Succeeding Together

Maximising the potential for joint opportunities between Australia and Indonesia




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The Australia-Indonesia Centre

ANZ

pwc

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Foreword

The Hon. Andrew Robb AO, MP – Australian Minister for Trade and Investment

Australia is committed to building a closer and sustainable trade and investment relationship with Indonesia.

Our future prosperity will be built on successful and enduring commercial partnerships.

We need to focus on our industry strengths, where working better together will make us more competitive.

There is scope for renewed cooperation in sectors such as infrastructure, resources and energy, tourism, education and skills training, food-processing, textiles/fashion, animal products and logistics among others.

Working together will provide opportunities to gain greater access to value chains for our goods and services, particularly in the ASEAN region.

This report produced by the Australia-Indonesia Centre, ANZ and PwC examines ways to do this by utilising our shared comparative advantages.

The report highlights sectors in which industry and government can work together.

The approach complements the Australian Government's commitment to building closer trade and investment ties through trade agreements with China, Japan and Korea, and other broader trade initiatives including the ASEAN-Australia-New Zealand Free Trade Agreement, the continuing Regional Comprehensive Economic Partnership and the Trans Pacific Partnership.

In time, the Indonesia-Australia Comprehensive Economic Partnership Agreement will play an important role in encouraging investment and aiding our competitive entry to global supply chains.

I congratulate the Australia-Indonesia Centre on taking the initiative to highlight our mutual strengths and ANZ and PwC for their contribution.

The report is a valuable addition to Indonesia Australia Business Week, which aims to build long-term business relationships. I am sure it will stimulate much discussion.

The Hon. Andrew Robb AO, MP
Minister for Trade and Investment
Commonwealth of Australia

Why competitive advantage now?

The 'new normal' after the global financial crisis includes a few important structural and fundamental changes that face both Australia and Indonesia. These changes imply that both Australia and Indonesia need to find new sources of competitive advantage, as well as leverage the relationship to increase bilateral trade and investment flows. Four key changes are noteworthy.

First, global economic growth is expected to be on a slow growth trajectory for the next five years due to a slowdown in productivity growth as well as the shifting demographics in advanced countries. The slowdown in China is expected to result in lower GDP growth of 6 to 7 per cent compared to pre-crisis of 8 to 9 per cent. Chinese demand for goods and services from other countries is also likely to slow, which is the new reality facing primary commodity exporters such as Indonesia and Australia.

Second, global trade has not only slowed because of economic conditions, but studies have shown that the growth of trade has, in fact, halved since the global crisis.[1] In the 1990s, 1 per cent global economic growth led to 2.2 per cent growth in trade, but in the 2000s 1 per cent economic growth led to 1.3 per cent growth in trade. The main causes for this structural change are related to the maturation of global value chains (GVCs), especially in China, whereby more parts and components are produced domestically rather than sourced from other countries.

Furthermore, the trade slowdown is not as a result of increased protectionism but because the benefits of liberalisation from early reforms have already been achieved. Starting in the mid-1980s to early 2000, there was a lot of liberalisation and reform achieved due to unilateral actions, including World Trade Organisation (WTO) processes and regional agreements such as the ASEAN Economic Community. Average tariffs have come down from 30 per cent to less than 15 per cent in developing countries and from 10 per cent to 5 per cent in developed countries. Most intra-ASEAN trade and trade under the ASEAN-Australia-New Zealand Free Trade Area does not carry a tariff. The easy part of reforms, like tariff reductions, is complete and there is a need to address other more difficult reforms.

Third, there are fundamental changes in the Asian region. China will navigate to its new normal through structural reforms that will result in labour-intensive production being replaced by services and innovation, which in turn will change the nature of GVCs and the role of China as a hub. Other fundamental changes are related to the ageing of the population in Northeast Asia. In contrast, most of Southeast Asia is expected to enjoy a demographic bonus through to 2025/2030, and also continue to experience a growing middle class with increasing purchasing power.

Fourth, GVCs have become even more fragmented. As GVCs mature, the slowdown in growth is greater for manufactured products that are produced in vertically specialised industries. Technology and innovation, especially information communications technology, has also led to greater fragmentation, which involves not just goods but services. The fragmentation of GVCs offers opportunities for countries – individually or jointly – to identify parts or tasks within the value chain for which they have a competitive advantage. GVCs offer new opportunities for developing countries and small-and medium-sized enterprises to leapfrog to higher-value-added parts of the GVC. The agenda for the 2015 Group of Twenty (G20) major economies meeting identified that small-and medium-sized enterprises can be an integral part of the export value chain with lesser developed countries, which bring lower value added manufacturing and services because of lower entry costs and less capital intensity. Middle and higher income countries

[1] C. Constantinescu, A. Mattoo and M. Ruta. (2015), World Bank Policy Research Working Paper No. 7158

operate in higher value added activities with higher skills and specialisations.

These fundamental trends imply that countries like Indonesia and Australia will have to diversify away from their traditional strengths like resources to find new sources of competitive advantage. Each country could do this on their own, or together. Given complementarities and proximity between Indonesia and Australia, serious consideration should be given to the possibilities for joint development of competitive advantage to face the challenges ahead as well as to take advantage of the opportunities opening up. This is, of course, the subject of this study and thus its recommendations could not come at a more timely moment.

Mari Pangestu
Former Minister of Tourism and Creative Economy (2011-2014)
and Former Minister of Trade (2004-2011)
Republic of Indonesia

Glossary

AANZFTA	ASEAN-Australia-New Zealand Free Trade Area
ABS	Australian Bureau of Statistics
AEC	ASEAN Economic Community
ANZCERTA	Australia-New Zealand Closer Economic Relations Trade Agreement
ASEAN	Association of Southeast Asian Nations
AUD	Australian Dollar
Bn	billion
CAGR	compound annual growth rate
DFAT	Australian Department of Foreign Affairs and Trade
FDI	foreign direct investment
FTA	free trade area
G20	Group of Twenty
GDP	gross domestic product
GLI	Grubel-Lloyd index
GSP	General System of Preference
HS	Harmonised System
IA-CEPA	Indonesia-Australia Comprehensive Economic Agreement
IMF	International Monetary Fund
IIT index	intra-industry trade
LNG	liquefied natural gas
LoI	Letter of Intent
LPG	liquefied petroleum gas
MER	market exchange rate
NIL	Negative Investment List
OBM	original brand manufacturing
ODM	original design manufacturing
PTA	preferential trade agreement
R&D	research and development
RCA	revealed comparative advantage
RIRDC	Australian Rural Industries Research and Development Corporation
SMEs	small and medium enterprises
STM goods	simply transformed manufactured goods
TPP	Trans Pacific Partnership
trn	trillion
USD	United States Dollar
VAT	value added tax
VET	vocational education and training
WTO	World Trade Organisation
Y/Y	year-on-year

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Executive summary

The shared opportunity: combining, creating and selling

With a three-trillion-dollar opportunity opening up in South East Asia, the timing could not be better for Indonesia and Australia to work together in new ways to increase trade and investment.

The growth in trade within the Association of Southeast Asian Nations (ASEAN) economy and from ASEAN members to their major trading partners provides opportunities on multiple fronts related to trade and investment. In the first instance at least a trillion dollar opportunity can be identified in foreign direct investment (FDI); a vital enabler to accessing the very strong growth in intra-and extra ASEAN trade. There is the potential for as much as USD3 trillion (trn) in trade growth over the next decade.

Indonesia and Australia can enhance shared benefits by rethinking some of the fundamentals underpinning the existing commercial relationship. Importantly, the shared benefits can be achieved by combining emerging complementary comparative advantages to create competitive advantages (see Box 1). Together, the aim of these joint competitive advantages will be to capture the growing opportunities presented by shifts in global supply chains.

For Indonesia, these shifts could potentially stimulate a second manufacturing revolution akin to that experienced in the late 1980s when the newly industrialised economies of north Asia moved their manufacturing capacity south.

For Australia, the shifts present opportunities for adding value to physical, biological, intellectual and service-rich resources.

In short, these shifts are highly favourable to those strategic partnerships that show characteristics beyond traditional modes of two-way bilateral trade.

The mode advocated here is that of combining comparative advantages, creating competitive advantages, and selling into third markets.

Box 1: Comparative and joint competitive advantages

Comparative advantage occurs when an economy can produce goods more efficiently (or at a lower opportunity cost) than its competitors. Australia and Indonesia have historically had a comparative advantage in producing animal, vegetable and food products as well as minerals and fuels. Australia's strongest comparative advantage is in minerals (iron ore) followed by animal products (beef and mutton); while Indonesia's strongest comparative advantage is in footwear followed by vegetable products (palm oil) and coal.

Joint competitive advantage emerges when comparative advantages can be combined in ways that enable the partnership to work together to compete and win market share over competitors. Implicit in this is finding or creating synergies in the process of combining the advantages so that competitiveness is enhanced.

Competitive and comparative advantage can change over time. For example, as some countries have transformed their economies from low to middle to high income levels, they have conceded some advantages such as low labour costs while gaining others such as sophisticated knowledge and technology. Because this is a forward looking report, it deals with the important distinction between static and dynamic comparative advantage.

The shared imperative: Act now

An immediate call to action is needed for three reasons:

1. Global supply chains are a fundamental dynamic of international trade and neither country can afford to operate exclusively outside of these.

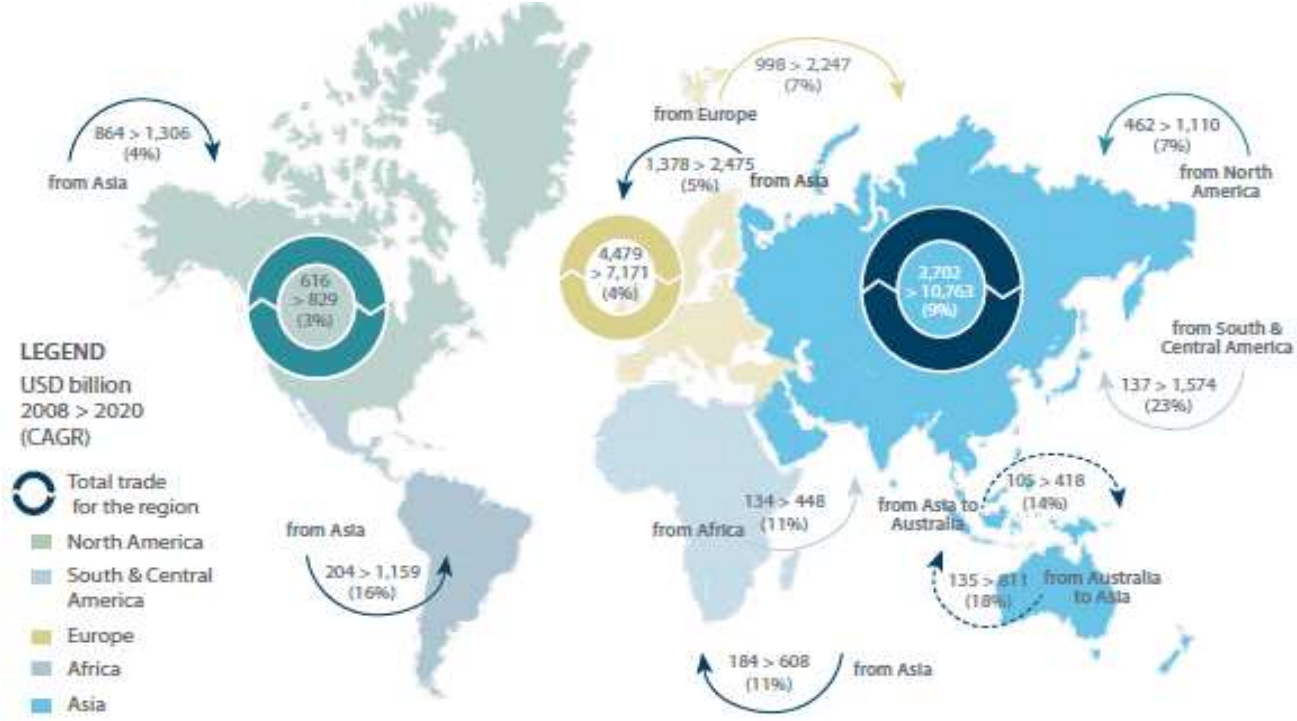
2. Asia is the dominant global economic hub, the axis of which is moving south east towards the immediate region. Opportunities surround Indonesia and Australia now, but these will be captured by other countries if there is no action.

3. While both countries seek to consolidate and strengthen domestic economic security to varying degrees, both are also acutely aware of the opportunities presented by an emerging generation of entrepreneurs keen to capture global returns.

The shared platform: The Asian convergence

The size of the Australian and Indonesian economies – 12th and 16th largest respectively – suggests that their trade flows should be strong. Fortunately some pre-conditions for this are converging. Together both economies are situated in the centre of the world's largest and fastest-growing trade hub, reflected in and driven by rising demand for a wide range of products and services in northern Asia (see Figure 1).

Figure 1: The shared platform – The Asian convergence



Source: Oliver Wyman. 2012, 'The Future of Asian Banking: Volume 2'

At the same time, the world is moving into a second phase of the Asian Century, with capital flows from North Asia spreading quickly to the south. The sense is that the economic centre of gravity within Asia is shifting south and east, thereby creating a 'Factory Asia' in our immediate region.

The south-easterly drift is destined to benefit Indonesia's younger, lower-cost and demographically endowed labour force. Additionally, the shift of capital flows is coinciding with an urbanisation of Indonesia's population. It can be expected that this will result in a rise in aggregate income and that a large consuming class will rapidly emerge.

Conceivably Indonesia's growing domestic market could consume all that it can produce, resulting in a declining capacity to export. While a larger Indonesian middle class will present opportunities for Indonesian and Australian small-medium-sized businesses to engage in joint ventures, additional benefits may arise by creating the efficiencies Indonesia needs to reduce its reliance on imports while increasing its capacity for export growth.

In summary, global supply chains are being competitively transformed as nations jockey to gain advantages by harnessing rapid shifts in technology, systems and services. With these global and regional issues in focus, this study puts the case that Indonesia and Australia have much to gain by

responding quickly and that in doing so both economies can 'succeed together'.

This report

This report, a product of Indonesian and Australian collaborators, provides an evidence-based argument that the opportunities to capture a significant part of a multi-trillion dollar market are real and that capturing them through combining, creating and selling are, in the words of ANZ CEO Mike Smith, 'attainable without having to do too much to make them happen.'

Through this report, an invitation is extended to policy makers, industry groups and individual businesses to think innovatively about a trade and investment relationship based on joint competitive advantage, and to respond strategically to the opportunities that exist.

The findings

The study shows that the scope for improving the Australian and Indonesian commercial relationship exists; it depends on the willingness of various stakeholders in both countries to act to realise these gains and make the most of these emerging joint competitive advantages.

Indonesia's comparative advantage has been relatively static over the past decade as has Australia's. That dynamic is expected to change for both economies, especially for Indonesia, given less reliance on exports of natural resources in future years. Box 2 outlines the projected advantages of both Indonesia and Australia.

Indeed, an important finding is that for Australia and Indonesia much of the comparative advantages are not static; they are dynamic and evolving over time. More broadly, and most importantly, the report finds that the timeline with which comparative advantage evolves is shortening.

In the ASEAN and Indonesian context, and by including the Australian corridor, the formation of the ASEAN Economic Community (AEC) as a key multilateral development may prove to be an enabler of dynamic comparative advantage changes for both economies.

'The regional impact of the economic transformation currently unfolding in China cannot be underestimated. New opportunities for opening investment and trade and to collaborate in penetrating regional and global value chains in products and services are unfolding very quickly. In spite of near-term challenges, regional economies such as Indonesia and Australia need to move fast together to take effective advantage of this trillion dollar bonanza.'

- Dr Raoul Oberman, Emeritus Director, McKinsey & Co

Box 2: Projected advantages

Based on President Joko Widodo's development agenda outlined thus far, **Indonesia** is expected to develop industries serving and supporting regional production chains for which Indonesia will initially supply raw materials. Should the structural reforms and transformations and infrastructure investments be successful, Indonesia can be expected to also make headways into industrial sectors such as:

- agro-industrial production for export and domestic market
- consumer products and production equipment
- using the textile sector as a launching pad for simply and elaborately transformed manufacturing
- given the size of the domestic population and likely demand for vehicles, Indonesia is also expected to emerge as a key player in the regional automobile sector (production, design, assembly) in coming decades.

Australian comparative advantage has remained relatively static over the past two decades. However, as the Australian dollar has retraced significantly and competitiveness returns to Australian services exports, a more dynamic comparative advantage is expected to reveal itself in coming years. As Indonesia and the ASEAN enter a demographic sweet-spot more aligned with demand for services in which Australia has a comparative advantage such as health, education and agro-processing, the services sector will increasingly become an area of mutual benefit.

The most likely near-term change will be a rotation from Australia's fuel exports which have primarily been coal to liquefied natural gas (LNG). Australia's LNG export volumes will rise rapidly over the next few years as the extra capacity created by the LNG investment boom comes on-stream. By 2018, Australia will rival Qatar as the largest exporter of LNG in the world.

This study focuses on:

- Two Indonesian sectors that have a comparative advantage over Australia:
  - Textiles/Fashion.
  - Food-Processing.
- Two Australian sectors that have a comparative advantage over Indonesia, including:
  - Logistics.
  - Animal Products.

These four sectors were selected for this study for several reasons:

- The analysis found that Indonesia or Australia has existing comparative advantages in these sectors because of their long-term expertise or experience in developing their respective sectors.
- Existing comparative advantages in these sectors indicates that there is capacity for both countries to achieve joint competitive advantages.
- Achieving joint competitive advantages in these sectors will assist the Australian and Indonesian economies to subsequently tap into larger regional and global value chains.

Accompanying case studies provide lessons for the innovation that will be required to build on or capture other existing and emerging opportunities.

An important message received through interviews with stakeholders is that the findings of the report and its subsequent recommendations are pertinent to a range of businesses. This study acknowledges that in addition to the large established companies of both countries, Australia's small–medium-sized businesses play a pivotal role in the Australian economy and that the expansion of small-medium-sized businesses in Indonesia will be critical to the overall growth of its economy.

In fact, small and medium enterprises (SMEs) are an integral part of both Indonesian and Australian economies. In Indonesia they account for more than 95 per cent of total firms and are responsible for more than 90 per cent of total employment, while in Australia they account for approximately 96 per cent of all businesses and 63 per cent of total employment. With greater trade liberalisation it can be expected that the importance of small- medium-sized businesses in each economy will continue to grow.

The innovation and entrepreneurialism required to capture competitive advantage from combining comparative advantages can, and will need to, emerge from businesses at every level.

A similar level of thinking is also required to emerge from our respective governments, industry bodies and supporting academic institutions.

The recommendations

This report puts forward two sets of recommendations:

- **Enabling recommendations**. These steps and themes – aimed at creating an environment conducive to investment and partnerships – are broad and may be applicable across a broader range of industries.
- **Sector-specific recommendations**. These are considered to be necessary steps to advance joint competitive advantages in the four sectors.

These recommendations have been developed after research was aligned with interviews conducted in both nations with government and business leaders.

The recommendations and prospective sectors identified in this report are the result of a preliminary analysis. Further research and work is recommended to build on this analysis, particularly towards identifying other sectors that are equally worth focusing on to achieve joint competitive advantages. Both economies will benefit from their neighbour being healthy and vibrant, however Australia and Indonesia need to be more ambitious in how they think about their relationship and the possibilities it brings for the future.

Enabling recommendations

1 Favour a new approach to trade and investment

Both governments have recognised the importance of accelerating cooperation in key sectors of interest. The Indonesia Australia Partnership on Food Security in the Red Meat and Cattle Sector is a strong example of how the nations are working to create stronger business partnerships that could result in competitive advantages in third markets. Deeper business ties will build trust in the relationship and provide greater ballast in times of differences. It is recommended that both governments explore opportunities for applying similar creative approaches in those sectors with the greatest potential for shared competitive advantage.

New approaches to cooperation should include policy-makers seeking the input of multiple stakeholders from both economies who can inform policy dialogue through their expertise. These stakeholders can include businesses, industry or peak body representatives that are familiar with the commercial environment and academics who can assist with research or provide support studies.

New approaches to cooperation should also encourage meetings between officials from relevant ministries/agencies from both economies on a more frequent basis. The purpose of these meetings will be to identify and pursue opportunities to better align commercial potential into regional and global value chains.

2 Create a better business and investment environment

Investment is the key to developing and driving competitive advantage, and investment is more likely to flow in a supportive environment. Australia can assist Indonesia with governance, policy development, and legal and regulatory settings.

In both countries regulation is particularly costly for businesses that operate in global markets. These businesses rely on the efficiency of the domestic regulatory and administrative setting to ensure that their competitiveness is not harmed. Regulations that are overly-prescriptive can lead to direct costs (i.e. time and money to ensure that paperwork complies with regulations) as well as indirect costs (i.e. less time or budget to focus on innovation). The costs of doing business should be minimised to encourage business efficiency and to attract investors to establish new operations. Both Australian and Indonesian businesses can benefit by a simpler regulatory environment in both countries to ensure productivity and facilitate opportunities for trade.

The ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) and the Indonesia Australia Comprehensive Economic Partnership Agreement (IA-CEPA) negotiations should be used to identify specific regulations that restrict or inhibit the potential for joint commercial collaboration so as to accelerate mutually advantageous investment conditions and opportunities.

For the Textiles/Fashion sector, both countries can achieve joint competitive advantages through a simplification and acceleration of licensing procedures; an opening up of the trade regime to allow for the freer flow of goods, services and workers from the two countries; and via reforms in their respective tax systems (i.e. expeditious processing of refunds and allowances).

The Food-Processing sector can benefit from a relaxing of Indonesia's Negative Investment List (NIL) that determines the openness of its investment regime.

For the Logistics sector, the legislation environment in both countries should be made consistent to assist businesses when investing in joint ventures in either Indonesia or Australia.

The Animal Products sector could similarly benefit from a further streamlined registration process in both countries to encourage small to medium sized businesses to trade with their counterparts by lowering delays and allowing them to realise their return on investment quicker.

3 Improve infrastructure

Transport infrastructure (i.e. railways, roads, seaports, airports) and the services provided by the logistics sector are crucial for moving goods and services to and from exporting and importing countries. Good infrastructure and efficient logistics sectors can therefore support trade in both Australia and Indonesia.

Improving infrastructure connectivity between eastern Indonesia and northern Australia can increase economic cooperation between the two economies. Enhancements to these areas can further reduce trading costs and permit greater opportunities to reveal joint competitive advantages to enter third markets together.

Australian capability in infrastructure development, notably through Infrastructure Australia and the Global Infrastructure Fund, should be leveraged by Indonesia.

Infrastructure policies and plans also need to ensure that the digital infrastructure is deployed to assist Australian and Indonesian firms and consumers to transition to a digital economy.

This step mainly involves efforts by both countries towards two specific industries, as outlined in the case studies included in this report.

The Logistics sector can benefit through possible Australian/Indonesian government or industry investment in ports infrastructure in both countries to help tailor bilateral trade to specific exports (i.e. livestock exports require greater refrigeration facilities at ports in both countries).

The Animal Products sector can similarly benefit from the establishment of key facilities in targeted locations. For example, raw Australian wool can be exported to Indonesia upon establishment of an early stage wool processing facility in Indonesia. This would allow both economies to jointly approach third markets.

4 Build skills and capacity requirements

Australia has high wage costs, which is an impediment to growth, while Indonesia has a large pool of lower-cost and skilled workers, and a huge demographic dividend. For Indonesia to cascade up value chains and avoid the middle income trap, it will need skills development.

An educated labour force does not necessarily mean that graduates are entering the labour market with the right skills. It is therefore important for Australia and Indonesia to develop and re-align the skillsets of its existing and future labour forces to leverage the opportunities created by greater trade facilitation between the two economies and third markets. Appropriate skillsets are particularly necessary for those entering the labour force who may be involved with the production or provision of goods/services in the near future that each economy has a comparative advantage in.

Australian firms can transfer their knowledge and expertise to their Indonesian counterparts in order to achieve joint competitive advantages. Implicit in this knowledge transfer is suitably targeting Indonesia's expanding capacity and growing labour force (i.e. Indonesia's total working age population is expected to be close to 175 million by 2050). Efforts are required by both economies to ensure that any knowledge transfer is directed appropriately to Indonesia's generous demographic dividend.

Developing partnerships in the areas of vocational education and training (VET) can assist in this process. Partnerships can be developed directly between industry and training centres or via collaboration with training institutions of both countries and their respective industries.

The challenge is urgent: Indonesia cannot cascade up value chains and avoid the middle-income trap if skills are not addressed; and Australia needs to address its high wage base. Despite its higher wage costs, Australia is ideally positioned to help. The IA-CEPA Skilled Workforce Pilot recommended by the Business Partnership Group – 'to support increased skills development in Indonesia and Australia by facilitating easier movement of skilled people between countries and increased capability transfer'[2] – should be accelerated and formalised.

Logistics: Australian SMEs should collaborate with Indonesian firms of a similar size to tap into Indonesia's growing capital base. Additionally, Australian businesses that have expertise in road/rail transportation can work with Indonesian firms to train their employees in using advanced manufacturing or processing equipment.

Animal Products: Indonesian wool producers can benefit from Australian knowledge in wool spinning, weaving and product development.

Textiles/Fashion: Australian textile firms can collaborate with Indonesian firms to assist in upgrading their technological capabilities for manufacturing.

Food-Processing: Indonesian SMEs in the sector can benefit from the lessons of their Australian counterparts in using advanced technology for production of certain animal by-products. Similarly, Australian small processors could leverage Indonesian techniques for energy-efficient production, such as methane-recycling in tofu production.

[2] Indonesia-Australia Business Partnership Group. (2012), Position Paper on Considerations Towards the Indonesia-Australia Comprehensive Economic Partnership Agreement, p54

5 Empower business

Maximising the competitive advantages of Australia and Indonesia cannot be achieved through steps that require government efforts alone.

Businesses in both economies should embrace policy reforms where applicable and re-orient their thinking to facilitate mutually advantageous trade and investment opportunities. To support businesses in this exercise the IA-CEPA Business Partnership Group recommendations on facilitating investment access should be progressed and formalised.

This is especially important given that shifts in relative comparative advantages between the two economies indicate that Australian and Indonesian firms are increasingly partners, not competitors, in any regional trade. In this environment businesses should be seeking to cooperate along the value chain to identify cross-border value chains that allow participants in their country to focus on their comparative strengths within the value chain.[3]

This step can be applied to all industries considered in the case studies, albeit through different methods.

In the Textiles/Fashion sector, where Indonesia has a comparative advantage, Australian and Indonesian designers can collaborate to create designs that suit Australian and wider Western preferences. The designers can further collaborate to determine customer preferences in Australian and other economies to strengthen market access for new and jointly developed products.

The Food-Processing sectors of Australia and Indonesia can benefit through efforts led by businesses associations within both economies to develop a robust economic case to encourage the Indonesian government to relax the next issued NIL (updated every six months).

Businesses in the Logistics and Animal Products industries in Australia can benefit similarly through coordinated efforts with their Indonesian counterparts.

Australian businesses in the Logistics sector, for example, can function as the promoters and executers of projects with Indonesia to approach third markets and further facilitate the introduction of products from third markets into Indonesia.

With regard to the Animal Products sector, research and development (R&D) projects could be jointly conducted in the area of livestock genetics with the aim of boosting profitability throughout cattle, sheep and goat value chains. Joint projects could be further conducted in feeding, finishing and nutrition R&D to increase productivity and profitability of producers in both economies.

[3] Indonesia-Australia Business Partnership Group 2012, Position Paper on Considerations Towards the Indonesia-Australia Comprehensive Economic Partnership Agreement, p53

Sector-specific recommendations

6 Develop competitive advantages in Textiles/Fashion

- **Encourage Australian firms to invest in Indonesia**. The textile industry in Indonesia needs large investments for its revitalisation. The barrier for Australian investors is Indonesia's complicated business climate. Simplifying and accelerating licensing procedures is an important first step. Opening the trade regime will allow for the freer flow of goods, services and workers from the two countries. Reforms to the tax system in both countries are required for expeditious processing of refunds and allowances.
- **Collaborate for product diversification**. Technical collaboration in upgrading the technological capabilities in textiles manufacturing can benefit both countries. Australian know-how in producing high-quality fabrics such as wool-based products can assist Indonesian textile manufacturing to diversify wool products.
- **Expand in Australia**. Australian designers can collaborate with Indonesian designers to work on designs that suit Australian and wider Western preferences. Additionally, for market access of new products, both parties could collaborate to determine customers' preferences both in Australia and in third countries for export. The ASEAN-Australia-New Zealand Free Trade Agreement will be crucial to fully maximise the benefits of market access granted under the Free Trade Area (FTA).

7 Develop competitive advantages in Food-Processing

- **Upskill Indonesian firms to use advanced technology for production.** Indonesian companies, particularly small- and medium-sized firms, can benefit from Australian expertise and thereby increase the capability of the Indonesian food-processing industry in meeting international standards.
- **Share information about export markets with Indonesian firms**. Australian food-processing firms can share their knowledge of the international market with Indonesian firms. The incentive for Australian producers is greater access to Indonesia's large domestic market while Indonesian producers may benefit through increased exports. This can be achieved via direct investment – or establishment – of Australian food-processing producers in Indonesia. This can facilitate joint access and greater exports for both countries in the wider region and to global markets.
- **Encourage food-processing business associations (and other relevant associations) in both countries to collaborate**. These associations can work together to gather necessary information and share it with food producers in Australia to minimise transaction costs to invest for Australian producers. Additionally, business associations should develop economic cases to encourage the Indonesian government to relax the NIL (updated every six months).

