

IEM Employment Survey 2014 Report

Standing Committee on Welfare & Service Matters

The IEM Employment Survey was conducted at the end of 2014. The deadline was 31 January 2015. The previous survey was carried out in 2009. Of 21,000 survey forms sent out to IEM members, only 952 responses were received before the closing date. This represented a survey sample size of 4.53% compared to 7.78% in 2009. Figures 1 to 4 show the distribution of responses by the IEM membership grade, membership with Board of Engineers Malaysia (BEM), age and gender of the participants.

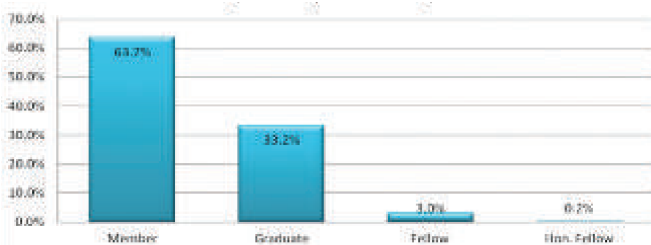


Figure 1: Response (%) by IEM Membership Grade (Total Response = 100%)

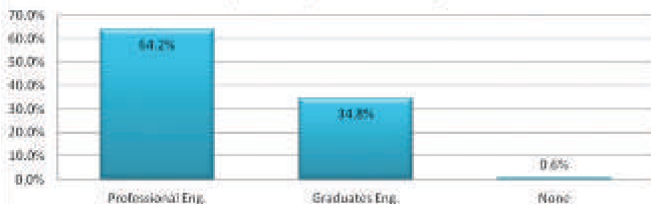


Figure 2: Response (%) by Registration with BEM (Total Response = 99.6%)

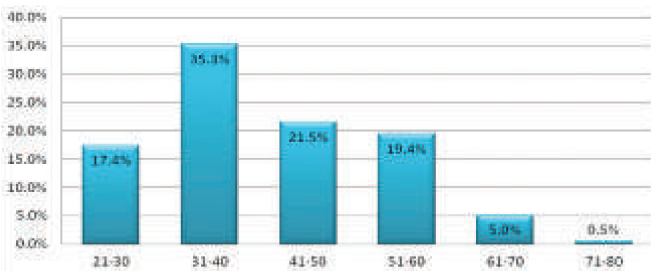


Figure 3: Response (%) by Age (Total Response = 99.3%)

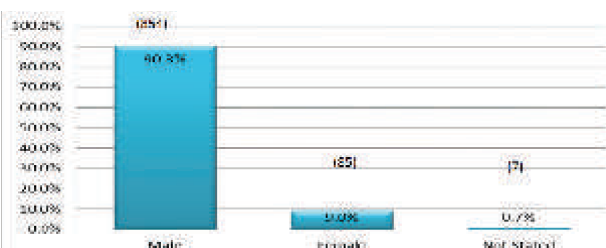


Figure 4: Response (%) by Gender (Total Response = 99.3%)

The highest response was from Corporate members (63.7%) followed by Graduate (33.2%), Fellow (3.0%) and Honorary Fellow (0.2%). About 90.9% respondents or 865 IEM members were working in Malaysia whereas only 20 members were employed overseas. The majority of respondents worked in the private sector, which represented about 79.6% of the respondents (758 engineers). Figures 5 and 6 show the nature of respondents' current jobs and their employment sectors; most worked as consultants in the construction and properties sector.

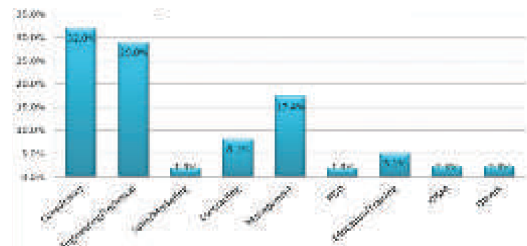


Figure 5: Nature of Current Job

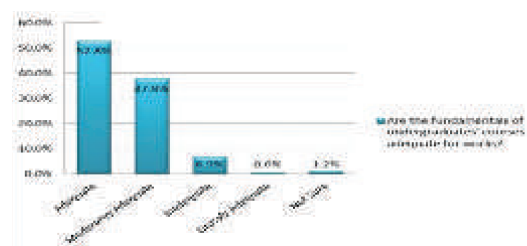


Figure 6

About 77% of respondents were fully employed. As for education level, 69.8% of respondents held bachelor degrees, 19.8% had masters and 5.4% had Ph.D qualification. The majority of respondents were from the civil and structural engineering discipline at 46.9%, compared to mechanical 21.5% and electrical 19.1%. The remainder were from chemical, electronics and other engineering disciplines. Most of the respondents (63.5%) were local graduates while 34.2% respondents had studied overseas.

