

## **A Comparative Study on the Impact of Higher Learning Institutions on Industrial Development in Perlis**

**Sabiroh Md Sabri<sup>1</sup>, Nadia Abdul Wahab<sup>2\*</sup>, Shukor Sanim Mohd Fauzi<sup>3</sup>, Nurul Ain Mohd Zaki<sup>4</sup>**

<sup>1</sup> Faculty of Business and Management, Universiti Teknologi MARA, Cawangan Perlis, Kampus Arau, 02600 Arau, Perlis, Malaysia

<sup>2,3</sup> Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA, Cawangan Perlis, Kampus Arau, 02600 Arau, Perlis, Malaysia

<sup>4</sup> Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Cawangan Perlis, Kampus Arau, 02600 Arau, Perlis, Malaysia

Authors' Email Address: <sup>1</sup>sabir707@uitm.edu.my, <sup>2</sup>nadiawahab@uitm.edu.my,  
<sup>3</sup>shukorsanim@uitm.edu.my, <sup>4</sup>nurulain86@uitm.edu.my,

Received Date: 18 May 2022

Accepted Date: 8 June 2022

Revised Date: 20 June 2022

Published Date: 31 July 2022

\*Corresponding Author

### **ABSTRACT**

*The establishment of a Higher Learning Institution (HLI) has posed some positive impacts on the community and industry within its vicinity. Universiti Teknologi MARA (UiTM) Cawangan Perlis has been established for over 40 years. Therefore, with the concern about the effect of UiTM Cawangan Perlis on the local population, there have been some critical questions that have not been addressed. To what degree does the presence of UiTM Cawangan Perlis affect the industry within its vicinity? This study aims to investigate the growth of industrial development in Perlis due to the existence of this HLI. Data was collected using an online survey which was distributed to 198 respondents selected using systematic sampling from the list of active businesses registered with Kangar Municipal Council. Data collected was analysed and compared with the data collected in the same study carried out in 2007. The result of this study has revealed that UiTM Cawangan Perlis's existence has contributed to both direct and indirect impact on the industrial growth, particularly in the revenue generation in the form of gross profit and the supply of highly qualified manpower. It is hoped that the result of this study could be used by UiTM to justify the return of the investment made by the government and strategize the plan for UiTM Cawangan Perlis development and sustainability in the future.*

**Keywords:** *Descriptive Comparisons, Economic Growth, Higher Learning Institutions Impact, Industrial Development, UiTM Cawangan Perlis*

### **INTRODUCTION**

The establishment of Higher Learning Institutions (HLIs) and their impact on regional development is a theme that has attracted growing attention in recent years. These institutions are increasingly expected not only to conduct education and research but also to play an active role in the economic, social and cultural development of their regions (Arbo & Bennenworth, 2007). The extent to which an HLI can play this role depends on several circumstances for example the characteristics of the institutions, the regions

in which they are located and the policy frameworks are all significant. Despite the many possible benefits of HLIs at individual and economic levels, it is important to carefully analyse the nature and extent of these benefits to justify the high costs involved in these investments, to establish or subsidize local universities or colleges (Wang, 2010). This may be particularly important for governments that consider spending limited resources. For instance, the values of these institutions to their surrounding communities are limited if they only contribute to the level of economic activity rather than if they also contribute to the economic growth of these areas.

These two types of contributions are made possible by two distinct effects of the institutions of higher education, known as the “expenditure effect” and the “knowledge effect”. The expenditure effect refers to the increased demand for consumption generated by faculty, staff, students, and university-related activities. This effect implies that having a new institution of higher education or an increase in the size of the institution will increase the level of employment and earnings in the location. While the expenditure effect contributes to the economy of a college’s location in a direct and immediate way, it only provides a one-shot boost to the economy and therefore is often labelled as a short-term benefit. On the other hand, a region can also receive long-term economic benefits from having a university or college in its location through the knowledge effect, referring to the knowledge production and technology transfer function of universities. Many studies indicate that the nearby presence of research universities fosters the formation and growth of high-tech businesses. This effect can be directly observed in the partnership formed between local industries and an institution’s faculty members or research (Wang, 2010). Such a strategy also allows HLIs to foster sustainable and engaging measures that incorporate each HLI’s knowledge ecosystem (Delaney & Horan, 2020).