8 Develop competitive advantages in Logistics

- **Simplify the regulation/legislation environment in Indonesia**. Consistent legislation will encourage Australian companies to undertake joint ventures with Indonesian businesses.
- **Transfer knowledge/expertise.** Capitalise on Indonesia's growing capacity and generous demographic dividend by training Indonesian firms in both road and rail transportation equipment/machinery.
- **Build relevant infrastructure to support bilateral trade**. There may be opportunities for possible Australian/Indonesian government or industry investment in ports infrastructure in both countries to help tailor bilateral trade to specific exports (i.e. livestock exports require more refrigeration facilities at ports in both countries).
- **Collaborate with counterparts to enter third markets**. Businesses in both countries can coordinate their efforts to approach third markets via joint ventures. For example, Toll Global Logistics currently benefits from a joint venture with an Indonesian dairy company based in Jakarta. This joint venture successfully combines the comparative advantages of the Australian logistics and Indonesian food-processing sectors to approach third markets together.
- **Explore opportunities for collaboration in the logistics of energy**. Australia's strength in the logistics of energy production and distribution (e.g. liquefied petroleum gas, or LPG) should be embraced by Indonesia to capture the benefits of proximity in energy supply.
- **Explore opportunities for collaboration in data management and facilities to support logistics capabilities.** Strong data capabilities will be key for Indonesia to cascade to higher value logistics-heavy supply chains (e.g. airlines, ports, etc.).

9 Develop competitive advantages in Animal Products

- **Simplify the regulation/legislation environment.** A more balanced and predictable approach to setting import quotas for goods in Indonesia may lead to growing business opportunities between Australia and Indonesia. Additionally, a more streamlined registration process may encourage small Australian businesses to trade with Indonesia by lowering delays and allowing them to realise their return on investment quicker.
- **Establish facilities in targeted locations**. For example, wool exports to Indonesia cannot be in the form of raw wool currently. Wool must be processed in Australia prior to being sent to Indonesia. The establishment of an early stage wool processing facility will assist both countries to jointly approach third markets.
- **Upskill existing labour force**. Indonesian and Australian producers of goods and services can benefit from the knowledge and expertise of each other's workers to make their skills and subsequently their products or services more relevant to their domestic markets.
- **Undertake joint R&D projects**. Joint R&D projects can potentially be conducted in areas of livestock genetics to boost profitability in cattle, sheep and goat value chains. Joint projects may also be conducted to increase productivity and profitability of producers in both countries for feeding, finishing and nutrition.

02
The Australia-Indonesia realities

- Australia and Indonesia have the 12th and 16th largest economies and are neighbours. Normally, this would give rise to a strong and sustained trade relationship, yet bilateral trade flows between them are relatively weak. Indonesia is not in Australia's Top 10 trade partners while Australia just scrapes into Indonesia's Top 10.
- Quite understandably, Australia and Indonesia have both looked north for trade and have benefited greatly from China's phenomenal growth from 2001-2011. Both economies are, however, undergoing a transition as the Chinese economy slows. In essence, Australia and Indonesia are experiencing negative terms-of-trade shocks and the transfer of income to the rest of the world that it implies.
- There are, fortunately, some green shoots. Based on current projections and recent trends, there is potential for strong growth in the exports of agricultural goods (by Australia) and machinery and transport goods (by Indonesia). For Indonesia in particular, recent developments such the election of President Joko Widodo and his planned medium-term economic reforms are designed to boost domestic production and spur economic growth. The Indonesian economy will also benefit from a much-needed capital spending program, which will lift the capacity of the Indonesian economy.
- Intra-industry trade is evident in areas of low-value-adding manufacturing, where Indonesia has a greater comparative advantage, but less evident where Australia or both countries trade according to comparative advantage (including animals, vegetables and minerals).
- The gradual shift away from China has encouraged Australia and Indonesia to strengthen economic ties within their more immediate region. The 2012 IA-CEPA negotiations can be regarded as fresh efforts by both countries to improve the existing trade relationship and foster greater economic cooperation.
- Investment – both domestic and from other nations – will drive growth in both nations. Indonesia needs capital to cascade up value chains, and Australia needs this to occur to supply Factory Asia with energy, education and health services.

2.1 The Australian and Indonesian economies

There is an indisputable logic that, if only because of our proximity as neighbours (i.e. with the attendant lower logistics costs), Australia and Indonesia should naturally be economic partners.

There is more to this relationship, however.

Australia and Indonesia are neighbours but not twins (Table 1). Rather, the economies are complementary around key success/competition factors – particularly FDI and human capital – which can dynamically drive competitive advantage:

- Australia is generally very effective at attracting FDI. This is due to the maturity of governance, ease of doing business and human capital aspects, all of which Indonesia needs to compete in the AEC. Both Australia and Indonesia need capital, but Australia can help Indonesia with governance requirements necessary to attract FDI, without which, Indonesia risks not being able to compete with its ASEAN competitors.
- Demographics and labour forces are mutually favourable, including Indonesia's abundant cost-competitive labour force, versus Australia's generally more highly educated, but expensive labour force. IA-CEPA should enable this, including via liberalisation of visa requirements.[4]
- Indonesia has demonstrated capability in simply transformed manufactured (STM) goods, and Australia needs access to this, including in textiles/fashion, food-processing, etc.

Table 1: Key comparative facts about Australia and Indonesia

	Australia	Indonesia
Geography		
Geography	Continent	Archipelago
Land Size	7.7m sq km	1.9m sq km
Arable Land (% of total)	11.1	13
People and Society		
Population	24 million	255 million
Population composition	Multicultural	Hundreds of indigenous ethnic groups
Urban Population	89%	53%
Urban population growth	1.7 (2014)	2.6 (2014)
Labour Force	12.37m	124.3m
Life Expectancy at Birth Female/Male	84/80	73/68
Labour Force	12.2 million	120.3 million
Labour force with Primary education (% of labour force)	27.3 (2008)	53.5 (2008)
Labour force with Secondary education (% of labour force)	38.9 (2008)	22.3 (2008)
Labour force with Tertiary education (% of labour force)	33.8 (2008)	7.1 (2008)
Median age of population	38.3 years	29.2 years
Total Dependency ratio	0.5	0.51
Income share held by lowest 20% (% of pop)	7 (2003)	8 (2010)

[4] See Indonesia-Australia Business Partnership Group 2012, Position Paper on Considerations Towards the Indonesia-Australia Comprehensive Economic Partnership Agreement,

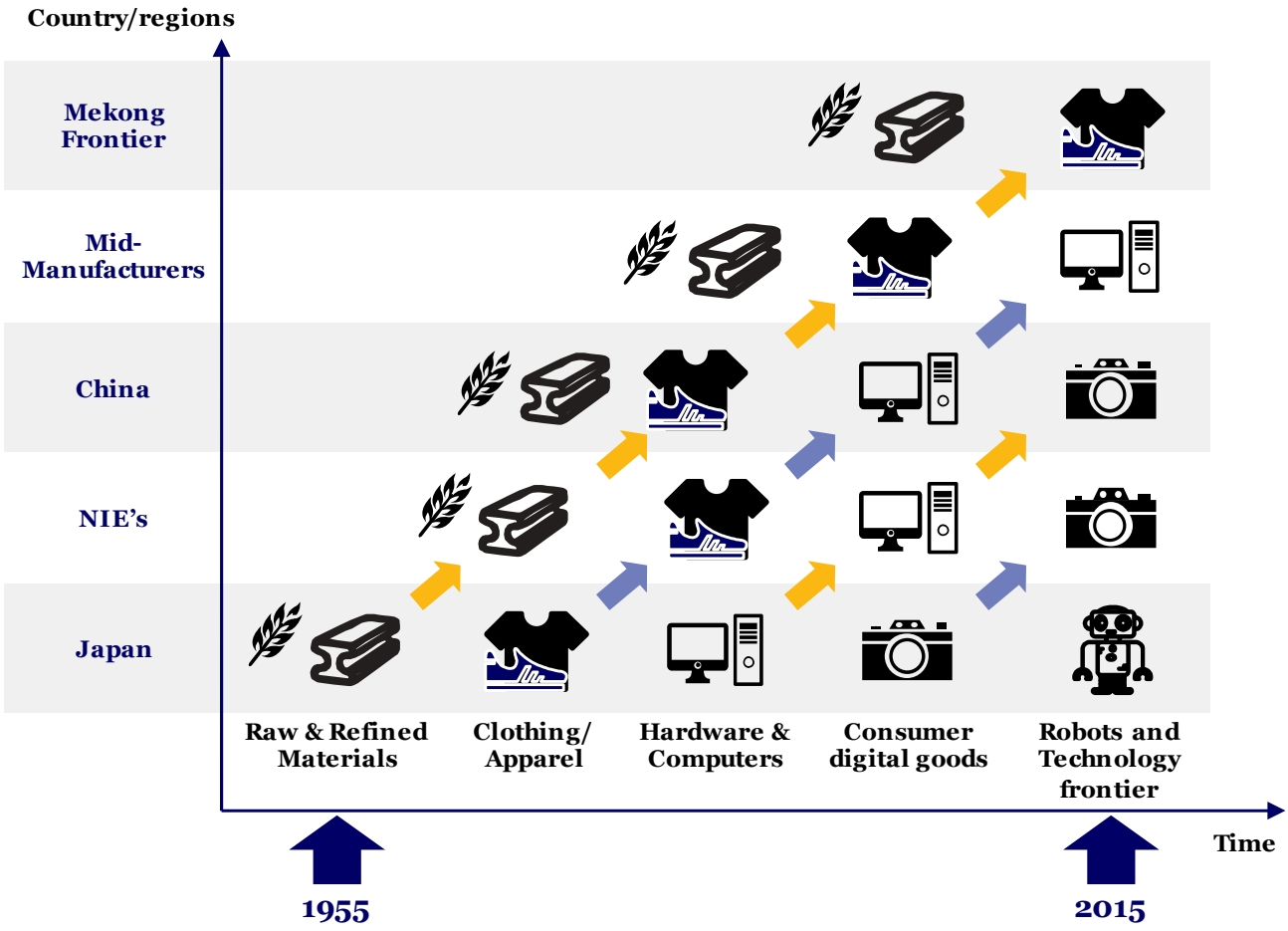
	Australia	Indonesia
Economy		
Nominal GDP	USD1444.2bn (2014)	USD888.6bn (2014)
Industry	Mining, industrial and transportation equipment, food-processing, chemicals, steel	Petroleum and natural gas, textiles, automotive, electrical appliances, apparel, footwear, mining, cement, medical instruments and appliances, handicrafts, chemical fertilizers, plywood, rubber, processed food, jewellery, and tourism
Household final consumption (% of GDP)	55.8 (2014)	56.6 (2014)
Government expenditure (% of GDP)	17.6 (2014)	9.5 (2014)
Gross capital formation (% of GDP)	27 (2014)	34.7 (2014)
Total trade (% of GDP)	42.3 (2014)	48.1 (2014)
Documents to Export/Import	7-May	8-Apr
Domestic credit to private sector	130	40.1
Ease of doing business	10/189	114/189
Agriculture value added (% of GDP)	2.5	13.7
Government expenditure on Education (% of GDP)	4.9	3.6
Tertiary enrolment (% of gross population)	89	32
FDI (net inflows) USD bn	51.7	23.3
Trade		
Trade in Services (% of GDP)	8	6.4
Merchandise Trade (% of GDP)	32.9	39.9
Exports of Goods & Services (% of GDP)	20.9	23.7
Top exports products	Coal, iron ore, gold, meat, wool, alumina, wheat, machinery and transport equipment	Palm oil, oil and gas, ores and slags, electrical appliances, plywood, textiles, rubber
Top export partners	China, Japan, South Korea	Japan, China, Singapore, US and South Korea
Top import products	Machinery and transport equipment, computer and office machines, telecommunication equipment, crude oil and petroleum products	Machinery and equipment, electronic equipment, chemicals, fuels, foodstuffs
Top import partners	China, US, Japan, Singapore and Germany	China, Singapore, Japan, South Korea and Malaysia

Together these elements provide the opportunity for Indonesia is to cascade up value chains (see Figure 2) if it can satisfy FDI and human capital requirements.

As Australia, via the Australia-Indonesia corridor, is likely to be embedded into ASEAN production chains, the Australia-Indonesia relationship cannot be considered in isolation from the Australia-Indonesia-ASEAN triangular relationship. Moreover, ASEAN will increasingly become the new 'factory of the world', a role China is abdicating as it rebalances its economy away from production and manufacturing and towards services and consumption.

China's de-industrialisation will lead to increased fragmentation in the ASEAN trade networks will spur trade and FDI within ASEAN and with ASEAN's key partners, likely to be dominated by China in coming years. 'Fragmentation' means the process by which multinational enterprises break up the manufacture of their more elaborate goods into components. Globalisation has caused production to become more fragmented and supply chains to become longer and more complex.

Figure 2: Industrialisation and the process of cascading up value chains

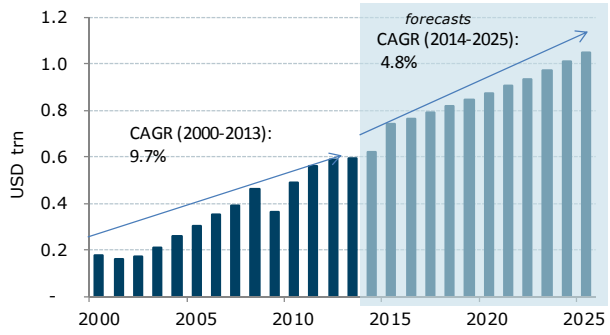


Source: ANZ 2015

In ASEAN's case, this process has evolved into remarkably complex networks**.** Not only is trade vertically integrated within companies and supply chains, it is also distributed across economies and labour forces as companies look to fully exploit specialised pools of labour. A key factor in the development of these highly sophisticated supply chains has been FDI, particularly from multinational enterprises over the past decade.

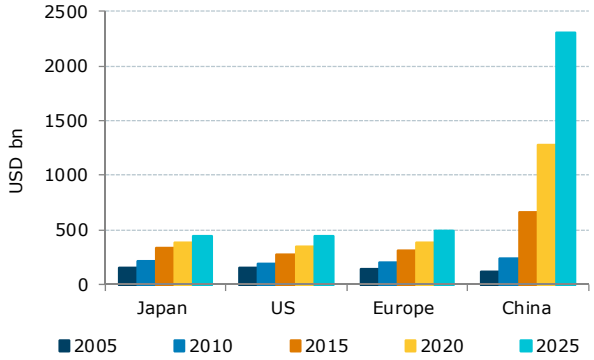
Such deepening cross-ASEAN relationships have stimulated both the growth in trade within the ASEAN economy (Figure 3), and from ASEAN members to their major trading partners (Figure 4).

Figure 3: Compound annual growth rates for intra-ASEAN trade



Source: ANZ 2015

Figure 4: Projections for extra-ASEAN trade



Source: ANZ 2015

The size of the prize for both Australia and Indonesia of collaboratively linking into global supply chains that directly feed into a rebalanced Chinese economy is at risk of being vastly under-estimated.

China's growing urban middle class will more than double its spending over the next 15 years, helping lift China's consumption, as a portion of GDP, to almost 50 per cent. By way of comparison, that means China's consumption in 2030 would exceed US GDP today and the growth in consumption between now and then would exceed the euro area's GDP in 2014.

These new opportunities are already becoming apparent across multiple sectors in which Australia and Indonesia are identified as having both individual and joint comparative and competitive advantages. New and/or deeper opportunities are already arising as the discretionary spending power of China's urban middle class grows. For Australia and Indonesia, those opportunities include:

- High quality iron ore and base metals for housing and automobiles.
- Coal, LNG, mineral fuels and chemical products to meet increasing energy needs.
- Education services.
- Agriculture and Aquaculture, both fresh, refined and processed.
- Tourism.
- Demand for health, finance and construction services on the ground in China.

With a potential FDI prize of around USD1trn and a potential trade size of between USD3-4trn just for ASEAN trade with China, it is vital that Australia and Indonesia identify their joint competitive advantages and work constructively together to realise them, to be able to capture as large a slice of this prize as possible for the mutual benefit of each country.

What follows is a snapshot of the Australian and Indonesian economies in terms of output, labour force, trade, industry structure, and how recent trends have shaped these variables.

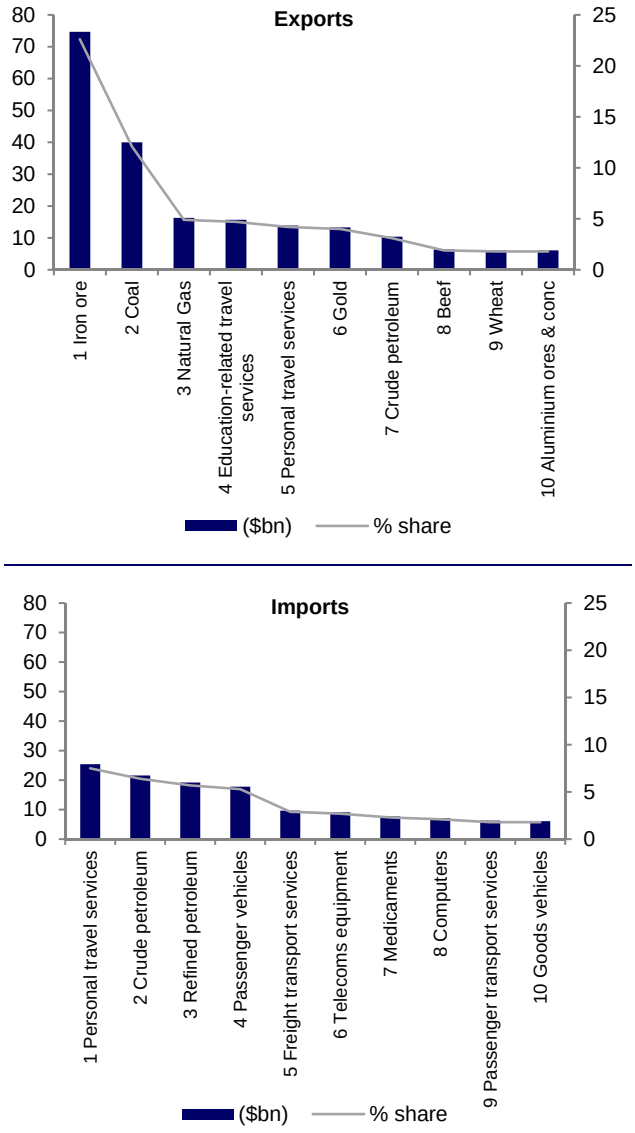
2.1.1 The Australian economy

The Australian economy is the 12th largest in the world. Total output, as measured by gross domestic product (GDP), is around AUD1.60 trn per year. GDP per capita was AUD67 thousand in 2014, making it the 15th wealthiest economy in the world according to the International Monetary Fund (IMF).

The Australian economy employs about 11.7 million people to achieve this level of production. The unemployment rate has fallen from as high as 11 per cent in the mid-1990s to approximately 6 per cent in 2015.

Australia's chief exports are raw materials, including iron ore and coal, while some services, including education and tourism, are also very important. Australia's primary imports are tourism, energy and cars. Figure 5 provides a breakdown of Australia's key exports and imports.

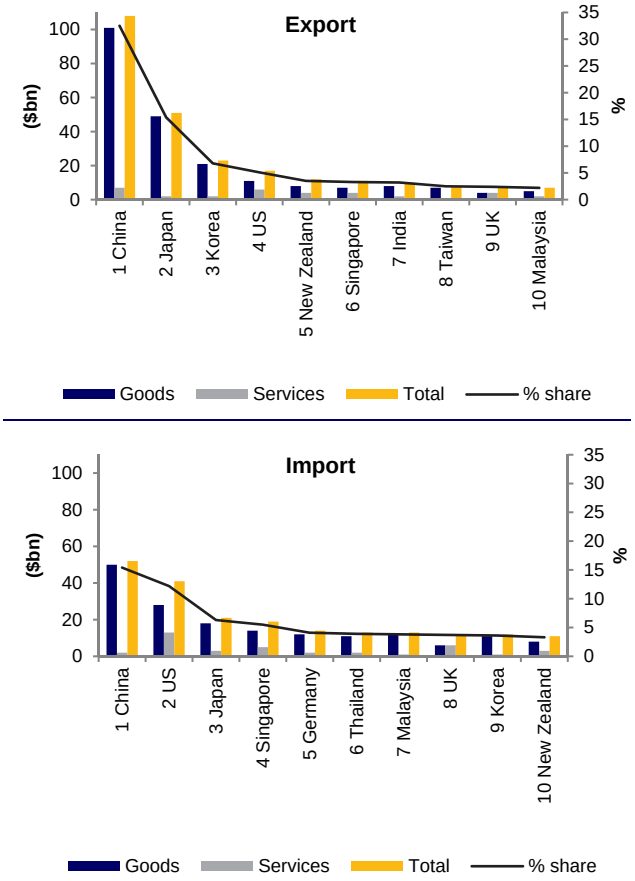
Figure 5: Australia's key exports and imports (2013-14)



Source: ABS and ANZ research 2015

Unsurprisingly, Australia's trading partners are predominantly located within the Asian region, with China receiving approximately one-third of all exports. Figure 6 shows Australia's key trading partners.

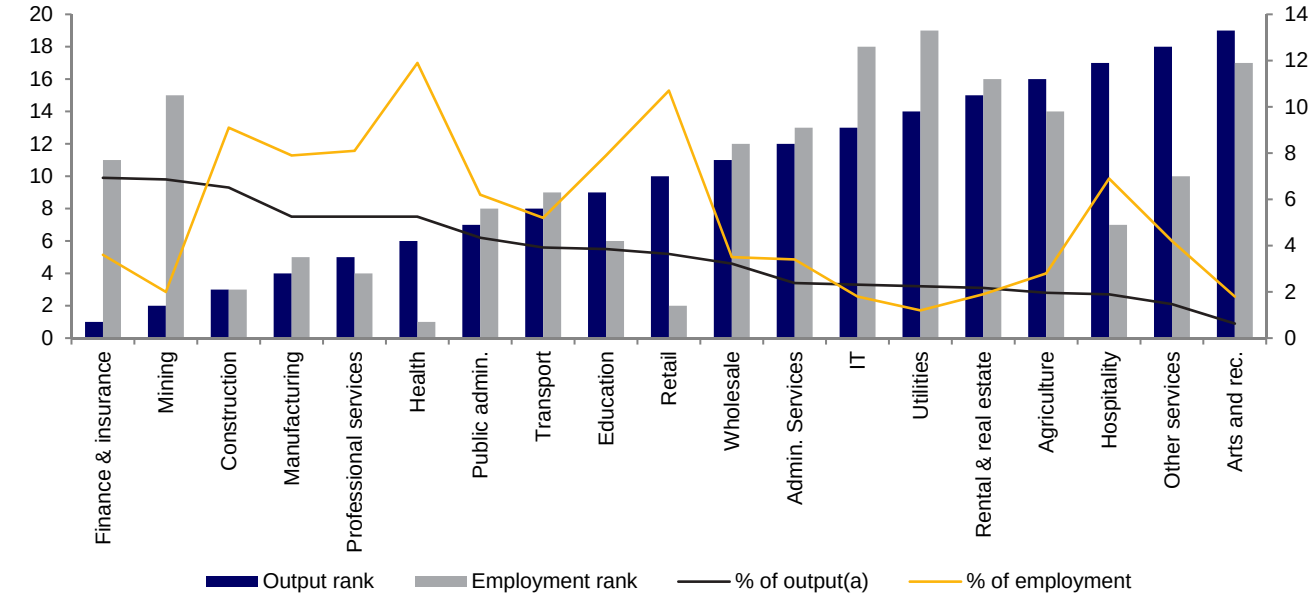
Figure 6: Australia's major trading partners (2013-14)



Source: ABS and ANZ Research 2015

The Australian economy is heavily influenced by mining, with a significant portion of the economy devoted to exports of raw materials. Mining has been the largest industry by output, in real terms for many years, only recently being overtaken by the finance and insurance sector (Figure 7). The mining and finance sectors, being capital intensive, are not large employers despite their size. Other industries such as health care and retail trade are the largest employers.

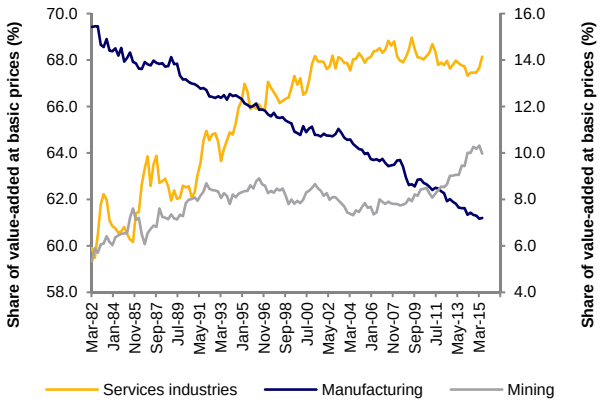
Figure 7: Structure of the Australian economy (2013-14)



Source: ABS and ANZ Research 2015

The Australian economy has been shifting gradually away from manufacturing towards the production of services (Figure 8). The catalyst for this shift was initially trade liberalisation in the 1980s which exposed Australia to increased import competition from low cost producers of manufactured goods, specifically in the newly-industrialising economies of Asia such as South Korea and Taiwan. The shift towards the production of services continued as the Australian economy increased in wealth, which encouraged households and businesses alike to demand greater services, such as childcare, banking and legal services. The inability of markets to deliver services across borders, coupled with increasing wealth in the Australian economy, resulted in the expansion of the domestic services industry.

Figure 8: Gross value added – Australia (1982-2015)



Source: ABS and ANZ Research 2015

2.1.2 The Indonesian economy

Indonesia is one of the largest emerging economies in the world, and is expected to generate approximately USD900bn of GDP in 2015, ranking it the 16th largest out of any economy in the world. It has a population of 250 million people with a GDP per capita of USD3,600 (in 2014).

The Indonesian economy remains in an embedded slowdown. Over the first half of 2015 most categories of expenditure have slowed – particularly public and private investment and household consumption – and the economy is mired in a trade recession. In a somewhat similar experience to Australia, Indonesia is also working through the aftermath of the resources boom, which among other things saw the country emerge as the world's largest exporter of coal and palm oil. Like Australia too, Indonesia has been struggling with the need to find new sectors to propel long-term development.

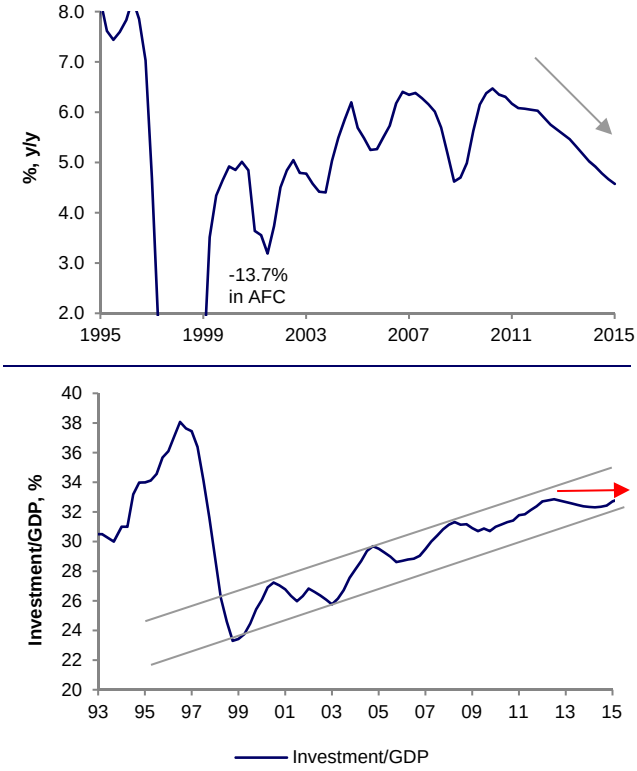
Recent developments should improve the efficiency of the Indonesian economy and deliver higher and more stable growth, lower inflation and reduced financial market volatility. Specifically these developments include the Cabinet reshuffle in August 2015 as well as President Joko Widodo's planned medium-term economic reforms to boost domestic production and spur economic growth.

'Indonesia was trapped with the natural resource curse. This explains, to an extent, why Indonesia's economy has become less integrated into global supply chains. The country also relied for its development on expansion of its domestic economic market, especially after the Global Financial Crisis'

- Felia Salim, Senior Financial Sector Expert

GDP growth in Indonesia has been slowing since 2011 falling from approximately 6.4 per cent to 4.6 per cent year-on-year (y/y) range most recently. This is the weakest level of growth since the global financial crisis of 2007-08 (Figure 9). The main driver behind this slowdown has been persistent underinvestment;[5] gross fixed capital formation (investment) growth slowed from about 9 per cent y/y in 2011 to only 4 per cent y/y in 2014. This is lower than GDP growth, which is atypical and detrimental for economies in Indonesia's state of development (Figure 9).

Figure 9: Indonesia's GDP growth (4Q rolling average) and investment over GDP



Source: CEIC and ANZ Research 2015

[5] The level of investment is often a reliable indicator of future growth. Investment is typically found in capacity building activities in early stages of development.

