

## A Method for Finding Investor Through Internet Marketing Strategy

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**Abstract:** This study analyse the important contribution of the Internet through online marketing for commercialization university research. Most of the commercialization of university research focus on the spin-off company or licensing as the principles for commercialization of university research. However, this study deviates from previous studies as it focuses on the internet as the mechanism to identify the marketing strategy for finding investor through internet marketing strategy. In this paper we analyse the literatures review from the internet marketing strategy that can be used in marketing university research and inventions. This study argues stringently for more research need to be done about the importance of Internet in sourcing for income and capital through online marketing. This study also analyses the future of the Internet for the commercialization process of research universities in Malaysia. Overall this study contributes to the existing literature by examining in a more comprehensive way about the process of commercialization of university research using the Internet as the main mechanism.

**Keywords:** Internet Marketing, Venture Capital, Commercialization of University Research, Malaysia.

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### INTRODUCTION

Internet has become one of the important tools to communicate and change our lifestyle. The use of the Internet in the technology transfer process is quickly becoming one of the preferred tools for both academic research centres and the industry leaders. The Internet allows for efficient distribution of information, the ability to collaborate in a real time setting and to quickly and easily track and maintain the legal and industry requirements for permits, patents and licensure. Internet can be used as the place to show to the stakeholders, society and industry about the potential of university invention. By actively engaging in technology development, universities are demonstrating ambidexterity in their ability to produce both scientific knowledge and technology outputs. According to Bennette and Zhao (2004) the tools in technology transfer could be of benefit to developing countries in the form of generating greater revenues.

The use of the internet as the mechanism in commercialization of university inventions are important and occur in two basic models namely linear model and non-linear model. Using the internet promotes more on non-linear and in informal ways (Link, *et al.*, 2007; Grimpe and Fier, 2009, Belkhdja and Landry, 2007). Informal commercialization of university technology transfer that has been mentioned by Grimpe and Fier (2009) can include using the internet as the method to getting capital online from the investor. Informal university technology transfer is still a new issue and there is little discussion about this. However, it will be a fruitful discussion in the context of finding investors through online marketing in the commercialization process. A higher increased exposure of discovering research results can be observed in managerial changes among academics concerning university-industry collaborative work.

When discussing about the commercialization process of university inventions, it should be noted that technology transfer managers should always be creative and innovative (Litan, *et al.*, 2007). Furthermore, according to (Wan Hussain, *et al.*, 2011) technological capabilities are the skills, technical knowledge and organizational coherence required to make industrial technologies function in an enterprise. Current research (Rothaermel, *et al.*, 2006) has focused on the logic behind the choice of technology commercialization path - licensing, start up or joint venture (Bray and Lee, 2000; Feldman, *et al.*, 2002; Wulong and Whewell, 1999; Shane, 2002) and the success characteristics for each option (Astebro, 2004; MacMillan, *et al.*, 1985). Other literatures have focused on the commercialization of university research that happened in United States, Europe and Japan and do not provide sufficient knowledge of the development in emerging countries (Wan Hussain, *et al.*, 2010; 2011; Shane 2004a). This is supported by Mohar (2009) who states that there is still little research

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being done about the commercialization of university research in Malaysia. Second, most of the research only focused on the spin-off company as the commercialization process but do not fully stress the licensing and patenting (Shane, 2004b). Third, most of the qualitative evidence only reflects on how the academic entrepreneurship give contribution to the knowledge base (Lehrer and Asakawa, 2004). In order to bridge this gap, this study only focuses on the commercialization process that is happening in Malaysia in relation to using the internet as the mechanism to seeking investors online. This article will contribute to the existing body of literature in improving the mechanism of technology transfer process.

#### ***Finding Potential Investor Through Internet:***

The changing role of universities have extended from 'knowledge production' to 'capitalisation of knowledge' with the objective of improving regional or national economic performance as well as the university's financial advantage and that of its faculty (Etzkowitz, *et al.*, 2000; Nowotny, *et al.*, 2001; 2003; Shane, 2004; Lawton Smith, 2007; Hoye, *et al.*, 2006). These changes are made by the policy makers so that that it can evaluate and monetize research funding (Slaughter and Leslie, 1997). Moreover, they have set-up many support systems for this (Guston, 1999; Jacob and Hellsmarks, 2003; Mian, 1997). Goldfarb and Henrekson (2003) have mentioned this top down principle from the government and bottom up from the individual to implement this.

