

## Underground Digital Economy in Thailand

Tanpat Kraiwanit  
Rangsit University, Thailand

— *Review of* —  
**Integrative  
Business &  
Economics**  
— *Research* —

### ABSTRACT

Globalization is making our world smaller and leading to new technologies that make human life comfortable. Unfortunately, along with the bright side of economic progress through improved communications, the dark side of the underground economy has also advanced during this digital age. The study is based on an analysis of about 1200 samples of online data collected in Thailand. It is found that the significant of age (X1), education (X2), income (X3), residence (X4), place (X5), a device used (X6), and patterns of internet use (X7). There was a statistically significant relationship between the Thai youth and the underground economy involvement. Thailand's government does not allow its youth to enter an Internet café prior to 3 pm and after 10 pm on weekdays, educates the public about the rules involved, and strictly enforces them. Parents provide the necessary computer devices in the common rooms of their houses which are easily visible and observe the children's behavior while using the Internet. To encourage children to use their free time by learning, playing sports or music and change their social values is not a part-time issue for a poor family; it takes a lot of time.

Keywords: Underground Business, Digital Economy

### 1. INTRODUCTION

Digital technology is helping drive economic growth across all sectors. In addition to enhancing human convenience, it also helps shrink the world. You can now communicate quickly across the globe, discover information or make transactions easily via e-commerce, e-banking, etc. However, this welcome change is accompanied by a dark side, the underground economy. Advances in communication technologies are also making it easier to access the underground economy as well, thus leading to an underground digital economy according to a report by the Thai Health Promotion Foundation. As disclosed at the conference on "gambling authority amid reform", we found that Thailand has 57% who had gambled at least once by the age of seven. However this is not a surprising number, given the simplicity of site searches on the Internet. In addition to betting online, one can indulge in prostitution and trading of illegal goods through simple keyword search. Communication knowledge and transaction

skills are being used to help enter the underground economy. Thai youth is indeed exhibiting increased curiosity to get involved in the underground economy.

## **2. LITERATURE REVIEW**

The hidden illegal economy is variously called the underground economy, black market, shadow economy, informal economy or parallel economy (Phongpaichit and Piriya-rangsan, 1999). Various attempts have been made to assess the sizes of such sectors in different countries. For instance, the sum of tax evasion and the informal sector has been estimated at 15% of GNP in the UK, 27% in Germany and the USA, and almost 60% in Thailand (which is certainly huge).

Thailand has acquired an international reputation as a country where illegal businesses flourish because of poor law enforcement. This is not only bad for the nation's international image but attracts international illegal business to use the country as a base. Thus, Bangkok has become a clearing-house for the shipment of girls from China to third world countries, and from South Asia into Malaysia. In drug trade, prostitution, and illegal trafficking of humans, Thailand has become a center of international significance.

The illegal economy complicates and undermines the management of the economy. The profits are often spent on luxurious consumption, or invested speculatively in the stock and property markets. These flows may counteract government policies to control consumption, promote saving, combat inflation, and regulate eccentric movements in speculative markets.

The high profits derivable from the illegal economy help promote a spendthrift consumerist culture. They also create social values in favor of risk and speculation for superficial and illusory gains and tend to erode the work ethic.

Leksrinak, Ploydanai, and Sukchotiratana (2012) studied the gambling behavior of youth on the basis of a case study from Bangkok and found that 72% of youth gamble at least 1-3 days per week, 89.8% gamble at a friend's house or residence, with each gambling session costing between 1,000 and 2,000 baht. The social observation with the highest weight was that people gamble especially when a friend also gambles. The structural factor contributing the highest to gambling was the news and information related to the place to gamble and the method of gambling. The desire to win back is the most significant factor affecting the attitude towards and motivation to gamble. As per emotional and physic factors, it was found that addicted persons were unable to quit which eroded their self-confidence felt stressed out or just neglected. As for their family

and social interaction, addicted persons were to be lying to family members with regard to their gambling compulsions, fight with family members over gambling, steal money from family members to sustain their gambling activities, or borrow money to keep gambling. The outcomes from such aggressive youth behaviors were that youth education turned mediocre as they skipped classes to gamble, loss of concentration and sleeping in the class, bad school results when compared to friends, reprimands from teachers and family or simply being arrested. All this was leading to risky behavior including increased smoking, drinking and use of drugs.

Kasikorn Thai Research Center Co., Ltd. conducted a survey and found that 21.4% of the responding football audiences were gamblers; the amounts wagered varied between 200 and 10,000 baht while estimated total amount of gambling debt was at least 6,000 million Baht.

The advent of the digital age immediately led to the underground digital economy. In this research, the term underground digital economy refers to “any action performed on the Internet involvement with spending or making money illegally.”