There has been considerable effort devoted to understanding the contributions of universities to the functioning of regional economies. Public investments naturally generate questions concerning the magnitude and distribution of their impacts as well as their effectiveness in achieving desired objectives. For research universities, issues of knowledge production and dissemination are considered central to modelling and understanding the impacts on surrounding regional economies (Drucker & Goldstein, 2007). Universiti Teknologi MARA (UiTM) Cawangan Perlis is the oldest campus established among all UiTM state campuses in Malaysia. It has been established for over 40 years and has somehow impacted the surrounding communities. With the concern about the effect of UiTM Cawangan Perlis on the local population, some critical questions have not been addressed. To what degree does the presence of UiTM Cawangan Perlis affect the industry, which includes the industries’ income opportunities and provision of human capital. Thus, this study aims to determine the growth rate of industrial development in Perlis due to the existence of this HLI. This will help the understanding of UiTM Cawangan Perlis’s contribution towards the development of industry in Perlis.

This paper is structured as follows. The next section will discuss the literature review. The next section is the method, wherein this section discusses the research setting and datasets. Findings and discussions to compare the growth rate of industrial development in Perlis due to the existence of this HLI are elaborated on in the results and discussion section. Lastly, this paper concludes with a conclusion of the overall results.

## LITERATURE REVIEWS

### Universiti Teknologi MARA Cawangan Perlis

Universiti Teknologi MARA (UiTM) Cawangan Perlis is one of the branch campuses of Universiti Teknologi MARA and it is located in Arau, Perlis, Malaysia. It was founded in 1974, making it the third-oldest UiTM campus in Malaysia. At its inception, there were 30 academic staff and 258 students. The campus then operated at a temporary site of the Scouts House at Padang Katong Road, Kangar (Abd Rahman et al., 2004). In 1980, the campus moved to its permanent site in Arau, Perlis with 464 acres of campus land. In 2004, further 129 acres were allocated for research and development

activities for this campus. Now, UiTM Cawangan Perlis is among the largest UiTM branch campus around the country, by the number of students and also the total courses offered (Alias et al., 2007).

As one of the largest UiTM branch campuses, UiTM Cawangan Perlis has been producing graduates who are not only competitive but also catalysts in national progress and prosperity, uplifting the Malaysian image in the eyes of the world. This higher learning institution not only initiates and generates knowledge culture in the state but also plays a key role in the socio-economic growth of the state as well as the nation (Abd Rahman et al., 2004).

### **Definition of Impact**

Prior literature suggests that impact is the effects caused by an organization or intervention that occurs outside the organization in a society or the natural environment (Maas & Liket, 2011). Whereas, research impact is defined as “an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia” (Greenhalgh & Fahy, 2015).

### **Impact of Higher Learning Institutions (HLIs) on Local Area**

Higher Learning Institutions (HLIs) offer many benefits to the local areas (Keshminder et al., 2021). As stated by Gibbons, et al. (1994) and Etzkowitz and Leydesdorff (2000) universities have been recognized as passive resource providers which also include the interactive process between businesses, universities, and governments. They provide educational opportunities, source of funding for research and innovation, collaborate with local and regional companies and play an important role in civil society. (Kelly, McNicoll & White, 2014). Besides education and research, there are several other ways in which HLIs support their local areas. As economic players, HLIs are becoming a vital source of economic activity in the region and have a positive influence, especially in times of recession (Witty, 2013). HLIs are increasingly recognised as a crucial driver for the creation of sustainable societies (Thanasi-Boçe & Kurtishi-Kastrati, 2021; Stephens, Hernandez, Roman, Graham, Scholz, 2008). Increases in HLI presence are positively associated with faster subsequent economic growth (Valeero & Reenen, 2019). Apart from that, many studies have also been examining the role of universities at different levels within the national innovation system and supply chain and also in technology transfer with the competitive business. Trifonova et al. (2020) stated that university development is essential since universities are providers of new scientific knowledge and technology. The development of universities can become a source of ideas and human resources needed to launch a new business. Examining the literature at these different scales provides an insight into how universities systematically contribute to the economic competitiveness within their establishment areas.