The role of academia in fostering technology transfer and economic growth is now considered a key element of national economic development policies (Nowotny, *et al.*, 2001; 2003). There also must be special incentives and rewards system to sustain this commercialization process (Lach and Schankerman, 2003). There are many initiatives that have been introduced by the government to promote research from universities. As a result, the government has raised research funding under Ninth Malaysia Plan (2006-2010) at 1.5% rather than 0.49% in the Eighth Malaysian Plan (Yusof, 2009).

Many countries are undertaking university reforms with a view to increase commercialization of the results of publicly funded research (Lehrer and Asakawa, 2004a; Slaughter and Leslie, 1997; Zhao, 2004) A number of studies have highlighted the involvement of academics in commercialization activity and indicated that the distinction between science and entrepreneurship is increasingly blurred (Owen-Smith and Powell, 2004). Academic entrepreneurship has often been used to describe the involvement of university scientists in forming startups related to their inventions (Lockett, *et al.*, 2005; Shane, 2004; Stuart and Ding, 2006).

The structure of the university as the basic platform for this will make the relationship with the industry easy to develop and there are also many programs that can be created for it such as industrial affiliate programs that connect with research centers or institutes, technology brokering, research park incubator programs and also spin-off companies (Dill, 1990; Fairweather, 1988; Johnson and Russo, 1984). The statement shows that one mechanism that can be used for commercialization of university research is by using the internet as the main platform. This has been suggested by Wan Hussain, *et al.* (2009) that the customer needs to be attracted to an innovation and that "attraction" may be a function of the seller's advertising expenditure, the effectiveness of the advertising, the price of the product, the reputation of the company, the service given during and after purchase, the location of retail stores and much more. Further, Wan Hussain, *et al.* (2011) also mentioned that internet marketing activities within university technology transfer in Malaysia are still lacking and require a lot of improvement. The writers attempt to classify the internet marketing strategy that can be used in commercialization of university research.

Technological capabilities reflect not only the ability in using resources but also capacities of resources, such as training, research and development (R and D) and maintenance of resources. Universities usually get their money from funds that have specially allotted by the universities for commercialization purposes. The universities' endeavors to enjoy significant income from commercialization are generally unsuccessful as the income arising from licensing is generally offset by the costs of patenting and preserving technology transfer offices.

Using the internet as the mechanism to finding investors online can also be regarded as International Technology Transfer (ITT). Several researchers (Perlmutter and Sagafi-Nejad, 1981; Contractor and Sgafi-Nejad, 1981; Simon, 1991; Stobaugh and Wells, 1984; Agmon and Von Glinow, 1991) regard International Technology Transfer (ITT) projects as a complex process that needs time to develop. The development process of ITT could be in the form of acquisition, adaptation and improvement (Rosenberg and Frischtak, 1985). Li-Hua (2004) reckons that the barriers of knowledge transfer known are cultural differences, language barriers, social values and different objectives. Among others, culture difference could become the major barrier in ITT (Kedia and Bhagat, 1988). The cultural difference exists between the technology provider and the technology receiver. This is in line with the opinion of Black, *et al.*, (2000) and Malik (2002) pointed out that for the technology transfer to function properly, the organizations involved in the process should endeavor to build a culture of mutual trust through effective communication between transferor and transferee. Working in unfamiliar markets is often burdened with difficulties due to culture differences. New cultures and business practices require time to understand, placing greater pressure on international construction companies to adapt to their new surroundings.

**Engaging With Venture Capital Online:**

The internet promises and changes the dynamics of business (Ansari and Mela, 2003) and helps to reduce the marketing cost to a lower level. Nowadays, the consumer can quickly access information about products and services with a one click of the mouse (Ha, 2008). Moreover, the potential of the internet show that information is no more a scarce resource but in fact a public good. Previous research shows that small medium enterprises also take advantage of the Internet especially the law firm, (Jedidi and Gupta, 1999; Jensen and Thursby, 2001; Ilfeld and Winer, 2002; Kim and Millan, 2008, Wan Hussain, *et al.*, 2009) and mainly use the internet to communicate via email.

This statement shows that the internet is not only mainly used to send email or for chatting but can be used to a new level. Other benefits from internet marketing is that it provides small sized companies and large companies with the same “weapons” to compete and fight in the new virtual world. Forrester Research estimates that by 2010, online sales will reach \$331 billion. With over 1 billion users in 2006 spending an estimated \$102.1 billion in online sales, it can hardly be ignored (Kocas, 2005).

