

# Liberalisation of Services Sector in Malaysia: Domestic Regulatory Reforms and the Impact on Professional Services

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## ABSTRACT

*In 2012, the Malaysian Government announced liberalisation of 27 services sectors, including selected professional services. This announcement came as a surprise to the industry players because they had been protected all this while and that it came unexpectedly too soon. This paper intends to investigate the level of awareness and the readiness of professional service providers in Malaysia in facing greater competition as a result of liberalisation of the sector. For this purpose, a case study was conducted on consultant engineers in Malaysia using survey and questionnaire research methods. The findings show that though majority of the respondents are aware of the liberalisation announcements, they have low level of understanding on the actual implications of the liberalisation exercise. It is also found that consultant engineers in Malaysia are highly domestic oriented and many of them lack confidence in seizing opportunities created by greater market access in overseas market. The findings of this study also confirm that regulatory reforms and liberalisation initiatives can only be effective in achieving the intended objectives when the government and stakeholders have in-depth understanding of the industry at the sectoral and disaggregated levels, and have appropriate knowledge of the industry's competitive strengths, weaknesses and opportunities. It is also important for the policy makers to identify the market failures that impede the progress and competitiveness of service providers, thus the call for informed policy interventions.*

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The views and opinions reflected in this paper are that of the authors alone.

# 1. Introduction

The New Economic Model<sup>1</sup> (NEM) envisages Malaysia to be a developed and high-income nation by 2020 by shifting the orientation of the economy towards knowledge-intensive and high-value added industries. Professional services have been identified as a catalyst to this transformation (ETP, 2011). The professional services sector encompasses services rendered by professionals such as engineers, accountants, lawyers, designers and architects that are linked to a wide range of industrial sectors such as aerospace, oil and gas, construction, automotive and so on. Hence, the sector's potential for growth is enormous. Out of the 11 services sub-sectors that have been identified as New Key Economic Areas (NKEAs) under the NEM in terms of their potential to contribute to Gross National Income (GNI) and export competitiveness, six sub-sectors are under the professional services, namely Medical Services, Environmental Engineering, Accounting Services, Architectural Services, Civil and Mechanical Engineering and Oil and Gas Engineering.

In 2012, the Malaysian Government announced an extensive liberalisation of 27 services sectors including the professional services. The objectives of this liberalisation exercise were to stimulate the potential of the selected services sector to be productive and internationally competitive and also to attract foreign investments and talents into the sector. Theoretically, openness in services trade is expected to increase consumer and producer's welfare arising from competitive pricing and greater choice and higher quality of services available in the market. Freer trade would also mean that the country's capacity to absorb and adapt new technology would improve, generate and attract higher quality investment, create opportunities for skilled manpower and high-paying jobs and open new business opportunities. In addition, domestic players will have greater market access in foreign countries thus improving their scope to expand and compete internationally.

However, trade openness also creates stiffer competition for domestic service providers. Removal of trade restrictions will expose local players to not only competition from more established large multinational firms but also low cost service providers from developing countries. The announcement to liberalise the 27 service sectors mentioned earlier has raised concerns among many local industry players because it came unexpectedly too soon and therefore some of them are not ready to face the competition and many are not in the position to benefit from the opportunities created by a more liberal market.

The focus of this paper in general is on professional services and specifically on engineering services. We chose this sector because as shown earlier, three out of the six sub-segments of professional services identified as NKEAs are from this sector, namely Environmental Engineering, Civil and Mechanical Engineering and Oil and Gas Engineering. We investigate the level of awareness and the readiness of consultant engineers and engineering firms in Malaysia in facing stiffer competition in domestic market and venturing into the global market. Survey and questionnaire methods were used to gauge the views of Malaysian professional engineers in the Klang Valley. This paper has four sections. The first section elaborates on the background of professional services in Malaysia focusing on the sector's contribution to GDP, value added and trade. The second section analyses Malaysia's initiatives in liberalising the engineering services through unilateral policy actions and through its engagements in trade agreements. Services trade liberalisation

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1 Government of Malaysia, National Economic Advisory Council, *New Economic Model for Malaysia*, Putrajaya: National Economic Advisory Council, 2009.

will be meaningless without reforms in the domestic regulations. Thus, this section will discuss the reforms that have been undertaken by the government in general as well as in the engineering services sector. The third section presents the result of the survey on the consultant engineers in Malaysia. The last section concludes with policy recommendations.

## 2. Professional Services: Contribution to GDP, Value Added and Trade

The services sector has steadily gained importance in the Malaysian economy with its overall contribution to the country's Gross Domestic Product (GDP) expanding from 38.3% in 1970, to 46.8% in 1990, and to 55.3% in 2014. The sector is the largest provider of employment in Malaysia accounting for 59.4% of total employment in 2014 (Treasury Malaysia, 2014). Malaysia is relatively a new player in services trade and its share in the global services trade is insignificant. In 2014, Malaysia's services exports accounted for only 0.79% of total global services trade (see Table 1). In comparison, 2.6% of global services trade originated from Singapore, while the share of India and China was 3.2% and 4.4% respectively in the same year.<sup>2</sup>

**TABLE 1 : MALAYSIA: SHARE IN TOTAL GLOBAL SERVICES EXPORTS, 2010-14**

	2010	2011	2012	2013	2014
Global Total Services Trade (US\$ Thousand)	3,924,369,870	4,388,754,976	4,525,225,897	4,772,389,956	4,972,237,653
Malaysia's Total Services Trade (US\$ Thousand)	32,019,500	36,145,100	37,883,500	398,11,600	39,484,044
Malaysia's Share in Global Services Trade (%)	0.82	0.82	0.84	0.83	0.79

(Source: International Trade Centre (2015). Data available at <http://www.intracen.org/itc/market-info-tools/trade-statistics/>; accessed on November 4, 2015)