President Joko Widodo's administration has shown that it is aware of the underinvestment trend and that it is willing to take decisive action to remedy this issue. In his first budget in 2015, President Joko Widodo has more than doubled capital expenditure to around USD23bn and asked parliament to increase the recently tabled 2016 budget to USD25bn. In 2016, the Government plans to build 376km of new roads, 110km of new railroad, and 11 new airports.

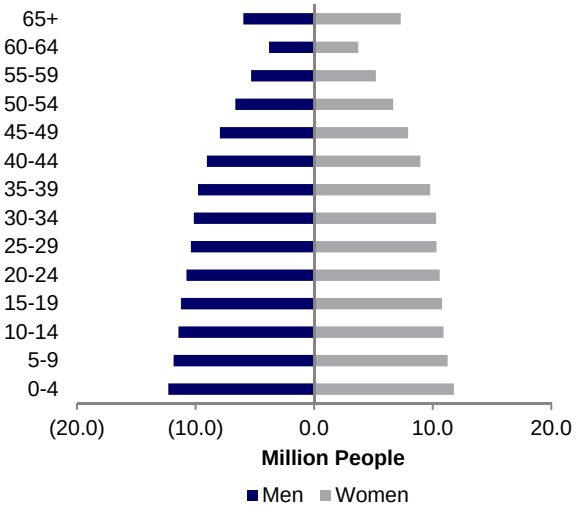
Primarily, this infrastructure spending will be aimed at raising the productive capacity and ultimately the prosperity of the 250 million people in Indonesia (Figure 10). Over the next ten years Indonesia is set to add almost 30 million people to the labour force, more than the population of Australia. Higher-grade infrastructure and a relaxation of investment and trade constraints will be important to ensure that these 30 million people will have productive jobs within the economy. The relationship with Australia should be a pivotal part of this development with both hard infrastructure development and soft agricultural food needed inputs.

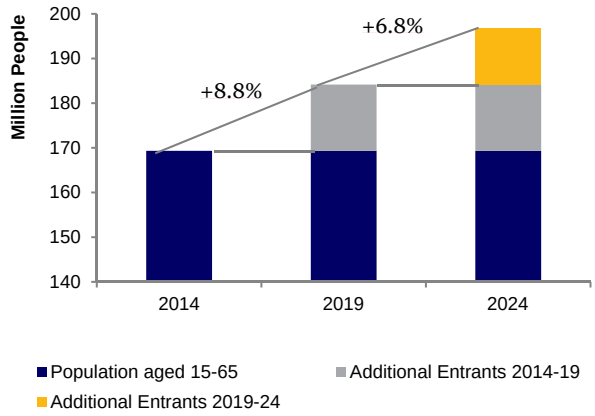
While additional direct investment is one part of the solution, in the context where FTAs and FDI are driving global dynamics, additional focus is required to satisfy conditions to broaden the sources of capital, specifically including FDI, domestic capital, and possibly foreign debt.

Indonesia is a largely domestically dominated country, with trade to GDP only at 45 per cent. However trade is still large in absolute terms, totalling nearly USD412bn in 2014 – more than double New Zealand's GDP – comprising exports of USD199.8bn and imports of USD212.5bn.

Indonesia's chief exports are raw materials, including crude oil, gas coal, rubber and palm oil in addition to travel services and machinery and transport equipment. Indonesia's chief imports are refined mineral fuels, electrical machinery, transport machinery, and transport services (Table 2, next page).

Figure 10: Indonesia's population pyramid (250m people) and working age population to add nearly 30m by 2025





Source: CEIC, BPS and ANZ Research 2015

Table 2: Key Indonesian imports and exports (2014)

Exports	USDbn	% share	Imports	USDbn	% share
Mineral Fuels	51.4	25.8	Refined Mineral Fuels	43.9	20.7
Palm Oil	21.1	10.6	Appliance`	25.8	12.2
Travel Services	9.8	4.9	Electrical Machinery	17.2	8.1
Electrical Machinery	9.7	4.9	Transport Services	12.0	5.6
Rubber	7.1	3.6	Iron and Steel	8.4	3.9
Other Business Services	6.0	3.0	Plastics	7.8	3.7
Appliance	6.0	3.0	Travel Services	7.7	3.6
Vehicles	5.2	2.6	Organic Chemicals	7.1	3.3
Pearls & Precious Stones	4.6	2.3	Other Business Services	7.0	3.3
Misc. Chemical Products	4.2	2.1	Vehicles	6.3	2.9

Source: CEIC, WITS and ANZ Research 2015

Unsurprisingly, Indonesia's major merchandise goods trading partners are located in the region with Japan, China, Singapore and India holding four of the top five export destinations. China, Singapore, Japan, Korea, and Malaysia lead the main import sources (Table 3).

Table 3: Indonesia's major trading partners (2014)

Export destinations	Goods (USDbn)	Services (USDbn)	Total (USDbn)	% Share (Merchandise)	Import sources	Goods ($bn)	Services ($bn)	Total ($bn)	% Share (Merchandise)
Japan	23.2	–		13.1	China	30.6	–		17.3
China	17.6	–		10.0	Singapore	25.2	–		14.2
Singapore	16.8	–		9.5	Japan	17.0	–		9.6
USA	16.5	–		9.4	Korea	11.8	–		6.7
India	12.2	–		7.0	Malaysia	10.9	–		6.1
Korea	10.6	–		6.0	Thailand	9.8	–		5.5
Malaysia	9.8	–		5.5	USA	8.2	–		4.6
Taiwan	6.4	–		3.6	Saudi Arabia	6.5	–		3.7
Thailand	5.8	–		3.3	Australia	5.6	–		3.2
Australia	5.0	–		2.9	Germany	4.1	–		2.3
All countries	176.2	23.5	199.8		All countries	177.5	33.5	211.0	

Source: CEIC, WITS and ANZ Research 2015

As previously mentioned, the Indonesian economy is largely domestically driven and employees in the manufacturing, wholesale and retail trade, accommodation, agriculture and construction industries account for 75 per cent of all employment. The services sector has grown in recent years, however primary (agriculture and mining) and secondary segments (manufacturing) account for 48 per cent of employment and 43 per cent of gross output (Table 4).

Table 4: Structure of the Indonesian economy (2014)

Industry Structure	% of output(a)	Output rank	% of employment	Employment rank
Manufacturing	21.6	1	13.3	11
Wholesale & Retail	13.7	2	21.7	15
Accommodation & Food	3.0	11		3
Agriculture	13.1	3	34.0	5
Construction	9.7	4	6.4	4
Public Admin	3.5	9	16.1	1
Education	3.1	10		8
Health & Social	1.1	16		9
Other Services	1.6	14		6
Mining	9.1	5	1.3	2
Transportation & Storage	3.9	7	4.5	12
Information & Communication	4.5	6		13
Financial & Insurance	3.8	8	2.6	18
Real Estate	3.0	12		19
Business Services	1.6	13		16
Electricity & Gas Supply	1.1	15	0.3	14

Source: CEIC, BPS, WITS and ANZ Research 2015

2.2 Economies in transition

The headline profiles of the Australian and Indonesian economies have broadly been similar through both the Asian and global financial crises, reflecting similar endowments and competition for similar external markets. Both economies have been characterised by historically long periods of growth with low volatility. However, since mid-2013 both economies have been undergoing a transition as the Chinese economy slows.[6]

'We have entered an age of the new normal. China cannot sustain being the global economic furnace heating the economies of its neighbours at GDP levels experienced over the past twenty years'

- Mahendra Siregar, Former Chair of the Investment Coordination Agency and one time Deputy Minister of Finance, Indonesia

The combination of both real (China driven) and financial (investor driven) demand for commodities provided a profound boom for commodity exporters from 2002 to 2011 with a surge in both the volume and price of commodity exports.

This basic macro backdrop provides the necessary, though not entirely sufficient, explanation for the current economic underperformance each economy is experiencing. In short, both Indonesia and Australia are now dealing with negative terms-of-trade shocks and the transfer of income to the rest of the world implicit in that shock.

Domestic overlays need to be added to complete the picture of why each country's economic performance is less than it could be. A brief summary of the domestic factors in consideration as well as the short-term economic concerns and medium-term economic promises are provided below.

2.2.1 Australia: A shift away from reliance on China

The period of sustained industrialisation and expansion of productive capacity of the Chinese economy was a once in a generation – if not historically speaking a one-off – opportunity for the Australian economy. The commodity and mining boom associated with the rise of China was much greater than any preceding commodity boom (such as the 1980s commodity boom). The major difference between the two periods is that the more recent boom benefited from deeper and sophisticated financial markets over the past decades and greater speculative demand, i.e. with hedge and mutual funds investing significantly into physical assets.

The Australian and Indonesian responses to the China and speculator led commodity booms were different, mainly because of Australia's supply response to the booms.

Australia was able to significantly expand capacity of existing resources and also create capacity for new exports (such as LNG) rather than exhausting its domestic supply.

'We need to go beyond trade which is transactional. The relationship there stops at the border. Investment produces commercial cooperation at a deeper level and builds solid longer term commitment'

- Gordon Flake, CEO Perth USAsia Centre, University of Western Australia

It is often argued, however, that there were significant costs involved. In particular, the Australian dollar appreciated to record levels against the USD, which helped contain inflation but greatly damaged the competitiveness of the trade-exposed manufacturing sector. Moreover, the boom in mining export receipts did not translate to an equally large rise in taxation revenue, creating a structural fiscal deficit.

[6] The slowdown of the Chinese economy reflects a rebalancing away from a commodity intensive investment-led growth model to a consumption-led growth model.

The Australian car manufacturing industry's competiveness in particular was severely damaged following the global financial crisis in 2007-08. Car manufacturers cited the sustained strength of the Australian dollar, high costs of production and a small domestic market as their primary reasons for eventually ceasing production activities. Specifically, the AUD's rise led to increased labour and material costs. This resulted in significant reductions in profits from vehicle sales. In 2009 Mitsubishi was the first manufacturer to announce its plans to stop vehicle productions and in 2014 Toyota was the last of Australia's vehicle manufacturers to announce its withdrawal from Australia (scheduled for 2017).

The experience of the Australian grains industry is a further sign that the Australian economy is in a period of transition. Australia has traditionally been in a good position to supply grain for the ever increasing demand from Asia. In 2014 approximately 75 per cent of Australian grain was exported to Asia.[7] However this domination is no longer certain as Canada, the US, Russia and Ukraine are increasingly placing emphasis on improving their exports to Asia and are therefore putting pressure on prices. As a result Australian grain producers may lose their market share in Asia over time.

Although the transition of the Australian economy has presented some challenges, it also presents some opportunities. The Prime Minister of Australia, Malcom Turnbull, recently signalled his intention to diversify Australia's economy, possibly in recognition that there are emerging sectors where Australia can develop competitive advantages. Specifically, the Prime Minister has targeted digital technology to transform Australia's global business. The Prime Minister has noted that the business community can benefit, particularly from innovation derived from the unique mixture of connectivity and processing power that digital technologies offer. The Australian economy can therefore reasonably expect a transition to a more innovative environment to compete with businesses globally.

2.2.2 Indonesia's global ups and downs

Indonesia is powerfully positioned as ASEAN's largest economy. It also has the largest labour force within the region with an average age of 29. By 2050 it is expected that Indonesia's total working age population will be close to 175 million. This sizeable labour force can strengthen Indonesia's comparative advantages over time to help the economy become more actively involved in global supply chains.

'The resources boom is over. We need a new model. We cannot rely on basic commodities for exports anymore.'

- Dr Dino Patti Djalal, Former Deputy Minister of Foreign Affairs of Indonesia

Indonesia has recently undertaken various initiatives designed to improve the productivity of its economy. President Joko Widodo has made infrastructure improvement a top policy priority with infrastructure spending to be increased by an average of 8 per cent annually over 2016 - 2019. Another example is the President's efforts towards enhancing the Indonesia's investment climate to remove constraints on the private sector, such as the recent establishment of a one-stop shop for business licensing to harmonise complex national and local regulations.[8] In particular, Indonesia's efforts towards greater trade integration has led to a trade surplus of USD7.13bn in the first nine months of 2015 (the largest trade surplus from January to September in four years).[9]

Like Australia, the Indonesian economy is in a period of transition. Indonesia's depletion of its own

[7] PwC. 2014. The Australian Grains Industry: The Basics. Retrieved from http://www.pwc.com.au/industry/agribusiness/assets/Australian-Grains-Industry-Nov11.pdf

[8] International Monetary Fund. (2015, 1 September). Poised for Take-off—Unleashing Indonesia's Economic Potential. Retrieved from https://www.imf.org/external/np/speeches/2015/090115.htm

[9] The Jakarta Post (2015, 15 October). Indonesia records 4-year biggest trade surplus of $7.13b. Retrieved from http://www.thejakartapost.com/news/2015/10/15/indonesia-records-4-year-biggest-trade-surplus-713b.html

oil and energy sources meant that it could no longer meet domestic demand from local production. This led Indonesia to switch from being a major energy and resource exporter to an importing nation in the past three to four years. At the height of the commodity boom, when Indonesia should have been posting large sustained current account surpluses and boosting foreign-exchange reserves, the opposite dynamic occurred. Indonesia's substantial domestic energy and resource requirements led to a massive swing from a current account surplus into a current account deficit as well as deterioration in the fiscal balance as resource-related revenues fell sharply.

The problematic nature of this dynamic extended beyond lost export revenue. The major loss of export revenues and a swing into current account deficit and larger fiscal deficits resulted in the Indonesian economy being perceived as fragile by fickle and highly mobile speculative capital in 2013. In this period:

- The Indonesian currency plummeted.
- Interest rates had to be increased to stabilise the currency and prevent inflation pass-through from a weaker currency.
- A range of trade barriers were put in place to stabilise the current account deficit.
- The economy slowed sharply.

Indonesia has undertaken a range of beneficial fiscal policies over the course of 2014, both regionally and globally. It used the decline in global oil prices to dismantle highly complex, ineffective and expensive fuel subsidies. These subsidy savings, which should amount to around 2-3 per cent of GDP per year, can be directed to higher multiplier public-works spending that will have a stronger economic impact (relative to subsidies) and ultimately improve the efficiency of the Indonesian economy.

With these factors in mind, it is premature to conclude that the Indonesian economy has troughed and that growth is likely to base around 4.5 per cent. It can be expected that this below-trend pace of growth is likely to be maintained for the foreseeable future. Growth can be expected to range around 4-5 per cent for the next two years before increasing to 6 per cent in the 2017-18 timeframe. Indonesia has fortunately shown a high propensity to leverage off more competitive currency levels and engineer trade-led recoveries in the past following difficult economic adjustments. It is possible that they will do this again.

2.3 The bilateral relationship and trade flows

It is important to consider the history of trade flows between Australia and Indonesia. An understanding of the most prominent exports/imports historically helps determine projections for commodity and services trade between the two economies.

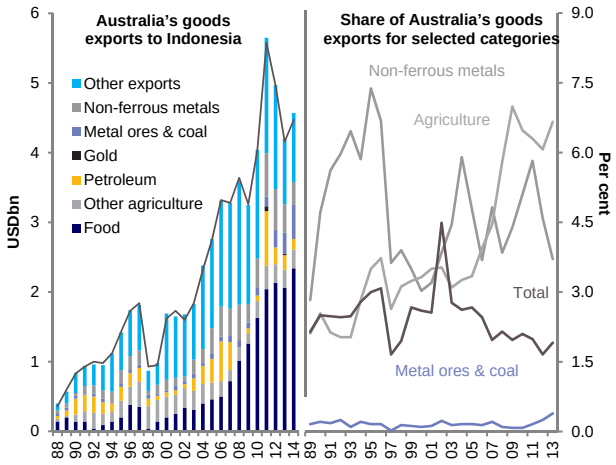
2.3.1 Australia to Indonesia

About 2 per cent (or AUD5.6 billion) of Australia's goods exports go to Indonesia, the 10th largest market for Australia's goods exports. By comparison, Japan is Australia's 2nd largest market for goods exports (after China) and represents approximately 15 per cent (or AUD50.4 billion) of total goods exports. Additionally:

- Higher shares of agricultural (6.7 per cent) and non-ferrous metals (3.6 per cent) go to Indonesia.
- Agricultural goods account for one-third of Australia's goods exports to Indonesia, with this share rising over time.
- Indonesia has also accounted for a rising share of Australia's total agriculture exports.
- Australia exports little metal ores and coal to Indonesia.
- The largest exports by value are: wheat, live animals, sugar and beef.

Figure 11 outlines Australia's exports to Indonesia and the share of its goods exports for several categories.

Figure 11: Australia's exports to Indonesia and share of exports

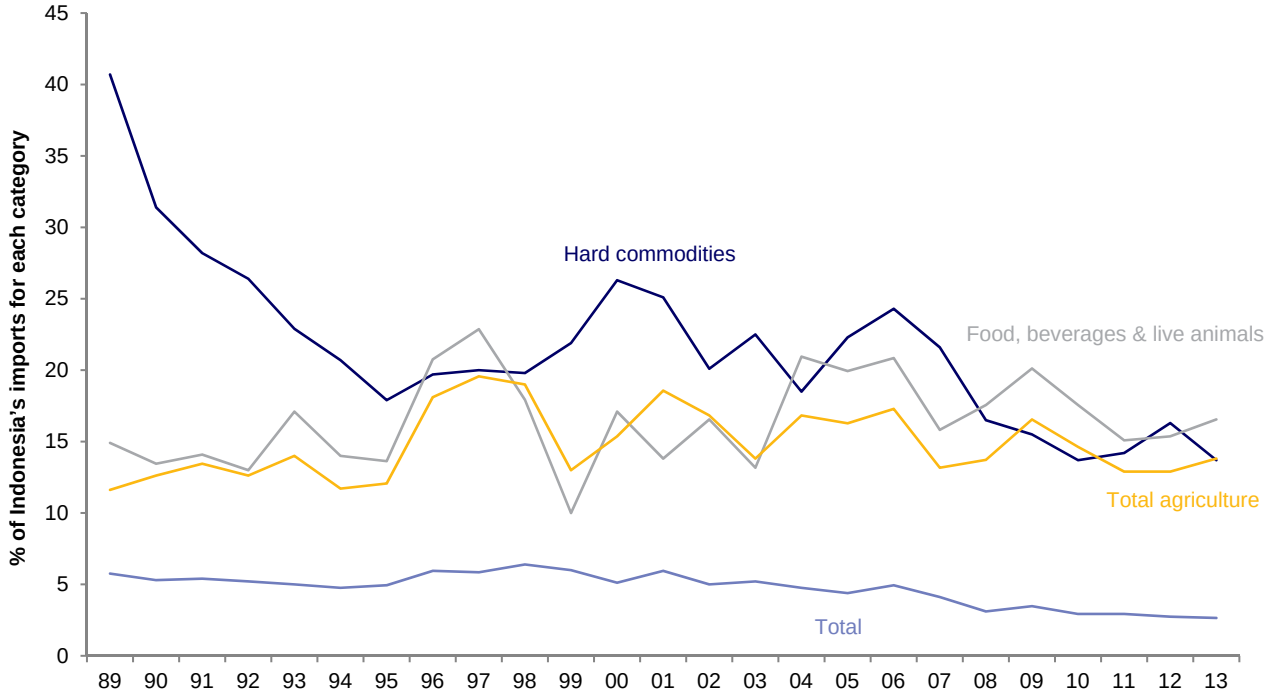


Source: Haver, ABS and ANZ Research 2015

There has been a clear loss of synergy in the Australia-Indonesia trade relationship, as highlighted in Figure 12, which shows Australia's share of Indonesia's imports in products that Australia produces with a comparative advantage. Despite a small rise in the share after the Asia Crisis, it has steadily declined since the late 1980s. The speed of decline in Australian market share has picked up since 2007-08. Additionally:

- Australia accounted for 2.7 per cent of Indonesia's total goods imports in 2013. This share has fallen over time, particularly from a peak of 6.4 per cent in 1998.
- Australia has higher shares, however, of Indonesia's imports of agricultural products and hard commodities, although the latter has fallen over time.

Figure 12: Australia as a source for Indonesia's imports

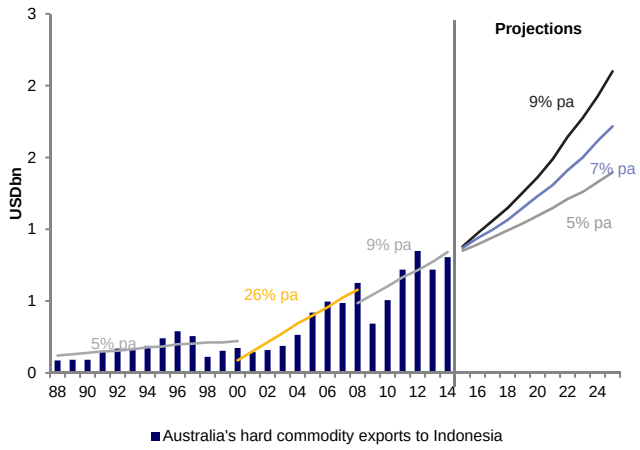


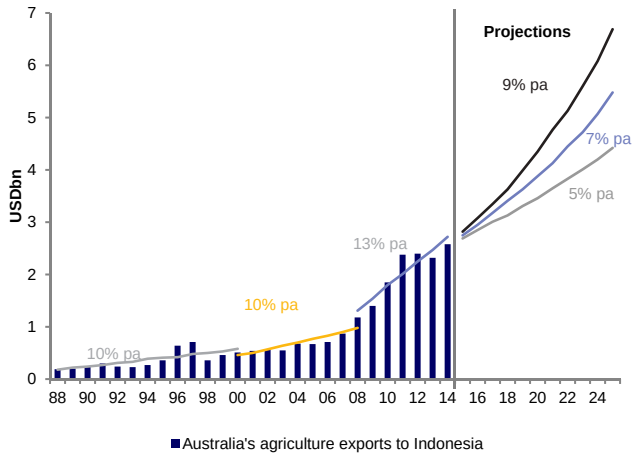
Source: Haver, ABS and ANZ Research 2015

Australia's export growth to Indonesia has been multi-speed in recent decades. Whereas hard commodity exports had a strong growth period from 2000-2010, agricultural exports have recorded similar rates of growth in the 1980s, 1990s and 2000s (Figure 13). A range of 5 to 9 per cent per annum growth seems plausible given the historical rates of export growth. The value of Australian agricultural exports could increase from around USD2.5bn now to nearly USD7bn by 2024 under a higher growth scenario (Figure 13).

Australia's services exports to Indonesia are even less diversified than goods exports with the education and tourism sectors dominating (Figure 14). Education accounts for 45 per cent of Australia's services exports to Indonesia, however, Indonesians accounted for just 3.2 per cent of international students in Australia at end 2014. By comparison, Chinese and Indian students (the top two nationalities for higher education enrolment in Australia) account for 36.1 per cent and 10.5 per cent respectively.

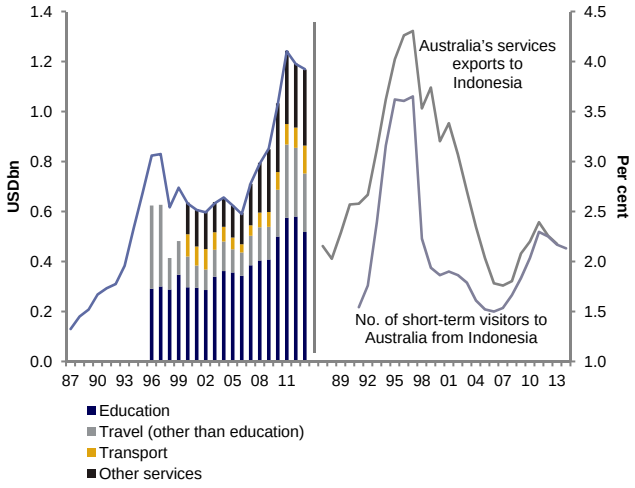
Figure 13: Projections for hard commodity exports to Indonesia and agricultural exports to Indonesia

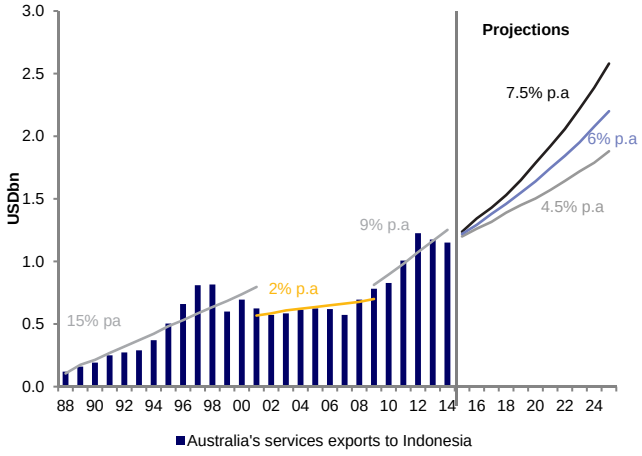




Source:Haver, ABS and ANZ Research 2015

Figure 14: Services exports to Indonesia and projections for services exports





Source: Haver, ABS and ANZ Research 2015

Australia's services exports to Indonesia may overtake hard-commodity exports by around 2020 if current growth rates per annum are maintained. This should highlight the potential for a more diversified engagement with Indonesia beyond the hard commodity focus.

In terms of projecting Australia's merchandise imports for Indonesia, the declining pace of import growth is apparent in recent decades. After sustaining 20 per cent per annum growth in the 1980s-90s, import growth slowed to around 13 per cent per annum in the 2000s and has averaged just 6 per cent per annum over the past five years. This deceleration suggests some degree of cautiousness is necessary in forecasting the likely future growth rate for imports.

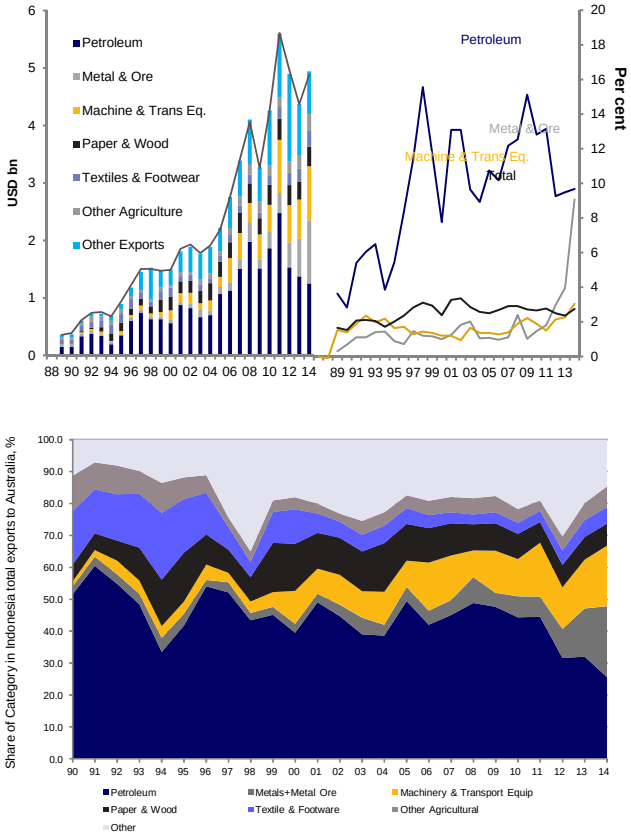
2.3.2 Indonesia to Australia

At present around 3.5 per cent of Indonesia's goods exports go to Australia, the 10th largest market for Indonesia's exports. Additionally:

- Higher shares of petroleum (10 per cent of Indonesia's total petroleum exports) and metal and metal ores (9 per cent) are exported to Australia.
- Petroleum accounted for 25.5 per cent of Indonesia's total merchandise exports to Australia in 2014. Metals and ores account for 22.2 per cent and machinery and transport equipment account for 18.9 per cent. The latter two groups have seen their shares rise over the past five years.
- Textiles, paper and wood, and other agricultural products round out the remaining top categories that are shipped to Australia.
- On a product basis: petroleum, metal manufactured goods, industrial equipment, iron and steel, and non-ferrous metals are the top five product exports to Australia.

Figure 15 outlines Indonesia's exports to Australia and the share of its goods exports for several categories.