The rapid adoption of the internet as a commercial medium has resulted in more innovative ways of marketing to consumers in computer-mediated environments. The internet has facilitated the ability of firms to reach target audiences more efficiently, displacing undifferentiated mass marketing techniques for more customised practices. By 1998, nearly 400,000 companies had established an internet presence (Hof, 1998) in hopes of capturing part of the current e-commerce market, currently valued at around \$8 billion and expected to grow to around \$50 billion by 2002 (Merrill Lynch, 1999). The future for e-commerce looks promising; over 60 million US homes have either e-mail or internet access and the number of households and businesses making online purchases continues to increase.

**Social Networking Sites:**

In 2004 the paper “Connectivism: A Learning Theory for the Digital Age” (Siemens, 2004) launched the theory of connectivism based on a critique of previous main learning theories synthetically labeled as behaviourism, cognitivism and constructivism. This writer mentioned that “the pipe is more important than the content within the pipe” which meant that the network itself is the learning process. This writer has introduced the connectivism theory. Social networking sites such as Facebook, Myspace, Linked-In and many more have affected the lifestyle of the people. Using this social networking help the people update their current profiles with the colleagues, friends and family. From the perspectives of commercialization of university research, social networking sites can help the university especially the inventors and technology transfer offices to find investors through online marketing. Swamidass (2009) also mentioned that the importance of the officer in a technology transfer office is to engage with the current technology. This will help reduce the bottlenecks of the commercialization of university research. The concepts of the social network have been studied by Siemens (2006) to find the potential of knowledge management. Regarding using social networking sites as the knowledge management we refer to the Table 1. Using this perspective the social networking site can be used as the process of co-operation/collaboration/trust/sharing features.

**Table 1:** Social Network Characteristic: adapted from (Pettenati, *et al.*, 2006b).

Social networking characteristic	
Goal Relation based on individual interests,	
debate, confront with specific topics;	
multiplicity and heterogeneity of joining	
interests and motivations.	
Belonging	Spontaneous and autonomous motivation
Duration	Non-defined
Cohesion and	High level of trust (relevance of reputation),
enabling factor	sense of responsibility, high technological
	skills, distributed reflexivity and evaluation (non
	Autonomous nor heteronymous but socially spread)
Type of relation:	share/evaluate

**Social Networking Characteristic:**

Social networking online is basically a new trend and has got wide attention for the past several years. Today, there many users using the social networking site to connect and interact with their friends, family and colleagues. The potential of the social networking as marketing has also been accepted and discussed. Using the social networking online as a marketing tool to attract venture capital is also a strategy that can help the university expose their products to the market. The Table 1 describe about the social network characteristic that been used in describe social networking sites. The social networking sites help the researcher to get reviews and feedback about their products and to establish networking with other people. The working environment and

situation of the university are different from other types of industry and using this mechanism will help to accelerate this process.

Social networking is a new trend and has grown tremendously over the past several years. Nowadays, people use it to connect with friends and create new relationships from all over the world. Social networkings also help to gain popularity and many celebrities use this to connect with their fans and friends. The popularity of the social networking can be used in commercialization of university research to the industry. Because the working environment within university and industry are different, using social networking can help to accelerate this process. By getting feedback from the network and social sites such as Facebook, LinkedIn, Friendster, Myspace and Twitter the researcher will know about the market and at the same will attract venture capital to invest money for their inventions.

The social network then facilitates online connections and relationships among people through online platform. Friend-networking sites, such as MySpace as well as Facebook, certainly are a specific kind of Social Networking Sites (SNS) which may have grown rapidly in popularity during the last couple of years. The social networking site MySpace ranks sixth in all round website traffic, with over 47 million unique US visitors every month. Online traffic data pertaining to Facebook, a social networking site focused in the direction of university students attracted more 150 million unique US visitors a month. Applying social networking with the commercialization of university will help the university eliminate the barriers and interact more deeply to collaborate in the future. Total facebook user in Asia is much more than 60 millions and more than 5 million users are from Malaysia. Social Networking sites can be used as the bridge to connect the university and industry by promoting university invention. Using social networking online could also create word of mouth marketing activities. Organizations recognize that this word-of-mouth exchange is available and intentionally employ ways of turning communication between consumers into “word-of-mouth marketing” (Freeman and Chapman, 2008). Next paragraph will be discussed about the forum marketing strategy that can be utilise in commercialization university research.

