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Australia and Thailand:
Countries with high complementarity of endowments

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1. Introduction

History shows that the roots of Australia–Thailand relations were commercial roots, leading the way by Trade and investment. When we take a closer look at the relationships between two countries, they are rather complementary than to compete or to substitute. This is evidently in manufacturing sector, agricultural sector, and investment sector. Therefore, this paper examines the degree of complementarity of endowments between two countries in order to understand the foundation of strategic relationships between Australia and Thailand. The paper is structured as follows. Section 2 and 3 provides the characteristics and resource endowment of the two countries. Section 4 illustrates trade and investment of Australia with reference to Thailand. Some general conclusions are drawn in the final section.

2. Australia's Characteristics and Resource Endowment

The Australian economy is one of the strongest developed economies in the world with low public debt, low unemployment, contained inflation, and continuing strong business investment.

Australia is the 12th largest economy in the world with GDP of around A$ 1.3 trillion or four–fold larger than Thailand with the average growth of around 2.6 percent for the last five years. In terms of geological area, Australia is the 6th largest country in the world with a total of approximately 7.7 million square kilometers – 14 times larger than Thailand. The greater part of the country is desert with a variety of climates ranging from subtropical to temperate zone due to its large geographical size. The largest part of the country is semi-arid. The northern part of the country has a tropical climate – tropical rainforests, grasslands, and part desert. Temperate climate

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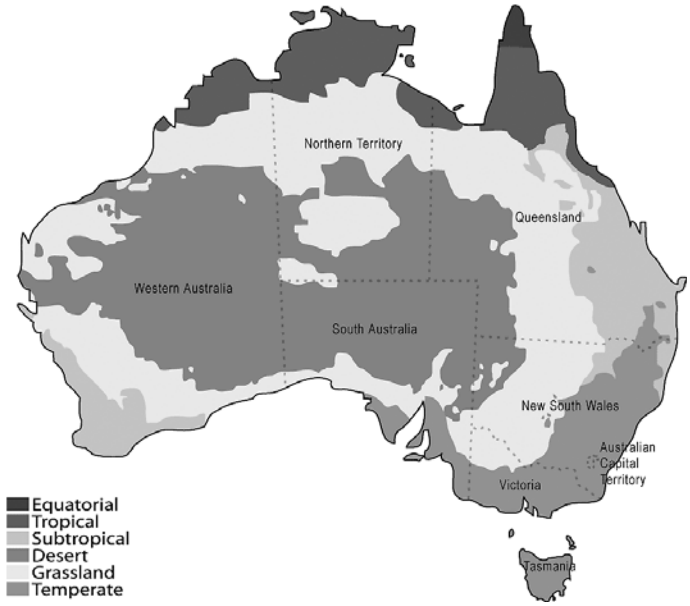


Figure 1 Australian Climatic Condition
Note. From "About Australia," by Australian Bureau of Meteorology, n.d.

is found only in the south-east and south-west areas.

Because of varieties of its weather, approximately 53.3 percent of Australian land is arable and pasture. Three major zones used for agriculture purposes in Australia consist of (1) Tasmania's high rainfall zone and a narrow coastal zone which are suitable for dairying and beef production, cropping principally winter crops such as wheat, (2) Sheep zone which is used for grazing of sheep for wool, lamb, and mutton as well as beef cattle, and (3) pastoral zone with low rainfall and less fertile soil which is good for grazing of beef cattle and sheep. Due to the irregular rainfall and the large desert areas (18 percent of the mainland), Australia, therefore, requires a mix of irrigation and dry-land farming across the country.

As a result of plenty of arable and pasture, Australia has been a major global agricultural producer and exporter. According to the Department of Agricultural, Fisheries, and Forestry (2012), gross value of agriculture, fisheries, and forestry production in 2010–11 reach A$ 52.1 billion. The following figure shows the proportion of productions to the gross value of production.

Australia is rich in diverse natural resources and has extensive reserves of coal, iron ore, copper, gold, natural gas, uranium, and renewable energy sources. This particular endowment attracts high levels of foreign investment and put Australia on the world's top of the natural resource exporter. Australia is also a significant exporter of energy, premium quality agricultural and services

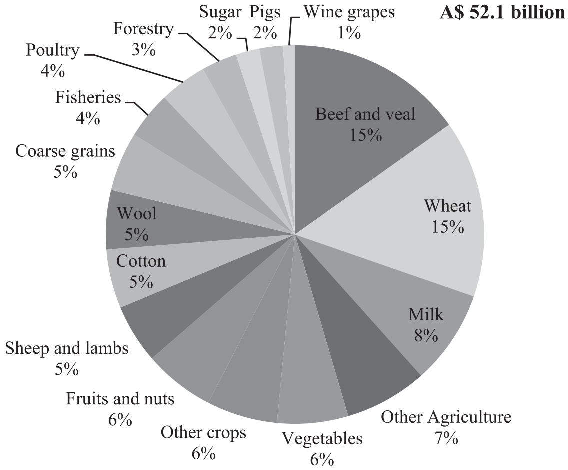


Figure 2 Gross value of agriculture, fisheries, and forestry production, 2010–11
Note. From *Australia's Agricultural, Fisheries, and Forestry at a Glance 2012,* by Australian Department of Agriculture, Fisheries, and Forestry, 2012

