# Influence of Competitiveness Factor towards Graduate Competency Level

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**Abstract:** The intense desire to produce good quality human capital is not sufficient by having basic skills for certain fields only. There is a need to have a competitive attitude to enhance their level of competency as it is a big concern for many employers today. Hence, the study was conducted to identify the competitiveness factors that influence the level of competency among graduates, especially those who are employed in the service sector in Malaysia. This study used the survey method for data collection. Stratified purposive sampling was applied and a questionnaire was distributed to 450 graduates from 13 service sectors based on the statistics obtained from the Ministry of Higher Education 2016. The findings from the exploratory factor analysis found that seven competitiveness factors consisting of 47 items formed the competitiveness attitude among graduates. However, based on a multiple linear regression analysis, only five models of competitiveness factors produced significant relationships with graduates' competency, which are job competitiveness, organizational management competitiveness, dominant competitiveness, goal competitiveness and self-improvement competitiveness. In fact, aggressive competitiveness and general competitiveness do not influence graduates' competency level significantly. Therefore, it can be concluded that graduates' competitive attitude such as having emotional control, innovation, and competitive enthusiasm to be the best, is one of the important characteristics for graduate marketability in the future. In addition, it is hoped that their level of competency can be enhanced through the development of competitive factors for the advancement of the country's higher education talents.

Keywords: Competitiveness, Competency, Graduates, Malaysia

#### 1. Introduction

Recently, the issue of graduate employment has become a great concern to the country. In Malaysia, the unemployment caused by an excessive number of graduates has not been fully resolved and many parties including the government view this situation as a serious matter (Halim, Muda, & Izam, 2019). A variety of issues and feedbacks have been received mainly from employers in the labour industry, whether public or private, that most new graduates lack the key features of the job market including a reluctance to be self-reliant and poor proficiency in English language skills (Ismail, 2012; Yusof et al., 2013; Wickramasinghe & Perera, 2010; Mohd Adnan et al., 2012). The results of the studies by Dhakal et al.

(2018), Tanius (2018), Hajazi (2016), and Yusof and Jamaluddin (2017), also found that there are deficiencies among the graduates that make them less employable such as not being able to communicate well, not having skills to work in groups, not being creative and critical in their thinking, poor decisionmaking, lacking in interpersonal skills, and inadequate problem-solving skills. These skills are key features for marketability as seen from an employer's perspective. Accordingly, the increasing number of students in the public and private institutions of higher learning nowadays has also increased the pressure on the competition for jobs in the market (Tan et al., 2017; Harun et al., 2017, p. 573; Yusof et al., 2013; Yusof & Jamaluddin, 2017). This, in turn, causes employers to be more selective and cautious in recruiting graduates from HEIs to work in their industry (Harun et al., 2017), while also seeking additional value from their potential employees (Madlan et al., 2017). Moreover, the concept of a job or employment itself is constantly changing, thus increasing the urgency among stakeholders such as professional bodies, educators, and governments to think broadly for better skills that can meet the industry's demands (Bowles, Ghosh & Thomas, 2020). Former Prime Minister of Malaysia, Najib Razak, had also emphasized the importance for the country to produce globally competitive, creative, and innovative human capital through his speech while delivering the 10th Malaysia Plan (10MP). In this case, it is believed that a competitive human capital will be able to face any challenges in the future. Hatch and Dyer (2004), found in their study that employees with a high value of human capital characteristics such as being highly skilled, outstanding, and displaying good manners, will improve the performance of an organization while also being able to compete well. Therefore, it is clear that competitive attitude is a very important feature that should be given attention, especially among HEIs graduates as it is an important factor for employment (Saleeb & Fleming, 2016). In this regard, the role of Higher Education Institutions (HEIs) in this decade has become increasingly challenging when it is not only to produce a knowledgeable and skilled generation but also those with salient values in the job market (Hajazi, 2016).

Basically, competitiveness is a natural trait that exists in one's self, which refers to the tendency or effort to do something that will benefit and satisfy him/herself. According to Othman et al., (2015, p. 141), competitiveness is self-motivation that exists within one's desire to do things in a better and faster way than others. Thus, a person with a competitiveness trait can improve their productivity and performance. Furthermore, a person with a competitive attitude is an individual who has goals (Mohd Zain et al., 2006). Therefore, competitiveness is a healthy trait because it is a motivation that aims to boost an individual's confidence to achieve his or her dream. As stated by Tehrani et al. (2014), the competitive attitude inherent in a person is due to internal motivation and the desire to achieve certain goals such as winning a competition, getting good grades or promotion at work. Therefore, by having a competitive attitude, one will work harder to achieve self-fulfilment (Saleeb & Fleming, 2016).

