

The Key Factors the Influence Student's Digital Start-Ups: A Study from Malaysian Entrepreneurial University

Sathiswaran Uthamaputhran¹, Yusrinadini Zahirah Md Isa²,
Hazriah Hasan³

¹Azman Hashim International Business School , Universiti Technology Malaysia, ^{2,3}Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan

To Link this Article: <http://dx.doi.org/10.6007/IJARBS/v14-i12/22750> DOI:10.6007/IJARBS/v14-i12/22750

Published Date: 16 December 2024

Abstract

Entrepreneurship which involves the creation of something valuable to society in terms of exercising one's creativity and innovation which is applicable in an existing or new organization. Digital entrepreneurship has gained greater acceptance among economists specially by the youth as a major contributor of societal growth. With Digital entrepreneurship, the involvement of young fresh graduates into entrepreneurship field is increasing in public and in private sectors of the economy. This research examined the key factors that influence student's digital start-ups using a conceptual model that includes various variables such as incubator or accelerator, industry collaboration, digital entrepreneurship integrated syllabus which influence the student's digital start-ups. This research was conducted using a quantitative research method for Universiti Malaysia Kelantan (UMK) City Campus degree students, and 400 respondents participated in the study. The data collected was analysed using Statistical Package for the Social Science (SPSS). Based on data obtained from the questionnaire survey, various methods of data analysis such as descriptive analysis, reliability and linear regression were carried out. The findings show that the variables considered in the study with the highest descriptive analysis is the incubator or accelerator program is 3.887. While the highly positive correlation is to the industry collaboration. From the results, it could be concluded that incubator or accelerator program had significant impact on the student's digital start-ups. The results of this research provide a direction towards the implementation of key factors that influence student's digital start-ups and how that will impact the development of entrepreneurship among students and in Malaysia.

Keywords: Digital Startups, Malaysia, Entrepreneurship University, Integrated Syllabus

Introduction

Digital entrepreneurship often takes place outside the boundary of the firms through collaboration which have the capacity to overcome resources scare. It defined as a new trend

of exploiting opportunities through internet technologies which attracting many entrepreneurship scholars (Davidson & Vaast, 2010). What makes digital entrepreneurship differs from traditional entrepreneurship is the nature where the entrepreneur ventures the business digitally instead of using traditional method (Hair et al., 2012). Many companies have emerged due to this sudden spike in technologies such as Uber, food delivery platform, online teaching platform and many other companies which based on digital innovation. The advancement of information technologies brings significant changes to the development of business ecosystems in the world. Also, the digital economy has encouraged businesses to develop various business activities beyond their internal markets (Kempster and Cope, 2010; Ziyae et al, 2014; Uthamaputhran, Zaato, Zainol, & Sabri, 2021). We believe that digital entrepreneur is a person who has the ability to create and delivers key business activities digitally.

The dependence on ICTs is significant because of the unique challenges and opportunities that new digital businesses face with regards to entry mode, production methods, capturing of payment and managing stakeholder relationships (Beckman et al., 2012; World Bank, 2014). Digital technology-based industry has the model, strategy, and value creation of new business. Despite the increasing number of digital companies in developing countries like Malaysia compared to advanced countries, there is a need to have a study that is based on how this digital business is created and operated. Compare to any other countries, Malaysian entrepreneurs are still having problems with resources and are still capturing small markets. Some entrepreneurs are still facing resources limitation especially in finance and human resources which still is a major issue and need to be addressed by government (Bradley et al., 2012; Linna, 2013).

By experiencing one of the fastest growth rates in internet usage, there is a growing potential for Malaysian entrepreneurs for exploiting digital businesses. The ongoing industrial revolution is expected to contribute to the formation of new businesses and jobs. This change necessitates the preparation of the individuals for the needs of the new age as the equipping of individuals for entrepreneurial activities. In one hand, I believe we know little about digital entrepreneurship competencies for young generation especially those studying in the higher educations. Meanwhile in other hand, Higher education in Malaysia is one of the best places for young people to learn digital-based entrepreneurship education. Higher education plays a huge role in encouraging the growth of student's entrepreneur and provide the necessary knowledge and information to support digital economy. In Malaysia, entrepreneurship education curriculum has been revised to include element of information technologies and equip them with entrepreneurship education based on digital. Students need to be taught comprehensive logic (computational thinking), including how to model, analyze data, and extract information. In addition, related to complex systems and sharpen the sense of business with the direct practice of entrepreneurship. This suggests a research need to examine the digital entrepreneurship competencies among students needed to be a successful student's entrepreneurs. It is important to unpack the competencies among students to deeper our understanding of the digital concept and how an individual can take an advantage in a country like Malaysia.

