## **5.1 Summary**

Trade is not an end in itself, but a means to economic growth and national development. The primary purpose is not the mere earning of foreign exchange but the stimulation of greater economic activity. It is commonplace to recognize that the use of tariffs has gradually been replace by the use of non-tariff barriers like quotas, export subsidies, local content requirement, anti-dumping, export standards (SPS and TBT).Baldwin (1984) for instance writes: "Not only have these measures become more visible as tariffs have declined significantly through successive multilateral trade negotiations but they have been used more extensively by governments to attain the protectionist goals formerly achieved with tariffs"(p. 600).<sup>71</sup> In terms of incidence, TBTs are by far the most used regulatory measures, with the average country imposing them on about 30 per cent of products and trade. Countries also impose SPS measures on an average of approximately 15 per cent of trade. Trade economists have mostly interpreted the growth in the number and form of export standards as a political economy response to the constraints being imposed by international trade agreements on traditional trade restrictions. As the use of tariffs is progressively more limited, new forms of non-tariff barriers (NTBs) are increasingly used .In this interpretation, export standards are just a new form of NTBs and protection-in-disguise. For example, Bredahl et al. (1987) illustrate this with the USA's implementation of a larger minimum size requirement on vine-ripened tomatoes mainly imported from Mexico - than on green tomatoes produced in Florida. Anderson et al. (2004) argue that governments raise genetically modified (GM) food standards as protection against imports. The present thesis singles out export standards (mandatory) and analyses the reasons behind

<sup>&</sup>lt;sup>71</sup> quoted in Anderson &Schmitt(2000)

imposition of standard which varies from purely "protectionist" goal to legitimate concern for health and safety of plant, animal, environment or the society and tries to find out the "optimum" standard under different situations. After elaborating upon the basic issues and the perspective in which the dissertation has been put in chapter1, **chapter 2 discusses the role of quality linked standard on trade and welfare.** Quality standard imposed by importing country imposes additional cost of compliance on exporting country and (in 2x2 structure) the latter losses both in terms of trade and welfare unless the quality standard changes the demand of the consumer substantially. Even in that situation the importing country gains more in terms of welfare. But in Nxn framework, i.e. multilateral trade welfare consequence will depend on absolute and relative magnitude of compliance cost of the exporting partners. Anyway, harmonization and mutual recognition of standard can be beneficial for the exporting country as it can accrue the benefit of scale economies and in general the volume of trade increases in the harmonizing region.

Rest of the two chapters of the thesis deals with externality linked standards.**Chapter3 deals** with imposed (by importing country) negative externality<sup>72</sup>. The purpose of this chapter has been to examine the welfare effects of product standards on an exporting country when the country by its own choice prefers to follow null standard which is not possible due to high set up cost at two different standards. If the standard is not linked with a true negative externality, the exporting country, given the assumptions of the model will always prefer to be discriminated by "tariff" and the importing country will also prefer to protect its market by "tariff" rather going for NTB. The typical assumptions taken here resemble the trade between developed and developing country when the developed country imposes some minimum standard on a

<sup>&</sup>lt;sup>72</sup> Where the actual externality associated with production/consumption is zero.

product but becomes relatively "costly" for the developing country to comply with this requirement. As the importing country is not free to set tariff it will go for NTB like minimum standard (as it is welfare improving than free trade). But the minimum standard affects the exporting country's local producers and consumers also. So NTB leads to worse situation for both the countries and definitely worst for exporting country. Next we examine what should be the "optimum" standard under this situation. From the point of view of foreign firm, the minimum standard that excludes exporting firm from export market has a favorable effect of eliminating competition. Though it increases foreign firm's own cost of production also but according to the assumption of the model the protective effect will outweigh the cost raising effect of increase in standard for foreign firm and the foreign firm will lobby for that minimum standard which excludes domestic firm. As the optimum standard should be zero under (imposed externality) so any positive standard in this situation is "protectionist".