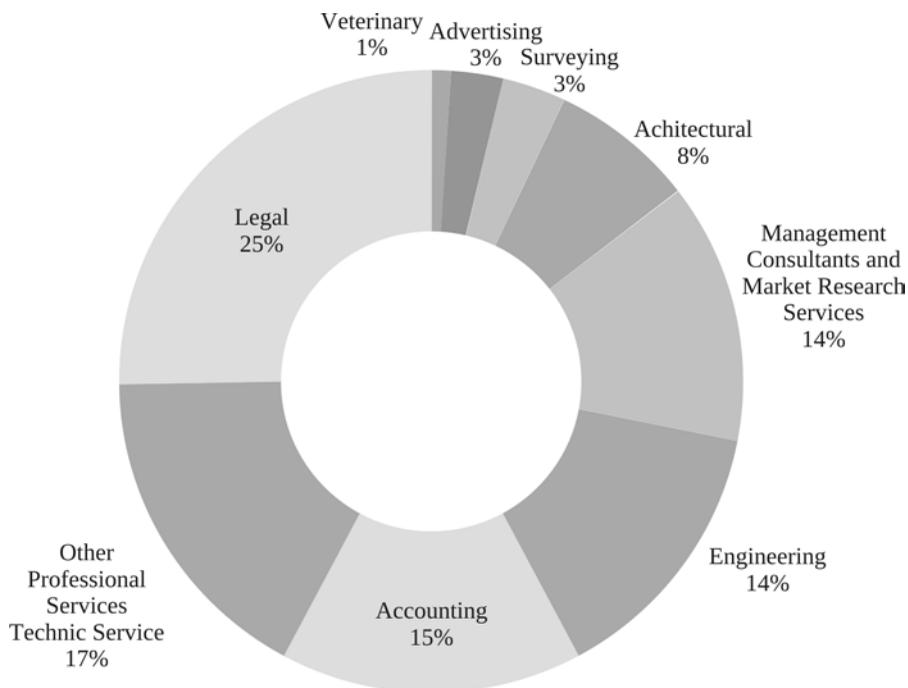
The share of professional services in the GDP is small, accounting for only 1.3% in 2013 (EPU, 2015). Data on professional services is difficult to obtain as they are scattered among different agencies and professional bodies. The Department of Statistics also does not segregate data on professional services. ETP (2011) provided some information on the sector but professional services were grouped under business services that encompass a wide range of services such as information technology, management, engineering, accounting, legal, design and architecture. The recently published strategic paper on services<sup>3</sup> by the Economic Planning Unit under the Prime Minister's Department reported that professional services sub-sector experienced an impressive growth of 9.8% per annum between 2011 and 2013, with employment in the sector expanding by

2 Calculated using data obtained from International Trade Centre, Trade Statistics, <http://www.intracen.org/itc/market-info-tools/trade-statistics/> (accessed November 4, 2015).

3 Government of Malaysia, Economic Planning Unit, Prime Ministers Department, "Transforming Services Sector," Working Paper no. 18, Putrajaya: Economic Planning Unit, 2015, <http://rmk11.epu.gov.my/pdf/strategy-paper/Strategy%20Paper%2018.pdf> (accessed October, 2015).

23% during the period. The report further noted that there were 20,372 professional services firms in the country in 2012 whose distribution of establishments in the professional services is shown in Figure 1.

**FIGURE 1: ESTABLISHMENTS IN THE PROFESSIONAL SERVICES SUB-SECTOR, 2012**



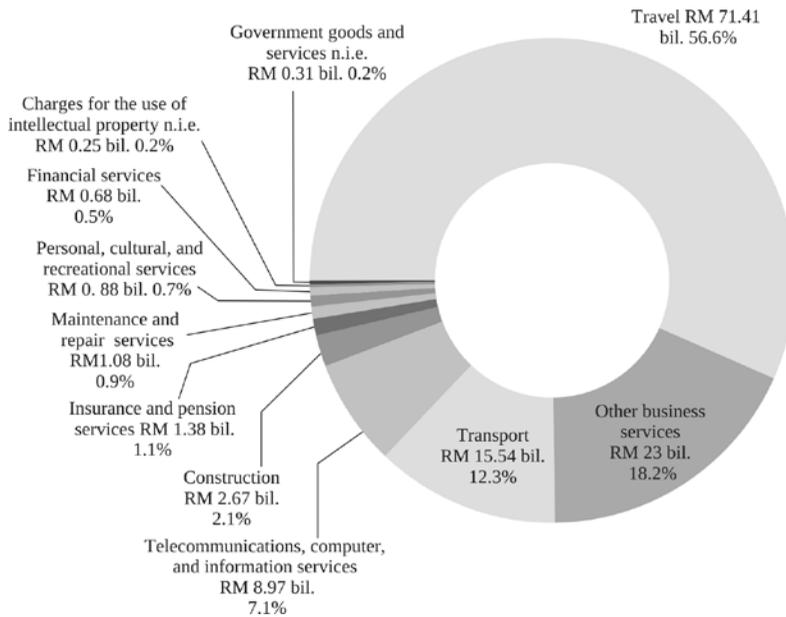
*(Source: Based on data obtained from EPU (2015))*

Flaaen, Ghani and Mishra (2013) noted that the growth of modern services<sup>4</sup> exports including professional services in Malaysia has been slow in contrast to other countries in the region. Hence, Malaysia’s services exports continue to be dominated by traditional sectors<sup>5</sup> that accounted for 71.7% of total services exports in 2014. Figure 2 shows the composition of Malaysia’s total services exports in 2014. In the traditional sector, the share of travel services exports was the largest (56.6%), followed by transport services (12.3%), construction (2.1%) and personal, cultural and recreational services (0.7%).

4 Modern services include telecommunications, computer and information services, other business services, financial services, insurance, royalties, and licence fees.

5 Traditional services include travel, transportation, construction, and personal, cultural and recreational services.

**FIGURE 2: COMPOSITION OF MALAYSIAN SERVICE EXPORTS IN 2014.**

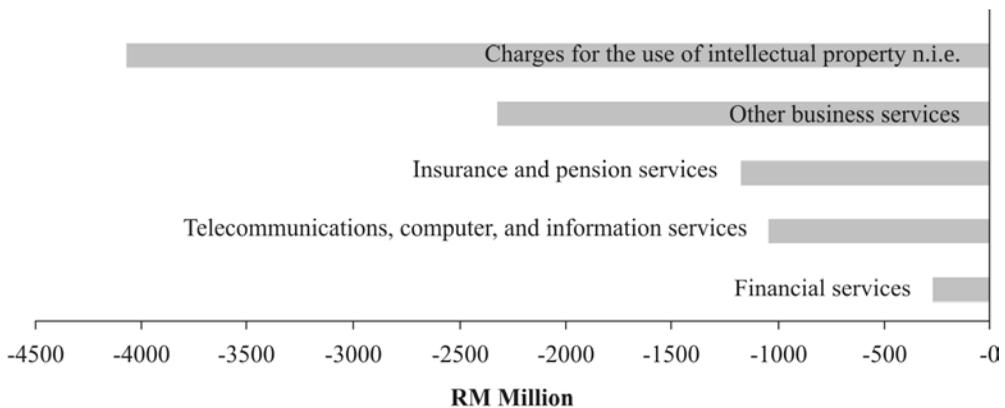


(Source: Department of Statistics Malaysia, unpublished)

Note: n.i.e. - not included elsewhere

Malaysia’s import of modern services has always surpassed exports. Figure 3 presents the trade balance of selected modern services in 2014. It is evident that Malaysia is a net importer of these key services and that the services trade balances were negative for all the selected sectors. The largest deficit was for payments for the use of intellectual property rights.