Thus, this paper analyses a theoretical relationship in which context as the key factors inside the higher education that influence students' digital startups. These include digital

incubators, digital classroom tools and digital real case which shape the student's start-up choices and decisions. Competencies include knowledge and behavioural skills and is connected to the goals pursued, business activities and tasks that entrepreneurs undertake (Bianchi et al., 2017; Mitchelmore and Rowley, 2013).

Literature Review

Digital Environment in Higher Education

Digital entrepreneurship components are the outside environment, conditions or situations that help the student to understand the forms or diverse outcomes of entrepreneurial behaviours (Zahra, et al., 2014). It has a strong influence over digital entrepreneur where it is an asset for them to start a business and it helps them to make entry decisions. For instance, exposure with the digital environment can allow the entrepreneur to discover, create and exploit entrepreneurial opportunities (Garud et al., 2014). Therefore, this study focuses on the key digital environment activities in the university and how it can increase their digital entrepreneurship competencies.

Several studies have highlighted the interchange between digital environment and digital competencies level. For instance, Sussan and Zoltan (2017), indicated the role of agents and users in the digital age which is a much-needed knowledge to support the development of the enterprise. Similarly, the study of Ghezzi et al. (2020), explained the importance of digital knowledge to engage with business model innovation and to create value in it. In sum, the above studies identify several key activities of digital entrepreneurship that support the development of digital entrepreneurship competencies among students in entrepreneurship education. For these students, the entrepreneurship activities are understood as key area that change their attitudes into entrepreneurship characteristics such as risk-taking and proactiveness.

Different Digital Entrepreneurship Activities

A digital start-up is a firm, or an organisation within an established firm (Shane & Venkataraman, 2000), in its early stages of development and growth (Klotz et al., 2013) in which digital technologies enable at least one component of a business model in a way that is not just functional but vital to the firm. It is important to have a strong foundation for individual who want to start and run their own businesses. Previous research on student entrepreneurs has largely neglected its organizational and spatial context, i.e. the domain or ecosystem where students study. Universities more or less actively support entrepreneurial activities of their staff and students and only offer just fundamental entrepreneurship courses. We believe that their exposure in higher education is still not sufficient to broaden their mind on the use of digital technologies in their business. The empirical evidence about the university's impact on students' entrepreneurial intentions or activities is rare: Walter et al. (2013) show that organizational-level factors like the availability of ecosystem that support the process of entrepreneurship including industry ties increase entrepreneurial intentions of male university students. Similarly, Geissler (2013), finds a positive effect of the perceived entrepreneurial climate at universities on students' entrepreneurial competencies.

Integrated Digital Entrepreneurship Studies

Countries' economic output and innovation growth have become highly dependent on digital technology advances in the last century. Changes in big data analytics, the introduction of

emerging technology, and an increase in their use are all part of the digitalization process. As a result, digitalization can be thought of as one of the coupling mechanisms between various aspects of the socioeconomic structure (technological, social, economic, and ecological). As a result, digitalization poses new challenges to socioeconomic system resilience; on the one hand, it provides opportunities, but it also introduces new threats and unpredictability. Therefore, it is important for the government to find the mechanism that can cultivate entrepreneurship and we believe that integrated digital entrepreneurship studies will be a great starting point. Although it will be a major concern for many entrepreneurs but it is primarily determining the transformation of students' entrepreneurs that will transform entrepreneurial and business models in many industries. Integrated digital entrepreneurship studies is refer to the adaptation integration of digital-output and entrepreneurship output as a collective approach in entrepreneurship studies. The arising technologies and innovation in leveraging entrepreneurship allow the entrepreneur to design and start more robust entrepreneurial activities. Universities or schools should have more digital entrepreneurship ecosystem which digital entrepreneurship activities emerged and developed. It helps them to facilitate the integration of resources and help to exploit the opportunities.