### **3. Methodology**

This research explores the factors that are making Thai youth in the digital age to be drawn into the underground economy. Data collection surveys were conducted using the Convenience Sampling Technique using an online questionnaire that sends a link to the Web boards, Facebook fan pages, and pages of various educational institutions. The researcher offered random prizes to participants in the survey. In-depth interviews were conducted with 20 interviewees, who were explained that the information from them would be kept confidential; individual records would not be disclosed.

#### **3.1 Data analysis**

The researcher analyzed the data collected from the questionnaire survey and interviews in order to understand the factors affecting youth in the present era of the underground digital economy. Incomplete responses were eliminated. A statistical program was used to estimate the percentage (Percentage), average (Mean) and standard deviation (Standard Deviation) values of variables of the Interest including the opportunity cost of time incurred by Thai youth as they got involved with the underground digital economy through loss of part-time hourly earnings. In addition, the perceptions and factors affecting youth as a result of their involvement with the underground economy were analyzed. Dummy and dependent variables were delineated using Logistic Regression Analysis (LRA). Data from the in-depth interviews were processed using descriptive content analysis and synthesis in accordance with the research framework.

### 3.2 Population and Samples

The population used in this study consisted of adolescents aged 13-21 years and living in Thailand but using the internet regularly. The population was divided into two groups.

The first group consisted respondents to the online questionnaire. The group consisted of 1200 cases. The second group consisted of participants in in-depth interviews conducted via chatting online. Specific samples (Purposive Sampling) taking part in the underground digital economy were in a total of 20 samples.

## 4. RESULTS

### 4.1 Quantitative Research

#### Underground Digital Economy Function

The factors inducing Thailand's youth to get involved in the underground economy created by the digital age including gender, age, education level, income, residence, place of Internet, and internet-enabled devices were analyzed using the Pearson Chi-Square. The importance of a variable rate was assessed based on the average weight of the Pearson Chi-Square for each significant variable (see Table 1).

**Table 1. The value of a variable rate based on importance.**

No.	Variable	Pearson Chi-Square	Score
1	Age	250.06	25.07%
2	Education	263.701	26.44%
3	Income	117.164	11.75%
4	Occupation	132.799	13.32%
5	Place to use the Internet	86.991	8.72%
6	Using device	76.708	7.69%
7	Patterns of Internet used	53.810	7.01%
total		981.233	100.00%

Next, the options for each variable were determined. The scores were determined by multiplying the youth ratio values with the corresponding scores. The results are presented in Table 2.

**Table 2. The condition of each variable.**

Variable	Known underground economy	Score
<b>Age</b>	<b>(full points)</b>	<b>(25.07)</b>
13-15 years	51.1%	13.02
16-18 years	54.3%	13.84
19-21 years	86.2%	21.96
<b>Education</b>	<b>(full points)</b>	<b>(26.44)</b>
Secondary school	51.8%	13.92
High school	53.3%	14.32
High School / Vocational	72.2%	19.41
Bachelor	87.3%	23.46
<b>Income</b>	<b>(full points)</b>	<b>(11.75)</b>
Less than 2,000 baht per month	49.3%	5.89
2001-4000 baht per month	57.3%	6.84
4001-6000 baht per month	69.6%	8.32
6001-8000 baht per month	76.8%	9.17
More than 8,000 baht per month	78.3%	9.35
<b>Occupation</b>	<b>(full points)</b>	<b>(13.32)</b>
Living with the father and / or mother.	58.9%	7.97
Living with relatives, not parents.	53.5%	7.24
Living with friends as hostels or lodges.	90.5%	12.24
Living alone as hostels or lodges.	80.0%	10.83
others	50.0%	6.77
<b>The place for using the Internet</b>	<b>(full points)</b>	<b>(8.72)</b>
Residences	61.5%	5.45
Internet cafe	65.0%	5.76
In School	70.0%	6.21
Play both residential and cafes.	88.4%	7.83
Play both residences and schools	60.9%	5.40
Play both Internet cafes and schools	36.4%	3.22
Play both residences, Internet cafes, and schools	76.8%	6.81

**Table 3. Variables and constants in the equation.**

Variable	Symbol	Co-efficient	Sig.
Constant	-	-10.630	.000
Age	X <sub>1</sub>	0.021	.536
Education	X <sub>2</sub>	0.124	.000
Income	X <sub>3</sub>	0.106	.013
Occupation	X <sub>4</sub>	0.130	.003
Place to use internet	X <sub>5</sub>	0.469	.000
Using Device	X <sub>6</sub>	0.363	.000
Pattern of internet used	X <sub>7</sub>	0.712	.000

The following model was used:  $P = \frac{1}{1 + e^{-Z}}$ ; where P is the probability that Thailand will recognize youth involved with its underground digital economy.