In the context of this study, competitiveness is an attitude that every graduate needs to have to prepare for the working world after graduation. Related to this, the concept of competitiveness, aligns to the context of the job market and related industries, namely the "trade" in professional knowledge and skills that motivate them to compete with others for job opportunities (Ivanenko et al., 2015). Thus, the role of Higher Educational Institutions as a key driver of innovation is crucial for the development of competitiveness in the world of work (Irianti et al., 2019). According to Ab Wahid (2014), among the set of competencies that every student in the HEIs should possess includes the ability to interact with others intelligently, personal skills and planning, multiculturalism, and the advantages of managing and administering the workplace. Therefore, every graduate needs to be prepared with the advantage of high competitiveness to enable them to venture into the field of work that they are passionate about. Moreover, a person with high competitiveness will be able to do their job more efficiently and effectively, while easily understanding their work. As such, this article will highlight the seven key competitive factors identified for future graduates' marketability, namely aggressive competitiveness, dominant competitiveness, self-improvement competitiveness, general competitiveness, organizational management competitiveness, goal competitiveness and job competitiveness.

## 2. Methodology

This study used the survey method by distributing questionnaires as a method of data collection. In addition, a stratified purposive sampling was utilized to recruit graduates working in the various service sectors in Malaysia. According to data from the Department of Statistics Malaysia 2015 (refer to Table 1), there was a total of 77.8% of graduates who worked in the service sector compared to just 22.2% from other sectors. Meanwhile, sources obtained from the Ministry of Higher Education Malaysia 2016, found that the number of graduates working in the service sector still monopolized the whole sector by 77.3% compared to only 22.7% from other sectors (see Table 2).

Table 1 Operating Population-based on Industry, 2015

Table 1 Operating 1 optimation-base	Malaysia	%	Graduates	%
Industry	(000)		(000)	
Total	14,067.7	100.0	3,055.7	100.0
Agriculture, forestry, and fisheries	1,753.9	12.5	35.9	1.2
Mining and quarrying	104.4	0.7	44.2	1.4
Manufacturing	2,322.7	16.5	380.5	12.5
Electricity, gas, steam, and air conditioning supplies	71.7	0.4	20.3	0.7
Water supply, sewerage, waste management and recovery	72.1	0.5	11.6	0.4
activities				
Construction	1,309.9	9.3	180.3	5.9
Services	8,299.0	<b>59.0</b>	2,378.2	77.8
Wholesale and retail trade, repair of motor vehicles and	2,361.4	16.8	354.5	11.6
motorcycles				
Transportation and storage	615.0	4.4	77.2	2.5
Accommodation and food and beverage services activities	1,150.8	8.2	92.2	3.0
Information and communication	214.2	1.5	149.2	4.9
Financial and insurance / takaful activities	354.4	2.5	205.0	6.7
Real estate activities	71.2	0.5	41.1	1.3
Professional, scientific, and technical activities	359.3	2.6	226.0	7.4
Administrative activities and support services	634.8	4.5	64.0	2.1
Public administration and defence; compulsory social	751.0	5.3	231.6	7.6
security activities				
Education	899.0	6.4	670.9	22.0
Health, humanitarian, and social work activities	573.1	4.1	209.1	6.8
Arts, entertainment, and recreation	81.7	0.6	22.3	0.7
Other services activities	233.1	1.7	35.1	1.1
Household activities as an employer	142.3	1.0	3.5	0.1

Source: Department of Statistics Malaysia, 2015

Therefore, the data collection process was conducted on graduates working in the service sector, with a total population of 104,127.0000 employees, based on the statistics from the Ministry of Higher Education 2016. From the total population identified, 384 study samples were required based on the determination of the number of study samples by Krejci and Morgan (1970). Moreover, the sample size of this study was also suitable for review, as stated by Roscoe (1975), that the sample size of 30 to 500 is acceptable and significant for research. A total of 450 sample questionnaires were distributed in this study.

