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## Potential Benefits of ICT for Youth Agro-based Entrepreneurs in Malaysia

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### ABSTRACT

Information Communication Technology (ICT) offers an abundance of benefits to users, particularly in relation to socio-economic aspects. Agro-based entrepreneurs are one group of users that has experienced such benefits. Additionally, young agro-based entrepreneurs are able to access more opportunities due to their superior ICT knowledge and compatibility. The present study aims to identify the potential benefits of ICT usage for youth agro-based entrepreneurs. Through document analyses, it can be concluded that the benefits offered from ICT to youth agro-based entrepreneurs include improving operational efficiency, increasing income, strengthening marketing aspects and creating new opportunities. With all of these potential benefits in place, it is hoped that consistent involvement from youths in the agriculture industries can be ensured.

**Key words:** Information communication technology, youth in Malaysia, agro-based entrepreneurs

### INTRODUCTION

According to the Third National Agricultural Policy, agriculture sectors contribute 7.6% yearly to Malaysia's overall GDP. However, the lack of guaranteed market access, high-cost margins, lack of information and market infrastructure means that agricultural activities have been slow to thrive. One of the main challenges in the industry relates to marketing. So far, within the Malaysian scope, only the Federal Agricultural Marketing Authority (FAMA) is acting as the main government marketing agency for agriculture products. Other challenges faced by modern farmers include volatile and low prices and poor information management, particularly on the latest market prices and the supply or stock for the long-term and short-term market. All of these problems can be easily solved by one tool Information Communication Technology (ICT). Studies conducted by Hassan *et al.* (2009), Bahaman *et al.* (2009), Shaffril *et al.* (2009) and Azarian *et al.* (2012) have proven ICT to be an effective solution to problems that occur in the agriculture industry, such as weak marketing linkages, poor information management, low productivity, low income and a lack of

diversity. The main objective of this study has much to do with the findings of these previous studies whereas it tries to explore the potential benefits of ICT for youth agro-based entrepreneurs in Malaysia.

In Third National Agricultural Policy stated several objectives to ensure the sustainability of the agriculture sector. These objectives are to increase productivity and competitiveness within the sector, enhancing food security and deepening linkages with other sectors. In addition, the government listed five agricultural policies in the Ninth Malaysian Plan (Economic Planning Unit, 2006): improving the services delivery systems; increasing agricultural production, including new resources of growth with greater private-sector participation; expanding agro-based processing activities and product diversification; strengthening marketing and global networking and enhancing the incomes of smallholders, farmers and fishermen.

Certainly, all of the policies mentioned above could be further strengthened by the superior evolution of ICT in Malaysia. Malaysia's exploration of ICT began in the early 1970s with the establishment of the first earth satellite system in Kuantan, Pahang. The satellite construction involved a total

Table 1: Indicators of ICT development in Malaysia

Communication technology	2000 (per 1,000 people)	2005 (per 1,000 people)	2010 (per 1,000 people)
Internet	71	139	167
Telephone	421	907	1339

Source: Malaysian Communications and Multimedia Commission (2011)

Table 2: Use of the internet at home

Age	2009 (%)	2011 (%)
Under 15	8.1	11.0
15-19	19.2	8.6
20-24	14.2	16.5
25-29	12.9	17.5
30-34	11.4	15.7
35-39	9.5	10.4
40-44	9.4	7.1
45-49	5.1	5.8
50 or over	10.2	7.4

Source: Malaysian Communications and Multimedia Commission (2011)

cost of RM 9 million (roughly equal to USD 3 million) and opened on April 6, 1970. It also highlights ICT progress in Malaysia and the country's opening of new chapter in relation to the outside world.

Subsequently, a National Telecommunications Policy was launched on May 17, 1994 to ensure the growth of ICT services in line with national aspirations. The establishment of these telecommunications policy objectives aims to support the achievement of national development goals in relation to national unity and national integration through the promotion of interracial and regional facilities based on telecommunications services. In addition, the goals of vision 2020 are intended to be met by creating a knowledgeable and informative community through the use of modern and sophisticated telecommunications networks. The evolution of modern telecommunications has resulted in superior inventions in terms of advanced communication technologies such as mobiles and smartphones, the internet, 3G, WiFi and other more sophisticated media for connecting people.

In RMK-9, the government accentuated the need for Malaysians to enhance their ICT knowledge in order to keep up with global communication technology development. This is particularly vital in the field of social and economic development, communication, agriculture, education and so on. In the current local setting, it is doubtless that ICT plays a vital role in the routines of all Malaysians and offers an abundance of benefits to them.

The internet and telephones are among the main communication technology devices used in Malaysia. The evolution of these two technologies has been tremendous and the majority of Malaysians rely greatly on them to conduct their socio-economic routines. A number of facts have supported this: First, the number of mobile subscriptions per 1,000 people, including both fixed and mobile, increased more than three-fold from 421 in 2000 to 1,339 in 2010. In addition, expansion of the broadband infrastructure has increased the use of internet services, as shown by the increasing number of internet subscribers from just 71 per 1,000 people in 2000, to 167 in 2010 (Malaysian Communications and Multimedia Commission, 2011) (Table 1).

Overall use of the internet at home among youth in Malaysia has increased from 67.2% in 2009 to 68.7% in 2011; however, this increase of 1.5% is relatively small. Users aged 25-29 and 30-34 have increased by 4.6 and 4.3%, respectively, while users aged 20-24 have increased 2.3% and users aged 35-39 have increased only 0.9%. However, users aged 15-19 have decreased by about 10.6% (Malaysian Communications and Multimedia Commission, 2011) (Table 2).

