



North Sumatra's export performance and competitive advantages in the implementation of ASEAN Economic Community (AEC)

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ABSTRACT

The effective implementation of ASEAN Economic Community (AEC) by the end of 2015 potentially led to a positive economic impact in the form of trade creation as well as negative impact in the form of trade diversion for its country members. North Sumatra as an entry point for Indonesia international trade experienced these impacts directly from economic integration. Hence, this study sought to analyze North Sumatra's position in facing the implementation of AEC and to further propose export economic development strategies; in order to take maximum benefits of available opportunities. From the study, it was discovered that North Sumatra prevailed as a champ in the implementation of AEC due to its competitive advantage in exports market. Since the year 2000, Asia has become the main export destination with export's share of up to 50% and has sustainably increased annually. In 2010, two third of export income originated from ASEAN countries especially Singapore. Export commodities are dominated by vegetable oil and vegetable fat as well as crude rubber. To maintain and promote North Sumatra's competitive advantages, it is recommended that the smallholders plantation (especially palm oil) be empowered in order to increase production which is currently 16% compared to that of state plantation; and investment be stimulated in the processing industry with crude palm oil and crude rubber as the raw materials, so that the exported commodity is in the form of final goods that can be directly exported to the end-consumer country (so far the export is in raw material and semi-finished goods and is re-exported by Singapore). The export of final goods will increase diversification of destination country and bring added value to the local economy of North Sumatra.

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INTRODUCTION

The ASEAN financial crisis in 1997 to 1998 and the successful experience of the economic regionalization of the European Union have prompted plans to accelerate the economic integration of ASEAN community (Anindita, 2008; Moenir, 2010; Salvatore, 2013). The 1967 ASEAN cooperation agreement in Bangkok developed into free trade area (AFTA) in 1992 and was effectively

implemented in 1993. Agreement on ASEAN Economic Community (AEC) was made in 1997 for its implementation in 2020, but then implementation of AEC, was accelerated to 2015 under 2003 Bali agreement (ASEAN Secretariat, 2008).

As Indonesia became a member of Asia, Indonesia under the Ministry of Trade (2013) gained some positive benefits including: (i) increase in economic growth, (ii) increase in income per capita, (iii) increase in new employment absorption, (iv) increase in Gross Domestic Product (GDP) and (iv) increase in intra ASEAN

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investment flow into Indonesia. Likewise, since AEC 2015 was implemented, various issues have arise, including: Indonesia's unpreparedness in terms of economic fundamentals, human resources, infrastructure, institutions and regulation (Mantra, 2011; Basri and danMunandar, 2009). Indonesia's export product competitiveness relatively lags behind other ASEAN countries, especially in terms of value-added exports (Sunarsip, 2014).

North Sumatra is one of the exit and entry points from and into Indonesia for international trade relations. Given that fact, the impact of trade agreements between Indonesia and other countries in the world, especially ASEAN countries will soon have an effect on North Sumatra's economy. Additionally, Indonesia's main commodities exports to ASEAN comprised of commodities with significant proportion of production and exports coming from North Sumatra such as rubber, forest products, prawns, chocolate and coffee (Ministry of Trade of the Republic of Indonesia, 2013).

This report aims to analyze the role of North Sumatra in the face of AEC 2015 implementation, with regards to (i) international trade performance (ii) export competitiveness and (iii) options available for economic sector development, especially for non-oil exports.

Export performance of North Sumatra prior to AEC 2015 implementation

The economy of North Sumatra is characterized by a significant open economy. Since 2000, the contribution of export value ranges from 36 to 43% of gross regional domestic product. This condition is above-average in Indonesia. Internationally, trade balance of North Sumatra has always posted a surplus, while nationally, it has deficit in its trade balance since 2012. Although North Sumatra's export value contribution is relatively stable within the range of 4–7% of Indonesia's export value, the trade surplus contribution continues to increase from 6 to 229% above Indonesia 2014 deficit (BPS, various year of issue). The North Sumatra's trade balance with its major trading partners (ASEAN, China, Japan, the European Union and the United States) has consistently posted a surplus except with that of China. Since 2004, the trade balance with China has been experiencing deficit and ever since the deficit is increasing each year.