Table 1 Structure of the Economy

Sector	% Share of GDP (2011)
Agriculture, forestry, and fishing	2.7
Mining	8.6
Manufacturing	9.3
Services	79.4
• Financial and Insurance Services	11.4
• Construction	9.2
• Professional, scientific and technical service	7.7
• Healthcare and social assistance	9.2

Note. From "Australian National Accounts: National Income; Expenditure and Product," by Australian Bureau of Statistics, 2011

products, innovation and creativity and has a large services sector. In 2011, the value of Australia's trade with the world valued more than A$600 billion. Total trade as a share of GDP was around 41.0 percent in 2010–11.

The economy of Australia has been dominated by the service sector with the contribution of almost 80% percent of GDP follow by the manufacturing, mining, and agricultural sectors.

The services sector is significant to Australia's economy. In 2011, total trade in services accounted for 17.9 percent of Australia's total trade in goods and services. Services exports accounted for 16 percent. The six largest services exports are Travel related services－education-related travel services worth A$15.1 billion (30.2%), recreational travel services worth A$11.8

Table 2 World Mineral Production Rank in 2011

Type of Mineral	World Ranking for Resources	% of World Resources	World Ranking for Production	% of World Production
Bauxite	2	20	1	31
Lead	1	39	2	13
IronOre	1	22	2	17
Gold	1	17	2	10
Nickel	1	27	4	12
Uranium	1	34	3	11
Zinc	1	26	2	12
BlackCoal	5	9	4	7
Silver	1	16	4	7
Copper	3	13	5	6

Note. From "Minerals," by Geoscience Australia, n.d.

billion (23.5%), business travel services worth A$3.6 billion (7.1%) – totaling 60.8% of the total trade in services. Other services include legal, accounting and management consultancy services as well as other services accounted for 26.7%, Passenger transports and other transport services (including cargo and baggage handling services, agents' fees associated with freight transportation and airport and port charges) constituted 12.5%.

The agricultural sector contributes approximately 3 percent to Australia's GDP. Major agricultural industries include cattle, cotton, dairy, fisheries, food, forestry, grain, horticulture, wine, wool, and sugar. The export volume in 2011 was around two-third of total production to the world. Although agricultural sector is relatively small Australia is still the world's second largest producer of sheep meat, chickpeas and wool, the fifth largest producer of barley and cattle meat as well as the world major export of other primary products such as wheat, wool, and wine.

Trade has always represented a large proportion of Australia's economic activity. Resources exports led the composition of exports (49.5 percent) follow by services export (17 percent) and manufacturers (13.9 percent). In regard to imports, capital and immediate imports including equipment, fuels, and business services that used mainly as inputs of Australian production added around 50–55 percent of Australia's import profile in the past two decades.

The minerals industry is Australia's largest export earner with mineral exports accounting for 50 to 60 per cent of the annual value of total exports of goods and services in recent years. In current dollar terms, the total value of Australian mineral exports (excluding oil and gas) was approximately $164.3 billion in 2011–12, dominated by coal, iron ore, alumina/aluminum, copper, nickel and gold. However, the country imported fuel and mineral which were mainly crude and

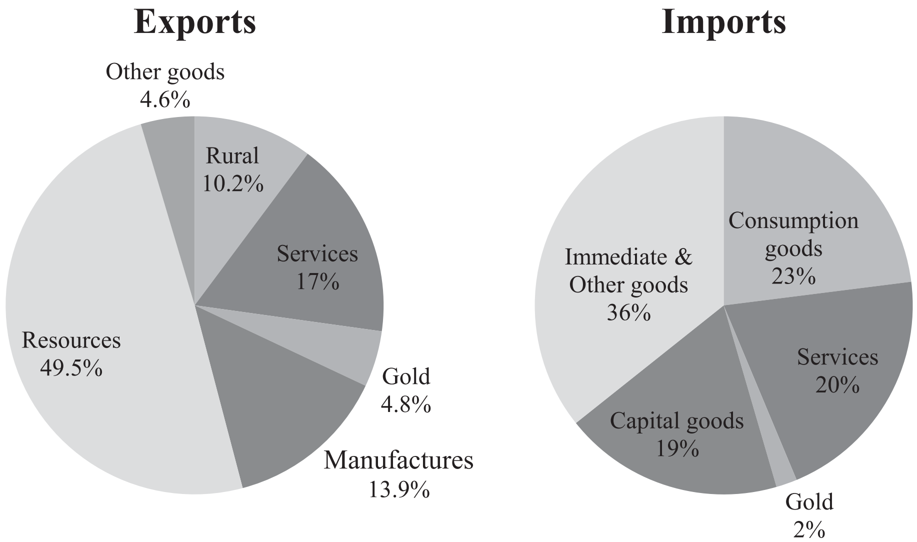


Figure 3 Composition of Exports and Imports (2010–11)

