Journal of World Trade Studies

Developing Countries in Global Trading System

ISSN: 2087-6912 Volume 2, Number 1, November 2011

CwtsPspd Pusat Studi Perdagangan Dunia Universitas Gadjah Mada
Center for World Trade Studies Universitas Gadjah Mada

Citation

This issue may be cited as [2011] Vol 2 No 1 JWTS U Gadjah Mada

Journal of World Trade Studies
Published by Center for World Trade Studies Universitas Gadjah Mada
Volume 2, Number 1, November 2011

Editorial

In this issue, *the Journal of the World Trade Studies* presents five selected articles focusing mainly on developing countries in global trading system. Some of the articles published in this issue were already presented at the International Conference on 'Enhancing Indonesia's Competitiveness in Contemporary Trade' on 3 October 2011. This conference was organized by the Center for World Trade Studies in cooperation with the Indonesian Ministry of Trade, the Indonesian Ministry of Foreign Affairs, and the Indonesian Ministry of Agriculture. In addition, the authors of the current issue are not only Indonesian researchers but also researchers from other countries. The contribution of international researchers exhibits the merit of networking under the WTO Chairs Programme.

The first article is written by Maharani Hapsari (lecturer at Department of International Relations, Universitas Gadjah Mada). She argues that managing environmental standards as a form of environment-related trade barriers has become increasingly important for producing countries that are active participants in global commodity trading. Current international environmental standardization in trade shows stronger tendency of convergence between sustainability criteria developed by the private sector and government regulations that apply in importing countries. Subsequently, such standards have overtime become guidelines for policy reforms in producing countries. To that end, the increasing role of private actors in pushing for higher environmental standards has generated new dynamics in production-trade relations, which have overtime become increasingly complex. As a consequence, producing countries, now face multi-layered trade barriers before their products gain access to importing markets.

Ambiyah Abdullah (PhD student at Nagoya University) argues in the second article that there has been a shift in the destination of Indonesian palm oil exports from European markets to India and China in recent years. This article aims to estimate the demand of these two countries for Indonesian palm oil exports. This article further argues that price supporting policies play an important role behind the increase in the quantity of the demand for Indonesian palm oil exports. This article concludes that it is crucial to disaggregate palm oil data into crude palm oil data and refined palm oil products. This can contribute significantly to improve the results of the price estimation and income elasticity of Indonesian palm oil export for both India and China.

Empowering local communities through traditional knowledge protection is the topic of the third article, written by Ayub Torry Satriyo Kusumo (lecturer in International Law at Faculty of Law Sebelas Maret University). This article presents the current state of affairs with respect to local community empowerment through a traditional knowledge protection system in Indonesia. This article also intends to analyze the potential impact of traditional knowledge protection management on the Indonesian economy, and also making recommendations on the formulation and development of a new policy on the protection of traditional knowledge.

Seth Omondi Gor (Senior lecturer at the School of Economics, University of Nairobi) in the fourth article attempts to assess the welfare effects of East African Community (EAC) on partner

states in the backdrop of multiple memberships in different Regional Trade Agreements. Using UN COMTRADE database at 6 digit level of aggregation with HS96 nomenclature, this article estimates a number of trade indicators with a view to evaluating the composition of trade structures, trade flows, the degree of openness of the economies, and the potential for trade diversion or creation, all of which have critical implications for EAC's integration process. On the basis of these indicators, the article finds that EAC is welfare enhancing to partner states.

The last article is written jointly by Xin Xu and Lei Zhang (both lecturers at Shanghai Institute of Foreign Trade). This article argues that since the rules of WTO agreements became more and more technical, and more and more disputes involved the expertise in the field of science or technology, the consultation with experts procedure became increasingly important. The authors further argue, however, although the Panel is authorized by the WTO rules to start such a procedure, there are no detailed rules guiding the Panel as how to operate in the practice. Under such a circumstance, the Panel had to establish the temporary rules for this procedure after consultation with the parties to the dispute in each case. Many problems relevant to the due process then arose from such temporary rules. This paper, therefore, tries to analyze major problems that receiving the most controversy and accusation, and will give suggestions as for how to reform this procedure.

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Coping with Environmental Standards in Trade: Indonesian Experience with Sustainable Palm Oil Debate

Maharani Hapsari[1]

Abstract

Managing environmental standards as a form of environment-related trade barriers has become increasingly important for producing countries that are active participants in global commodity trading. Current international environmental standardization in trade, shows stronger tendency of convergence between sustainability criteria developed by the private sector and government regulations that apply in importing countries. Subsequently, such standards have overtime become guidelines for policy reforms in producing countries. To that end, the increasing role of private actors in pushing for higher environmental standards, has generated new dynamics in production-trade relations, which have overtime become increasingly complex. As a consequence, producing countries, now face multi-layered trade barriers before their products gain access to importing markets.

Keywords: environmental-related trade barrier, environmental standardization, sustainability, Indonesia, palm oil

A. INTRODUCTION

The debate over environmental issues has taken on increasing importance among international trading partners. With respect to palm oil, the intensification of global trade in the commodity has been accompanied by the tightening of environmental standards in the European Union as one of the leading palm oil importing regions. Using environmental standards as a trade barrier has the potential to reduce market access of palm oil exporting countries. Doubtless, Indonesia, which contributed 46 percent the world palm oil market[2] (2009) and has keen interest to maintain its market share, is one of the countries adversely affected by such a development.

This article traces the trend in international environmental standards on palm oil trade. By assessing links between voluntary environmental standards developed by the private sector and policies adopted by governments in importing countries and producing countries, the paper attempts to determine the extent to which the relationships among these actors influence policy adopted in oil palm producing countries. By doing so, the article attempts to understand the governance structure of international environmental standardization mechanisms as well as discern relevant policy implications for Indonesia in strengthening its position in the global palm oil market.

B. WHO DEFINE ENVIRONMENTAL STANDARDS?

Despite efforts to liberalize trade through a series of negotiations involving governments, the use of environment-related trade barriers

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[2] "Malaysian Palm Oil Industry Performance," Global Oils and Fats Magazine, Vol.7, Issue 1, Jan-March 2010. http://www.americanpalm oil.com/publications/GOFB/GOFB_Vol7_Iss1-pullout1.pdf (August 20, 2011)

is still a common occurrence. Environment-related trade barriers take various forms. One such form environmental regulations and standards relating to product standards (specifying characteristics of acceptable products must have) and non-product standards (which refer to conditions under which products are made); both are legally binding. Environmental labelling is another form, which requires the provision of compulsory or voluntary information about the environmental impact of products as well as production condition to producers and consumers. The third form, entails economic instruments manifested in taxes and charges on products[3].

The trend in current trade practices shows the involvement of both government and non-government actors in defining environmental standards. This is the case because of the relations between the state and the market, which have become increasingly dynamic, implying that standard setting process is no longer the monopoly of the government. There are three major actors of environmental standard setting, and they include importing countries, private actors, and producing countries. The interplay between these driving actors underlies policy reforms in producing countries. The modelling of international environmental standard setting is shown in Figure 1.

Several trends in environmental policies implemented by governments are discernible in developed countries. First, a shift from *non-discriminatory trade policies* to *process discriminatory trade policies* (from applying trade ban on timber products regardless of their sources to giving preferential market access to timber from sustainable forestry and the formation of groups of retailers who agree to buy a certain percentage of total timber purchases from sustainable sources, possibly at a premium price).[4] Secondly, a shift from ensuring that proper regulations are in place to greater emphasis on 'precautionary principle' (taking action when the science is not clear, but where there is reasonable cause for concern). Thirdly, a shift from 'command and control' to 'market-based environmental policy', which involves partnerships and voluntary arrangements with business sectors.[5]

Different domestic standards may lead to tensions in trade relations. The fear is that in the absence of preceding negotiations between importing countries and producing countries, the demand for higher environmental standards has the potential to spark off accusation that importing countries are applying protectionist measures in the guise of pursuing environmental protection.

Even though gradual harmonization between national and other standards is more preferable in order to allow adaptation on the side of producing countries, the intermingling motives of environmental protection and environmental protectionism may contribute to the difficulty in resolving the international debate. In the process, power asymmetry may present its own challenges to efforts of producing countries to deal with higher environmental standards introduced by importing countries and the private actor. More politically powerful actors are likely to dominate the construction of sustainability frame as well as international environmental standardization mechanism. Importing countries with significant market share are especially in a more favorable position to impose environmental standards as part of terms of trade with producing countries in the aftermath of making changes in their trade policies.

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[3] "Environment-Related Trade Barrier and the WTO" (Center for Policy Dialogue Homepage, 2009). www.cpd.org.bd/pub_attach/OP77.pdf (August 10, 2011)

[4] Stefanie Engel."Achieving Environmental Goals in a World of Trade and Hidden Action: the Role of Trade Policies and Eco-Labeling," *Journal of Environmental Economics and Management* 48 (2004): 1123

[5] This applies for example to EU context. See Wyn Grant, Peter Newell, and Duncan Matthews. *The Effectiveness of European Union Environmental Policy* (New York: St. Martin Press, 2000), 11-12

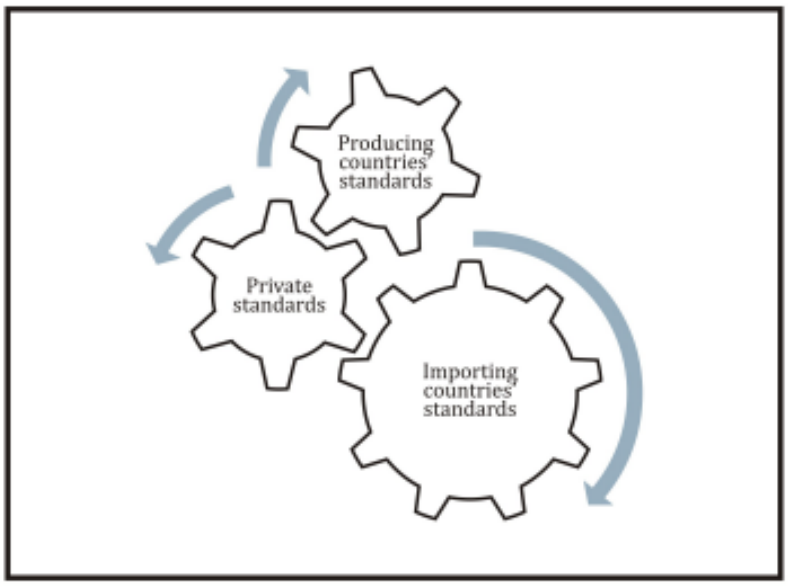

Figure 1
International Environmental Standardization

Outside the government sphere, the role of private actor in environmental standard setting may evolve through three phases (initiation, gaining widespread adoption, and political legitimacy). The first phase is developed among small communities in which actors assess the benefit of joining certification scheme. Here, firms which are closest to the standard join first. The second phase occurs when efforts to gain broader support from firms which are 'distant' from requirements and non-governmental organizations expect increases in requirements. At the same time, normative pressure from phase one combine with the emergence of shared norms and learning, leading to a redefinition of separate interests and the prerequisites for community building. The third phase is when environmental standard setting is considered a legitimate arena of authority.[6]

While private standards are voluntary in nature, government standards are compulsory and are expected to produce stronger implications for market access of products from producing countries in the case of failure to comply. In this context, relations between government standards and private standards may be complementary if there is a need on the side of importing countries to include verification by third party to ensure compliance by producing countries. The role of private environmental standards, therefore, possibly extends their traditional scope beyond voluntary-based compliance mechanism, which will be discussed further in the later section of this article.

C. INDONESIA IN THE GLOBAL PALM OIL TRADE

Palm oil has become a very strategic commodity on the international market. As of July 2011, palm oil was considered as the most tradable vegetable oil in the world with total production of 50.26 Million Metric Tons.[7] Based on list obtained from the Food and Agriculture Organization, 156 countries are involved in palm

[6] Cashore et al.,"Can Non-state Governance 'Rachet-Up' Global Environmental Standards? Lessons from the Forest Sector." *RECIEL* 16, no.2 (2007): 163

[7] "Major Vegetable Oils: World Supply and Distribution" (United States Department of Agriculture, 2011). http://www.fas.usda.gov/psdonline/psd

oil trading.[8] Palm oil is used as feedstock for edible oil products, oleochemical and biofuel. An estimated 74 percent of global palm oil usage is for food products and 26 percent for industrial products. The largest consumers are India, China, EU, Indonesia, Malaysia, Pakistan, Thailand, and Nigeria – which together account for roughly 72 percent of total world consumption. [9] Based on statistics, 10,403,000 tons out of 37,971,000 tons globally imported palm oil, is traded with various countries in non-major markets, which highlights the extent to which palm oil usage is worldwide.[10] During 1995-2010 world demand for palm oil increased 32 million tons, with India consuming 5.7 million tons, 5 million tons went to China, 4.3 million tons were destined to the European Union, and the rest 17 million tons was consumed by other countries. In 2009, India became the leading global user and importer of palm oil , replacing EU's position.

As the largest palm oil producer coupled with its domestic capacity and international competitiveness, Indonesia has the potential to derive even more benefits from palm oil. With respect to domestic capacity, acreage of oil palm plantations in Indonesia reached 5,453,817 in 2005 , and increased to 6,594,914 hectares, and 7,824,623 in 2006 and 2010, respectively. The expansion of area under oil palm plantations has been equalled with increase in production. Palm oil production reached 11,861,615 in 2005, increased to 17,350,848, and1 9,844,901 in 2006 and 2010,[11], respectively. In future, availability of abundant land, which is lacking in other producing countries, may put Indonesia in a very strategic geopolitical position. Anyhow, Indonesia has become the main destination of foreign direct investment in oil palm plantation sector. The surge in World palm oil demand has served as a strong drive for national governments in tropical regions to invest more in this sector. Indonesia is today reckoned to be managing the largest oil palm plantations in the world. Oil palm plantation management in Indonesia is run by state-owned corporation (8 percent), private corporations (50 percent) and smallholders (42 percent).[12]

Though Indonesia continues to export CPO in its crude form, the national government is taking measures to scale up the production capacity of refined palm oil as well as strengthening downstream industries. The operations of most palm oil companies in Indonesia are still focused on upstream production, producing fresh fruit bunches and/or crude palm oil which they sell to larger trading companies, export-oriented companies and edible oil manufacturing companies for the domestic market. There are only a few large and fully vertically integrated companies which are involved in downstream processing as well as engaged in palm oil export activities[13] .

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report.aspx?hidReportRetrievalName=BVS&hidReportRetrievalID=702&hidReportRetrievalTemplateID=5 (August 6, 2011).

8 Rhett.A Buttler and Lian Pin Koh." Consumers should help pay the bill for 'greener' palm oil." (Mongabay, 2010). http://news.mongabay.com/2010/0112-palm_oil.html (August 16, 2011)

9 "Indonesia: Raising Global Demand Fuels Oil Palm Expansion,"(USDA FAS Homepage, 2010). http://www.pecad.fas.usda.gov/highlights/2010/10/Indonesia/ (August 12,2011)

10 See Table 11 of USDA FAS Oilseeds Market and Trade Circular August 2011. http://www.fas.usda.gov/oilseeds/circular/2011/Aug/oilseeds.pdf (August 12, 2011)

11 Indonesian palm oil production increased from 15,560,000 Tons in 2005 to 16,600,000 in 2006 while Malaysian production was instead decreasing from 15,485,000 Tons in 2005 to 15,290,000 Tons in 2006. See Table 11 of the USDA FAS Oilseeds Market and Trade Circular December 2007. http://www.fas.usda.gov/oilseeds/circular/2007/December/oilseeds.pdf (August 17, 2011)

12 "Palm Oil Statistics." Directorate General of Estate Crops, Ministry of Agriculture, Republic of Indonesia, 2011

13 "Palm Oil Fact Sheet,"(MVO, 2010). http://www.mvo.nl/Kernactiviteiten/MarktonderzoekenStatistiek/Factsheets/FactsheetPalmOil2010/tabid/2301/language/en-US/Default.aspx (August 15, 2011).

The competitiveness of Indonesian palm oil has been rising in comparison with other producing countries in general and Malaysia as the main market competitor, in particular. Indonesian palm oil market is mainly concentrated in three main regions: Asia (72.81 percent), Europe (18.61 percent), and Africa (7.17 percent), wherein it outcompetes Malaysian palm oil. During 1999-2001 and 2005-2007 periods, the market share of Indonesian palm oil in Asia increased from 47 percent to 66 percent, while refined oil increased from 19 percent to 30 percent. In Europe, Indonesia's market share for CPO shrunk slightly from 38 percent to 37 percent. However, at the same time, Indonesia increased exports of refined palm oil from 18 percent to 30 percent. Meanwhile In Africa, Indonesia's CPO exports increased from 36 percent to 58 percent, while exports of refined oil increased from 27 percent to 39 percent.[14] In light of that, there is little doubt that Indonesia already enjoys a very strategic position, which it can utilize to enhance its linkages with various segments of domestic palm oil producers and business players in the global palm oil value chain.

Palm oil sector has become a strategic source of revenue for Indonesia, as well as contributed significantly to improving living standards of many segments of Indonesian population. While in early 2000s palm oil sector contributed between 1.5 percent and 2 percent to national GDP, that figure rose to 4.5 percent in 2010 and 6-7 percent in 2011.[15] [16][17]Moreover, , about 3,700,.000 people derive a living from palm oil sector , making it an important economic activity in efforts to eradicate rural poverty. Given the existing area covered by oil palm plantations today, Indonesia must utilize it to the best of its ability to elevate living standards of the affected communities. Thus, Indonesia should not only strive to maintain its position as the largest palm oil producer, but also importantly, must also seek various ways of increasing benefits the country can derive from trading palm oil by increasing the capacity of domestic industries generate innovations of downstream products. Managing palm oil sub sector, therefore, is a big stake for the Indonesian government.