This study used strata sampling with the purpose of sampling divided into strata to obtain homogeneous subgroups and selected samples from each layer (Babbie 2014, p. 223; Kothari 2004; Onwuegbuzie & Collins 2007). According to Kothari (2004), the selection of stratified samples is indeed based on a specific purpose because the sample size represents the estimated characteristics of each strata or category.

Table 2 Sampling of Population Based on Graduates working in the Services Sector, 2016

No.	Services Sector Category	Population by Number of Working Graduates (000)	Sample required
1	Education	23,875	88
2	Other services activities	19,788	73
3	Professional, scientific, and technical activities	11,082	41
4	Information and Communication	8,343	31
5	Financial and insurance / takaful activities	7,826	29
6	Accommodation and food and beverage services activities	7,292	27
7	Wholesale and retail trade, repair of motor vehicles and motorcycles	5,617	21
8	Administrative activities and support services	5,616	21
9	Human health activities and social work	4,748	18
10	Transportation and storage	3,262	12
11	Art, entertainment, and reaction	2,924	10
12	Public administration and defence; social security activities	2,056	7
13	Real estate activities	1,698	6
Tota	1	104127	384

Source: Ministry of Higher Education 2016

As shown in Table 2, the selected respondents are graduates working only in the field of services and they are divided by categories of services according to the number of graduates employed by the industry in 2016 (Ministry of Higher Education Malaysia 2016). The sampling formula for obtaining sample sizes for each of the strata or this study is as follows (Kothari 2004):

Sample size by strata (n) = Total population by category (p) x Sample size (N) and divided by actual population size (P)

$$\frac{n1 = p1 \times N}{P}$$

The sampling formula was used to determine the sample size by strata, which were categorized according to their services field, based on the statistics from the Ministry of Higher Education 2016. This formula was applied to obtain a sample size for each category and to get the total number of samples required for the study, which was 384 participants.

#### 3. Findings and Discussion

# 3.1 Demographic Analysis

The results of this study found that respondents in the age group of 20 to 30, who were graduates from the youngest group, consisted of 195 respondents (50.8%), which was more than half of the total respondents. Meanwhile, respondents aged 31 to 40 were the second highest group with a total of 137 (35.7%), followed by respondents aged 41 to 60 (13.5%). In addition, based on the purpose of the survey to identify the influence of competitive factors on the level of competency among graduates, this study set five educational background criteria, namely Certificate or Diploma, Bachelor's degree, Master's, Doctor of Philosophy and other higher education qualifications. According to the descriptive analysis, 203

graduates (52.9%) have a bachelor's degree. Next, graduates with a Certificate or Diploma accounted for 150 (39.1%), those with a master's degree were 30 (7.8%), and those with other qualifications besides the four existing qualifications numbered one (0.3%). However, none of the graduates from the 384 respondents who answered the questionnaire possessed a Doctoral degree. Based on the analysis, it can be concluded that most of the graduates in the field of service in Malaysia are first degree graduates and holders of Certificate or Diploma in higher education.

According to the demographic analysis of the services sector in Malaysia, 210 respondents (54.7%) represented graduates from the government sector. In addition, the study showed that the second-highest sector of choice for graduates to work was from the private sector representing 151 respondents (39.3%), followed by other fields of service represented by 16 respondents (4.2%), and self-employed graduates in providing services with seven respondents (1.8%). Thus, it can be concluded that the average graduate working in the service sectors in Malaysia are found both in the public and private sectors. However, some graduates work in other service sectors such as other sectors and work by themselves, such as marketing consultants and executives in private companies.

### 3.2 Factors that Construct Competitiveness Character in a Graduate

Before the exploratory factor analysis, a normality test for competitive variables was first performed to look at the distribution of data for each item. The results of the normality test for competitive variables are presented in Table 3:

**Table 3**: Normality Test for Competitive Variables

Competitiveness Factor	Normality Tes	t
Competitiveness Factor	Skewness	Kurtosis
Aggressive competitiveness	222	024
Dominance competitiveness	020	051
Self-improvement competitiveness	192	.960
General competitiveness	265	.447
Organizational management competitiveness	018	.213
Goal competitiveness	.277	.206
Job competitiveness	.114	1.10