Note. Adapted from "ABS Catalogue 5368.0 – International Trade in Goods and Services, Australia," by Australian Bureau of Statistics, 2011

Table 3 Australia Trade in Primary Products of 2011

Export	A$M	%Share
1. Wheat	6,076	2.3
2. Beef	4,684	1.8
3. Wool & Other Animal hair (incl. tops)	2,837	1.1
4. Cotton	2,537	1.0
5. Meat (excl. beef)	2,375	0.9
Import	**A$M**	**%Share**
1. Edible products & Preparation, nes	1,636	0.7
2. Wood, simply worked	651	0.3
3. Cereal Preparation	618	0.3

Note. From "Composition of Trade," by Australian Department of Foreign Affairs and Trade, 2011

refined petroleum at 9.2 percent and 6.3 percent respectively.

Australia imports of manufacturing products has mainly concentrated on labour intensive end of the industry while exporting the more capital intensive and technological products. Motor vehicles recorded the highest value of importing goods at A$ 14, 159 million or 6.2 percentage share, followed by Medicaments (including veterinary) at A$ 8,530 million or 3.8 percentage share and Telecom equipment and Parts at A$ 8,322 million or 3.7 percentage share. In terms of export, the largest manufacturing export product in 2011 was Medicaments (including veterinary) at A$ 3,278 million.

Table 4 Australia Trade in Manufactures of 2011

Export	A$M	%Share
1. Medicaments (incl veterinary)	3,278	1.3
2. Alcohol beverages	2,033	0.8
3. Passenger motor vehicles	1,352	0.5
4. Aircraft, spacecraft & parts	1,099	0.4
5. Measuring & Analyzing instruments	993	0.4
Import	**A$M**	**%Share**
1. Passenger motor vehicles	14,159	6.2
2. Medicaments (incl veterinary)	8,530	3.8
3. Telecom equipment & parts	8,322	3.7
4. Computers	6,634	2.9
5. Goods vehicles	6,153	2.7

Note. From "Composition of Trade," by Australian Department of Foreign Affairs and Trade, 2011

Table 5 Australian Direct Investment Abroad 2005–2011

Unit: A$ Billion

	2005	2008	2009	2010	2011
Total all countries	252	302	348	375	339
OECD	211	247	265	269	248
APEC	172	228	204	210	209
EU	51	44	93	102	76
ASEAN	8	14	16	17	18

Note. From "International Investment Position, Australia: Supplementary Statistics 2011," by Australian Bureau of Statistics, 2011

In 2012, it contributed approximately $106 billion to the economy. Manufacturing is also central to innovation, accounting for over one quarter of all Business Expenditure in R&D in 2010–11, representing around $4.8 billion invested in research and development.

In terms of outbound foreign direct investment, OECD group has been the highest recipient of Australia's FDI, reaching A$269 billion in 2010 and A$248 billion in 2011, follow by APEC and EU. Australia's trade with ASEAN is relatively small compared with other trading bloc.

Australian foreign direct investment (FDI) in ASEAN in 2011 recorded at A$17.8 billion, increasing from A$ 13.7 billion in 2008. Singapore is the biggest FDI recipient in this region with the total percentage share of 39.7 percent followed by Malaysia and Indonesia. Thailand seems to be overlooked by the Australian, receiving only less than 3 percentage share on the average.

Another strong, well-regulated, profitable, and sophisticated sector in Australia is financial sector. The Australian financial system consists of the Authorised Deposit-Taking Institutions (ADI) or

Table 6 Australian Direct Investment in ASEAN, 2008–2011

	2008		2009		2010		2011	
	A$ m	%share	A$ m	%share	A$ m	%share	A$ m	%share
ASEAN	13,758	100	15,993	100	16,762	100	17,801	100
Singapore	6,559	47.7	7,509	47.0	7,140	42.6	7,061	39.7
Malaysia	2,183	15.9	3,171	19.8	3,782	22.6	np	np
Indonesia	2,089	15.2	3,068	19.2	3,320	19.8	3,654	20.5
Philippines	np	np	410	2.6	610	3.6	np	np
Vietnam	278	2.0	461	2.9	425	2.5	580	3.3
Thailand	390	2.8	216	1.4	370	2.2	431	2.4
ASEAN Unspecified	np	np	np	np	np	np	np	np

Note. From "International Investment Position, Australia: Supplementary Statistics 2011," by Australian Bureau of Statistics, 2011
np: not available for publication but included in totals where applicable, unless otherwise indicated