ASEAN is the main export destination of North Sumatra. Two-third of the export value of 2010 is gained from ASEAN, despite the fact that the dominant trading partners intra-ASEAN are Singapore followed by Malaysia and Thailand. These two latter countries contribute for about 10% of North Sumatera's total export revenue. Twenty three percent (23%) of the export value comes from Japan, the European Union, the United States and China, while 13% of the exports value

comes from dozens of countries and other regions around the world. Export markets to ASEAN have increased consistently over the years; while exports to the United States, the European Union and Japan have being fluctuating with the tendency to decrease at the lowest level of below 10%. While exports to China have being fluctuating with the tendency to increase at a low level, as illustrated in Table 1.

North Sumatra export competitive advantage prior to AEC Implementation

It is widely recognized that the method for measuring competitive advantage is by analysis of Revealed Comparative Advantage (RCA). Further details regarding the application of this method can be seen, among others, on Lyford and Welch (2004) for US textile exports, Banterle (2005) for EU agri-food trade, Banterle and Carraresi (2006) for processed meat in the EU and Mokshina (2005) for the dairy sector in Russia as well as Barbaros et al. (2005) for Turkish organic products export to the EU. With analysis of RCA, North Sumatera's export competitiveness advantage can be revealed. Table 2 illustrates the RCA values that describe North Sumatra's competitive advantage in the regions or countries of its trading partners. As can be seen, North Sumatra has the power of competitive advantage among ASEAN countries, especially Singapore. In the meantime, North Sumatra lost its competitive advantage as compared to China in the last eight years (since 2009).

North Sumatra's export competitive advantages

The export volume has increased rapidly in the last 13 years (2002-2014). The highest growth was experienced by exports of vegetable oils and fats, which are non-oil export commodities of North Sumatra. Several groups of products experienced significant export decline, such as wood and cork, furniture and photographic apparatus and equipment. But several other groups of goods had an insignificant increase, including fish, shellfish, molluscs and its derivatives, processed vegetable oils and vegetable and animal fats, fodder, timber and cork. While the group of non-ferrous metals experienced a long-run decrease yet insignificant in export volume (Table 3). The correlation analysis showed that the world economic growth has no significant effect on the North Sumatra's export volume either as a whole or per goods group (double digit SITC). On the other hand, the dollar exchange rate (US\$) has a positive and significant effect on export volume. Similar positive effect is also experienced by a group of other goods, including: vegetable oils and fats, essential oils, tobacco and tobacco preparations, fruits and vegetables, organic

Table 1. Development of North Sumatra's export value to its main trading partners in 2001 to 2010 (in US\$).

Destination Country	North Sumatra exports value									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
The United States	138.201	139.269	113.071	141.721	236.027	268.059	332.917	394.030	332.501	451.364
Asia	1.088.972	1.287.928	1.300.942	2.140.495	2.398.322	2.894.639	3.916.279	5.551.753	4.032.720	5.535.014
1. Malaysia	128.308	128.158	134.174	283.370	301.769	509.374	515.177	426.735	461.888	529.704
2. Singapore	904.390	1.119.225	1.130.392	1.802.329	1.998.064	2.260.381	3.229.966	4.872.988	3.313.139	4.719.005
3. Thailand	46.734	32.725	28.926	44.839	82.431	102.995	143.621	208.548	216.776	228.446
Japan	318.206	280.861	274.447	402.581	423.907	539.705	709.867	768.087	487.955	712.851
People's Republic of China	21.836	16.730	110.235	104.111	204.616	356.024	370.104	614.516	253.618	300.440
Eropean Union	311.517	292.942	272.379	444.729	544.952	589.248	670.208	708.986	414.337	504.004
Others (RoW)	286.162	397.059	267.201	505.493	553.981	532.597	816.016	932.583	807.350	1.103.763
Total value	2.155.354	2.406.969	2.330.825	3.729.173	4.345.747	5.158.383	6.787.876	8.926.473	6.287.564	8.549.577
	Proportion (%)									
The United States	6.41%	5.79%	4.85	3.80	5.43	5.20	4.90	4.41	5.29	5.28
Asia	50.52	53.51	55.81	57.40	55.19	56.12	57.70	62.19	64.14	64.74
1. Malaysia	5.95	5.32	5.76	7.60	6.94	9.87	7.59	4.78	7.35	6.20
2. Singapore	41.96	46.50	48.50	48.33	45.98	43.82	47.58	54.59	52.69	55.20
3. Thailand	2.17	1.36	1.24	1.20	1.90	2.00	2.12	2.34	3.45	2.67
Japan	14.76	11.67	11.77	10.80	9.75	10.46	10.46	8.60	7.76	8.34
People's Republic of China	1.01	0.70	4.73	2.79	4.71	6.90	5.45	6.88	4.03	3.51
Eropean Union	14.45	12.17	11.69	11.93	12.54	11.42	9.87	7.94	6.59	5.90
Others (RoW)	13.28	16.50	11.46	13.56	12.75	10.32	12.02	10.45	12.84	12.91
Total value	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Collected from "Social Economics and Regional Finance of North Sumatra", Bank of Indonesia (various publishing years).

