**Abstract**: Malaysian government has given an emphasis on the transformation of institutions of higher education to fulfill the demand for competitive and creative human capital, to enable Malaysia to withstand the challenges of globalization. Therefore, it is crucial to identify what are the trend in the demand for higher education in the era of globalization. This study has been conducted with the aim of identifying changes in demand for higher education caused by globalization. The trend in demand for pre-university education and higher education was compared between before and after globalization. Data were obtained from 288 samples using questionnaires as instrument. Respondents of this study were randomly selected from the population, who are currently holding the posts of administrators in institutions of higher education in Malaysia. Data obtained were analyzed using inferential statistics method. It was found that trend in demand for pre-university education and higher education showed positive trend, except for the demand for Higher School Certificate and Public HEIs. This gives the implication that globalization has given a positive impact on the demand for privatized institutions of education compared to public institutions.

**Key-words**: Globalization, Human capital, Education demand, Trend, Pre-university education, Higher education,

**1 Introduction**

Education has always been the field in which the government of Malaysia has given emphasis since its independence till now. Malaysian government believes that education is the key towards an ongoing effort to develop potential human capital who are intellectually, spiritually, emotionally and physically capable of leading Malaysia towards a fully developed nation by 2020.

However, globalization has caused drastic changes in education in the last decade of the 20th century [1]. Globalization has demanded for a more competitive, knowledgeable, creative and innovative workforce, thus causing a change in the education system overall, from the level of pre-school to higher education. [2] argued that globalization has fostered considerable demand for higher education throughout the world, as greater levels of remuneration accrue at higher levels of education. Many countries are moving towards achieving mass higher education (defined as having an enrolment of 40 percent or more of the age 18-24 population). According to [3], the increase in the demand for post-compulsory education which was recorded in the second half of the twentieth century has been phenomenal.

This paper aims to identify what are the current trends in demand for education, in particularly higher education, due to globalization. This is because globalization, liberalization and the vast development of ICT has influenced the development of the national education system, with the aim to produce human capital with first class mentality. Issues discussed in this paper include challenges of globalization, institutions of higher education, human capital and the findings made about the trend in demand for higher education. Comparison of the trend in demand before and after globalization were made, to show how globalization has impacted the demand of higher education in Malaysia.

**2 Challenges of globalization**

Globalization is the result of a borderless world, whereby the development in information technology as well as extensive mobility of goods and services across the world, has led nations
around the world to be interconnected through politics, economic and social activities. [4] described globalization as a process in which geographic distance becomes a diminishing factor in establishing and maintaining cross-border, political and socio-cultural relations. Globalization is a continuous process which has resulted in uncertainties of the future [5].

Globalization has demanded institutions of higher education to undergo revolutionary changes to ensure human capital are “produced” not for a product-based economy, but for knowledge-based economy. The rapid expansion of Malaysia’s higher education has involved extensive growth that has relied mainly on the liberalization of the education sector. Therefore, efforts has been taken by the government of Malaysia, through the Ministry of Higher Education (MOHE) to transform its institutions of higher education to increase its competitiveness, productivity and innovativeness in producing human capital with first class mentality.

The transformation of institutions of higher education has been revealed through The National Higher Education Strategic Plan Beyond 2020, which provides a framework through which actions can be taken to produce human capital with first class mentality. The strategic plan has identified seven thrust through which the process of strengthening and revolutionizing higher education can take place. The seven thrusts are: widening access and increasing equity ; improving the quality of teaching an learning ; enhancing research and innovation ; strengthening of higher education institutions ; intensifying internationalization ; enculturation of lifelong learning ; and reinforcing the delivery systems of the Ministry of Higher Education [6]. It is hoped that institutions of higher education can lay the foundation towards improving the nations competitive edge in various aspects, especially in human capital development who are competitive and resilient.

2.1. Human Capital
The theory of human capital has become the basis for the development of any nation. [7] believes that productivity, earning and improved quality of life can be achieved through investment in training and schooling, as well as other factors such as health. Wages increase positively, with age, through training and schooling obtained [7]. The theory that investment in human capital provide returns though time, despite of the increase in the cost at the time the investment being made, has given hope to developing nations such as Malaysia to emphasize education for the purpose of developing its citizens. Through development, poverty can be diminished and quality of life can be improved [8] and one way to achieve development is through education.