### **METHODOLOGY**

This study adopted quantitative research with the aim to compare the impact of UiTM Cawangan Perlis establishment on the industrial development in Perlis. A comparative study can be considered when a study on a particular topic or phenomenon is conducted to determine the differences and similarities by following established rules and using equivalent concepts. Based on its nature, this study adopted descriptive comparisons approach where the most basic research questions are often descriptive in nature, and seek to describe the occurrences of certain phenomena and how these occurrences vary between cases (Esser & Vliegenthart, 2017).

This study included the investigation of the direct and indirect industrial development effects of UiTM Cawangan Perlis' establishment. The direct impact refers to the generation of revenue with the presence of UiTM Cawangan Perlis in the form of gross profit, while the indirect impact refers to the contribution of UiTM Cawangan Perlis from the sense of its presence and the availability of economic, political, social, and skilled labour-power.

Data was obtained using an online survey that was distributed to 198 participants. The list of respondents was selected using systematic sampling from the active enterprises registered with the Kangar Municipal Council. Systematic sampling is a random method of sampling that applies a constant interval to choosing a sample of elements from the sampling frame (Lavrakas, 2008). The data collection process took about six months to complete, which was started in July until December 2020. Data was then analysed using descriptive analysis with the assistance of SPSS software. Subsequently, a comparison of the current data collected was made with data collected in the same study conducted in 2007 which uses the same instrument to measure the impact of UiTM Cawangan Perlis establishment on the industrial development in Perlis.

## RESULTS AND DISCUSSIONS

The analysis in this study involves two types of analysis which are frequency analysis and a descriptive comparison approach. In the first phase, data collected from both studies carried out in the years 2007 and 2020 were analysed using frequency analysis. Both data are then compared to see the difference in the impact of UiTM Cawangan Perlis establishment on industrial development from different perspectives. Details of the analysis are presented in the following sections.

### Analysis of Company Profile

Table 1 shows the data collected in 2007 and 2020 on the company profile. In 2007, most of the companies that have provided feedback are local companies representing 99% while multinational companies are only represented by 1% of the respondents. However, the distribution of ownership status is quite similar where native companies are represented by 56% while non-native companies are 44%. Most of the companies that have given feedback are among the small industries represented at 88% while the other 10% are in the medium industry category and no company is involved in heavy industry. Most of the respondents are involved in the services sector which is 82% while only 8% are involved in the manufacturing sector, 1% in construction and 9% in other categories. The type of business ownership status is mostly represented by the sole proprietorship type of 83%, followed by 8% partnership, the private limited company also 8% and only 1% from among cooperative business class.

Data collected in 2020 also showed the same result of company registration type where 99% were local companies and only 1% is multinational companies. The ownership status showed a similar result where 99% were represented by native companies and only 1% were non-native companies. Most of the companies that have given feedback are among the small industries represented at 62% while the other 37% are in the medium industry category and only 1% are involved in heavy industry. Most of the respondents are involved in the services sector which is 60% while 17% are involved in the manufacturing sector, 10% in the construction sector and 13% in other categories. The type of business ownership status is mostly represented by the sole proprietorship type of 64%, followed by 11% partnership, the private limited company also 24% and only 1% from among cooperative business type. There was no difference shown in both data on the type of company registration as it shows that most companies that participated in the study are local companies. However, there was some difference in the percentage of the company based on their size where the comparison shows the increase of medium-sized companies that participated in the study as compared to the study carried out in 2007. This could also indicate that the industry in Perlis has grown over the past 13 years with more medium-sized companies available in the industry.

In terms of the sector involved, the comparison data has shown an increase in the construction and manufacturing sector and some decrease in the service sector. In terms of the ownership type, it has also shown some increase in the partnership and private limited type of the company.

