.1, pp 12-25.

2 See web link, http://www.wto.org/english/tratop_e/region_e/region_e.htm last accessed on 11-01-2015.

Decreasing Concentration in the trading activity: Global Trends

Over the last five decades during 1962 to 2013, the global GDP grew at 8 percent annually while total global trade increased at phenomenal rate of 10.5 percent annually. However this was marked by some radically changes in the global economy. The analysis using the Herfindahl-Hirschman Index (H-index) for the import and export shares of countries suggests a clear decreasing concentration in the global economy. The H-index for the global exports of 248 countries have suggested a decrease of almost half its values observed in 1962 – there was a remarkable decrease from 0.85 in 1962 to 0.50 in 2012 this was higher than what was observed 2008 at 0.43. While in the case of import share it suggested a sticky trend during the five decade period showing only a decrease by 17 percentage points from 0.67 in 1962 to 0.50 in 2013, see Figures 1 & 2.

Figure 1: Decreasing Global Concentrations; 1962 to 2013



Source: WITS COMTRADE Online Database, accessed on 12-12-2014

This suggested a decreasing trend in concentration during the periods for both exports and imports. It also suggested a stake reality of some other kind of barrier3 existing in the case of imports while exports suggested a substantial decrease in concentration. Figure 2 analyses suggested emergence of three broad phases based on the trends observed in the H-index. The period of 1962 to 1985 is the first phase with the GDP

[3] It should be noted that this period witnessed substantial reduction in MFN applied rates.

growing at 11 percent annually and both exports and imports grew at little more than 14 percent respectively.

However, the second phase (1986 to 2008), saw a fall to half the rates of phase one, in the growth rates of GDP with 6 percent and moderate drops in growth rates of export and import, which fell to around 10 percent. Further in the last phase of 2009 to 2013 nearly all the growth rates were at the lowest levels. The growth rates of the GDP almost the recording the same with 6.0 percent and both exports and imports recording nearly 9 percent respectively, see Table 1.

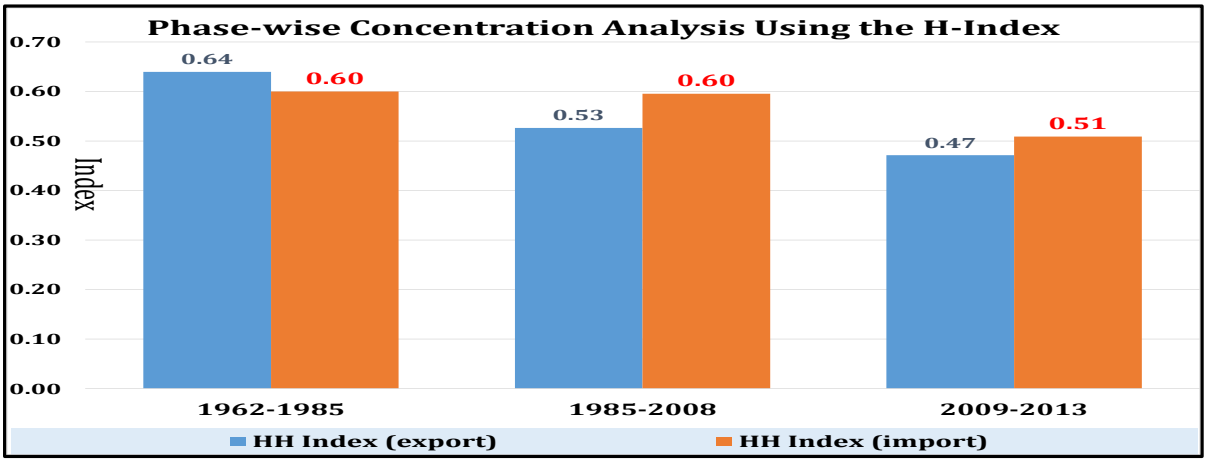
Table 1: Growth Rates of Global GDP and Trading Activities

Phases	GDP	Exports	Imports
1962 - 1985	11.0	14.7	14.7
1986 - 2008	5.6	9.5	9.5
2009 - 2013	6.0	8.9	8.8

Source: WITS COMTRADE Online Database, accessed on 12-12-2014

As indicated from the above analysis it can be said that over the three phases we can observe that H-index too have decreased over the phases suggesting a decrease in concentration in terms of shares of individual countries to the total values of export and import.

Figure 2: Phase-wise Concentration of Exports and Imports Hindex



Source: WITS COMTRADE Online Database, accessed on 12-12-2014

However, the decrease of the H-indexes have been much sharper in terms of individual country shares for export, while in the case of share of imports it indicated a sticky

trend. Since the seventh century exports and imports of the global economies have shown increasing signs of equity, which is correspondingly shown by an increase in exporting activities.

With increased interaction the world economies up to 2008 with both H-indexes for exports and imports recorded lower values. Therefore, we can observe an upward trend in term H-index, suggesting signs of concentration is indicated by the increased protections across key drivers (countries) of global economies. Kanbur (2001), Rodrik (2001), Smith (1994 & 2005), Weisbrot et al. (2001), Akyüz (2005) and TWN (2006) clearly established the fact that, the differences in the level of development have led to an increasing protectionism, even in the so-called most liberalised phase of the global history.

Growing Imbalance in the WTO Negotiations: Tariff and Non-Tariff Measures

Various studies have observed that while the non-tariff measures (NTMs) are on increase as applied tariffs have been slowly and steadily decreasing, especially since the formation of WTO in 1995.[4] In the post 1995 period, there were concerted efforts creating Plurilateral and sector centric agreements, like the information technology agreement (ITA).