D. ENVIRONMENTAL STANDARD SETTING

Despite high prospects of palm oil in future, the role of environmental standards has taken on increasing importance due to its adverse effect on ease of access of palm oil to importing countries, especially EU. One of the well known government-sponsored environmental standards used by importing countries is EU Renewable Energy Directive. However, Indonesia as major producing country introduced its own, known as Indonesian Sustainable Palm Oil (ISPO). Non-government actors, using Roundtable on Sustainable Palm Oil (RSPO) framework, have also developed voluntary certification of their own, adding to the existing scheme such as ISO 14001. There are differences in emphasis among producing countries, importing countries and private sector on what constitutes sustainability criteria. EU focuses more on environmental criteria while providing less attention to social issues. On the contrary, private standards under RSPO do emphasize not only environmental protection, but also pay attention to social issues such as the fulfilment of legal rights of the affected

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[14] Amzul Rifin. "Export Competitiveness of Indonesian Palm Oil Product," *Trends in Agricultural Economics* 3, no.1 (2010): 1-18

[15] Colin Barlow, Zahari Zen, and Ria Gondowarsito, "The Indonesian Palm Oil Industry." (Malaysian Palm Oil Board, 2003) http://palmoilis.mpob.gov.my/publications/opiejv3n1-8.pdf (August 29)

[16] "Indonesia: Benchmark for Sustainable Palm Oil in Emerging Markets." http://www.valuenotes.com/businesswireArticle.php?ac=26937&at=I (August 29, 2011)

[17] "Indonesia: Raising Global Demand Fuels Oil Palm Expansion" (USDA FAS, 2010) http://www.pecad.fas.usda.gov/highlights/2010/10/Indonesia/ (August 29, 2011).

communities in the development of oil palm plantations. Indonesia as a palm oil producing country, based its standard on the criteria introduced by RSPO which was adopted in the form of legislation with compulsory consequences for all palm oil producers. A summary of sustainability criteria covered in these standards is presented in Table 1.

Non-government initiatives provided the initial driving force toward international en-

Table 1
Environmental Standards: Instruments, Definitions and Operational Indicators

	Importing countries	**Private actors**	**Producing countries**
Instruments	Directive 2009/28/EC	RSPO Certification	Indonesian Sustainable Palm Oil
Scope of sustainability issues	Environmental sustainability consists of two main sets of criteria to be fulfilled cumulatively, (i.e., are greenhouse gas emission savings and land-use requirements).[18]	Legal, economically viable, environmentally appropriate and socially beneficial management and operations"	Economic, social and ecological appropriate according to Indonesian legislations
Operational indicators	*Greenhouse gas emission saving* a) Default value (19 percent for palm oil without methane capture and 56 percent for palm oil with methane capture) b) Threshold value (35percent from 2010 to 2013; 50percent by 2017; 60percent by 2018) *Land use requirements* a) Biofuels shall not be made from raw material obtained from land with high biodiversity value, which includes primary forest and other wooded land, areas designated for nature protection or the protection of rare, threatened or endangered ecosystems or species, and highly biodiverse grasslands.	*Principle 1* – Commitment to transparency *Principle 2* – Compliance with applicable laws and regulations *Principle 3* – Commitment to long-term economic and financial viability *Principle 4* – Use of appropriate best practices by growers and millers *Principle 5* – Environmental responsibility and conservation of natural resources and biodiversity *Principle 6* – Responsible consideration of employees and individuals and communities affected by growers and mills *Principle 7* – Responsible development of new plantings	a) Licensing and plantation management b) Implementation of technical guidance on oil palm planting and management c) Environmental management and monitoring d) Responsibility to labor e) Social responsibility f) Empowerment of community's economy g) Sustainable improvement

Table 1. Cont'.

	Importing countries	*Private actors*	*Producing countries*
	b) Biofuels shall not be made from raw material obtained from land with high carbon stock, namely wetlands, continuously forested areas, or land spanning more than one hectare with a certain minimum canopy cover. c) Biofuels shall not be made from raw material obtained from peatland, unless evidence is provided that the cultivation and harvesting of that raw material does not involve drainage of previously undrained soil.		

Source: RSPO Homepage; Lendle and Schaus (2010: 2-5); Ministry of Agriculture, Republic of Indonesia (2011)

vironmental standardization through the introduction of certification for sustainable palm oil with emphasis put on the production process based on sustainability criteria. Historically, environmental issues associated with palm oil production have emerged in public debate particularly since the occurrence of 1997 forest fires in Indonesia. Non government actors, both domestic and transnational environmental NGOs (World Wildlife Fund, Greenpeace and Friends of the Earth) have raised concerns about potential adverse ecological effects arising from oil palm plantation companies activities. In light of that, pressure has grown with the main drive being to prevent deforestation and biodiversity loss , as well as curbing the emission of greenhouse gases to reduce and mitigate climate change. Meanwhile, the Forest Peoples Programme (FPP), Sawit Watch and Oxfam Indonesia have also raised their concerns over issues of social justice and land reform. In their advocacy, these organizations have pushed for an active role of the financial sector and the supply chain in efforts to influence policy in producing countries.[19]

After a series of multi-stakeholders' meetings, concerns which were raised by environmental groups and social NGOs, led to the in-

[18] Andreas Lendle."Sustainability Criteria in the EU Renewable Energy Directive: Consistent with WTO Rules?" (International Centre for Trade and Sustainable Development, September 2010) http://ictsd.org/downloads/2010/10/case_brief_rerewable_energy_dir_v5.pdf (August 16,2011).

[19] Cheng Hai Teoh."Key Sustainability Issue in the Palm Oil Sector." (International Finance Corporation Homepage).http://www.ifc.org/ifcext/agriconsultation.nsf/AttachmentsByTitle/Discussion+Paper/$FILE/Discussion+Paper_FINAL.pdf (August 17, 2011).

troduction of private-based criteria of sustainable palm oil within the framework of the Roundtable on Sustainable Palm Oil (RSPO) in 2004. This forum consists of banks and investors, consumer goods manufacturers, environmental or nature conservation organization, oil palm growers, palm oil processors and traders, retailers and social or development organizations (NGOs). Transnational NGOs such as WWF, Greenpeace International, Friends of the Earth, OXFAM International, Forest Peoples Programme and Sawit Watch are active participants in this forum. WWF has been actively involved from the very beginning, largely involved in engaging actors in palm oil supply chain.[20]

RSPO has become a focal point for oil palm planters and actors along the supply chain. This is demonstrated, by among others, the scope of certification in the total structure of global palm oil production as well as geographical coverage of RSPO certification. As of 2008, RSPO represented 40 percent of global palm oil production.[21] In terms of geographic coverage, RSPO certification applies to palm oil producers in 8 major countries in Southeast Asia, Latin America, Africa and the Pacific. Currently, Indonesia is the second largest producer of RSPO-certified palm oil, contributing to 35% out of total 4.2 million tons of certified palm oil. The current estimated annual production capacity of RSPO-certified production units, 4.2 million tons of sustainable palm oil, equals about 9 percent of global production, estimated to be about 46 million tons annually. Malaysia contributes about 54 percent of the world's current RSPO-certified palm oil production capacity. Indonesia is second, with about 35 percent of the current global supply. Papua New Guinea and Colombia provide the remaining 10 percent and 1 percent respectively.[22] To that end, RSPO is considered to gained broader social legitimacy from various stakeholders.

Nonetheless, attitude toward environmental standardization seems to differ among importing countries. For example, Chinese palm oil buyers though acknowledge their contribution to environmental problems associated with using palm oil in producing countries, the implementation of environmental standards is not legally binding. Moreover, the national government does not have in place specific policies to that effect[23]. This is also true in the case of India, which is committed to prioritizing the use of palm oil in meeting domestic needs.[24] However, the situation is EU is different. EU applies stringent sustainability criteria on outsourcing policy of biodiesel for transportation and bioliquids for energy provision. In fact, the policy has been largely responsible for driving the transformation of sustainability standardization in producing countries. Thus, there is no convergence in environmental standards importing countries apply on palm oil production.

EU has established environmental standards criteria as regards land use change and greenhouse gases emission in the recently adopted EU Renewable Energy Directive (RED) in 2009. The EU Renewable Energy Directive established mandatory national targets of 20% share of energy from renewable sources and a 10% share of energy from re-

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20 Cheng Hai Teoh, Ibid.,

21 Greetje Schouten and Pieter Glasbergen,"Creating Legitimacy in Global Private Governance: The Case of the Roundtable on Sustainable Palm Oil," *Ecological Economics* (2011): 6, doi:10.1016/j.ecolecon.2011.03.012

22 "RSPO Trademark: Next Phase in Transformation to Sustainable Palm Oil," (RSPO European Union 2011) http://www.rspo.org/?q=content/rspo-trademark-next-phase-transformation-sustainable-palm-oil (August 21, 2011)

23 David Braun."Supports for Sustainable Palm Oil Gains Tractions in China" (National Geographic) http://newswatch.nationalgeographic.com/2009/07/14/palm_oil_statement_of_support/(August 16, 2011).

24 Meri Orth and Adriani Zakaria,"Indian Use of Indonesian Palm Oil,"Aidenvironment Project Number A3004 (Amsterdam: Aidenvironment, 2010), 20.

newable sources in transport in Community energy consumption by 2020.[25] EU RED plays a crucial role in providing obligatory environmental measurements that should be implemented by producing countries. Issues regarding indirect Land Use Change (iLUC) highlight EU's approach in adjusting trade policy. ILUC is generated by the elevated demand for agricultural commodities as a consequence of biofuel consumption, which leads to displacement of pre-existing agricultural production into new areas either in the same country or in other parts of the world. It is assumed that this displacement will further affect grasslands, forests or other natural habitats; GHG emissions as a consequence of the release of carbon locked up in soils and biomass; and the loss of biodiversity.[26] Thus, iLUC, is concerned with increasing supplies of relevant commodities without displacing existing production and ecosystem services to other lands, or by production systems that value and enhance ecosystem services.[27] In practice, mitigating iLUC is carried out in the absence of effective land-use planning globally and robust land use planning at all levels.[28] On that note, therefore, policies on mitigating iLUC, represent a unilateral act by the European Union.

As part of implementing Renewable Energy Directive, EU plans to pursue three verification mechanisms to ensure that producers comply with the rules. First, companies will have to report their sourcing of biofuel to EU member states. Second, EU will conclude bilateral and multilateral agreements with a provision on sustainability criteria with other countries. The use of the directive, however, is not conditional on successful conclu-sion of such agreements. Third, European Commission may decide if voluntary national and international certification schemes are sufficient with sustainability criteria of 35% greenhouse gas savings.[29]

In this verification process, the convergence of market-based instruments with importing countries' instruments may intensify pressure on producing countries. On 10 September 2010, RSPO submitted two applications to the European Commission to seeking a formal recognition of the RSPO system and the RSPO- Renewable Energy Directive (RED) system as a voluntary scheme under EU Renewable Energy Directive (EU-RED) requirements. Following specific clauses in the EU-RED sustainability criteria, the Additional Guidance will allow palm oil producers whose plantings existed on or before January 2008, and palm oil processors whose mills were in operation before or on January 23, 2008, to fully comply with the EU-RED requirements until April 2013. [30] A manifesto by palm oil buyers in Netherland, which was issued in November 2010 and was communicated to Dutch Minister of Agriculture and Trade, affirmed further the commitment to outsource only sustainable palm oil under RSPO certification start-

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[25] Article 13 of Directive 2008/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, *Official Journal of the European Union,* June 5, 2009

[26] Catherine Bowyer." Anticipated Indirect Land Use Change Associated with Expanded Use of Biofuels and Bioliquids in the EU – An Analysis of the National Renewable Energy Action Plans." London: Institute for European Environmental Policy, 2010.

[27] "Indirect Land Use Change Impacts of Biofuel" (IUCN).http://cmsdata.iucn.org/downloads/ec_iluc_consultation__iucn_submission__29_october_2010.pdf (August 10, 2011).

[28] "Indirect Land Use Change Impacts of Biofuel" Ibid.,

[29] Fredrik Erixon."Green Protectionism in the European Union: How Europe's Biofuels Policy and the Renewable Energy Directive Violate WTO Commitments." Brussels: European Center for International Political Economy, 2009.

[30] "RSPO Applies for Recognition as a Voluntary Scheme under EU Renewable Energy Directive Requirements," (RSPO 2011) http://www.rspo.org/?q=content/rspo-applies-recognition-voluntary-scheme-under-eu-renewable-energy-directive-requirements (14 August 2011)

[31] "Dutch to use only certified palm oil by 2015,"

ing from 2015. [31] This movement by Netherland and RSPO has strengthened the link between private standards and government standards in importing countries. The Netherland has significant share of palm oil trade among EU members. This is reflected in the fact that 2 million tons out of 5.4 million tons of palm oil imported into EU, enter s through Netherland.[32] The recognition of RSPO certification by EU , either collectively or as individual members, may present a more systematic challenge to Indonesia and other palm oil producing countries. Given its large market share (Figure 2), Netherlands has the potential to exercise political influence on the direction of policy transformation in palm oil producing countries in the event national government s take the step to formally recognize existing private standards, notably those developed by RSPO in the verification process.

E. IMPLICATION FOR INDONESIA

The Directive 2009/28/EC has some policy implications or Indonesia as well as other producing countries. With special reference to Indonesia, the implementation of the measures is likely to increase difficulties Indonesia face in catching up with EU standards. This is because 27 percent of palm oil concessions (planned plantations in 2006) in Indonesia are on peat-forests, while only 10 percent of plantations in Malaysia are on what used to be peat-forest land and the same figure for concessions as the one of Indonesia is expected. However, there is still sufficient room to expand palm oil production on degraded forests as well as on rubber plantations, though the latter is less efficient. Therefore, in pursuant with Article 17 (3) (a) and (5) of the Directive , some Malaysian and Indonesian palm oil biodiesel may not meet the sustainability requirements[33]. Furthermore, producing countries are obliged to prove that palm oil they are exporting is produced by oil mills with have facilities that capture methane. EU members may rely on the default value, while non-EU members rely on typical value, which exceeds the given threshold. This may create serious difficulties for producing countries, which are typically non-EU members to enter EU market.[34]

However, failure to comply with the European Standards does not prevent Indonesian palm oil meant for biodiesel production purposes to enter EU market, but precluded from receiving subsidies from EU Member States, as well as excludes it from contributing toward the 10 percent target for renewable energy for transport by 2020[35]. Such disincentive may dissuade EU buyers from purchasing Indonesian palm oil.

Standards in palm oil producing countries may become irrelevant and illegible if compared with higher standards imposed by private actors and importing countries. Thus, producing countries are seeking for a gradual adaptation that will be based on prevailing conditions at the national level. Nonetheless, such a policy means that producing countries will continue to face intense pressure , arising not only to use private standards by businesses,

(Mongabay 2010) http://news.mongabay.com/2010/1105-dutch_palm_oil.html (September 3, 2011)

[32] "Manifesto of the Task Force Sustainable Palm Oil: Initiative to promote the use of RSPO certified palm oil in the Netherlands" (Taskforce duurzamepalmolie 2010) http://www.taskforceduurzamepalmolie.nl/Portals/4/download/Manifesto_Task_Force_Sustainable_Palm_Oil.pdf (September 6, 2011), p.3.

[33] Andreas Lendle,"Sustainability Criteria in the EU Renewable Energy Directive: Consistent with WTO Rules?" (International Centre for Trade and Sustainable Development, September 2010) http://ictsd.org/downloads/2010/10/case_brief_rerewable_energy_dir_v5.pdf (August 16, 2011).

[34] Gernot Pehnlet and Cristoph Vietze," European Policies towards Palm Oil: Sorting Out Some Facts." Jena Economic Research Paper, 2009, www.jenecon.de (August 16, 2011).

[35] Vincent Picket,"EU Directive: Implications for the Palm Oil Industry" (Speech at the International Palm Oil Congress, Kuala Lumpur, August 15, 2009).

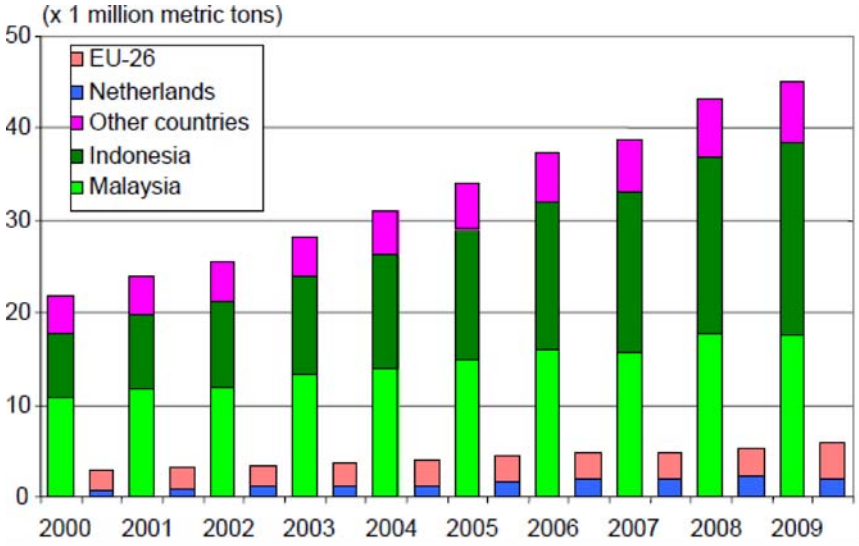

Figure 2
Global Palm Oil Production and EU Imports
Source: Task Force Sustainable Palm Oil (2010)

which is likely to increase costs for domestic business players, but also from governments in importing countries, which will be manifested in stricter environmental regulations.

That said, Indonesia can still have access the market for edible oil in major importing countries. Domestic policies can be case-selective in dealing diverse environmental criteria meted out by importing countries. Nonetheless, if Indonesia plans to increase its share in biofuel market, there is little else it can do other than taking measures necessary to comply with environmental standard in EU. Since its initial production in 2006, biofuel has been underutilized and has faced environment-related trade barriers. Besides, Netherland, Italy and Spain are accounting for more that 80% of Indonesian biodiesel export. Thus, the biggest challenge the Indonesian government faces, is to verify that palm oil feedstock from Indonesia meets EU requirements. Without being too optimistic, if current conditions persist, Indonesia will experience a 40 percent drop in biodiesel exports to 195 million liters in 2011.[36]

Indonesian experience highlights two issues. First, relates to whether Indonesia will comply or not with EU Directive. Recently, Indonesian government has taken unilateral measure involving the introduction of its own national standards manifested in Minister of Agriculture issued Ministerial Regulation No.19/Permentan/OT.140/3/2011 on Indonesian Sustainable Palm Oil (ISPO) issued on March 29, 2011. The objective of this regulation is to ensure that all oil palm planters meet national sustainability criteria. Moreover, compliance with the regulation is not voluntary, rather serves as launching pad for even stronger enforcement of relevant regulations related to oil palm plantation sector more comprehensively. The Unilateral measure may work if the national standard is accepted by some palm oil importing countries which are less concerned with environmental issues. Nonetheless, for the environmentally-concerned market, Indonesia must implement the verification mechanism , which will involve the third party if national standard have any chance of receiving acceptance.

By developing national standard, there is still an opportunity for Indonesia to elevate its

[36] Jonn P.Slette and Ibnu E Wiyono,"Indonesia Biofuels Annual 2010," GAIN Report Number ID 1033 (Jakarta: USDA FAS, 2010), 5

environmental standards to those that apply at the international level. This is through encouraging capacity building by national business players in the palm oil business to internalize environmental externalities in their operations right from upstream to downstream industry. The success in this sector may also trigger integration of environmental criteria among sectors. However, unless the capacity of the bureaucracy to effect collaboration in integrating environmental policy, trade policy, forest policy and agricultural policy improves, the cost of ensuring compliance may be very high.