Digital Entrepreneurship Components and Competencies Level Industry Collaboration

The importance of industry collaboration is emphasized in the current literature on opportunity recognition. In the field of entrepreneurship, opportunity recognition has been regarded as a key aspect of the entrepreneurial process (Shane & Venkataraman, 2000). It is well established that industrial network especially existing technopreneurs with universities students are an important resource facilitating new start-up especially for students who limited resources for starting a business. It creates a tie between students and existing entrepreneurs have a significant role, as do the ties of individuals, especially existing entrepreneurs (Crick & Spence, 2005; Ellis, 2008; Hadjikhani et al., 2005). In several studies (Coviello, 2006; Crick & Spence, 2005; Ghauri et al., 2003) such collaboration has been seen as major factors in initiating the process of opportunity discovery and exploitation with the student following their industry partner networks to the real market. These ties between both student and industry as bridges facilitating start-up entry. This is consistent with the assumption in the network model (Johanson & Mattsson, 1988) that the network ties help the new entrepreneur to discover the opportunities. Students also can develop personal relationships, with a focus on interpersonal trust. It assists them not only to gather the flow of information but also connect them with new contacts which are important for starting a business.

Incubator or Accelerator Program

The relationship between universities and business incubator or accelerator within the university is crucial as universities are the source of knowledge, research, resources and today's innovation-driven centre. The affiliation or management of incubator or accelerator activity inside a university often a great advantage for the new potential entrepreneurs from student, as these institutions can provide links to the industry, society and government entities. Such activities include the incubation of start-up firms, knowledge commercialization, the development of knowledge transfer partnerships and providing entrepreneurship courses. Mian (1996) defined IBs as "a strategy understood in relation to innovation centres and as a function of business and research development" whereas Greene and Butler (1996) viewed BIs as a mechanism to promote the technology-based firms'

development and to give the right resources to grow business to a level of maturity. , incubators are a resource for new entrepreneurs to solve their problems as outlined by Shahzad et al. (2012), they also analyzed that incubators are vital for achieving the entrepreneurial spirit growth as they provide assistance to new entrepreneurs in many different aspects as found by Al-Mubaraki and Busler (2010).

Digital Entrepreneurship Integrated Syllabus

Entrepreneurial action can be understood as an innovative action through a combination of resources and characteristics and it directly move towards a specific entrepreneurial goal. Matlay (2005) believe that individual probability of starting a business is high when they have entrepreneurship related education. Mueller (2011) or Packham, Jones, Miller, Pickernell, and Thomas (2010) have corroborated the positive contribution that entrepreneurship education can have on its participants in terms of skills, knowhow an entrepreneurial attitude. However, these days it cannot exist without a support from digital technologies. According to Rekha, Ramesh, and Jaya-Bharathi (2015), coupled with innovative action is creativity, since the entrepreneurial mindset cannot exist with-out it; the entrepreneur draws conclusions from reality, identifies a problem and creates, innovates and invents. It is not simply a matter of doing things well: it is necessary to add something new (Townsend, Busenitz & Arthurs, 2010). Therefore, it is important to have a digital entrepreneurship integrated courses which helps the entrepreneur to identify and exploit the opportunities. Integrated digital entrepreneurship studies is refer to the adaptation integration of digital-output and entrepreneurship output as a collective approach in entrepreneurship studies. The arising technologies and innovation in leveraging entrepreneurship allow the entrepreneur to design and start more robust entrepreneurial activities. Universities or schools should have more digital entrepreneurship ecosystem which digital entrepreneurship activities emerged and developed. It helps them to facilitate the integration of resources and help to exploit the opportunities.

Conceptual Framework

Based on the literature review, the model of this study on student's digital entrepreneurial implementation in University Malaysia Kelantan indicating the independent and dependent variables is as follows.

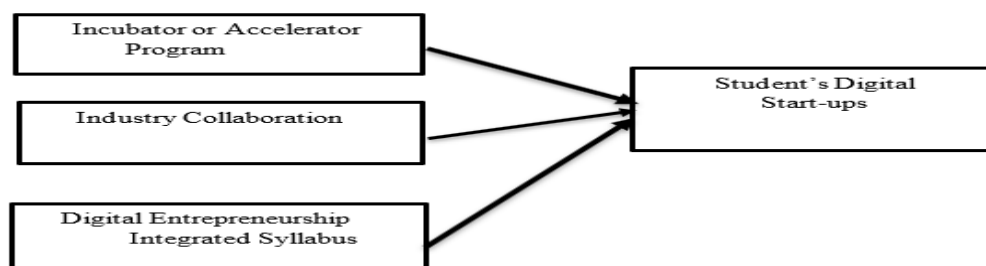


Figure 1: Study Framework

Research Methods

Research Design

Researcher choose to use quantitative methods of analysis in this research study. The approach to the questionnaire was introduced with the objective to collect significant information for statistical analysis.