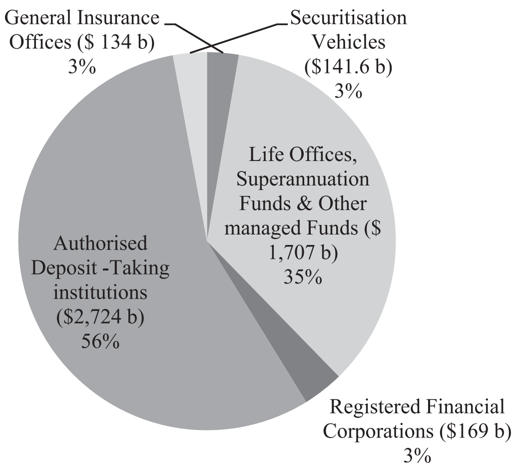


Figure 4 Australia's Financial Sector Assets – September 2010 (A$ billion)
Note. From "Australia's Banking Industry," by Australian Trade Commission, 2011

financial institutions, Insurance (life and general), Superannuation, Financial markets, and Payments Systems. The sector is the largest contributor to Australia's national output in 2010[1] (11 percent) and ranked fifth amongst the world's leading financial systems and capital markets[2]. According to the 21 countries surveyed by the Asian Bankers 500 in 2009, Australia has the 3rd largest collective financial sector assets following Japan and China, totaling around 240 percent of the country's nominal GDP. As of September 2010, total financial sector assets reached approximately A$ 4.9 trillion.

1) From *Australian National Accounts: National Income; Expenditure and Product – December 2010,* by Australian Bureau of Statistics, 2011. (Table 6. Gross Value Added by Industry, Chain Volume Measured)
2) From *The Financial Development Report 2010,* by World Economic Forum, 2010

The four largest banks in Australia, namely, Australia and New Zealand Bank (ANZ), Commonwealth Bank of Australia (CBA), National Australia Bank (NAB), and Westpac Banking Corporation (WBC), occupies four out of nine banks of the top 100 banks globally received a Standard & Poor's rating of AA or higher. Australia is also the world's seven largest foreign exchange markets with total Foreign exchange turnover averaging US$ 192 billion per day in April 2010[3)] and the second largest pension fund industry－superannuation-in the Asia-Pacific regions after Japan, and fourth largest pension pool in the world.

In knowledge-based economy like Australia, innovations and Information and Communication Technology (ICT) are major force driven the country. Australia's Telecommunications and IT market are the third largest in the Asia-Pacific and tenth largest in the world. New technological innovations and knowledge based industries have led Australia to higher productivity and faster development of information and knowledge in all industries contributing to almost half of the country's GDP. The national Research and Development (R&D) spending has proven that Australia now emphasizes on technological knowledge and innovation.

In 2010–2011, Australia's total expenditure on R&D (Business, Government, Higher education, Private non-profit) accounted for A$ 30.3 billion, an increase of 9 percent (A$2.5 billion) over 2008–09.

During the 2011–12 fiscal year, the Australian government organizations spent A$3,500 million on R&D. The Commonwealth government organizations contributed A$2,405 million (68 percent) to total government expenditure on R&D while States and territory governments organizations spent A$1,128 million (32 percent). In the same period, the business expenditure on R&D reached

Table 7　Gross Expenditure on R&D by sector, 2000–2011

Sector	2000–01 $m	2002–03 $m	2004–05 $m	2006–07 $m	2008–09 $m	2010–11 $m
Business	4 983	6 940	8 676	12 639	r 17 291	17 880
Government	2 356	2 482	2 486	3 095	3 420	(a)3 833
Higher education	2 790	3 430	4 327	5 434	r 6 844	8 203
Private non-profit	289	360	479	609	744	(a)914
Total	10 417	13 212	15 969	21 777	28 299	(a)30 830

Note. From "ABS Catalogue 8104.0 Gross Expenditure on R&D by Sector," by Australian Bureau of Statistics, 2011
r: revised
(a): These estimates have been carefully modelled.