The current situation attests to the reality that bilateral approach is still underutilized in building mutual understanding between importing and producing and exporting countries. On a bilateral basis, Indonesia may enter into negotiation with EU as an environmentally-concerned market, while building mutual adoption of environmental regulations in its trade policy with other major markets such as India and China. Nonetheless, this policy alternative is still grossly underutilized despite its strategic advantage for Indonesia. Unlike Malaysia, which has completed bilateral free trade agreement with EU, Indonesia has just embarked on it[37]. This is applies to talks between Indonesia and India[38]. The inclusion of environmental issues in this process is expected to play a crucial role in improving the possibility of adopting mutual environmental standards, not only for palm oil, but also other strategic primary commodities.

Bilateral negotiations can also facilitate the development of economic incentives from environmentally concerned market segments. In the current debate among palm oil trading partners (particularly producing countries and importing countries), environmental standardization creates an unequal distribution of environmental cost which are met largely by producing countries. Palm oil producers have to bear the cost of certification as well as other costs that are necessary for compliance with either voluntary or compulsory standards. This is occurs at a time when palm oil importing countries or buyers have yet to show serious indication that they will apply appropriate policy measures to induce a shift in market preference to certified palm oil, which if materializes would increase the share of the cost of applying environmental related measures for importing countries , thereby reducing the high cost producing countries have to bear. Ideally, if international trade in palm oil is to provide non-discriminatory treatment for both producing and importing countries, trade negotiation should include the development of stages of adaptation, which are feasible to implement by both producing and importing countries. This would improve on the current condition, which is characterized by importing countries delinking their palm oil purchases from producing countries instantly with attendant social and economic costs.

The second issue that needs addressing is the extent to which Indonesia 'treats' private sustainability standards in meeting its trade objectives. The existing private certification by RSPO is to most circles socially legitimate, at least among international trading partners. In other words, if benchmarking through private voluntarism is an option, capacity and resources of oil palm planters (state plantations, private plantations or smallholders) are pivotal to enhancing Indonesia's international environmental competitiveness. While large oil palm plantation companies may adjust their firm-level strategies more easily, smallholders may face formidable difficulties in doing so. Many smallholders are part of a contract farm-

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[37] Erwida Maulia."Indonesia, EU Seek "Ambitious" Free Trade Agreement".(Jakarta Post, June 15, 2011). http://www.thejakartapost.com/news/2011/06/15/indonesia-eu-seek-ambitious-free-trade-agreement.html

[38] RI Should Speed Up FTA Talks with India: Gapki". (Jakarta Post, February 22, 2011). http://www.thejakartapost.com/news/2011/02/22/ri-should-speed-fta-talks-with-india-gapki.html (September 6, 2011)

ing system that tie them with large plantations. Moreover, most of them lack sufficient requisite knowledge, technology and manpower in their production operations. If successful, the elevation of environmental standards by different segments of oil palm planters to national benchmarking may increase their competitiveness as they will be able to build linkages with the international market.

F. CONCLUSIONS

This article traces mechanisms that apply in setting international environmental standards, by focusing on the role of producing countries, importing countries and private actors. The case of palm oil demonstrates the tendency of increasing pressure for palm oil producing countries to comply with private environmental standard due to the adoption of private environmental standards by importing countries in the verification process. Thus, palm oil producing countries, are obliged to not only taking measures to meeting requirements set by importing countries, but also increasingly so, with more stringent environmental requirements , which the private sector must comply with.

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Estimating Demand of India and China for Indonesian Palm Oil Export

Ambiyah Abdullah[1]

Abstract

There has been a shift in the destination of Indonesian palm oil exports from European markets to India and China in recent years. This article aims to estimate the demand of these two countries for Indonesian palm oil exports. This article argues that price supporting policies play an important role behind the increase in the quantity of the demand for Indonesian palm oil exports. This article concludes that it is crucial to disaggregate palm oil data into crude palm oil data and refined palm oil products. This is because it can contribute significantly to improve the results of the price estimation and income elasticity of Indonesian palm oil export for both India and China.

Keywords: palm oil exports, price estimation, income elasticity

A. INTRODUCTION

Based on current world market condition, the consumption of palm oil surpasses that of any other vegetable oil today. Moreover, in terms of quantity produced per year, palm oil assumes the number one position if compared with other oils. In its annual report, the United States Departement of Agriculture (USDA) underscores the fact that both world supply of, and demand for, palm oil are projected to increase significantly (October, 2011). The same report notes that world palm oil production today stands at 50,281 thousand metric tons. Meanwhile, palm oil trade is also showing an upward trend. Exports and imports of the commodity registered an increase of 38,009 thousand metric tons and 38,925 thousand metric tons, respectively. Such a substantial increase in production, and international trade in palm oil, makes the commodity to enjoy the largest share of the world's market in vegetable oils. Palm oil production contributes 32 percent of vegetable oils market, which is followed by soybean oil. Palm oil also contributes the largest percentage to total import and exports of vegetable oils on the world market, carving out a share of 63% and 62%, respectively. This is an indication that palm oil contributes most to the world market vegetable oils market.

Indonesia and Malaysia, are renowned for being the two largest producers and exporters of palm oil in the world market today. Palm oil sector plays an important role in the economies of both Indonesia and Malaysia. Since 2009, Indonesia has become the largest palm oil producer and exporter of palm oil , with Malaysia assuming the number two slot, in both respects. This is attested by an USDA report (October, 2011), which puts the combined contribution of production and export of Indonesia and Malaysia palm oil to the world market at 87% and 90%, respectively. As regards Indonesia, the Government of Indonesia has plans to attain the target of twenty two million tons of palm oil production and palm oil acreage to nine million ha by 2020. Such factors underscore some of the factors that

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underlie the important position Indonesia enjoys in the palm oil World market.

The direction of trade of Indonesian palm oil shown an upward trend over the last five years. Moreover, it is also important to note that the destination of Indonesian palm oil has shown a shift from European countries to India and China , which have become the two largest importing countries for Indonesian palm oil. Restrictions palm oil exports face in Europe, manifested in among other measures, regulation relating to environmental standards, has been one of the factors responsible for that shift in the direction of Indonesian palm oil exports. Based on USDA Report (November 2011) India assumes number one importer of Indonesian palm oil for 2007-2011 period. In November 2011, India imported 7,250 thousand metric tons of palm oil, while China was second in importance, and imported 6,300 thousand metric tons of the commodity during the same period. Moreover, PORAM data show that during 2004 to 2008 period, the share of India's palm oil imports Indonesia increased significantly every year. In 2008, the share of Indonesian palm oil exported to India's constituted about 85 % of India's total palm oil imports. In the case of China, Indonesia palm oil exports contributed 34 percent of that country's imports of the commodity in the same period. In light of that, India and China are the two main destinations of Indonesian palm oil exports. To that end, this study uses monthly data to estimate the demand for Indonesian palm oil in India and China. Data used were for the period between January 1996 and July 2010. The estimation of the demand for palm oil export demand is based on the assumption that export supply of Indonesian palm oil is inelastic.

B. LITERATURE REVIEWS

Export Demand is the differentiated form of the demand model. Goldstein and Khan (1975) model is the renowned export demand model. The export demand model assumes the following specification:

$$X_i^d = j(Y * e);$$

Where:
quantity demanded for exported good
income of importing countries
price of exported good
price of substitute good in importing countries
exchange rate

In addition to the theoretical framework, a number of studies on the price and income elasticity for Indonesia palm oil both at the aggregate and country levels are available in extant literature. With respect to estimating export demand elasticity of Indonesian palm oil export for India and China, a study by Yulismi and Siregar (2007) found that India has an inelastic price elasticity in the short-run and in the long-run, but showed an elastic income elasticity in long-run. China was found to have an elastic price elasticity and inelastic income elasticity for Indonesian palm oil exports, both in the short- run and in long-run. Yulismi and Siregar (2007) study also conducted an estimation of the price and income elasticity for Malaysian palm oil exports. Their results showed that Malaysian palm oil exports had an elastic price and income elasticity in the cases of India and China, both in short- run and in long-run. On the same note, a study conducted by Shariff et al. (2006) found that Malaysia palm oil exports showed elastic price elasticity for India but inelastic price elasticity for China. Meanwhile, as regards income elasticity, Malaysian palm oil exports were found to have an elastic income elasticity for India and China in long-run, but it is inelastic in the short-run.

Furthermore, Abdullah (2011) using an ECM model examined the price and income elasticity of Indonesian palm oil export to the world market. Results indicated Indonesian palm oil exports have an inelastic price and income elasticity both in the short- run and in the long-run. Rifin (2010a) analyzed the mar-

ket share of palm oil exports from Indonesia and Malaysia to Asia, Europe and Africa using CMSA (Constant Market Share Analysis). Rifin (2010a) found that Indonesian palm oil exports are more competitive in Europe than Malaysian palm oil exports during 1999-2001 and 2005-2007 periods.

More ever, a study by Rifin (2010a) reveals that Indonesia and Malaysia palm oil exports have an inelastic price elasticity both in the short- run and in long-run. However, in terms of income elasticity, Indonesia palm oil exports were shown to be elastic income elasticity both in the short- run and in the long-run, while Malaysia palm oil exports showed inelastic income elasticity in the short- run and in the long-run. Niemi (2004)'s study of Indonesia and Malaysia palm oil exports were found to show elastic price and income elasticity in the European Market. Nonetheless, Malaysia palm oil exports were found to have higher price and income elasticity that Indonesian palm oil exports. To that end, unlike previous studies, this study attempts to estimate price and income elasticity for Indonesian palm oil export to India and China, which are the two largest importing countries. The study uses monthly data for January 1996 to July 2010 period, and the Error Correction Model.

C. DATA, SOURCE AND METHODOLOGY

1. Data and Source

This study uses monthly data for the period between January 1996 and July 2010, to estimate the demand of India and China for Indonesian palm oil exports. Data for the quantity of Indonesian palm oil exports to India and China were taken from IDE JETRO database , at Nagoya Office; the export price of Indonesian palm oil is based on the unit value, which was taken from IDE JETRO at Nagoya Office, and is deflated by world consumer price index; the income data for India and China were taken from International Financial Statistic, IMF. World soybean oil price data were obtained from the International Financial Statistics, IMF , which represents a substitute for palm oil.

2. Methodology

The estimation model used in this study is underpinned by an assumption that Indonesian palm oil exports has an infinite elastic export supply. This means that supply can adjust to the rise in demand due to availability of land in Indonesia. To that end, this study uses the export demand approach to estimate the demand of India and China for Indonesian palm oil export during January 1996 -July 2010 period. The export demand model, this study uses is shown below:

$$\Delta XI_t = \alpha_0 + \alpha_1 \Delta PXI_t - \alpha_2 \Delta PSI_t + \alpha_3 \Delta YI_t + \ldots \quad (1)$$

$$\Delta XC_t = \beta_0 + \beta_1 \Delta PXC_t - \beta_2 \Delta PSC_t + \beta_3 \Delta YC_t + \ldots \quad (2)$$

Where:
Indonesian Palm Oil Export Quantity to India and to China respectively (t) and Real Export Price of Indonesian Palm Oil Export to India and to China respectively (USD/t) and Real World Price of Soybean Oil in India and China (USD/t)
Eeal Income of India (USD)
EC = Error Correction Term means all variables are in the form of difference

D. FINDINGS AND DISCUSSION

Since the data used are in time series, conducting test for stationarity of variables , using ADF Test was deemed necessary. To that end, the unit root test using ADF Test was conducted both on data for India and China using none, constant included and constant and trend included specifications. The results are categorized into two: the case for India and China, as depicted hereunder:

- India

Table 1
ADF Result of India

Variable	ADF Test	ADF Test	ADF Test
	None	**Constant Included**	**Constant and Trend Included**
Level			
Export Quantity	0.269995	-4.210068***	-8.199696***
Price of Indonesian Palm Oil Export to India	-0.297506	-9.298507***	-9.302071***
World Soybean Oil Price	-0.235838	-2.10656	-2.222536
India Income	2.565265	-0.182407	-3.218683*
First Difference			
Export Quantity	-10.36797***	-10.35869***	-10.32959***
Price of Indonesian Palm Oil Export to India	10.64212***	-10.61048***	10.60296***
World Soybean Oil Price	-9.498520***	9.472537***	-9.490315***
India Income	-23.55879***	-24.08320***	24.03197***

Source: Author's Calculation
Note: ***Significant at 1% probability level.

As depicted in table above, ADF test results show that all variables were stationary at 1% probability level in three categories. In light of that, taking the next step involving conducting co- integration test on residual, becomes admissible. The results of that process are presented in Table 2.

The result from the co- integration test shows that residual is stationary, an indication that there was co- integration between all variables . To that end, the last step involving conducting the error correction model (ECM) analysis for India case was done .

The result of the ECM model estimation show that the price and income elasticity of Indonesian palm oil export for India are elastic both in the short- run and in the long-run (with negative sign, which is an expected result). In the short-run, price elasticity is shown to be 1.31 , which means that an increase of 1 percent in the price of Indonesian palm oil exports to India, induces a decrease of 1.31 in the quantity of Indonesian palm oil exports to India. In long- run, the price elasticity is larger than in short- run (It has value 1.49). World price of soybean oil, while not significant in the short-run , is shown to be significant in the long-run. This shows that in the short- run consumers in India do not find it easy to switch from consuming Indonesian palm oil to soybean oil in the event of an increase in prices of Indonesian palm oil exports. It is also notable that the

Table 2
Co-Integration Result of India

Variable	ADF Test	ADF Test	ADF Test
	None	Constant Included	Constant and Trend Included
Level			
Residual (u)	-13.86086***	-13.82052***	-13.77892***

Source: Author's Calculation
Note: *** Significant at 1% probability value

Table 3
Short-Run and Long-Run Estimates of India Export Demand

Period	Constant	Export Price	Soybean Oil Price	Income	Error Correction	Result
Short-run (ECM)	0.01	1.31	-0.12	1.27	-0.49	R2 = 0.75
	(0.35)	(20.33)***	(-0.17)	(3.10)**	(-8.04)***	DW = 2.1
Long-run	3.55	1.49	-3.26	1.69		
	(6.06)***	(13.98)***	(-14.13)***	(19.03)***		

Source: Author's Calculation
Note: *** = significant at 1% probability levels

coefficient of the income elasticity in the long-run is larger than in the short- run. In the short-run, income elasticity is 1.27 , while in the long-run it is 1.69. This means that in the long-run, an increase of 1 percent of incomes of Indian consumers , induces a decrease of 1.69 in the quantity demanded of Indonesian palm oil exports.

- ***China***

The same procedure and steps are applied to the case of Chin. The unit root test was conducted to test the stationarity of all variables. The ADF test result appear in the Table 4.

As shown in the table above, all the variables were found to be stationary in the first difference based on none, constant included, and constant and trend specifications. To that end, the second step of conducting a co-integration test using ADF test on the residual then followed. The result are presented in the Table 5.

Subsequently, the last step involving conducting an error correction analysis using the export demand model for China, was done. The results of the estimates of price and income elasticity for China are presented in the following table:

The ECM analysis result for the case of China, show that Indonesian Palm oil exports exhibit an elastic income elasticity in long-run and elastic price elasticity of soybean oil as substitute good in the long- run. The price of Indonesian palm oil exports, is not significant both in the short- run and in the long- run. Moreover, income elasticity is found to insignificant in the short-run but shown to be significantly elastic in the long-run. This means that imports of Indonesian palm oil in China is not sensitive to both price and incomes in the short- run but does so in the long-run. In the

Table 4
ADF Result of China

Variable	ADF Test	ADF Test	ADF Test
	None	**Constant Included**	**Constant and Trend Included**
Level			
Quantity of Indonesian Palm Oil Export to China	-1.784878*	3.311791**	-4.151112***
Price of Indonesian Palm Oil Export to China	0.033058	-4.299932***	-4.348252***
World Price of Soybean Oil	-0.235838	-2.10656	-2.222536
China Income	2.843392	-0.92408	-1.883095
First Difference			
Quantity of Indonesian Palm Oil Export to China	-16.18447***	-16.13866***	-16.10244***
Price of Indonesian Palm Oil Export to China	-17.47315***	-17.42718***	-17.36744***
World Price of Soybean Oil	-9.498520***	-9.472537***	-9.490315***
China Income	-1.727431*	-3.428147**	-3.474196**

Source: Author's Calculation

Note: ***Significant at 1% probability level

Table 5
Co-Integration Result of China

Variable	ADF Test	ADF Test	ADF Test
	None	**Constant Included**	**Constant and Trend Included**
Level			
Residual (u)	-4.573977***	-4.558986***	-4.519721***

Source: Author's Calculation

Note: ****Significant at 1% probability level

Table 6
Short-Run and Long-Run Estimates of China Export Demand

Period	Constant	Export Price	Soybean Oil Price	Income	Error Correction	Result
Short-run (ECM)	0.01	0.03	5.20	1.65	-0.68	R2 = 0.33
	(0.07)	(0.12)	(1.14)	(1.02)	(-9.12)***	DW = 2.08
Long-run	-22.85	0.05	3.43	3.39	-	
	(-7.02)***	(0.14)	(3.29)***	(8.19)***		

Source: Author's Calculation

Note: *** = significant at 1% probability levels

long- run, an increase of 1 percent in the income of oil palm consumers in China, induces an increase of more than 1 percent (3.39) in the quantity of Indonesian palm oil demanded. However, the price of soybean oil is shown to be elastic in the long- run, which means that if the price of soybean oil falls by 1%, it induces a decrease of 3.34 in the quantity demanded for Indonesian palm oil. This finding supports the notion that the demand for Indonesian palm oil in China is sensitive to incomes of palm oil consumers in China.