Data Collection

In this research study, researcher used primary and secondary data to collect research information data. The information obtained directly from the target respondent of population for the analysis of certain priorities and a problem will be known as primary data (Chua 2019) In this study practically are used the quantitative data collection methods. Questionnaire is used as an important source in this research. While Secondary data collection is about data obtained by an individual other than the researcher doing the research may also be guided to and such data can be internal or external to the organisation. For an example, published journals, books and newspapers, government publications, internet sources, archival records, written and non- written documents (Rengiah 2013).

Population

The population of this research is around 5631 UMK students. (Source from UMK Office). The sample was determined by referring the table which is mentioned by Krejcie and Morgan table (Krejcie & Morgan, 1970).

Sample Size

Based on (Krejcie & Morgan 1970) table of determining sample size for a define population, a sample size of 400 respondents were selected randomly for the objective of this research. Furthermore, each questionnaire is individually sent out and respondents have to reply on the basis of their own thought about the topic.

Sampling

In this study researcher use probability sampling. Under probability sampling researcher use Simple Random Sampling (SRS) (Taherdoost 2016). Simple Random Sampling was used to collect data from our target respondents as a form of probability tool. The purpose for using Simple Random Sampling in this study is because it will show accurate data of large population in a study (Zaato, Ismail, Uthamaputhran, Owusu-Ansah, & Owusu, 2021). This approach helps researchers to easily pick the samples and will distribute the questionnaire to the intended sample and as the population of University Malaysia Kelantan (UMK) students is very high.

Research Instrument

In this study, the researcher used questionnaires as the research instrument where the questionnaire measurement was divided into various section A, B, C and D. Each of the sections represent each variable. The questionnaire was designed using the 10-point Likert Scale. Section A consisted of questions on respondent's demographic profiles which is University Malaysia Kelantan (UMK) first degree students. Section B contained questions that seek to gather the relevant information on students' digital start-ups, while Section C to D contained questions that were structured to obtain related statement of independent variable which were industry collaboration, incubator or accelerator program, and digital entrepreneurship integrated syllabus. The questionnaires used for this study were derived from related previous studies and redesigned as indicated below.

Table 3.1

Sources of Questionnaire

Section	Description	Source (s)	No. of items
A	Demographic	Questions on demographic profile	5
B	Student's Digital Start-ups	Bradley, et al, (2012).	5
C	Incubator or Accelerator	Hassan, (2020); Fernández Fernández, (2015)	5
D	Industry Collaboration	Coviello, 2006), Crick & Spence, (2005)	5
E	Digital Entrepreneurship Integrated Syllabus	Ngoasong, (2018); Davidson, & Vaast, (2010).	5

Data Analysis Procedure

The process to identify and access a data is known as procedure for data analysis. The type of method used to analysis the data is reliability analysis, coefficient of correlation and linear regressions. For easy analytical methods, data entry, data interpretation, reporting and visualisation of data findings, the data was analysed using the Statistical Package for Social Sciences (SPSS) program. The aim of using the Social Sciences Statistical Package is to encode and analyse the data collected based on the dependent and the independent variables (Aziz, Afthanorhan et al. 2016).

Analysis of Results

Demographic Profile

The researchers distributed and collected questionnaire from students of University Malaysia Kelantan City Campus. The questionnaire contained five sections. Section A consists of demographic profile of respondents such as gender, age, race and faculty. Out of the data obtained from 400 respondents, 64.25 percent (257) of them are female while the remaining respondents made of 35.75 percent (143) are male students of the UMK City Campus. On the age group of students in UMK City Campus, majority of the students' aged within 23-26 years old, representing 37.5 percent and is equivalent to 150 students. The second highest domination comes from age range of 27-30 years old with 140 students constituting 35 percent.

The students that aged from 19-22 years had 110 respondents or accounted for 27.5 percent involved in the study. In addition, based on respondents' race, majority of them are Malay representing 32.3 percent (129) followed by 111 students made of 27.8% formed other races and 20.8 percent (83) of the students are Indian students. Chinese students recorded the least race with only 19.3 percent (77) out of the 400 students who responded to the questionnaire. Lastly, in view of student's faculty of affiliation, 210 students (52.5%) out of the 400 respondents at UMK City Campus are from Faculty of Entrepreneurship and Business and 190 students (47.5%) from the Faculty of Hospitality, Tourism and Wellness (FHPK).