3）From *Australia's Banking Industry,* by Australian Trade Commission, 2011

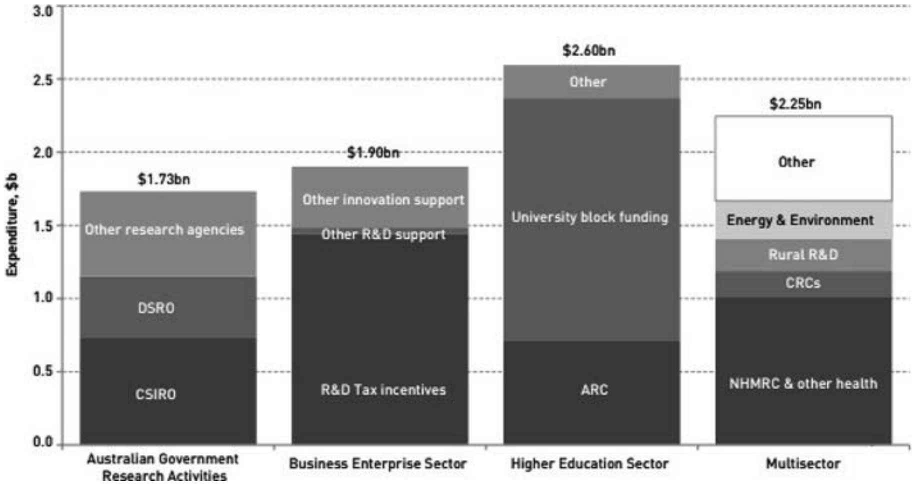


Figure 5 Expenditure on Science, Research, and Innovation by Category, 2010–11

Note. From *Australian Innovation System Report 2012,* by Australian Department of Industry, Innovation, Science, Research, and Tertiary Education, 2012

A$17,800 million.

Australian businesses continued to direct their majority of R&D investment into Experimental development (A$10,910 million or 61 percent) and Applied research (A$5,886 or 33 percent). Engineering (A$9,210 million or 52 percent) and Information and Computing Sciences (A$5,019 million or 28 percent) ranked at top 2 highest field research expenditure. Together, they accounted for 80 percent of total business expenditure on R&D in 2010–11.

The largest contributors to total business expenditure on R&D have been Manufacturing and Mining, contributing A$4,760 million (27 percent) and A$3, 821 million (21 percent) respectively. Financial and insurance services ($2,749 million or 15%) and Professional, scientific and technical services ($2,697 million or 15%) were the next largest contributors. Together, these four industries accounted for more than three quarters (78%) of total R&D expenditure in business enterprise in 2010–2011.

In connection with Australia Labour market, Australia has relatively low unemployment rate at around 5 percent. At November 2012, approximately 11.5 million people are employed. The workforce is highly concentrated on the Eastern seaboard, with more than three quarters of workers employed in the three most populous states, namely, New South Wales, Victoria, and Queensland). The Australian workforce is projected to grow an average of 2.1 per cent a year reaching 15.3 million by 2025.

3. Thailand's Characteristics and Resource Endowment

Thailand is the 33[th] largest economy in the world, 2[th] largest economy in ASEAN. The population of Thailand is approximately 66.7 million people with the labor force stands at 39 million. Thailand is also the world's 23[th] largest in purchasing power during 2005–2011 by World Bank.

Manufacturing is the major contributor to Thailand's GDP, accounting for 35.6 percent in 2010 and accounted for 73.4 percent of the total exports in 2011. Vehicle manufacturing and electronics have been very vibrant sectors. Thailand is the world's largest hard disk drive producers with over one third of the world's market and the largest vehicle manufacturer and ranks number 15 in the world, exporting automotive products to 130 countries worldwide. In Thailand, the auto industry is the third largest industry, making up about 19.75% of GDP. Other high-technology products such as integrated circuits and parts, hard disc drives, electrical appliances are now leading the country's growth in exports. In terms of imports, almost half of import goods are raw materials and intermediate (42.9 percent). Other imports are capital goods (24.8 percent), Fuel (19 percent), Consumer goods (9.2 percent), and vehicles (3.9 percent).

With reference to Agricultural sector, Agriculture makes a contribution to Thailand´s economy − around 10 percent of GDP. Although the contribution of agricultural sector to GDP has declined markedly since 1960 s, the country is still the major exporting country of rice, rubber and sugar. Thailand also major exporting country of food products such as canned tuna, chicken meat etc.

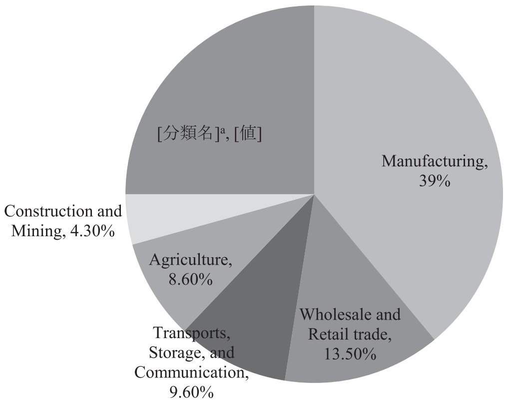


Figure 6 Structure of the Economy in Year 2011: GDP by Sector (%)
Note. From "Thailand at A Glance," by Bank of Thailand, n.d.
[a] Other services include financial sector, education, hotels and restaurants, etc

Thailand's strong agricultural sector results in a well-developed agro-industry sector. There are more than 10,000 food processing companies in Thailand producing around US$10 billion annually from food manufacturing alone and in 2012, Thailand made US$30 billion from its food exports, mainly to ASEAN countries, the USA, Japan, China, Russia and Europe. Thailand is the first country to adopt agricultural biotechnology and has the most advanced food processing industries in Southeast Asia.