Findings of this study, with respect to elasticity of demand for Indonesian palm oil in India and China, which is found to be elastic, are different from those found by Yulismi and Siregar (2007). While the Yulismi and Siregar (2007) study established that price elasticity of Indonesian palm oil exports for India was inelastic while for China was elastic, in both the short- run and the long-run., this study , which used monthly data for January 1996 to July 2010 period, found that price elasticity of Indonesian palm oil exports to India us was elastic both in the short- run and in the long- run. Findings of this study are also different for China as well. This study found that the price elasticity of Indonesian palm oil export for China is insignificant in both the short- run and in the long-run. Price elasticity of demand shows the effects of change in price of palm oil exports can be divided into income effect and substitution effects. The income effect refers to the effect on consumer demand when price changes but keeping other factors constant. If there is price change, the purchasing power parity of consumer also changes. If the price elasticity of demand is elastic, then an increase of 1% of the price of Indonesian palm oil exports to India, induces an increase of more than 1 percent in the quantity demanded for Indonesian palm oil export by Indian consumers. This is because the purchasing power parity of Indian consumer will decrease. The elastic price elasticity of demand for Indonesian palm oil exports by India consumers implies that the expenditure on Indonesian palm oil exports constitutes a large proportion of the total budget of Indian consumers. The other effect induced by price change is the substitution effect. Change in the price , implies a substitution effect of other goods. The elastic price elasticity of Indonesian palm oil exports to India , implies that the substitution effect for other goods is large. In addition, the price elasticity of Indonesian palm oil export for India, is larger in the long-run than in the short- run. This is mainly because in the event of an increase in the price of Indonesian palm oil exports, in the short- run Indian consumers face difficulties in switching from consuming Indonesian palm oil for alternatives such as soybean oil.

Income elasticity of Indonesian palm oil

exports to India was found to be elastic in both the short- run and in the long- run , while the case of China produces insignificant estimates in the short- run but was found to elastic in the long- run. Income elasticity of demand implies the change in income induces a change in quantity demanded for Indonesian palm oil exports. The elastic income elasticity of Indonesian palm oil exports to India shows that as incomes of Indian consumers increase by 1%, the quantity of demanded for Indonesian palm oil exports increases by more than 1%. This implies that Indonesian palm oil exports is an important good for Indian consumers. However, in the case of China, income elasticity for Indonesian palm oil exports is insignificant but is elastic in the long- run. Meanwhile, results also show significant and elastic price of soybean oil in the long- run.

The price and income elasticity of Indonesian palm oil exports for India and China , which this study show, also confirm the reality based on data that India and China are two major importing countries for Indonesian palm oil. The growth of income and population in India and China are two major important factors that are attributable for the large contribution the two countries make to vegetable oil consumption. China and India are the second largest consumers of vegetable oils in the world. Since 2007 to the present, Vegetable oil consumption in India and China has been increasing every year. In October 2011, based on USDA Report (October 2011), China consumed 20% of total world consumption of vegetable oil, while India was in the third position, consuming 11 % of total world vegetable oil consumption. Moreover, on closer observation, it comes to light that in October 2011, India and China , imported 36% of total world palm oil. Additionally, from 2007 to October 2011, India and China have been the two largest consumers of palm oil in the World. This implies that the pattern of vegetable oil consumption in India and China has changed. During early 1970s, India consumed peanut oil and rapeseed oil as the major vegetable oils, but since 1999 to the present, India consumes palm oil and soybean oil as the two major vegetable oils instead of peanut oil and rapeseed oil. The trend and pattern of vegetable oil in China also shows a similar pattern to that in India. The pattern of vegetable oil consumption in China also changed. Currently, palm oil consumption contributes 70% to total vegetable oils consumption. Many researchers believe that the consumption of palm oil in India and China will significantly increase in future.

E. CONCLUSION

The growth of incomes and population , as well as changes in policies and pattern of vegetable oils consumption in India and China, are key factors that underlie increase in consumption of vegetable oils. The elastic price and income elasticity of Indonesian palm oil exports for India and China in the short- run and in the long- run, have some implications for trade policies which should the Indonesian government should implement. Based on current condition, India and China are the two rapidly growing economies in the world. This means that Indians and Chinese are today enjoying ever rising incomes, which have led them to demand larger quantities of Indonesian palm oil exports. This should serve as a good opportunity for the Indonesian government to increase palm oil exports to India and China. Price supporting policies play an important role in supporting the increase in quantity demanded for Indonesian palm oil exports. Implementation of price supporting policies can be done by among other measures, reducing various barriers that that affect cost of production, effective and efficient marketing strategies and promoting innovation toward enhancing the quality of Indonesian palm oil products. Based on this study findings, the author recommends disaggregating palm oil data into crude palm oil data and refined palm oil products. This is because doing so should contribute significantly to improving results of estimation of price and income elasticity of Indo-

nesian palm oil export for both India and China.

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Empowering Local Communities Through Traditional Knowledge Protection

Ayub Torry Satriyo Kusumo[1]

Abstract

This article examines the current state of affairs with respect to local community empowerment through a traditional knowledge protection system in Indonesia, analysis of the potential impact of traditional knowledge protection management on the Indonesian economy, and making recommendations on the formulation and development of a new policy on the protection of traditional knowledge. The study is a doctrinaire research, and used a juridical approach. Secondary data were used , obtained largely through conducting a literature review of both printed and electronic materials publicly available in the library and internet. Content analysis technique based on deductive methods, was used in analyzing the data. The study came up with several findings. First, trade Related aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods (TRIPs) Agreement as embodied in the provisions of the World Trade Organization (WTO) in 1994, succinctly show that Intellectual Property Rights issues are inseparable from world trade and investment. Secondly, protection system for traditional knowledge can achieved by using laws that relate to Intellectual Property Rights (IPR) as well as non-IPR instruments, and using instruments other than laws. Thirdly, IPR is vitally important as it provides legal protection to commercial works.

Keywords: TRIPs, World Trade Organization, Traditional knowledge, Intellectual Property Rights

A. INTRODUCTION

Traditional knowledge is one the interesting issues, which have emerged within the scope of Intellectual Property Rights study. Traditional knowledge , which is constitute intellectual property of indigenous peoples/indigenous/ traditional people encompasses many things, which range from traditional knowledge systems, works of art, literature, philosophy, medicine, to what is known as indigenous science and technology. What is interesting is that current Intellectual Property Rights arrangements as they are do not cover traditional intellectual property, especially in the realm of international trade.

In light of that, a paradigm shift in the management of traditional works is emerging in developing countries. This has in the main been attributable to the current realities that objects which once used to be categorized as freely accessible , have overtime acquired economic value. A country which is endowed with rich culture and natural resources today considers ways of levering traditional knowledge as a way to enhance its competitiveness in international trade.

There are two mechanisms which serve as framework in providing protection of traditional knowledge: through legal protection,

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and using instruments other than laws or legislation[2]. With regard to legal protection, this constitutes an effort to protect traditional knowledge using binding laws. This form includes Intellectual Property Rights or regulations governing genetic resources. Meanwhile, non-legal form is providing protection to traditional knowledge using other instruments that are nonbinding in nature. This form includes codes of conduct adopted by international organizations, governmental and non-governmental organizations, professional societies and the private sector.

However, protection based on laws , has the advantage that besides being binding, it lasts long. This study explores two ideas. The first, relates to the empowerment of local communities through the Protection of Traditional Knowledge Systems in Indonesia; secondly, prospects of empowering local communities by providing legal protection to traditional knowledge using intellectual property rights framework.

B. INTELLECTUAL PROPERTY RIGHTS UNMATCHED THE TRADITIONAL KNOWLEDGE PROPERTIES

1. The concept of Community Empowerment

The concept of empowerment was born as an antithesis to the models of development and industrialization, which do not benefit the majority of the population. This construction of the concept is based on the following framework (Projono, OS and Pranarka, AMW, 1996: 269):

a. The centralization process of power generated concentration of factors production.
b. Concentration of factors of production by entrepreneurs pushes workers and communities on the outskirts.
c. Power strengthens its hold on knowledge systems, political systems, legal systems, as well as through manipulating ideology and legitimacy. Co-optation system of knowledge, legal systems, political system and ideology, systematically create a polarized population (comprising two categories of people)

2. Intellectual Property Rights (IPR)

IPR is the power of creativity and innovation applied through artistic expression. In this case, a person's intellectual potential resource is not limited but can as well accessible to everyone. IPR is a strength which can be used to enhance a person's dignity as well as the future of a nation materially, culturally and socially. Therefore, the development of the national IPR system should not only be done using legal approaches (legal approach) but also technologies and businesses (business and technological approach).

However, the conception of IPR, which is based on legal approach, seems too shallow if applied to traditional knowledge. The logic of the law underpinning IPR, is that the concept of law provides legal protection to intellectual work. Moreover, IPR protection is itself based on providing protection to the individual rather than the community. In light of that, in order to strike a balance between individual interests and interests of the society, the IPR system should be based on the following principles[3]: 1) justice (the principle of natural justice); 2) economy (the economic argument); 3) principle of culture (the cultural argument); 4) the principle of social (the social argument).

The protection of IPR is contained in the TRIPs Agreement, which was a product gen-

[2] Budi Agus Riswandi dan M. Syamsuddin. 2005. *Hak Kekayaan Intelektual dan Budaya Hukum,.* Jakarta: PT Raja Grafindo Persada hal 37

[3] Budi Agus Riswandi dan M. Syamsuddin. 2005. *Hak Kekayaan Intelektual dan Budaya Hukum,.* Jakarta: PT Raja Grafindo Persada page 32

erated by a discussion in the General Agreement on Tariffs and Trade (GATT) in 1994 which has three basic principles[4]. The first principle relates to the establishment of minimum standards of protection and enforcement of IPR for the participating countries signatory to TRIPs Agreement. This includes copyright (and other related rights), trademarks, geographical indications, industrial designs, patents, layout of integrated circuits and trade secrets. The important point to note is that this is a minimum standard, which means that countries are allowed to set higher standards than those stipulated .

The second is that each country must protect IPR amongst citizens, by giving them rights as stipulated in the TRIPs Agreement. This principle is known as the principle of "national treatment".

The third calls for participating countries to provide treatment which is more detrimental to citizens from countries other than the treatment on its own citizens. Furthermore, the principle of "the most favored nation" applies here, which means that any rights granted to citizens of a country, must also be given to citizens of other countries.

3. Overview of Traditional Knowledge

There are several definitions of traditional knowledge propounded by experts on the subject. Nonetheless, one definition which many people use is that developed by the World Intellectual Property Organization (WIPO), namely:

> "Traditional based literary, artistic or scientific works, performances, Inventions, scientific discoveries, designs, marks, names and symbols, undisclosed information and all other tradition-based Innovations and Creations resulting form of intellectual activity in the industrial, scientific, literary or artistic fields ".

Agus Budi Riswandi outlines the definition of traditional knowledge as follows[5]: 1) Traditional knowledge is the result of practical thinking, which is based on the teachings and experience from generation to generation; 2) Traditional knowledge is knowledge in the area of the township; 3) Traditional knowledge cannot be separated from the holders of society, including health, spiritual, cultural and language from the public shareholders, as it a way of life. Traditional knowledge holders lend credibility to the community. In this case I need to point out, simply that that traditional knowledge is held by local communities or regions and is hereditary.

C. METHODS

This is study which is solely based on literature review as source of data, and used descriptive methods to analyze the data. The objective of the research is to provide data as expeditiously as possible about the people or circumstances or other symptoms. In this study, the researcher collected data and subsequently constructed and transformed them into a series of research results[6]. Therefore, this study is also a library research.

As regards the location of the research, various libraries with relevant data pertaining to the subject matter were used. These included the Ministry of Industry and Trade of Indonesia Library, particularly the Directorate of Foreign Economic Relations in Jakarta; Foreign Affairs section of the Ministry of Agriculture Library in Jakarta; Library Assessment

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[4] Prasetyo Hadi Purwandoko. 1999. ***I****mplikasi Ketentuan Agreement on TRIPs bagi Indonesia*. Yustisia No 47 Tahun XIII September - Nopember. Surakarta: Fak. Hukum UNS.

[5] Budi Agus Riswandi dan M. Syamsuddin. 2005. *Hak Kekayaan Intelektual dan Budaya Hukum,*. Jakarta: PT Raja Grafindo Persada hal 29.

[6] Bambang Sunggono.1997**.** *Metodologi Penelitian Hukum*. Jakarta: PT. Raja Grafindo Persada.

and Policy Development Board of the Ministry of Foreign Affairs in Jakarta; Library of Graduate Program of Legal Studies University of Padjajaran in Bandung, Indonesia University Graduate School Library; Library of the University of Sebelas Maret; Library of Faculty of Law University of Sebelas Maret; and various reliable websites .

The research used secondary data , which were divided into:

a. Primary legal materials, namely: Agreement Establishing The World Trade Organization (Agreement Establishing the World Trade Organizations), Law No. 7 of 1994; the Understanding of Trade Related Aspects of Intellectual Property Rights, Including Trade in Goods Counterfeit (Agreement on Trade Aspects of Related to Intellectual Property Rights, Including Trade in Goods Counterfeit); Convention on Biological Diversity of 1992; the International Treaty on Plant Genetic Resources for Food and Agriculture of 2002; the International Union For the Protection of New Varieties of Plants, Indonesia's IPR regulation (Copyright, Patent, Trademark, Industrial Designs, Trade Secrets, Layout Designs of Integrated Circuits, Plant Variety Protection)
b. Secondary legal materials, namely books, reports, and seminar papers, the news of the mass media such as Kompas, and a variety of draft legislation on Traditional Knowledge Protection Act, as well as issues related to the research.
c. Tertiary sources of legal materials, which included materials that provide guidance and explanation of the legal materials of primary and secondary legal materials. Examples of the sources are dictionaries, legal encyclopedias, bibliographies.

Study of Literature or desktop method, was used in data collection. Meanwhile, content analysis technique based on juridical perspective was used to analyze data in a logical and systematic manner.

D. SPECIFIC REGULATION IS REQUIRED FOR THE PROTECTION OF TRADITIONAL KNOWLEDGE

1. Local Community Empowerment Through the Protection of Traditional Knowledge Systems

Fundamental issues relating to Law enforcement in Indonesia can be divided into three categories. First, with respect to substance, traditional knowledge does not have explicitly, both in terms of substance and procedural sense any legal protection. Protection is only limited to a symbolic form, making rule ineffective and with no benefits from it.

Secondly, legal aspects of the apparatus. There are still very few legal personnel who are knowledgeable about the problems and issues that relate to traditional knowledge.

Thirdly, cultural aspects of the law, which are rooted in the fact that traditional societies are in general very reluctant to take legal action in dealing with any infringement on intellectual property rights relating to traditional knowledge.

On the other hand, the government, which arguably has the necessary capacity and awareness to use the due process of the law in the protection of traditional knowledge, is still busy with other problems of the state. Moreover, the commitment of the government to enforcing law and order as enshrined in various national legislation is very much in doubt.

Thus, providing protection to traditional knowledge which exist in Indonesia, especially based on IPR framework, is still problematic. However, there is need to note that efforts are underway to provide protection to traditional knowledge, thanks to the use of extraordinary funding tailored to the identification of tradi-

tional knowledge. This is vivid evidence of the existence of serious attention and concern for traditional knowledge problems. By providing protection to traditional knowledge, the nation has an opportunity to enhance its competitiveness in global trade, which in turn will pave the way for higher local and national revenues and incomes.

The protection of traditional knowledge can be done in two ways, namely, using legal protection, and taking recourse to non legal instruments. As regards using legislation, the protection of traditional knowledge is achieved through adopting a binding legal form, for instance Intellectual Property Rights Law, the regulations relating to genetic resources, traditional knowledge in particular and customary law.

Meanwhile, protection of traditional knowledge using non-legal instruments is achieved through the application of instruments that are not binding,, which include among others codes of conduct adopted by international, governmental and nongovernmental organizations, professional societies and the private sector. Other protections include the compilation of the discovery, registration and a database of traditional knowledge.

2. *The prospect of Empowering local People through the Protection of Intellectual Property Rights contained in Traditional Knowledge*

The development and application of IPR has raised serious cause for concern. This relates to the legal terms as well as trade and human rights. Indonesia is endowed with a wealth of traditional knowledge, which calls for better management, if its benefits are to be optimized. As Henry Soelistyo of the Association of Community Intellectual Property Rights, argues:

> "Accepting and accommodating the concept of globalization of IPR protection does not necessarily go against national interest. However, keeping public interest in mind, remains a justification in the principles of regulation and the rationale of the various areas of IPR protection at the national level. However, all that should be done within the corridors of law and international norms[7]".

The opinions expressed above are precise in the context of the legal system in Indonesia. This is because the legal system in Indonesia acknowledges three other legal subsystems, namely the national law, Islamic law and customary law.

Under such conditions, it is ideal that whatever is stipulated in corresponding legal norms do not contravene or conflict with other legal norms. In other words, what is set out in the norms of the prevailing /positive laws should not be contrary to the norms stipulated in Islamic law and customary law. The same applies to legislation relating to traditional knowledge. Ideally, Indonesia should have in place national norms translated into regulations on traditional knowledge. Such regulations should not contravene or contradict other legal norms, especially those enshrined in Islamic law (Mohammed Djumana, 2006: 5).

Moreover, providing protection to traditional knowledge can create immense opportunities that can contribute to the generation of foreign exchange revenues , which in turn will help tom propel Indonesia's economic development.

Appreciation of works of traditional society and culture will increase and as will be the sense of belonging and pride (sense of belonging or pride). If Indonesia were to show its serious commitment to exploring and uti-

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[7] Henry Soelistyo Budi. 2000. *Status Indigenous Knowledge dan Traditional Knowledge dalam Sistem HaKI*. Makalah. *Kajian Sehari " HaKI di Indonesia: Mewujudkan Masyarakat Etik dan professional*". Pusat Pemberdayaan Masyarakat dan Pengkajian Strategis dan IIPS, 3 Juni. Semarang : PPMPS.

lizing the potential of traditional knowledge, the country and its people will reap a lot more advantages in terms of economic benefits and preservation of noble values inherent in traditional knowledge. Greater government attention to the vast potential this nation has in traditional knowledge and better still increase its contribution to turning into icons for the people, will no doubt help in generating more value added as well as strengthening national character and identity as a nation.

Moreover, preservation of traditional knowledge will avert the danger that this vast and invaluable resource will one day become extinct. Like the saying goes "what is in the grip should be maintained", there is need to maintain and manage the resources and wealth of the nation which we already have.

With well streamlined and regulated protection of traditional knowledge, means that all other countries or parties that use traditional knowledge will have to be subjected to share the profits they earn from doing so with Indonesia. Such a process generates revenues for the host nation.

Additionally, protection of traditional knowledge, also improves Indonesia's position in world trade. Regrettably, providing protection to traditional knowledge is no mean feat. For example, the implementation of the Copyright Act in Surakarta, has not been accomplished so far because of[8] a) the IPR provisions are contrary to the nature of traditional knowledge; b) the absence of institutions that serve as umbrella for the protection of traditional knowledge; c) the absence of database of traditional knowledge in Surakarta; d) differences in IPR system if applied to traditional knowledge; and e) other factors that lead to inefficient implementation of the Copyright Act in Surakarta, which relate to the substance of legislation, law enforcement structures, and cultural communities.