By  $Z = -10.630 + 0.124(X_2) + 0.106(X_3) + 0.130(X_4) + 0.469(X_5) + 0.363(X_6) + 0.712(X_7) + \text{error}$

### Back Testing Technique

To observe and predict values corresponding to all cases, we used the back testing technique at various cut-off levels (0.50 to 0.70 as Indicated in Table 4), i.e., the level at which Thai youth are supposed to have gotten involved with some underground business. If the predicted value is smaller than the cut-off value, it was determined that the individuals were not involved in the underground business. By contrast, if it was larger, it was determined that the youth were involved.

**Table 4. Back Testing results**

Cut value	Predict		Not involve	Involve	% Correct	Total
	Observe					
<b>0.50</b>	Not involve		351	441	44.3%	2196
	Involved		192	1212	86.3%	71.2%
<b>0.60</b>	Not involved		600	192	75.8%	2196
	Involved		498	906	64.5%	68.6%
<b>0.70</b>	Not involved		669	123	84.5%	2196
	Involved		654	750	53.4%	64.6%

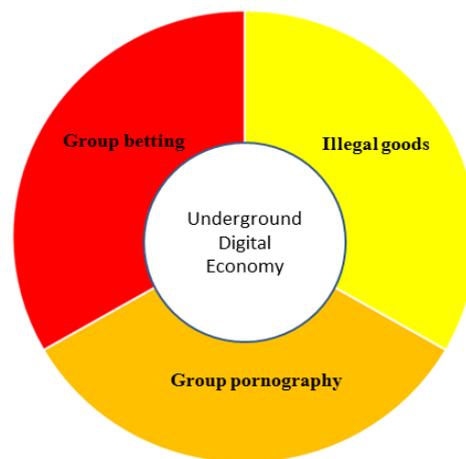
The results show that the best cut-off value level seems to be at around 0.50, which we can see from the Table 4. Although it has been estimated that the probability of Thai youth getting involved in an underground business was 71.2%, which is higher the

cut-off values of 0.60 and 0.70, it is acceptable to set the best model at the cut-off value of 0.50.

### Results from the In-depth Interview

In this section, we focus on the information collected through the 20 online chatting samples. The following section reports the findings.

Figure 1: Underground digital economy



#### 1. Gambling

The youth who reported getting involved in the underground economy mentioned gambling at casinos. The betting modes were various (depending on how the games were played). First, they start by betting among the group of friends and step up to an underground casino. In some cases, the players do not have to travel to bet on since they can play online or through text in and then transfer money to the table to place the bets. Once young people start gambling, they are always at risk of becoming a gambler in the future.

As for online gambling, the interviewees told that websites simplified gambling. First, the players get the identification document (ID) to log in, then they transfer money to a private gambling account given by the website provider. The minimum amount (500-1,000 baht) which depends on the owner policy is not considered to be too much for them. Gamblers can bet on baccarat, roulette, slot machine, playing the card, and etc. The websites use real time or live videos that are open 24 hours a day. They don't feel it wrong to gamble online. Online gambling makes them feel safe because no one knows who they are. The key factors which make these young people get involved in the online gambling are, they can earn money easily for themselves. Moreover, transfer of funds received is extremely simple.

#### 2. Illegality

This refers to what constitutes legal goods. Copyright violations of movies, music, games, applications and goods are considered illegal. Usually, participants exchange files among their members. Once they just register as VIP members, they can download unlimited numbers of files; the subscriptions are not only a long time but also daily. Retail prices range from 50 to 1000 baht per year depending on the service provider. The respondents also said that they had been duped by online vendors into buying brand-name shoes. Many posted in forums accusing some vendors and warning other customers. The illegal products included guns and drugs that could not be bought easily if you are a third party or were unable to log into a private Line Group or a Facebook Group. However, sometimes, you could still order by phone. As for illegal guns, it is so easy to search by using the keyword “sale of illegal guns” on the website of the search engine only a thousand Baht.

As for drugs, one of the informants said that outsiders are able to purchase drugs easily provided he/she has a connection inside to join a line group or a group on Facebook. The dealer still uses the phone to order more than selling, based on the Internet because these don't have to advertise and customers are often regular. Among the drugs popular among Thailand's youth are the ice drug (Methamphetamine), Kratom, marijuana (ganja),. Information about drug formulation and how to find the raw materials for the mixed drugs (such as the 4x100 drug) is included.