Foreign Direct Investment (FDI) is vital to Thailand as it is a source for technology transfer, employment, and growth of the country. The net flow of FDI in 2010 was US$ 5.8 billion. Manufacturing sector, particularly, high-tech export-oriented industries such as machinery and transport equipment and electrical appliances have been the main FDI recipient sectors. Other important recipients were real estate and mining and quarrying. The major sources of FDI inflows were Japan, the Netherland, Hong Kong, and the United States.

For FDI outflows, the main destination of Thai direct investment has been ASEAN with the increasing share from 33.5 percent in 2007 to 51.3 percent in 2010. Singapore and Myanmar are two top FDI recipients in ASEAN. Thai businesses also invest more in Australia and Canada while the share of FDI outflows to the EU 27, the United States, and Japan were decreased. Overall, Thailand's offshore investments were mainly in mining and quarrying, manufacturing, trade, and financial institutions.

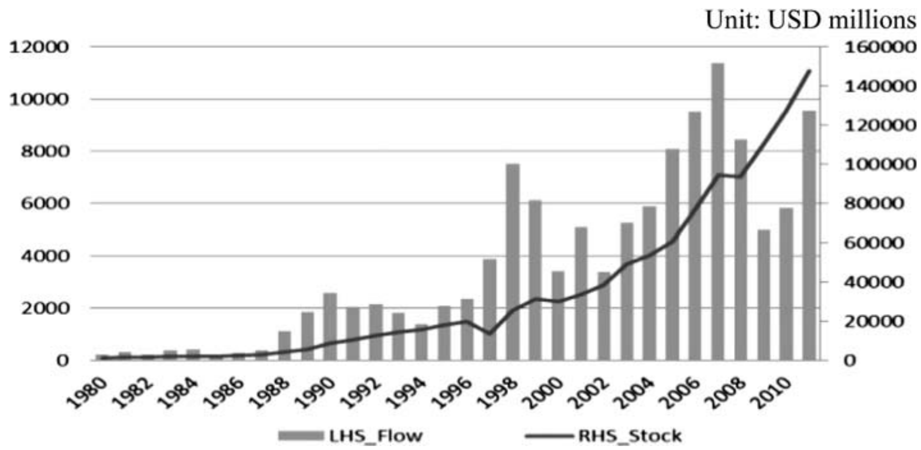


Figure 7 Thailand FDI Performance

Note. From UNCTAD, 2012

4. Trade and Investment between Thailand and Australia

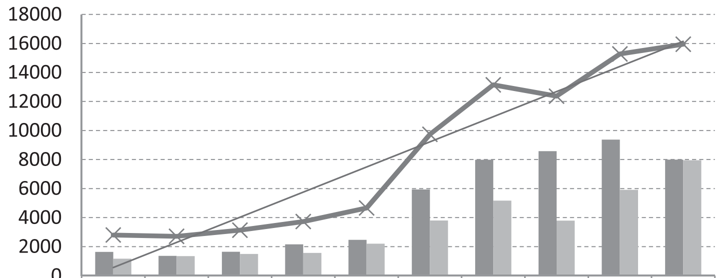
In 2011, Australia was the 8th largest export destination of Thailand while Thailand ranked 9th for the Australia's export destination and 2nd largest trading partner in Southeast Asia.

Australia's good and services trade with Thailand totaled US$ 15,945 million in 2011. Export totaled US$ 7,997 million; Imports totaled US$ 7,948 million. The Australia goods and services trade deficit with Thailand was US$ 50 million in 2011.

Thailand is currently the 6th largest merchandise trading partner with A$ 15,048 million in 2012. Australia's merchandise goods exports totaled A$ 4,873 million; goods imports totaled A$ 10,175 million. Australia's merchandise trade deficit with Thailand was A$ 5,302 million. Australia has become Thailand's 9th largest merchandise trading partner, up from 11th in 2004, since the TAFTA came into force.

Figure 8 illustrates changes in total trade value between Thailand and Australia before and after TAFTA came to effect. Before the signing the trade pact, total trade value between the two countries was below US$ 5 billion. From 2007 onward, the total trade value between Thailand and Australia surged to over US$ 10 billion with a rising trend over years.

Thailand's total merchandise exports to Australia in 2011 totaled US$ 7.9 billion. Since 2005, approximately 60 percent of Thailand's merchandise export to Australia has utilized TAFTA.