With respect to problems and challenges likely to emerge if the traditional knowledge is protected under IPR laws. This relate much to the nature of the IPR, which is limited and narrow in scope because of the requirement that there should be new and original elements. This is contrary to the nature of traditional knowledge , which does not constitute or is a new element, because it has been there for generations. So the prospect of using the IPR protection is not effective, and requires a separate arrangement. This issue has been discussed in the Draft Law of Traditional Knowledge and Traditional Cultural Expressions.

The scope of subjects, which are currently under discussion relating to the above bill include : a) Consideration / policy underlying the need for protection (preservation, moral, economic, etc.); b) Who should benefit and who the owners of related objects; c) Object to be protected (Definitions/Scope of Traditional Knowledge and Traditional Cultural Expressions); d) The criteria that must be met and limits, which must not be violated; e) The rights and liabilities of the owner, as well as exclusion; f) the aspect of protection, which has not been accommodated by conventional Intellectual Property Rights systems

Other provisions in the bill include, g) the procedure to obtain utilization permits (how to administer) and enforce such rights (sanctions and fines); h) issues which cannot be dealt with at the national level, hence need addressing at the international level, and attendant mechanisms to use; i) the treatment of objects that are belong to foreign culture/heritage; j) terms of protection; k) the notion that the state has a moral obligation (ethical imperative) to preserve cultural diversity and traditional knowledge; l) Development of the state must support the creative industries which focus on economic growth and job creation.

The Bill on Bill of Traditional Knowledge and Traditional Cultural Expressions has important points, which include[9]:

[8] Nurulla Tri Siswantiti. 2007. *Implementasi Undang-Undang Nomor 19 Tahun 2002 tentang Hak Cipta di Kota Surakarta*. Surakarta : Skripsi page 71

a. General Provisions

1) Traditional Knowledge is the intellectual work in the field of knowledge and technology that contain elements characteristic of traditional heritage produced, developed, and nurtured by the community or society; 2) Traditional Cultural Expressions is defined as intellectual work in the field of art which contains elements characteristic of traditional heritage that produced, developed, and maintained by the community or society, 3) Tradition is a cultural heritage of the community, maintained and/or developed in a sustainable manner over generations by a community or traditional community; 4) Protection is an effort to protect all forms of utilization Traditional Knowledge and Traditional Cultural Expressions done without violating the rights and decency; 5) The owner and/or Custodian Traditional Knowledge and Traditional Cultural Expressions is a community or traditional communities that maintain and develop the traditional Knowledge and Traditional Cultural Expressions and communal, 6) utilization is the utilization Traditional Knowledge and Traditional Cultural Expressions outside the context of tradition; 7) the Expert Team on Traditional Knowledge and Traditional Cultural Expressions is a special independent team in the environment department in charge of Traditional Knowledge and Traditional Cultural Expressions; 8) Petitioner is a foreign person or foreign legal entities applying for permits access to utilization and application utilization agreement registration; 9) The application is a request to obtain access permits utilization, and utilization recording agreement; 10) Use Access Permit is a permit that given by the Minister to a foreign person or foreign legal entity prior to the use agreement; 11) Holders of permits access to the utilization of a foreigner are foreign legal entities which have obtained permits of access and utilization; 12) utilization agreement is an agreement between the owner and/or Custodian of Traditional Knowledge and/or Traditional Cultural Expression and foreigners or foreign legal entities, the utilization of Traditional Knowledge and/or Traditional Cultural Expression outside the context of the tradition.

b. Protection of Traditional Knowledge and Traditional Cultural Expressions

1. Traditional Knowledge and Traditional Cultural Expressions covers elements of culture, which :
   a. Have special characteristics that are integrated within the cultural identity of certain people who preserve it;
   b. prepared, developed, maintained, and transmitted within the scope of tradition,
2. Traditional Knowledge-protected works include literary tradition based, artistic or scientific works, performances, inventions, scientific discoveries, designs, marks, names, names and symbols, undisclosed information, and all the updates based on traditions and creations resulting from intellectual activity in the field industrial, scientific, or artistic,
3. Traditional Cultural Expressions protected includes one or a combination of the following expression:
   a) verbal textual, whether oral or written, in the form of prose and poetry, in a variety of themes and content of the message content, which may be a work of literary or narrative informative; b) music, including among others: vocal, instrumental or a combination thereof; c) motion, including among other things: dance, martial arts, and game; d) the theater, including among others: puppet shows and theatrical people; e) art, whether in the form two-dimensional and three-dimensional made from various materials such as leather, wood, bamboo, metal, stone, ceramics, paper, textiles, etc. or combinations thereof; f) customary ceremonies,

which also includes the manufacture of tools and materials and presentation.

c. Scope of Protection Traditional Knowledge and Traditional Cultural Expressions (Article 3)

Traditional Knowledge And Traditional Cultural Expressions protection includes the prevention and prohibition of :

1) Utilization is done without the use of access permissions and agreements utilization by foreigners or foreign legal entities; 2) Utilization of the implementation of utilization did not mention clearly the origin region and the community or society is the source of these Traditional Knowledge and Traditional Cultural Expressions; and/or 3) Utilization conducted distorted and incorrect impression of the community concerned, or that make the community feel offended, insulted, reprehensible, and/or contaminated.

d. Period of Protection (Article 4)

The term of protection provided for intellectual property Traditional Knowledge and Traditional Cultural Expressions still maintained by the owner

e. Documenting (Article 5)

1. The Government shall conduct the data collection and documentation of Traditional Knowledge and Traditional Cultural Expressions throughout Indonesia, 2) Traditional Knowledge and Traditional Cultural Expressions are documented to provide information about the Traditional Knowledge and Traditional Cultural Expressions which are owned by the Indonesian people in general, and traditional community or society at in particular, 3) Data Collection and documentation of Traditional Knowledge and Traditional Cultural Expressions as referred to in number one can also be organized by universities, research institutions, and other interested parties, 4) Minister to coordinate a data base that collects documentation of Traditional Knowledge and Traditional Cultural Expressions referred to in number one and three at the top in a national network, 5) The database referred to in number are placed in a medium that is easily accessible by everyone, 6) Further provisions concerning data collection and documentation of Traditional Knowledge and Traditional Cultural Expressions is regulated by government.

E. TRADITIONAL KNOWLEDGE: WE PROTECT IT, WE CAN GAIN ADVANTAGES FROM IT

There is urgent need for a system that protects Traditional Knowledge. Two mechanisms can be used to create such a system: firstly, using legal protection, and using instruments other than law. By providing protection to Traditional Knowledge, we can get the benefits of exploring and preserving it and use it as the means of community empowerment to generate a wealth of advantages for the nation and the population.

Unfortunately, the prospects of providing protection to Traditional Knowledge using Intellectual Property Rights Law framework is still blurry because of the nonexistence of special rules that specifically apply to it. The absence of regulations, if it continues as it is, will disrupt the harmony and tranquility of the society, which will have implications for providing protection to traditional knowledge.

Unless a reliable, sustainable, and appropriate protection system to traditional knowledge is conceived and implemented, there is little doubt that it is a matter of time that our invaluable traditional knowledge will be extinct. Once that occurs, the nation will lose all the benefits which are the vast wealth of traditional knowledge contain.

To that end, there is urgent need for the government to expedite the deliberations and passing of the bill on Traditional Knowledge and Traditional Cultural Expressions as it is only through that process that better management and protection of folklore will be ensured to posterity. Local governments also have an important role to play in this endeavor, which is the creation of database and inventory of folklore in the region.

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The Turn towards Regional Trade Agreements: Is EAC Welfare Enhancing to Partner States?

Seth Omondi Gor[1]

Abstract

This study attempts to assess the welfare effects of EAC on partner states in the backdrop of multiple memberships in different Regional Trade Agreements. Using UN COMTRADE database at 6 digit level of aggregation with HS96 nomenclature, we estimate a number of trade indicators with a view to evaluating the composition of trade structures, trade flows, the degree of openness of the economies, and the potential for trade diversion or creation, all of which have critical implications for EAC's integration process. On the basis of these indicators, we find that EAC is welfare enhancing to partner states.

Keywords: Regional Trade Agreement (RTA), East African Community (EAC), Revealed Comparative Advantage (RCA)

1. INTRODUCTION

An important consequence of the failure of multilateral trade negotiations, from Seattle 1999, Doha, 2001 and Cancun 2003, is the proliferation of Preferential Trade Arrangements, actualized through Regional Trade Arrangements (RTAs). This renewed enthusiasm is fuelled in part by the change in trade strategies by key members of WTO, particularly the USA, towards regionalism and away from its traditionally favoured multilateral trade system. This policy shift from the USA has consequently spawned two diametrically opposed approaches to trade liberalization globally, namely; the multilateral approach and the regional approach. A natural offshoot of this scenario is that today, almost each and every country participates in an RTA in one way or another.

East African Community (EAC) partner states have not been spared the rampant proliferation of Preferential Trade Arrangements, which are currently being actualized globally through Regional Trade Arrangements. In East Africa, partner states have membership spanning three different RTAs. Kenya, Uganda, Tanzania, Rwanda and Burundi belong to East African Community (EAC). All except Tanzania belong to Common Market for Eastern and Southern Africa (COMESA), and Tanzania belongs to Southern Africa Development Cooperation (SADC). SADC and COMESA are Free Trade Areas while EAC is a customs union. Other existing arrangements are cooperation agreements such as the Cross Border Initiative.

RTAs by their very nature are discriminatory and therefore have the potential to impact trade either positively or negatively. However, opinion is divided on the exact impact of RTAs on trade. Proponents of regional approach to trade liberalization argue that the positive effects far outweigh the negative ones. On the other hand, opponents argue that RTAs generate limited benefits or even losses for the participating countries, implying that they have the potential to undermine multilateral trade system thereby slowing down global trade liberalization. To the best of our knowledge, no study has been done so far to situate

the East African Community (EAC) in this debate.

RTAs have several potential benefits. These include increased competition, which provides opportunities for enhancing efficiency, access to enlarged markets which can foster growth through economies of scale in domestic production. RTAs can also lead to increased investment and higher total factor productivity growth due to better access to technology. As a result of this, partner states are likely to benefit from a lower price of capital goods thereby stimulating investment. Besides, RTAs can also lead to more rational tariff regimes which may encourage greater partnership and foreign investment. Smaller countries in an RTA are likely to face an improvement of their TFP owing to a positive externality effect from the more technologically developed countries' advanced technical knowhow.

Other benefits include increased intra-regional trade along with inflows of foreign capital, which can help to boost industrial development and increase diversification of the export base. RTAs can also promote convergence wherein the poorer partner states are facilitated to catch up with the richer ones through the process of trade. Besides, RTAs can serve a useful economic purpose by providing a platform for reducing uncertainty and improving credibility which may be conducive to a better environment for the private sector to plan and invest.

It is the belief of partner states that some or all of these potential benefits are bound to accrue to each member individually and to all members collectively. This, in our opinion is what is providing the impetus for integration of the East African Countries into an economic community. Experience and robust economic theory however identifies certain indicators which are likely to drive the direction and magnitude of outcomes of such integration arrangements and which should therefore inform any trade potentials expected from such a process. In this paper, we estimate some of these indicators with a view to determining the welfare effects of the EAC integration process.

1.1 EAC IN PERSPECTIVE

The first attempt at regional integration in East Africa dates back to 1917 when Kenya and Uganda first formed a customs union that was later joined by Tanzania in 1927. This attempt was followed by the formation of the East African Common Services Organization in 1961 which collapsed in 1967. Formal attempt at forming an East African Community started in 1967 between Kenya, Uganda and Tanzania. The Community collapsed in 1977 following disagreements between the three founding countries on a number of political and economic issues.

Kenya, Uganda and Tanzania renewed attempts at regional co-operation by forming the Permanent Tripartite Commission for East African Co-operation in 1993. This led to the subsequent signing of the Treaty for the establishment of EAC by the three countries in 1999. The Treaty entered into force in 2000. In 2007, Rwanda and Burundi signed treaties of accession to the EAC.

The roadmap of the EAC envisaged a gradual progression from a customs union to a common market, monetary union, finally culminating into a political federation. The customs union was established in 2005. This was followed by the signing of a protocol for the establishment of a common market in 2009 and a subsequent launch of the same in 2010. A monetary union is envisaged to enter into force in 2012.

1.2 EAC TRADE PERFORMANCE: 2001-2009.

There is evidence that intra-EAC trade has continued to expand over the years. Value added products and pooling of resources for investment arising from integration have greatly boosted business and upped employment creation in the region. In 2009, trade vol-

umes between partner states increased to Ksh315 billion. This rose slightly to Ksh324 billion in 2010. In 2011, the community is projecting intra-trade at about Ksh342 billion and 360 billion in the subsequent financial year.

At the country level, export volumes to EAC for Uganda shot up from a net of USD 87.2 million in 2001 to USD 398.8 million in 2009. Over the same period, Tanzania's export volumes rose from USD 58.6 million to 323.5 million, while Kenya's exports almost doubled from USD 622.5 million to USD 1167.1 million. Rwanda and Burundi have however, not registered significant growth in their export volumes. In 2006 for instance, Rwanda's exports to EAC stood at a net worth of USD 33 million and Burundi's at USD 5.5 million. In 2009, these figures stood at USD 47.3 million for Rwanda, and USD 6 million for Burundi.

The low export growth figures for Rwanda and Burundi are more than compensated for by massive growth in import volumes. In 2006 for instance, import flows from EAC stood at USD 143 million for Rwanda, and USD 60.9 million for Burundi. In 2009, these figures stood at USD 449 million and USD 129 million respectively. This reverse trend is notable for Kenya, Uganda and Tanzania as well. Despite having massive growth in export volumes, the growth in import volumes is muted, despite having higher values. In 2002, import volumes for the three countries stood at USD 19.1, 415 and 97.9 million respectively. In 2009, the same figures stood at USD 162.2, 547 and 316.9 million respectively.

Overall, Kenya is dominant in the intra-EAC trade, accounting for almost half the total value of trade and registering a surplus in its trade accounts with each of the partner states. Uganda remained the largest importer in intra-EAC trade, accounting for about half of the total imports, and Burundi the smallest. Over the period of analysis, Tanzania registered the highest growth rates in intra-EAC exports.

It is evident that the intra-trade performance presents mixed results to the various partner states and this then begs the key question of whether there is trade potential in the RTA for all the partners. This is the question that the present study seeks to address.

2. ANALYTICAL FRAMEWORK

The potential for trade within an RTA can be inferred from underlying structural similarities or dissimilarities within partner countries. Welfare gains and losses that accrue to partner states in EAC are therefore likely to depend on the existing and expected trade patterns among them as well as their own individual trade structures. In order to gauge the potential welfare gains and the need for increasing intra-EAC trade for partner states, we rely on the Sussex framework to calculate a number of complementary trade indicators which robust economic theory and experience suggest are likely to reveal the underlying trade structures and also give an indication of the direction and outcome of integration. These include Trade Concentration Index, Revealed Comparative Advantage Index and Finger Kreinin Index. Data for computing all the indices has been obtained from UN Comtrade database while the Systematic and Integrated Framework for Trade Analysis (TradeSift) software is used for the analysis.

The degree of openness of countries in an RTA is a basic indicator of trade liberalization. It is measured as the share of trade (exports plus imports) in the GDP expressed in current prices.

$$OPN_i = \frac{X_i + M_i}{GDP_i}$$

The indicator ranges from zero (for an economy that is completely closed) to infinity (for an economy that is completely open). An RTA is more likely to be welfare enhancing if trade is a small share of GDP.

A more concentrated export structure suggests that imports into an RTA are met by third party countries, while a more diversified structure indicates high potential of complementarity in trade. The structure of ex-

ports of most countries in Sub-Saharan Africa tends to be highly concentrated in a few products many of which are not important in the other African countries. This acts to limit the potential flow of imports among partners in an RTA. It is important to test whether EAC is afflicted by the same problem. Using diversification of exports as a proxy for output diversification, we measure diversification of export structure by calculating a Trade Concentration Index (TCI).

When calculated by product;

$$TCI_{ij}^{k} = \sum_{k} \left(\frac{X_{ij}^{k}}{X_{ij}} \right)^{2}$$

Where:
K = product
I = reporting country
J = partner country
X = total exports

Trade Concentration Index decreases with the level of diversification. When TCI = 1, this implies that a given country is exporting only a single product. The closer it is to zero, the more diversified is the export structure. TCI is sensitive to the level of aggregation. In this study, we therefore aggregate at the 6 digit level.

A complementary method of evaluating trade flows and the potential of complementarity among partner states in an RTA is to calculate an index of Revealed Comparative Advantage (RCA). RCA shows the share of product *k* in total country *i* exports relative to the share of product *k* in total world trade. A country has Revealed Comparative Advantage when its share of exports of a good exceeds the equivalent share of exports of the world. In the context of RTAs, the presumption is that partner states that have a narrower range of RCA indices particularly in similar products are less likely to find grounds for sustained exporting as a result of an RTA.

The method used in this study is based on the Balassa Index which estimates RCA with respect to total world trade. The general form of this framework is expressed as follows;

$$RCA_{iw}^{k} = \left(\frac{X_{iw}^{k}}{X_{iw}} \right) \Big/ \left(\frac{X_{ww}^{k}}{X_{ww}} \right)$$

The Sussex framework[2], provides an alternative version of this index which is normalized for purposes of making cross-sectoral comparisons possible. The normalized version is given as;

Normalized RCA = (RCA – 1) / (RCA + 1)

From this framework arise two versions of RCA; bilateral RCA1 and bilateral RCA2. In this study, we compute the former. RCA1 uses the exports of a selected comparator country - country *j* as the denominator. The RCA1 is then calculated by comparing the share of exports of country *i* to the world to the share of exports of country *j* to the world.

$$BRCA1_{iw}^{k} = \left(\frac{X_{iw}^{k}}{X_{iw}} \right) \Big/ \left(\frac{X_{jw}^{k}}{X_{jw}} \right)$$

It ranges from zero (no exports in that product) to infinity. If RCA>1, then the country has a revealed comparative advantage in the product in question.

Trade can be used as an imperfect proxy for production structures (when calculated by destination). To test for potential for trade diversion or trade creation in the EAC, we calculate Finger-Kreinin Index (FKI) by source. FKI shows how similar the structure of imports or exports is or how similar the structure of production is between two countries.

$$FKI_{ij}^{k} = \sum_{i} \min \left[\left(\frac{x_{i_1 j}^{k}}{X_{i_1 j}} \right), \left(\frac{x_{i_2 j}^{k}}{X_{i_2 j}} \right) \right]$$

FKI ranges between 0 and 1. A value of zero indicates that the two countries have trade structures that are completely different and the products that country *i* exports are completely different from the ones that country *j* exports

and vice-versa. This is a sure recipe for trade diversion. A value of 1 show that the two structures are identical and the countries in question export the same products with the same level of intensity. This implies that there is scope for trade creation between the two countries since both countries can choose to import from the more efficient producer between them. In this study, we calculate FKI by source.