**FIGURE 3: MALAYSIA: TRADE BALANCE FOR SELECTED SERVICES SECTOR, 2014.**



(Source: Department of Statistics Malaysia, unpublished)

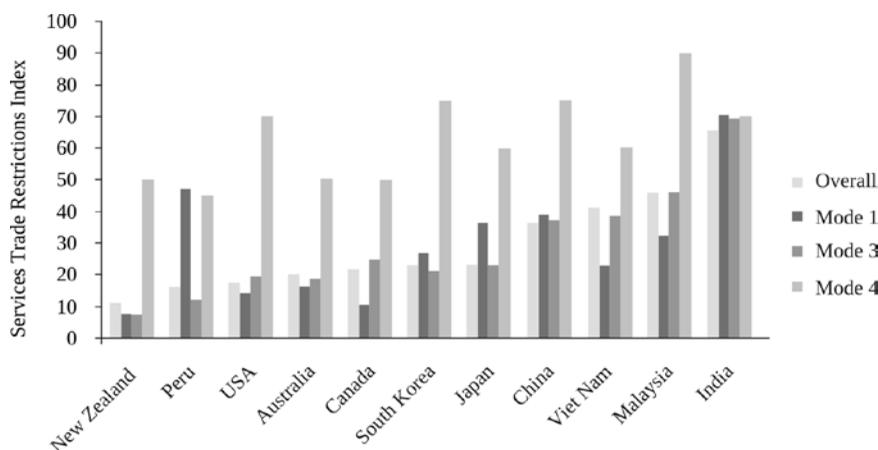
Note: n.i.e. – not included elsewhere.

### 3. Liberalisation and Domestic Regulatory Reforms in Professional Services Sector

Services sector in Malaysia is subjected to strong doses of protection and the progress in eliminating trade and investment restrictions remains limited. Resistance from local players partly contribute to the slow reform process. Professional associations, for example, of lawyers, nurses, architects and doctors still oppose freer mobility of professionals from abroad, despite conclusion of many free trade agreements.

Figure 4 compares the STRI<sup>6</sup> indices of Malaysia’s key trading partners. The indices reveal that services sectors in Vietnam, China, Malaysia and India are highly restrictive. The figure also shows that for Malaysia, trade in services through mode 4 is the most restrictive in comparison to other modes. Commitments to liberalise trade in services are made based on 4 different modes of supply viz., Mode 1 - Cross border Supply; Mode 2 – Consumption abroad; Mode 3 – Commercial Presence; Mode 4 – Movement of natural persons.

**FIGURE 4: SERVICES TRADE RESTRICTIONS INDEX FOR SERVICES SECTORS - SELECTED COUNTRIES.**



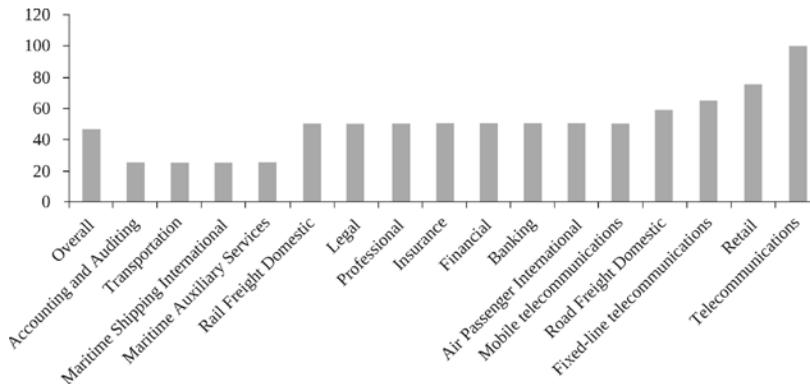
(Source: World Bank, Services Restrictions Database, accessed from <http://iresearch.worldbank.org/servicetrade/home.htm>)

Note: Each country in the database is covered in one year from within the 2008-11 range. Policy measures covered include restrictions on entry and legal form, licensing and operations as well as aspects of the regulatory environment.

Figure 5 presents a comparison of the sectoral incidence of policy restrictiveness in the services sectors in Mode 3 (commercial presence) for Malaysia. With the exception of accounting and auditing, transportation and maritime shipping and auxiliary services, all other sub-sectors registered considerably high level of protection.

<sup>6</sup> STRI ranges on a scale from 0 (fully open) to 100 (fully closed).

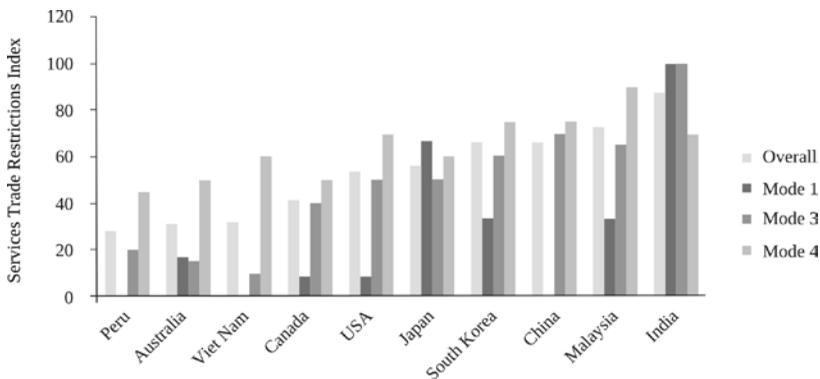
**FIGURE 5: MALAYSIA: STRI FOR MODE 3 FOR SERVICES SUB-SECTORS**



(Source: World Bank STRI database, accessed from <http://iresearch.worldbank.org/servicetrade/home.htm> on January 19, 2016)

An analysis of Modes 3 and 4 restrictions for professional services in select countries show even higher level of restrictiveness (see Figure 6).

**FIGURE 6: SERVICES TRADE RESTRICTIONS INDEX FOR PROFESSIONAL SERVICES - SELECTED COUNTRIES**



(Source: World Bank, Services Restrictions Database, accessed from <http://iresearch.worldbank.org/servicetrade/home.htm> in November 2015)

Malaysia has undertaken extensive liberalisation for most of its professional services under the General Agreement of Trade in Services (“GATS”), ASEAN Framework Agreement on Services (“AFAS”), Transpacific Partnership Agreement (“TPPA”), bilateral and regional free trade agreements as well as through autonomous<sup>7</sup> initiatives. ASEAN has concluded nine packages of services commitments so far, while Malaysia has concluded six bilateral FTAs as of June 2014 namely with Japan, Pakistan, New Zealand, India, Australia and Chile (no commitments were made for

<sup>7</sup> Autonomous liberalisation refers to policy measures taken by member countries to liberalise specific economic sector independently, and not as part of their commitments in the GATS or any regional or bilateral trade agreements

services sector). Under ASEAN, Malaysia is a party in ASEAN-wide FTAs with China, Korea, Japan, India, Australia and New Zealand. Table 2 shows that Malaysia has offered 7 sub-sectors of professional services under GATS and extended an additional sub-sector namely urban planning and landscape architectural services for liberalisation under AFAS.