Figure 15: Total merchandise exports from Indonesia to Australia and share of Indonesia's exports to Australia

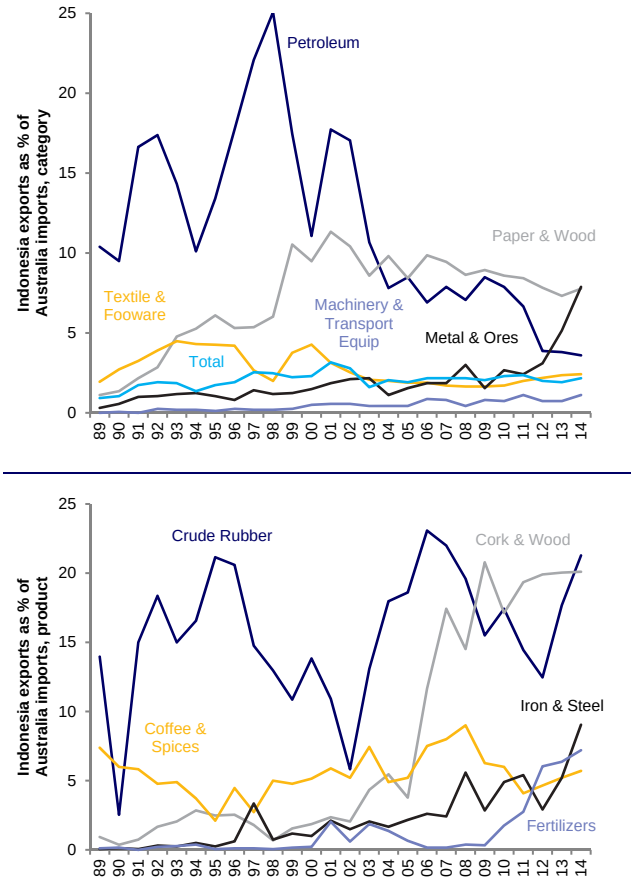


Source: WITS and ANZ Research 2015

Indonesia has not been able to build market share in Australia's total import market, remaining stagnant at 2 per cent for the past 25 years. However, there have been some shifts in the composition of this 2 per cent market share (Figure 16):

- The share of Indonesia's petroleum exports in Australia's total petroleum imports has declined to single digits over the past 5 years, compared with a peak of 25 per cent in the late 1990s.
- Replacing this loss in market share, Indonesian exports of paper and wood, metal and ores, and machinery and transport equipment has gradually climbed. Paper and wood products have the largest share of Australian imports of this category, but it is still relatively low at 7.7 per cent.
- When Indonesia's exports are broken down to a product basis shows few products have a significant market share of Australian imports. In particular, cork and wood exports from Indonesia (USD145m) account for 20 per cent of all Australian cork and wood imports (USD721m). Crude rubber supply from Indonesia also holds a substantial 21 per cent share (USD21m) of Australia's total (USD101m) rubber imports.

Figure 16: Indonesian exports to Australia as a percent of Australia's total global imports by broad category and product

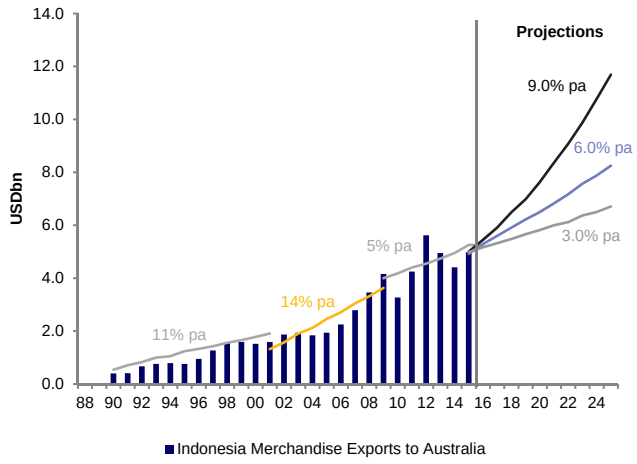


Source: WITS and ANZ Research 2015

Indonesia's export growth to Australia has steadily grown over the past 25 years despite commodity price booms and busts. Notably, growth has generally remained resilient during commodity price downturns.

This study has constructed three growth scenarios for Indonesia's exports to Australia where total exports grow at a modest 3 per cent, a base case 6 per cent, or a strong 9 per cent over the coming decade (Figure 17). Under these scenarios, the total merchandise exports from Indonesia to Australia grow from USD4.9bn in 2014 to USD6.9bn (modest), USD8.7bn (base), or USD12.8bn (strong) over the next decade.

Figure 17: Projections for Indonesia's merchandise exports to Australia

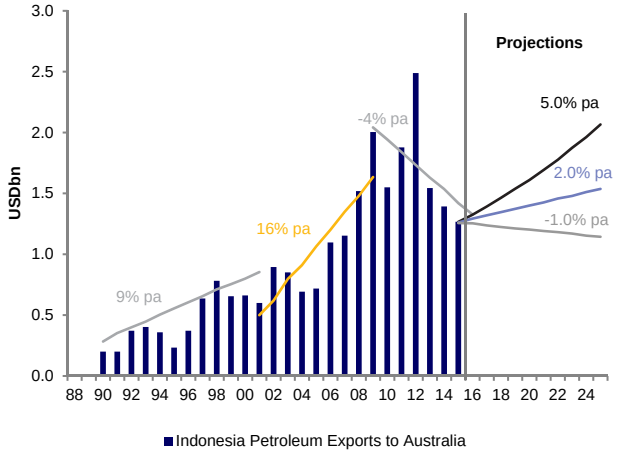


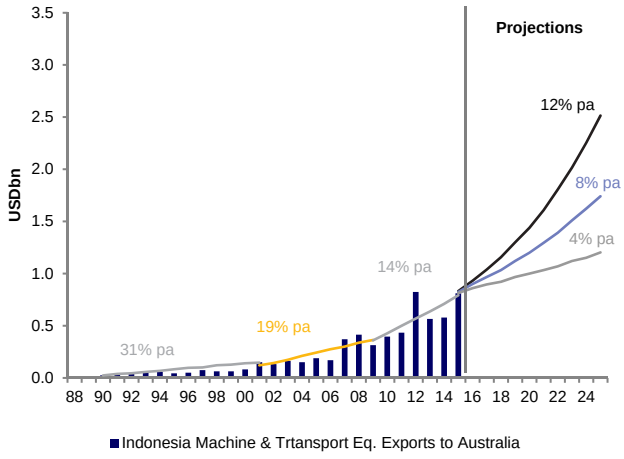
Source: Haver and ANZ Research 2015

A closer look at some of the main components of merchandise exports from Indonesia to Australia shows that petroleum exports are unlikely to accelerate substantially over the coming years, with the downside scenario even predicting a contraction (Figure 18). Australia's emergence as a major LNG exporter and the global fall in commodity prices underscore this view.

It is also worth noting that the machinery and transport sector may soon overtake petroleum as the largest export category (Figure 18). Growth in this sector has been in double digits since 1990, while even a conservative growth estimate predicts that this category will be the largest contributor to trade. Indonesia's development of quality infrastructure and manufacturing bases will drive this growth.

Figure 18: Projections for Indonesia's petroleum exports to Australia and Indonesia's machinery and transport exports to Australia

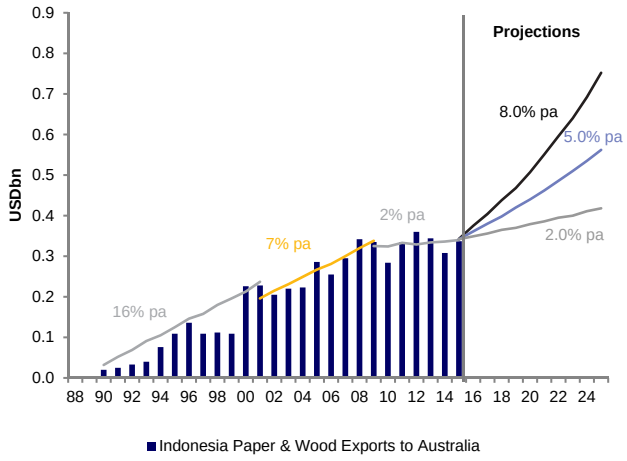


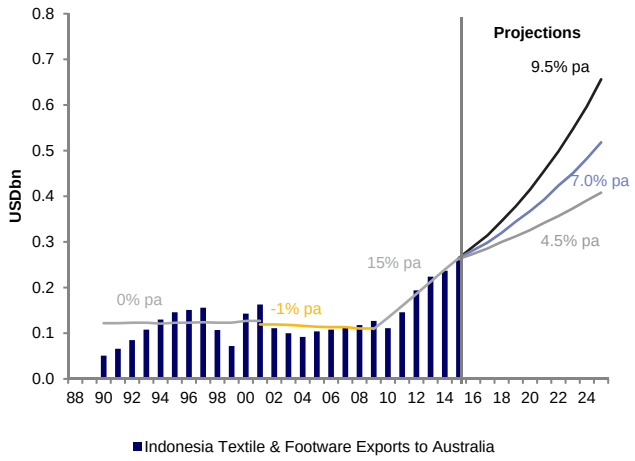


Source: Haver and ANZ Research 2015

Paper and wood industry exports may also accelerate by leveraging Indonesia's natural endowments. Textile and footwear exports may also increase as some lower value added manufacturing migrates south from China (Figure 19).

Figure 19: Indonesia's paper and wood exports to Australia and textile and footwear exports to Australia



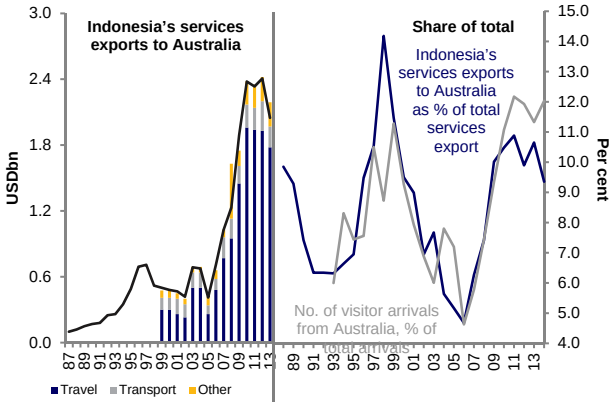


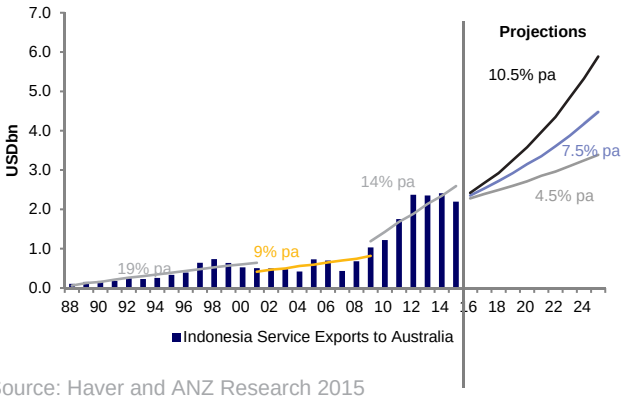
Source: Haver and ANZ Research 2015

Indonesia's services exports to Australia have been dominated by travel. The majority of this is for personal travel and tourism. Over the past five years only 6.5 per cent of this travel flow is not related to personal tourism underlining the opportunity to strengthen business to business ties. Additionally:

- Travel services account for roughly 80 per cent of total services exports to Australia.
- Australia now represents around 10 per cent of Indonesia's total services exports and in Figure 20 it is clear that there is a direct correlation with the amount of tourist arrivals onshore. In 2014, Australian visitors represented 12 per cent of all short term arrivals.
- There appears to be significant room to diversify this export flow for additional growth (Figure 20).

Figure 20: Services exports to Australia and projections of services exports





Source: Haver and ANZ Research 2015

Currently services exports from Indonesia are about 45 per cent of merchandise trade flows, however growth of services trade has been much stronger over the past two years at 14 per cent (relative to merchandise exports growth of 5 per cent). Under the conservative estimate (growing 4.5 per cent per year), Indonesia's services exports to Australia would reach USD3.6bn by 2025. Under the base scenario it reaches USD4.8bn while in the upper scenario services exports may reach USD6.6bn by 2025.

2.3.3 Intra-industry trade

The intra-industry trade (IIT) index measures trade that occurs within industries and product groups. IIT conceptually reflects differing tastes and consumer preferences and economies of scale, rather than differing 'factor endowments'[10], and typically becomes a rising share of bilateral trade as economies and incomes become similar over time.

This relationship has been measured using the Grubel-Lloyd index (GLI), calculated from the ratio of trade overlap to total trade within a product or product group. GLI ranges from 0 to 1; when GLI= 0, there is no IIT and the countries are strictly exporters or importers of that good, and when GLI=1, there is only IIT, and the country exports as much as it imports of that good.

The results are presented in Table 5, which shows the GLI by broad product group[11] and the share of that product group in total trade.

Table 5 also shows the proportion of products within the broad group [12] that have a GLI less than 0.5. This illustrates the extent to which IIT is evident across a broad range of products within the group (closer to 0 per cent), or driven by IIT trade across different products within that group (closer to 100 per cent). That is, it acknowledges that when applied to broader product groups, the GLI can mask existing patterns of production fragmentation.

The analysis bears patterns also evident in 'revealed comparative advantage' (RCA), discussed in more detail in Chapter 3 of this study. Unsurprisingly, the results suggest that little IIT occurs in industries where Australia or both countries have a RCA, including in animal, vegetables and food products as well as minerals and fuels.

However, an interesting observation is that IIT is evident in products for which neither country has a comparative advantage, particularly intermediate products such as chemicals, plastics and hides, or final manufactures, which Indonesia has a RCA, such as textiles.

However, this evidence of intra-industry trade masks diversity within production chains – for instance, while IIT is evident for hides, this reflects the fact that Australia exports raw hides (GLI of 0.01), but then imports processed articles of leather (GLI of 0.03). Similarly, within the textiles group, Australia exports cotton (GLI of 0.02) but imports Indonesian apparel (GLI 0.01). Strengthening these relationships as 'Factory Asia' moves south will be a key component of joint competitive advantage in future.

Chapter 2 explores the possible opportunities presented by 'Factory' Asia in some additional detail.

[10] A 'factor endowment' is the amount of labour, capital, land and entrepreneurship that an economy can use towards manufacturing.

[11] This is measured using Harmonised System (HS) commodity classification at the broad 1-digit (HS1) level. Product groups can be disaggregated further into lower levels – for example the next level of disaggregation is HS2.

[12] Measured at the HS2 level.

Table 5: Intra-industry trade between Australia and Indonesia (2014)

	GLI	Share of trade	Products <0.5
Animal	0.1	9%	80%
Vegetable	0.1	12%	90%
Food Products	0.9	3%	56%
Minerals	0.3	1%	50%
Fuels	0.3	5%	100%
Chemicals	0.7	2%	73%
Plastics & Rubber	0.5	0%	50%
Hides	0.7	4%	100%
Wood	0.3	3%	83%
Textiles	0.9	1%	86%
Footwear	0.0	1%	50%
Stones & Glass	0.2	13%	100%
Metals	1.0	13%	67%
Electic Mach.	0.4	1%	100%
Transport	0.7	2%	50%
Misc.	0.3	0%	75%

Source: PwC analysis and ANZ Research 2015

2.3.4 Recent bilateral and regional trade negotiations

There is potential for a strong corridor relationship to develop between Australia and Indonesia, particularly given the conclusion in late 2014 of the AANZFTA – Australia's most ambitious trade deal to date.

The AANZFTA is Australia's first multi-country FTA, signalling its willingness to cooperate multilaterally, and it is also the first time that ASEAN has embarked on FTA negotiations covering all sectors including goods, services, investment and intellectual property simultaneously. This makes it the most comprehensive trade agreement that the ASEAN has ever negotiated.

'Global and regional value chains are having a major impact on Southeast Asian economies. They are spurring growth and are a key driver of ASEAN integration. They present an array of new opportunities for trade and investment. And because of how value chains work, they present ideal pathways for collaboration among economies, including SMEs. Australia and Indonesia have opportunities to jointly tap into regional value chains, and can use the ASEAN-Australia-NZ FTA to do so.'

- H.E. Simon Merrifield, Australian Ambassador to ASEAN

Indonesia is likely to dominate the AEC that will come into effect from December 2015. It will account for over one-third of the ASEAN economic mass and around one-half of the ASEAN population.

In this regard, it can be expected that the Australia-Indonesia corridor will become a vitally important conduit for a range of macro-economic flows that range from goods, to services, to people and capital.

The IA-CEPA builds on the AANZFTA and covers tariffs, cooperation, capacity building and investment. IA-CEPA negotiations commenced in 2012 with the aim to strengthen and expand the trade, investment and economic cooperation relationship between Indonesia and Australia. Negotiations have stalled since 2013. However, this report finds it is in both countries' interests to reinvigorate those negotiations.

03
The importance of comparative advantages

- Australia and Indonesia have historically had a comparative advantage in producing animal, vegetable and food products as well as minerals and fuels. Analysis shows that Australia's strongest comparative advantage is in minerals (iron ore) followed by animal products (beef and mutton), while Indonesia's strongest comparative advantage is in footwear followed by vegetable products (palm oil).
- Examination of Indonesia's projected comparative advantage suggests that it will gradually move up the value-added chain in the primary industry sectors and embed itself in regional and global production chains due to its generous demographic dividend (i.e. Indonesia's total working age population is expected to be close to 175 million people by 2050). In particular, Indonesia is expected to climb up the value chain in most primary industry sectors through the economic reforms launched recently by President Joko Widodo that will focus on infrastructure, maritime highways and the development of dedicated industrial zones.
- If the Widodo structural reforms are successful, Indonesia may achieve significant advancement in industrial sectors such as agro-industrial production for export and domestic products and consumer products and production equipment amongst several others. The concentration of the Indonesian industry in the textile and clothing/apparel industries will see Indonesia continue to have a comparative and competitive advantage in this sector.
- Australia's projected comparative advantage is less straightforward largely due to its widely fluctuating currency in recent decades. The currency fluctuations have historically meant that Australian export growth has been strongest in those sectors where export demand has been price-insensitive. This has largely been aligned with Chinese demand for Australian commodities (energy and agricultural) during its industrialisation.
- The Australian dollar weakened significantly from 2012-15, helping improve the competitiveness for Australian manufacturing (although the sector is still recovering). The compound annual growth rates (CAGRs) in new export sectors are therefore likely to be slow to build. The most likely near-term change for Australia will be a shift within its fuel exports from coal to LNG. By 2018 Australia will rival Qatar as the largest exporter of LNG in the world.
- Both Indonesia's and Australia's comparative advantage has been relatively stagnant over the past decade. However this pattern is expected to change for both economies given less reliance on natural resources exports in coming years and decades. The AANZFTA will broaden Australia's export base and capitalise on Australia's proximity to the fast-growing markets of Asia including Indonesia, with complementary opportunities arising from their respective comparative advantages.
- Without concerted action, comparative advantage will slowly evolve and whilst more specialised manufacturing is likely to emerge in both economies, the joint comparative advantage between Australia and Indonesia may remain concentrated in the sectors highlighted above.

3.1 Exploring comparative advantage

The concept of comparative advantage suggests that the gains from trade are greatest when an economy specialises in the production of goods or services aligned to its economic endowments (i.e. labour, capital and technology). The RCA index extends this concept to identify the sectors in which a joint comparative advantage between two economies is located. The RCA index is calculated as the ratio of a country's share of the product in the country's total exports to the share of world exports of the product in total world exports. A country is said to have a RCA if the value of the index exceeds one and a revealed competitive disadvantage if the index's value is below one.

Identifying the areas of specialisation that an economy should occupy is crucial from a development and allocative efficiency perspective. Economies are generally unable to successfully transition from low-income to middle-income and eventually high-income without correctly positioning themselves to their comparative and competitive advantages (see Box 3 for a distinction between comparative and competitive advantage).

For a developed, high-income economy, the efficient allocation of resources within an economy is generally guided by its comparative advantages. An economy's allocative efficiency, gains from trade and productivity are highest when resources are dedicated to those areas of production and export where a comparative advantage is present.

Figure 21 shows the RCA for both Australia and Indonesia. The figure shows that both countries have a RCA in the lower-value added space and in primary commodity products in particular. The figure also shows that comparative advantage has been largely unchanged for both economies over the past decade.

Box 3: Comparative versus competitive advantage

Comparative advantage is part of competitive advantage, but competitive advantage is not part of comparative advantage. The relationship in this sense is asymmetric.

A country – or company or individual for that matter – is said to have a comparative advantage when it can produce goods more efficiently (or at a lower opportunity cost) than its competitors.

Competitive advantage is a broader term that incorporates comparative advantage but is a general extension to include any advantage that one country or competitor may have over another. This would include access to raw materials, lower labour costs, productivity differentials, and the quality and quantity of infrastructure, transport and logistics networks. For example, China and Saudi Arabia are both efficient refiners of diesel. However, as Saudi Arabia has ready access to oil, whereas China generally needs to import it, it can be concluded that Saudi Arabia would have a comparative advantage over China in the production of diesel.

Figure 21: Revealed comparative advantage in 2013/14 and in 2005

2013/14	Australia	Indonesia	2005	Australia	Indonesia
Animal	3.7	0.9	Animal	4.1	1.3
Vegetable	1.4	3.4	Vegetable	1.7	2.6
Food Products	1.1	1.0	Food Products	1.9	0.9
Minerals	14.1	2.8	Minerals	13.3	3.3
Fuels	2.4	1.8	Fuels	2.0	2.0
Chemicals	0.5	0.5	Chemicals	0.8	0.4
Plastics & Rubber	0.2	1.4	Plastics & Rubber	0.2	1.2
Hides	0.4	0.6	Hides	1.1	0.6
Wood	0.6	2.2	Wood	0.6	2.6
Textiles	0.2	1.9	Textiles	0.6	1.8
Footwear	0.0	3.8	Footwear	0.1	2.4
Stones & Glass	2.5	0.5	Stones & Glass	1.9	0.6
Metals	0.8	0.7	Metals	1.4	0.7
Electic Mach.	0.1	0.4	Electic Mach.	0.2	0.6
Transport	0.2	0.3	Transport	0.4	0.1
Misc	0.4	0.4	Misc	0.4	0.6

Source: RAPBN 2015, IISD and ANZ Research 2015

Comparative advantage can be examined further by considering advantage at any point in time ('static' comparative advantage) and advantage over time ('dynamic' comparative advantage). Whereas industrialising economies have tended to exhibit a 'dynamic' comparative advantage over time, primary producing and commodity economies tend to have a more 'static' comparative advantage. The sections below explore the static and dynamic comparative advantages of Australia and Indonesia.

3.1.1 Static comparative advantage

Australia and Indonesia have historically had a comparative advantage in producing animal, vegetable and food products as well as minerals and fuels (Figure 21). Both economies have a comparative advantage primarily concentrated in the agricultural and resources sector with some evidence of a comparative advantage in simply transformed manufactured (STM) goods.

Table 6 shows that Indonesia has a comparative advantage in the Plastics, Rubber and Wood sectors and some STM goods such as Textiles and Footwear. Its strongest comparative advantage is in Footwear followed by Vegetable (palm oil). Australia's strongest comparative advantage is in Minerals (iron ore) followed by the Animal (beef and mutton) sectors.

Table 6: Export growth (%) – RCA in 2014 and RCA in 2005

2014	Australia	Indonesia	2005	Australia	Indonesia
Animal	5.00	1.71	Animal	6.70	4.90
Vegetable	5.79	10.57	Vegetable	11.11	16.71
Food Products	1.84	2.85	Food Products	1.52	10.83
Minerals	31.51	5.14	Minerals	19.91	13.24
Fuels	25.87	31.65	Fuels	10.00	10.99
Chemicals	4.70	4.80	Chemicals	3.58	11.70
Plastics & Rubber	0.44	6.13	Plastics & Rubber	2.77	11.07
Hides	0.50	0.34	Hides	4.67	7.73
Wood	0.95	4.91	Wood	3.86	2.76
Textiles	2.18	7.15	Textiles	4.18	6.44
Footwear	0.03	2.81	Footwear	4.59	14.12
Stones & Glass	6.06	1.73	Stones & Glass	10.88	8.17
Metals	5.09	4.36	Metals	5.04	7.49
Electic Mach.	3.36	9.83	Electic Mach.	4.11	1.35
Transport	1.88	2.59	Transport	1.49	20.53
Misc	4.80	3.43	Misc	2.96	5.40

Source: RAPBN 2015, IISD and ANZ Research 2015

Table 6 further shows the export growth rates in the sectors where a comparative advantage has been revealed. It indicates that export performance has generally aligned with the RCA as economic theory suggests for Australia, but less clearly so for Indonesia. Additionally:

- Australia has enjoyed extraordinarily strong growth in the Minerals sector over the past decade (i.e. nearly 20 per cent annually). This is the sector in which Australia has the largest comparative advantage.
- Australia has also enjoyed strong growth in the Fuels (coal) sector of 10 per cent over the past decade.
- Strong growth has also been recorded in the Animal and Vegetable sectors for which Australia has a RCA.

Interestingly, Indonesia has enjoyed the fastest growth in the Transport sector. CAGRs of over 20 per cent growth here is unusual in that this is not a sector in which a comparative advantage has been revealed. In fact, quite the opposite, Indonesia has a comparative disadvantage in this sector.[13] In other sectors, export performance aligns with comparative advantage. Additionally:

- Indonesia has enjoyed strong growth of around 15 per cent in both the Footwear and Vegetable sectors.
- Double-digit export growth has also been revealed in the Minerals and Fuel sectors, again comparative advantage sectors.
- Export growth in the STM space – Wood and Textiles has been modest but not spectacular.

[13] Although growth in this sector does not align with RCA, it is important to note that growth in sectors may have occurred for other reasons; such as subsidisation based on non-economic or political imperatives. It is outside of the scope of this study to explore these other reasons in depth.

3.1.2 Dynamic comparative advantage

Analysis of comparative advantage in Asia has shown that it is dynamic and that it evolves over time. For example, Asian nations have consistently cascaded up value chains in the 60 year period of Asian modernisation and industrialisation that commenced with Japan in the 1950s. This created the economic space for less developed economies like Indonesia to commence cascading up value chains, thereby pushing out their production possibility frontiers.

Possible enablers of dynamic comparative advantage changes for both Australia and Indonesia include:

- **The AEC** – In December 2015 the members of ASEAN will form the AEC. It can be expected that the AEC will become a key enabler of dynamic comparative advantage through the deepening of global value chains and the formation of industrial clusters that ASEAN is likely to encourage. This segmentation will allow global supply chains, enabled by multinational corporations, to extend through ASEAN.
- **The role of manufacturing in dynamic comparative advantage** – Indonesia's young and sizable population can push the economy as a key manufacturing centre over the coming decades. Low-value added exports currently dominate the manufactured shipments out of Indonesia. The share of low value-added exports has however declined in the last decade, suggesting less reliance on cheap labour and natural resources (that are abundant within Indonesia). Labour and resource-intensive production account for the majority of manufactured exports despite this decline.
- **FDI is already enabling this change** – In 2015 FDI flows into ASEAN surpassed FDI into China for the first time. Analysis shows that ASEAN will emerge as the new 'Factory Asia' in the coming decades where Indonesia will play an increasingly important role due to the size and growth of its labour force. Indonesia has the largest projected increase in its working age population of the ASEAN economies (rising by 50 million people by 2050). Indonesia's total working age population is expected to be close to 175 million people by 2050.

3.2 Projected comparative advantages

The sections below continue and extend the concept of dynamic comparative advantage by anticipating how the Indonesian and Australian economies will progress in the coming decades. In particular, these sections identify the industries that are most likely to thrive in each economy. The identification of these sectors can encourage both economies to cooperate and mutually benefit from their competitive advantages.

3.2.1 Indonesia

It is expected that Indonesia will move up the value-added chain in the primary industry sectors as well as embedding itself in regional and global production chains because of its large and growing labour force. Indonesia is expected to climb up the value chain in most primary industry sectors through the economic reforms launched by President Joko Widodo that will focus on infrastructure, maritime tollways and the development of dedicated industrial zones. These reforms form a longer-term industrialisation and modernisation strategy that will provide clarity to foreign multinational enterprises. However, this long-term strategy should not be at the expense of more flexible shorter term projects and plans.

It can therefore be expected that Indonesia will develop industries serving and supporting regional productions chains (for which Indonesia will initially supply raw materials). If the longer-term structural reforms are successful, Indonesia should advance into industrial sectors such as:

- Agri-industrial production for export and domestic markets.
- Consumer products and production equipment.
- Using the textile sector as a launching pad for simply and elaborately transformed manufacturing.
- Given the size of the domestic population and likely demand for vehicles, Indonesia is also expected to emerge as a key player in the regional automobile sector (production, design, assembly) in coming decades.

The high concentration of Indonesian industry in the textile and clothing/apparel industries will see Indonesia continue to have a comparative and competitive advantage in this sector.

3.2.2 Australia

Australia's projected comparative advantage is less straightforward largely due to its widely fluctuating currency in recent decades. From 1985 to 1995 the AUD-USD generally declined from around USD0.80c to USD75c before declining to less than USD0.50c by 2001. The currency then more than doubled, appreciating above parity with the USD through 2010-2011.

These moves in the currency have largely meant that Australian export growth has been strongest in those sectors where export demand has been price-insensitive. This has largely been aligned with Chinese demand for Australian commodities (energy, mineral ores and agricultural) during China's own period of industrialisation.

The Australian Dollar weakened significantly from 2012-15, leading to a return of competitiveness for Australian manufacturing. CAGR in new export sectors is therefore likely to be slow to build with many Australian manufacturing and goods producing sectors previously damaged due to the strong Australian dollar over the China boom years. However, given the low base, high levels of CAGR in newly competitive sectors can be expected to reveal themselves in coming years.

Additionally, the lower dollar will revitalise a number of Australian service sectors with relatively strong comparative advantages. These likely include Financial Services, Health and Education.

The most likely near-term change will be a rotation from Australia's Fuel exports which have primarily been coal to date to LNG. Australia's LNG export volumes will rise rapidly over the next few years as the extra capacity created by the LNG investment

boom arrives. By 2018, Australia will rival Qatar as the largest exporter of LNG in the world. The long-term global outlook for LNG is strong and Asia is expected to emerge as a major source of demand, particularly as demand for clean energy rises.

Australia's engagement with Asia is likely to become more diverse with Indonesia emerging as a large manufacturing centre in ASEAN, a more competitively priced currency and LNG supply embedding Australia into regional production and supply chains. The AEC in particular may be a key enabler of dynamic changes in comparative advantage for Australia.