### AGRO-BASED ENTREPRENEURS IN MALAYSIA

Similar to ICT development, agriculture has been subject to special focus from the government. A number of efforts have been made to ensure the success of the agriculture industry in the country. In terms of marketing aspects, for example, local agro-based entrepreneurs are assisted by a number of agencies, the most common agency of which is FAMA. Among FAMA's main aims are effectively and efficiently developing marketing chains for local food and agricultural products. Additionally, FAMA coordinates agricultural marketing activities from either private or government departments. It also helps to improve market systems and expand agricultural markets, for example by providing pasar tani (local calling for agriculture markets) to enable farmers and entrepreneurs to sell their products directly to customers. In addition, FAMA enhances cooperation between the private sector and the government.

The government has also established three Regional Growth Corridors (RGC) under RMK-9. These three corridors are the Northern Corridor of Economic Region (NCER), the Eastern Corridor of Economic Region (ECER) and the Iskandar Development Region (IDR). The main objective of the RGCs is to increase and sustain the economy based on agriculture, especially for small and medium-sized agro-based entrepreneurs. Following RMK-9, the Tenth Malaysian plan (Economic Planning Unit, 2010) was launched and this has attempted to boost the development of a new generation of entrepreneurs that are capable of coping with global challenges and fulfilling the demand of the global market (Economic Planning Unit, 2011).

Figure 1 shows the distribution of agricultural sectors within the small and medium-sized enterprise (SME) market segment from 2006 to 2013 (DoS., 2013). In general, two of the agricultural sectors in SME in Malaysia-agriculture and crops and livestock recorded an increasing trend compared to their previous years while the remaining agricultural sectors in SME-fishing and forestry and logging recorded decreasing trend on productivity growth. Crops and livestock have been detected to recorded the highest growth in 2013 and this is resulted by the better performance of agriculture crops, such as vegetables, fruits and paddy as well as livestock, which are mainly cultivated by SMEs and this is followed by the agriculture. The forestry and logging were detected to record the lowest growth in 2013. The fisheries sector, albeit recorded a significant growth in 2006, failed to continue to productive

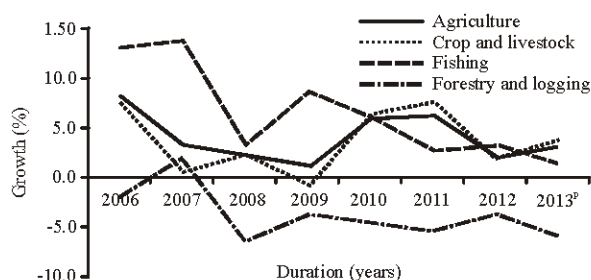


Fig. 1: Distribution of agricultural sectors in SMEs from 2006 to 2013 (DoS., 2013)

trend in the upcoming years. In 2013, the fisheries sector recorded the second lowest of productivity growth. Both sectors-the fisheries and forestry and logging, albeit recorded a slight increase in productivity in 2011, failed to continue the growth in 2012 and continue to decrease in 2013.

### BENEFITS OF ICT FOR YOUTH AGRO-BASED ENTREPRENEURS

**Improved operational efficiency:** Many sectors have benefited from the superior functions of ICT, especially when it comes to improving responses to customers and increasing productivity (Harindranath *et al.*, 2008; Omar *et al.*, 2014; Ghee-Thean *et al.*, 2012). One of the reasons for this scenario is that ICT can synchronize data between suppliers and customers and also improve decision-making processes. In addition, ICT can improve the exchange of supply and demand information between farmer and entrepreneurs (Molony, 2008).

**Increased income:** By using ICT, entrepreneurs can reduce both direct and indirect costs, especially advertising costs and at the same time can improve their business processes. Lower costs mean that entrepreneurs can increase their income. According to Muriithi *et al.* (2009), ICT also enables entrepreneurs to increase production and sell more products to potential buyers and also to coordinate sales. In this way, entrepreneurs can increase their income, as well as their sales volumes.

**Strengthened marketing aspects:** Through the use of ICT, entrepreneurs can access up-to-date market information. ICT provides opportunities for the youth-agro based entrepreneurs to create their own networks and linkages, regardless of time and place (Bahaman *et al.*, 2009, 2010; Velmurugan and Velmurugan, 2014). Such opportunities offered to entrepreneurs will strengthen and improve their marketing aspects at both a regional and an international level (Bahaman *et al.*, 2009). As a result, they can market and supply their products not only domestically but also internationally.

**Creation of new opportunities:** By having access to ICT, entrepreneurs can create new opportunities by penetrating the global market. In addition, they can find new partners and exchange information, reach new customers and expand to new markets, as well as improving value chain coordination (Zhu *et al.*, 2006). It is consistent with RMK-9 to increase exports and decrease imports from other countries, as well as to increase the value added to products. According to Gakuru *et al.* (2009) and Sahharon *et al.* (2014) by using ICT, entrepreneurs can overcome challenges to upscaling, such as by sharing and transferring knowledge, as well as innovating and increasing the sustainability of their products. Furthermore, entrepreneurs can form public-private partnerships, which lead to win-win situations for all concerned (Muriithi *et al.*, 2009).

### CONCLUSION

ICT is very important to agro-based entrepreneurs and offers many benefits to them. Through the superior functions offered by ICT, youth agro-entrepreneurs are potentially able to improve their operational efficiency, increase their income, strengthen their marketing aspects and create new opportunities. The potential benefits-if fully manipulated by the youth agro-entrepreneurs-will be one of the keys to their success in the agriculture industry. Therefore, entrepreneurs must increase their knowledge of ICT and explore technologies in order to run their businesses and grow; thus, rather than focusing their efforts only on the subsistence level, by using ICT entrepreneurs can afford to run their agriculture business at a commercial level.

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