	2000	2001	2002	2003	2004	2007	2008	2009	2010	2011
Export US$ m	1636	1362	1642	2,160	2,468	5,937	7,983	8,579	9,369	7,997
Import US$ m	1164	1346	1496	1,568	2,197	3,800	5,165	3,787	5,908	7,948
Total Trade Value US$ m	2801	2708	3136	3,728	4,665	9,737	13,148	12,366	15,277	15,945

Figure 8 Trade Value between Thailand and Australia, 2000 to 2011
Note. From "Foreign Trade Statistics of Thailand (MENUCOM)" by Thailand Ministry of Commerce, 2012

Table 8 Thailand's Merchandise Exports under Thailand − Australia FTA

Description	2005	2006	2007	2008	2009	2010	2011
Total Export to Australia (US$ m)	3,175	4,350	5,937	7,983	8,579	9,369	7,997
Export under TAFTA (US$ m)	2,122	2,746	4,067	4,944	4,316	5,613	5,036
% Share	66.8	63.1	68.5	61.9	50.3	59.9	63.0

Note. From "Foreign Trade Statistics of Thailand (MENUCOM)" by Thailand Ministry of Commerce, 2012

Table 9 Principal Imports from Australia

Unit: A$ billion

Description	2009	2010	2011	2011 (Jan)	2012 (Jan)
Crude oil	1.02	2.00	1.97	0.30	0.11
Other metal ores, metal waste, scrap and products	0.67	0.66	0.83	0.05	0.06
Vegetables and vegetable products					
Iron, steel and products	0.22	0.33	0.30	0.02	0.06
Natural gas	0.08	0.24	0.38	0.01	0.03
Others	0.03	0.09	0.15	−	0.02
	2.16	2.80	4.05	0.58	0.10
Total	4.19	6.01	7.69	0.97	0.39

Note. From "Foreign Trade Statistics of Thailand (MENUCOM)" by Thailand Ministry of Commerce, 2012

Table 10 Principal Imports from Thailand

Unit: A$ billion

Description	2009	2010	2011	2011 (Jan)	2012 (Jan)
Motor cars, parts and accessories	2.32	3.25	2.47	0.20	0.14
Precious stones and jewelry	2.23	1.53	0.73	0.01	0.08
Refine fuels	0.12	0.12	0.18	0.03	0.04
Air conditioning machine an parts thereof	0.33	0.39	0.35	0.02	0.03
Prepared or preserved fish, crustaceans, molluscs in airtight	0.22	0.25	0.29	0.02	0.03
Others	4.05	3.92	3.64	0.26	0.26
Total	9.28	9.44	7.66	0.55	0.57

Note. From "Foreign Trade Statistics of Thailand (MENUCOM)" by Thailand Ministry of Commerce, 2012

Major Australian exports to Thailand including crude oil or crude petroleum, other metal ores, metal products, iron, steels, copper, and aluminum.

On the other hand, Australia imports wide range of products from Thailand. Major merchandise imports from Thailand have been goods vehicles, passenger motor vehicles, gold, and vegetables and vegetable products.

Total service trade value between Thailand and Australia remains constant since 2007. However, Australia's total services import value has gradually increased over years while its export value to Thailand has stabilized. Australia's major service exports have been travel services with the majority related to education followed by transport services. On the other hand, services imports from Thailand are mainly personal travel services－other than education-related, follow by transport services and other business services.

In the case of trade protection, Australia is an original Member of the WTO, and grants at least most-favored-nation (MFN) treatment to all its trading partners. According to the WTO's Trade Policy Review in 2001, the tariff remains one of the country's main trade policy instruments. On average, Australia's applied MFN tariffs remain relatively low. The average applied MFN tariff for industrial products is 3.4%, while that for agricultural imports is roughly 1.4%. Some 96% of applied MFN tariff rates are currently in the range zero to 5%.

Similar to Australia, the tariff remains one of the main trade policy instruments for Thailand. WTO's Trade Policy Review in 2011 reported that Thailand's average applied MFN tariff is approximately 11.2 percent. Tariff rates vary considerably from one HS chapter to another and within chapters. Agricultural products (WTO definition) tend to have the highest tariffs, with an average applied rate of 26%. Within agricultural products, beverages, spirits, and tobacco have the highest tariffs with an average of 49%. The greatest variability in any sector, and the highest average tariff outside of agriculture, is in transport equipment with a standard deviation of 26 and an average of 33%.

Thailand has a relatively high tariff protection than Australia in both average and weighted average tariff. Table 11 and Table 12 show the MFN applied duties on agricultural products and

Table 11 MFN Applied Duties on Agricultural Products in Selected Developed Countries in 2011 (%)

	USA	EU	Japan	Australia	Thailand
Animal products	2.4	23.0	15.7	0.4	28.7
Dairy products	19.1	55.2	178.5	4.9	22.1
Fruit, vegetables, plants	4.9	11.5	12.3	1.6	29.3
Coffee, tea	3.2	6.2	16.3	1.0	25.5
Cereal & Preparations	3.5	16.3	68.3	1.3	17.6
Oilseeds, fats & oils	4.5	7.1	11.0	1.6	10.1
Sugars and confectionery	16.6	29.1	28.4	1.9	20.8
Beverages & Tobacco	15.4	19.2	15.4	3.6	41.8
Cotton	4.6	0.0	0.0	0.0	0.0
Other agricultural products	1.2	4.8	4.2	0.3	9.1