Descriptive Analysis

The descriptive analysis tested based on 400 respondents according to the variable and listed out the summary of the mean and standard deviation on table below:

Table 4.1

Summary of Mean and Standard deviation according to each Variable

Description	N (Sample size)	Mean	Standard Deviation
Student's Digital Start-ups	400	3.883	1.131
Incubator or Accelerator	400	3.867	1.112
Industry Collaboration	400	3.887	1.128
Digital Entrepreneurship Integrated Syllabus	400	3.863	1.114

Table 4.1 shows the mean and the standard deviation of both dependent variable and independent variables. Mean for dependent variable of this research which is student's digital start-ups is 3.883. For the independent variables, the variable with the highest mean is industry collaboration which is 3.887, followed by the mean score of incubator or accelerator with 3.8665 and also mean of entrepreneurship integrated syllabus which is 3.8630. From the descriptive statistics, the highest mean is independent variable which is industry collaboration is 3.8865 and the lowest mean is digital entrepreneurship integrated syllabus is 3.8630 and by approximation, all the variables have recorded 4.00 and suggests that the respondents have agreed that the variable are suitable for the study.

Reliability Analysis

Table 4.2

Reliability Statistics

Variable	N (Sample Size)	Number of items	Cronbach's Alpha	Result
Student's Digital Start-ups	400	5	0.973	Excellent
Incubator or Accelerator	400	5	0.974	Excellent
industry Collaboration	400	5	0.970	Excellent
Digital Entrepreneurship Integrated Syllabus	400	5	0.970	Excellent

Cronbach's Alpha is one of the significances of reliability analysis which will indicates the ability of the items where they positively correlated to each other in a series. Cronbach's alpha can be interpreted as an average correlation coefficient, ranging from 0 to 1. Since Cronbach's alpha is up 1, the higher the value, the higher the internal consistency quality (Aziz, Afthanorhan et al. 2016). Table 4.2 summarised the findings of the reliability test of each variable in this study. As shown by Table 4.2, the Cronbach's Alpha ranges from 0.970- 0.974 which indicates that each item for each variable is excellent based on the rule of thumb of Cronbach's Alpha Coefficient. All the items of the variables represent as excellent as it exceeded 0.6 based on rule of thumb of Cronbach's Alpha Coefficient. Furthermore, the reliability shows that all the items from each variable are easily understood by the respondents and that the questionnaire is suitable for data collection in this study.

Normality Test

Table 4.3

Summary of Skewness and Kurtosis Results

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Students	Digital	.189	400	.000	.853	400	.000
startups	or						
Incubator	Accelerator	.195	400	.000	.861	400	.000
Industry Collaboration		.180	400	.000	.865	400	.000
Digital	Entrepreneurship	.189	400	.000	.863	400	.000
Integrated Syllabus							

Table 4.3 present the normality test for all the variables. There are two types of tests used to run this normality test known as Kolmogorov- Smirnov and Shapiro- Wilk, with the significant p-value of less than 0.05 and indicates as normal data. A shown in the table above, the revealed p- value is 0.000 for all the variables that have been stated, which is less than 0.05 and shows that the data has been normally distributed.

Pearson Correlation

Table 4.4

Pearson Correlation

Variables	Pearson Correlation (r)	Sig. (2- tailed)
Incubator or Accelerator	0.952	.000
Industry Collaboration	0.938	.000
Digital Entrepreneurship Integrated Syllabus	0.929	.000

Table 4.4 presents that the result of Pearson Correlation of the independent variables. The highest Pearson Correlation (r-value) is Incubator or Accelerator with 0.952 while the lowest r-value is Digital Entrepreneurship Integrated Syllabus with 0.929 value. And the Industry Collaboration value is 0.938. Furthermore, the p- value is significant for all the variables with the value of 0.000. Hence all the independent variables have strong positive and significant relationship with the dependent variable of this study.

Linear Regression

Table 4.5

Results of Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		Beta	Std. Error	Beta		
1	(Constant)	0.041	0.057		0.721	0.472
	Incubator or Accelerator	0.548	0.045	0.538	12.139	.000
	Industry Collaboration	0.259	0.050	0.259	5.232	.000
	Digital Entrepreneurship Integrated Syllabus	0.185	0.047	0.182	3.919	.000

Dependent Variable: Student Digital Start-ups

Based on the table 4.5 above, it shows which independent variable that gives most significantly effect to student entrepreneurial competencies among the students from UMK City Campus. The higher the t- value, the greater the effect of the independent variable on the dependent variable. According to the table above, the most significant independent variable that influenced student digital start-ups is incubator or accelerator. From the result, it proved that Incubator or Accelerator has the highest t-value among the other two independent variables. The t-value for incubator or accelerator is 12.139 followed by Industry Collaboration which the t-value is 5.232. The lowest t-value for the independent variables is 3.919 which is on Digital Entrepreneurship Integrated Syllabus. The higher the t-value shows the greater impact of the independent variable on the dependent variable.