3. RESULTS AND DISCUSSION

Table 1 reports the Openness Indicator for each of the partner states in EAC.

their exports to the rest of the world. Uganda has the most diversified export base and Burundi the least. In its trade with EAC, Burundi's exports are the least diversified, with its exports to Kenya narrowing down to a handful of commodities. Kenya's trade with EAC is the most highly diversified followed by Uganda's. Rwanda and Tanzania follow closely in that order. An overall analysis shows that there is sufficient basis for trade hence partner states should be able to exploit the full potential of the different economies along the lines of comparative advantage.

Table 1
Degree of Openness of EAC Partner States

Year / Reporter	2003	2004	2005	2006	2007	2008
Burundi	0.35	0.38	0. 47	0.62	0.59	0.39
Kenya	0. 40	0. 41	0. 49	0. 48	0. 48	0. 46
Rwanda	0.17	0.20	0.22	0.22	0.24	0.25
Uganda	0.28	0.27	0.27	0.35	0.38	0. 40
Tanzania	0.32	0.34	0.34	0. 44	0. 47	0.54

Source: Own computations

The table shows a relatively low level of openness for all the EAC countries. Although all countries register a persistent rise in this indicator over the period analyzed, Rwanda and Uganda are shown to be the least open. Kenya is, on average the most open. These results suggest that within EAC, trade is only a small share of GDP hence integration is bound to be welfare improving.

Using UN Comtrade data for 2009, we computed the Trade Concentration Index by product for each of the partner states. Results are reported in Table 2. From Table 2, it is evident that each of the five countries exhibit highly diversified structures with respect to

In order to evaluate trade flows and the potential of complementarity among EAC partner states, we compute an index of Bilateral Revealed Comparative Advantage. For each set of EAC partner states, we calculate BRCA1 for the top ten exports to the world. For all the five EAC countries combined, top ten exports yields 31 products in which at least one country has a revealed comparative advantage. black tea, portland cement, coffee (Not roasted), beer made from malt, petroleum oils and oils obtained from bituminous and transmission apparatus are common export items to all the five countries in which each partner has an RCA greater than one. Table 3 reports BRCA1 by

Table 2
Trade Concentration Indices 2009

Country / Partner	Burundi	Kenya	Rwanda	Uganda	Tanzania
World	0.1851	0.0536	0.1265	0.0465	0.0874
Burundi	---------	0.0619	0.1386	0.1003	0.1194
Kenya	0.7509	---------	0.8073	0.0849	0.0639
Rwanda	0.2045	0.0233	---------	0.0877	0.1922
Uganda	0.4097	0.0365	0.0815	---------	0.1548
Tanzania	0.2620	0.0147	0.0810	0.0534	---------

Source: Own computations

product for the country with the highest index against relevant competing partner.

From a list of 50 products, 31 had BRCA1 greater than one. The rest showed mixed results with some countries posting BRCAs that are far less than one. Table 3 shows wide differences in comparative advantage over a large number of export products, ranging from 2460. 44 for Kenyan exports of fresh produce to the world against Uganda's to 3.08 for Uganda's exports of stemmed tobacco to the world against Kenya's. This is likely to provide grounds for sustained exporting between the EAC countries thereby leading to a welfare improving RTA, provided that the initial tariffs are not too high.

To determine the potential for trade diversion or trade creation in the EAC, we test for similarities in the structure of exports of two countries into a given market by computing the Finger-Kreinin Index (FKI) by source using data for 2009. When computed in this manner, the FKI then simply compares the degree of similarity of the reporter country's and a first partner country's exports into a second partner country's market. Table 4 reports the FKI computations.

From the table, it is evident that the structure of exports within EAC is, on average more dissimilar than similar, with a score range of 0.00 – 0.56 on the FKI scale and with the latter scores being the outliers. Exports of Kenya/World, Kenya/Rwanda, Kenya/Uganda, Kenya/Tanzania to the world and the rest of EAC show on average, the highest range of FKI scores, with a minimum score of 0.26 and a maximum score of 0.45. This shows a fair dose of similarity in export structure of Kenya and these partners which suggests remote possibilities for trade creation, since all these countries can choose to import from the most efficient producer

Exports of Uganda/World, Uganda/Burundi, Uganda/Kenya and Uganda/Rwanda to the World and the rest of EAC is the only other set of export structures that show some remote semblance with Uganda/Burundi exports to Rwanda registering the highest FKI score (0.56). This implies that what Uganda exports to Rwanda are not very different from what Burundi exports to Rwanda, thereby suggesting possibility of trade creation. The exports of Rwanda/Burundi to Kenya are also shown to be totally different (FKI score of

Table 3
Bilateral Revealed Comparative Advantage by Product: 2009

Product	Country	Partner	BRCA1
Other black tea	Uganda	Burundi	123. 48
Coffee, not roasted	Burundi	Tanzania	9. 42
Beer made from malt	Uganda	Tanzania	13.85
Petroleum oils and oils obtained from bituminous	Uganda	Rwanda	35.24
Other (Product number 060390)	Kenya	Tanzania	31. 46
Portland cement	Uganda	Burundi	228.54
Cigarettes containing tobacco	Kenya	Tanzania	16.56
Raw sugar	Uganda	Tanzania	333.66
Other (Product number 283699)	Kenya	Uganda	29.72
Fresh (Product number 060310)	Kenya	Uganda	2460. 44
Transmission apparatus	Uganda	Tanzania	238. 41
Other (Product number 070990)	Kenya	Rwanda	640.71
Other (Product number 140490)	Kenya	Uganda	1150.36
Fresh or chilled	Uganda	Kenya	23. 47
Stemmed tobacco	Uganda	Kenya	3.08
Vegetable fats and oils	Uganda	Tanzania	36.60
Product number 999999	Tanzania	Uganda	14.62
Cashew nuts in shells	Tanzania	Kenya	187. 44
Non-monetary, other semi manufactured forms	Tanzania	Rwanda	34.96
Sesamum seeds	Tanzania	Kenya	18. 44
Non-monetary, other unwrought forms	Burundi	Rwanda	178.23
Other (Product number 261690)	Tanzania	Rwanda	85.38

Source: Own computations

zero), implying that what Rwanda exports to Kenya is totally different from what Burundi exports to Kenya, suggesting possibility of trade diversion. Overall, the FKI scores suggest more possibilities of trade diversion than creation.

These results (from FKI computations) must however be interpreted with caution, particularly with regard to the welfare effect of EAC. From a simple Vinerian Model, trade creation is always welfare increasing while trade diversion is always welfare reducing. Evidence from literature suggests some ambiguity in this one-to-one correspondence.

From a practical perspective, if demand is not perfectly price elastic, then both trade diversion and creation would arise because integration would lead to a fall in domestic prices which then leads to an increase in con-

Table 4
Finger-Kreinin Index by Source 2009

Reporter	Partner 1	Partner 2	Fki
Burundi	Kenya	World	0.10
		Rwanda	0.01
		Uganda	0.01
		Tanzania	0.03
	Rwanda	World	0.11
		Uganda	0.03
		Tanzania	0.02
	Uganda	World	0.10
		Tanzania	0.12
	Tanzania	World	0.12
Kenya	World	Burundi	0.22
	Rwanda	World	0.30
		Burundi	0.33
		Uganda	0. 44
		Tanzania	0. 42
	Uganda	World	0.34
		Burundi	0.26
		Tanzania	0. 45
	Tanzania	World	0.33
		Burundi	0.33
Rwanda	World	Kenya	0.34
	Burundi	World	0.05
		Kenya	0.00
		Uganda	0.04
		Tanzania	0.02
	Uganda	World	0.19
		Kenya	0.18
		Tanzania	0.12
	Tanzania	World	0.21
		Kenya	0.07
Uganda	World	Tanzania	0.23
	Burundi	World	0.26
		Kenya	0.09
		Rwanda	0.56
		Tanzania	0.19
	Kenya	World	0.25
		Rwanda	0.07
		Tanzania	0.27
	Rwanda	World	0.27
		Tanzania	0.27

Table 4. Cont.

Reporter	*Partner 1*	*Partner 2*	*Fki*
Tanzania	World	Rwanda	0.04
	Burundi	World	0.07
		Kenya	0.10
		Rwanda	0.13
		Uganda	0.27
	Kenya	World	0.20
		Rwanda	0.06
		Uganda	0.23
	Uganda	World	0.11
		Rwanda	0.05

Source: Own computations

sumption in each of the partner states. Such consumption gains enhance welfare thereby increasing effects of trade creation. They can also offset the welfare reducing effects of trade diversion thereby causing trade diversion to be welfare enhancing. In general terms however, trade creation is superior to trade diversion.

4. CONCLUSION

In this paper, we have answered the basic question of whether the EAC is welfare enhancing to partner states by identifying the factors, which are likely to promote trade creation rather than trade diversion. The first set of factors relate to the degree of openness of the region to trade. The openness indicator suggests that overall, trade in EAC is a small share of GDP, and hence trade is welfare enhancing.

The second set of factors is concerned with the degree of overlap between the goods produced by partner states. The Trade Concentration Index shows a considerable overlap between products of each country, which signifies scope for trade creation. The last set of factors relate to differences in production costs between partner states in industries, which they have in common. The BRCA1 shows great differences in costs between partner states, implying potential for greater gains resulting from trade creation.

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The Consultation with Experts Procedure in WTO Dispute Settlement System

Xin XU and Lei ZHANG[1]

Abstract

Followed the rules of WTO covered agreements became more and more technical, and more and more disputes involved the expertise in the field of science or technology, the consultation with experts procedure became increasingly important. However, although the Panel is authorized by the WTO rules to start such a procedure, there are no detailed rules guiding the Panel as how to operate in the practice. Under such a circumstance, the Panel had to establish the temporary rules for this procedure after consultation with the parties to the dispute in each case. Many problems relevant to the due process then arose from such temporary rules. This paper tries to analysis the major problems thereof that receiving the most controversy and accusation, and will give suggestions as for how to reform and perfect this procedure.

Keywords: consultation with experts procedure , expert review group, individual expert due process

With the growing participation in the WTO and its dispute settlement system, the developing countries, including China, gradually become mature in the cognition, understanding and application of the WTO dispute settlement system. However, this does not change the current situation that the developing countries still lag behind the developed countries in using the dispute settlement system, especially in some of the details of the system. For example, with the rules of WTO agreements covering more technological elements, and as more and more of the WTO disputes involving particular knowledge in scientific fields, the consultation with (external) experts in the WTO dispute settlement system has become increasingly important. Yet, the understanding of this procedure in developing countries is still relatively weak. This paper will first propose an overview of this procedure, giving an introduction of the legal basis and the current status of this procedure, and then focus on the analysis of several key issues thereof receiving the most controversy and accusation in practice, and finally try to give the reform and improvement proposals to deepen the understanding of this procedure in developing countries, and help them make better use of this procedure in the future.

I. THE LEGAL BASIS AND CURRENT STATUS OF THE CONSULTATION WITH EXPERTS PROCEDURE

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From 1995, the consultation with experts procedure had been adopted in many cases by the Panel under the WTO dispute settlement system. There are several reasons that can explain this increased adoption. First, the WTO Agreements themselves became more technical, both in the trade/economic sense, and the factual/scientific sense. The examples may be the Customs Valuation Agreement, the Agreement on Agriculture and so forth Further, in Doha Round, it becomes even popular to adopt scientific principles or economic formulas to set up the regulations. Second, a number of WTO obligations adopt an explicit economic/scientific criterion of legality. For example, the sanitary measures are required be based on the "risk assessment", otherwise, it will violate the WTO Agreement. And, to judge whether two products constitute "like products", one of the criteria is whether there exists "competitive relationship" between these two products. Third, the WTO dispute settlement has been legalized. During the GATT, disputes were settled through diplomatic approach where the Panel often had to decide only issues of law, The new rule-based process has increased the number of reluctant respondents as well as the incentive to dispute the facts. Hence, the need to bring in the neutral experts arose.

As generally believed, the legal basis of this procedure is Article 13 of Understanding On Rules and Procedures Governing the Settlement of Dispute (DSU), paragraph 1 of this Article states that "Each panel shall have the right to seek information and technical advice from any individual or body which it deems appropriate....." paragraph 2 further states that" Panels may seek information from any relevant source and may consult experts to obtain their opinion on certain aspects of the matter. With respect to a factual issue concerning a scientific or other technical matter raised by a party to a dispute, a panel may request an advisory report in writing from an expert review group....." In addition to the general provisions of the DSU, the Agreement on Application of Sanitary and Phytosanitary Measures (SPS Agreement) and the Agreement on Technical Barriers to Trade (TBT Agreement), respectively made particular statements on the consultation with experts procedure.

As we all know, the SPS Agreement often implicates scientific principles. It requires that "only sanitary or phytosanitary measures enacted by a member state must be applied only to the extent necessary to protect human, animal or plant life or health" and "based on scientific principles and……not maintained without sufficient scientific evidence". In order to deal with these types of questions, when disputes involve "scientific or technical issues", the SPS Agreement, in Article 11.2, declares "A panel should seek advice from experts chosen by the panel in consultation with the parties to the dispute. To this end, the panel may, when it deems it appropriate, establish an advisory technical experts group, or consult the relevant international organizations, at the request of either party to the dispute or on its own initiative." Like the SPS Agreement, the TBT Agreement states in Article 14.2 that "At the request of a party to a dispute, or at its own initiative, a panel may establish a technical expert group to assist in questions of a technical nature, requiring detailed consideration by experts."

Besides, the DSU and the TBT Agreement respectively provides detailed procedures in its Annex for the establishment and operation of the expert review group/technical expert group (hereafter together referred as expert review group, except for particular reference) [2]Such procedures include the Panel's control on the expert review group, the qualifications and requirements of the candidate experts, the communication of the documents, the comment of the parties to the dispute on the expert advice, and so forth.

Until now, the Panels totally adopted the consultation with experts procedure in 11

[2] Annex IV of DSU, with the title of"Expert Review Group" and Annex II of TBT Agreement, with the title of "Technical Expert Groups".

cases.[3] Among which, the Panels of *US-Shrimp/Turtle* and *Japan-Photographic Film and Paper* adopted this procedure solely according to Article 13 of the DSU, others were either based on Article 13 of the DSU together with Article 11.2 of the TBT Agreement, or based on Article 13 of DSU together with Article 14.2 of the SPS Agreement. For all these 11 cases, except 2 Panels that selecting to consult certain institutions[4], most of the Panels selected to consult individual experts[5], while doing so, the Panels consistently refused to establish an expert review group, but consulting the experts on the individual basis. The problem is that under such circumstance, the procedures respectively provided by the Annex of the DSU and the TBT Agreement has no space to be used, therefore, the Panels may and have to establish temporary rules for this procedure after consultation with the parties to the dispute in each case. Following the increased adoption of this procedure and more difference occurred in such temporary rules, more and more problems relevant to the due process exposed.

II. THE PROBLEMS EXISTED IN THE CURRENT CONSULTATION WITH EXPERTS PROCEDURE

A. How to Choose between the Individual Expert and the Expert Review Group

As mentioned above, the Panels, when adopting the consultation with experts procedure, almost without exception chose to consult experts on individual basis, even if the TBT Agreement clearly demonstrated the preference to establishment of technical expert groups. On this issue, an intense debate had occurred in *EU-Asbestos*. EU claimed that the Panel in this case should have no choice but to establish an expert review group in accordance with the provisions of Annex IV of the DSU. As the precondition, EU claimed that the dispute measures should be examined in accordance with the terms and references of GATT1994, not that of the SPS Agreement. Therefore, Article 13 of the DSU should be applied when adopting the consultation with experts procedure, paragraph 2 of this Article states clearly: "Panels may seek information from any relevant source and may consult experts to obtain their opinion on certain aspects of the matter.

With respect to a factual issue concerning a scientific or other technical matter raised by a party to a dispute, a panel may request an advisory report in writing from an expert review group. Rules for the establishment of such a group and its procedures are set forth in Appendix 4."EU believed that based on the principles of general international law of treaty interpretation, paragraph 1 and paragraph 2 of Article 13 of the DSU should be explained sys-

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[3] According to the materials published in WTO official website, actually there are more than 11 cases adopting the consultation with experts procedure, because EC-Measures Affecting Livestock and Meat (Hormones) (hereafter EC-Hormones) included WT/DS26 (complaint by United States) and WT/DS48 (complaint by Canada), EU-Measures Affecting the Approval and Marketing of Biotech Products (hereafter EU-Biotech Products) included WT/DS291, WT/DS292 and WT/DS293. If calculated as 11 cases, they are: Australia-Measures Affecting the Importation of Salmon (WT/DS18) (hereafter Australia-Salmon, noted that experts were appointed twice: original panel and implementation panel); EC-Hormones; Janpan-Measures Affecting Consumer Photographic Film and Paper (WT/DS44) (hereafter Japan-Films); United States-Import Prohibition of Certain Shrimp and Shrimp Products (WT/DS58) (hereafter US-Shrimp/Turtle); Japan-Measures Affecting Agricultural Products (WT/DS76) (hereafter Japan-Varietals); India-Quantitative Restrictions on Imports of Agricultural, Textile, and Industrial Products (WT/DS90) (hereafter India-Quantitative Restrictions); European Communities-Measures Affecting the Prohibition of Asbestos and Asbestos Products (WT/DS135) (hereafter EC-Asbestos); United States-Section 110 (5) of the US Copyright Act (WT/DS160) (hereafter US-Copyright Act); Japan-Measures Affecting the Impor-

tematically, which means as far as the "scientific issues" is concerned, the most recommended method under the DSU is to set up an expert review group. This is because "scientific issues" appears only in second sentence of Article 13.2, and this sentence was provided specially for the establishment of an expert review group. The drafting history of the DSU also supported this interpretation.