3.2.3 Joint competitive advantage

Both Indonesia's and Australia's comparative advantage has been relatively stagnant over the past decade. However this pattern is expected to change for both economies given less reliance on natural resources exports in coming years and decades. The AANZFTA will broaden Australia's export base and capitalise on Australia's proximity to the fast-growing markets of Asia including Indonesia, with complementary opportunities arising from their respective comparative advantages.

The geographical location of global energy demand is likely to move closer to both Australia and Indonesia as 'Factory Asia' moves south into the ASEAN region and towards Indonesia in particular. It is likely that industrial structures within both Australia and Indonesia are unlikely to change significantly over the medium-to-long run with improved connectivity between the two economies. 'Factory Asia' can be expected to remain energy hungry and is likely to source that energy from within its own region.

The drift south in manufacturing and production platforms from the more expensive north-Asian economies will benefit Indonesia's younger, cheaper and demographically endowed labour force. Additionally, this shift of capital flows towards 'Factory Asia' will coincide with an urbanisation of Indonesia's population. It can be expected that this will result in a rise in aggregate income and that a genuine consuming class will rapidly emerge. A larger Indonesian middle class will present opportunities for Australian small- medium-sized businesses to engage in joint ventures with their Indonesian counterparts.

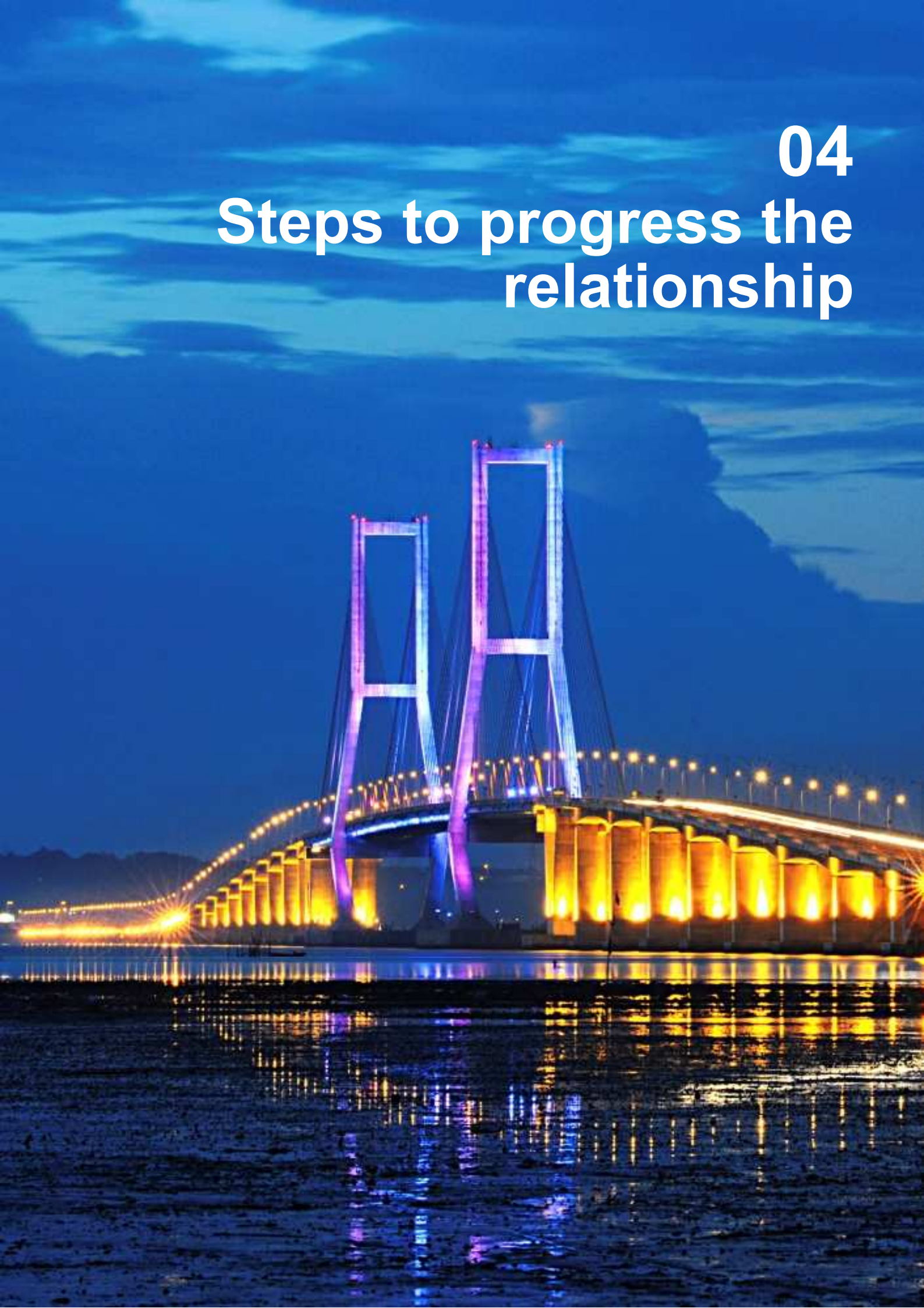
In fact, SMEs are an integral part of both Indonesian and Australian economies. In Indonesia they account for more than 95 per cent of total firms and are responsible for more than 90 per cent of total employment, while in Australia they account for approximately 96 per cent of all businesses and 63 per cent of total employment.[14] With greater trade liberalisation it can be expected that the importance of SMEs in each economy will continue to grow. Specifically, increases in productivity and output growth could raise the average wage paid by SMEs in Indonesia. This can help to alleviate youth unemployment in Indonesia (20 per cent, or four times larger compared to the overall unemployment rate) and thereby add to its already sizeable labour force.[15] This can create further opportunities for businesses in both countries to eventually collaborate with their counterparts.

Although comparative advantage will slowly evolve and more specialised manufacturing is likely to emerge in both economies, the joint comparative advantages between Australia and Indonesia may remain concentrated in the sectors highlighted above – specifically, the Animal, Vegetable, Food, Mineral and Fuel sectors. The likely long-standing comparative advantage that can be expected for Australia and Indonesia strongly suggests that these joint-comparative advantages should be capitalised on for both economies to benefit.

[14] RAND Corporation. (2015). Reforming Indonesia's Policies Towards Small and Medium Sized Enterprises. Retrieved from http://www.rand.org/labor/centers/rapid/projects/reforming-indonesia-smes.html; and ASMEA. (2015). SME Facts. Retrieved from http://www.asmea.org.au/SMEFacts

[15] International Monetary Fund. (2015, September 1). Poised for Take-off—Unleashing Indonesia's Economic Potential. Retrieved from https://www.imf.org/external/np/speeches/2015/090115.htm

04
Steps to progress the relationship



- Efforts are required to grasp the multi-trillion-dollar opportunity for both Australia and Indonesia, to avoid the adoption of protectionist policies that can undermine long-term economic growth. Greater bilateral cooperation and stronger economic integration is essential to improve current trade and investment patterns.
- Additionally, economic cooperation is required to develop cross-border integrated industries and value chains in both goods and services that use the comparative advantages of each economy to supply domestic and third markets. These can be achieved by a variety of broad steps that can help both economies tap into larger regional and global value chains.
- These broad steps can be categorised as:
  - **Step 1: Favour a new approach to trade and investment.**
  - **Step 2: Create a better business and investment environment** – simplify regulatory procedures and remove duplications.
  - **Step 3: Improve infrastructure** – identify and develop ‘gateway’ infrastructure projects, cooperate to expand the scope of infrastructure initiatives and leverage broader regional efforts.
  - **Step 4: Build skills and capacity requirements** – reconcile required skills with education providers, upskill the existing labour forces, collaborate with international counterparts, exchange knowledge and ease visa requirements for skilled workers.
  - **Step 5: Empower business** – share market information, cooperate to approach third markets together and collaborate to develop new products for domestic or third markets.

Australia and Indonesia have been aware of creating potential in joint competitive advantage in red meat for several years. In 2013 the two countries announced the Indonesia-Australia Partnership on Food Security in the Red Meat and Cattle Sector to encourage and promote joint investments within the red meat and cattle sector. Members of the Partnership are selected from industry and government in both Australia and Indonesia and meet regularly to discuss how their AUD60m in funding should be used towards their aim of improving the productivity, sustainability and competitiveness of the red meat and cattle sector in Australia and Indonesia. In simple terms, the Partnership facilitates closer dialogue between Australia and Indonesia to underpin food security and strengthen their relationship as part of an internationally competitive supply chain by encouraging:[16]

- Breeding activities to be centralised in Australia.
- Fattening of imported Australian livestock to occur in Indonesia.
- Establishment and use of abattoirs in Indonesia for distribution of red meat to the rest of Asia.

This is one example of joint competitive advantages in practice. This report explores similar opportunities in other sectors. For example, there is an opportunity of complementarity between Australia and Indonesia in the wool industry. Australia is the global leader in producing premium wool, however it is not being used in Indonesia at a time when its Fashion/Textile sector is gaining momentum in global markets. Additionally, Indonesia has established market relationships in third markets like the USA and Japan but its supply is limited to the spring and summer seasons. Australia, however, has primary knowledge of the winter season. These two competitive advantages could potentially be combined to approach third markets together.

'A big area of opportunity is building an investment footprint by both countries in each other's economy. We both have a need and opportunity to penetrate more deeply into global value chains'

- Mr Kym Hewitt, Senior Trade Commissioner, Australian Embassy, Jakarta

Efforts are required in both Australia and Indonesia to avoid the adoption of protectionist policies that can undermine long-term economic growth. Greater bilateral cooperation and stronger economic integration is essential to improve current trade and investment patterns. Additionally, economic cooperation is required to develop cross-border integrated industries and value chains in both goods and services that use the comparative advantages of each economy to supply domestic and third markets. These can be achieved by a variety of steps that can help both economies tap into larger regional and global value chains.

The broad aim of these steps for both countries should be to reduce costs and increase efficiency in trading goods and or services with the other party. In general, these steps can be categorised as:

- **Step 1:** Favour a new approach to trade and investment.
- **Step 2:** Create a better business and investment environment.
- **Step 3:** Improve infrastructure.
- **Step 4:** Build skills and capacity requirements.
- **Step 5:** Empower business.

This study has tested the likelihood of these broad steps succeeding by applying them to four case studies (see Appendix A). The two case studies that focus on Indonesian industries that have a comparative advantage over Australia are:

- Textiles/Fashion.
- Food-Processing.

[16] Department of Agriculture and Water Resources (2015. August 21). Indonesia-Australia Partnership on Food Security Communique 21 August 2015. Retrieved from http://www.agriculture.gov.au/about/media-centre/communiques/indonesia-australia-food-security

Similarly, two case studies focus on Australian industries that have a comparative advantage over Indonesia. These are:

- Logistics.
- Animal Products.

These four sectors were selected for this study for several reasons:

- Analysis found that Indonesia or Australia has existing comparative advantages in these sectors because of their long-term expertise or experience in developing their respective sectors.
- Existing comparative advantages in these sectors indicate that there is capacity for both countries to achieve joint competitive advantages.
- Achieving joint competitive advantages in these sectors will assist the Australian and Indonesian economies to subsequently tap into larger regional and global value chains.

Box 4 provides a brief overview of each industry and areas of potential collaboration between Australia and Indonesia.

It is clear that in each of these case studies that even where one country enjoys a competitive advantage over the other, the second country will still be able to play a key role in supporting the success of the other.

Maximising the comparative advantage of Australia and Indonesia cannot be achieved through steps that require government efforts alone. Businesses in both economies should embrace policy reforms where applicable and re-orient their thinking to facilitate mutually advantageous trade opportunities.

Each step is briefly explored in the following sections.

Box 4: Industry snapshots

Textiles/Fashion

- **The industry**: Indonesia has a comparative advantage in the Textiles/Fashion sector. The industry contributed approximately 8 per cent of the manufacturing value added in 2012 while exports of textiles/fashion in 2014 were approximately USD12.4bn.
- **Areas for potential collaboration:** The industry has been undergoing a slowdown over the past 15 years. Increased collaboration with Australia can reverse this trend. Areas for potential collaboration include investing to revitalise the industry, technical cooperation to upgrade the industry's technological capabilities and jointly identifying expansion opportunities within Australia.

Food-Processing

- **The industry**: Indonesia has a comparative advantage in the Food-Processing industry. In 2012 the industry contributed 20 per cent of total output of the manufacturing sector.
- **Areas for potential collaboration:** The industry lacks the application of advanced technology and its main export destinations are developed countries with strict standards that can act as barriers to entry. The industry can improve through importing Australian food-processing technology. Australia can share information about export markets with Indonesian firms to expand their market knowledge.

Livestock Logistics

- **The industry**: Australia has a comparative advantage in the Livestock Logistics industry. The value of Australia's live animal exports increased by almost 54 per cent between 2013 and 2014 and most of this trade has been channelled through two ports located in the north of the country.
- **Areas for potential collaboration:** Livestock trade with Indonesia is important for cattle farmers in northern Australia as well as for the logistics and transportation firms that specialise in the industry. There are opportunities for Indonesian companies to invest in ports infrastructure in Australia to help customise bilateral operations. The two economies can collaborate to improve time-to-market for goods through the development of Indonesian ports to better target mutual interests in Europe.

Animal Products

- **The industry**: Australia has a comparative advantage in the Animal Products industry. Cattle and calve meat and wool represent the largest animal product sectors in Australia, followed by milk, sheep and lamb meat. In 2014 the total value of Australia's animal products exports was AUD40.5 billion and 6.9 per cent higher relative to the previous year.
- **Areas for potential collaboration:** In regards to wool, there is an opportunity for raw Australian wool to be processed in Indonesia for export to third markets. For livestock genetics, Australia can offer its knowledge on livestock management and husbandry to improve the productivity of local and Indonesian stock. Australia and Indonesia can also establish one or more meat processing plants in northern Australia to improve food security, generate employment and encourage skills transfers between workers.

Note: Refer to Appendix A for full case studies

4.1 Step 1: Favour a new approach to trade and investment

Both governments have recognised the importance of accelerating cooperation in key sectors of interest. The Indonesia Australia Partnership on Food Security in the Red Meat and Cattle Sector is a strong example of how the nations are working to create stronger business partnerships that could result in competitive advantages in third markets. Deeper business ties will build trust in the relationship and provide greater ballast in times of differences. It is recommended that both governments explore opportunities for applying similar creative approaches to explore opportunities in those sectors with the greatest potential for shared competitive advantage.

New approaches to cooperation should include policy-makers seeking the input of multiple stakeholders from both economies that can inform policy dialogue through their expertise. These stakeholders can include businesses, industry or peak body representatives that are familiar with the commercial environment and academics that can assist with research or provide support studies.

New approaches to cooperation should also encourage meetings between officials from relevant ministries/agencies from both economies on a more frequent basis. The purpose of these meetings will be to identify and pursue opportunities to better align commercial potential into regional and global value chains.

4.2 Step 2: Create a better business and investment environment

Regulation is particularly costly for businesses that operate in global markets. These businesses rely on the efficiency of the domestic regulatory and administrative setting to ensure that their competitiveness is not harmed. Regulations that are overly-prescriptive can lead to direct costs (i.e. time and money to ensure that paperwork complies with regulations) as well as indirect costs (i.e. less time or budget to focus on innovation).

The costs of doing business should be minimised to encourage business efficiency and to attract investors to establish new operations. Both Australian and Indonesian businesses can benefit by a simpler regulatory environment to ensure productivity and facilitate opportunities for trade.

The AANZFTA and the IA-CEPA negotiations should be used to identify specific regulations that restrict or inhibit the potential for joint commercial collaboration.

Implementing trade-enabling measures can lead to various benefits for both economies, such as:[17]

- **Export competitiveness.** Local firms can be more competitive in international markets through a reduction in trade costs and lead times.
- **Private sector development and FDI.** New jobs and providing local producers and consumers with greater choice and better products can be achieved via lower trade costs and entry barriers to attract foreign direct investors.
- **Market integration.** Economies can more easily integrate regionally when trade costs fall. Trade facilitation can benefit every party along the value chain (domestic or foreign) within or outside a preferential trade agreement (PTA), which can sometimes result in trade diversion.
- **Economic growth and employment.** Trade facilitation can stimulate growth and employment via greater investment in transport and trade-related infrastructure.

[17] Refer to the following link for a more comprehensive list and supporting information: http://www3.weforum.org/docs/WEF_GlobalEnablingTrade _Report_2014.pdf

4.2.1 Opportunities for Indonesia and Australia

In 2014 Australia and Indonesia ranked 23rd and 58th respectively out of 138 countries in the World Economic Forum's Global Enabling Trade Index.[18] Australia ranked 17th in 2012 while Indonesia ranked 58th in 2012.[19] Australia's decline and Indonesia's recent stagnation can be attributed to the regulatory barriers and over-specified regulations faced by each country's exporters (amongst other barriers such as lack of access to foreign markets).

This is supported by the World Bank's Ease of Doing Business Index which finds that Australia and Indonesia ranked 13th and 109th respectively in 2015. Relative to the previous year, Australia fell three spots while Indonesia improved by eight.[20]

Implement new regulatory programs.
The regulatory environment faced by businesses involved with outbound and inbound trade can be simplified to remove some of the obstacles faced by businesses. Specifically, regulatory quality programs can improve existing regulatory requirements in both countries. Such programs are designed to help develop regulations that meet pre-determined quality standards. For example, undertaking targeted regulatory impact assessments (i.e. focusing on trade-facilitation) prior to introducing new government regulations can enhance the quality of the Australian and Indonesian regulatory environment.

There is a commonality of this step that applies to each of the four case studies. Box 5 briefly outlines the recommendations for each relevant industry.

Box 5: Case study snapshot

Textiles/Fashion

- **The opportunity:** The industry in Indonesia needs large investments for its revitalisation and the barrier for Australian investors is currently Indonesia's complicated business climate. Simplifying and accelerating licensing procedures is an important first step. Opening the trade regime will allow for the freer flow of goods, services and workers from the two countries. Reforms to the tax system in both countries are required for expeditious processing of refunds and allowances.

Food-Processing

- **The opportunity**: The industry can benefit from a relaxing of Indonesia's NIL that determines the openness of its investment regime. This can be achieved by joint Australia-Indonesian efforts to lobby the Indonesian government.

Livestock Logistics

- **The opportunity**: Simplified and consistent legislation will encourage Australian companies to undertake joint ventures with Indonesian businesses.

Animal Products

- **The opportunity**: A more balanced and predictable approach to setting import quotes for goods in Indonesia may lead to growing business opportunities between Australia and Indonesia. Additionally, a more streamlined registration process may encourage small Australian businesses to trade with Indonesia by lowering delays and allowing them to realise their return on investment quicker.

Note: Refer to Appendix A for full case studies

Remove duplications. New regulatory programs can help to remove policies that duplicate actions and regulations. Such programs can consist of streamlined inter-ministerial policy coordination where government ministers are encouraged to collaborate when developing new investment and trade facilitation policies. Effective policy coordination can be crucial to ensure that beneficial agreements can be achieved through bilateral and multilateral negotiations.

[18] The Index measures the quality of institutions, policies and services facilitating the free flow of goods over borders and to their destinations. See the following link for more information: http://www.weforum.org/reports/global-enabling-trade-report-2014

[19] Refer to the following link for a comprehensive breakdown of the Enabling Trade Index 2012 and 2010 rankings: http://www3.weforum.org/docs/GETR/2012/GlobalEnablingTrade_Report.pdf

[20] The index measures the regulatory environment for 189 countries to determine how conducive they are to business operation. See the following link for more information: http://www.doingbusiness.org/rankings

Simplify regulatory procedures. New regulatory programs can facilitate goods and services trade by simplifying procedures. For example, Australia's recent *Customs Amendment Act 2015* removes various time-consuming procedures for importing/exporting businesses that achieve 'trusted trader' status. The Act is a trade-facilitation measure and aims to harmonise international trade procedures to help with the movement of goods. Businesses that are accredited as 'trusted traders' can benefit through streamlined reporting requirements and being provided a single point of reference when communicating with the Australian Department of Immigration and Border Protection. Businesses can largely avoid licensing and transiting formalities (and the costs involved to address these procedures) that involve detailed and technical administrative processes and lengthy documentation requirements. The Indonesian government could establish a similar program to encourage trade facilitation. In addition, Australia and Indonesia could cooperate to strengthen the status of trading Australian/Indonesian businesses in their respective economies.

4.3 Step 3: Improve infrastructure

Transport infrastructure (i.e. railways, roads, seaports, airports, etc.) and the services provided by the logistics sector are crucial for moving goods and services to and from exporting and importing countries. Good infrastructure and efficient logistics sectors can support trade in both Australia and Indonesia.

'In practical terms for developing pioneer areas in eastern Indonesia, Australia being a hub of world class expertise and professional services, actually offers critical development value added before these regions are actually ready to absorb the bulk capital investments from the major infrastructure capital providers.'

- Bernardus Djonoputro, President of the Indonesian Association of Urban and Regional Planners and Non-executive Director of PT Jababeka Infrastruktur

Improving infrastructure connectivity between eastern Indonesia and northern Australia can increase economic cooperation between the two economies. Enhancements to these areas can further reduce trading costs and permit greater opportunities to reveal joint competitive advantages to enter third markets.

High-quality infrastructure for sea, land and air transport can lead to higher volumes of trade more broadly.[21] Transport infrastructure, in particular, can impact trade activities due to its influence over an economy's comparative advantage. For example, the Australian Animal Products industry is sensitive to the quality of infrastructure and therefore access to good infrastructure can strengthen and maintain its comparative advantage in the sector.

4.3.1 Opportunities for Indonesia and Australia

Identify and develop 'gateway' infrastructure projects. The Australian and Indonesian governments can support their importing/exporting businesses by identifying then developing large 'gateway' infrastructure projects. The purpose of these projects can be to improve both economies' ability to access each other's markets as well as international markets.

The Indonesian Government can look to Australia's 2015 White Paper on Developing Northern Australia as an example of Australia's recognition and support of gateway infrastructure projects to facilitate trade. The White Paper acknowledges for example that the redevelopment of the Port of Darwin is to capitalise on Darwin's potential to be a gateway into Asia. Indonesia can aim to support similar gateway projects by improving its sea transport and inter-island trading facilities. The need for better quality infrastructure was highlighted by President Joko Widodo in April 2015 upon sealing a 'maritime partnership' with China that will see joint projects between Chinese and Indonesian firms on ports, highways, and railroads for example. Australia should be encouraged by Indonesia's willingness to cooperate with regional countries to improve its own infrastructure. Additionally, Australia can propose a similar partnership with Indonesia to jointly develop gateway infrastructure projects that can facilitate the trade of goods between both economies.

Cooperate to expand scope of infrastructure initiatives. A proposed partnership on gateway projects should go beyond the objectives of existing Australia-Indonesia infrastructure initiatives (i.e. the 2008-2015 Indonesia Infrastructure Initiative Facility, the 2005-2014 Eastern Indonesia National Road Improvement Project). Such initiatives aim to improve infrastructure facilities within Indonesia; these can be regarded as a good first step to a broader partnership that seeks to develop targeted infrastructure projects in both countries to facilitate trade. Additionally, improved engagement between

[21] See the following link for more information on the studies and their findings in relation to infrastructure and the logistics sector and their impact on trade facilitation: https://www.wto.org/english/res_e/booksp_e/anrep_e/wtr04_2b_e.pdf

Australia and Indonesia can enhance regional productivity within the ASEAN region by providing a more open and predictable environment for businesses in the region.

In relation to the case studies, this step mainly involves efforts by both countries towards the Logistics and Animal Products industries. Box 6 briefly outlines the recommendations for each relevant industry.

Box 6: Case study snapshot

Livestock Logistics

- **The opportunity**: The Logistics industry can benefit through possible Australian/Indonesian government or industry investment in ports infrastructure in both countries to help tailor bilateral trade to specific exports (i.e. livestock exports require greater refrigeration facilities at ports in both countries)

Animal products

- **The opportunity:** The Animal Products industry can benefit from the establishment of key facilities in targeted locations. For example, raw Australian wool can be exported to Indonesia upon establishment of an early stage wool-processing facility in Indonesia in order to jointly approach third markets.

Note: Refer to Appendix A for full case studies

Leverage broader regional efforts. Indonesia will aim to benefit from the recently established AEC Blueprint that is due for implementation by the end of 2015. The Blueprint aims to accelerate the implementation of physical connectivity (i.e. infrastructure) through cooperation initiatives and investment projects across ASEAN. As outlined in Chapter 2, Indonesia has an important role to play as a leader in the AEC given it will account for over one-third of the ASEAN economic mass and approximately half of ASEAN's population. There is an opportunity here for Australia to leverage its relationship with Indonesia to seek greater involvement in the implementation and investment of infrastructure projects. Australia's strengths in public-private partnerships and financial services in infrastructure are particular areas where skills can be shared. In particular, Australia can seek involvement in specific infrastructure projects in Indonesia that facilitate trade to the rest of the ASEAN region.

4.4 Step 4: Build skills and capacity requirements

An educated labour force does not necessarily mean that graduates are entering the labour market with the right skills. It is important for Australia and Indonesia to develop and re-align the skillsets of its existing and future labour force to leverage the opportunities created by greater trade facilitation between the two economies. Appropriate skillsets are particularly necessary for those entering the labour force who may be involved with the production or provision of goods/services in the near future in which each economy has a comparative advantage in.

Australian firms can transfer their knowledge and expertise to their Indonesian counterparts in order to achieve joint competitive advantages. Implicit in this knowledge transfer is suitably targeting Indonesia's expanding capacity and growing labour force (i.e. Indonesia's total working age population is expected to be close to 175 million by 2050). Efforts are required by both economies to ensure that any knowledge transfer is directed appropriately to Indonesia's generous demographic dividend.

Developing partnerships in the areas of VET can assist in this process. Partnerships can be developed directly between industry and training centres or via collaboration with training institutions of both countries and their respective industries.

'We do not just need more Indonesianists in Australia, we need more Australianists in Indonesia'

- Andre Omer Siregar, Indonesian Consul in Darwin

Additionally, Australians need to learn from Indonesians about 'how to do business in Asia/in an Asian culture'. If Australia is move into the Asian Century then its people have significant knowledge to gain in this space. Perhaps just through being there is the only way to truly learn.

4.4.1 Opportunities for Indonesia and Australia

Reconcile required skills with education providers. A review of the status of vocational and tertiary education providers can be undertaken in both countries to determine whether training providers can better align the skills needed by industries that have comparative advantages. These reviews can be undertaken by joint industry-government partnerships to identify current and future skills gaps in each country. The partnerships can further:

- Design strategies to address these gaps.
- Increase the supply of quality training institutions that provide relevant training in strategic sectors.

Upskill existing labour force. Upgrading the skills of the existing labour force in both economies may be required to address the skills shortages of those already in the labour market. Australia and Indonesia can focus on improving the quality of training by potentially incentivising quality improvements from vocational and tertiary training providers.

This step applies to all case studies, albeit through different methods. Box 7 briefly outlines the recommendations for each relevant industry.

Box 7: Case study snapshot

Textiles/Fashion

- **The opportunity:** Technical collaboration in upgrading the technological capabilities in textiles manufacturing can benefit both countries. Australian know-how in producing high quality fabrics such as wool-based products can assist Indonesian textile manufacturing to diversify wool products.

Food-Processing

- **The opportunity**: Indonesian companies, particularly small- and medium-sized firms can benefit from Australian expertise and thereby increase the capability of the Indonesian food-processing industry in meeting international standards.

Livestock Logistics

- **The opportunity**: Capitalise on Indonesia's growing capacity and generous demographic dividend by training Indonesian firms in both road and rail transportation equipment/machinery.

Animal Products

- **The opportunity**: Indonesian producers of goods and services can benefit from Australian knowledge and expertise to make their skills more relevant to the domestic market.

Note: Refer to Appendix A for full case studies

Collaborate with international counterparts. Australian and Indonesian businesses can collaborate to ensure that trade in goods/services with their respective comparative advantages is sustained. This effort can possibly be led by business associations or through the previously mentioned joint industry-government partnerships. These efforts can involve discussions on:

- Strategies to facilitate trade in goods/services where comparative advantages exist.
- Short/medium/long-term projections of trade in those goods/services.
- Possible disruptions to trade in goods/services.
- Solutions to overcome those disruptions.
- Possible dispute-resolution methods.

Knowledge exchange. Indonesia has an expanding capacity and a growing labour force (i.e. Indonesia's total working age population is expected to be close to 175 million people by 2050). Efforts are required by both economies to ensure that any knowledge transfer is directed appropriately to Indonesia's generous demographic dividend. For example, Indonesia currently lacks skills in wool weaving and processing. Australia can assist to build Indonesian expertise so that Australian exports to Indonesia can be in the form of raw wool.

Easing the visa requirements for skilled workers. Australia and Indonesia can encourage the movement of skilled individuals between the two countries by relaxing immigration/visa requirements for individuals to directly fill skills gaps or for individuals to provide training. This process could potentially involve greater efforts towards recognising the qualifications of Australian and or Indonesian workers.

Importantly, the AEC will encourage significant competition for labour and skills and those countries that have the necessary skills will benefit from 'Factory Asia'. Indonesia is already facing a challenge from fellow ASEAN member Vietnam in areas of traditional Indonesian strength such as textiles and footwear (Vietnam has also joined the Trans-Pacific Partnership with eleven other countries that together represent 40 per cent of global trade). It is important for Indonesia to rapidly improve the competitiveness of its labour force to remain competitive in the AEC. One possible mechanism is to use Australia's VET sector more thoroughly:

- The Indonesian and Australian governments can potentially collaborate to ease visa requirements for workers that are entering Australia to gain or refine their skills. As above, visa requirements may also be eased for Australian certified VET trainers who are entering Indonesia to upskill local workers.
- VET providers should be encouraged to develop training packages suitable for both Australian and Indonesian audiences.