**TABLE 2: MALAYSIA’S COMMITMENTS IN PROFESSIONAL SERVICES IN GATS AND AFAS, AS OF OCTOBER 2015.**

Professional Services Sub-Sectors in GATS	Malaysia’s Commitment in GATS	Malaysia’s Commitment in AFAS (8th Package)
Legal Services	√	√
Accounting, Auditing and Bookeeping Services	√	√
Taxation Services	√	√
Architectural Services	√	√
Engineering Services	√	√
Integrated Engineering Services	√	√
Urban Planning and Landscape Architectural Services	x	√
Medical Services	√	√
Veterinary Services	x	x
Services provided by midwives, nurses, physiotherapists and paramedical personal	x	x

*(Source: Schedules of commitments under GATS were obtained from WTO official website [https://www.wto.org/english/tratop\\_e/serv\\_e/serv\\_commitments\\_e.htm](https://www.wto.org/english/tratop_e/serv_e/serv_commitments_e.htm) while commitments under AFAS were retrieved from Malaysia’s Ministry of International Trade and Industry’s website <http://www.miti.gov.my/index.php/pages/view/2109?mid=150>)*

To have a clearer understanding on the details of liberalisation commitments by Malaysia, the ensuing discussion provides a detailed analysis on one of the professional services, namely engineering services. Modes 1 and 2 of Malaysian engineering services are fully liberalised. It means all transactions of engineering services through these modes can freely enter the country without any restrictions. As in most of the countries in the world, Malaysia’s modes 3 and 4 of services supply are highly restricted. In the engineering sub-sector, the inscribed limitations in services specific schedules reflect domestic regulations that are stipulated in Malaysia’s Engineering Act. Professional engineers in Malaysia are bound by the Registration of Engineers Act (1967) and regulated by the Board of Engineers Malaysia (“BEM”). As of February 2014, there were 10,775 Professional Engineers and 73,297 Graduate Engineers that were registered with BEM.

The Engineering Act (as revised in 2007), apart from listing the professional qualifications for engineers, also stipulates that only Malaysian citizens are allowed to register with BEM. This means that foreign engineers are not allowed to register with BEM and hence, not allowed to practice in Malaysia as a natural person. Nevertheless, foreign engineers are allowed to practice in Malaysia as temporary engineers, but not permitted to operate independently or serve as directors or shareholders of an engineering and consulting services (“ECS”) firm. In addition, foreign professional engineers are allowed only to practise in specific projects for a renewable period of one calendar year and must be sponsored by a Malaysian ECS firm. Malaysian companies that wish to hire foreign engineers are required to show proof that local engineers with the necessary experience for a particular technical position are not available in Malaysia (Wong, 2012). The Act also stipulates the following conditions for foreign engineers:

1. must be registered as a professional engineer in their home country;
2. have a minimum of ten years working experience; and
3. have a physical presence of at least 180 days in one calendar year.

Commercial presence of foreign engineering firms in Malaysia is also highly restricted. Under the Engineering Act (1967), any firm that wishes to offer engineering consultancy practices must register with BEM. The Act also stipulates that Single Disciplinary Practice (“SDP”) is subject to the following requirements:

1. in the case of sole proprietorship, the sole proprietor should be a Professional Engineer;
2. in the case of partnership, all the partners should be Professional Engineers;
3. in the case of a body corporate, it (i) has a board of directors comprising of persons who are Professional Engineers; (ii) has shares held by members of the board of directors mentioned in sub paragraph (i) solely or with any other persons who are Professional Engineers.

Since foreign engineers are not allowed to register with the BEM as Professional Engineers, this automatically means foreign firms cannot establish a company in Malaysia in SDP. As for multi-disciplinary practices (“MDP”), Malaysia allows a maximum of 30 per cent foreign ownership which has to be in the form of joint ventures with Malaysian professional engineers registered with the BEM. Also, the director of the JV company has to be a Malaysian citizen. Table 3 shows the prescribed restrictions in Mode 3.

**TABLE 3: MALAYSIA’S COMMITMENTS IN ENGINEERING SERVICES (MODE 3) IN GATS, AFAS AND BILATERAL AGREEMENTS, AS OF AUGUST 2014.**

Trade Agreement	Limitations on market access	Limitations on national treatment
GATS ASEAN-Korea ASEAN-China Malaysia-Pakistan Malaysia-Japan	a) Engineering services may be supplied only by a natural person b) For multi-disciplinary practices (Architecture, Engineering and/or Quantity Surveying), foreign equity up to a maximum of 30 per cent for joint ventures by professionals who are registered in the country of origin. Foreign directorship is not allowed.	a) None b) Unbound
AFAS ASEAN- Australia-NZ Malaysia-NZ Malaysia-NZ	For multi-disciplinary practices (Architecture, Engineering and/or Quantity Surveying), foreign equity up to a maximum of 30 per cent for joint ventures by professionals who are registered in the country of origin. Foreign directorship is not allowed.	None

(Source: Extracted from Specific Schedules of various services agreements, accessed from [www.miti.gov.my](http://www.miti.gov.my).)

Autonomous liberalisation is a common practice and has been progressively undertaken by the government. The autonomous liberalisation that was undertaken in 2009 and 2012 has the most significant impact on domestic regulations. In 2009, twenty-seven services sub-sectors were liberalized with the target of allowing 100% foreign ownership by 2012.<sup>8</sup> The second round of liberalisation in 2012 further added 18 services sub-sectors, which included engineering services. Nev-

<sup>8</sup> Government of Malaysia, Ministry of International Trade and Industry, 2015, <http://myservices.miti.gov.my/web/guest/autonomous> (accessed January 19, 2015).

ertheless, there is a limitation that at least two-third of the Board of Directors shall be Professional Engineers (local or foreign) with Practising Certificate. Foreign engineers are now allowed to register with BEM as professional engineers, which means Professional Engineers of any nationality with a Practising Certificate is allowed to establish SDP in Malaysia, with 100% foreign ownership.

Trade restrictions in professional services are largely imposed on the movement of professional engineers across borders (Mode 4) and on the commercial establishment of foreign engineering firms (Mode 3). The mobility of professional workers is largely restricted by domestic laws, policies and licensing requirements. Dixon (2013) listed the following requirements that have become barriers for foreign-trained and registered engineers to seek job abroad:

1. Licensing and standard requirements may differ between countries, thus creating barriers for engineers in countries with lower requirements to move into those with higher levels;
2. Countries tend to have varied scope of tasks for different types of engineering jobs and therefore limits the opportunities for engineers to bid for a specific engineering contract;
3. Education and training requirements to qualify and register as a professional engineer differ between countries, where some countries just require formal engineering degree while others condition practical experience.

Table 4 shows Malaysia’s commitment in the GATS and AFAS agreements as well as in the FTAs for Mode 4 of engineering services.