**Chapter4** examines the effect of **actual externality** (consumption and production) linked standards. Even if there is consumption linked actual negative externality the standard will not be welfare enhancing unless the initial negative externality is very high. So if we compare between tariff and NTB, NTB is worse for exporting country with no externality and probably with externality also. For importing country tariff as a tool of protection is better without externality and may be worse with externality if the initial negative externality is extremely high. However for importing country it is a comparison between two better states (protection by tariff or NTB) whereas for importing country it is the comparison between to worse states (discrimination by tariff or NTB) where NTB obviously tend to increase the lag between exporting and importing country. Next we examine what should be the "Optimum" level of NTB and whether it is "protectionist". In a nutshell it concludes,

- i) With huge difference in compliance cost the possibility is always there (whether production or consumption externality) that importing country's welfare will be increasing in  $\tau$  and exporting country's welfare will be decreasing in  $\tau$  and the importing country will adopt the "prohibitive standard" (or even go beyond that, if importing country's welfare is increasing in  $\tau$  under monopoly due to reduction in negative externality.)
- ii) When the initial negative externality is very high there is a possibility that importing country's welfare initially decreases in  $\tau$  though that of exporting country increases in  $\tau$  which is possible with negative consumption externality(as we have assumed that exporting country is also following the same standard for its local market).Similar kind of situation is possible with production externality even if we don't take the above mentioned assumption.
- iii) The "optimum standard" under consumption externality is necessarily "protectionist" if we assume a local duopoly instead of global duopoly (Fisher&Serra,2000),whereas if we follow the global welfare maximization criterion (Engle 1996) "optimum standard" might not be protectionist.
- iv) Under production externality the "optimum standard" might not be protectionist by either of the two definitions.

## **5.2Policy Implications**

What policy conclusions can be drawn from this thesis? The analysis clearly shows that the imposition of export standards most of the time may lead to "over standardization" or "under standardization" instead of "optimum standardization" for exporting country. Barriers related to product standards are the main concern of global trade today. The potential to use product standards as hidden trade barriers is immense. If even a small part of this potential is allowed to be exploited, the implementation of the free trade regime could become dominated by protectionists and those who would welcome trade retaliation and counter retaliation. However, transparency and harmonization of standards could become trade facilitators in addition to providing technical quality and safety parameters. There is an urgent need for discipline in the usage of SPS and TBT measures as a tool for "disguised" protection. This can be possible only if the entire WTO membership works towards a harmonious blending of three issues, i.e., science, safety and trade. This can be best achieved by harmonizing the standards/regulations across the various WTO Members. There is also a lack of mutual recognition of inspections and standards, and developing countries find that the major importing industrialized countries often demand 'sameness' in the process rather than 'equivalence' in standards (WTO, 1999; FAO, 2000) This issue in particular has prompted developing countries to seek greater transparency in new notifications in the WTO and special treatment in recognition of problems facing these countries <sup>73</sup>In many such circumstances, harmonization with international standards can act to reduce the

from arbitrary or unjustifiable discrimination due to different export standards.

So harmonization and mutual recognition of standards will be one of the major footstep towards trade facilitation for which Regional Trading Blocs (RTBs) and Regional Trading Agreements

regulatory trade barriers created by national standards. This would also prevent WTO members

<sup>&</sup>lt;sup>73</sup>Sawhney (2005)

(RTAs) can be used as an instrument .Towards harmonization of SPS measures on as wide a basis as possible; SPS encourages WTO Members to 'base' their measures on international standards, guidelines or recommendations, where they exist (Article 3.1). Hence, it is important for developing countries to ensure that their views and concerns are taken on board in course of developing international standards. This requires effective participation in the standard setting processes of the key international standard setting bodies, though the track records of developing countries; however, indicate that their participation in the proceedings of the international standard setting bodies is very poor, both in quantitative and qualitative terms. The lack of an effective participation by developing countries implies that international standards generally get set as per the wishes of developed countries, by default or often with a slender majority vote. Consequently, the measures based on these standards are often difficult to be coupled with, particularly since the safety clients in many cases are prescribed without conducting any clinical study in the developing countries with regard to contaminants, pesticides, animal diseases, etc. This approach, coupled with the lack of participation by the developing countries, often results in inappropriate international standards being set. Efforts should also be made to involve relevant industries in the process, as they are the major stakeholders. The governments may develop strategies to work together with business communities towards achieving effective participation in standardization process.