4.5 Step 5: Empower business

Maximising the competitive advantages of Australia and Indonesia cannot be achieved through steps that require government efforts alone. Businesses in both economies should embrace policy reforms where applicable and re-orient their thinking to facilitate mutually advantageous trade opportunities.

'Get Australians going to other places outside Bali. More familiarity with these locations could stir new opportunities.'

- Nick Trim, General Manager Operations, Eastern Pearl Flour Mills, Makassar

4.5.1 Opportunities for Indonesia and Australia

Share market information. Australian and Indonesian businesses should be encouraged to share information on their domestic markets in order to reduce transaction costs for investments by Australian/Indonesian producers of goods or services. Information on domestic markets (i.e. size, nature of regulation, competitors, growth, etc.) can be shared directly between businesses or via business associations that can offer a broader and possibly more representative view of markets.

Cooperate to approach third markets together. Australia and Indonesia have strong independent relationships with their respective trading partners. As a result both countries have gathered valuable information on international markets for goods where they have comparative advantages. Australia and Indonesia can choose to share this information in order to gain better access to third markets via joint ventures.

All industries considered in the case studies can potentially benefit through the application of this step. Box 8 briefly outlines the recommendations for each relevant industry.

Box 8: Case study snapshot

Textiles/Fashion

- **The opportunity:** Australian designers can collaborate with Indonesian designers to work on designs that suit Australian and wider Western preferences. Additionally, for market access of new products both parties should collaborate to determine customers' preferences both in Australia and in third countries for export. The AANZFTA will be crucial to securing market access in the region.

Food-Processing

- **The opportunity**: Food-processing business associations (and other relevant associations) in both countries should be encouraged to collaborate. These associations can work together to gather necessary information and share it with food producers in Australia to minimize transaction costs to invest for Australian producers. Additionally, business associations may together lobby the Indonesian government – informing with evidence on the potential benefits – to relax the next issued Indonesian NIL.

Livestock Logistics

- **The opportunity**: Businesses in the Logistics and Animal Products industries in Australia can benefit through coordinated efforts with their Indonesian counterparts. Australian logistics companies for example can function as the promoters and executers of projects with Indonesia to approach third markets and further facilitate the introduction of products from third markets into Indonesia.

Animal Products

- **The opportunity**: R&D projects could be jointly conducted in the area of livestock genetics with the aim of boosting profitability throughout cattle, sheep and goat value chains. Joint projects could be further conducted in feeding, finishing and nutrition R&D to increase productivity and profitability of producers in both economies.

Note: Refer to Appendix A for full case studies

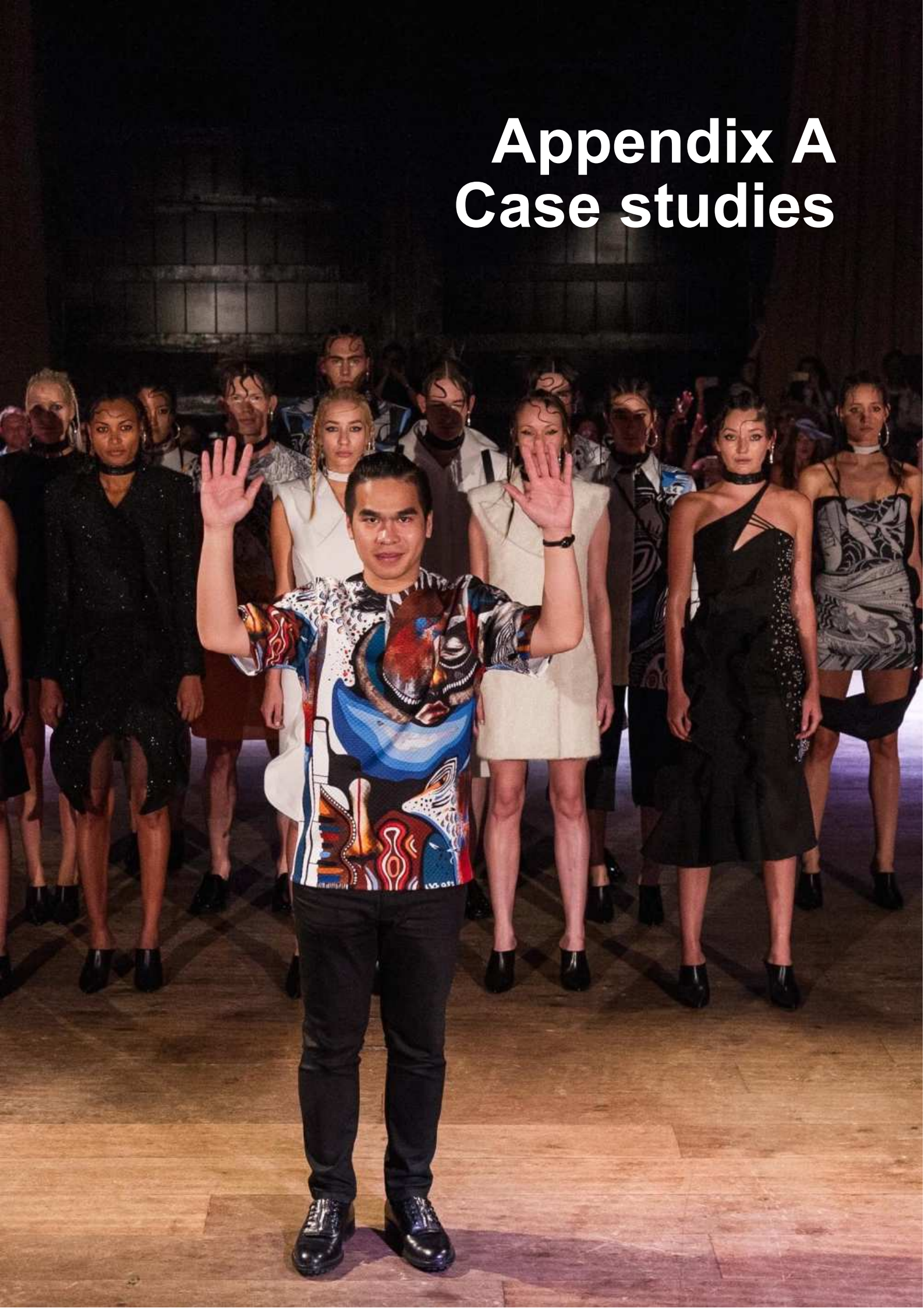
Actively encourage liberalisation of bilateral investment opportunities under IA-CEPA. Businesses in both economies should embrace activities and policy reforms to facilitate mutually advantageous investment opportunities. To support businesses in this exercise the IA-CEPA Business Partnership Group recommendations on facilitating investment access should be progressed and formalised.

Collaborate to develop new products. Australian and Indonesian businesses can cooperate to jointly develop new products for their own domestic markets or for third markets. Producers can take advantage of Australian or Indonesian skills for the manufacturing process and use their shared market information on consumer preferences to tailor their products. In addition, Australian and Indonesian businesses can undertake joint R&D projects to identify the scope for new products or to improve the productivity of existing goods/services. There is a role for organisations such as AIC to stimulate R&D to identify and capture further opportunities for trade based on joint comparative advantage.

Collaborate to develop a new generation of entrepreneurs. Trade based on combining comparative advantage, creating competitive advantage and selling into third markets requires a new way of thinking about trade and the trading relationship between Australia and Indonesia. Greater collaboration between both countries' younger generation could discover innovative ways to utilise joint comparative advantage.

Appendices

Appendix A
Case studies



Textile and Fashion

- Indonesia has a comparative advantage in the Textiles/Fashion sector. The industry contributed approximately 8 per cent of the manufacturing value added in 2012 while exports of textiles/fashion in 2014 were approximately USD12.4bn.
- The industry has been undergoing a slowdown over the last 15 years. Increased collaboration with Australia can reverse this trend.
- Areas for potential collaboration include investing to revitalise the industry, technical cooperation to upgrade the industry's technological capabilities and jointly identifying expansion opportunities within Australia.

1. Overview of the industry and key issues

Textiles and clothing are among sectors in which Indonesia has comparative advantage (see Table 7). Together these sectors represent one of Indonesia's leading manufacturing sectors, contributing approximately 8 per cent of the manufacturing value added in 2012. The sectors also contribute significantly to foreign reserves; for example, in 2014 exports of textile and clothing amounted to USD12.4bn.

Table 7: Revealed Comparative Advantage (2008-2012)

ISIC	Industries	2008	2009	2010	2011	2012	Top 3 Destinations
3211	Textile	2.74	2.69	2.56	2.29	2.60	Turkey, Japan, Brazil
3212	Products from textile except for garments	0.53	0.43	0.47	0.52	0.56	Japan, USA, Malaysia
3213	Knitting	0.40	0.38	0.47	1.50	0.36	Vietnam, Thailand, Australia
3214	Carpet	0.45	0.42	0.34	0.32	0.45	Japan, USA, Malaysia
3215	Yarn	1.13	0.72	0.68	0.57	0.64	Japan, Morocco, USA
3219	Other textile industries	0.51	0.53	0.38	0.43	0.40	China, Australia, Singapore
3220	Garments excluding footwear	2.02	1.95	2.36	2.11	2.46	USA, Germany, Japan

Source. Comtrade, Calculated

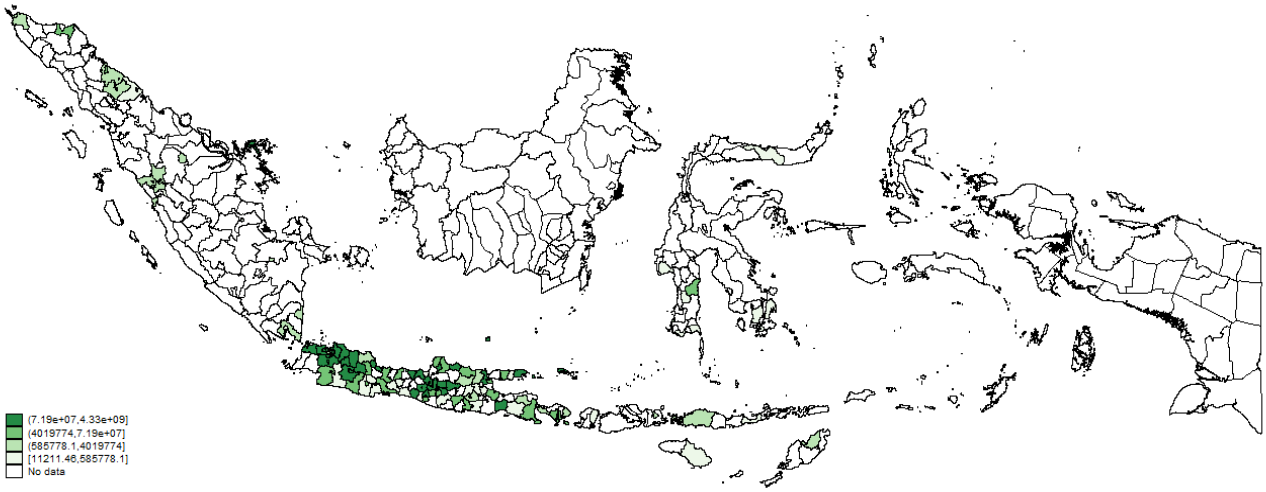
The sectors are relatively highly concentrated in Java, with 99.63 per cent of textiles and 98.6 per cent of clothing produced on the island. Figure 22 shows the geographical distribution of the industries. Textile industries are concentrated in:

- West Java (58.5 per cent).
- Banten (18.6 per cent).
- Central Java (12.8 per cent).
- Jakarta (6.4 per cent).
- East Java (2.9 per cent).

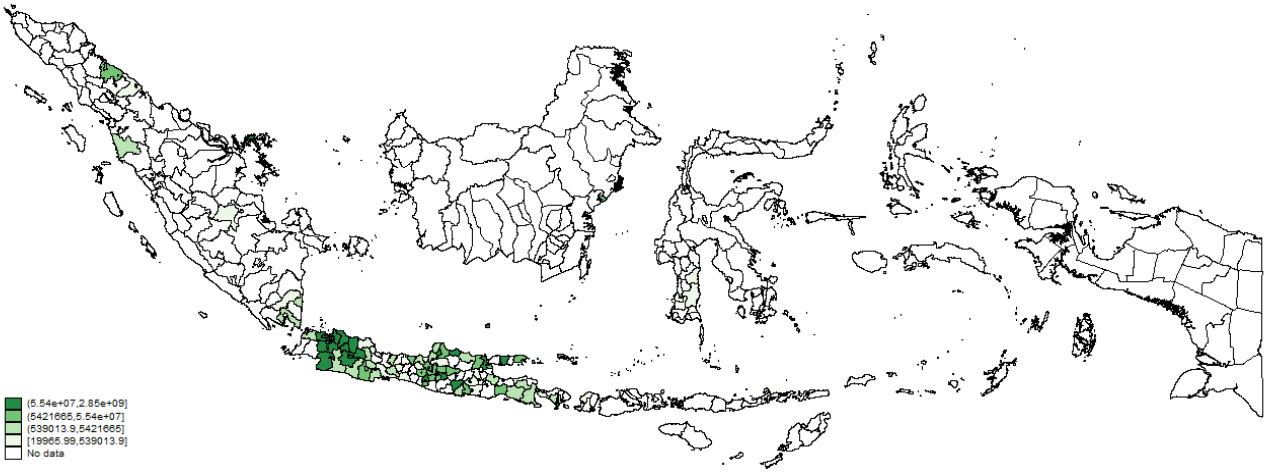
Meanwhile, the clothing industries are concentrated in:

- Jakarta (38.1 per cent).
- West Java (35.4 per cent).
- Banten (13.3 per cent).
- Central Java (8.1 per cent).

Figure 22: Textile Industries in Indonesia

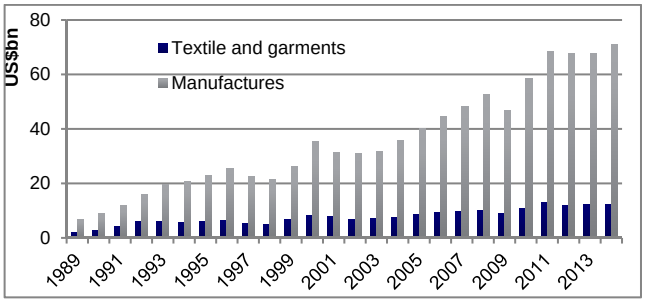


Clothing Industries in Indonesia: Geographic Distribution



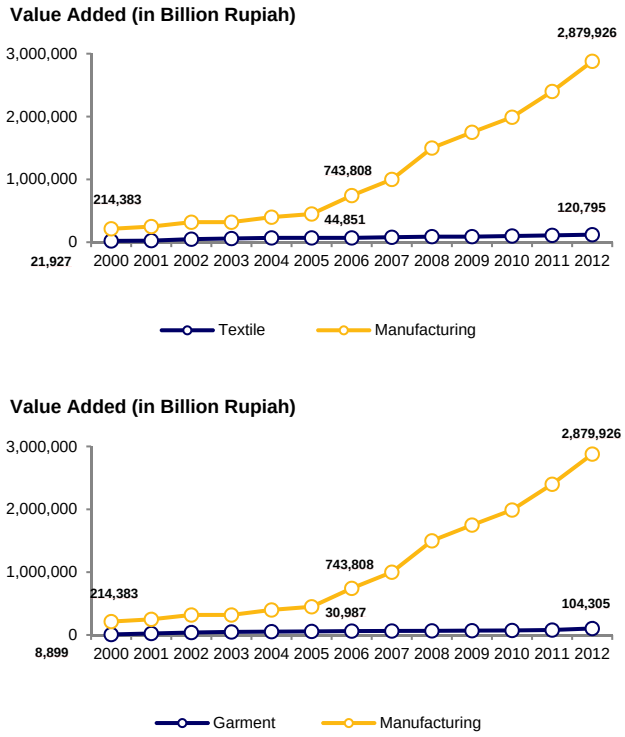
Exports from these sectors have historically been among Indonesia's top-ten leading exports; however they have undergone a sustained slowdown in the last 15 years. In 2000, textiles and clothing contributed 14 per cent of the manufacturing sector's value added. By 2012 this figure to 8 per cent. Furthermore, there was a relative decline in exports as a percentage of total manufacturing exports from 32 per cent in 2000 to 17 per cent in 2012 (see Figure 23 and Figure 24).

Figure 23: Exports of textile and clothing vs. manufacturing (USDbn), 1989-2014



Source. Comtrade, calculated.

Figure 24: Value Added Textile, Clothing and Manufacturing, 2000-2012

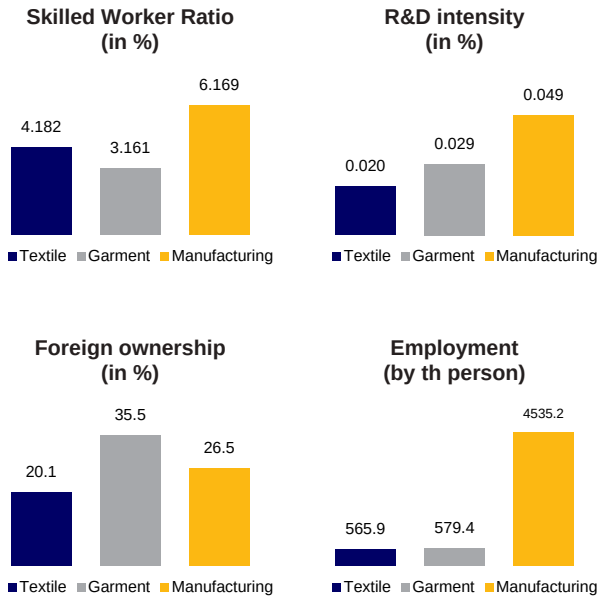


Source. BPS, Survey of Medium and Large Manufacturing Establishments, various years, calculated.

The declining share of the textiles and clothing sectors is due to several factors. **First**, restrictive labour market regulations, including several sharp increases in minimum wages and high severance pay have been a key factor for the sectors' decline. Prior to the 1997 Asian Financial Crisis, the labour market was conducive to business while labour unions were well controlled and minimum wages were set below market rate (Aswicahyono, et al., 2010). After the 1997 crisis, labour unions became more demanding and minimum wages increased by over 90 per cent in the period 1999-2002. The new labour law, enacted in 2003, had several affects: it made the labour market more restrictive and minimum wages increased frequently. For example, from 2008-2013 minimum wages increased by 8 to 19 per cent annually (Kuncoro, 2013). High severance pays have also made the risks of hiring costly.

Restrictive labour market regulations have resulted in increased unit labour costs (Aswicahyono et al, 2014) while labour productivity has not increased as quickly (particularly in the unskilled labour intensive manufacturing sector of textiles and garments). As an unskilled labour intensive sector, the increase to minimum wages has led to substantial increases in costs of production (see Figure 25). Kuncoro (2013) reports that labour costs represent approximately 13 per cent of total production costs in textiles manufacturing and 16 per cent of total production cost in clothing manufacturing.

Figure 25: Skill worker ratio, R&D intensity, foreign ownership and employment



Second, the textile and clothing sector is constrained by high energy costs. The textile industry is an energy intensive industry, particularly in Indonesia where a large proportion of textiles and garments machinery were purchased in the 1990s and therefore largely energy inefficient. The cost of energy in Indonesia (USD10.5cent/kwh) is relatively higher compared to competing countries, such as Vietnam (USD7cent/kwh), Pakistan (USD6.6cent/kwh) and Bangladesh (USD3cent/kwh). The reliability of electricity supply is another challenge for producers, particularly those that are based outside Java.

Third, textile industries have lacked technological advancement. Based on a 2012 survey of manufacturing firms, there were more than 2,000 medium and large textile companies and more than 1,869 medium and large clothing companies where R&D intensity was relatively low. The average for companies in these sectors was approximately 0.023 per cent compared to 0.05 per cent average for the manufacturing sector overall (see Figure 25).

Fourth, the textile manufacturing sector is not adaptive to the dynamics of its downstream industries. Textile manufacturers rarely collaborate closely with designers. Therefore the manufacturers are unlikely to be aware of changes in customers' preferences and current trends. Dina Midiani from the Association of Designers and Fashion Entrepreneurs suggested that: 'A partnership between designers and textile companies will be beneficial for both textile manufacturers and clothing industries'.

Fifth, frequent changes to trade regulations create uncertainty around acquiring imported inputs. The textiles and clothing sectors rely significantly on imported inputs – 32.2 per cent for textiles and 51.56 per cent for clothing. In addition, intra industry trade in textile and clothing is also quite significant. Sectors that rely heavily on imports and engage in intra industry trade activities do not benefit from an unpredictable trade environment. Harry Darsono from Harry Darsono Couture remarked that: 'The supply of raw materials remains a key challenge for the industry'.

Sixth, a value added tax (VAT) of 10 per cent on cotton is a constraint. This tax commenced in July 2014 and has led to higher capital costs for businesses (that are required to pay the VAT when sourcing their inputs) and increased prices for retail goods for consumers.

Seventh, the requirement to use the Indonesian Rupiah in all transactions within domestic markets has resulted in higher transaction costs as the Rupiah has fluctuated and hedging costs have increased.

The challenge for textiles and clothing manufacturers in the near future is the likelihood of Indonesia graduating from its low-income country status, which will make it ineligible for the General System of Preference (GSP). Currently, Indonesia exports its textiles and garments to the EU and US under the GSP preference. The EU and US' engagement of Indonesia's competition in the region (i.e. Vietnam) poses another threat to Indonesian textile and garment exports. Ade Sudrajat from the Indonesian Textile Association noted that 'the phasing out of the GSP scheme leaves Indonesia's textile and garments manufactures vulnerable, an FTA with the largest buyers is needed'.

Another challenge for Indonesia's clothing industries is to determine how to tap into department store chains (Wall Mart in the US, Target in both the US and Australia and Grace Bros and Myer in Australia) and move up the ladder, from unskilled intensive to skilled (designer) based clothing manufacturing. Mass production clothing will remain important for Indonesia in terms of labour absorption. Indonesia has significant potential for designer based clothing manufacturing with many well-known designers and unique local materials (i.e. hand-made batik and hand-woven materials). However the main constraint for designer clothing is the availability of raw materials (particular cotton-based, silk or wool fabrics). In addition, many local textile companies produce fabrics in large quantities, which are not suitable for designer clothing. In response, some textile manufacturers have developed production lines for low quantity fabrics (however the majority of textile manufacturers are bulk producers). As a result, Indonesian designers have often resorted to imported materials available in small quantities.

2. Potential Collaboration

The decline of the textiles and clothing sectors is due to problems internal to Indonesia. Policy reforms are required to improve the business environment for the industries. The current government, through its reform packages is expected to address the impediments to growth of these sectors. The most crucial factors are labour regulations, energy costs, ease of doing business and an open trade policy. Potential collaboration between Indonesia and Australia can be facilitated by addressing these major issues promptly.

There are a number of potential areas for enhanced collaboration with Australia. **First, invest in Indonesia**. The textiles and clothing industries in Indonesia need large investments for their revitalisation. Kuncoro (2013) reported that 82 per cent of weaving machines, 84 per cent of knitting machines, 93 per cent of finishing machines and 78 per cent of garment machines in Indonesia were technologically outdated. A large amount of investment is needed to advance processing technologies in order to revitalise the industries, create higher quality fabrics and improve the value added performance of the textiles industry.

Second, collaboration for product diversification. Technical collaboration in upgrading the technological capabilities in textiles manufacturing can also benefit both countries. Australian know how in producing high quality fabrics such as wool-based products can assist Indonesian textile manufacturing to diversify wool products. However, a key aspect of collaboration is market access. Dr Nasir Tamara of Sritex perfectly noted that 'the biggest challenge is to find markets to maintain growth'.

Collaboration on the supply side, however, should to be combined with the ability to tap into new markets (countries and products). Indonesia will likely continue to be a lower cost textile and clothing manufacturing nation compared to Australia, it would therefore be beneficial to have production bases in Indonesia to export the products to Australia. Previous studies also show that strategic partnerships with foreign investors can contribute to the advancement of industries. For example, the development and progress of the Indonesian textile industry in the 1980s was driven by the relocation of textile multinational corporations (Thee, 2009 in Vickers, 2012). Suyanto, et al. (2012) notes that FDI in the garment industry has led to increased total productivity and technological change. However, FDI in the industry has declined in recent times due to an unfavourable business climate (see Figure 25).

Third, expanding in Australia. Indonesian clothing industries need to shift from low unskilled manufacturing (with high labour costs) to higher value-added clothing production. This can be achieved by producing Original Design Manufacturing (ODM) for Australian shopping outlets or Original Brand Manufacturing (OBM) for Australian brands. On the supply side, Indonesia remains a potential source for producing ODM or OBM garments because of its' large pool of talented designers and its unique fabrics. There is potential for Australia and Indonesia to collaborate in this market segment targeted to Australian and other Western markets. Australian designers can collaborate with Indonesian designers to work on designs that suit Australian and wider Western preferences.

3. Potential Barriers and Suggested Solutions

First, invest in Indonesia. The barrier in attracting Australian investors to invest in Indonesia is Indonesia's complex and evolving business environment. This different environment can have the effect of making Australian investors uncomfortable and thereby hesitant to invest in Indonesia. The Indonesian deregulation package announced in September 2015 represents a start in the right direction. The package includes:

- The simplification and acceleration of licensing procedures.
- An open trade regime allowing for the freer flow of goods, services and workers between the two countries.
- Reforms to the tax system (including the expeditious processing of refunds and allowances).

Second, collaboration for product diversification. Collaboration for product diversification requires market access for inputs and outputs. The free flow of inputs requires a more open trade regime. To gain market access for new products, both parties need to work on customer preferences both in Australia and in third countries to export.

Third, expanding in the Australian market. There are several obstacles to entering into the Australian market. These include competition from China and other non-ASEAN low cost producers. Obtaining access to Australian department stores will be important, as well as, taking advantage of better market access provided through the AANZFTA.

Food-Processing

- Indonesia has a comparative advantage in the Food-Processing industry. In 2012 the industry contributed 20 per cent of total output of the manufacturing sector.
- The industry lacks the application of advanced technology and its main export destinations are developed countries with strict standards that can act as barriers to entry.
- The industry can improve through importing Australian food-processing technology. Australia can further choose to share information about export markets with Indonesian firms to expand their market knowledge (and in turn gain access to Indonesia's large domestic market).

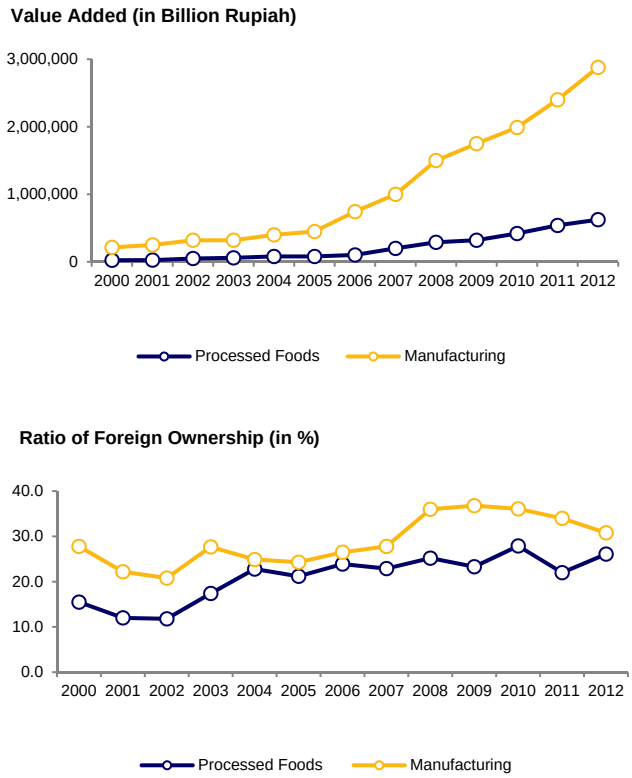
1. Overview of the industry and key issues

The food-processing industry contributes significantly to the overall output of the Indonesian manufacturing sector. The first chart in Figure 26 shows that in 2012, the food-processing industry's output was approximately 20 per cent of total output of the manufacturing sector. However since the mid-2000s, food-processing output growth has fallen behind total manufacturing output growth (see first chart in Figure 26).

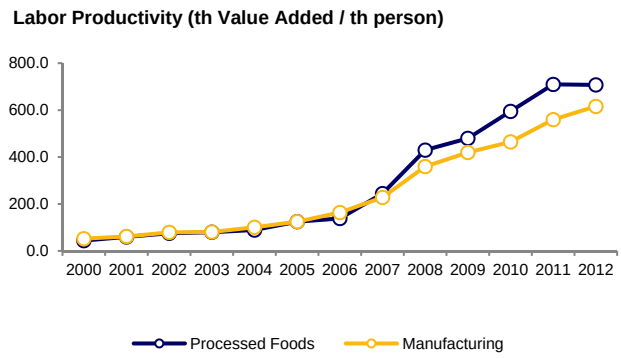
The trend for labour productivity in the food-processing industry shows a somewhat different picture in terms of the industry's performance (see the third chart in Figure 26). The growth pattern in labour productivity for the food-processing industry closely matches that experience of the manufacturing sector during the 2000s. A slowdown in value added growth over time combined with a sustained increase in labour productivity during the 2000s implies a substitution of labour for capital and a sign of increased mechanization in the industry. Greater labour productivity in food-processing may have come about through increased foreign investment. Another trend is the significant increase in the share of foreign ownership from approximately 10 to 15 per cent in the first half of the 2000s to more than 20 per cent in the latter half of the 2000s (see the second chart in Figure 26).