Note. From "World Tariff Profile 2011," by World Trade Organization, 2011

Table 12 MFN Applied Duties on Non-Agricultural Products in Selected Developed Countries in 2011 (%)

	USA	EU	Japan	Australia	Thailand
Fish & fish products	0.9	10.3	5.5	0.0	11.1
Minerals & metals	1.7	2.0	1.0	2.7	6.0
Petroleum	1.3	2.7	0.5	0.0	6.0
Chemicals	2.8	4.6	2.2	1.8	3.1
Wood, paper, etc.	0.5	0.9	0.8	3.3	6.9
Textiles	7.9	6.6	5.5	4.3	7.9
Clothing	11.7	11.5	9.1	8.9	30.3
Leather, footwear, etc.	4.0	4.2	12.0	4.2	12.5
Non-electrical machinery	1.2	1.9	0.0	2.8	4.1
Electrical machinery	1.7	2.8	0.1	2.9	7.6
Transport equipment	3.0	4.3	0.0	5.8	20.3
Other manufactures	2.3	2.7	1.2	1.3	10.3

Note. From "World Tariff Profile 2011," by World Trade Organization, 2011

non-agricultural products respectively. It can be seen that Thailand has very high MFN rates on agricultural products compared to Australia, USA, EU, and even Japan in many categories.

Australia applies higher tariff on non-agricultural sector than agricultural section in general. On the contrary, Thailand has a high applied average MFN rate for agricultural products. Trade weighted average of tariff protection in 2010 (Table 13) confirmed this point that Australia's protection remains on its non-agricultural products while Thailand's protection has been in agricultural sector.

On the subject of investment, Thai investment in Australia surpasses Australian investment in Thailand, even though Thai investors have only recently pursued opportunities in Australia. Australian investment in Thailand grew from $1.4 billion in 2009 to $2.1 billion in 2011, while Thai investment in Australia increased more than 10 fold from $1.3 billion to $13.4 billion over the same period. Thai business has invested in Australia's energy, infrastructure, agribusiness and tourism sectors. On the other hand, Australia has invested in Thai's Services and Infrastructures,

Table 13 Trade Weighted Average of Tariff Protection 2010

	Total	Agriculture	Non-Agriculture
USA	2.1	4.5	2.0
EU 27	2.8	9.9	2.4
Japan	2.1	11.2	1.3
Australia	5.2	2.8	5.3
Thailand	5.0	12.3	4.6

Note. From "World Tariff Profile 2011," by World Trade Organization, 2011

Table 14 Australian Investment Applications Totals by Sector, 2002–2012 (Jan–Apr)

Sector	Projects	A$ million
Agricultural	20	102
Minerals and Ceramics	5	258
Light Industry	31	89
Auto and Metal Processing	58	172
Electrical and Electronics	25	54
Petrochemicals, chemicals	10	61
Services and infrastructure	41	411
Total	190	1,147

Note. From Board of Investment of Thailand.

Minerals and Ceramics sector, Auto and metal processing sector, and agricultural sector respectively.

5. Conclusion

Beyond above mentioned, there remains enormous untapped potential for both Thailand and Australia as it appears that the two countries' endowments complement each other significantly. Thailand and Australia have a high degree of complementary in the various areas including market size, labor, technology, climatic condition, availability of capital, and mineral resources.

In relation to agricultural sector, there comes the third area of the complementarity – climatic condition. Thailand is in the Northern Hemisphere and has a tropical climate that experiences monsoonal influences. But Australia has several different climates due to its massive size of the continent. Because of its location in the Southern Hemisphere, Australia's seasons are opposite to those of Thailand. As a result Thailand and Australia are not going to compete with each other in the world market even though they are producing the same products. This is because same products will be in the market at different time of the year.

Investments between two countries look promising both investments from Thailand to Australia and Australia to Thailand. However, according to the Study of Australian Business in Thailand in 2012 by the Australian-Thai Chamber of Commerce (AustCham), Australia businesses appear to have overlooked Thailand even though Thailand offers ideal market for Australia's services industry to grow, particularly in business consultant, education and training.

However a complementary of resources between the two countries alone is not able to dictate trade and investments between the two countries. In terms of trade between the two countries, Australia is relatively more open than Thailand. Its tariff protection has been low particularly manufacturing products. This implies tariff concession under TAFTA is not high for Thailand compared with Most Favored Nation's rates or MFN while in some products tariffs are equal. Therefore Thailand has to compete with countries in the world market and mostly depends on competitiveness of Thailand's produce.

As far as investment from Australia is concerned, there are many factors other than complementarity. This is particularly true in the case of business practices and cultures in both countries as well as rules and regulations. This could be an issue that needed to be explored in detail if we want to increase investments between the two countries.

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