Table 4.6

Results of Model Summary

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	0.961 ^a	0.924	0.924	0.31217

The first row on table 4.6 is a model summary for linear regression. The column "R" performed linear coefficient of correlation of (incubator or accelerator, industry collaboration, and digital entrepreneurship integrated syllabus). A value of "R" is 0.961, in this table, proved that a strong positive linear relationship between the variables. If "R" is equal to zero, then between the dependent variable and independent variable there is no linear association. Since the number of terms in a model adjust and added more variables (incubator or accelerator, industry collaboration, and digital entrepreneurship integrated syllabus), then R-square = 0.924 will always higher than adjusted R-square = 0.924. Next, about 92.4% of variation explained by only the independent variables that actually affect the dependent variable. From table 4.21 model summary for linear regression, the R-Square is 0.924 the modified R-square will penalise you if you add more useless variables or useful variables (Independent Variables) and the model can also cause sub-zero values, which means that the data 1 model will match unless the R-square is null or decreased. The aim of the modified R-square is to simply change the number of terms of a model.

Table 4.6

ANOVA^a Summary

Model		Sum of Squares	df	Mean square	F	Sig.
1	Regression	472.008	3	157.336	1614.552	.000 ^b
	Residual	38.590	396	.097		
	Total	510.598	399			

Table 4.6 presents that p-value (Sig 0.000) was less than alpha value 0.05. The alternative hypothesis as three independent variables was significantly explained the variance in intention level supported by the data and would be accepted.

Discussion and Conclusion*Discussion*

Table 4.7

Tested Hypothesis

Hypothesis	Statement	Sig. Value	Result
H1	There is a positive and significant relationship with incubator or accelerator on Student's Digital Start-ups in University Malaysia Kelantan	0.000	Confirm
H2	There is a positive and significant relationship with Industry Collaboration on Students Digital Start-ups in University Malaysia Kelantan	0.000	Confirm

H3	There is a positive and significant relationship with Digital Entrepreneurship Integrated Syllabus on students Digital Start-ups in University Malaysia Kelantan	0.000	Confirm
----	--	-------	---------

Table 4.7 shows the results of hypothesis of this study. In this research all the independent variables are accepted. As based on the table above, this research is accepting (H1) significant relationship with incubator or accelerator on student's digital start-ups among students of University Malaysia Kelantan because the result 0.952 with significant value $p < 0.05$, it means there is a significant relationship exist with incubator or accelerator on student's digital start-ups among students in University Malaysia Kelantan. This study also accepts (H2) because it records 0.938 with significant value $p < 0.05$. This means that there is a significant relationship between industry collaboration on student's digital start-ups among students in University Malaysia Kelantan. Lastly, the study accepts (H3) because 0.929 with significant value $p < 0.05$ an indication that there is a significant relationship with digital entrepreneurship integrated syllabus on students Digital Start-ups among students in University Malaysia Kelantan.

Conclusion and Recommendations for Future Research

There are few recommendations made by the researcher on the basis of this research. Future researchers can manage to conduct research in different areas of Malaysia in order to gain the local context. The difference state of Malaysia will have a different view and perception on the entrepreneurship. Further information on the key factors that influence student digital start-ups can be found for future researchers. In future, researchers can know the important of implementation of student digital start-ups to student themselves and also for growth of nation. Besides that, it is recommended that the future researcher wide the sample size and population in order to obtain a more detailed and varied results of the analysis of this research. This is because this study was conducted at the UMK City Campus only. Future researchers are advised to conduct similar research in various universities, states or even in Malaysia as it will lead to different outcome. Furthermore, the number of respondents can be increased for future studies in order to increase the accuracy of the data collected. Later, prospective researches should consider using quantitative techniques for research purposes. Future researchers could gain a deeper understanding of the implementation of student digital start-ups. The respondent's interview helps researchers to understand how respondents think about the implementation of student digital start-ups. Moreover, various viewpoints on the positive relationship between student's entrepreneurial competencies with student's digital start-ups, incubator or accelerator program, industry collaboration and digital entrepreneurship integrated syllabus for a potential evidence can be gained using quantitative approaches.