The ITA led to tariff across 97 countries dropping to zero from their applied rates. Products covered under the ITA include computer hardware and peripherals, telecommunications equipment, computer software, semiconductor manufacturing equipment, analytical instruments, and semiconductors and other electronic components.[5] This process has brought down the average applied most favoured nation (MFN) duties of developing countries to a level of 10 percent from as high an average of 40 percent during the Uruguay Round.

[4] In the period before 1995 this process of tariff reduction was limited to the largely developed countries with occasional bilateral deals with limited set of developing countries.

[5] Refer to website: http://web.ita.doc.gov/

While it is relatively simple to make an assessment of the level of average tariff on the other have making an assessment of the liberalisation based on the level of non-tariff measures is rather difficult as these are not quantifiable like in the case of tariffs, as most often these variables qualitative in nature (for example like, labelling, quality related technical specifications, level of contaminations in PPM, etc).

The NTMs are broadly divided into two categories WTO non-compatible (NC-NTMs) and those which WTO compatible NTMs (C-NTMs). The NC- NTMs are those which have been either phased out or restricted from use under the WTO and the WTO compatible ones are those which continue to be used even this day and until there is some restriction which is imposed on these measures in the future.

However, there are a broad range of possible NTMs, they fall under the broadly two heads: 1) those which are imposed at the borders on imports, such as restrictions, prohibitions, seasonal duties, tariff rate quotas ; foreign exchange controls including artificial exchange rates; public procurement practices and are some of the tactics deployed and 2) the domestically restrictions which are imposed by law/legislations/regulations on the imports like product standards, quality specifications, labour and environmental standards to regulate trade flows with these products qualities and thereby restrict free trade flows.

The applied on tariff lines have continued to decrease and with consensus on the definition of NTMs the task of quantification of these WTO-compatible NTMs[6] should be easier. The impact of NTMs can only be measured from the exporters' point of as cost towards compliance with these qualitative measures. There is a divergence in the level of technological capabilities, skill-set and development across the sectors, firms and more broadly countries. The task is made even more difficult, we need more and more case studies and these case studies cannot be one time phenomenon, there is a need for a more robust and dynamic approach towards these primary surveys.

There is an attempt trend that is observed among the leading NTMs countries they have become more stringent with the increasing scientific understanding and technological capability. In such cases, repeated primary surveys at regular intervals to analyse the

[6] In this paper from this point onwards NTMs should be understood as WTO compatible NTMs.

cost of compliance with increasing stringency of the NTMs measures renders quantification of these measure almost impossible and challenging.

Based on the trends since 1995, the formation of WTO, It can be observed from the behaviour of industrialised countries and other emerging economies while they as group actively preach liberalisation and some of them are campaigners of free trade but they do have some of the most stringent restriction in the form of SPS and TBT barriers (US, China, Korea South, EU, (Switzerland - high incidence of Specific duty) and Japan. Free trade or Tariff liberalisation has followed with either non-tariff measures like SPS/TBT measures or the maintenance of Specific Duties which existed during the Uruguay Round. It is further aggravated by the increased market access challenge emerging from the difference in the level of development and technological capabilities of the developed, developing and least developed countries.[7] According to the 2012 edition World Trade Report a flagship publication published by the WTO in 16 July 2012:

> *…non-tariff measures, such as regulatory standards for manufactured and agricultural goods, can have a significant impact on trade — possibly even more than tariffs*"[8]

These increased regulations can be clearly established from the Figure 3 below. There is an increase in the NTMs like the Sanitary and Phytosanitary (SPS) measures and Technical Barriers to Trade (TBT) which can be seen to be increasing on the left side of the Figure 3 (a). In this context, the Centre for WTO Studies (CWS) has collated and created databases on WTO-compatible, non-tariff measures such as SPS and TBT that are being implemented by countries, based on the Members' submission to the WTO Secretariat as mandated under the SPS and TBT Agreements. There are nearly 22.5 thousand TBT notifications 1995 to 2014 and in terms of product coverage roughly one lakh products at heading level (4 digit HS). Another 16.4 thousand SPS notifications notified under the WTO from January 1995 to 2014, in terms of product coverage roughly 1.4 lakh products at heading level (4 digit HS). So the total NTMs under the SPS

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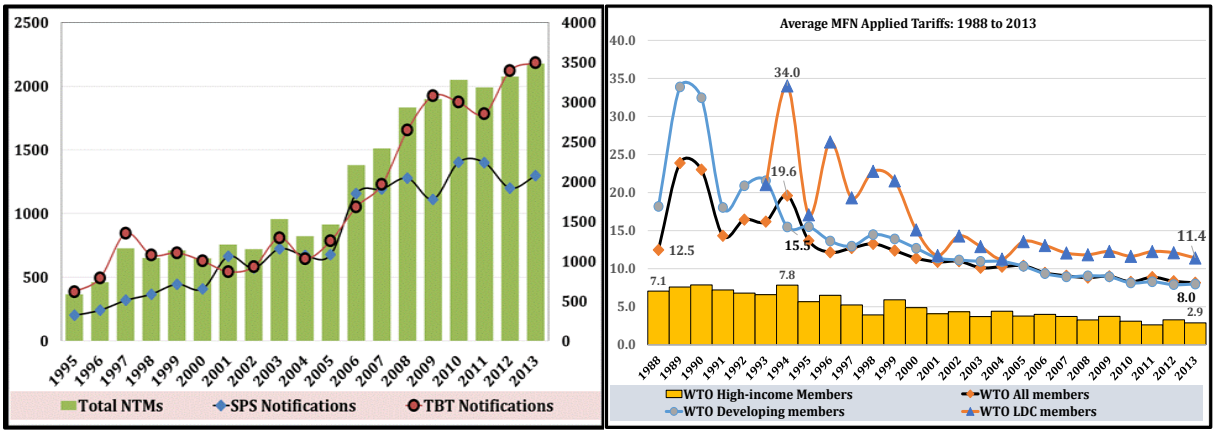
[7] Kallummal Murali, 2013, "***SPS Measures and Market Access Implications for Agricultural Trade: WTO's Systemic Issues and Changing Scale of Technology***", ISBN 978-3-659-40808-3, Lambert Academic Publishers, Germany.