The survey shows that 52.8% of respondents were of the opinion that the fundamentals of undergraduate courses

were adequate for work (Figure 7); 66.3% agreed that communication skills should be a part of the undergraduate curriculum and 95.3% answered positively when asked if engineering was their own choice. Figure 8 shows the reasons for choosing engineering as a career. The majority did so because of their interest and ambition.

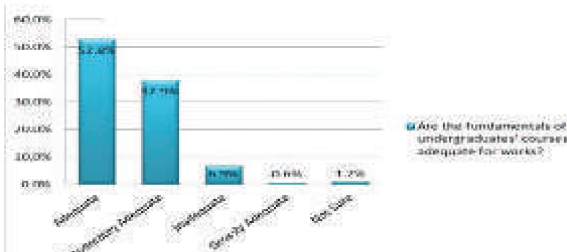


Figure 7

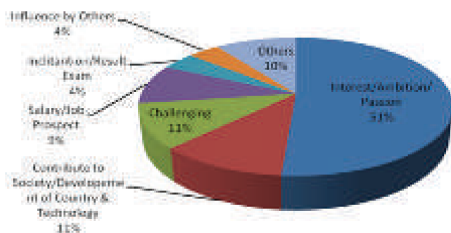


Figure 8

KEY PROFILES OF RESPONDENTS

The key profiles of the survey respondents can be summarised as follows:

- 63.7% were Corporate Members of IEM, 33.2% Graduates, 3% Fellow and 0.2% Hon. Fellow
- 64.2% were P.E. with Board of Engineers Malaysia and 34.8% Graduate Engr.
- 35.3% of respondents were in major age group 31-40 years and 5.5% were senior citizens above 61 years
- 90.3% were male respondents and 9.0% were female respondents
- 90.9% respondents worked locally and 2.1% worked overseas
- 79.6% were in Private Sector, 10.3% Government and 10.1% GLC
- 32.0% were involved in Consultancy, 17.4% Management and least 1.9% in R&D and Sales
- 37.3% were employed in Construction and Properties, 12.6% Infra projects and least 0.8% Agriculture
- 77.0% were fully employed, 18.2% self-employed and 1.1% unemployed
- 69.8% had Bachelor degrees, 19.8% had Masters and 5.4% were PhDs.
- 49.6% were in Civil/Structural discipline, 21.5% in Mechanical, 19.1% in Electrical
- 63.5% were local graduates, 34.2% were overseas graduates and 2.3% did twinning programmes

ANNUAL REMUNERATION

The Employment Survey 2014 shows that the average annual remuneration of engineers increased by 27.28% from RM90,744.00 in 2008 to



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RM115,500.00 in 2014 (Figure 9). In terms of gender, male engineers commanded a higher annual income than female engineers (Figure 10).

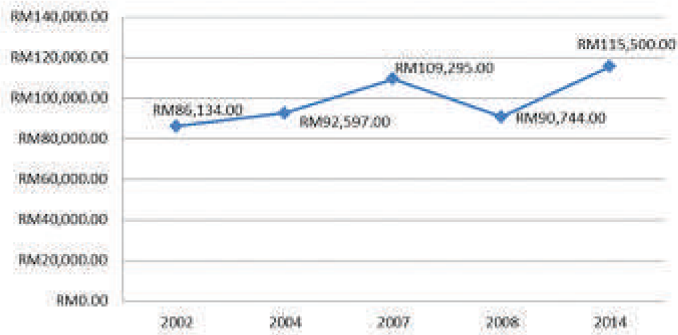


Figure 9

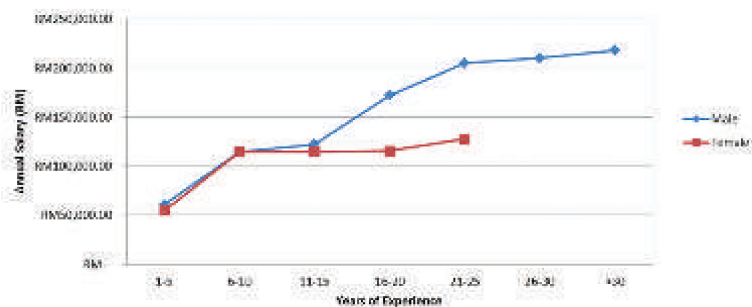


Figure 10

Figures 11 and 12 represent the average remuneration based on qualification level for both working engineers/corporate members and graduates. These show that engineers with PhD qualification earned the highest remuneration at 1 to 10 years working experience where 87.5% of the respondents were working in universities/colleges. However, for engineers with Masters, remuneration increased in line with their years of working experience.