One of the main characteristics of the food-processing sector in Indonesia is its high dependency on imported raw materials. For example, according to the Chairman of the Indonesia Association of Food and Beverage (Gabungan Pengusaha Makanan dan Minuman Seluruh Indonesia, GAPMMI), Indonesia is importing 100 per cent of its flour and raw sugar needs and around 70 per cent of its soy and milk needs for the food industry.[22] Domestic production has not been able to fill the gap due to several factors, including rising demand for key food inputs. Critical dependency on imported raw materials has made the Indonesian food-processing industry vulnerable to exchange rate movements, particularly when the markets are mostly domestically oriented.

Figure 26: Performance trends of processed foods industries



[22] From the article on Liputan 6 news website, published on March 18, 2015. http://bisnis.liputan6.com/read/2193282/rupiah-loyo-pengusaha-makanan-dan-minuman-mulai-evaluasi-harga



The major challenge for food-processing is in relation to adding value (see the first chart in Figure 26). The Indonesian food-processing industry is dominated by SMEs using simple technologies and mostly lack the skilled human resources needed to support the use of more advanced technology (however some of larger producers are now utilizing more sophisticated means of processing). Some larger industry companies involved in food-processing have recently adopted advanced technology, albeit their representation is relatively small when compared to the total population of companies undertaking manufacturing in the industry.[23]

A lack of application of advanced technology in the Indonesian food-processing industry is illustrated by low R&D expenditure of the industry (also termed as technical intensity) (see Figure 27), which is less than 1 per cent of the total expenditure in the industry. This is despite the relatively high extent of R&D expenditure, as well as, the use of skilled workers employed in the overall Indonesian manufacturing sector.

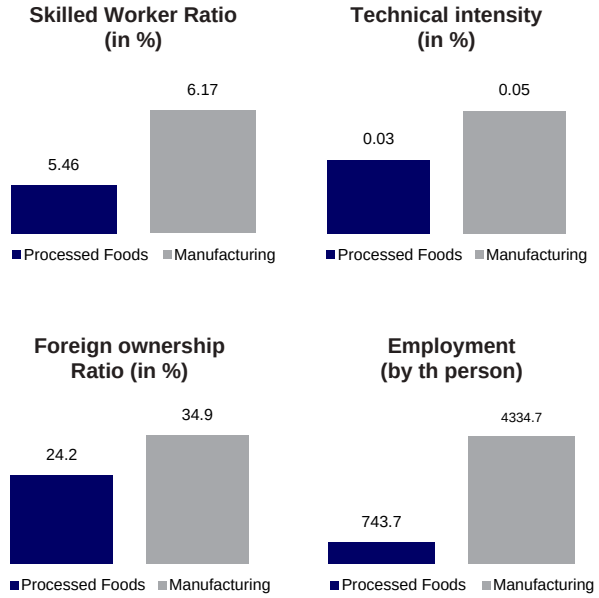
Another constraint to adding value in the food-processing sector relates to the sector's export destinations, which is currently mostly represented by developed countries. Standards for food products required by these countries can sometimes act as barriers-to-entry replacing traditional tariffs and non-tariff measures. For example, European Union regulations requiring dairy products to use mechanically milked processes initially led to a greater than 60 per cent reduction in imports from developing countries.

Another main challenge for Indonesia's food-processing industry is in its distribution. Refrigerated logistical technology is the key issue here mainly for traditional distributors. The use of cold storage facilities in Indonesia is still limited to only raw or some processed marine products. On this issue, Indonesia shares similar conditions with other developing countries. Most food loss in ASEAN and Africa occurs between production and retailing processes and not at stores or at the consumption stage (Save Food Congress, Dusseldorf, 2011).[24] Estimated food losses in the Indonesian domestic market are 28 per cent (FAO, 2014) due to poor product quality, cold chain management and storage, and post-harvest handling, packaging and logistics (Van der Laan, 2015). Temperature fluctuations during storage and distribution are common especially in hot and humid tropical countries like Indonesia. This climate could increase the cost of cold-storage construction. Indonesia inevitably needs to invest in a comprehensive logistic system to better handle perishable commodities and avoid more food loss in the future.

[23] Examples of these are such as PT. Sunpack and PT. Tio Niaga Jaya Lestari have been aiming to use the latest technology to ease the production processes within the industry. The food processing machinery, though, are still mainly imported from the countries like PRC and Germany (Converging Knowledge Pte. Ltd., 2012).

[24] As presented by Mr. Naoji Kato from Nichirei Foods Inc. on APEC Policy Partnership on Food Security in Jakarta, January 25-26, 2013.

Figure 27: Performance comparison of processed foods industries



Although Australian food products only contributed to 1.8 per cent of its total exports (World Bank 2014), their role in the Australian economy has been crucial. Food, Beverage and Tobacco products represent 24 per cent or the largest value added proportion in the manufacturing sector, notwithstanding that the overall manufacturing sector constitutes only 6.5 per cent of Australia's gross value added (Australia Bureau of Statistics/ABS 2014). The role of food production in the manufacturing sector of Australia also has led to increased employment in the sector over time – from 18.7 per cent of total manufacturing employment in 2004 to 24 per cent in 2014 (ABS 2014). Dominated by the smallholders local industries (ABS 2014) and highly concentrated along eastern seaboard e.g. Victoria, New South Wales and Queensland, Australia has managed to become a major global exporter of food products such as wheat, sugar, barley, beef and sheep meat, dairy and wine (Australian Trade Commission, 2013).

Australia has also aimed to capture the growing number of opportunities in being a major food supplier to Asia. In doing so, Australia seeks to find niche markets as being a major provider of more specialised products such as organic products, portion-controlled meals, desserts and other tailored catering solutions for international hotels, restaurants and the catering industry (Australian Trade Commission, 2013).The Australian food manufacturing industry is heavily mechanised and relies on the world-class technologies in food-processing to ensure that their food products exhibit the high standards of food quality. The Australian Trade Commission in 2013 further noted that Australia's food processors excel in applying the latest food technologies and manufacturing processes to simple packaging processes to logistics handling.

Despite its vital position in the Australian economy, the food-processing sector has faced some immediate challenges. Andrew White (a spokesperson for AusVeg) noted in 2013 that increasing costs of manufacturing including labour, electricity and freight (that were not followed by greater Government incentives for processors and R&D investment) threatened the food industry's competitiveness.[25] The Australian Government acknowledges that that innovation is essential for the industry to be successful in international competition. [26] However limited profit margins and lack of government assistance for R&D in the sector have resulted in low levels of R&D investment (confirmed by ABS figures of food manufacturing R&D). After experiencing frequent increases in R&D expenditure from the 2005-06 through to 2010-11, there was a decline in 2011-2012 despite food product exports being valued at around USD27 billion in that same year.[27] Other challenges include: regulatory burden through the imposition of higher standards than those of importing countries; a declining appetite to enrol in food and food science tertiary education; and increased competition with the mining sector – which was the country's top exporting sector (World Bank, 2014) – to attract the needed investment.

[25] http://www.abc.net.au/radionational/programs/breakfast/food-processing/4737622

[26] http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook44p/ProcessedFood

[27] http://www.australianmanufacturing.com.au/7821/board-members-of-food-industry-precinct-announced

2. Potential collaboration

The overview of the processed food industry in Indonesia and Australia indicates the following two potential areas of collaboration between private sector/companies in their industries.

First, the use of advanced technology by Indonesian food-processing firms through importing or installing Australian food-processing technology and know-how to Indonesia.

Indonesian companies, particularly SMEs, could learn from their counterparts in Australia in using advanced technology for production. There are at least two elements to this: mechanisation; and the use of cold-storage technology.

Each of these elements offers considerable merit to increase the capability of the Indonesian food-processing industry in meeting rigorous international standards. For Australian firms, there is an opportunity to expand their earnings from the intellectual property rights associated with the technology and systems developed in Australia.

Second, sharing information about international export markets with Indonesian firms. The Indonesian interest lies firmly with increasing revenue from exporting from the both the perspective of companies and the nation. Deep knowledge about export markets is critical for success in international markets, therefore the experiences accumulated by Australian food-processing firms can be valuable for their Indonesian counterparts.

The major incentive for Australian producers to share their knowledge base is gaining access to the large Indonesian domestic market. In this scenario, Australian producers will have access to the Indonesian market while Indonesian producers can increase their exports in the wider regional and global markets. Potential collaboration between Australian and Indonesian companies can be facilitated through direct investment or through the establishment of Australian food-processing producers in Indonesia.

3. Potential barriers and suggested solutions

Increased levels of direct investment by Australian producers in the Indonesian processed food industry and possible investment by Indonesian firms into Australia's food-processing industry can be the main stimuli to improve the performance of the food-processing industries in each economy. However there are several barriers that can prevent greater Australian participation in Indonesia.

The first barrier is the openness of the investment regime in Indonesia, which is governed by its NIL. The latest NIL was issued in 2014 and is regarded as relatively more open by some compared to its previous version. However some aspects of the NIL remain restrictive. For example, direct foreign investment in many sectors is still closed for SMEs.

Another barrier is the lack of human capital. Benefits from FDI generally occur when there is sufficient domestic absorption capacity. In the case of Indonesia, there is a lack in the absorption capacity arising from the lack of supply of skilled workers. Training locals can be an expensive exercise in Indonesia and Indonesian training standards may not always meet those required by multinational companies. One Australian investment manager noted that they had to send several staff from Indonesia to Switzerland for 6 months in order to raise skills levels to those needed to manage key technical aspects of the company's operations.

There are several possible solutions to these barriers. **First, in regards to the lack of knowledge of investing in Indonesia, the food-processing business association (and other relevant associations) from Indonesia and Australia can collaborate to gather necessary information and share it with the food producers in Australia**. This is important for minimising transaction costs and encouraging investment by Australian producers in Indonesia.

Second, greater collaboration between business associations in Indonesia and Australia could help to relax Indonesia's investment regime. The business associations could undertake research and subsequently present the Indonesian government with strong evidence to show the benefits to relaxing Indonesia's NIL (usually revised every six months).

Collaboration between the business associations of Indonesia and Australia should encompass industries that are related to the value-chain of the food-processing sector. The aim of including these industries could be to extend the positive impacts experienced by the food-processing sector through any collaborative activities.

Third, the provision of in-house training by companies in Indonesia could improve the stock of skilled Indonesian workers. Training that is tailored to the requirements of large companies can provide workers with valuable skill-sets and can be less expensive compared to general up-skilling via training organisations. Another approach to raising skills within companies could include partnering with dedicated centres of training expertise within the sector. This could include working with TAFE organisations in Australia and/or polytechnics in Indonesia.

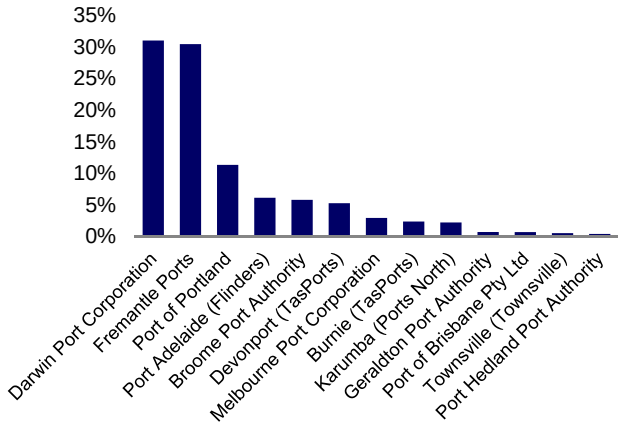
Livestock Logistics

- Australia has a comparative advantage in the Livestock Logistics industry. The value of Australia's live animal exports increased by almost 54 per cent between 2013 and 2014 and most of this trade has been channelled through two ports located in the north of the country.
- Livestock trade with Indonesia is important for cattle farmers in Northern Australia as well as for the logistics and transportation firms that specialise in the industry.
- There are opportunities for Indonesian companies to invest in ports infrastructure in Australia to help customise bilateral operations. The two economies can collaborate to improve time-to-market for goods through the development of Indonesian ports to better target mutual interests in Europe.

1. Overview of the industry and key issues

This case is taken not from the perspective of pure transport logistics, for which Australia has only a RCA index of 0.2 in 2013-14, but rather as an extension of the animal product supply chain and the fact that animal products provided the second largest RCA of 3.7 in 2013-14 (behind minerals). The value of Australia's live animal exports increased by almost 54 per cent between 2013 and 2014 and most of this trade has been channelled through two ports. In the period 2012-13 almost 60 per cent of total livestock exports (measured in mass tonnes) were sent overseas from the Ports of Darwin and Fremantle while the Port of Portland came third with 11.35 per cent (see Figure 28).

Figure 28: Distribution of livestock[28] exports by port in mass tonnes – 2012-13



Source: Ports Australia, http://www.portsaustralia.com.au/

In a recent study Higgins et al. (2013) found that logistics represent a substantial part of the total cost of production in the livestock and meat sector. In the Northern Territory for example, nearly 50 per cent of cattle travel more than 1000 km between the farm and the abattoir[29] or the port and the transport costs exceed AUD150 per head[30] and may get up to 35 per cent of the cattle market price.[31]

Some of the issues identified in Higgins et al. (2013)[32] that contribute to the high cost of transportation of livestock include:

- *The variability of road access:* During the wet season (particularly in Northern Australia) cattle can be stranded in floods with roads that are completely blocked or too wet for heavy transportation. Variable accessibility to roads reduces value and increases logistic costs. Selected minor roads in the country and highways have potential, via upgrade, to facilitate access to trucks during the wet season and reduce delays, uncertainty and transportation costs considerably. For example, upgrading the highway between Clermont and Roma would allow large road trains to use this route and reduce the number of heavy vehicles using the Bruce Highway. This, according to Higgins and co-authors, may significantly reduce transportation costs.

[28] Includes cattle, sheep and pigs

[29] Sometimes as much as 2500 km to east coast abattoirs

[30] Higgins, A, Watson, I, Chilcott, C, Zhou, Mingwei, Garcia-Flores, R, Eady, S, McFallan, S, Prestwidge, D, Laredo, L. A framework for optimising capital investment and operations in livestock logistics. Rangeland Journal, 35:181-191, 2013.

[31] CSIRO. The agricultural potential of Australia's north – Livestock industry logistics, 2013. http://regional.gov.au/regional/ona/files/SAF_LivestockLogisticsFlyer-AH2013-05.pdf

[32] CSIRO has developed a Livestock Logistics Tool (Transport Strategic Investment Tool (TraNSIT)) to analyse the impact of potential initiatives such as providing feed lot or processing facilities closer to the location of animals to reduce logistic costs in Northern Australia. This tool may also be used to evaluate the viability and potential costs and benefits of initiatives oriented to reduce logistics costs with Indonesia.

- *The need for long detours:* Suitability of roads for type 1 and 2 vehicles represents a problem in some areas due to gradients and sharp turns. This requires detours that significantly increase travel distance when compared to the direct route (up to 300 km in Queensland for example).
- *Underutilisation of multi-modal transportation:* Livestock logistics heavily rely on road transportation. For example, in Queensland and the Northern Territory only 6 per cent of cattle are delivered to Queensland abattoirs by rail. Investment in infrastructure that includes hubs and depots may facilitate multi-modal transportation. As an example Higgins et al. (2013) consider the case of the Adelaide to Darwin rail link, which could be utilised for movements to Darwin with appropriate investments in cattle-loading facilities in suitable locations with depots at Katherine.
- *Tick infection:* Another issue identified by CSIRO that increases the logistic costs in Australia's north is that parts of the country are infected by ticks such as Queensland, which requires cattle to be dipped with the consequent increase in delays and costs.

Livestock trade with Indonesia plays an important role for Australia. It is not only important for cattle farmers, but it is also vital for the logistics and transportation firms that specialise in this industry.

The Federal ban imposed on cattle trade in 2011 demonstrated a degree of vulnerability of this sector to disruptions to external markets, and in particular with Indonesia. After the ban was lifted, live exports doubled the transportation workload, as declared by truck drivers for an ABC report in 2014.[33]

Fred Troncone, CEO of Wellard Rural Trade, considers that the bigger demand for feeder cattle weighing less than 350 kg comes from Indonesia and he foresees a boost in the number of live cattle exports to Indonesia in the future. According to Mr Troncone, Indonesia's cattle herd has declined while beef consumption continues to grow, which are welcome news for all the workers involved in the cattle trade, including truck drivers and logistic personnel.[34]

The dependency of the Australian livestock industry to trade with Indonesia presents particular challenges for the logistics sector. Goucher (2011) finds that transport costs of beef cattle from the Australian farm to the destination port overseas represents a major component of the total cost to produce and deliver the product, which is particularly true in the case of Indonesia. Goucher compares the transportation cost of delivering beef cattle from the western Darling Downs in Queensland to Japan, with the transportation cost of delivering beef cattle from the Victoria River District (Northern Territory) to Indonesia. What he finds is that delivering to Japan represented 13.1 per cent of the total cost, while delivering to Indonesia represented 28.6 per cent.

A possible partial explanation to this difference in costs relies on the nature of the operations with Indonesia. As suggested by Higgins et al. (2013), uncertainty in relation to export permits and quotas makes planning of live exports of cattle very difficult for producers, which may increase logistics costs. On the one hand, there is only a short time interval between the export permit granted and the arrival of the ship to the port. This imposes great pressure on the domestic stage of the supply chain to get the cattle on board the ship in time. On the other hand, since quotas dictate the supply of live cattle for each shipment, a quick identification of sources of cattle of the requested weight to ensure a reliable supply to the port is very difficult, particularly in moments of adverse weather conditions. For these reasons, higher certainty and lead times for orders would allow better planning of the necessary actions and logistics to be put in practice to ensure a reliable supply and to optimise benefits at each stage of the supply chain.

An interview with a representative of Toll Global Logistics also noted the problems around getting to Java due to infrastructure constraints in terms of

[33] ABC media report (2014). http://www.abc.net.au/news/2014-09-09/behind-the-scenes-live-export-preparation/5721584

[34] In declarations to the same ABC media report (2014).

moving products around the island. Infrastructure constraints can be particularly problematic the further away those products need to move from Java and into other islands in the country.

2. Potential collaboration

Toll Global Logistics have pointed to the 'opportunities for Indonesian companies to invest in ports infrastructure in Australia to help customise the bilateral operations'. They add that Australian ports are in general not equipped for livestock exports and there is room for improvement with respects to meat product logistics (considering the need for refrigeration for example).

However, there is also potential to improve time-to-market through the development of Indonesian ports and the manufacturing sector to target mutual western interests. [35] Efficient ports in Indonesia would potentially provide new shipping access to the Indian Ocean, bypassing the Malacca Straits and improving shipping times to the Indian Ocean Rim markets (including Africa, India and the Middle East) and to Europe by many days. This would reduce costs for exporters and open up access to global supply chains for businesses in both Australia and Indonesia.[36] Toll Global Logistics has added that there could also be potential to further strengthen the developed international logistics capabilities of the maritime sector of Indonesia by leveraging the knowledge of the mining logistics sector of Australia.

There are several potential areas for collaboration. **First**, Australia can transfer knowledge and expertise to Indonesia in regards to road and rail transportation. **Second**, there are opportunities of joint ventures between Australian and Indonesian firms to penetrate third markets together. Toll Global Logistics mentions a particular joint venture with a dairy company in Jakarta, which has successfully combined comparative advantages of the Australian logistics and Indonesian food-processing. However, the key for these types of successful joint ventures in the Australian – Indonesian context is the level of mutual trust between the partners and how mature their relationship is. **Third**, Australian logistic companies could work as the promoters and executers of projects with Indonesia to approach third markets or facilitate the introduction of products from third markets into Indonesia.

3. Potential barriers and suggested solutions

The differing regulatory environments in each economy can be a challenge for Australian or Indonesian investors who may be uncomfortable investing in a market that they do not fully understand. Investor unfamiliarity can further prevent common ventures into third markets.

Toll Global Logistics noted that to realise benefits around knowledge transfer, the right investment environment should be created to motivate Australian companies to go into joint ventures with Indonesian partners. Also the legislation environment should be consistent enough so that Australian companies are comfortable in making those investments.

Based on their particular experience Toll Global Logistics view is that, even though there are big opportunities for investment in Indonesia, Australian firms face resistance from internal lobbying and there is not enough confidence from the investor's perspective to take advantage of those opportunities to grow their business. Furthermore, any strategy to promote joint venture projects with Indonesia would need to consider the need for a long-term vision, as opposed to a quick win, or be applied to current business relationships that are already mature enough.

[35] http://dfat.gov.au/trade/agreements/iacepa/Documents/ia-bpg-position-paper.pdf

[36] http://dfat.gov.au/trade/agreements/iacepa/Documents/ia-bpg-position-paper.pdf

Animal Products

- Australia has a comparative advantage in the Animal Products industry. Cattle and calve meat and wool represent the largest animal product sectors in Australia, followed by milk, sheep and lamb meat. In 2014 the total value of Australia's animal products exports was AUD40.5 billion and 6.9 per cent higher relative to the previous year.
- In regards to wool, there is an opportunity for raw Australian wool to be processed in Indonesia for export to third markets.
- For livestock genetics, Australia can offer its knowledge on livestock management and husbandry to improve the productivity of local and Indonesian stock.
- Australia and Indonesia can establish one or more meat processing plants in Northern Australia to improve food security, generate employment and encourage skills transfers between workers.

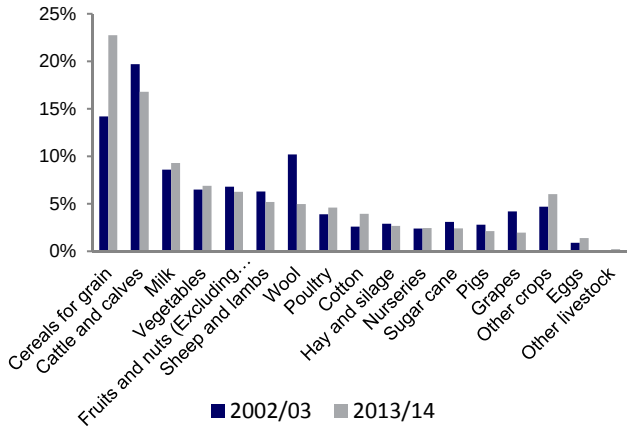
1. Overview of the industry and key issues

Animal product industries – setting the scene

Animal products come from sectors in which Australia has comparative advantage, shown by the RCA index of 3.7 in 2013-14 (see Figure 21 of the main report). Cattle & calve meat and wool represent the largest animal product sectors in Australia, followed by milk then sheep and lamb meat.

Despite this comparative advantage, the contribution of animal products to total agricultural production in Australia decreased from 52.5 per cent in 2002-03 to 45 per cent in 2013-14. The fall in the contribution of animal products to total agricultural output between 2002-03 and 2013-14 can be explained by a relative decrease in output share of two major industries. The first relates to the cattle and calves industry, whose share fell from 19.7 to 16.8 per cent, while the second is the wool industry, with a decrease in contribution from 10.2 to 5 per cent. At the same time the share of cereals for grain (including wheat and barley) increased from 14.2 to almost 20 per cent during this period (see Figure 29).

Figure 29: Industry contribution to agricultural output, 2002-03 to 2013-14



Source: Australian Bureau of Statistics (ABS), 2015, - *Value of Agricultural Commodities Produced*, Australia, Catalogue 7503.0, 2013-14

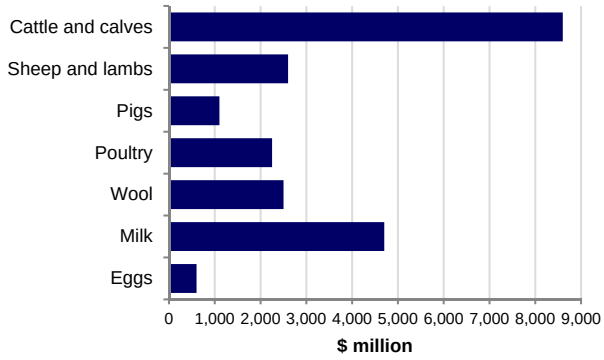
Cattle and calve meat: The value of cattle and calve meat production (see Figure 30) dominates agricultural commodities (valued at AUD8.54 billion in 2013-14). Australia is the world's seventh-largest beef producer, supplying 4 per cent of the world's beef. [37] In 2013-14, Australia produced approximately 2.5 million tonnes of beef and veal, with the largest contribution coming from Queensland. The direct contribution of beef and live cattle to GDP is approximately 1 per cent.

The 2013-14 production of meat reached record highs not achieved since 1978-79, despite the recent falling trend in its contribution to total agricultural output shown in Figure 29. The driver of this increase in production has been the adverse climatic conditions across most of the eastern states, registering severe droughts throughout 2013

[37] http://www.mla.com.au/About-the-red-meat-industry/Industry-overview/Cattle

(particularly in Queensland). The dry conditions forced farmers to increase the number of cattle slaughter by 12 per cent from the previous year, with a reduction in total herd of around 6 per cent.[38] As a result, the sector has suffered a marked drop in prices (as reported by MLA). However, the negative impact on prices has been mitigated by a strong demand of meat exports across global markets.

Figure 30: Value of Agricultural Commodities Produced, Livestock slaughterings & other disposals & livestock products 2013-14



Source: Australian Bureau of Statistics (ABS), 2015, - *Value of Agricultural Commodities Produced*, Australia, Catalogue 7503.0, 2013-14

Sheep meat and wool: The sheep industry is organised into the wool sector and sheep meat sector – worth approximately AUD2.53 and AUD2.64 billion in 2013-14 respectively (see Figure 30). Sheep and lamb numbers are mainly located in New South Wales, Victoria and Western Australia and South Australia.[39]

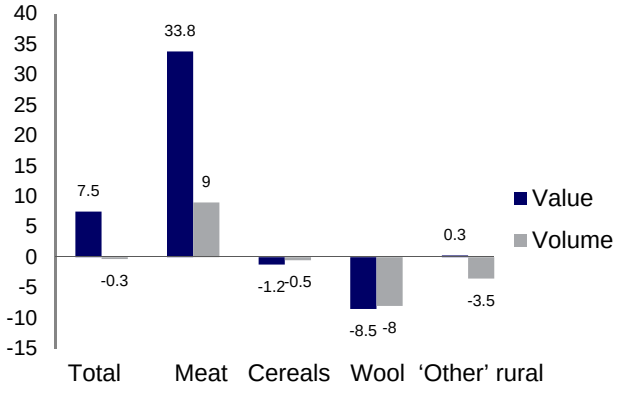
Australia is the second-largest wool producer globally and dominates the world market for all wools.[40] The predominant breed of Australian wool is Merino and a small sector of the industry produces ultrafine wool (11.5–15 μm in diameter). Despite the significant volume of raw wool production, a representative from the Australian wool industry has noted the industry does not cover any early stages of wool-processing. Australia's processing sector has shifted to China.

The future appears to be dominated by both a combination of the two products: wool and sheep/lamb meat. The growth in global sheep/lamb meat demand will continue to encourage producers towards meat production at the expense of fine wool production and a substitution towards the growth in medium wool (19.6–22.9 μm) production at the expense of fine wool (18.6 to 19.5 µm).[41]

Animal product exports

In 2014 the total value of Australia's rural exports was AUD40.5 billion – 6.9 per cent higher than in the previous year. However, most of this growth was driven by a change in commodity prices, which increased 7.2 per cent between 2013 and 2014. The only rural industry that registered a growth in both value and volume of exports during this period was the meat industry (Figure 31).

Figure 31: Australia's rural exports growth – 2013-14



Source: Department of Foreign Affairs and Trade (DFAT), Composition of Trade Australia, 2014.

As a consequence, the contribution of the meat industry to total rural exports increased from 22.9 per cent in 2013 to 28.6 per cent in 2014. Within the meat industry the total value of beef exported in 2014 was AUD6.5 billion, 27.3 per cent higher than in 2013. Sheep meat and goat meat exports also increased during this period. Sheep meat reached a total of AUD2.3 billion and goat meat AUD199 million exports in 2014, with an annual increase of 40.8 per cent and 36.5 per cent, respectively.[42]

38 Meat and Livestock Australia (MLA). Annual Report, 2013-14.

39 Australian Bureau of Statistics (ABS) 2015 – *Agricultural Commodities by State & Territory* - Cat. No. 7121.0, 2013-14

40 In 2012 China produced 400,000 metric tonnes and Australia produced 362,100 metric tonnes (see FAO STAT - United Nations (2014); USDA NASS (2015))

41 http://www.mecardo.com.au/commodities/analysis/global-sheep-flock-report.aspx?GoMobile=0

42 Meat and Livestock Australia (MLA). Annual Report, 2013-14.

Australia's meat sales to all main export destinations rose in 2014 when compared to the previous year. As shown in Table 8, the most significant growth was observed in meat exports to the United States, with an annual increase of 111 per cent, which positioned the United States at the top of the list of destinations with 24 per cent of total meat exports in 2014.