[8] WTO, 2012, "***World Trade Report 2012: Trade and public policies: A closer look at non-tariff measures in the 21st century"***, World Trade Organisation, Geneva.

and TBT was close to 39.0 thousand notifications with a product coverage total 2.4 lakh products from 1995 to 2014.

Figure 3: The Changing Template of Trade Policy Instruments: NTMs Vs MFN Average Applied Tariffs

(a) *(b)*



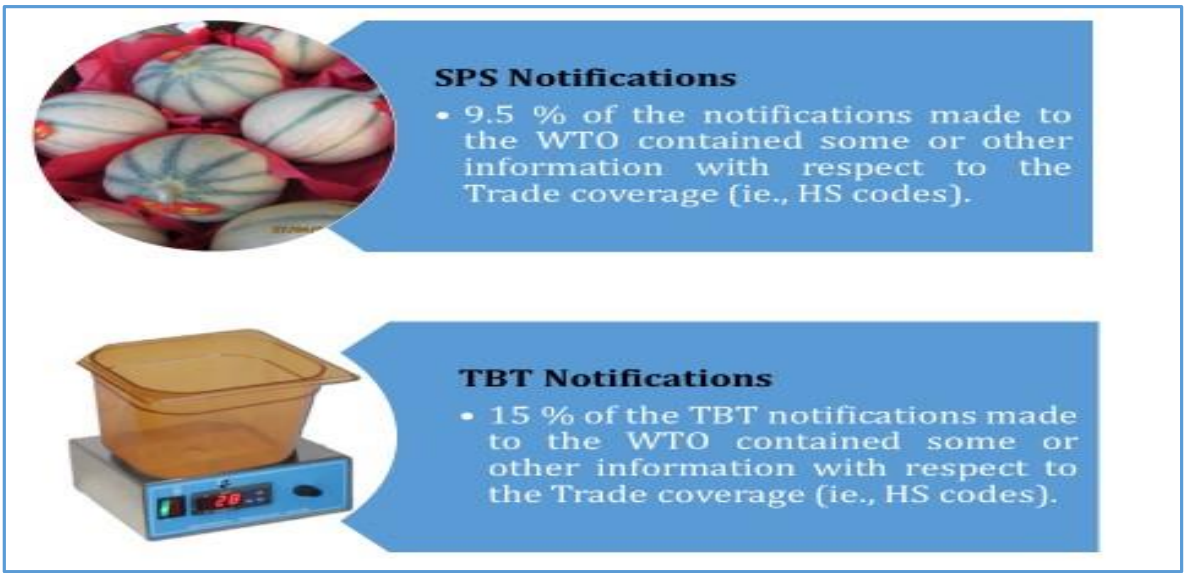
Source: Compiled by the author based on WITS COMTRADE and CWS Web portal on SPS and TBT databases.

The average applied MFN rates[9] in the high-income members was 7.1 percent in 1988 only to increase to 7.8 percent just after the WTO came to existence clearly indicating protectionism in the form of tariffs existed in the developed world, see Figure 3 (b). However it decreased thereafter from nearly 8 percent average applied MFN rates to 3 percent level in 2013. While on the other hand both the developing countries and least developed countries (LDCs) showed a drop of 8 percentage points and 23 percentage points respectively. Therefore, we can observe sharp reductions in tariff rates in the case of developing and the LDCs creating relatively low tariff regimes.

The Figure 4 clearly indicates that in 9.5 percent of the total notifications made there are trade linkages (HS codes) indicated by the members of total 16.4 thousand SPS notifications made during 1995 to 2013. Similarly in the case of TBT notifications out of the 22.5 thousand TBT notifications only 15 percent had a trade linkage.

Figure 4: Actual Trade Coverage's (HS codes) SPS and TBT Notifications under the WTO

[9] Note that much of agricultural products were protected in the developed countries with the repent use of specific tariff rates (non-ad-valorem tariffs) this was as a direct outcome of the 100 percent tariffication procedure agreed in the Uruguay Round, See the discussions in Kallummal, 2015.



Source: Compiled by the author based on CWS Web portal on SPS and TBT databases.

This has been rectified by the Centre for WTO Studies[10] web portal which provides the trade links to all the notifications from 1995 onwards. This would facilitate enhancing the market access understanding of the tariff reduction and NTMs increased notifications since 1995 and its overall impact on trade.

Non-Tariff Measures (NTMs) Asia Pacific Economic Cooperation (APEC) and India

Analysis of the NTMs (SPS and TBT measures) notified to the WTO secretariat indicates, these notifications have been over the period of January 1995 to December 2013. This has been seen across all the categorisations like the national *vs* international measures and the developed and developing country breakup within the APEC plus India grouping.

The NTMs like the SPS and TBT measures are increasingly being notified (in terms of numbers) by the APEC Members and India from 1995 to 2013 – it should be noted that it was happening while the MFN average tariffs rates were declining across the world. It is therefore, important to make an assessment on relative significance of these rising new[11] kind of barriers. In this section, we analyse in detail the SPS and TBT measures notified by APEC Members and India.