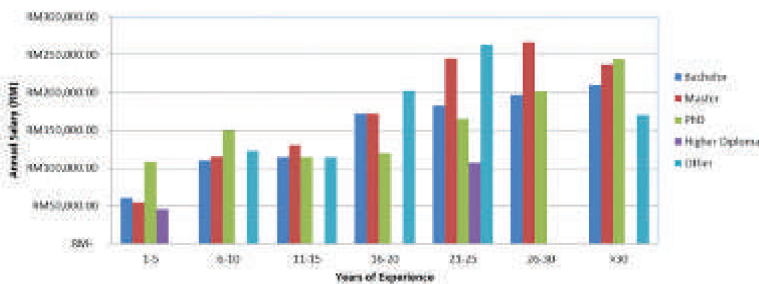


Figure 11

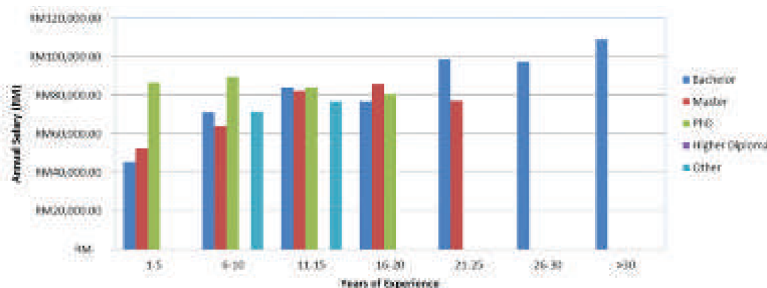


Figure 12

Figures 13 and 14 show that both working engineers/corporate members and graduate engineers who were fully employed, had a high and stable increment of remuneration and this corresponded to years of experience as compared to self-employed engineers. This was reflected in the respondents' number of fully employed engineers, which was 77% from various sectors of



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employment including the O&G sector. Meanwhile, only 18.2% respondents were self-employed, mostly in the construction sector and these were possibly small contractors or consultants.

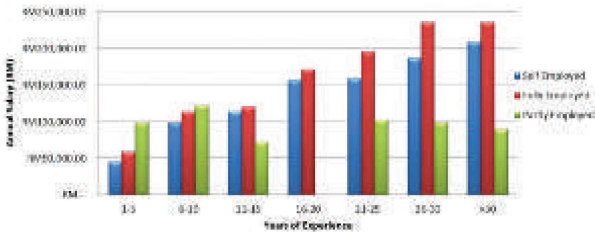


Figure 13

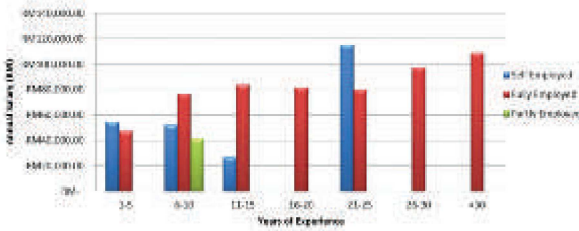


Figure 14

Figures 15 and 16 represent the remuneration by location. Engineers who worked overseas earned a much higher salary than engineers working in Malaysia. There was a difference of up to RM170,000.00 in annual remuneration between local engineers and engineers working overseas with working experience between 21 and 25 years, with most working in O&G and manufacturing sector.