**Table 1: Demographic Profile of Company**

| No | Demographic Profile Of Company                                                           | 2007<br>Percentage (%) | 2020<br>Percentage (%) |
|----|------------------------------------------------------------------------------------------|------------------------|------------------------|
| 1  | <b>Registration Type</b><br>Local Company<br>Multinational Company                       | 99<br>1                | 99<br>1                |
| 2  | <b>Registration Status</b><br>Native<br>Non-Native                                       | 56<br>44               | 99<br>1                |
| 3  | <b>Company Size</b><br>Small<br>Medium<br>Others                                         | 88<br>10<br>2          | 62<br>37<br>1          |
| 4  | <b>Company Sector</b><br>Services<br>Manufacturing<br>Construction<br>Other              | 81<br>8<br>1<br>9      | 60<br>17<br>10<br>13   |
| 5  | <b>Ownership Type</b><br>Sole Ownership<br>Partnership<br>Private Limited<br>Cooperative | 83<br>8<br>8<br>2      | 64<br>11<br>24<br>1    |

Based on data collected in 2007, a total of 98% of respondents in the industry are registered with the Kangar Municipal Council while another 2% are not registered. Business registration is mostly annual, which is 89% while only 11% are registered on a daily basis. Data collected in 2020 showed that a total of 91% of respondents in the industry are registered with the Kangar Municipal Council while another 9% are not registered. All of the businesses are registered annually. Table 2 shows the position of industry ownership status based on registration with Kangar Municipal Council where both types of ownership are registered with MPK. The difference showed that more native companies were registered in the past 13 years.

**Table 2: Company Registration Status with Municipal Council**

| Ownership Status | 2007<br>Percentage (%) | 2020<br>Percentage (%) |
|------------------|------------------------|------------------------|
| Native           | 99                     | 91                     |
| Non-native       | 44                     | 1                      |

In 2007, it was found that for the status of business premises, as many as 91% are among businesses with permanent status while another 9% are non-permanent. In 2020, it was found that 86% of the business are with a permanent business premises status while another 14% are with non-permanent business premises status. Data collected from 2007 shows that most respondents in this category are represented by business owners which is 68%. While business managers are 18%, employees 12% and others 2%. In addition, data from 2020 shows that 49% of the respondents are business owners, 17% are business managers, 21% are business workers and 14% are from other categories. Table 3 illustrates the summary of respondents' positions in the company.

**Table 3: Respondents' Position in the Company**

| <b>Respondent's Position</b> | <b>2007<br/>Percentage (%)</b> | <b>2020<br/>Percentage (%)</b> |
|------------------------------|--------------------------------|--------------------------------|
| Owner                        | 68                             | 49                             |
| Manager                      | 18                             | 17                             |
| Worker                       | 12                             | 21                             |
| Others                       | 2                              | 14                             |

### **Analysis on Impact of UiTM Cawangan Perlis Establishment on Industry**

#### **i. Analysis of Impact on Yearly Company's Gross Income**

UiTM Cawangan Perlis's impact analysis on the industry in this study is described based on direct impact and indirect impact on the company. The direct impact is explained by referring to the generation of revenue in the form of gross profit with the existence of UiTM Cawangan Perlis while the indirect impact refers to the contribution of UiTM Cawangan Perlis from the context of its existence and graduates to the economy, politics, social, environment inside UiTM Cawangan Perlis and outside UiTM Cawangan Perlis. The direct impact refers to the generation of revenue in the form of gross income earned in UiTM Cawangan Perlis and the surrounding area with the existence of UiTM Cawangan Perlis. The annual gross income of all respondents is divided into nine ranges.

Data from 2007 shows that most industries are micro-business when 75% of them show gross income less than RM50,000 while industry/business earning gross income less than RM1 million but more than RM50,000 is 23.5% and only 1.5% of all respondents earned gross income over RM1 million. In addition, data from 2020 shows that 26% of the industry is micro-business with a gross income of less than RM50,000. Industry earning a gross income of more than RM50,000 but less than RM500 million is 54.2%. Data also shows that 6.3% of the industry is earning more than RM500 million but less than RM1 million and 13.5% of all respondents earned a gross income of more than RM1 million. This position is further refined by the following Table 4. In 2020, data shows that the number of companies earning more than RM500,000 has increased to 19.8% compared to only 3.5% in 2007. This indicated that over the past 13 years, there has been a great increase in the generation of revenue among companies in Perlis that could be the result of UiTM Cawangan Perlis's establishment.