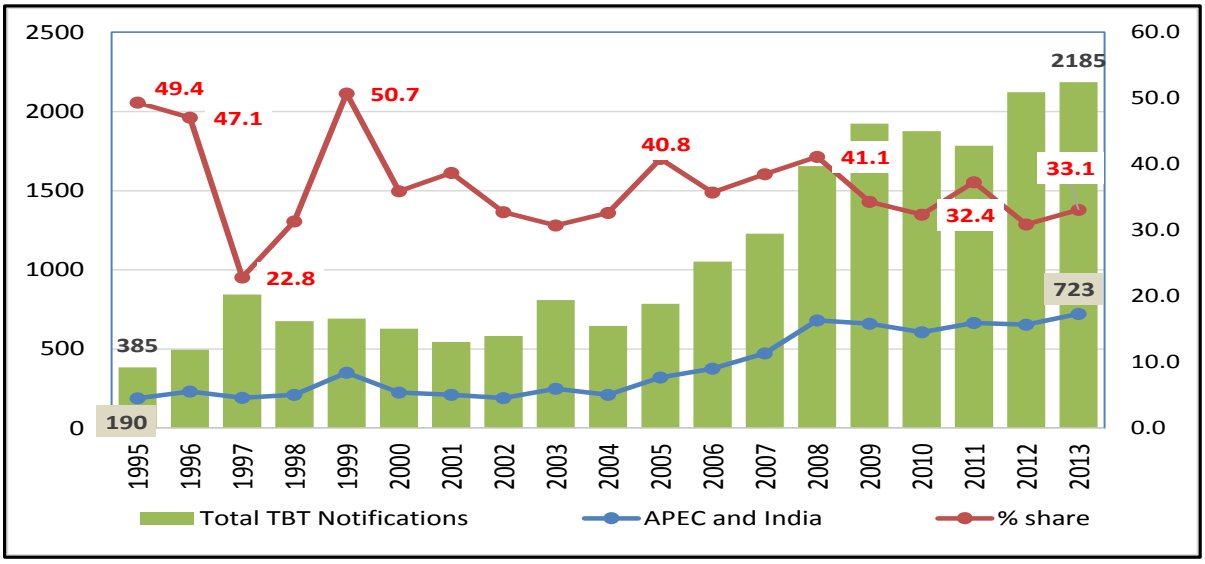
It can be seen from the Figure 5, that in the case of TBT measures both total notifications by the WTO members and APEC plus India (as a group) has been growing over the years,

[10] Visit the web Sites of Centre for WTO Studies, IIFT <http://wtocentre.iift.ac.in/> and the following web links for SPS Measures <http://cc.iift.ac.in/sps/index.asp> and for TBT measures http://cc.iift.ac.in/tbt/index.asp.

[11] These were discussed as new protectionism in the Greenways, 1979.

keeping the shares of APEC plus India's (APEC+India) at an average of close to 38 percent. In terms of number of notifications it increased from 385 measures in 1995 to 2185 measures by 2013 – registering a growth rate of nearly 10 percentages.

Figure 5: APEC plus India: TBT Measures and Total Notified Measures under WTO

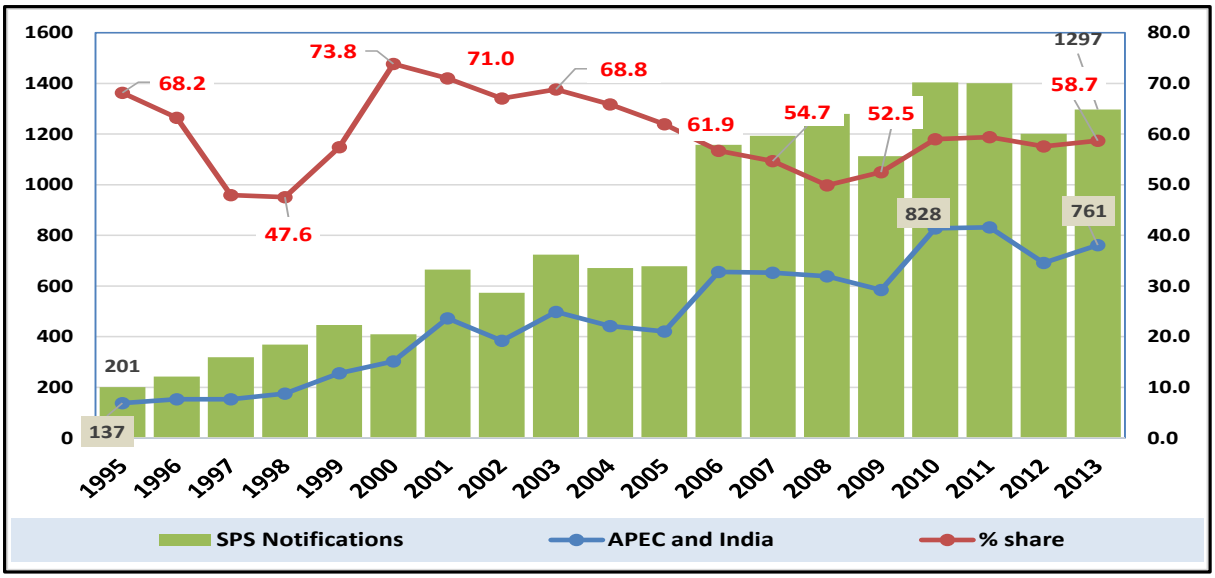


Source: Compiled by the author based on CWS Web portal on SPS and TBT databases.