Education has been viewed as a capital good which can be used to develop human resources necessary for economic and social growth [9]. They added that it has been widely accepted that education improves citizens and helps to upgrade the general standard of living in a society. [7] indicated that the difference in earnings among individuals are determined by physical investment, education, technology and capability. He too added that age-earning profiles tend to be steeper among more skilled and educated person. Therefore, there is an increasing perception that higher education provides better financial reward.

Malaysia has been a firm believer in education as a way in enhancing human capital. New Economic Policy (1971-1990) was implemented due to social and economic issues, with the goal of achieving unity through eradicating poverty and eliminating the identification of ethnics in Malaysia based on economic activities. During this period, Malaysia saw the expansion of higher education, with the aim of producing manpower for the economic sector. However, the development of ICT has accelerated the process of globalization in 1990ies, which has resulted into drastic change to produce skilled and creative as well as competitive workforce. With better education, the earning and quality of life of Malaysians too has improved tremendously, thus causing an increased demand in higher education. Thus, the idea of human capital theory, which is to increase productivity and wages through education, is a suitable in developing human capital.

3 Problem Statement
In 1996, the 1961 Education Act was amended in order to ensure that the education system of the nation is relevant to current needs. The need to amend the Education Act was to meet the demands of globalization and ICT era, as well as gearing the nation, especially the education system towards achieving Vision 2020. Vision 2020 was launched by Dato’ Seri Dr. Mahathir Mohammed in 1991 to aspire Malaysians towards achieving the status of
developed nation by 2020. One of the major amendments made was to allow the establishment of more private higher education institutes [10]. Does this give the indication that the demand for institutions, especially private institutions for higher education has been affected by globalization?

Due to this, one of the major steps taken by the government in late 1990ies as well as in this past decade, was to increase access to higher education by setting up more public universities, college universities, matriculation colleges, community colleges, private colleges and university as well as branch campus of overseas universities. The increase in the number of institutions of higher education is to fulfill the demands for a more skilled, knowledgeable, creative, innovative and competitive workforce, as well as resilient to meet the challenges of globalization. Based on statistic figure given in the [11], 22% of the number of school leavers join the workforce after secondary school. This leaves the question of where do the other 78% go and if they do further their studies, what type of institutions do they go for?

Globalization has caused the demand for a “world class human capital” [11]. It is essential to make sure that the institutions of higher education can provide sufficient and quality knowledge and skill needed to enable Malaysian workforce to be “world class human capital”. Due to this fact it is essential to identify how has globalization affected the trend in education demand in Malaysia, especially the demand for types of institutions of higher education. This study aims to identify the trend in demand for institutions for higher education before 1995 and after 1995. The research questions are:

1. What is the trend in demand for pre-university education before and after 1995?
2. What is the trend in demand for institutions of higher education before and after 1995?

4 Methodology
This study aims to identify the trend in demand for institutions of higher education before and after 1995. The population of this study are administrators from public and private institutions of higher education in Malaysia, whereby they were chosen because of their awareness of the changes in policies in higher education as well as their experience in administrative role. Population of this study include Vice Chancellors, Directors, Deans, Deputy Deans and Head of Departments. The number of population identified are 1073 from a total of 20 public and 32 private institutions of higher education. The 31 private institutions of higher education consists of private universities and college universities (26), and five branches of foreign universities from all over Malaysia. List of private institutions of higher education were obtained from MOHE. A total number of 285 samples are needed but 288 samples were randomly selected for this study. Number of samples selected was determined by using the Table for determining sample size from a given population by Krejcie & Morgan [12]. The selection of samples randomly is an important requirement to enable results obtained can be generalized to its population [12; 13].

This study was conducted by using survey method, whereby trend in demands for type of higher education before 1995 and after 1995 were surveyed based on the perception of administrators in institutions of higher education. Questionnaire were used as instrument to obtain data. The items in the questionnaire were self developed by the team of researchers using document analysis technique. Two important documents which were used to identify the items in the questionnaire are [6] and [14]. A pilot test was conducted using 30 samples [12], to test all the 11 items under three main construct which are pre-university education (three items), institutions of higher education (five items) and technical and vocational institutions (three items). The Cronbach Alpha value obtained is 0.853, which is high [12; 13]). The questionnaires consist of two parts, Part One includes three questions, namely, type of institutions represented by the respondent, number of years in service and the title of the posts held. Part Two consists of 11 items based on three constructs, as mentioned earlier.