From the data collected in 2007, the study on the percentage of UiTM Cawangan Perlis contribution to gross income generated by the company found that as many as 67% of respondents did not get the benefits from UiTM Cawangan Perlis establishment. However, 26% of the businesses generate up to 10% of their gross income from UiTM Cawangan Perlis. A relatively large percentage of 4.4% of respondents generate gross income between 11% to 40% from UiTM Cawangan Perlis. The remaining 2.5% of respondents generate gross profit from UiTM Cawangan Perlis between 41% to 70% and only 1% generate gross income between 71% to 100% from UiTM Cawangan Perlis establishment.

**Table 4: Yearly Company's Gross Income**

| <b>Gross Income</b> | <b>2007<br/>Percentage (%)</b> | <b>2020<br/>Percentage (%)</b> |
|---------------------|--------------------------------|--------------------------------|
| 0 – 50,000          | 75.0                           | 26.0                           |
| 51,000 – 75,000     | 5.9                            | 2.1                            |
| 75,001 – 100,000    | 6.9                            | 15.6                           |
| 100,001 – 150,000   | 4.4                            | 5.2                            |
| 150,001 – 200,000   | 1.5                            | 9.4                            |
| 200,001 – 300,000   | 2.5                            | 6.3                            |
| 300,001 – 500,000   | 0.5                            | 15.6                           |
| 500,001 – 1,000,000 | 2.0                            | 6.3                            |
| More than 1,000,000 | 1.5                            | 13.5                           |

ii. Analysis on Impact of Contribution on Company's Gross Income

From the data collected in 2020, it was found that 16.7% of the respondents did not get any benefits from the UiTM Cawangan Perlis establishment. However, 35.4% of the businesses generate up to 10% of their gross income from UiTM Cawangan Perlis. A relatively large percentage of 25% of respondents generate gross income between 11% to 40% income from UiTM Cawangan Perlis. The remaining 16% of respondents generate gross profit from UiTM Cawangan Perlis between 41% to 70% and 6.3% generate gross income between 71% to 100% from UiTM establishment.

Comparing the data between 2007 and 2020, the findings show quite a tremendous difference where the respondents' businesses who did not get any benefits from the UiTM Cawangan Perlis establishment have decreased from 67% to 16.7%. This also means that more businesses have generated their income due to the UiTM Cawangan Perlis establishment. This is clearly shown by the increase in the total percentage of respondents receiving benefits from UiTM Cawangan Perlis establishment from 33.9% to 83.4%. Table 5 shows the summary percentage of UiTM Cawangan Perlis's contribution to the companies' gross income.

**Table 5: UiTM Cawangan Perlis Contribution to Company's Gross Income**

| <b>Percentage of Contribution to Gross Income</b> | <b>2007<br/>Percentage (%)</b> | <b>2020<br/>Percentage (%)</b> |
|---------------------------------------------------|--------------------------------|--------------------------------|
| No contribution                                   | 67                             | 16.7                           |
| 1-10                                              | 26                             | 35.4                           |
| 11-40                                             | 4.4                            | 25.0                           |
| 41-70                                             | 2.5                            | 16.7                           |
| 71-100                                            | 1                              | 6.3                            |

iii. Analysis on Factors that Contribute to Company's Establishment

Respondent's answers to the reasons why they opened a business are quite subjective where the feedback given is not the same as each other.

From the data collected in 2007, it was found that among the answers with the highest percentage is the attractive and conducive environment offered around the UiTM Cawangan Perlis area at a rate of 33%. Followed by 26% of social factors such as providing services and heritage factors. Next is the economic factor such as the broad opportunity factor which is at the rate of 22%, this factor is like the ever-expanding market potential, profit and so on. Political factors are also part of the reason why industry/business operates here at 6%. A small percentage of respondents of 5% responded that technological factors such as technical skills in certain fields are the reason, they do business here. However, 3% of respondents are not sure about the reasons why they do business in the study area

From the data collected in 2020, the highest percentage is the economic factor where the respondents think opening their business in the UiTM Cawangan Perlis area can increase the economy. In addition, 15% opened their business due to environmental factors where the environment is attractive and conducive. Apart from that, 3% opened their business due to social factors for example the business location is near to their house. Only 1% of respondents responded that technological factors such as technical skills in certain fields are the reason, they do business here. Table 6 summarizes the details of factors that caused to industry to start its business in the UiTM Cawangan Perlis area.