#### ***Forum Marketing:***

Another type of marketing that can be used is the forum marketing. Forum marketing is the untapped niche and using this marketing will help the university to find reliable investor through it. A forum community has been defined as the C-to-C (customer to customer) network (Pitta and Fowler, 2005). Wind (1976) said that using C-to-C relationship is becoming the most powerful and important technique because consumers have been shown to influence brand choice and services. This statement is supported by Pitta and Fowler (2005) that they stressed using the forum as the formal mechanism that the community uses to exchange information and by doing so will also help to market the products or services. They also mentioned that posted messages in forum are organized and help the user know what is currently happening and discuss by organizing it into “threads” that are the subject headers for a discussion. Finding an appropriate forum for the inventor are crucial to help finding the investor. There are website Big Boards ([www.big-boards.com](http://www.big-boards.com)) that put the entire forum in the internet. Inventors can use this website to find information related to their research.

#### ***Viral Marketing:***

In the high speed of internet marketing revolution, the use of viral marketing is become important (Krishnamurthy, 2000; Ives, 2005; Kilby, 2007). Viral marketing is also known as the word of mouth marketing but it only happens in the online world (Cordoba, 2001). The literature reviews about the viral marketing in the context of commercialization of the university are still at infancy state and need a lot of research to be done. Viral marketing also can be defined as the marketing tools that the consumer uses to spread the message about the product or services (Thorsten, *et al.*, 2004). The consumers that get the message will share it among their friends and this will create a “virus” among the network (Ives, 2005). The definition of viral marketing by Phelps, *et al.* (2004) is “the process of encouraging honest communication among the consumer network” (p. 334). By utilizing the viral marketing strategy, consumers share their experiences about the services and products. By replicating this technique in the context of commercialization of university research as a marketing strategy would easily attract venture capital to be invested if the products from the university are good and profitable. Venture capital can easily be convinced based on the online reviews about the potential of the product. As Montgomery (2001) mentioned, this type of marketing can infect the customer like a rampant flu virus” (p. 93).

When using the viral marketing technique in commercialization of university research, the people will give attention and be aware about the product (Wan Hussain, *et al.*, 2011). The society will be aware that the university has new products and inventions and feel confident of the capability of the scientist.

#### ***Mobile Marketing:***

Mobile marketing also is one of the possible platforms that can be utilized in finding and attracting venture capital to engage with the commercialization of university research. International mobile operators at the

moment are increasing technological transition from 2G to 3G, while by June 2004 active users of wireless data applications exceeded 115 million internationally (Smith, 2004). This figure will reach 1.72 billion by 2007, with blend subscriber revenue of \$584 billion (Yankee Group, 2003). Matching the GSM Association, cellphone users send more than 10 billion SMS messages each month; making SMS the most popular mobile data service (Dickinger, *et al.*, 2004). Mobile e-mail has been especially regarded as a physique tool to “strengthen brand awareness, build or test customer loyalty and develop or develop demographic databases” (Mylonopoulos and Doukidis, 2003). Mobile marketing or perhaps wireless marketing is a subset of e-marketing and is defined by Dickinger, *et al.* (2005) as “... using a wireless medium to supply consumers with time-and-location-sensitive, personalized information that promotes goods, services plus ideas, thereby benefitting all stakeholders”. A prior pilot study performed by Quios located that in mobile advertising the level of recognition was surprisingly high: 79 per cent of participants recalled 60 percent of mobile advertising (Barnes, 2003). Aside from that, firms that using mobile e-mail campaigns can bring in consumer attention and provide consumer responses to a much greater degree than other direct marketing channels, because such firms can engage in “one-to-one dialogue” with customers (Kavassalis, *et al.*, 2003). A fresh survey by Ericsson signifies that 60 per cent of samples liked getting mobile advertising (Barnes, 2003). Also, a survey using popular brands’ trial mobile advertising found that as many as 84 per cent of 500 young British adults are likely to recommend the service to their friends, while only 7 per cent are likely to abandon the service (Barwise and Strong, 2002). However, complementing mobile advertising with other channels, such as the internet, television, print media and personal contact, enables marketers to maximize campaign usefulness (Kavassalis, *et al.*, 2003). This mode of advertising takes bonus of precious channels of wireless communication to enhance customer relationships and to carry out direct response marketing and nomination activities. This approach of marketing also can act as a trust-building mechanism that are more powerful than traditional marketing.