A total of 600 questionnaires were distributed, but only 288 of the questionnaires can be analyzed, which is sufficient based on the number of samples required. Based on the experience of researchers during data collection process, “busy” has been the most common reason given by respondents in their lack of response in completing the questionnaires. Questionnaires were distributed using postal service and some were personally distributed by the researchers. All of the 11 items were measured using seven point numerical scale[13] with one indicating as the least important and seven indicates
having the most importance. Respondents were asked to indicate the importance of all the items before 1995 and after 1995. The year 1995, has been set as the benchmark for globalization for this study as it was the year Malaysia became a member of the World Trade Organization (WTO). It is an organization which administers international trade and has 120 members. [15] indicated that countries which became members of WTO agreed upon liberalization of trade by signing up General Agreement of Tariffs and Trade (GATT). According to Verger (2009) liberalization of twelve sectors were agreed upon, including education. Even if Malaysia did not participate in the liberalization of the education sector, but by signing up GATT and through WTO, Malaysia officially became a member of an organization which promotes globalization through free trade, indicating the era of globalization for Malaysia. Therefore, 1995 is used as the “cutting off point” to measure globalization.

Data obtained were analyzed using inferential statistics method, that is by using paired-sample t test, at the significant value of p< 0.05. Each items for all three constructs, which are demand for pre-university education, demand for institutions of higher education, and demand for technical and vocational education, were compared with two independent variable, which are before 1995 and after 1995. Data were processed using SPSS for Windows Version 18.0.

### 5 Findings and Discussions

The purpose of this study is to find out in the trend in demand for education before and after 1995. 1995 is the year chosen to mark globalization for Malaysia due to its participation in WTO. Demand for education here has been categorized under three constructs: demand for pre-university education, institutions of higher education, and technical and vocational education. Findings and discussion will be discusses separately according to the research questions.

**RQ 1: What is the trend in demand for pre-university education before and after 1995?**

<table>
<thead>
<tr>
<th>Pre-university education</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>sig.p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher School Certificate before 1995</td>
<td>288</td>
<td>5.41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher School Certificate after 1995</td>
<td>287</td>
<td>4.84</td>
<td>0.000*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matriculation Programme before 1995</td>
<td>286</td>
<td>4.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matriculation Programme after 1995</td>
<td>285</td>
<td>6.62</td>
<td>0.000*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Level before</td>
<td>287</td>
<td>5.18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Level after</td>
<td>286</td>
<td>5.45</td>
<td>0.002*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 shows results of the findings to identify the trend in demand for pre-university education before and after 1995. The results show that there is a significant difference for all three types of education before and after 1995. There is negative trend for high school certificate after 1995 with t (287) = 4.48, p<0.05. Whereas there are positive trend for both matriculation programme with t (285) = -6.62, p<0.05 and A Level with t (286) = -3.08, p< 0.5. There seem to be a negative trend for the demand of Higher School Certificate when compared to trend to the demand for matriculation programme and A Level seem to increase after 1995, based on the opinion of the respondents who are administrators in institutions for higher education. This indicates that the demand for matriculation programme and private has increased after globalization. Higher School Certificate seem to have less demand maybe due to school leavers do not prefer to stay back in school after the age of 17 and they would prefer to go to other institutions. In Malaysia, students who are interested to further their study in public university are required to have Higher School Certificate (HSC) or Matriculation as their entrance qualification. Higher School Certificate are offered in public school all over Malaysia. Matriculation programmes were previously conducted by public universities, however, in 1996, Matriculation Division under the Ministry of Education was established to manage all matriculation programmes [1]. Since then, 11 matriculation colleges were established nation-wide which offers one year programme, which are meant to prepare students for professional fields in institutions of higher learning [1]. Matriculation programmes being an alternative to HSC, seem to have more demand after 1995, as the result shows. Besides,
students spend one and a half years for HSC compared to Matriculation programmes which is a one-year programme [1], thus gaining more popularity since the establishment of matriculation programmes after 1996. The same goes for A-Level education, which is an alternative for both HSC and matriculation programmes, has gained positive trend in demand. A-Level is a programme offered by private institutions of education, which is a favourite among students who intend to further their studies in foreign universities either through local branch or through twinning programmes.