**Table 6: Factors that Contribute to Company's Establishment**

| <b>Factor</b> | <b>2007<br/>Percentage (%)</b> | <b>2020<br/>Percentage (%)</b> |
|---------------|--------------------------------|--------------------------------|
| Social        | 26                             | 3                              |
| Technology    | 5                              | 1                              |
| Economy       | 22                             | 80                             |
| Environment   | 33                             | 15                             |
| Politic       | 6                              | 0                              |
| Not Sure      | 3                              | 1                              |

In 2007, most companies exist based on environmental factors. Among the contributing reasons could be the population density and strategic location of the UiTM Cawangan Perlis area. While in 2020, almost all of the companies exist due to economic factors such as business opportunities and high demand for products and services offered by businesses around the UiTM Cawangan Perlis establishment area.

iv. Analysis on UiTM Cawangan Perlis Impact on Company

Data collected in 2007 shows that the existence of expertise possessed by graduates is acknowledged by a total of 28% of respondents in fields such as business management and administration, especially in the fields of marketing, services, hospitality and cuisine, fashion, photography, fibreglass, mechanical and civil engineering. However, 57% of respondents say that UiTM graduates do not have the expertise they needed. While 15% of respondents are not sure about the expertise of UiTM graduates. Respondents have also submitted suggestions on the expertise that can be produced by UiTM to help develop the field they are involved in.

A total of 14% of respondents suggested that more technical expertise should be produced by UiTM, while another 9% of respondents suggested more expertise in the field of business management. On the other hand, 50% of respondents said the expertise of UiTM graduates was not necessary for their business and 27% of respondents said they were not sure about this need. In addition, data collected from 2020 shows that 25% of respondents acknowledged that UiTM Cawangan Perlis graduated possess the expertise needed by the company in the field of human resources management, structure planning, printing and publication, food servicing, event management, landscape and design, business and management, culinary, marketing and accounting. However, 75% of other respondents did not state their answers.

From data collected in 2007, it was found that the impact of UiTM establishment greatly affects the business development of the respondents admitted by 34% respondents while 6% of respondents found that the impact is small. However, 53% of respondents said that the impact did not affect the development of their business while another 6% of respondents said they were not sure. In addition, data collected in 2020 found that 12% of the respondents state that the establishment of UiTM has given a great impact on their business, while 28% feel that they have been moderately impacted by UiTM Cawangan Perlis's existence. 39% reported that UiTM Cawangan Perlis's existence has a low impact on their business and another 21% reported that they were not affected. From the study in 2020, it is found that more companies agreed that UiTM Cawangan Perlis has an impact on their business, as compared to the study in 2007. This clearly shows that industries and companies in this area are increasingly recognizing UiTM's role in boosting the industries and businesses in this area.

The contribution of UiTM Cawangan Perlis and its citizens to business in the study area is shown in Table 7. Data collected in 2007 found that the existence of market opportunities with the presence of UiTM Cawangan Perlis is a high priority among the study respondents with 85% agreeing. Meanwhile, the provision of energy resources to businesses in the study area received priority at 41%. The contribution of training by UiTM Cawangan Perlis to business is 32%. Furthermore, data collected



in 2020 shows the establishment of UiTM Cawangan Perlis impacted the provision of training to their business most by 75%, followed by 64% for the provision of human resources, 37% for the provision of consultation and finally 26% for the market opportunities.