The first sentence of Article 13.2 applied only to such a circumstance that the Panels hoped to obtain factual information beyond the technical or scientific fields. According to the context, the ordinary meaning of the terms, and the object and purpose of Article 13.2, a clear conclusion can be drawn together from the first sentence and second sentence that: the scientific issues in the strict sense must be settled in accordance with the procedure included in Annex IV of the DSU. The preamble of Annex IV also confirms this interpretation, because it states that the rules and procedures provided in Annex IV should be applied to the expert review groups established under Article 13.2, without distinguishing whether it was based on the first sentence or the second sentence.[6]

However, both the Panel and the Appellate Body of this case rejected the EU's argument. As the Panel finally decided to apply the SPS Agreement, it then presented that:"We believe that neither Article 11.2 of the SPS Agreement nor Article 13.2 of the DSU prohibited us from obtaining advice and information from individual experts according to the first sentence of Article 11.2 of the SPS Agreement and Article 13.1 and the first sentence of Article 13.2 of the DSU.[7] Appellate Body gave its support to the Panel: "We agree with the views of the Panel. If the dispute under the SPS Agreement involves scientific or technical issues, the Panel should seek advice from the experts whom will be selected after negotiating with the Parties. To this end, the Panel may establish an advisory technical expert group in the case of appropriate. "In other words, Article 11.2 of the SPS Agreement authorizes the Panel may specifically though not exclusively ask the technical expert group to provide written advisory report on factual issues concerning scientific matters. The Panel deems that this provision allows it to establish such an expert review group both for scientific or other technical problems, but at the same time does not rule out consultation with experts on the individual basis. The Panel believed such an interpretation best suited the text of the said provision, an to reconcile the text is what the Vienna Convention of the Law of Treaties required.[8]

Whether the SPS Agreement or GATT1994 should be applied that respectively resulting in the application of Article 11.2 of the SPS Agreement or Article 13 of the DSU does not matter, because the Panel believed that even if Article 13 of the DSU should be applied, the effect is the same just as Article 11.2 of the SPS Agreement being applied. For the interpretation of Article 13 of the DSU, EU

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tation of Apples (WT/DS245) (hereafter Japan-Apples); EU-Biotech Products; Australia-Measures Affecting the Importation of Apples from New Zealand (WT/DS367) (hereafter Australia-Apples).

4 Respectively, Panel in India-Quantitative Restrictions, consulting with IMF; Panel in US-Copyright Act, consulting with WIPO.

5 In Japan-Films, the Panel consulted a linguistic expert, In the other 10 cases, all the experts came from scientific field.

6 Panel Report, European Communities-Measures Affecting Asbestos and Asbestos-Containing Products, para. 5.3, WT/DS135/R, 18 Sep. 2000.

7 Panel Report, European Communities-Measures Affecting Asbestos and Asbestos-Containing Products, para. 5.17, WT/DS135/R, 18 Sep. 2000.

8 In addition, since Canada claimed that the dispute should apply TBT Agreement, EU therefore argued that, if the measure at issue should be deemed to fall under the TBT Agreement, Article 14.2 of that Agreement would require the establishment of an expert review group for any scientific or technical matter, and pursuant to Article 1.2 of DSU, that provision would prevail over those of Article 13 of DSU. The Panel rebutted such an argument. The Panel noted that it is only "to the extent that there is a

and the Panel carried out from different emphases. The logic of EU was that Article 13.1 is applied to the consultation with expert for general factual issues, while Article 13.2 is specially suitable for the consultation with experts for scientific issues. The Panel should respect this intention expressed by the contracting members when drafting this treaty. On the other hand, the Panel and the Appellate Body emphasized that when providing the establishment of expert review group for obtaining expert opinion on scientific issues, the exact word used by Article 13.2 is "may", therefore, the Panel is entitled to decide based on the factual circumstances whether to establish an expert review group or not, not being forced to do so.

From the angle of word interpretation, the analysis of the Panel was tenable. However, the Panel's interpretation obviously failed to comply with the original intention of the WTO members when they drafted the relevant provisions. Just look at the provisions once again, it is clear that the expert review group (technical expert group) was explicitly mentioned, while consultation with experts on an individual basis was only derived by reading the relevant provisions.

Perhaps some practical reasons may explain why the Panels made such a choice: the establishment of an expert review group took a long time, and a written report made by all the experts after discussion and compromise will make the Panel fell great pressure to refuse. Therefore, the Panels usually expressed that consulting with experts on the individual basis will make them solicit necessary scientific or technical information more effectively.

However, from the institutional perspective, this approach is open to question. Consulting individual experts may make the information collection more flexible, and the time required is relatively less. But at the same time, it also led to a risk: if the experts' opinions contradicted each other, the Panel was still lacking in the ability of judge. Because most Panel members came from trade and legal fields, and asking them to decide substantive scientific debate was clearly beyond the scope of their abilities. To a certain extent, it will finally affect the legitimacy of the Panel's decision. On the other hand, if an expert review group is established, then the experts with different views may eventually achieve a more consistent opinion after discussion, a result difficult for the Panel to get. Furthermore, establishing an expert review group is in fact more in line with the expressions of the relevant provisions. If, the DSU, the SPS Agreement and the TBT Agreement expressly refer to the establishment of expert review group and even provide detailed procedure for it in its respective Annex, then, it is very difficult to explain why the Panels are only willing to consult experts on individual basis, an approach not being clearly mentioned in the relevant provisions but derived from logic reasoning based on common sense?

In fact, this problem actually came from the strict trial period of the Panel proceedings. Had the Panels not subjected to so great time pressure, it would be willing to establish an expert review group. So, if we want to solve this problem in the future, a feasible approach may be ruling the time needed for the consultation with experts out from the current trial period of the Panel proceedings, that is, if the Panel decides to start the consultation with experts procedure, it may enjoy an additional period to select the members of the expert review group and to determine the scope and contents of the questions, and the time required

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difference between the rule and procedures of the Understanding and a special or additional rule or procedure in Appendix 2 to the DSU that the latter will prevail. Yet, just as stated by the Appellate Body, it is only where the provisions of the DSU and the special or additional rules of Appendix 2 can not be read as complementing each other that the special or additional provisions will prevail over those of the DSU, that is, in a situation where the two provisions would be mutually incompatible. However, Article 14.2 of TBT Agreement and Article 13 of DSU can be read as complementing each other, so there is no such priority of application.

by the expert review group to give diligent and objective answers should also be decided by the Panel according to the circumstances under each case, not subject to the time limit of the trial.

B. How to Select the Appropriate Experts

Annex IV of the DSU and Annex II of the TBT Agreement provide clear criteria for how to select the experts:"Participation in expert review groups shall be restricted to persons of professional standing and experience in the field in question; Citizens of parties to the dispute shall not serve on an expert review group without the joint agreement of the parties to the dispute, except in exceptional circumstances.[9] Members of expert review groups shall serve in their individual capacities and not as government representatives, nor as representatives of any organization. "However, strictly speaking, these criteria shall apply only when an expert review group is to be established. Therefore, once the Panel decides to consult the experts individually, there is no legal obstacle to prevent the Panel, after negotiating with the parties to the dispute, from developing selection criteria different from the above ones. Yet, just as EU stated:" The Panel's use of experts for obtaining scientific and technical advice should respect general principles of law. In particular, it should be transparent, avoid conflicts of interest, reinforce the integrity of the dispute settlement mechanism and foster public confidence in the outcome of the dispute."[10]

Anyway, for the criteria such as the experts shall have professional standing and experience in the field in question, shall serve in their individual capacities and so forth, there is little dissent. The real controversy lies in how to judge whether the potential experts can act independently and impartially, whether they uphold the principle of no conflict of interests and so forth In other words, how to judge some relationships between the experts and the parties to the dispute may actually impact on the experts' independence and impartiality when they providing the expert advice? From the perspective of legal procedure, this question may further be changed into as how to establish appropriate rules of procedure to guarantee the required independence and impartiality?

For example, to ensure that the candidate experts and the parties to the dispute are without a conflict of interests, is it enough for the candidate expert be required to fill out a disclosure form concerning his interests, relationships and any matters that may affect his independence, or should he has the obligation to prove his impartiality? This paper argues that it is not incumbent upon a prospective expert to prove his impartiality and neutrality. On the contrary, he can only be required to fill out a disclosure form, disclosing any information reasonably be expected to be known by him that may affect or result in suspicious of his impartiality and neutrality. Once the prospective expert fills out the disclosure form, the parties to the dispute may raise objection to this person because of the disclosed information showing a possibility of conflict of interests. The Panel has the right to decide whether such a possibility really exists and then whether the objections of the parties to the dispute should be confirmed.

The approach taken by the Panel in *US-Shrimp/Turtle* should be praised in this instance. Having noted that in their disclosure forms, three of the experts approached had disclosed what might be considered as potential conflict of interests, the Panel nevertheless decided to confirm their appointments "being of the view that the disclosed information

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[9] Such exceptional circumstances may include: the dispute involves certain disease only spreading in the territory of one of the parties to the dispute; there is a need to provide technical assistance to the national legislation of the Respondent, and etc.

[10] Panel Report, European Communities-Measures Affecting Asbestos and Asbestos-Containing Products, para. 5.3, WT/DS135/R, 18 Sep. 2000.

was not of such a nature as to prevent the individuals concerned from being impartial in providing the scientific information expected of them. The Panel also took into account the disclosed information when evaluating the answers provided. The Panel underlined that, in making its choice, it had been guided primarily by the need to gather expertise of the best quality and covering as wide a field as possible. In the circumstances specific to this case, it was difficult, if not impossible, to reconcile this need with an agreement by all the parties to the dispute on each and every individual concerned.[11] Then the Panel made the said decision.

In practice, however, it still remains a very subjective problem as how to determine whether there exists a potential conflict of interests. For example, in *Australia-Apple*, Australia opposed to appoint Dr. Cross as the expert, the reason is that this man kept long cooperation with the scholars from New Zealand, and the main purpose of his work is to promote the export of New Zealand's apples. Dr. Cross made an announcement of no conflict of interests in his disclosure form, among that he stated." I have collaborated with scientists at HortResearch New Zealand in the conduct of research into the sex pheromone of apple leaf midge. We have not had any joint funded research projects. I was a guest speaker at a NZ top fruit conference a couple of years ago. But then again I was a guest speaker at the IFTA (International Fruit Tree Association) 50th anniversary conference in Hobart Australia in 2007."[12] The Panel stated that: "As a matter of fact, HortResearch is wholly owned by the New Zealand Government. However, participation in joint research with other scientists who may be affiliated with a government-funded institution does not itself imply a connection with that Government. There is no indication that Dr. Cross has worked for the Government of New Zealand, nor that he has received any monetary compensation from that Government.

If Australia wanted to do a successful objection, it should submit additional arguments or evidences to prove how the impartiality or independence of the said expert is affected then.[13] "It is to be expected that in any specialized area of science, the few knowledgeable experts will frequently engage with each other and may participate in joint research projects, in meetings and conferences, and joint publications. This is particularly true, when, as this Panel's considerable difficulty in identifying experts clearly demonstrates, there are a very small number of experts in the field in question. In such a situation it is all the more likely that all of the world's experts will work and collaborate in some way at one time or other."[14] "In the present case, as the party making an objection to the selection of an expert proposed by the Panel, it was Australia's burden to make the case that Dr. Cross's participation in a joint research project and publication with researchers from HortResearch New Zealand would call into question Dr. Cross's independence and impartiality, or create actual or potential, direct or indirect, conflicts of interest. Yet in this regard Australia does not provide any explanation or evidence."[15] Based on the above facts, The Panel in this case finally decided to appoint Dr. Cross and accept his opinion.

What these two Panels had done are worthy of recognition. After all, the core purpose of the consultation with experts procedure is to provide information and professional advices on scientific or technological matter with best quality. Therefore, the detailed rules

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[11] Panel Report, United States-Import Prohibition of Certain Shrimp and Shrimp Products, para. 5.11, WT/DS58/R, 15 May, 1998.

[12] Panel Report, Australia-Measures Affecting the Importation of Apples from New Zealand, para. 1.21, WT/DS367/R, 17 Dec. 2010.

[13] Panel Report, Australia-Measures Affecting the Importation of Apples from New Zealand, para. 6.8, WT/DS367/R, 17 Dec. 2010.

[14] Id.

[15] Id.

of procedure should be designed around this requirement. In the long run, in order to enhance the public's confidence on the result of the WTO dispute settlement and improve its legitimacy, as far as the consultation with experts procedure is concerned, it should make sure that selection of the most suitable experts should always take priority.

On the basis of the above understanding, let's further discuss whether the prospective experts may be the citizens coming from one of the parties to the dispute. As a fact, the cases that need to apply the consultation with experts procedure are often involving very specialized expertise in scientific or technical fields, therefore, the number of appropriate experts to be consulted who should have international professional standing and experience will not be so much. If further considering whether they are available due to the time or schedule or their willingness of providing expert advice, the number of appropriate experts may be even less. Thus, if an proposed expert should be automatically excluded only because he is the citizen of one of the parties to the dispute, the Panel will face a risk of not being able to find the most appropriate experts who have the highest level of the required expertise. In the past practice, the Panels performed quite cautiously and conservatively, trying their best to avoid selecting the citizen of one the parties to the dispute as an expert. However, due to such a limitation, the difficulty of finding the appropriate experts increased a lot and the time needed accordingly increased. In addition, if just as the above supposed, the Panels may establish more expert review groups in the future when adopt the consultation with experts procedure, then the appointment of a citizen from one of the parties to the dispute as the expert will cause less doubt of due process.

This paper then supposes that it is not appropriate to unconditionally and automatically apply the principle of "citizens of the parties to the dispute shall not serve as an expert". The Panel shall select the experts basically based on the qualifications and academic prestige of the candidates. If a citizen of one of the parties to the dispute was proposed based on the above criteria, then the objection will be persuasive only if the parties to the dispute can provide tangible evidences proving an actual or potential conflict of interests exists between the said candidate and that party.

C. How to Solicit and Consider the Expert Advice

According to the current practice, the Panel will usually develop the list of questions needed to consult based on the written documents initially submitted by the parties to the dispute, the parties to the dispute will have opportunity to comment on such list of questions, and the Panel will make adjustments and finalize the list according to the comments of the Parties to the dispute. The selected experts are without the need to answer all the questions in the list, but just those within the scope of their professional fields. In practice, the above approach encountered the following controversies:

First, whether the Panel may draft the questions to be consulted based on the information or issues of concern provided by the third party? In particular, whether the Panel may consult the experts for any scientific issues beyond the complaints raised by the parties to the dispute? As mentioned above, the Panels usually determine the scope to be seeking expert advice based on the initial written documents submitted by the parties to the dispute.[16] However, in *Australia-Apples*, part of the questions to be consulted with the experts in the list were prepared by the Panel according to the issues of concern raised by the United States, a third party to this dispute. Australia objected these questions, and argued that the third party is not the party to the dispute, any

[16] For example, the case of Japan-Varietals, see Panel Report, Japan-Measures Affecting Agricultural Products, WT/DS76/R, 19 Mar., 1999.

documents submitted by the third party does not constitute the evidences and/or arguments that can be invoked by the parties to the dispute to support its own point of view. By the same logic, the third party's submissions do not constitute the basis for the questions to be asked to the experts. Australia also claimed that because the complainant has the obligation to provide prima facie evidences of the respondent's trade measures being inconsistent with the WTO agreements, therefore, if the complainant did not make a claim or the claim has not being supported by enough evidences, then, even if there are some expert testimonies to support this claim, such expert testimonies can not be used as the evidence to support this claim. Australia advocated that New Zealand did not provide evidences for part of its claims, and then tried to use the information provided by experts or third parties to supplement, this is inconsistent with the principles of due process. In addition, Australia also claimed that the Panel, when do its ruling, should not rely on the expert opinion issued for the questions designed by the Panel according to any third party's information.[17]

The Panel considered that in essence, the consultation with experts procedure serviced for its duty of making an objective assessment on the dispute matters by seeking the information and the scientific advices. The dispute matters include the claims raised by the complainant related to the trade measures, and all the other claims and measures within the jurisdiction of the Panel. The Complainant has the obligation to clarify the nature of its claims by legal analysis, should identify which provisions of the WTO Agreements have been violated by the claimed measures. Once a claim has been successfully included in the Panel's jurisdiction, the Complainant should further adduce evidence for this claim. In any case, once a claim was appropriately submitted to the Panel and the complainant also submitted the relevant arguments and evidences, the Panel may have full investigative powers in order to make an objective assessment of the issues in dispute. In this respect, the Panel was not limited by the claims and arguments raised by the parties to the dispute. It may form its own views, or consider or even accept the third party's views. Australia's objection to the Panel's consideration of the third party's information contradicted the Panel's obligation of making objective assessment of the matters in dispute, and also damaged the rights of the third party authorized by the DSU.[18]

In essence, the disagreement between Australia and the Panel lied in the understanding of the nature of the consultation with experts procedure. Australia believed that the nature of this procedure was evidence collection, and then should strictly apply the rules of evidence. According to the adversary system under the common law, the burden of proof borne by the parties, that is, the court may not on its own initiative take investigation or collect evidence for the matters on which the parties to the dispute did not raise a claim, nor the Panel may take investigation or collect evidence as required by any third party or based on the information provided by such third party. Even according to the civil law under which the court has more authorities, although the court may take investigation and collect evidence outside the scope of the parties' claims and use the results thereof as the basis of its ruling, such a practice is only a supplement or exception to the principle of parties' burden of proof.[19]

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[17] Panel Report, Australia-Measures Affecting the Importation of Apples from New Zealand, WT/DS367/R, 17 Dec. 2010.

[18] Panel Report, Australia-Measures Affecting the Importation of Apples from New Zealand, p. 197, WT/DS367/R, 9 August, 2010.

[19] For example, the China's Civil Procedure Law and its judicial interpretation stipulated that the court can not collect evidences on its initiative except on the following situations: (1) The parties and their legal counsels can not collect evidence by themselves

On the other hand, the Panel believed that the nature of the consultation with experts procedure was fact identification, a concept broader than the evidence collection. Just as what the Panel has said, it had the obligation to make objective assessment on the matters in dispute, for which it enjoyed broad powers of investigation.

So, the question may be further changed into as what the nature of expert advice should be in the WTO dispute settlement system? Is this something similar with the expert conclusion under the civil law or something similar with the witness testimony under the common law? The origin of this question boiled down to the difference between the words and expressions of the relevant WTO Agreements and that of the domestic laws. Article 13 of the DSU states that consulting with external experts is the Panel's right to seek information. Such a concept or formulation can not be found in the domestic litigation laws. However, if we apply the concepts under the domestic laws by analogy, then we may find that such a right of seeking information or taking investigation may be more exactly to be recognized as evidence collection. Although the last sentence of paragraph 6, Annex 4 of the DSU states that the final report of the expert review group is only an advisory nature, but this does not preclude the final report constituting the evidence. Of course, since the relevant WTO provisions avoid using those concepts that universally accepted in the domestic laws and preferred to the concepts such as the right to seek information, it was not appropriate to treat them as two equivalent things.

This paper argues that the consultation with experts procedure in WTO dispute settlement system is similar but different with the collection of witness testimony/expert conclusion in the domestic law. The difference is that to some extent, the consultation with experts procedure in the WTO dispute settlement system deviates from the adversary system under the common law, and the Panel should accordingly be authorized relatively greater power of investigation.[20] Therefore, typically, the Panel can prepare the questions to be asked to the experts according to the information provided or concerns raised by the third party. But if such information or concerns are beyond the scope of those claims submitted by the parties to the dispute, the Panel should refuse to take further investigation according to such information or concerns.