**RQ 2: What is the trend in demand for institutions for higher education before and after 1995?**

Table 2: Trend in demand for institutions of higher education before and after 1995

<table>
<thead>
<tr>
<th>Institutions of Higher Education</th>
<th>n</th>
<th>Mean</th>
<th>df</th>
<th>T</th>
<th>sig. p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public HEIs before 1995</td>
<td>286</td>
<td>6.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public HEIs after 1995</td>
<td>286</td>
<td>6.03</td>
<td>285</td>
<td>-0.39</td>
<td>0.698</td>
</tr>
<tr>
<td>Private HEIs before 1995</td>
<td>288</td>
<td>4.09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private HEIs after 1995</td>
<td>288</td>
<td>5.91</td>
<td>287</td>
<td>-22.90</td>
<td>0.000*</td>
</tr>
<tr>
<td>Foreign HEIs before 1995</td>
<td>288</td>
<td>5.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign HEIs after 1995</td>
<td>288</td>
<td>5.64</td>
<td>287</td>
<td>-4.12</td>
<td>0.000*</td>
</tr>
<tr>
<td>Twinning Programme Before 1995</td>
<td>288</td>
<td>4.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twinning Programme after 1995</td>
<td>288</td>
<td>5.47</td>
<td>287</td>
<td>-12.27</td>
<td>0.000*</td>
</tr>
<tr>
<td>College Universities before 1995</td>
<td>286</td>
<td>3.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College Universities after 1995</td>
<td>286</td>
<td>5.39</td>
<td>287</td>
<td>-15.68</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

Sig at p<0.05

Table 2 summarizes the findings about the trend in demand for institutions of higher education before and after 1995, based on the perception of administrators in institutions of higher education in Malaysia. There are significant differences in the demand for private HEIs, foreign HEIs, twinning programmes and college universities when compared between before and after 1995. The results show a positive trend in the demand for private HEIs with t(287) = -22.90, p<0.05, and the demand for foreign HEIs too showed increase in demand with t(227) = -4.12, p<0.05.

The demand for twinning programmes too shows positive trend with t(227) = -12.27, p<0.05. Demand for college universities shows positive trend, whereby it obtained t (287) = -15.68 at p<0.05. However, the findings show that there is no significant difference in the trend in demand for public HEIs, with t (227) = -0.39, p>0.05. These findings give an impression that the demand for private HEIs which includes foreign HEIs, HEIs which offer twinning programmes and college universities have showed positive trend since globalization. This findings are in par with the introduction of [10], which allowed the establishments of more private higher education institutions [1]. The increasing trend in demand for private institutions too is due to its role which has gone through various changes and is an important alternative for students to gain quality tertiary education in Malaysia [1]. Furthermore, the increase of public demand for higher education in both public and private institutions, and the government’s aspiration to position Malaysia as a regional centre of academic excellence, have led to the growth of private higher educational institutions. Besides

It can be summarized that globalization has increased the demand for pre-university education, institutions of higher education and technical and vocational institutions. The highest increment is seen in the demand for private HEIs, followed by community colleges. The increment in demand for private HEIs can further be strengthened with the findings that the demand for twinning programmes, as well as community colleges seem to increase too. Therefore, globalization has given an impact in the demand for higher education, the idea of developing human capital through education is right on its track.

**6 CONCLUSION**

One important implication of this study is the discovery that there is a negative trend in the demand for HSC offered in public schools, therefore giving an indication that school leavers prefer to enroll institutions of higher education such as public and private HEIs, community colleges, polytechnics and skill institution centres. The
significance of public universities of institutions after 1995 too doesn’t seem to differ much, however the importance of public institutions is still there as this item obtained the highest mean score compared to all 11 item, with the mean score obtained before 1995 is 6.00 and the mean score for after 1995 6.03. This gives the implication that public HEIs has always remain as an important institution of education in Malaysia. The demand for private HEIs and community colleges showed the biggest difference between before and after 1995. This gives the implication that many Malaysians has started to rely on private HEIs. Community college too has gained importance as it is an alternative for school leavers who are low or medium achievers, to obtain skills to enable them to join the workforce.

Based on the result obtained, the realization among the public that education is the key towards a developed country and to produce manpower who can compete and be resilient towards the challenges of globalization, can be seen. Education, especially higher education, can provide the country with innovative and creative human capital. Through the support given by government, such as encouraging the establishment of private HEIs as well providing funds or loans through National Higher Education Fund Corporation for students to further their study in tertiary education [10], are moves made to increase the awareness of importance of producing human capital through education.

One of the limitation of this study is data are gathered from the perspective of administrators in HEIs. To further strengthen the findings, perception of parents or households, as well as perception of students should also viewed. This will allow comparison to be made. Perception of employers should also be taken into consideration, on what they think are current trend in demand for higher education should be.

Reference