TBT and SPS measures (see Figure 5 & 6) continued to be relevant even after the MFN averages tariff in the APEC+India continued to decrease from 16.3 percent in 1988 to 3.9 percent in 2013 with a negative growth rate of 6 percent. The APEC+India total TBT measures increased from 190 measures in the year 1995 to 723 measures by 2013 with a growth rate of nearly 8 percent. The TBT measures were considerable barriers to trade in the region as is evident India accounted for negligible shares. The percentage of share of APEC+India was around an average of 40 percent during this period – while it was 49 percent of the total TBT measures this gradually dropped to 33 percent by 2013.

Figure 6 analyses the trends in the SPS measures, which too indicated an increasing trend during the period of January 1995 to December 2013. Although there has been an increasing trend in terms of the number of measures, in terms of shares, the total SPS measures suggested a marginal drop in share from 68 percent in January 1995 to nearly 59 percent.

Figure 6: APEC plus India: SPS Measures and Total Notified Measures under WTO



Source: Compiled by the author based on CWS Web portal on SPS and TBT databases.

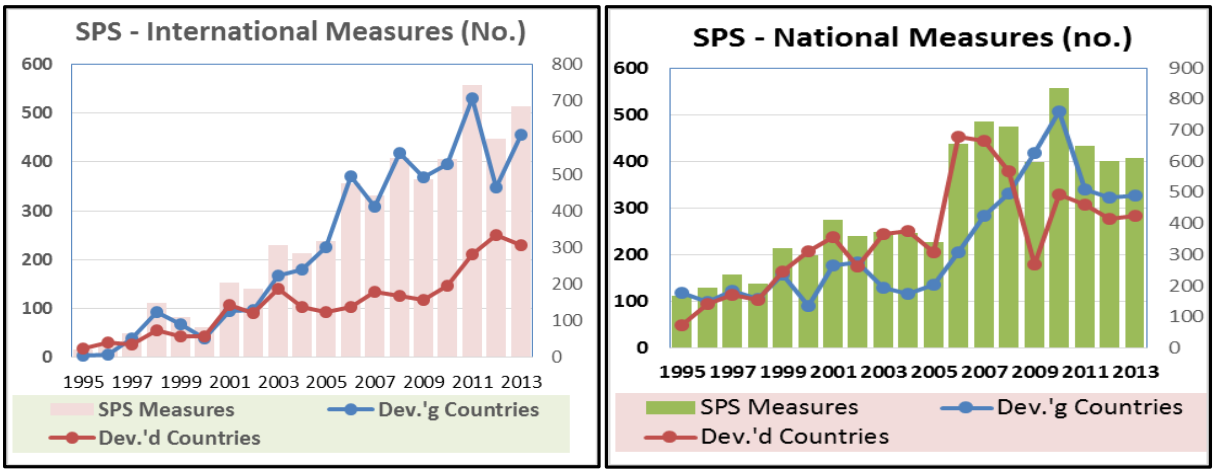
Figure 7 and 8 provides a detailed analysis of the emergence of national measures across the developed and developing members of the APEC+India grouping. In both the figures, we analyse and show the comparative influence of national measures (right hand side of the respective figures) over the international measures (left hand side of the respective figures) separately.

While it can be observed that there has been an increase in protection across the grouping of APEC+India. The total TBT and SPS measures for both National and International measures are represented on the right hand side of the Figures 7 & 8. In the case of SPS measures in particular, as observed based on Figure 7, it can be said that there is relatively clear dominance of the developed countries of the APEC+ India grouping when compared the usage of National measures. This is drawn from the analysis of the left hand side of figure 7. It clearly indicates that of the total 19 years of analysis (1995 to 2013) at least in majority of 13 years the developed countries had a higher number of SPS measures which were primarily based on National standards. In the case of International measures the developing countries had a clear domination in 17 years out of the total 19 years – with the developing countries having used more of International measures. There is an increase in the restrictions on the trade in agricultural products in the developed market of APEC+ India group, which is primarily based on National standards in the developed countries.

The APEC+India grouping suggested an increased protection by the developing countries in comparison to the developed countries. There is a clear domination of developing

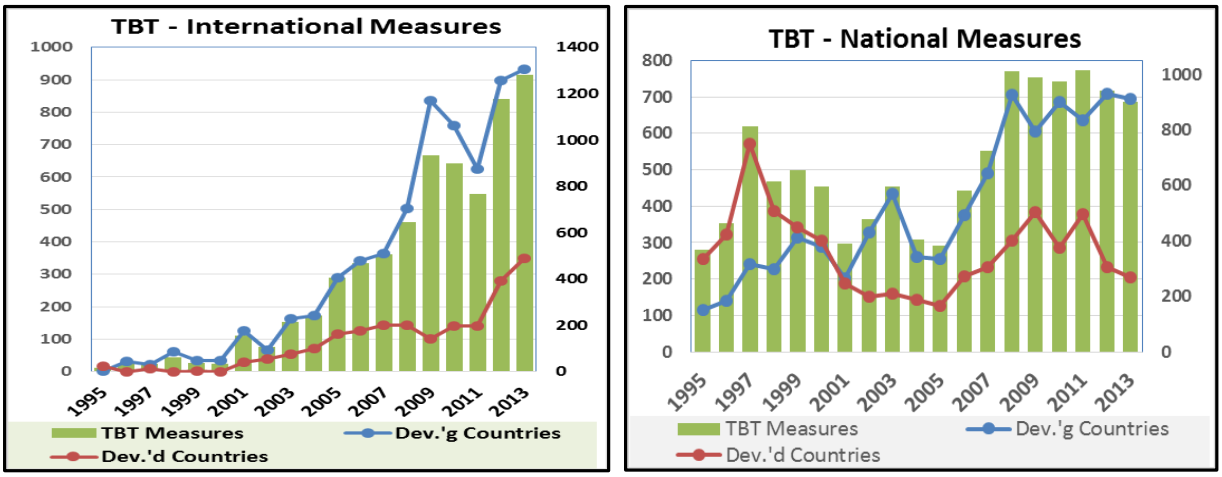
countries in the case of International TBT measures. However when it comes the application of National measures, the developing countries showed a clear domination in 13 years out of the total 19 years.