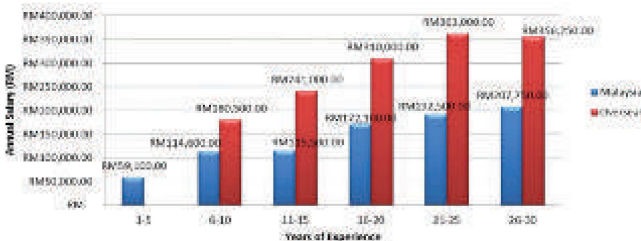


Figure 15

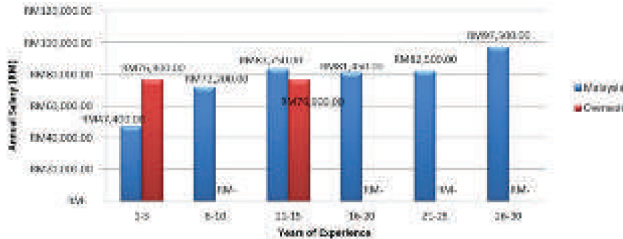


Figure 16

PERCEPTION OF REMUNERATION, JOB SATISFACTION AND JOB CHARACTERISTICS

On job satisfaction, 72.1% of engineers said they were satisfied with their jobs and only 9% were dissatisfied with how demanding their jobs were. Unfortunately it seemed that 27.4% of respondents did not receive any encouragement to attain their Professional Engineer’s status. When asked if they had any intention to move away from engineering field, only 16.1% replied positive to this question. On the quantum of remuneration, only 48.5% of the respondents perceived it as favourable.

On a scale point of 1 to 5, respondents were asked to describe their jobs as Challenging, Rewarding, Stress and

Competitive. Figure 17 shows the results and this can be summarised as below:

- 90% of respondents perceived their job as challenging or very challenging
- About 63% of respondents perceived their job as rewarding or very rewarding
- Almost 78% of respondents perceived their jobs as stressful or very stressful
- Almost 83% of respondents perceived their jobs as competitive or very competitive

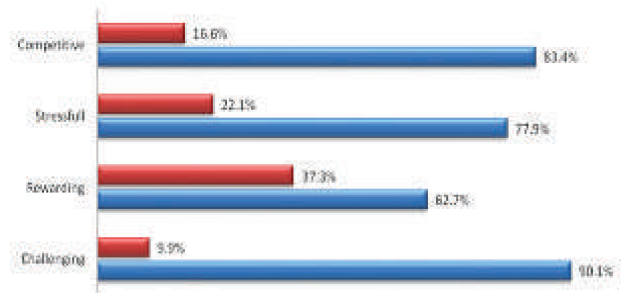


Figure 17

SURVEY ON WOMEN ENGINEERS

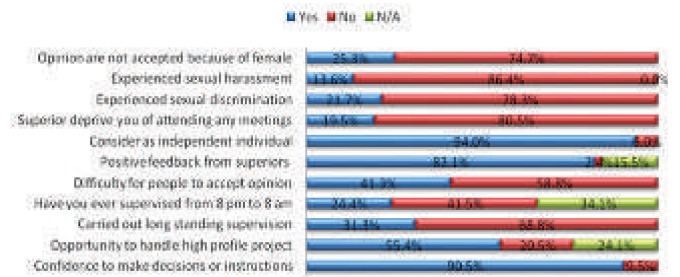


Figure 18

Figure 18 shows the perception of women engineers on several issues related to their jobs and working environment. The findings are summarised below:

- 22% of women engineers said they had experienced gender discrimination
- Only 13.6% experienced gender harassment in the office or on site
- 25% respondents felt or perceived that their professional opinions were not accepted because they were women
- 55.4% of women engineers were given the opportunity to handle high profile projects
- 90.5% women engineers were confident to make decisions at meetings or give instructions at sites

From the choice of answer for most significant difficulties as women scientists/engineering professionals in the country, the three (3) most important issues that respondents chose were Work/Life Balance, Lack of Women in Senior Roles and Workplace Culture.

SURVEY ON CURRENT ISSUES

Several questions were aimed at assessing the perception of the respondents on current engineering programmes in universities and other related issues. Figure 19 shows that more than 25% of respondents were uncertain about these issues; 18% replied and agreed that the syllabus of some universities were outdated and mismatched with current job requirements.

In this survey, about 21% of respondents answered that students should master one (1) additional global language besides English in order to improve their job competitiveness.

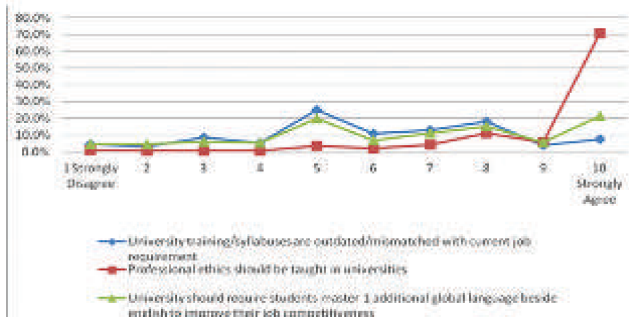


Figure 19

With regards to the shortage of engineers, most respondents were still divided on this issue but 25% slightly agreed that overall, there was a shortage and 14% slightly agreed that there was a shortage of engineers in some disciplines.