Table 2. North Sumatra's exports competitive advantage in Asia , Japan and China in 2001 to 2010.

Destination country	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Asia	1.462	1.440	1.412	1.425	1.370	1.355	1.310	1.308	1.226	1.232
1. Malaysia	0.921	0.701	0.661	0.813	0.795	1.072	0.754	0.425	0.508	0.420
2. Singapore	2.152	2.324	2.436	2.599	2.304	2.190	2.294	2.426	2.417	2.553
3. Thailand	0.561	0.296	0.242	0.196	0.332	0.330	0.351	0.365	0.502	0.371
Japan	0.312	0.259	0.235	0.218	0.212	0.215	0.224	0.177	0.197	0.205
People's Republic of China	0.216	0.150	1.084	0.649	1.239	1.809	1.636	2.176	0.899	0.892

Source: Results of self-calculation.

Table 3. Trend of North Sumatra's export volume based on goods group (in two Digits SITC Code) in 2002 to 2014.

Goods group	Y = a + bT		
	b	R ²	Significance
1. Vegetable oil and fats (42)	131.595	0.58	**
2. Crude rubber (23)	11.18	0.522	**
3. Nonferrous metal (68)	-1.673	0.089	ts
4. Wood and cork manufactures (63)	-21.845	0.81	**
5. Fish, crust, molluses and their derivatives (03)	0.756	0.068	ts
6. Coffee, tea, cocoa, spices (07)	4.952	0.612	**
7. Clothing (84)	1.509	0.289	*
8. Animal and vegetable oil and fats (43)	13.711	0.17	ts
9. Ess. Oils & perfume materials (55)	15.702	0.918	**
10. Tobacco and processed Tobacco (12)	3.142	0.864	**
11. Fruits and vegetables (05)	5.152	0.789	**
12. Furniture (82)	-1.411	0.726	**
13. Miscellaneous food preparations (09)	19.565	0.709	**
14. Organic chemicals (51)	38.848	0.834	**
15. Animals fodder (08)	11.451	0.185	ts
16. Wood, lumber and cork (24)	0.554	0.043	ts
17. Pulp and waste paper (25)	12.737	0.655	**
18. Rubber manufactures article (62)	2.104	0.928	**
19. Miscellaneous manufactured articles (89)	2.295	0.883	**
20. Photographic apparatus, equipment and optic (88)	-10.044	0.399	**
Total Export	264.753	0.723	**

** , Significant at 95% confidence level; **ts**, not significant.

Source: Results of self-calculation.

chemicals and other industrial products. In contrast, the dollar exchange rate negatively affects the group of furniture and photographic apparatus and its equipment.

CONCLUSION AND POLICY IMPLICATION

From the present study, it is concluded that North Sumatra will prevail as a champ as AEC is implemented. This is considered relevant since Asia has being North Sumatera's main export market all the while, where economic integration is more of a trade creation rather than a trade diversion as put forth by Stiglitz (2007), Salvatore (2013) and Krugman and Obstfeld (2014) statements. Additionally, it is noteworthy that Singapore is a major export destination for North Sumatra with a market share of up to 60% of the total export values. However, it is clear that Singapore does not expend its imported products from North Sumatra, instead it re-exports its goods either directly or after processing stages afterwards. This happens because the commodities exported are raw materials or semi-finished materials.