Figure 7: National and International SPS Measures in Developed and Developing Countries



Source: Compiled by the author based on CWS Web portal on SPS and TBT databases.

Figure 8: National and International TBT Measures in Developed and Developing Countries



Source: Compiled by the author based on CWS Web portal on SPS and TBT databases.

So the comparatively in the case of both the TBT and SPS measures, the average for APEC members countries for the period of 1995 to 2013 was an astonishing 7 times higher compared to India TBT and SPS measures. Suggesting that the APEC members had substantially higher restrictions based on SPS and TBT measures. The APEC+India grouping is not very conducive for India to be when tariff would be liberalised as there are these NTMs like SPS and TBT measures which stem-up.

The National SPS measures (NTMs) are largely domestic measures which needs to be addressed domestically; therefore, the solution to eliminate these barriers would have to

come from these very respective members (APEC grouping). The increase in National SPS Measures are manifested in the form of increased regulations based on the Maximum Residual Limits (MRLs) of contaminants of pesticides, fungicides and other chemical residuals. Table 2 analyses these residual levels for a total of 7600 contaminants present in 23 agricultural products exported by India and is consumed as food in the markets mentioned in the table.

Table 2: Top 23 India's Export Interest in the Agricultural Crops (Food) to APEC Countries

S. No.	Crops	Codex	Australia	China	Japan	Korea	Malaysia	New Zealand	Singapore	Thailand	Vietnam	Selected APEC Countries
1	Cashew Nut	37	28	11	75	81	38	10	39	38	40	397
2	Chickpeas-Dry	24	58	11	94	93	25	24	29	24	25	407
3	Coconut	10	12	4	30	27	13	3	12	11	10	132
4	Coffee Bean-Green	5	9		20	33	8	3	7	6	6	97
5	Corn-Grain	50	80	43	120	101	54	31	54	50	54	637
6	Cucumber	62	56	47	101	100	67	60	65	64	65	687
7	Grape-Table	71	96	35	115	117	71	80	75	73	73	806
8	Guar-Dry		7		52			1				60
9	Guava	1	13	6	30	36	6	7	3	1	1	104
10	Mustard Seed Indian (Brown)	4	2	1	29	31	4	4	8	4	7	94
11	Onion-Bulb	38	37	15	77	80	40	38	45	39	40	449
12	Peanut	35	41	22	87	88	39	14	39	40	40	445
13	Pepper-Non-Bell	52	48	34	113	105	62	62	63	56	67	662
14	Rice-Grain	28	46	15		65	28	22	33	31	33	301
15	Sesame Seed	7	15	2	24	40	7	6	11	7	7	126
16	Soybean	50	62	42	112	103	55	32	56	55	51	618
17	Spearmint-Oil		1					2				3
18	Sugar Cane	12	28	14	46	12	16	7	15	15	12	177
19	Tea Leaves	7	11	6	25	11	8	8	7	6	7	96
20	Turmeric-Root	1	19		62	67	1	1	1	3	2	157
21	wheat-Grain	55	88	48	103	92	55	44	59	55	56	655
22	Cattle Meat*	25	32	29	50	40	30	21		22	25	274
23	Milk*	24	24	24	24	24	24	24		24	24	216
Total		**598**	**813**	**409**	**1389**	**1346**	**651**	**504**	**621**	**624**	**645**	**7600**

Note * =

Source: Compiled by the Author based on FAO database on MRLs.

The MRL based restrictions of India's exports have gained prominence as the tariffs have bottomed out. The scale of this is clearly evident in APEC markets from the Table 2. Some of these restrictions on exports of agricultural goods are more stringent than the internationally harmonised standards (CODEX).

Japan is taken as a case to highlight the scale of maintaining a higher standard in MRL levels on some of the export interest products of India. These are stringent as they are more restrictive than compared to the international standards (CODEX standard) for

these agricultural products. The case of 16 agricultural products exported by India to Japan is listed in Annex Table 1, what is extremely important is that trade statistics will not capture what happens behind the border. In this case is extremely important to understand and analyse what happens to India's exports of these 16 agricultural products once they are rejected due to a national measures in the form of SPS barrier. Japan would be justified, in the application of the measure, if it was compatible with the SPS Agreement of the WTO. The SPS Agreement requires any national measure to deviate from the internationally harmonised level if there was a compelling scientific justification. The whole process required a detailed risk assessment procedure to be carried out before the application of a higher level of tolerance in the form of MRLs.

There has been an increase in the developing such standards and regulations by countries who want to stay in the business of trading as these are the measures of tomorrow which protect the domestic industries and their consumers from unregulated imports. However, the country-wise listing of 338 CODEX committees indicates that there are no committees which are headed by India and would be left out. India is still stuck with old issues like tariff based protection, while the other players are moving far ahead with SPS measures based protection which would be good for both the domestic industry and the consumers.

Conclusion

To conclude, we would say that as indicated in the paper there has been rise in SPS measures and therefore the NTMs, while average MFN applied duties have been moving downwards. As the world is moving more and more towards "behind the boarder measures" like the NTMs, which are the SPS measures based standards. These are largely domestic standards which are being increasingly applied on the imports from third countries. Most often the refusals by the countries are difficult to capture in terms of trade statistics. Often the SPS measures based refusal happen on imports inside the territory of partner and after it has crossed the border. These may not be reflected in the conventional trade statistics. Increasing more and more exports is faced with the incidence of NTMs, like SPS and TBT Measures, do require unconventional remedies and these are as follows.