Table 3 shows that the competitive factor is within a normal distribution with a value of around  $\pm$  2.58 equals P <0.01 based on a sample size of 384. Furthermore, KMO and Bartlett tests were also carried out to determine whether the exploratory factor analysis is appropriate. Based on the KMO and Bartlett tests, it was found that the KMO value for the competitive factor was .916, which is above .60, which is very good. Moreover, Bartlett's value was also significant, with a value of .000 = P <0.05. After knowing the data distribution of KMO and Bartlett values for competitive factors, the exploratory factor analysis was performed. In this regard, the Principal Component Analysis techniques and Varimax spin techniques had been implemented. Based on the exploratory analysis that was carried out, it was observed that seven factors shape the competitive characteristics among graduates.

Examining the exploratory analysis conducted, the seven factors that shaped the competitiveness of the graduates consisted of 47 items in total. The first factor is represented by eight items, the second factor by seven items, the third factor by eight items, the fourth factor by eight items, the fifth factor by eight items, the sixth factor by five items, and the last factor by three items. Overall, it shows that the percentage of variance that contributed to competitiveness was 57%. The results of the literature analysis that was conducted on the factors contributing to competitiveness suggested aggressive competitiveness, dominant competitiveness, self-improvement competitiveness, general competitiveness, organizational management competitiveness, goal competitiveness and job competitiveness. Meanwhile, results from the exploratory factor analysis also found that these factors significantly contribute to the increase of

competitiveness characteristics among graduates. The findings demonstrated that the most dominant factor contributing to the increase in competitiveness of graduates was aggressive competitiveness by predicting a percentage change of 28.6%.

Furthermore, the second factor predicting the highest percentage change was general competitiveness at 10%, followed by organizational management efficiency at 5.13%, self-promotion competitiveness at 4.28%, dominant competitiveness at 3.25%, goal competitiveness at 2.95%, and lastly job competitiveness at 2.77%. In addition, the reliability tests showed that all of these competitive factors have a high consistency value of above .70. According to Bonett and Wright (2014), the reliability values of .70 to .95 are high and satisfactory. Although there was one factor with a value less than .60 that was at .541, which is competitiveness of the workforce, it is still considered important in the aspect of improving one's competitiveness.

Based on the highest percentage variance, it demonstrated that the aggressive competitive factor contributes the most to the formation of competitiveness among graduates. The importance of this aggressive competitiveness was also acknowledged by Bartos et al. (2015) and Junior (2015), who found that the presence of aggressive competitiveness within employees improves the quality and performance of an organization. In addition, this aggressive competitiveness is seen as enhancing the value of competition between one organization and another. As mentioned by Zhunusov et al., (2019), the presence of competition in any market directly affects the overall development of the nation's economy, and the use of highly efficient human capital is one of the key factors in enhancing a company's competitiveness. Meanwhile, Othman et al. (2015) viewed aggressive competitiveness as vital for university graduates today, so that their position in the working world will be stronger. This is because, with aggressive competitiveness, one not only enjoys the competition but can also experience greatness through the competition (Newby & Klein, 2014).

General competitiveness, on the other hand, represents the second-highest percentage of graduates' competitiveness. Thus, this indicates that graduates in the field of services in Malaysia have the desire to compete for excellence in their field of work. This is aligned with the findings obtained by Selevich et al. (2015), on the importance of competitiveness in graduates, with the presence of competency in graduates demonstrating the quality of academic approaches used. Additionally, competitiveness can enhance the positive perception among employers in hiring graduates as their new employees. At the same time, the value of competitiveness within graduates can determine the degree of competitiveness among educational institutions in the country. In contrast, the findings of a study by Wu (2015), showed that the level of competitiveness among HEIs is poor. However, having a competitive advantage can improve the assessment of one's performance so that personal productivity can be improved over time (Albert, 2017).

The third factor contributing to the formation of graduates' competitiveness is organizational management competitiveness. Organizational management competitiveness encompasses the characteristics of competent leaders, wise decision-making, and a strong sense of organizational excellence (Azemi et al., 2017). Therefore, every graduate needs to have a competitive attitude in managing an organization so that the desired goals are achieved (Othman et al., 2015). This is in line with the findings of a study by Colbert et al. (2014), who argued that leaders with organizational management competencies can influence the effectiveness of an organization through strategic thinking skills in decision-making and in controlling every situation to achieve organizational goals.

