

Export of Australia's Engineering Services

A Background Paper Prepared for the Services Summit 2009

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1. Introduction

Globalisation has led to increased integration of the world's economies and technical developments have driven the growth of traded services. The ease with which people can now travel and communicate across international borders has made international transactions commonplace. Despite the world economic downturn, these transactions are still occurring, just not at the same level as previously.

Engineering services is just one of a number of professional services now being regularly traded internationally. Australian engineers have the expertise and capabilities necessary to succeed in providing professional services in the international market place.

However, there are major impediments to the international provision of professional services, such as the non-recognition or limited acknowledgment of home country education, qualification or accreditation/licenses. Other major non-tariff barriers to services trade include nationality and residency requirements; restriction on incorporation; restricted eligibility for contracts including government procurement contracts; and prohibition on advertising. Restrictions on foreign direct investment and ownership; requirements pertaining to a minimum number/percentage of local staff; and restrictions on the international relationship of locally established firms are the most common barriers identified by Australian service providers.

In 2006, Engineers Australia conducted a survey of members to examine the nature of global engineering and build a profile of Australian engineering exporters. The aim was to identify some of the non-tariff barriers operating to restrict trade in engineering services, particularly domestic regulations and licensing procedures, that may limit the ability of Australian engineers to provide services in some countries.

Services trade accounts for the principal share of GDP and employment in both developed and developing economies. Engineers Australia believes that there are significant economy wide benefits deriving from services trade and investment liberalisation for both developing and developed nations. Liberalisation that allows the internationalisation of engineering expertise, drives technology transfer and has the potential to boost living standards and support development worldwide.

Technical knowledge can be defined as the design, or blueprint of a new product, process or service. One of the key characteristics of technological knowledge is that it can be transferred across countries. The stock of technological knowledge in a country is influenced by domestic innovation and the international diffusion of technology.

Barriers preventing services and service providers interacting with local firms have the potential to significantly slow down technology diffusion between countries and service sectors like engineering. With the removal of barriers, the best technologies are selected through market mechanisms, not by trade policy incentives that introduce distortions into the economy.

2. Australia's trade in engineering services

The major components of Australia's services sector are:

- Travel;
- Freight;
- Passenger and other transportation; and

- Other services, which include communications, construction, insurance, financial, computer and information services, royalties, personal, cultural and recreational, government and other business services.

The category "other services" contributed to 26 percent of total services exports in 2005 and has been growing annually.

DFAT publishes a comprehensive statistical publication on Australia's services trade each financial year. The publication draws on data from the Australian Bureau of Statistics (ABS), the International Monetary Fund (IMF), the WTO and other sources.

However, as a result of the way statistics are categorised, it is difficult to gain a clear understanding of the value of professional services to the Australian economy and of the sectoral composition of services trade. In much of the data presented by the ABS and DFAT, it is difficult to uncover statistics related to individual trade in professional services sectors, like engineering. It is easy to overlook the true value of professional service sectors to the Australian economy because data on these activities is combined into the "other business services" category within the "other services" category.

In most official statistics, engineering services are absorbed in the broader categories of business services, other services or construction activity. However, the engineering sector is a diverse and large profession that includes a range of practitioners, such as professional engineers, engineering technologists, engineering associates, and tradespeople.

Engineering is about applying science and technology to develop and implement new technologies, placing engineers in a central role in improving the security and living standards of the community, improving the standards of environmental care and generating wealth for Australia.

The traditional focus of engineering activities has been in infrastructure – the fundamental facilities and systems that allow a modern society to function effectively. These include transportation, communication systems, energy and water supply, and waste removal. However, engineering is much broader than this and impacts on many aspects of community life.

The most commonly traded engineering services are consultancy services typically consisting of design services, planning and design development, procurement services, field services during construction and project management. These services usually fall within three broad categories. For example:

- General services: Feasibility studies, cost estimations, preparation of drawings, specifications and contract documents and the supervision of construction;
- Specialised services: Design and development of process equipment, environmental advisory and design services, materials testing, software or systems development and project management; and
- Comprehensive services: Turnkey services such as build-own-operate-transfer contracts.

With advanced communication systems many of these services can and are being supplied "cross border". For example consulting can be performed on-line, with designs, specification, blueprints and know-how being transmitted electronically. Despite the increased ease with which engineering services can be provided electronically, it seems that while the cross border supply of engineering services was increasing, the bulk of services were continuing to take place through commercial presence or the movement of engineers overseas.

The Australian engineering industry was becoming increasingly competitive at the international level and the ability of Australian companies to provide engineering services to overseas countries increased throughout the last decade. There is every reason to expect that this will pick up again once the world has passed the current economic crisis.

Engineers Australia has undertaken a survey of individual members and companies, working and living internationally, to gain information on:

- The type, size, cost and length of projects being undertaken overseas;
- To identify how many members regularly work overseas;
- What countries they work in; and
- For what period of time.

The aim has also been to try and capture some of the non-tariff barriers that restrict trade in engineering services, particularly domestic regulations and licensing procedures that may impose restrictions on trade in engineering services in various countries.