We have to be alert regarding the whole production process following good manufacturing and good agricultural practices to avoid the chances of export refusals. Also there is a need to check the WTO compatibility of any new NTMs which is introduced and applied on the exporters. This process is particularly challenging because the notifications most often do not have trade linkage (HS codes) as indicated in the paper.

Therefore, there is a need to keep a close tab on the following developments:

1. To be involved closely in the process by watching for any new NTMs, particularly the SPS and TBT measures, which are being introduced in the recent past. These would then have to be mapped with the existing internationally harmonised standards, in order to establish that the measures are national or International measures. Therefore, keeping a track of the notifications by the prominent trading partners and in general all the WTO members becomes very critical.
2. Counter intelligence and surveillance of the domestic sales within the partner country becomes an important integral part of this exercise. This is carried out to make an assessment as to whether all the domestically sold goods meet the SPS measures directive. It is to check for national treatment (NT) and most favoured nation (MFN) principles being adhered as per the spirit of the SPS and TBT agreements. Checking and testing for nearly all the products in partner's market will become a primary concern for any exporter.
3. Such laboratory testing and checking would have to be carried-out keeping the information of the refusal. This will becomes important for the trading partners to access for violation of the WTO principles like the "national treatment" and "most favoured nation".
4. The first three points mentioned should be carried out at the sectoral level. Some of these efforts need to be addressed at sectoral level as the problems are unique in nature, as the need for inspection of the measure/regulation for "compatibility" are largely sectoral in approach. The need to check for the stringency of SPS measures, in terms of maximum residual limits (MRLs), based on risk assessment approach most often needs a sectoral approach as such measures are adopted largely by the developed countries. Such measures once adopted by a country should be tracked for continuity so that they are not relaxed by future notifications.

Exporting country should ensure that constant violators firms are identified and are discouraged from undertaking future trading. There is a need to urgently address the issues of improvement in the quality. India can only succeed as a country, when its products have a quality approach (organic) to manufacturing processes with lower presence of contaminants. There is an urgent need to achieve a balance negotiated outcomes particularly in the context of tariff vs NTMs. India has to be an active player in terms of pushing for quality and should be more active in the international committees for standardisation.

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Annex Table 1: Pesticides and Veterinary Drugs MRLs regulations in Japan on 16 Indian Export Interest Agricultural Products

Agricultural Products	Pesticides	Japan	Codex	Stringency (Japan's MRL exceeding)
1	*2*	*3*	*4*	*5 =(4-3)*
Cattle Meat	Novaluron	0.7	10	-9.300
	Piperonyl Butoxide	2	5	-3.000
	Lambda Cyhalothrin	0.02	3	-2.980
	Bifenthrin	0.5	3	-2.500
	Alpha-Cypermethrin	0.1	2	-1.900
	Cypermethrin	0.1	2	-1.900
	Zeta-Cypermethrin	0.1	2	-1.900
	Flubendiamide	1	2	-1.000
	Indoxacarb	1	2	-1.000
	Spinosad	2	3	-1.000
	Phosmet	0.2	1	-0.800
	Permethrin	0.4	1	-0.600
	Chlorpyrifos	0.5	1	-0.500
	Boscalid	0.2	0.7	-0.500
	Deltamethrin	0.03	0.5	-0.470
	Fipronil	0.04	0.5	-0.460
	Fenpropathrin	0.1	0.5	-0.400
	Fluopyram	0.1	0.5	-0.400
	Spinetoram	0.01	0.2	-0.190
	Beta-cyfluthrin	0.02	0.2	-0.180
	Cyfluthrin	0.02	0.2	-0.180
	Fenpyroximate	0.03	0.2	-0.170
	Difenoconazole	0.05	0.2	-0.150
	Endosulfan	0.1	0.2	-0.100
	Methoxyfenozide	0.2	0.3	-0.100
	Aminopyralid	0.02	0.1	-0.080
	Thiacloprid	0.03	0.1	-0.070
	Chlorpyrifos-methyl	0.05	0.1	-0.050
	Diflubenzuron	0.05	0.1	-0.050
	Dinotefuran	0.05	0.1	-0.050
	Bifenazate	0.01	0.05	-0.040
	Oxydemeton-methyl	0.01	0.05	-0.040
	Spirotetramat	0.02	0.05	-0.030
	MCPA	0.08	0.1	-0.020
	Emamectin	0.002	0.004	-0.002
Chickpea	Bifenazate	0.3	7	-6.700
	Azoxystrobin	0.5	3	-2.500
	Flubendiamide	1	2	-1.000
	Chlorothalonil	0.2	1	-0.800
	Alpha-Cypermethrin	0.05	0.7	-0.650
	Zeta-Cypermethrin	0.05	0.7	-0.650
	Paraquat dichloride	0.05	0.5	-0.450
	Spinosad	0.02	0.3	-0.280
Coconut	Spinosad	0.02	0.07	-0.050
Coffee bean, green	Imidacloprid	0.7	1	-0.300
Corn Grain	Piperonyl Butoxide	24	30	-6.000
	Pirimiphos-methyl	1	7	-6.000
	Glyphosate	1	5	-4.000
	Deltamethrin	1	2	-1.000
	Triadimenol	0.1	0.2	-0.100
	Alpha-Cypermethrin	0.2	0.3	-0.100
	Zeta-Cypermethrin	0.2	0.3	-0.100
Cucumber	Zoxamide	1	2	-1.000
	Indoxacarb	0.2	0.5	-0.300
Grape, table	Captan	5	25	-20.000
	Clofentezine	1	2	-1.000
	Triflumizole	2	3	-1.000
Milk*	Novaluron	0.4	7	-6.600
	Flubendiamide	0.1	5	-4.900
	Spinosad	2	5	-3.000
	Bifenthrin	0.2	3	-2.800
	Boscalid	0.1	2	-1.900
	Indoxacarb	0.1	2	-1.900