**TABLE 4: COMMITMENTS IN ENGINEERING SERVICES (MODE 4), AS OF OCTOBER 2015.**

Type of Trade Agreement	Limitations on market access	Limitations on national treatment	Additional commitments
GATS Malaysia-Pakistan Malaysia-Japan	Unbound except as indicated in the horizontal section and in respect of 2 b)*, subject to temporary registration for a period of one year per temporary registration	Unbound except for the categories of natural persons referred to under market access	The qualifying examination to determine the competence and ability to supply the service for the purposes of registration with the professional bodies will be conducted in the English language
ASEAN-China ASEAN-NZ ASEAN-Rep. of Korea Malaysia-Australia Malaysia-NZ	Same as GATS	Engineering services must be authenticated by a registered professional Engineer in Malaysia.	Same as GATS
AFAS	Same as GATS	Engineering services must be authenticated by registered professional Engineer in Malaysia.	<ul style="list-style-type: none"> <li>• Same as GATS;</li> <li>• Other requirements as per in ASEAN Chartered Professional Engineer (ACPE) Registry.</li> </ul>

*(Source: Summarised from Malaysia’s Specific Commitment Schedule in various trade agreements, available from [www.miti.gov.my](http://www.miti.gov.my))*

*Note \* - 2(b) of horizontal section provides that “professionals being persons who possess necessary academic credentials, professional qualifications, experience and/or expertise which have been duly recognized by the professional bodies in Malaysia and registered with those respective professional bodies”.*

As can be seen from Table 4, some of the limitations that were inscribed in the GATS Agreement for market access were liberalised or amended in the subsequent FTAs. For example, under the AFAS agreement, professional engineers from ASEAN countries who comply with the requirements of the ASEAN Chartered Professional Engineer (ACPE) Registry are allowed to practice in Malaysia. In order to facilitate the mobility of ASEAN engineers within the ASEAN countries, a Mutual Recognition Agreement (MRA) on Engineering Services was signed at the 11th ASEAN Summit on 9th December 2005 in Kuala Lumpur. The MRA allows the qualifications of professional services suppliers to be mutually recognized by signatory member countries. In 2012, ASEAN Economic Ministers signed the Agreement on the Movement of Natural Persons (MNP). The objective of MNP is to facilitate the free flow of goods, services, investment, and skilled labour, thus contributing to the establishment of an ASEAN single market and production base under the ASEAN Economic Community initiative.

The 2012 autonomous liberalisation measures that withdrew citizenship requirement for foreign engineers to practise in Malaysia require changes to be made to the Engineering Act<sup>9</sup>. Abdul Majid (2013) highlighted four sections in the Act that would be affected by the liberalisation:

1. Section 7: Restrictions on unregistered persons;
2. Section 8: Only Professional Engineers may submit plans, drawings etc;
3. Section 10: Qualifications for registrations; and
4. Section 10A: Registration of Temporary Engineers.

Section 10A of the Act will have to be deleted since Temporary Engineers registration will be redundant with the deletion of citizenship requirement. Another important change is that engineers with equivalent professional qualifications such as Chartered Engineer status need not clear the Professional Assessment Examination (PAE). In the existing Act, Professional Engineers must pass a PAE conducted by BEM or its corporate member of the Institution of Engineers (Malaysia).

It can be seen from the above discussion that Malaysia has progressively liberalized its engineering services sectors under the GATS. Intal et al. (2014) found that service sector liberalization commitments of the ASEAN members under the AFAS have gone significantly beyond the GATS. Thanh and Bartlett (2006) reported that on average there is a decline in the level of restrictiveness in ASEAN of about 10% since the AFAS was signed. They found that Malaysia's restrictiveness index declined from 80% under GATS to 76.3% under the AFAS. It is expected that there will be deeper and broader liberalisation commitments with forthcoming AFAS packages (i.e. AFAS 9 to AFAS 12) and the TPPA. Fukunaga and Ishido (2015) have found that there is evidence of progressive deepening of liberalisation commitments as a result of Malaysia's participation in various trade agreements.

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<sup>9</sup> The amendment to the Act was gazetted on February 24, 2015 and became effective on July 31, 2015.

**TABLE 5: MALAYSIA'S HOEKMAN INDEX BY 11 SECTORS**

Sector	GATS (2006)	AANZFTA (2012)	AFAS 8 (2012)	ASEAN MNP (2012)
Business Services	0.01	0.10	0.39	0.45
Communication Services	0.00	0.02	0.25	0.31
Construction and related engineering services	0.00	0.50	0.50	0.50
Distribution services	0.00	0.00	0.30	0.40
Educational services	0.00	0.30	0.25	0.25
Environmental services	0.00	0.00	0.25	0.25
Financial services	0.00	0.38	0.38	0.38
Health related and social services	0.00	0.25	0.50	0.50
Tourism and travel related services	0.00	0.25	0.50	0.50
Recreational, cultural and sporting services	0.00	0.20	0.30	0.30
Transport services	0.00	0.04	0.16	0.19
Simple average of all sectors	0.00	0.17	0.36	0.38

(Source: Fukunaga and Ishido (2015))

Note: GATS (General Agreement on Trade in Services); AANZFTA (ASEAN-Australia- New Zealand FTA); AFAS 8 (ASEAN Framework Agreement on Services); ASEAN MNP (Movement of Natural Persons).

Table 5 presents the Hoekman Index<sup>10</sup> for Malaysia that measures the degree of commitments in the services sector. The results show that Malaysia's services sectors experienced progressive liberalisation over the years from GATS (0.00 - unbound) through AANZFTA (0.17) and AFAS 8 (0.36) and finally to the ASEAN MNP (0.38). The transport services recorded the lowest score of liberalisation commitments of 0.19. Business services, construction and related engineering services, health related and social services and tourism and travel related services experienced deeper and broader liberalisation obligations.

## 4. Case Study on Consultant Engineers in Malaysia

This section presents the findings of the survey on the level of awareness among professional engineers in Malaysia on the government's initiative in liberalising the engineering services and their readiness to face greater competition in domestic and international market. Before we go into the discussion on the survey and its findings, it will be useful to have a brief overview on the Malaysian engineering services.

### 4.1 Overview of Engineering Services in Malaysia

Engineering services industry in Malaysia largely consists of small firms. A survey done by BEM-ACEM 2003 as reported in Abdul Majid (2013) found that 63% of the engineering consulting

10 The index assigns value 1 when the said sector is "fully liberalised"; 0.5 when "limited" (but bound); 0 when "unbound" (government has not committed to liberalise) by sub-sector.

industry consists of small firms, medium (34%) and large (3%). As of March 2014, there were a total of 2,127 engineering consulting practices registered with the BEM.<sup>11</sup> This consists of 959 sole proprietorships (45.1%), body corporate (44.9%) and partnerships (9.0%). As of October 2015, there were only 9 foreign engineers registered with the BEM. The large firms generally offer multi-disciplinary services that include civil, mechanical and electrical services and these firms export their services mainly to ASEAN and Middle Eastern countries (Wong, 2012). In 2014, there were only 19 multi-disciplinary practices in Malaysia.<sup>12</sup> Most of the engineering consulting firms in Malaysia heavily rely on domestic market. Looi (2003) reported that only 12% of Malaysian engineering firms surveyed in his study received revenue from overseas market and earnings from exports accounted only 1.5% of total industry revenue.