**Table 7: UiTM Cawangan Perlis Impact on Company**

| No | Impact Ranking       | 2007           | 2020           |
|----|----------------------|----------------|----------------|
|    |                      | Percentage (%) | Percentage (%) |
| 1  | Market Opportunities |                |                |
|    | 1                    | 75             | 23             |
|    | 2                    | 10             | 3              |
|    | 3                    | 9              | 23             |
|    | 4                    | 5              | 50             |
| 2  | Human Resources      |                |                |
|    | 1                    | 6              | 10             |
|    | 2                    | 35             | 54             |
|    | 3                    | 22             | 27             |
|    | 4                    | 37             | 9              |
| 3  | Consultation         |                |                |
|    | 1                    | 9              | 8              |
|    | 2                    | 31             | 29             |
|    | 3                    | 38             | 41             |
|    | 4                    | 21             | 22             |
| 4  | Training             |                |                |
|    | 1                    | 9              | 60             |
|    | 2                    | 23             | 12             |
|    | 3                    | 31             | 9              |
|    | 4                    | 36             | 19             |

Notes:

1 = Very High Impact  
2 = High Impact

3 = Low Impact  
4 = Very Low Impact

In 2007, most of the respondents agree that market opportunities are the main contribution of UiTM Cawangan Perlis's establishment towards their companies. While in 2020, training and human resource have become UiTM's main contribution to the businesses in this area. This demonstrates that UiTM is seen as a contributor to providing knowledge and expertise in this area to the industries.

## LIMITATIONS AND FUTURE RESEARCH

As with any other research, this study has its limitations. First, the data collection was limited to only 198 participants from active enterprises registered with the Kangar Municipal Council. A larger sample size could yield a better understanding of to what degree the presence of UiTM Cawangan Perlis impacts the industries within its vicinity. Second, this study may have overlooked other direct and indirect impacts of this HLI on the growth of industrial development in Perlis as this study only focuses on the direct impact which is revenue generation in the form of gross profit and the indirect impact which is the supply of highly qualified manpower.

Future studies should also consider examining other direct and indirect impacts such as the advancement in innovations as well as change of business practices as it is equally important to develop insights on what are the contributions of UiTM Cawangan Perlis towards industrial development in Perlis. A larger scale of studies could also be established to understand the direct and indirect impacts of UiTM Cawangan Perlis on sustainable development in the areas of societal challenges, natural environment, policy-making and culture.

## CONCLUSION

This paper investigated the long-term effects of UiTM Cawangan Perlis establishment on industrial development in Perlis. The study used data from the same study collected in 2007 and compared it with the data collected in 2020. The comparison was done on various aspects for example the demographic profiles of the company and the impact of UiTM Cawangan Perlis's establishment on the company itself. The impact was categorized as direct and indirect impacts. The direct impact refers to the revenue generation in the form of gross profit with the existence of UiTM Cawangan Perlis, whereas the indirect impact refers to the contribution of UiTM Cawangan Perlis from the context of its existence and the supply of skilful manpower to the economic, political, social, environment within and outside this HLI. The outcome of this study revealed that the presence of UiTM Cawangan Perlis has contributed to both direct and indirect impacts on the rate of industrial development, especially in the generation of revenue in the form of gross profit and the supply of highly skilled labour. It is hoped that the outcome of this research could be used by UiTM Cawangan Perlis to justify the return of the government's investment and strategize the potential growth and sustainability strategy for UiTM Cawangan Perlis in the future.

## ACKNOWLEDGEMENTS

This study is a part of the Kajian Impak 20 Tahun UiTM. The authors wish to thank Bahagian Penyelidikan, Jaringan Industri, Masyarakat dan Alumni, Universiti Teknologi MARA Cawangan Perlis for their support in conducting this research.

## AUTHORS' CONTRIBUTION

Fauzi, S.S.M. and Sabri, S.M. conceived and planned the study. Fauzi, S.S.M. lead the research team while Sabri, S.M. took the lead in writing the manuscript. Sabri, S.M., Wahab N.A. and Mohd-Zaki N.A. contributed to the interpretation of the results. All authors provided critical feedback and helped shape the research, analysis and manuscript.

## CONFLICT OF INTEREST DECLARATION

We certify that the article is the Authors' and Co-Authors' original work. The article has not received prior publication and is not under consideration for publication elsewhere. This manuscript has not been submitted for publication nor has it been published in whole or in part elsewhere. We testify to the fact that all authors have contributed significantly to the work, validity and legitimacy of the data and its interpretation for submission to Jurnal Intelek.