	Fluxapyroxad	0.02	0.5	-0.480
	Alpha-Cypermethrin	0.05	0.5	-0.450
	Cypermethrin	0.05	0.5	-0.450
	Zeta-Cypermethrin	0.05	0.5	-0.450
	Fluopyram	0.07	0.3	-0.230
	Lambda Cyhalothrin	0.03	0.2	-0.170
	Chlorantraniliprole	0.05	0.2	-0.150
	Thiabendazole	0.1	0.2	-0.100
	Endosulfan	0.004	0.1	-0.100
	Spinetoram	0.01	0.1	-0.090
	Dinotefuran	0.05	0.1	-0.050
	Imazapic-ammonium	0.05	0.1	-0.050
	Bifenazate	0.01	0.05	-0.040
	Clofentezine	0.01	0.05	-0.040
	Hexythiazox	0.02	0.05	-0.030
	Hexythiazox	0.02	0.05	-0.030
	Tebufenozide	0.02	0.05	-0.030
	Thiacloprid	0.02	0.05	-0.030
	Deltamethrin	0.03	0.05	-0.020
	Azoxystrobin	0.01	0.03	-0.020
	Difenoconazole	0.005	0.02	-0.020
	Chlorothalonil	0.06	0.07	-0.010
	Clothianidin	0.01	0.02	-0.010
	Diphenylamine	0.0004	0.01	-0.010
	Diphenylamine	0.0004	0.01	-0.010
	Fenpyroximate	0.005	0.01	-0.010
	Emamectin	0.0005	0.002	-0.002
Nut, cashew	Diflubenzuron	0.06	0.2	-0.140
	Spinosad	0.02	0.07	-0.050
Onion, bulb	Chlorpyrifos	0.05	0.2	-0.150
	Cyantraniliprole	0.04	0.05	-0.010
	Imidacloprid	0.07	0.1	-0.030
Peanut	Imidacloprid	0.7	1	-0.300
	Chlorothalonil	0.05	0.1	-0.050
	Diflubenzuron	0.05	0.1	-0.050
	Zeta-Cypermethrin	0.05	0.1	-0.050
	Penthiopyrad	0.04	0.05	-0.010
	Fluopyram	0.02	0.03	-0.010
Pepper, non-bell	Buprofezin	5	10	-5.000
	Ethephon	2	5	-3.000
	Ametoctradin	0.05	1.5	-1.450
	Novaluron	0.05	0.7	-0.650
Rice	Glyphosate	0.1	30	-29.900
	Iprodione	3	10	-7.000
	Dinotefuran	2	8	-6.000
	Piperonyl Butoxide	24	30	-6.000
	Azoxystrobin	0.2	5	-4.800
	Trifloxystrobin	0.9	5	-4.100
	Alpha-Cypermethrin	0.9	2	-1.100
	Zeta-Cypermethrin	0.9	2	-1.100
	Deltamethrin	1	2	-1.000
	Flutolanil	1	2	-1.000
	Spinosad	0.1	1	-0.900
	Glufosinate-ammonium	0.3	0.9	-0.600
	Lambda Cyhalothrin	0.5	1	-0.500
	Chlorantraniliprole	0.05	0.4	-0.350
	Sulfuryl fluoride	0.04	0.1	-0.060
	Sulfuryl fluoride	0.04	0.1	-0.060
	Sulfuryl fluoride	0.04	0.05	-0.010
Soybean, seed	Deltamethrin	0.1	1	-0.900
	Chlorothalonil	0.2	1	-0.800
	Paraquat dichloride	0.1	0.5	-0.400
	Diquat dibromide	0.2	0.3	-0.100
	Cyproconazole	0.05	0.07	-0.020
	Propiconazole	0.05	0.07	-0.020
Tea, leaves	Dicofol	3	40	-37.000
	Tolfenpyrad	20	30	-10.000
Wheat, grain	Glyphosate	5	30	-25.000
	Piperonyl Butoxide	24	30	-6.000
	Trinexapac-ethyl	0.6	3	-2.400

	Malathion	8	10	-2.000
	Alpha-Cypermethrin	0.2	2	-1.800
	Zeta-Cypermethrin	0.2	2	-1.800
	2,4-D	0.5	2	-1.500
	Deltamethrin	1	2	-1.000
	MCPA	0.1	0.2	-0.100
	Aminopyralid	0.04	0.1	-0.060

Note * = Veterinary Drugs
Source: US, FAS online last accessed on 03.02.2015.

Annex Table 2: Number of CODEX Committees and Countries in charge of various Committees

Country Heading	Number of CODEX Committees
Australia	10
Brazil	1
Cameroon	2
Canada	13
China	17
Colombia	2
Costa Rica	3
Denmark	6
France	2
Germany	14
Hungary	16
Japan	11
Lebanon	8
Malaysia	6
Mexico	35
Netherlands	20
New Zealand	38
Norway	26
Republic of Korea	1
Switzerland	11
Thailand	1
United States of America	95
Sub-Committees of CODEX	**338**

Source: Web site of FAO, CODEX, last accessed on 21-10-2014.