None of the Malaysian firms have so far made it into the rank of global top engineering firms. A large percentage of the global engineering services industry's activity is concentrated in developed economies, accounting for 75% of the industry's revenue (Ibis World, 2013). In 2010, out of 20 top global engineering firms, 19 firms originated from the OECD countries, out of which nine firms are from the United States, six from Europe, two from Canada, two from Australia and one from Japan. Only one firm is from the developing world, namely Constructora Norbero Odebrecht from Brazil (Fernandex-Stark, Bamber and Gereffi, 2010). American firms accounted for 34.4% of total revenue from overseas engineering projects in 2012, followed by European (34.2%), Australian (10.2%), Canadian (8.9%), Chinese (3.1%) and Japanese (1.9%) firms. Nevertheless, an increasing number of developing countries have begun exporting their engineering services for the past one decade. Brazil, India, the Republic of Korea, the Russian Federation, Middle East and Singapore are emerging exporters of engineering services (Catteneo, Engman, Saez and Stern, 2010). In 2012, an Egyptian company, Egypt Dar Al-Handasah Consulting, was ranked 10th in terms of international revenue earnings, while Aurecon a Singaporean company was listed at the 20th position. In addition, about 10 firms from China made it into the top 100 international engineering and design firms.<sup>13</sup>

## 4.2 Survey Findings

This section presents the findings of the survey on the professional engineers' awareness on the Malaysian government's initiative in liberalising the engineering services and their readiness to face a more competitive market. This survey was undertaken and analysed in 2013.

### 4.2.1 Background of the respondents

This survey was conducted on consultant engineers who are employed by engineering firms and those who own engineering firms in Klang Valley (Federal State of Kuala Lumpur and Selangor). Consultants are the best representatives for the objectives of this research, as they are most affected by the liberalisation policy since they provide professional services to the public and private clients on a larger scale. In 2013, there were a total of 1300 consultant engineers in Malaysia and out of that 956 are based in Klang Valley. Questionnaires were sent to all consultant engineers op-

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11 Information on the registration of professional engineers is updated periodically at the Board of Engineers Malaysia's website, [www.bem.org.my](http://www.bem.org.my).

12 Ibid.

13 Based on the list of top 225 international firms provided by ENR (2013).

erating in Klang Valley by email. In addition to sending by email, questionnaires were also given directly to twenty (20) professional engineers and for another 20 respondents, we obtained feedback through direct face to face interviews using the same questionnaire. A total of 103 responses were received, with a response rate of 10.8%. We followed up by telephone calls and emails, but the response was still low.

**TABLE 6: DEMOGRAPHY PROFILE OF THE RESPONDENTS**

Demographic type	Description	Frequency	Percentage
Age (in years)	20-29	8	7.8
	30-39	14	13.6
	30-49	46	44.7
	50 and above	35	34.0
Highest education level	Diploma	0	0
	Professional diploma	0	0
	Bachelor Degree	74	71.8
	Master Degree	25	24.3
	PHD	4	3.9
Engineering Discipline	Civil & Structural	64	62.2
	Mechanical	18	17.5
	Electrical	21	20.4
	Chemical	0	0
	Other	0	0
Registration with Board of Engineers Malaysia	Not registered	0	0
	Graduate Engineer	4	3.9
	Professional Engineer (Ir.)	99	96.1
Type of organization	Sole Proprietor	43	41.7
	Partnership	15	14.6
	Body Corporate (Sdn. Bhd.)	45	43.7
	Multi Disciplinary Practice (Eng, Arch, QS)	0	0
	Other, please specify:	0	0
Number of employees in the company	0-10	0	0
	1-10	61	59.2
	11-20	25	24.3
	21-50	16	15.5
	100 and above	1	1.0

Position in organization	Owner/Director/Executive	93	90.3
	Senior Management	8	7.8
	Middle Management	2	1.9
	Junior level personnel	0	0
Years of experience in the engineering practice	1-5	4	3.9
	6-10	7	6.8
	11-15	20	19.4
	16-20	17	16.5
	more than 20 years	55	53.4
Type of work that your firm has experience in. <b>(You may circle more than one)</b>			
a) Building works			
i) Civil and structural	-	65	63.1
ii) Mechanical works	-	33	32.0
iii) Electrical works	-	37	35.9
b) Other works		-	
i) Geotechnical	-	24	23.3
ii) Roads	-	4	3.9
iii) Bridges	-	28	27.2
iv) Tunnels	-	2	1.9
v) Dams	-	18	17.5
vi) Airports	-	6	5.8
Is your company involved or have joint ventures with foreign consultants for any consultancy work <b>in Malaysia?</b>	No	93	90.3
	Yes		
	10	9.7	
Is your company involved or have joint ventures with foreign consultants for any consultancy work <b>outside of Malaysia?</b>	No	92	89.3
	Yes	11	10.7

Table 6 shows the demography profile of the respondents. The majority of respondents are between 30 to 49 years of age (44.7%), followed by those 50 years and above (34%), 30-39 years (13.6%) and 20-29 years (7.8%). Respondents are mostly civil engineers (62.2%), followed by electrical (20.4%) and mechanical (17.5%). Ninety six per cent (96%) of the respondents are professional engineers registered with the BEM.

In terms of the type of organisation, 43.7% are from body corporates, followed by sole proprietors (41.7%) and partnership (14.6%). Majority of the respondents are owner/director/executive (90.3%) of their own companies with more than 20 years of experience (53.4%). This demography of the respondents provides reliability to the results of the research as the respondents have strong background in terms of knowledge and experience in engineering consultancy practice. The respondents largely do not have any joint ventures with foreign consultants for consultancy work in Malaysia (90.3%) or outside of Malaysia (89.3%). Simple statistical test method by calculating frequency and percentage analysis was used to analyse the responses.

#### 4.2.2 Awareness of the Professional Engineers on Liberalisation Exercise

Table 7 presents results of the survey on the level of awareness of the professional engineers on the government’s decision to further liberalise the sector. The findings show that though 76% of the respondents are aware of the government’s initiatives, majority of them were not aware that the policy will be effective in 2012 and that the Registration of Engineers Act, 1967 will be amended accordingly.

**TABLE 7: AWARENESS OF LIBERALISATION OF ENGINEERING SERVICES.**

Statement		Frequency	Percent
I am aware of the Government’s announcement to liberalise the engineering services.	Yes	76	73.8
	No	27	26.2
I am aware that liberalisation of the engineering services will be effective by 2012.	Yes	33	32.0
	No	70	68.0
I am aware that the liberalisation of the engineering services by Government of Malaysia is in line with international agreements.	Yes	61	59.2
	No	42	40.8
I am aware of the Registration of Engineers Act 1967.	Yes	98	95.1
	No	5	4.9
I am aware that the Registration of Engineers Act 1967 will be amended in view of the liberalisation of engineering services.	Yes	36	35.0
	No	67	65.0

This raises concern because even professionals are not fully aware of current policy developments that have direct effect on them.