Second, whether the Panel can consider the opinion provided by the expert beyond the areas of expertise by virtue of which he/she was selected? This problem firstly occurred in Australia-Apples. During the consultation with experts procedure in this case, Australia claimed that the experts' answer to question 4, 5, 21, 66, 67, 89 and 121 were beyond the areas of expertise by virtue of which the experts were selected.[21]Australia considered that this resulting in a lack of due process in the consul-

due to objective reasons; (2) The court held that it is necessary to collect the evidences on its initiative, such specific circumstances including: for the protection of national interests, public interests and the interests of a third person; due to the procedural requirements, if the court does not collect evidences on its initiative, the litigation will not carry out.

[20] Question 4 and 5 involved the quarantine practice of Australia. Question21, 89 and 121 required the experts should have expertise in waste disposal Although not specifically for the WTO, some scholars on the whole support this view. For example Durward Sandifer: "an international arbitral tribunal can not tolerate the strict rules of evidence, apart from specific exceptions, they are usually willing to collect evidence ex officio beyond those provided by the parties." Durward Sandifer, *Evidence before international tribunals*, Charlottesville: University Press of Virginia, 1975, pp. 3-4; Witenberg: "the judge of international arbitration court not only has the right but the obligation to ascertain the facts ex officio." Witenberg, *"Onus Probandi devant Jes Jurisdictions Arbitrales*," 55 Rev. Gen D. Droit Int'l Pub 321, 335 (1951); Gillian White, *The Use of Experts by International Tribunals*, New York: Syracuse University Press, 1965, ch. VII.

[21] Question 4 and 5 involved the quarantine prac-

tation with experts procedure. Australia therefore requested the Panel not to use the answers to these questions in its report.[22] The Panel once again recalled its extensive rights authorized by the DSU and its working procedures, and then presented that the proposed questions were relevant to the "Apple Import Risk Analysis Final Report" (IRA) and the evidence submitted to it, and the aim of preparing all these questions was to seek professional help for its better understanding of the scientific basis and scientific reasoning of the IRA. In other words, the experts were only asked to assist the Panel to understand the evidence presented to the latter, this was in line with the legal responsibilities of the experts.[23]

Leaving aside the specific conditions of *Australia-Apples*, as far as whether the Panel may consider the opinions provided by the experts beyond the areas of expertise by virtue of which they were selected is concerned, there are different views among scholars. For example, Joost Pauwelyn has stated that: "crucially, unlike many domestic legal systems, WTO procedures do not set out restrictions on the admissibility of evidence.....In WTO proceedings, parties can put whatever evidence they want on the panel record.....The same principle would seem to apply to panel-appointed experts. In reply to panel questions, they can submit whatever they like.....More generally, the reluctance of international adjudicators to exclude evidence from the record stems from the facts that the parties in dispute are sovereign states, not individuals."[24] Joost Pauwelyn also quoted what Durward Sandifer had said to confirm his opinion:"International judicial proceedings derive a distincitve character from the fact that the parties are sovereign states. From this fact it follows that the consequences of error or a failure to ascertain the facts in reaching a decision are, in many instances, more far-reaching in their effect than in litigation between ordinary private parties in municipal tribunals."[25]Therefore, Pauwelyn finally concluded that:"The only genuine restriction on evidence before a WTO panel remains one of timing. Normally, all evidence ought to be submitted during the first round of submissions and hearings (not in the rebuttal stage, let alone, beyond that). But even there, upon a showing of good cause, a panel would be pressed to nonetheless accept the evidence."[26]

As mentioned above, this paper agrees that the expert opinion is better to be treated as the evidence, which means the discussion hereof based on the same precondition as that of Pauwelyn. In such context, this paper can not agree with Pauwelyn's point of view. The reason of little restrictions on the admissibility of evidence in the WTO dispute settlement system is that it is very difficult to get consensus on the evidence rules because of great difference among the Members. There is no way but leave a relatively large discretion to the

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tice of Australia. Question21, 89 and 121 required the experts should have expertise in waste disposal (from Australia's canned-food factory). Question 66 and 67 involved the climate knowledge. However, New Zealand argued that, to answer question 4 and 5 do not require the experts having expertise in the field of quarantine, but just require the experts to give advice based on the arguments of IRA and the parties to the dispute; to answer 66 and 67, the experts were just required to help the Panel analyzing whether the IRA's analysis of climate conditions relating to the diseases is correct, which is within their professional field; to answer question 21,89 and 121, the experts were just asked to assist the Panel to understand the evidence presented to it.

[22] Panel Report, Australia-Measures Affecting the Importation of Apples from New Zealand, p.171 , WT/DS367/R, 9 August, 2010.

[23] Id.

[24] Joost Pauwelyn, "The Use of Expert in WTO Dispute Settlement", *Int'l & Comp. L. Q.* Vol. 51, 347, (2002).

[25] Durward V. Sandifer, *Evidence Before International Tribunals, (*Charlottesville:University Press of Virginia, 1975), p. 4-5.

[26] Joost Pauwelyn, "The Use of Expert in WTO Dispute Settlement", *Int'l & Comp. L. Q.* Vol. 51, 347, (2002).

Panels. Furthermore, even if we acknowledge such little restrictions, it should be understood as having little restrictions on the types and submissions of evidence, not on the requirements of how to constitute a legitimate evidence. For the expert opinion, it is needed only because the experts having prestige and experience in their areas of expertise. Otherwise, there is no need to take such consultation. The key feature and value of the expert opinion will be killed if the information and opinions provided beyond the expert's area of expertise may be considered or even accepted. In fact, the expert does not know much more than the average person outside its expertise field. For example, in *Australia-Salmon*, a consulted laboratory scientist may answer whether the frozen fish can constitute a disease vector, but she can not provide advice for what the costs and benefits of establishing relevant legislations be.[27] Of course, in practice, it is difficult to distinguish what answers are within the experts' area of expertise and what are not. But this kind of practical difficulty shall not constitute the ground for accepting the information or opinions provided beyond the expert's area of expertise at the theoretial level. As will discuss below, such practical difficulties may be overcome by the cross-examination procedure.

In short, from the core features of the expert opinion, the Panel should not accept and consider the information and opinions provided by the experts beyond the areas of expertise by virtue of which they were selected.[28]

D. How to Guarantee the Quality of the Expert Advice

Although the expert advice only had an advisory nature, it was no doubt the Panel relied heavily on it when do its ruling. However, in the current practice of WTO, the expert advice is difficult to get cross-examination. This leads to some poor-quality, even false expert advice misguiding the Panels. For example, in *EU-Hormones*, Dr. Lucia, in the absence of any support from empirical research, commented that the risk of getting cancer resulted from adding hormones in the production of the beef is less than per million.[29] Both the Panel and the Appellate Body relied heavily on this conclusion when preparing their rulings, because this conclusion changed a very complex scientific issue into a simple percentage that can be easily understood for almost everyone. The Panel and the Appellate Body felt it was convenient to use such a conclusion. In addition, as all the circumstances mentioned above, including whether the questions raised by the Panel based on the information or concerns provided by the third party, whether the expert advice went beyond their areas of expertise, whether the expert advice went beyond the scope of the questions asked to them and so on, it is clearly unscientific for Panels to rely on such advices directly without any discriminating process.

To this end, the Panels have developed a number of specific measures.[30] Generally speaking, the Panel will transfer the written replies made by the experts to the parties to the dispute for them to comment. After that,

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[27] Panel Report, Australia-Measures Affecting the Importation of Salmon, WT/DS18/R, 6 Nov. 1998.

[28] A related issue is whether the Panel may consider the answers given by the experts beyond the scope of the Panel's questions. This issue is not controversial in theory, because the Panel apparently will not consider the experts advices beyond the scope of questions it asked. But the key is sometimes it is very difficult to distinguish the margin in practice.

[29] Panel Report, European Communities-measures Concerning Meat and Meat Products (Hormones), para. VI, WT/DS26/R, WT/DS48/R, 18 Aug. 1997.

[30] Such practice has developed based on the provisions of Appendix II of TBT Agreement. Paragraph 6 of this Appendix states: "The technical expert group shall submit a draft of report to the Members concerned with a view to obtaining their comments, and taking them into account, as appropriate, in the final report, which shall also be circulated to the Members when it is submitted to the Panel." But this provision obviously can not constitute the cross-examination procedure.

the Panel may reconvene the experts' meeting either on its own decision or at the request of either party to the dispute. On this meeting, the experts may have opportunities to respond to the comments made by the parties to the dispute. In essence, such practice is similar to the cross-examination procedure under the domestic laws of the WTO Members. However, since it is not a compulsory procedure, and the relevant provisions are too vague to be applied, it is hard to say there exists standardized cross-examination procedure for the expert advice.[31] To ensure the quality and legitimacy of the expert advice, it is necessary to introduce the cross-examination procedure prevailing in the domestic evidence rules into the consultation with experts procedure under the WTO dispute settlement system in the future.

In this regard, many scholars have suggested introducing the traditional cross-examination procedure under the common law system.[32] However, after carefully examining such cross-examination procedure, this paper argues that it is inappropriate to simply reproduce the traditional cross-examination procedure in the consultation with experts procedure. This is because in the common law system, the traditional cross-examination procedure originated from the philosophy of liberty, pursuing the typical pattern of adversary system and putting the judges in a detached and passive position during the whole hearing. It is especially right for the expert advice, because the experts were appointed by the parties to the dispute. In view of this, the cross-examination was designed to be: firstly direct examination—each party to the dispute queried its own appointed experts, then cross examination—each party to the dispute queried the experts appointed by other parties, and again direct examination, or even take the second cross examination when necessary. The cross-examination procedure was designed to protect the party's right of free query, and help the court to find reliable and objective expert advice and/or to understand the issues involving the expertise in particular fields.

However, the WTO dispute settlement system does not adopt the typical pattern of adversary system.[33] As far as the consultation with experts procedure is concerned, the experts were mainly selected and appointed by the Panel, they are entrusted to act on the Panels rather than the parties to the dispute and to a great extent were subjected to the control of the Panels. In short, the cross-examination procedure was designed to against the liberalism of the parties to the dispute to defend themselves, including the appointment of external experts to defend themselves in the adversarial trial. Therefore, after considering the purposes and objectives of the cross-examination procedure, we find it is not suitable for the consultation with experts procedure in the WTO dispute settlement system.

As an alternative, the paper recommends a concurrent evidence procedure originated from the practice of Australia's courts in the patent cases to the consultation with experts procedure in the WTO dispute settlement system.[34]

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[31] Zhang Xiaojian, "Expert Decision and Public Participation in WTO Dispute Settlement System", Hebei Law Science, Vol. 25, No. 3, March 2007.

[32] For example, Joost Pauwelyn, "The Use of Expert in WTO Dispute Settlement", in *Int'l & Comp. L. Q.* Vol. 51, 325, 327 (2002); Christopher T. Timura, "Cross-examining Expertise in the WTO Dispute Settlement Process", *Mich. J. Int'l L.* Vol. 23 (3), 709 (2002).

[33] The Panel and the Appellate Body of WTO expressed in many cases that the Panel is more similar with the court under the civil law bearing the duties ex officio. For example, in Canada - Continued Suspension, the Appellate Body confirmed Article 13 of the DSU 13 and Article 11.2 of the SPS Agreement authorized "significant investigative powers" to the Panel, and the Panel enjoyed a wide range of discretion in applying these powers, including the selection of external experts. See Appellate Body Report, Canada-Continued Suspension of obligation in EC Hormones, para. 439, WT/DS321/AB, 31 Mar. 2008.

[34] The Official name of this procedure is Concurrent Evidence Procedure, commonly known as hot tub.

The concurrent evidence procedure is a way parallel to the cross-examination procedure specifically for the experts' testimony. From the Australia's practice, the procedure includes the following steps: First, the court will ask each expert to prepare a written report and then exchange the written report among them. Second, in the trial, all the experts will share their views on specific issues, and then the court will announce orally both the consensus and disagreement of the experts. Third, the court will allow the experts to provide public statements outlining their views and the supported data, methods and empirical basis. After each expert finishes the public statements, the court will again ask questions to each expert.[35]For the court's questions, the experts should give comments, and not just in response to the questions raised by the court special for him, but may also in response to the questions raised by the court to other experts. Through the concurrent evidence procedure, the court can make it clear whether the information relied by the experts to make their advices are sufficient and correct, and whether the standards applied by the experts to make conclusions are applicable. Furthermore, this procedure can help the court together with the parties to the dispute better understand the issues involving the expertise in the professional fields, find an appropriate solution and then improve judicial efficiency.

As far as the WTO dispute settlement system is concerned, in order to better introduce the concurrent evidence procedure, the first thing is that the Panel should ensure the experts can access to all the documents submitted by the parties. If, after consulting the experts, the parties to the dispute put forward new evidences and disputes arising from these new evidence, then such new evidences should also be sent to the experts for their comment. Second, the experts should submit all the written evidences that they relied to give their expert opinion. This requirement aims to avoid the experts issuing their opinion only by guesswork and provide basis for the Panel and the parties to the dispute to examine. Third, in addition to enhancing the symmetry of information between the parties to the dispute and the experts, there should be enough time for the Panel, the parties to the dispute and the experts to conduct the concurrent evidence procedure. Under the current practice, the parties to the dispute usually have to wait until the substantive session is convened by the Panel to comment on the expert advice, and the meeting with the experts thereafter is usually completed within one day, which makes the experts in fact have no opportunity to respond to the parties' comments. Finally, to guarantee the due process, the private exchanges and contacts between the experts and the members of the Panel should be prohibited.[36]

III. CONCLUSION

The WTO judiciary makes an increasingly use of expert advice. This development must be applauded. It helps to guarantee the quality, transparency and legitimacy of WTO decisions, in particular those that cut across a number of social values. To scientifically design the consultation with experts procedure in the WTO dispute settlement system, we need to correctly handle the following questions:

First of all, how to correctly understand and apply the concept of due process. Due process is a basic system under the domestic constitution, which refers to the procedures ensuring the parties to be equally protected by the neutral judges, implementing the principles of parties initiative and guaranteeing the procedure's effectiveness. In short, it refers to

[35] However, some courts do not provide the public statements process for the experts, but go into the court question phase directly.

[36] See Joost Pauwelyn, "The Use of Expert in WTO Dispute Settlement", *Int'l & Comp. L. Q.* Vol. 51, 325, 327 (2002).

all the procedures that can maximally guide the judges to achieve justice.[37]According to this definition, we can see that not all the procedural issues can be raised to the concept of due process. Some minor procedural issues, as will not affect the fair trial rights of the parties, may be put in a less optimal position comparing to the substantive justice. Such situations exist in the consultation with experts procedure. For example, as for only one expert has been selected, if in fact the Panel had tried its best to find the appropriate experts while only one expert was available due to many objective reasons, it is difficult for that reason alone to think this practice violate the principle of due process, because only one expert being selected does not necessarily affect the fair trial rights of the parties.[38]Again, although the information disclosed by the candidate experts in the disclosure form showed certain relationships existed between the candidates and the party to the dispute, or if the candidate came from the party to the dispute, this does not necessarily lead to the candidates being excluded directly. Only if there are firm evidences showing that such relationship adversely affects the candidate expert to provide the advice independently and impartially, the opposition to this candidate can stand up.

Second, how to keep balance between the rights of the Panels and the rights of the parties to the dispute. Setting aside the whole design of the WTO dispute settlement system, as far as the consultation with experts procedure is concerned, WTO's current approach is more inclined to pursue the inquisitorial doctrine of the civil law. Because in current practice, the consultation with experts procedure were to great extent controlled by the Panel: (1) whether to consult the external experts is decided by the Panel. Although the parties to the dispute have the right to request, the Panel does not have the obligation to accept such a request.[39]And, even if the parties to the dispute do not raise such a request, the Panel can also make such a decision ex officio.[40] (2) the Panel also decides which issues belonged to the factual issues so that can seek expert advice for them; which experts to be selected after negotiation with the parties to the dispute; what kind of written questions to be asked in the initial meeting with the experts, and whether the parties to the dispute can make verbal challenge to the experts about their advices face to face.

China is also a civil law country, but on this issue, the appropriate position for us is to allow the parties to the dispute to participate in the consultation with experts procedure more actively so as to avoid the Panel totally controlling it. Therefore, it is necessary to amend the relevant provisions of the DSU, including allowing the parties to the dispute to decide whether to consult the experts or not, authoring the parties to the dispute with greater rights in selecting the experts, with the right to solicit expert advice directly and with the right to further cross-examine the expert advice, and so forth.

Third, how to keep balance between

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[37] John V. Orth, translated by Yang Mingcheng, Chen Shuanglin, *Due Process of Law: A Brief History*, (Beijing: Commercial Press , 2006), p. 25.

[38] In Australia-Apples, Australia opposed that only one expert in the field of ALCM was selected, arguing that this violated the principle of due process. The Panel rebutted such an argument, stated that such a practice did not affect the fair trial rights of Australia, and therefore did not constitute the violation of due process. Panel Report, Australia—Measures Affecting the Importation of Apples from New Zealand, .para. 7.11-7.21, WT/DS367/R, 9 August, 2010.

[39] For example, in Argentina-Footwear, Argentina has requested expert advice from the IMF. The Panel considered it as unnecessary and rejected Argentina's request. See Panel Report, Argentina-Measures Affecting Imports of Footwear, Textiles, Apparel and other Items, para.III.C.2, WT/DS56/R, 25 Nov. 1997.

[40] For example, in US-Shrimp/Turtles, no party has request to solicit external experts' advice, but the Panel decided to do so. See Panel Report, US-Import Prohibition of Certain Shrimp and Shrimp Products, para. VA, WT/DS58/R, 15 May, 1998.

quickly resolving the disputes and detailedly examining the complex facts involving knowledge in special fields. Article 3 of the DSU clearly states that one of the goals of the WTO dispute settlement system is to resolve disputes quickly. In order to achieve this goal, the DSU provides clear time limits for the WTO dispute settlement procedure. However, these time limits are increasingly challenged with more and more disputes involving non-trade specialized knowledge. When criticizing the Panels' failure to comply with the time limits, people, noted that more and more cases had adopted the consultation with experts procedure, began to reflect on whether the strict time limits may hinder the Panel to identify the facts of the case. Thus, as mentioned above, a compromise is to provide extra period outside of the current trial time limits for the consultation with experts procedure. Combined with previous practice and consider the entire trial period, we suppose this period to be 3 months.

In short, with the consultation with experts procedure plays an increasingly important role in the WTO dispute settlement system, the developing countries including China should pay more attention to the use of this procedure, and should make voice for how to improve this procedure in the future so as to safeguard their national interests.

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