Based from the previous paragraph, we feel that incorporating mobile marketing will give a big impact to promoting commercialization of university research and at the same time help in sustaining the relationship with the industry. Nowadays, everyone has a cell phone and this tiny tool has become the important tool in our lives and using this marketing strategy will help the university to penetrate the market and establish relationship with the industry.

#### ***Other Types of Internet Marketing Techniques:***

There are also internet marketing techniques that can be implemented to promote commercialization activity such as Search Engine Optimization (SEO), Keyword Advertising, Banner Advertising, Email Marketing and Video Marketing. Internet marketing strategies are only tools to help the commercialization of university and to prevent bottlenecks in technology transfer activity (Swamidass, 2008). We feel that in the future SMS advertising also can help in the commercialization activity of university invention. There is still too little attention and discussion of using these types of marketing in technology transfer and commercialization activity especially in Malaysian universities and we hope that there will be more future discussion to expand our knowledge and understanding.

#### ***Effect of The Internet Marketing And Legal Implications:***

Rules and regulations in Malaysia about the commercialization of university invention still need further development. As has been mentioned by (Yusof, 2009) the commercialization of university research in Malaysia is still at paucity level and more research needs to be done. Implementing internet marketing strategy for commercialization of university inventions will help the university promote university inventions but there are also drawbacks that universities must know. This is because the internet is just like “double-edged sword” and universities must use it wisely to maximise the profit and reduce the risk.

In this article, we present the benefits and drawbacks of the collaboration between university and industry. The benefits of the commercialization activity help the university gain additional income, promote two-way knowledge transfers and give impact to economic development. However, some of the negative drawbacks from this activity are the impact on the students and less time spent on teaching by the academics.

Commercialization of university research in Malaysia is still new and needs more discussion. Using the internet as a platform to finding and attracting venture capital creates a few issues that need to be considered. When online, there are no limits because the internet offers no boundaries for the researcher and venture capital to react. It is very important for the university to become the middle agent that helps in engaging the venture capital with the researcher. From the legal perspective, the researcher that wants to attract venture capital must get the permission from TTO office before doing anything. This is because the funding of their research is government-based, thus universities have legal rights over the invention. The researcher can easily bypass the procedure but in the end the researcher should pay the consequences for his action. Using the internet should be only for engaging and attracting venture capital, not creating and doing business out of the invention. This is the vital principle that should be borne by researchers when doing internet marketing strategy.

Based on the aforesaid discussion, finding investors through online also has bad implications for the inventor. It is similar to the double edge sword which must be used carefully. This is the potential problem that has been identified in using internet marketing strategy.

***Security level of the website:***

While using the internet, the inventor must be aware of the security level on their website and ensure that it is always updated. It is important for the inventor not to reveal their information about the research that they have done. Hackers always try to do anything to hack into the system and steal research and inventions. The university should establish the security department that can cater to this problem.

***Payment System Gateway:***

By attracting venture capital through online the university can obtain money from all over the world. It is very important for the university to establish a reliable payment system gateway that will help the transaction become smooth and faster. Using this payment system, the universities can get a massive funding from their alumni and at the same time improve the technology transfer process. Until today, there is still no payment system gateway available at the Malaysian universities to attract venture capital. We feel that establishing a payment system will help the university get easier funding because nowadays we are connected online and the internet has made our life become easier.

***Limitations and Future Research:***

The present study presents and introduces a new perspective of attracting venture capital using the internet marketing strategy. Our study has several limitations and suggests areas that need for further research. The data from our study only present the internet marketing that is available and that can be utilized for attracting venture capital. The limitations have not been tested yet in the commercialization process in the Malaysian environment. Further research using details will help to provide more understanding about this scenario and the perceptions of using venture capital in Malaysia.

***Conclusion:***

This research attempts to investigate the functions of the internet as the platform in commercialization of university research in Malaysia and how can it help source for venture capital. Commercialization of university research involves many people such as researchers, Technology Transfer Offices (TTO), entrepreneurs, policy makers and venture capitalists. Utilizing the internet can help working together to achieve business success. The outcome of this study could provide an insight in commercialization and technology transfer in Malaysian universities. This research in this study is part of an ongoing PhD research at the Faculty of Engineering and Built Environment UKM, on the commercialization process in Malaysian universities. Commercialization of university research is still new in Malaysia and this study will contribute to the existing literature by incorporating the internet as the new medium in sustaining the relationship with university and industry. The results could provide an insight into Malaysian universities using the internet to attract venture capital rather than using traditional methods.

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