#### 4.2.3 Readiness to Face Competition

Table 8 presents the findings on the readiness of professional engineers in facing greater competition with more liberal entry of foreign engineers and engineering firms. To understand whether they are ready to face stiffer competition in the future, we inquired on their capabilities and strength in providing engineering services in Malaysia.

**TABLE 8: CAPABILITIES & STRENGTH OF PROFESSIONAL ENGINEERS IN MALAYSIA.**

Statement		Frequency	Percent
Malaysian engineering consultants have the <b>EXPERTISE</b> to provide consultancy services <b>in Malaysia</b> with regards to:			
a) Knowledge in <b>all fields</b> of engineering	Strongly agree	36	35.0
	Agree	42	40.8
b) Technical skills /competencies	Strongly agree	33	32.0
	Agree	49	47.6
Malaysian engineering consultants have the <b>CAPACITY</b> to provide consultancy services <b>in Malaysia</b> with regards to:			
a) Manpower	Strongly agree	34	33.0
	Agree	57	55.3
b) Technology	Strongly agree	29	28.2
	Agree	45	43.7
c) Finance	Strongly agree	25	24.3
	Agree	51	49.5
Malaysian engineering consultants are capable to <b>COMPETE</b> with foreign engineering consultants to provide engineering services <b>in Malaysia</b> with regards to:			
a) Securing a job	Strongly agree	26	25.2
	Agree	31	30.1
b) Standard of service	Strongly agree	27	26.2
	Agree	43	41.7
Malaysian engineering consultants require <b>SUPPORT</b> from the government to <b>COMPETE</b> with foreign consultants, in terms of:			
a) Regulatory requirements	Strongly agree	52	50.5
	Agree	40	38.8
b) Financial incentives	Strongly agree	38	36.9
	Agree		
		42	40.8

In terms of the capacity to provide consultancy services in Malaysia, majority of the respondents agree that professional engineers in the country are able to cater for manpower needs of the industry (88.3%), provide expertise in technical skills/competencies (79.6%) and have knowledge in all fields of engineering (75.7%). The findings also show that about three quarter of the respondents agree that Malaysian engineering consultants have the capacity in terms of financial strength and technological capability.

On the question of whether they have the ability to compete with foreign engineering consultants in projects tendered in Malaysia, 68% of the respondents agreed that they will be able to compete for standard of service while only 55.3% said they would be able to compete in terms of securing a job. These results show that even though the Malaysian consultants have the capacity with regards to manpower, and expertise with regards to technical skills/competencies and knowledge in all fields of engineering, many of them are not ready to compete directly with foreign engineering consultants yet.

We then asked whether they would require support from the government to compete with foreign consultants, 89.3% of the respondents said that they would need support in terms of regulatory

requirements, while 77.7% said they would need financial incentives. The results suggest that the respondents are concerned about the liberalisation effects and do require support from the government.

#### 4.2.4 Strengths of Professional Engineering Services

The objective of this analysis is to examine the respondents' perceptions on the strength of professional engineering services in Malaysia, with the aim of understanding their capabilities to compete with foreign services providers. The results are presented in Table 9.

**TABLE 9: STRENGTH AND WEAKNESSES OF PROFESSIONAL ENGINEERING SERVICES IN MALAYSIA**

Statement		Frequency	Percent (%)	Total (%)	Rank
<b>STRENGTH</b>					
Malaysian engineering consultants have the expertise to provide consultancy services in Malaysia with regards to:					
a) knowledge in all fields of engineering	Strongly Agree	36	35.0	75.7	3
	Agree	42	40.8		
b) technical skills /competencies	Strongly Agree	33	32.0	79.6	2
	Agree	49	47.6		
Malaysian engineering consultants have the capacity to provide consultancy services in Malaysia with regards to:					
a) manpower	Strongly Agree	34	33.0	88.3	1
	Agree	57	55.3		
b) technology	Strongly Agree	29	28.2	71.8	5
	Agree	45	43.7		
c) finance	Strongly Agree	25	24.3	73.8	4
	Agree	51	49.5		
Malaysian engineering consultants are the capacity to provide consultancy services in Malaysia with regards to:					
a) securing a job	Strongly Agree	26	25.2	55.3	7
	Agree	31	30.1		
b) standard of service	Strongly Agree	27	26.2	68.0	6
	Agree	43	41.7		
	Agree	42	40.8		

The results show that Malaysian engineering consultants have the capacity to provide consultancy services in Malaysia with regards to man power, expertise in technical skills/competencies and knowledge in all fields of engineering. The results also show that professional engineering services in Malaysia have sufficient capability to provide services in terms of expertise (knowledge in all fields of engineering, technical skills /competencies) and capacity (manpower, technology and finance).

Nevertheless, only 68% of the respondents admitted that they would be able to compete with foreign engineering consultants in Malaysia with regards to equivalent standard of service. In terms of securing a job in the domestic market in case they have to compete with foreign engineering service providers, only 55.3% said they would be able to secure the job successfully. These results show that even though the Malaysian consultants perceive that they have the capacity in terms of manpower, expertise, technical skills /competencies and knowledge in all fields of engineering, their major concern is whether they would be able to compete with foreign engineering consultants if the domestic market is open to foreign competition.

#### 4.2.5 Impact of Liberalisation of Engineering Services

The results in Table 10 show that in order of ranking, the respondents feel that the most significant impact of liberalisation would be reduction in the opportunities to secure jobs in the domestic market if foreign consultants are free to enter the market (rank 1 =77.7%). Most respondents agree that foreign consultants and firms will be encroaching into their business territory and that they are not ready for it yet.

**TABLE 10: IMPACT OF LIBERALISATION**

Statement			Frequency	Percent (%)	Total (%)	Rank
Increase Foreign Direct Investment (FDI) into Malaysia	10	Strongly agree	10	9.7	37.9	10
		Agree	29	28.2		
Increase competitiveness of engineering consultancy services in Malaysia.	3	Strongly agree	16	15.5	66.0	3
		Agree	52	50.5		
Introduce international best practices	4	Strongly agree	12	11.7	62.1	4
		Agree	52	50.5		
Encourage new technologies in consultancy services	2	Strongly agree	14	13.6	71.8	2
		Agree	60	58.3		
Increase the level of service to local clients/ customers with regards to:						
a) Quality of service	10	Strongly agree	11	10.7	50.5	6
		Agree	41	39.8		
b) Cost effectiveness	3	Strongly agree	7	6.8	47.6	8
		Agree	42	40.8		
Encourage the mergers of small consulting companies to match larger foreign companies.	4	Strongly agree	11	10.7	49.5	7
		Agree	40	38.8		
Reduce the opportunities of securing jobs with the influx of foreign consultants	2	Strongly agree	46	44.7	77.7	1
		Agree	34	33.0		

Reduce the quality and safety of service in Malaysia by cheaper players from lesser developed countries.	10	Strongly agree	24	23.3	56.3	5
		Agree	34	33.0		
Encourage Malaysian consultants to venture internationally.	3	Strongly agree	11	10.7	46.6	9
		Agree	37	35.9		

On the positive effects of liberalisation, the respondents acknowledge that liberalisation of professional services would encourage new technologies in consultancy services (rank 2, 71.8%); increase competitiveness of engineering consultancy services in Malaysia (rank 3 = 66%); and introduce international best practices (rank 4 = 62.1%).