Conclusion

This study aim is to identify the key factors that influence student's digital start-ups among students at UMK City Campus. Universities can use this study findings to determine the effectiveness of implementing student's digital start-ups and also the key factors such as incubator or accelerator programs, industry collaborations and digital entrepreneurship integrated syllabus. Through this, it will help to build a bond between undergraduate students and industries. The result of this study is also useful to Malaysian entrepreneurship companies from either the Government or private sectors to assess the key factors that influence student's digital start-ups for future evidence of all Malaysian undergraduates and the effect

on the country's future growth. From the study of the overall variable, the minimum criteria for the reliability analysis has been met, because the value of Cronbach Alpha coefficients is above 0.6. The independent variable identified as the incubator or accelerator programs, industry collaborations and digital entrepreneurship integrated syllabus proved to have significant positive relationship to the dependent variable thus, student's digital start-ups. From the study, all the hypothesis thus, H1, H2 and H3 were accepted in this research. In particular, this research has shown that university students are really conscious of digital start-ups which will help them to succeed in future and also achieve their career goals. This will actually happen when universities and students or young graduates are willing to consider these factors like, incubator or accelerator program, industry collaboration and digital entrepreneurship integrated syllabus as key factors that will boost student's implementation of digital start-ups towards creation of jobs to reduce graduate unemployment through the creation of tangible and intangible services start-ups by university students.

Acknowledgement

The authors wish to acknowledge UMK organizers of this conference, the Editorial Board and the anonymous reviewers of this notable journal for the vital role played vis-à-vis the publication of this study.

References

- Al-Mubarak, H. M., & Busler, M. (2010). Business incubators models of the USA and UK: A SWOT analysis. *World Journal of Entrepreneurship, Management and Sustainable Development*.
- Aziz, M. I., Afthanorhan, A., & Awang, Z. (2016). Talent development model for a career in Islamic banking institutions: A SEM approach. *Cogent Business & Management*, 3(1), 1186259.
- Beckman, C., Eisenhardt, K., Kotha, S., Meyer, A., & Rajagopalan, N. (2012). Technology entrepreneurship. *Strategic entrepreneurship journal*, 6(2), 89-93.
- Bianchi, C., Glavas, C., & Mathews, S. (2017). SME international performance in Latin America: The role of entrepreneurial and technological capabilities. *Journal of Small Business and Enterprise Development*.
- Bradley, S. W., McMullen, J. S., Artz, K., & Simiyu, E. M. (2012). Capital is not enough: Innovation in developing economies. *Journal of Management Studies*, 49(4), 684-717.
- Ellis, P. (2008). 'Social ties and international opportunity recognition'. Unpublished manuscript, Hong Kong Polytechnic University.
- Garud, R., Gehman, J., & Giuliani, A. P. (2014). Contextualizing entrepreneurial innovation: A narrative perspective. *Research Policy*, 43(7), 1177-1188.
- Geissler, M., & Zanger, C. (2013). Entrepreneurial role models and their impact on the entrepreneurial prefunding process.
- Ghauri, P., Lutz, C., & Testom, G. (2003). Using networks to solve export-marketing problems of small- and medium-sized firms from developing countries. *European Journal of Marketing*, 37(5-6), 728-752.

- Coviello, N., & Cox, M. P. (2006). The resource dynamics of international new venture networks. *Journal of International Entrepreneurship*, 4(2–3), 113–132
- Crick, D., & Spence, M. (2005). The internationalisation of 'high performing' UK high-tech SMEs: a study of planned and unplanned strategies. *International business review*, 14(2), 167-185.
- Davidson, E., & Vaast, E. (2010, January). Digital entrepreneurship and its sociomaterial enactment. In 2010 43rd Hawaii International Conference on System Sciences (pp. 1-10). IEEE.
- Fernández Fernández, M. T., Blanco Jiménez, F. J., & Cuadrado Roura, J. R. (2015). Business incubation: innovative services in an entrepreneurship ecosystem. *The Service Industries Journal*, 35(14), 783-800.
- Hadjikhani, A., Ghauri, P., & Johanson, J. (2005). Introduction: Opportunity development in business networks. In *Managing opportunity development in business networks* (pp. 1-24). Palgrave Macmillan, London.
- Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications. *Long range planning*, 45(5-6), 320-340.
- Hassan, N. A. (2020). University business incubators as a tool for accelerating entrepreneurship: theoretical perspective. *Review of Economics and Political Science*.
- Johanson, J., & Mattsson, L.-G. (1988). Internationalisation in industrial systems—A network approach. In N. Hood J.-E. Vahlne (Eds.), *Strategies in global competition* (pp. 287–314). London: Croom Helm.
- Kempster, S., & Cope, J. (2010). Learning to lead in the entrepreneurial context. *International Journal of Entrepreneurial Behavior & Research*.
- Klotz, A. C., Hmieleski, K. M., Bradley, B. H., & Busenitz, L. W. (2014). New venture teams: A review of the literature and roadmap for future research. *Journal of management*, 40(1), 226-255.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Linna, P. (2013). Bricolage as a means of innovating in a resource-scarce environment: A study of innovator-entrepreneurs at the BOP. *Journal of Developmental Entrepreneurship*, 18(03), 1350015.
- Matlay, H., Packham, G., Jones, P., Miller, C., Pickernell, D., & Thomas, B. (2010). Attitudes towards entrepreneurship education: a comparative analysis. *Education+ Training*.
- Mian, S. A. (1996). The university business incubator: a strategy for developing new research/technology-based firms. *The Journal of High Technology Management Research*, 7(2), 191-208.
- Mitchelmore, S., & Rowley, J. (2013). Entrepreneurial competencies of women entrepreneurs pursuing business growth. *Journal of small business and enterprise development*.
- Mueller, S. (2011). Increasing entrepreneurial intention: effective entrepreneurship course characteristics. *International Journal of Entrepreneurship and Small Business*, 13(1), 55-74.
- Ngoasong, M. Z. (2018). Digital entrepreneurship in a resource-scarce context: A focus on entrepreneurial digital competencies. *Journal of Small Business and Enterprise Development*.