The fourth factor that contributes to the formation of graduates' competitiveness is their self-competitiveness. In this context, the competitiveness for self-improvement is crucial for every graduate to have the motivation to improve their efficiency, achievement, and greater personal performance. The results of a study by Othman et al. (2015), suggested that HEIs have a highly competitive advantage. This means that they will work hard at improving their weaknesses to achieve their desired goals. In line with this, Shimizu et al. (2015), found that individuals who perceive failure as a challenge will constantly improve their performance to achieve their goals. Dominant competitiveness is the fifth factor contributing to the competitiveness of graduates. In this regard, Othman et al. (2015), viewed that a person with dominant competitiveness always wants to be seen as superior to others. The tendency to be superior to others improves one's desire to compete and be the best among others (Newby & Klein, 2014). In addition, the

dominant competitive factor is important in improving one's confidence, especially in dealing with others when managing each assigned task.

Meanwhile, the sixth factor identified to contribute to the formation of competitiveness is the competitiveness of goals. Based on the analysis of this exploratory factor, it shows that graduates in the field of services have the desire to compete in order to develop their capabilities. This is in line with Hibbard and Buhrsmester (2010), who stated that a person with a competitive edge will tend to do something until they achieve what they want. In addition, the results of the study by Saleeb and Fleming (2016), showed that the main factor influencing a person to compete is to achieve personal goals rather than to be seen as superior to others. Therefore, a person with a goal will always be positive in improving their performance for the sake of future excellence.

Lastly, job competitiveness is also one of the factors contributing to the formation of graduates' competitiveness. Although the value of consistency based on the reliability test for this factor is relatively simple, it cannot be ignored. This is because job competitiveness is a person's willingness to perform assigned tasks based on personal criteria, such as basic academic skills and personal characteristics (Othman et al., 2015). Therefore, a lack of job competitiveness will make it difficult for a person to compete for job opportunities. However, the results of studies conducted by Fatoki (2014) and Jackson (2013), found that the level of employment competitiveness among HEIs is still limited. The competitiveness of this workforce is important so that one's level of competence can be improved over time (Othman et al., 2015).

Therefore, each individual must have a competitive nature to enhance their ability to fulfil their assigned responsibilities. A competitive attitude not only improves one's efficiency, but their excellence in performing the tasks will enhance the performance of the organization involved. In this context, graduates need to have the ability to build good interpersonal relationships, sniff opportunities, be effective in optimising opportunities and most importantly, and be successful graduates in developing their careers. Thus, success depends not only on what is provided but how we can exploit every available resources for future self-development.

### 3.3 Influence of Competitive Factors on Graduate Competency Levels

Multiple regression analysis was performed on the seven competitive factors of graduate competence, namely aggressive competitiveness, dominant competitiveness, competitive advantage, competitiveness, goal competitiveness, organizational competitiveness, and job competitiveness. The results of the multiple regression analysis are shown in Table 4:

**Table 4** Multiple Regression Analysis of Competitive Factors in Increasing Graduate Competency Levels

Model	Variables	Beta	Sig	df	$\mathbb{R}^2$	$\Delta R^2$	F
1	Job competitiveness	.618	.000	21.569	.382	.382	235.891
2	Job competitiveness	.458	.000	31.564	.559	.177	241.155
	& Organizational management competitiveness	.450	.000				
	Job competitiveness,	.371	.000	33.147	.587	.028	179.810
3	Organizational management	.401	.000				
	competitiveness & Dominance competitiveness	.203	.000				

Model	Variables	Beta	Sig	df	$\mathbb{R}^2$	$\Delta R^2$	F
	Job	.311	.000	33.861	.600	.013	141.725
	competitiveness,						
	Organizational	.384	.000				
	management						
4	competitiveness,	.171	.000				
	Dominance						
	competitiveness	.144	.000				
	& Goal						
	competitiveness						
	Job	.320	.000	34.095	.604	.004	115.051
	competitiveness,						
	Organizational	.361	.000				
	management						
	competitiveness,	.150	.000				
5	Dominance						
	competitiveness	.134	.001				
	& Goal						
	competitiveness,	.075	.048				
	Self-improvement						
	competitiveness						

Table 4 shows the results of the various regression analysis for the seven competitive factors in improving graduate competence. Based on the multiple regression tests, the factor of the workforce is the most important in influencing graduates' efficiency and contributes to the largest variance of 38.2%. As stated by Othman et al. (2015), job competitiveness is a person's willingness to perform tasks to achieve the goals outlined. Therefore, the results of this study show that a willing person will enhance their ability to perform the assigned tasks. In line with this, a study by Alih et al. (2018), also found that when a person has a high level of commitment in doing work, this will have a positive impact on the organization by achieving the desired results.