**Export standards** sometimes have a worse effect on developing countries than that of tariff. The difficulty in disentangling the legitimate requirements from those with a protectionist motivation makes the situation more complex. The need is to find out the reason behind imposition of export standard. It may a) truly serve public or **consumer interest** ,b) can be **purely "protectionist**" (as discussed in chapter 3 of the present thesis),c) may be a **mixture of above two** ("over

standardization"). The developing nations face difficulties in complying with the new requirements. On the other side, developed countries implement changes faster and obtain faster results in terms of trade performance. Moreover, they usually count on more government support and private organization to update and keep pace with innovations and higher consumption patterns. Thus, lags between the richer countries and the poorer ones are also tending to increase unless there is conceptual studies regarding the legitimacy issue, but certainly it is not a topic to be addressed only by the economists. The negotiations under the WTO and other organizations will have to consider the broader perspective to be relevant in dealing with trade disputes. For this, WTO's dispute settlement body should play active and conducive role. In addition, a gradual shifting of the production activities of the so-called "dirty industries" to developing countries has been observed since the 1980s (Grossman and Krueger, 1995). Often the negative externality associated with production in the exporting country is "overlooked" by "standard makers"<sup>74</sup> (very often the developed importing countries) and the former follows the lucid environmental standards, enjoys "pseudo comparative advantage" and specializes in "dirty industries". Thus the issue of "under standardization" should also be addressed by WTO as the otherwise "standard setters" by their own interest may be reluctant to do the same.

Anyway, if a measure could be considered to be legitimate, instead of in a narrower and stricter classification as a barrier, the exporting country (specially the developing countries) should set their "own house in order". The necessary technical assistance is also required to comply with the standards more easily. There are several domestic and technological constraints which need to be addressed at their end. Some of the companies do not have basic technology even for standardized products, and they "perceive" (and effectively it ends in) any valid and legitimate

<sup>&</sup>lt;sup>74</sup>Section 4.2.2 of the thesis proposes the theoretical justification behind such behavior

standard as a non-tariff barrier. There is also lack of information about foreign standards among developing country (specially small and medium scale producers) and particularly on changing standards. This clearly means that the imperative on the part of **developing country governments to support the technological upgrading of their domestic sectors has become extremely urgent.** 

## **5.3Scope of Future Research**

Quite a few extensions of our analyses in this dissertation can be conceived of. The result depends on specific but realistic conditions of the model. Some of these assumptions can be relaxed in future research. First we have focused on government decision process on standards by explicitly assuming only producers' lobby (subject to the welfare function) in standard setting process. When the "median voter theorem" predicts in a democracy the trade policy should aim to fulfill the need of the consumers (as they are large in number),<sup>75</sup>the collective action problem shows that compared to an individual producer, individual consumer may not have much incentive to lobby for trade policy change.<sup>76</sup>However we show that consumers are also affected by standard .So we can incorporate consumers' lobby also in standard setting process by govt. Regarding the comparison between tariff and "standard" we have calculated "equivalent tariff" by keeping the "volume" of trade unchanged under two situations. In this respect we can reexamine the effect taking the value of trade with respect to the importing country (i.e. the value of import).This extension can be more realistic as the producers in the importing country under any policy changes (whether from tariff to NTB or vice versa) will lobby for keeping their

<sup>&</sup>lt;sup>75</sup>Krugman&Obsfeld(2000)

revenue unchanged. Even we can extend this analysis by calculating "equivalent tariff" on the basis of "equivalent profit to the producers" under two situations (tariff and standards).

In Chapter 3 &4 we have assumed the exporting firm is following the same "standard" (imposed by the importing country) in the local market also as the fixed cost of production under two different situations is high enough to outweigh the benefit from producing at a lower standard for local market. We can relax this assumption though that will change not the direction (apart from consumption externality situation<sup>77</sup>) but the magnitude of the results. Another possible extension would be to incorporate the change in consumers' preferences for the product which creates less negative externality. (Section 4.2)The assumption that valuation of externality remains uniform across countries may not be true especially when it is a trade between developed and developing country. For the exporting country generally the valuation of the externality will be different and there can be under valuation of externality. In that case actually the prohibitive standard will be lower than what we have derived (both in the case of consumption externality & production externality) and a particular measure may simply be a 'perceived barrier' and may not actually be a barrier. Though the present dissertation could not address these issues, the basic structures and benchmark results provide the launching pad for such analyses to be carried out in the future.

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<sup>&</sup>lt;sup>77</sup> Discussed in section 4.2.1.2