Table 8: Australia's meat exports[43] by selected markets (2013-2014)

Country	A$000 (2013)	%	A$000 (2014)	%	Growth 2013-2014 %
Japan	1,723,354	18	1,976,005	15	15
United States	1,488,522	15	3,136,805	24	111
China	1,374,103	14	1,428,553	11	4
Middle East	1,076,351	11	1,305,062	10	21
Korea	884,517	9	1,090,028	8	23
Indonesia	520,491	5	896,257	7	72
Other Markets	2,651,119	27	3,382,905	26	28
Total	9,718,456	100	13,215,616	100	

Source: Department of Foreign Affairs and Trade (DFAT), Australia Merchandise Exports and Imports, 2015.

The participation of other important trade partners in total meat exports decreased during this period, with the exception of Indonesia. The share of Indonesia's purchases in total Australia's meat exports rose from 5 to 7 per cent between 2013 and 2014 (see Table 8). Indonesia consumes only around 4.3 kilograms of meat per capita per annum (poultry the largest proportion consumed).[44] In comparison, Vietnam and Australia consume 49.9 kg and 111.5 kg of meat per capita, respectively, with a world average meat consumption of 41.9 kg per capita.[45]

Australia is Indonesia's main supplier of frozen and chilled meat, live animals and offal.[46] Indonesia is also Australia's largest market for live cattle. In 2013, Indonesia's imports of live cattle accounted for 53 per cent of total Australia's exports in this industry.[47] Live animal exports to Indonesia increased by 85 per cent from AUD302 million in 2013 to AUD560 million in 2014, while meat and meat preparation exports increased by 54 per cent from AUD219 million to AUD336 million in the same period.

However, in 2013 the Indonesian Government implemented a policy of import quotas that are adjusted according to fluctuations in the domestic price of beef.[48] Since 2015 the Indonesian policy has been to issue import permits for Australian feeder cattle only (which is then fattened in feedlots in Indonesia). Permits vary significantly from period to period, as they depend on variations in beef prices, and in some occasions permits to slaughter-ready cattle have also been issued. The Indonesian Government has announced an increase in permits issued to Australia's feeder cattle, but details about the number of permits have not been confirmed yet. It is expected that the Indonesian demand for Australian beef will remain strong in the future, despite the efforts to achieve self-sufficiency.

The high variability and lack of predictability in import quotas issued by Indonesia affects the export capacity of Australian producers. A senior manager of trade engagement (South East Asia) considers that a more balanced and predictable approach to setting import quotas for meat and meat products would lead to growing business opportunities between Australia and Indonesia. Moreover, according to this senior manager, a further streamlined registration process would encourage smaller business to trade with Indonesia by lowering delays and allowing them to realise their return on investment quicker, making the market more attractive.

43 Meat exports include the categories of meat and meat preparation and live animals chiefly for food.

44 Australian Trade Commission. Trade Opportunities with Indonesia, 2014

45 FAO 2013, *Current Worldwide Annual Meat Consumption per capita, Livestock and Fish Primary Equivalent*, Food and Agriculture Organization of the United Nations, viewed 31st March, 2013,

46 Australian Trade Commission. Trade Opportunities with Indonesia, 2014

47 Australian Trade Commission. Trade Opportunities with Indonesia, 2014

48 Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES). (2015). Agricultural Commodities: September Quarter 2015. P.90

Wool was Australia's third-largest agricultural export in 2010-11 behind wheat and beef, valued at AUD3.05 billion and making up approximately 5 per cent of total farm exports. Australia exports wool to 52 countries with the biggest market being China, which takes around 65 per cent of the national clip – seeing a shift away from traditional markets in Western Europe and Japan.[49]

The value of total lamb exports in 2011-12 was AUD1.094 million and mutton exports AUD401 million. Australian live sheep exports were valued at AUD345 million in 2010-11. The lamb and sheep industry (including live sheep) contributed around 3 per cent to the value of total Australian farm exports in 2011-12. The Middle East is the biggest Australian market for lamb exports (25 per cent) and mutton exports (48 per cent). The United States, China and the Middle East continue to dominate, taking 66 per cent of Australia's total sheep meat exports.[50] Large volume, high value market for Australian lamb – there is a large proportion of chilled lamb that is shipped to the US, and cuts tend to be higher value, including legs, racks, short loins, shanks, and shoulders.[51] Victoria is one of the world's largest suppliers of sheep meat, exporting around 179,000 tonnes in 2013-14, worth AUD898 million.[52] There is demand for lamb in Indonesia (mainly in the high-end food service sector), but Indonesians still prefer the taste of Indonesian goat meat, for which the country is still self-sufficient.[53]

As shown in Table 9, emerging livestock industries had an estimated value of production of AUD322 million in 2011-12, and their export earnings were around AUD201 million in the same period.[54] The main export markets for Australian buffaloes are Brunei, Malaysia and Indonesia. Indonesia emerged as a major export market, following the signing of an animal health protocol with Australia in October 2005 but the peak of exports to Indonesia was in the mid-2000s. More recently Vietnam has opened as an important export market for live buffaloes from Australia.

Table 9: Emerging livestock industries Australia ($'000)

	Gross value production		Exports		Imports	
	2006-07	2011-12	2006-07	2011-12	2006-07	2011-12
Alpacas	1,245	2,625	16	0	468	60
Buffaloes	5,077	3,071	4,923	729	-	-
Camels	1,483	1,288	0	0	-	-
Dairy sheep	4,000	5,550	na	na	732	551
Deer	3,047	1,659	3,251	1,985	2,814	633
Emus	1,256	561	1,032	641	-	-
Game birds	120,000	165,000	7,891	6,224	-	-
Game pigs	9,615	6,694	12,275	8,477	-	-
Goats	65,709	93,684	90,706	128,452	5,078	11,506
Kangaroos and Wallabies	54,073	28,646	99,223	46,553	-	-
Ostriches	2,364	324	1,833	601	-	-
Possums	39	65	0	65	-	-
Rabbits	2,599	3,181	18	34	4	6
Total	**273,629**	**321,966**	**221,168**	**193,761**	**9,096**	**12,756**

Source: Rural Industries Research and Development Corporation (RIRDC). Emerging animal and plant industries: Their value to Australia, 2014.

Goats (including meat and mohair) accounted for 64 per cent of the total exports while Kangaroos and wallabies followed with 23 per cent. The next two most important livestock industries in terms of exports were game pigs and game birds with 4 and 3 per cent of the total emerging livestock exports, respectively. Exports in all these industries decreased between 2006-07 and 2011-12, except for meat goats, which increased 43 per cent from AUD88.8 to AUD127.1 million (Table 9).

49 http://www.woolproducers.com.au/about-us/trade/

50 ABC, Rural (February 2015) *Sheep meat production and exports to decline in 2015 after two years of record sales*, http://www.abc.net.au/news/2015-02-03/records-over-for-sheep-meat-exports/6063302

51 MLA's Market information & Industry insights – Australian sheep industry projections 2015

52 http://agriculture.vic.gov.au/agriculture/livestock/sheep

53 Australian Trade Commission. Trade Opportunities with Indonesia, 2014.

54 Rural Industries Research and Development Corporation (RIRDC). Emerging animal and plant industries: Their value to Australia, 2014.

2. Potential collaboration

Wool collaboration: There is a significant opportunity for Australia and Indonesia to collaborate in the area of wool production and wool-processing. Australia produced 362,100 metric tonnes of raw wool in 2013-14 with 65 per cent being sent to China. Moreover, all wool-processing has been moved from Australia to China. At the same time it has been identified that the Indonesian clothing sector is seeking to move to skilled (designer) based clothing manufacturing but faces constraints on the availability of raw materials such as wool fabrics. There is an opportunity here for raw wool to be processed in Indonesia (which has a comparative advantage in textile, clothing and footwear sectors) and in so doing create the opportunity for value creation and retention of such value for both countries. Collaboration of these key sectors with comparative advantage (i.e. the Australian wool sector and the Indonesian textile and clothing sectors) will generate competitive advantage and make good the use of the opportunities afforded through relationships in third markets, which have the need for warmer wool-based garments.

A representative of the wool industry has noted that Indonesia already has established market relationships in third markets like the US and Japan. There is opportunity for complementarity because Indonesia has a supply and expertise focused on the spring and summer seasons based on bulk fabrics produced in large quantities but which are not suitable for designer clothing. On the other hand, Australia has primary knowledge of dealing with fabrics for winter season garments and requirements around wool-processing. These two competitive advantages could be combined to approach third markets together.

The representative of the wool industry notes that, opposite to what may happen in other industries, developing a commercial or joint venture relationship with Indonesian producers in the wool sector may not take very long: 'maybe three to four years provided that the right conditions are given in Indonesia in terms of improving their wool-processing capacities'. Indonesia has certainly proven capacity to process cotton and that may facilitate the development of the industry towards processing wool. To optimise the outcome of the potential integration with Indonesia in this area (i.e. extract maximum returns) it would be ideal to count on capital and capabilities in both countries without the intervention of third parties. The Australian wool industry went through a cooperation and industry development process with Vietnam, and it could be replicated with Indonesia.

Collaboration around R&D initiatives in livestock genetics: Taking consideration of import quotas and the desire by Indonesia for self-sufficiency policy, the focus on collaboration is not on Australia providing more meat exports to Indonesia, per se, but rather, on the opportunity for Australia to offer its know-how on livestock management and husbandry for the purpose of improving the productivity of both its stock and Indonesian stock.

One of the factors affecting Australia's trade relationship with Indonesia is around Indonesia's beef self-sufficiency policy. Since 2010 the Indonesian Government has implemented a trade policy with the aim of controlling the volume of cattle imports, as discussed earlier in Section 1, to achieve food security in relation to beef.

This was an extension of historic self-sufficiency policy on other products like rice and sugar (now extended to beef), in part, to deal with fluctuating commodity prices and in part reflecting a commitment to maintain the overall stability of food security with the signing of a Letter of Intent (LoI) with the UN's Food and Agriculture Organisation in March 2009.[55]

[55] ACIL Tasman, *An economic analysis of the live exportation of cattle from northern Australia*, prepared for WSPA, October 2012

'The more I learn of the field conditions of our country, the more I'm convinced that in the next four or five years, we'll be able to achieve the so-called food self-sufficiency, food security and food sovereignty.'

- President Joko Widodo, opening speech of the 2015 Jakarta Food Security Summit

The Australian Minister for Agriculture and Water Resources, Barnaby Joyce, has stated that: 'Australia understands the high importance that Indonesia attaches to building up its cattle industry and beef production as a key part of strengthening its long-term food security. Australia supports a number of development assistance programs which aim to support Indonesia's goal of lifting its agricultural productivity and food security.'[56]

An Australian senior manager of trade engagement for South East Asia[57] considers that there are opportunities of collaboration for R&D initiatives between Australia and Indonesia. These initiatives could relate to animal health, welfare and biosecurity. Also, there could be collaboration opportunities around R&D projects, which could be jointly conducted in the area of livestock genetics with the aim of boosting profitability throughout cattle, sheep and goat value chains. In addition, joint projects could be conducted in feeding, finishing and nutrition R&D to increase productivity and profitability of producers in both countries.

Collaboration around meat processing in Northern Australia: An opportunity for collaboration between Australian and Indonesia is identified with respect to establishing one or more meat processing plants in North of Australia, which would require an investment of around AUD160 million[58] (covering operating and capital costs). The advantages for Indonesia include[59]:

- A more profitable and productive Northern Australian beef herd which is integrated into the Indonesian beef market is likely to be a more efficient way of improving beef security.
- Additional employment benefits consistent with the objectives of the Indonesian beef self-sufficiency Blue Print where Indonesian labour could be utilised to reduce the labour constraints in Northern Australia.
- Technology transfers between Northern Australian facilities and the Indonesian processing industry including labour skill transfer with a rotation of the Indonesian abattoir workforce being rotated through facilities under training programs and then returning to their Indonesian plant.

3. Potential barriers and suggested solutions

Challenges and solutions around wool collaboration: According to a representative of the Australian wool industry, barriers in Indonesian markets depend on the level of processing of products. For the finished products there are no clear barriers and the opportunities are high considering that wool products can be targeted towards the growing middle class in Indonesia. However, at the raw commodity level the barriers may relate to prices not being competitive in Indonesia. A softening Australian dollar, however, is currently providing some relief in this regard.

With regards to a joint venture between Australian woolgrowers and Indonesian fabric processors, there are at least three challenges. The first one is the lack of early stage processing in Indonesia. Exports to Indonesia cannot be in the form of raw wool and currently have to be processed before being sent to Indonesia. The solution to this would be for Indonesia to invest in necessary capital required to establish early processing wool cleaning

[56] (Hon) Joyce, B Minister for Agriculture Water Resources, *Working together for a bright future for Indonesian and Australian cattle industries*, Media Release, 6 October 2015

[57] These comments are individual opinions and do not represent the views of the Victorian or Australian Governments.

[58] In October 2012 dollars (see ACIL Tasman, *An economic analysis of the live exportation of cattle from northern Australia*, prepared for WSPA, October 2012)

[59] ACIL Tasman, *An economic analysis of the live exportation of cattle from northern Australia*, prepared for WSPA, October 2012

and scouring facilities in Indonesia but that funding remaining between Australian and Indonesia to maximise returns.

The second issue relates to the current lack of knowledge of Indonesian producers in relation to spinning, weaving and product make up with at different processing levels. The representative of the Australian wool industry recommends assistance in the form of transfer of knowledge in the form of education and training with wool fabrics to help Indonesian fabric processors move up the ladder. There is an explicit need for training in this regard before a competitive advantage in Indonesia can be achieved by Australian Wool growers to break into third markets and keep more of the rents which are currently being extracted by Chinese processors.

Thirdly, the Australian wool industry will need to provide end market introductions for major wool fabric users, in the instance where third market demand is driven by international garment designers, labels, and manufacturers.

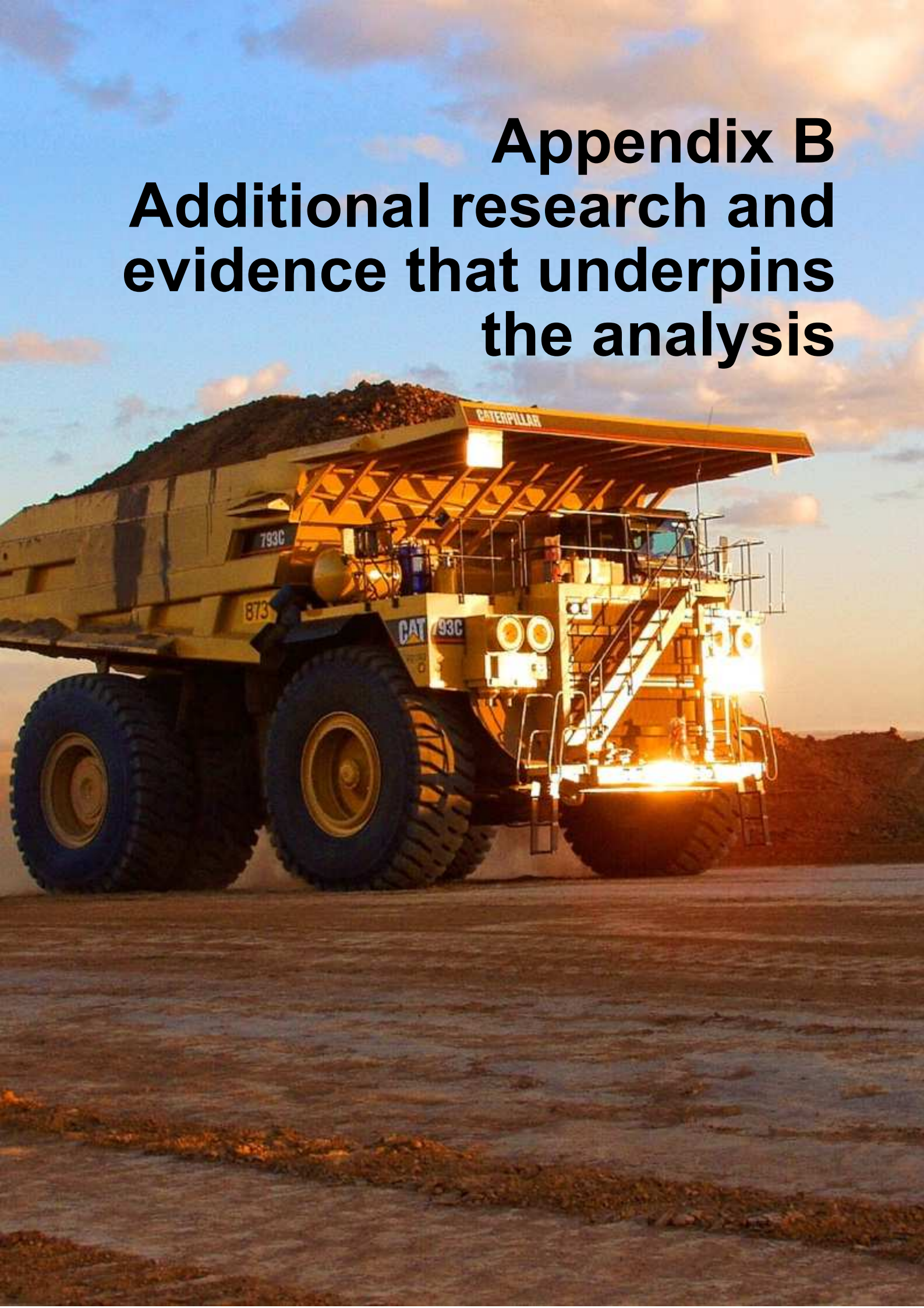
In relation to the threats that may present to the Australian wool industry from a potential strengthening of the integration process with Indonesia, the representative of the wool industry considers that there are currently no clear risks. The representative notes that this is because the Australian industry does not cover any early stages of the wool processing. Opportunities could also arise for reverse trade with Australia, as wool products could be exported back to Australia after processing in Indonesia.

Challenges and solutions around collaboration around R&D initiatives in livestock genetics: One of the current obstacles for joint bilateral projects in R&D relates to the perceived high cost of implementing research programs versus the perceived benefits. To help overcome this obstacle a senior manager of trade engagement (South East Asia) considers that more emphasis should be put in providing cost-benefit analysis with detailed information about the expected benefits to producers in both countries. That is to say a full business case should be made to allow for evidenced based decisions with regards to R&D investments. Moreover, clearer investment protocols and assistance identifying joint venture partners from both nations will be necessary to promote investments and maximise cross investment benefits for both nations' partners.

Challenges and solutions around collaboration around meat processing in Northern Australia: The Australian beef industry, in association with the WA, NT and Australian Governments, will need to prepare a comprehensive plan to be presented to the Indonesian Government to integrate the Australian and Indonesian beef industries.[60]

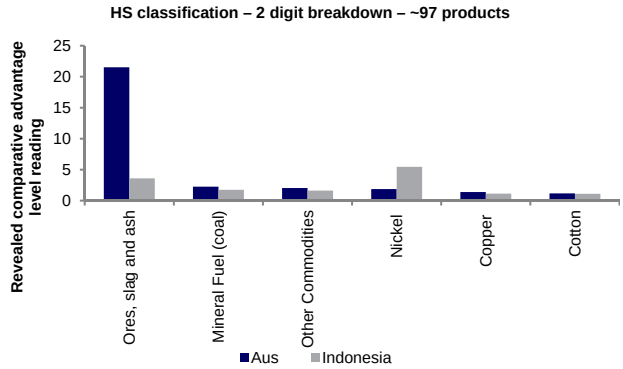
[60] ACIL Tasman, *An economic analysis of the live exportation of cattle from northern Australia*, prepared for WSPA, October 2012 Australian Trade Commission. 2015. Agribusiness to Indonesia.

Appendix B Additional research and evidence that underpins the analysis



In isolation, if there are product segments in Australian and Indonesia that are both greater than 1 (or, >1) it would suggest that they could combine forces to gain an even greater advantage. The results of this analysis are not overly surprising. Most of the shared RCA >1 are in the commodity sector, ore, minerals and coal metals. Figure 32 shows only those products where both Indonesian and Australian RCA is >1.[61]

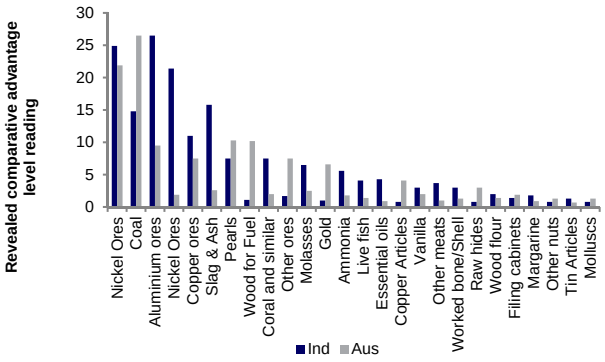
Figure 32: Revealed comparative advantage (2 digit HS Classification)



Source: ANZ Research 2015

The same pattern emerges when extending this analysis to a HS 4 digit classification system (see Figure 33). Only 26 products out of a possible 1,200 emerge where both countries have an RCA >1 under this analysis. The products that stand out are mainly primary goods such as nickel ores and coal (with very few secondary goods).

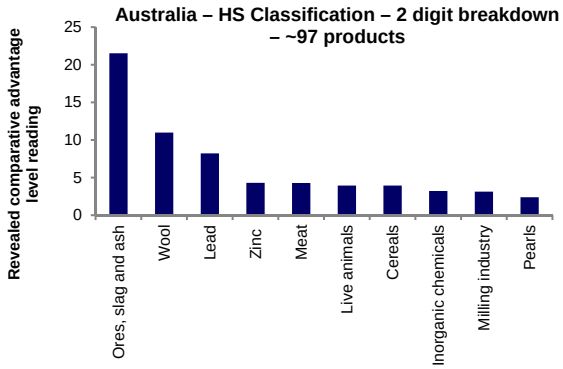
Figure 33: Revealed comparative advantage (4 digit HS Classification)



Source: ANZ research

In isolation, the top 10 product groups were Australia has an RCA (HS classification 2) is presented in Figure 34.

Figure 34: Top 10 Australian products with an RCA



Source: ANZ Research 2015

[61] The formula to calculate RCA is derived from: K = industrial index; j = country index; and X = exports

Similarly, Figure 35 presents the top 10 product groups where Indonesia has an RCA (HS classification 2).

Figure 35: Top 10 Indonesian products with an RCA

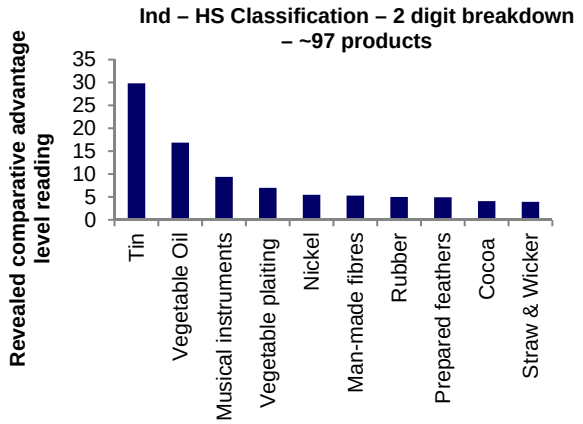
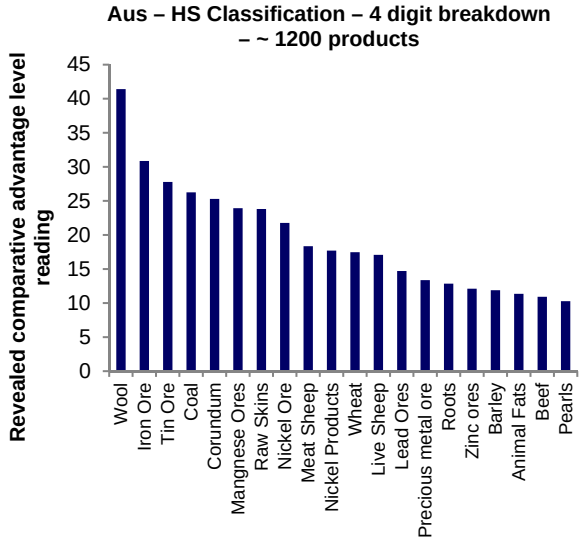


Figure 36 shows the top 20 product groups where Australia has an RCA (HS classification 4).

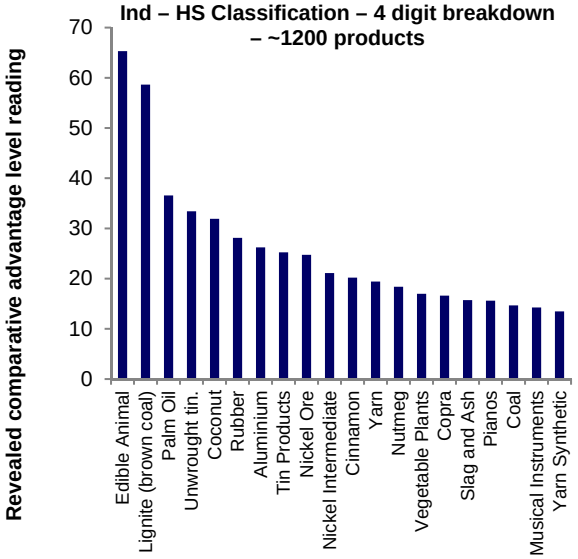
Figure 36: Top 20 Australian products with an RCA (HS classification 4)



Source: ANZ Research 2015

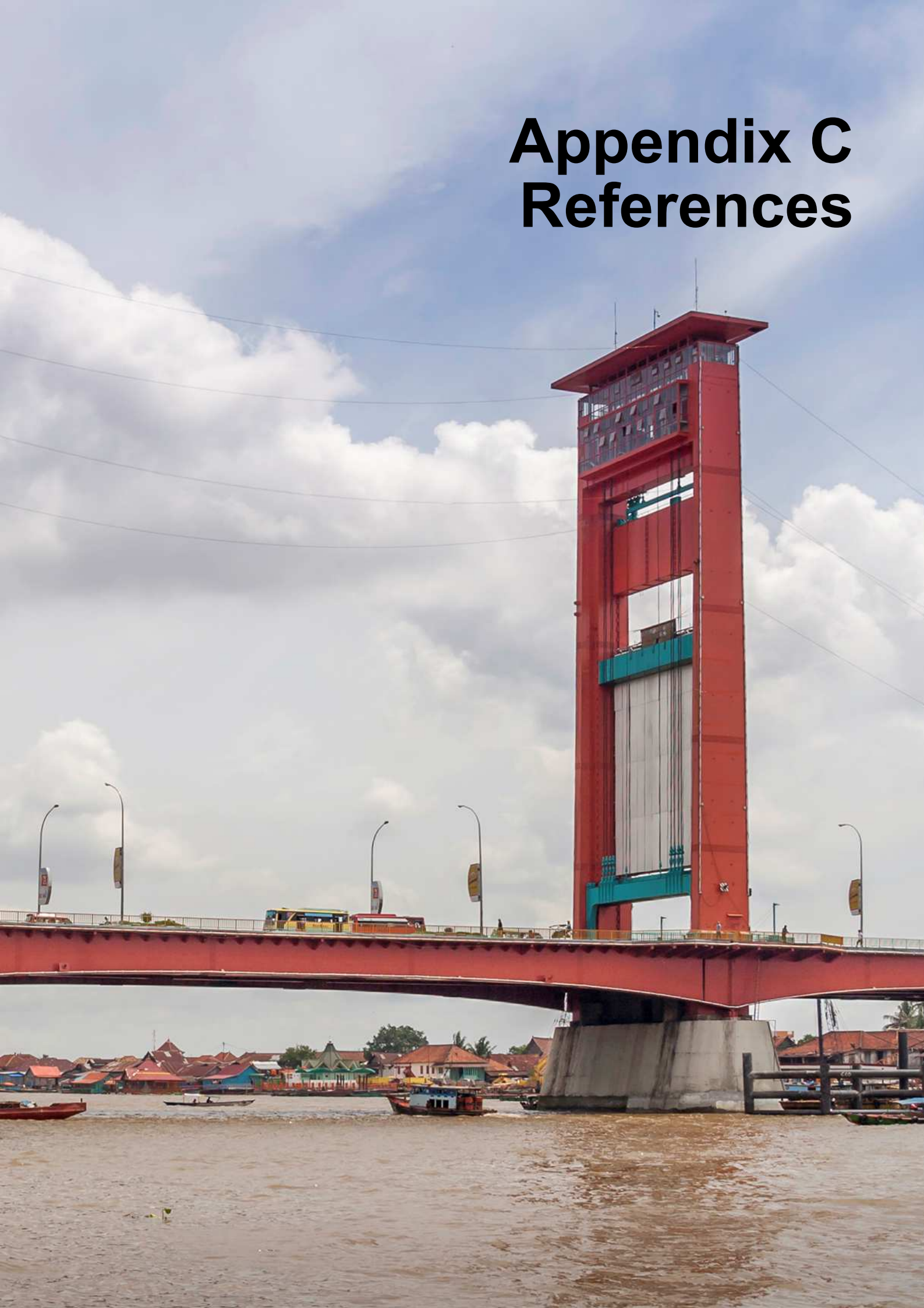
Likewise, Figure 37 shows the top 20 product groups where Indonesia has an RCA (HS classification 4).

Figure 37: Top 20 Indonesian products with an RCA (HS classification 4)



Source: ANZ Research 2015

Appendix C
References



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Appendix D
Figures and tables

Figures

Tables

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