The second factor contributing to the increasing degree of competency of graduates is the organizational management factor which contributed to a 17.7%. Thus, the study further reinforces that every graduate needs to have a competitive attitude that includes management aspects such as intelligence in the planning and management of tasks in the interest of the organization responsible. Sharma (2017), points out that strengthening the level of competence can be achieved through human resource management especially given the importance of organizational aspects. However, the results of a study conducted by Ab Wahid et al. (2014), found that the level of competency of the HEIs at both the administrative and planning levels is still at a moderate level. In this context, although they know and understand the background of the organizations involved, they are still less capable of addressing any changes that occur in the organization. The findings of this study show that a lack of competitiveness in good organizational management can also affect the performance of an organization.

The third factor contributing to the graduates' level of competence is their dominant competitiveness, contributing 2.8% of the variance. Having a competitive edge will make one feel great and more powerful than others (Othman et al., 2017). According to a study by Albert (2017), music students feel more empowered when they can compete with others. This study also shows that having a dominant competitive nature will make a person more motivated to improve himself to be seen as more powerful than others. Thus, they will try to stand out among others so that their self-esteem will increase.

The fourth factor contributing to the degree of competency of graduates is the goal competitiveness that contributes 1.3% of the variance. Thus, the results show that a person with a goal will compete until the desired result is achieved. In line with this, the results of the study by Comeig et al. (2017), also yielded significant results with value (p = 0.008), whereby the performance of female workers improved when they

were motivated to compete to achieve their goals or objectives. In this regard, competition with others is no longer the main goal, but a competition to achieve the goal will be advantageous from the point of view of self-development as well as increasing one's level of competence.

The last factor contributing to the graduates' competitiveness level is their self-improvement by contributing 0.4%. The results of this study are in line with the findings of Shimizu et al. (2015) that suggested a person with a desire to improve their performance will work harder with their competitive advantage to improve their future success. The findings of this study are also supported by Othman et al. (2015), who argued that self-improvement competitiveness is important for today's HEIs graduates especially to strengthen their competitive position.

#### 4. Conclusion

On the whole, it can be concluded that factors of competitiveness affect one's level of competence. In the context of this study, the value of competitiveness is very important for all HEIs graduates so that their level of competency in performing real tasks in the workplace can be enhanced over time. This is because the competitive nature itself means that the spirit of inner motivation will make individuals willing to do everything to achieve one's goals and excellence. Based on the exploratory factor analysis conducted, there are seven factors that shape competitiveness among graduates, namely aggressive competition, dominant competitiveness, general competitiveness, goal competitiveness, organizational management competitiveness, and job competitiveness. However, the results of the multiple regression analysis showed that only five significant factors influence the degree of competency of the graduates, namely, job competitiveness, organizational management competitiveness, dominant competitiveness, goal competitiveness and self-improvement competitiveness. Aggressive competitiveness and general competitiveness factors are important for graduates although they do not significantly influence the level of competency in the workplace.

The findings of this study are important to stakeholders such as policymakers and HEIs to address the problem of unemployment among recent graduates. These findings provide exposure to stakeholders on the competitive factors that need attention and encouragement for HEIs to enhance the competency of graduates. This is because employers today not only evaluate graduates in terms of the basic skills they have to work, but also their competitive levels such as emotional control, relentlessness, innovation, and competitiveness to become the best they can be. In fact, these attitudes are not just for the sake of the organization, but also for personal development that will have a positive impact on the development of the country.

This study selected graduates in the service sector as a general study sample. However, this study did not specifically assess whether respondents had graduated from public or private HEIs. Therefore, further studies can be conducted by comparing the competencies of public and private HEIs graduates. It is important to look at the focus and strategies of these two HEIs in improving their graduates' level of competency. The disadvantages and advantages of both HEIs can serve as benchmarks to address the issue of unemployment of graduates in the country.

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