- Rekha, S. K., Ramesh, S., & Jaya-Bharathi, S. (2015). Empirical study on the relationship between entrepreneurial mindset and the factors affecting intrapreneurship: A study in Indian context. *International Journal of Entrepreneurship*, 19(1), 53-59.
- Rengiah, P. (2013). Effectiveness of entrepreneurship education in developing entrepreneurial intentions among Malaysian university students (Doctoral dissertation, Southern Cross University).
- Sanasi, S., Ghezzi, A., Cavallo, A., & Rangone, A. (2020). Making sense of the sharing economy: a business model innovation perspective. *Technology Analysis & Strategic Management*, 32(8), 895-909.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.
- Shahzad, K., Bajwa, S. U., Ali, Q., & Zia, S. (2012). Role of incubation in women entrepreneurship development in Pakistan. *Asian Journal of Business Management*, 4(2), 200-208.
- Sussan, F., & Acs, Z. J. (2017). The digital entrepreneurial ecosystem. *Small Business Economics*, 49(1), 55-73.
- Taherdoost, H. (2016). Sampling methods in research methodology; how to choose a sampling technique for research. *How to Choose a Sampling Technique for Research* (April 10, 2016).
- Townsend, D. M., Busenitz, L. W., & Arthurs, J. D. (2010). To start or not to start: Outcome and ability expectations in the decision to start a new venture. *Journal of Business Venturing*, 25(2), 192-202.
- Matlay, H. (2005). Entrepreneurship education in UK business schools: Conceptual, contextual and policy considerations. *Journal of Small Business and Enterprise Development*.
- Uthamaputhran, S., Zaato, S. G., Zainol, N. R., & Sabri, N. A. A. (2021). The Role of Technological Capabilities: A Study of Malaysian High-Tech Born Global Companies' Early Internationalization. The Importance of New Technologies and Entrepreneurship in Business Development: In The Context of Economic Diversity in Developing Countries, 194, 16.
- Walter, S. G., Parboteeah, K. P., & Walter, A. (2013). University departments and self-employment intentions of business students: A cross-level analysis. *Entrepreneurship Theory and Practice*, 37(2), 175-200.
- World Bank. (2014) *Global Financial Development Report 2014: Financial Inclusion*, International Bank for Reconstruction and Development / The World Bank, Washington
- Zaato, S. G., Ismail, M., Uthamaputhran, S., Owusu-Ansah, W., & Owusu, J. (2021). The Influence of Entrepreneurial Orientation on SMEs Performance in Ghana: The Role of Social Capital and Government Support Policies. The Importance of New Technologies and Entrepreneurship in Business Development: In The Context of Economic Diversity in Developing Countries, 194, 1276.
- Zahra, A., Nouri, F., & Imanipour, N. (2014). Explaining the role of managerial skills of entrepreneurship in business success. *International Journal of Management Sciences*, 4(1), 42-52.
- Ziyae, B., Sajadi, S. M., & Mobaraki, M. H. (2014). The deployment and internationalization speed of e-business in the digital entrepreneurship era. *Journal of Global Entrepreneurship Research*, 4(1), 1-11.