As for the negative impact of liberalisation, about 56% of the respondents concur that if liberalisation leads to greater inflow of engineers from less developed countries in the region, services might be offered at lower costs but will come at the expense of quality and safety of services in Malaysia. Fifty per cent of respondents agree that there are other positive impacts of liberalisation that would contribute to improvements in the quality of service; encourage the merger of small consulting companies to match larger foreign companies (49.5%); enhance cost effectiveness for local clients (47.6%); and, encourage Malaysian consultants to venture internationally (46.6%).

#### 4.2.6 Strategies to Mitigate the Negative Impact of Liberalisation

Table 11 presents the frequency of results and ranking on the strategies for liberalisation of engineering services in Malaysia. The results show that in order of ranking, there are three most important strategies which are all ranked 1 (92.2%). They are: amendment of Engineers Act should address and safeguard the interest of Malaysian engineering consultants; in order to face liberalisation, Malaysian consultants need capacity building in the variety areas of expertise ;and skills/ competencies. The results and discussion above show that it is important that the interest of Malaysian engineering consultants be addressed and safeguarded through the amendment to the Engineers Act. Besides this, other strategies are capacity building in the three areas of knowledge, skills/competencies and technology, which show that these factors are important for competing with the foreign consultants especially with regard to the standard of engineering services. It has also been acknowledged that Malaysian consultants need capacity building in the area of finance and technology transfer since liberalisation increases business competition in the market.

**TABLE 11: STRATEGIES FOR LIBERALISATION OF ENGINEERING SERVICES IN MALAYSIA**

Statement		Fre- quency	Percent (%)	Total (%)	Rank
<b>Amendment of Engineers Act</b> should address and safeguard the interest of Malaysian engineering consultants	Strongly agree	75	72.8	92.2	1
	Agree	20	19.4		
<b>Introduction of competency assessment</b> on local by-laws for <b>ALL</b> foreign and local consultants in order to give advantage to Malaysian engineering consultants	Strongly agree	45	43.7	75.7	4
	Agree	33	32.0		

In order to face liberalisation, Malaysian consultants need <b>capacity building</b> in the following areas:					
a) Manpower	Strongly agree	29	28.2	75.7	4
	Agree	49	47.6		
b) Knowledge	Strongly agree	37	35.9	92.2	1
	Agree	58	56.3		
c) Skills/ competencies	Strongly agree	37	35.9	92.2	1
	Agree	58	56.3		
d) Technology	Strongly agree	33	32.0	89.3	2
	Agree	59	57.3		
e) Finance	Strongly agree	31	30.1	79.6	3
	Agree	51	49.5		
To allow foreign consultants, up to <b>100% equity ownership</b> of local consulting companies to <b>encourage growth</b> of the engineering services.	Strongly agree	2	1.9	7.8	5
	Agree	6	5.8		

## 5. Conclusions and Policy Recommendations

Malaysia has a long way to go to be a regional hub for services and a world-class service provider. We have seen from the discussion in this paper that Malaysia's service sector is still highly protected. In most cases, barriers result from restrictive domestic regulations that hinder the development and competitiveness of the domestic service industry. Ishido and Fukunaga (2012) assert that to maximize the gains from trade liberalisation, domestic regulatory reforms are vital and must be supported by complementary policies.

Hence, it is pertinent that Malaysia undertakes comprehensive domestic regulatory reforms and enhance complementary socio-economic elements such as improving education and skills training, tackle the brain drain issue and enhance institutional governance – all factors that are important drivers of growth and competitiveness of the services industry. Regulatory reforms can only be effective if the policy-makers and stakeholders have in-depth understanding of the industry at the sectoral and disaggregated levels, and a clear knowledge of the industry's competitive strengths and weaknesses, and a clearer sense of the market failures warranting informed policy interventions. Cali et al. (2008) noted that appropriate complementary policies would vary from sector to sector; thus careful consideration is needed in drawing up and executing required policies. The challenge for domestic policy-makers will be to identify sector-specific reform road maps and address the knowledge gaps. It is also important to draw up strategies to minimize the impact of liberalisation on local services providers. In the case of engineering services, some of the recommendations that were gathered from the survey and interviews are as follows:

- i) *The amendment of Engineers Act* should address and safeguard the interest of Malaysian engineering consultants; and

- ii) Malaysian consultants need *capacity building* in the areas of *knowledge and skills/competencies, technology, finance and manpower*.

In addition, the regulatory bodies would face new challenges in monitoring and ensuring the standards of foreign engineers that come with different background, experience and standards. Hence, the regulatory bodies must be prepared to face these developments by improving the administrative system in the country and by heightening cooperation with similar regulatory bodies in partner countries.

Reciprocal liberalisation measures undertaken by trading member nations imply that Malaysian engineering consultants and firms would have better market access abroad. It is also important to recognise that easy movement of professionals and skilled workers do provide opportunities for Malaysia to fill skill-gaps in specific areas. However, Malaysian engineering services providers are still at an infant stage in terms of international business ventures. Institutional support both in terms of capacities and capabilities by merging the expertise and professionalism might assist local players to become successful global players. Lack of international accreditation in quality standards, and of capacities and capabilities of financial management marketing and other resources, currently work against the Malaysian professional service providers' ability to compete internationally in a significant way (BEM, 2000).

Nevertheless, Malaysian consultant engineers and firms have made inroads in foreign market and have the capacity to export their services in specific niche engineering areas including large scale infrastructure projects such as highways, ports, airports, water supplies, and oil and gas facilities. Further research on the actual impact of implementation of the government's policy to liberalise services, particularly engineering services, would be beneficial. It could also focus on the progress of the strategies and recommendations made in this research and the effectiveness of the initiatives taken by the various parties concerned. The research would be ideally conducted after a few years from the implementation of liberalisation considering the duration of projects completed. It would then be more practical to gauge the response and impact of Malaysian engineering service provider globalising and venturing their services outside of Malaysia.

A higher level of integration and liberalisation may also be achieved through closer collaborations between ASEAN partner countries and dialogue partners. Further liberalisation of Mode 3 and Mode 4 market access within ASEAN and FTA partner countries would enhance the availability of technology, expertise and capital and this is a stepping stone for Malaysian professionals to later compete with more established and competitive professionals from developed nations. Effective implementation of liberalisation commitments, however, requires compliance and reforms of domestic regulations, which can only be successfully implemented if there is a strong political will, effective inter-agency coordination and decisive leadership in politics and business circles. But the scenario on the ground is to the contrary.