## REFERENCES

- Abd Rahman, A. R, Onn, M., Mat Arof, Z. Kaur, N., Osman, S. R. F., Sintha Madar, A. R., & Azmi, A. (2004). 30 tahun: Melakar sejarah mendidik bangsa, Arau: UiTM Perlis.
- Alias, R., Khalid, S. A., Mat Arof, Z., Awang, A., Syed Abdullah, S. L., Hassan, H. (2007). Kajian Impak UiTM Perlis 2007: Kampus Perlis, Arau: UiTM Perlis.
- Arbo, P., & Benneworth, P. (2007). Understanding the regional contribution of higher education institutions: A literature review. OECD, Directorate for Education, Working Paper N. 9, 1, 1–78. <https://doi.org/10.1787/161208155312>

- Delaney, K., & Horan, C. (2020). Implementing UN Sustainability Development Goals Through Engagement within University Communities of Practice. *European Conference on Knowledge Management*, 149–XVIII.
- Drucker, J., & Goldstein, H. (2007). Assessing the regional economic development impacts of universities: A review of current approaches. *International Regional Science Review*, 30(1), 20–46. <https://doi.org/10.1177/0160017606296731>
- Esser, F., & Vliegenthart, R. (2017). Comparative research methods. In J. Matthes, C. S. Davis, & R. F. Potter (Eds.), *The international encyclopedia of communication research methods* (pp. 248–269). London: Wiley-Blackwell. doi:10.1002/9781118901731.iecrm0035
- Etkowitz, H. and L. Leydesdorff (2000). The Dynamics of Innovation: From National Systems and Mode 2. To A Triple-Helix of University-Industry-Government Relations., *Research Policy*, Vol. 29, No. 2, pp. 109-123.
- Gibbons, M., et al. (1994), *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*, Sage, London.
- Greenhalgh, T., & Fahy, N. (2015). Research impact in the community-based health sciences: an analysis of 162 case studies from the 2014 UK Research Excellence Framework. *BMC medicine*, 13(1), 232.
- Kelly, U., McNicoll, I., & White, J. (2014). The economic impact of higher education institutions in England: summary report.
- Keshminder, J. S., Shamsudin, N. M., Bakar, M. S. A., Zain, W. N. I. W. M., Janor, R. M., & Salleh, S. A. (2021). the Role of Higher Learning Institutions in Developing B40 & M40 Communities Living Near Higher Education Institutions. *Journal of Institutional Research South East Asia*, 19(2), 216–238.
- Lavrakas, P. J. (2008). *Encyclopedia of survey research methods* (Vols. 1-0). Thousand Oaks, CA: Sage Publications, Inc.
- Maas, K., & Liket, K. (2011). Social impact measurement: Classification of methods. In *Environmental management accounting and supply chain management* (pp. 171-202). Springer, Dordrecht.
- Stephens, J. C., Hernandez, M. E., Román, M., Graham, A. C., & Scholz, R. W. (2008). Higher education as a change agent for sustainability in different cultures and contexts. *International journal of sustainability in higher education*, 9(3), 317-338.
- Thanasi-Boçe, M., & Kurtishi-Kastrati, S. (2021). Social responsibility approach among universities' community. *Journal of Enterprising Communities: People and Places in the Global Economy*.
- Trifonova, N. V., Khutieva, E. S., Proshkina, A. S., Irina, L. B., & Gunkova, P. I. (2020). Entrepreneurial Ecosystems of the Leading Universities. *International Session on Factors of Regional Extensive Development (FRED 2019)*, 266–270.
- Valero, A., & Van Reenen, J. (2019). The economic impact of universities: Evidence from across the globe. *Economics of Education Review*, 68, 53-67.
- Wang, H. (2010). Institutions of Higher Education and the Regional Economy: A Long-Term Spatial Analysis. *Economics Research International*, 2010, 1–19. <https://doi.org/10.1155/2010/376148>
- Witty, A. (2013). Encouraging a British Invention Revolution. *Sir Andrew Witty's review of universities and growth*, London: BIS.