Company type

Australian engineering companies with Australian offices only (34 percent of survey respondents) and Australian engineering companies with offices in both Australia and in overseas countries (35 percent) are involved in offering their services overseas at similar levels. Nineteen percent of respondents were also foreign companies with offices in Australia highlighting that Australia is both an importer and exporter of engineering expertise. Companies falling into the 'other' category made up 12 percent of respondents.

Number of employees

Regardless of company size, all survey respondents had staff located both in Australia and internationally including small companies of up to four employees' to larger companies with over 1000 employees. Thirty six percent of companies who responded to the survey had 1000 or more employees in overseas offices. Twenty seven percent of companies also had 1000 or more employees located in Australia. On the whole, companies with the largest number of employees were much more likely to be involved in international activities.

Type of work

Companies with international operations are rarely involved in just one area of engineering work. However, the survey results clearly show that many companies (over 60 percent) spend a significant proportion of their time undertaking project management and design and documentation work.

Location

The survey results also confirmed that Australian engineering companies were undertaking work across the globe. While over 40 percent of companies who responded to the survey undertake work in North America and South East Asia, engineering services work is also being undertaken at significant levels in all regions. A high level of engineering work is being undertaken not only in Asia Pacific Economic Cooperation (APEC) countries but also in Western Europe, the Middle East and Central America.

Forty eight percent of companies that responded to the survey had clients predominately based in North America. Forty five percent had clients in South Eastern Asia, while 40 percent had their major clients based in Western Europe or East Asia. Eastern Europe and the Caribbean were also represented with 14 and 12 percent of engineering companies having clients based in these regions.

Forty-four percent of companies that responded to the survey, indicated that they had design work carried out overseas for a mix of Australian domestic, and international projects. Of this 44 percent, three quarters sourced up to 40 percent of their design work from overseas. More than one-fifth of respondents indicated that they sourced between 60 and 100 percent of their design work from overseas.

For domestic projects, almost two-thirds of respondent companies used overseas design services for up to 20 percent of the projects they undertake. For overseas projects, a quarter of the companies used an overseas provider to produce 80 to 100 percent of the design work. There seems to be a correlation with projects overseas using higher rates of overseas design teams. However, regardless of whether the project is in Australia or not, overseas design teams are used to a significant extent.

Companies identified that the two key drivers of this shift to use overseas design services were to overcome skill shortages in Australia and to lower costs. Time constraints were cited by 14 percent of respondents as another key consideration.

3. Barriers to trade

The liberalisation of international service transactions poses challenges that are quite different from those in the goods area. Barriers to services trade occur in national economies in the form of legislation and administrative practices and are not found at the border, making them less transparent than tariffs and quotas. It is also much more difficult to assess the restrictive impacts of these barriers and effectively argue for their removal.

A key feature of impediments to trade in services is that they tend to be in the form of non-tariff barriers such as domestic regulations, licensing requirements, migration and labour restrictions and other prohibitions that are difficult to measure.

Market access in services is inherently more complex than market access for trade in goods. Market access for goods can be increased simply by reducing border measures that are imposed on goods as they enter a market, for example reducing tariffs and streamlining customs procedures.

However, market access for trade in services hinges on government policy interventions that are often applied after a service supplier has entered the market. These measures take the form of government regulation and are usually aimed at domestic policy objectives rather than trade policy objectives. As a result, there is usually little consideration of the effect of domestic regulation on market access for foreign service suppliers.

Major impediments to the international provision of engineering services which are also common to other professional services, arise from the non-recognition or limited acknowledgment of home country education, qualification or accreditation/licenses. Nationality and residency requirements; restriction on incorporation; restricted eligibility for contracts including government procurement contracts; and prohibition on advertising also operate as major non-tariff barriers to services trade.

Restrictions on foreign direct investment and ownership; requirements pertaining to a minimum number/percentage of local staff; and restrictions on the international relationship of locally established firms are the most common barriers identified by Australian service providers.

In the Engineers Australia survey when engineering companies were asked 'how much do non-tariff barriers increase the costs of doing business', 70 to 80 percent of companies believed that non-tariff barriers increased their costs by up to 25 percent. The inability to gain registration for employees increased costs by more than 25 percent for 14 percent of companies, while the registration of companies where Directors must be registered engineers increased costs by more than 25 percent for 25 percent of companies.

4. Policy responses

The Australian government has a significant and continuing role to play in facilitating trade in engineering services. In particular, the Australian government should seriously consider the Following:

Counting the value of services trade - The true value of trade in engineering services to the Australian economy is essentially unknown due to problems in the collection of services statistics. Until this is improved, it will be difficult to identify areas where trade in professional services, including engineering is under-performing, or to measure or predict the impact on trade volumes for changes in policy and regulation.

Better information to exporters - The Australian government needs to be more proactive in supporting professional service providers by providing information tailored to specific industries and countries on the types of non tariff barriers and regulatory hurdles operating in overseas markets and how they can be overcome.

Assistance to exporters - The Australian government needs to identify and promote opportunities to support Australian service exporters to participate in overseas trade fairs and to identify and promote other measures to increase market knowledge, mutual awareness and mutual understanding of trade and investment opportunities between Australian engineering companies and overseas trade partners.

Mutual recognition agreements - The work of engineering professional associations towards international mutual recognition of university qualifications and licensing/registration needs to be supported by the Australian government wherever possible in FTAs under review and future FTAs.