SURVEY ON GREEN BUILDING TECHNOLOGY

Figures 20 to 22 represent the respondents' opinions on Green Building Technology. Most of the respondents were involved in or had contributed to the design/construction/guideline of Green Building Technology. There was awareness with regards to its codes of practice, design, production or system.

About 18.6% of the respondents strongly agreed that Energy Efficiency programme had been achieved.

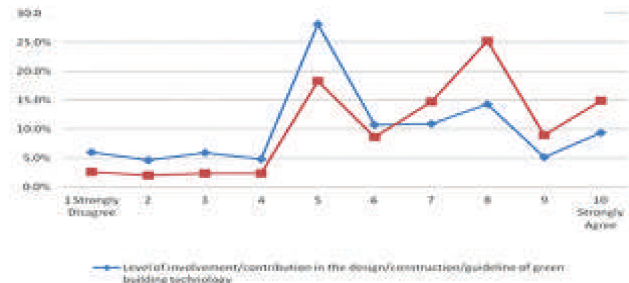


Figure 20

When asked whether the Green Building developments had more risks than traditional buildings, most of the respondents were uncertain but there was a balance between the respondents who agreed and disagreed. About 19.4% agreed that there was a likelihood they would incorporate Green Building elements in their future projects. In the final question, 28% of respondents strongly agreed that Malaysian colleges & universities should offer more courses related to green technology in the construction industry.

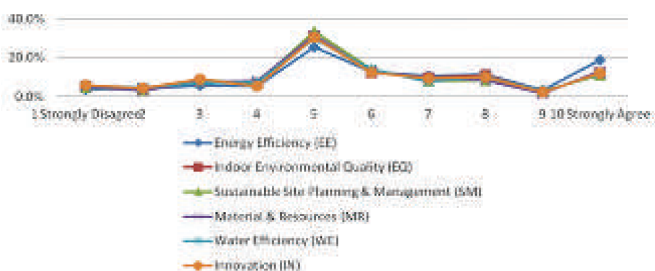


Figure 21

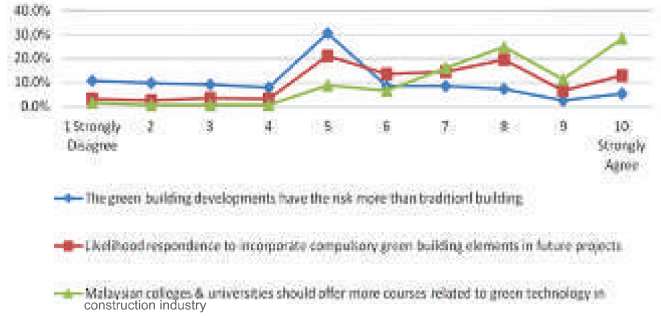


Figure 22

CONCLUSION

The sample size of 4.53% survey data obtained in this employment survey was relatively small, so it may not reflect a true picture of the engineers' employment status, remuneration and perception on the current issues. However it is acceptable to conclude the engineer's annual income had increased 27.28% in the last six years (2008 to 2014).

The response from women engineers (9%) was also very low compared to male engineers. Although almost 20% of women engineers said they had experienced some form of gender discrimination, the number had decreased, compared to previous surveys: 36% in 2007 and 25% in 2009. Hopefully, this number will be lower in future.

This survey should be continued in the future to further update and gather the latest information and data on employment statuses, awareness on current issues and technologies and as well to improve the welfare of engineers.

It is also suggested that the Employment Survey be carried out online and to award a higher CDP hour in order to attract more engineers to respond and thus get a bigger sample survey which would help provide a more accurate analysis and a better understanding of engineers' needs for further improvement. ■

ANNOUNCEMENT

Professional Engineer with Practising Certificate (PE with PC).

Professional Engineer who wishes to continue to be a Submitting Person in the consultancy practice must apply for registration as Professional Engineer with Practising Certificate (PE with PC) with Board of Engineers, Malaysia (BEM)

One-year grace period will be given to all Professional Engineer from 31 July 2015 to 31 July 2016 to decide whether to maintain registration as Professional Engineers or apply to be registered as PE with PC.

Existing Professional Engineers will be exempted from the following provided they have applied for registration as PE with PC before 31 July 2016.

- Passing the Professional Competency Examination (PCE);
- Paying the processing fee of RM50.00 and registration fee of RM200.00;

All Professional Engineers registered after 31 July 2015 requiring a PC are required to sit and pass the PCE. Those who do not required a PC will remain as a P.E.

For further information, please refer to the Board of Engineers, Malaysia.(BEM)

(Source: BEM Website: <http://www.bem.org.my/v3/REA15.html>)