In terms of commodity, the highest growth of North

Sumatra's exports is experienced by a group of vegetable oil and vegetable fats followed by raw rubber. Although these goods are the largest contributor to the exports value, however, the processed vegetable oils and vegetable fats have showed insignificant growth in the last 13 years (2002–2014). This indicates the absence of downstream industries of vegetable oils and vegetable fats in North Sumatra. Geographically, North Sumatra has a competitive advantage over the production of plantation crops, especially oil palm and rubber, as reflected in the contribution of these goods to exports value. However, the competitive advantage in the upstream industry has not been utilized in the production of downstream sectors to the consumer goods (final products). To maintain the position and increase the exports value, North Sumatra needs to strategically focus on the plantation sector such in the forms of as:

- Empowering smallholder plantations to increase production. The total area of oil palm State Plantation is nearly similar to that of smallholder plantation area, but the production of smallholder's is only 16% as compared to the production of the State Plantation (BPS Sumatera Utara, 2015). Thus, the potential for

increased production is still very wide open;

- Encouraging investment in downstream industries (processing industry) of products made of raw vegetable oils and vegetable fats and rubber/latex. The development of domestic industries will increase the volume of local demands. Thereby the export volumes can be controlled in order to keep export prices consistently profitable on an ongoing basis for semi-finished materials (intermediate goods).

In addition to that, the exports of consumer goods (final products) will allow direct exports to the country in need without having to stop over at Singapore (diversification of export destination country/region) and thus the added value of processing activities will be enjoyed by North Sumatera's economy as a whole.

REFERENCES

- Anindita R. & Reed M. R. (2008). *Bisnis dan Perdagangan Internasional*. Andi Offset, Yogyakarta.
- Bank Indonesia (various years). *Regional economic financial statistics of North Sumatra (monthly)*. Medan, Indonesia.
- Banterle A. & Carraresi L. (2006). *International trade and competitiveness analysis in the European Union: the Case of Prepared Meat Sector*. The 98th EAAE Seminar 'Marketing dynamics within the global trading system: New perspectives', Chania, Crete, Greece: 29 June–2 July.
- Banterle A. (2005). *Competitiveness and agri-food trade: An empirical analysis in the European Union*. The 11th Congress of the EAAE (European Association of Agricultural Economists), 'The future of rural Europe in the global agri-food system', Copenhagen, Denmark, August 24-27, 2005.
- Barbaros R. F., Akgüngör S. & Aydoğuş O. (2007). *Competitiveness of Turkey's organic exports in the European Union market*. The 105th EAAE Seminar 'International marketing and international trade of quality food products', Bologna, Italy, March 8-10.
- Basri F. & dan Munandar H. (2009). *Landskap Ekonomi Indonesia – Kajiandan Renungan Terhadap Masalah-masalah Struktural, Transformasi Barudan Prospek Perekonomian Indonesia*. Kencana Prenada Media Grup, Jakarta.
- BPS-Statistic of North Sumatra (various years) (2015). *North Sumatra in Figure*. Medan, Indonesia.
- Krugman P. R. & dan Obstfeld M. (2014). *International economics: theory and policy*. 10th Edition (Pearson Series in Economics). Prentice-Hall, Englewood Cliffs, New Jersey.
- Lyford C. P. & Welch J. M. (2004). *Measuring competition for textiles: Does the U.S. make the grade?* The Southern Agricultural Economics Association annual meeting. Tulsa, Oklahoma, February 18, 2004.
- Mantra. D. (2011). *Hegemoni dan Diskursus Neoliberalisme Menelusuri Langkah Indonesia Menuju Masyarakat Ekonomi ASEAN 2015*. Mantra Press, Bekasi.
- Ministry of Trade of the Republic of Indonesia (2013). *Menuju ASEAN Economic Community 2015*. Direktorat Jenderal Kerjasama Perdagangan Internasional, Depdag RI, Jakarta.
- Moenir H. D. (2010). *Dampak Kemajuan Ekonomi China-India Terhadap Proses Integrasi Ekonomi ASEAN (Studi Kasus 2000-2008)*, Skripsi, Jakarta: FISIP UI.
- Mokshina P. (2005). *Competitiveness of Russian dairy sector: Inter-regional comparison*. Paper presented at the XIth Congress of the EAAE (European Association of Agricultural Economists), 'The future of rural Europe in the global agri-food system', Copenhagen, Denmark, August 24-27, 2005.
- Salvatore D. (2013). *International Economic* 11th edition. Wiley, NY.
- Stiglitz J. E. (2007). *Making globalization work*. Mizan, Bandung.
- Sunarsip (2014). *MEA 2015 dan Daya Saing Kita (AEC 2015 and our competitiveness)*. Koran Sindo, Monday, 24 Maret 2014. Retrieved from <http://economy.okezone.com/read/2014/03/24/23/959646/mea-2015-dan-daya-saing-kita/large>. on 19 Februari 2016.
- The ASEAN Secretariat (2008). *ASEAN Economic Community Blue Print*. The ASEAN Secretariat Public Affairs Office, Jakarta.