### **3. Pornography**

As for online pornography, it can be found everywhere. Some websites usually cheat by transferring money first not giving anything in return. This problem can, however, be avoided by using a specific website. Most live shows take place during nights with DJs encouraging the audience to pay more money to see more.

Age restriction for live shows is only 18 years. Many spectators are high school students studying at the vocational level. The interviewee said that one of the DJs, who entertained the audience, his friend, was just 17 years old.

## **5. Conclusions and Recommendations**

### **5.1 Discussion**

The results from this research have shown that Thai youth living in dormitories or personal residences have extensive opportunities to participate in the underground digital economy compared to youth who are living with their parents. This finding is in agreement with Khongkrit Leksrinag, Narong Ploydanai and Wichernchot Sukshotirat (2012) who studied the gambling behavior of youth from Bangkok. In terms of social factors, it appears that individuals with a gambler friend are themselves more prone to online gambling. As for structural factors, the main source of gambling information

seems to be sports media content about gambling, that use new technology and have incorporated simple payments via a banking system that can be accessed easily. Among factors related to attitudes and motivation in gambling are channels for earning money and returning the money lost. The observation that the majority of youth gamble at a friend's house or a friend's shelter is in agreement with Siriporn Seritanon (2011) who studied the effect of media exposure and obscene sexual behavior of university students including the application of randomized response technique and the solutions to prevent exposure to pornography. It was found that most of the students exposed to pornography via the Internet system in social media through Smartphone and Facebook, focus on how to look at friends' house and dormitory.

With regard to the infringement of copyright goods, it is found that Thai youth buys pirated goods because they are cheaper and copyright products are too expensive to buy. This conclusion is in agreement with Sumalee Lekprayoon (2010), who has studied the subject of infringement of intellectual property rights and noted that a pirated brand sells well if it is popular among consumers who are not willing to pay the high price and they buy counterfeit goods that cost less.

Thai youth dare to engage in the underground digital world because they feel safe, nobody knows them there; they can go to a public internet cafe or even get into online activities while at their dormitory. Such an environment makes the youth feel safe as their parents do not know of their behavior. This observation is consistent with the concept of the Classical School of Criminology (Jeremy, 1832) that a crime initiated by individuals' free will. Choosing to do something that gives them the satisfaction that they are responsible for their own actions. They do not worry about evading the law and thus choose to be the offender. Thai youth who have seen the advertisements in the underground digital economy often feel that these have become a commonplace in society. As a result, they get attracted by the content designed to influence emotions, attitudes, values and behaviors of consumers. Especially teenagers who have the ability to learn, understand, analyze and synthesize but do not hesitate or consider the situation carefully and are likely to search for new things regardless of how risky it is to engage in such behavior.

## **5.2 Suggestions**

### **For Policy Makers**

The government should make sure that the Internet cafes are not open 24 hours a day and strictly ban youngsters from playing before 3 pm or after 10 pm on a weekday. Since youth have little knowledge about legalities of using computers laws and regulations, the government should educate and make sure they comply. The government should establish a cyber-police department to control and arrest illegal services. They should organize public campaigns encouraging the sale of copyright

products only.

### **For parents**

Parents should provide computers in the common room or in an area at home where they can easily observe children's Internet activities and behavior. Moreover, if necessary, parents should not allow children to live in a private dorm or live in a rented home alone. They should find opportunities to visit their children regularly, or call them frequently. They should encourage children to spend their free time to do something productive like learning an additional language, playing sports or music or volunteering to help the poor. Presently, some students have their own businesses as net idols or presenters and make more than 100,000 baht a month.

### **For further study**

- 1) There should be a study categorizing factors that influence youth to participate in the underground digital economy, e.g., as factors influencing them to gamble, to buy illegal things, and the like
- 2) Study other factors affecting Thai youth to participate in the underground digital economy such as the number of I.D. Line or Facebook, so the youth can generate a fake I.D. to participate in the underground digital economy.
- 3) In order to understand the operation processes of the underground businesses better, there should be a 'trial' of participants in the underground digital economy.

## **ACKNOWLEDGEMENTS**

This research was supported by Rangsit University research fund. We thank our students for data collection and Mr. Phatcharawat Phakhinsitthinan, Research Assistant for data analysis.

## **REFERENCES**

- [1] Aphapirom, A. (2003). The report, analysis, synthesis and summary execution of various events and trends **that Occurred in Thailand and abroad and have an impact on Thailand**. *Square*, 2(17), May-August 2003.
- [2] Buranasuksakul, T. (n.d.). Child and Adolescent Mental Health. Retrieved July 12, 2015, from [http://www.smartteen.net/main/\\_admin/download/4-30-1387795341.pdf](http://www.smartteen.net/main/_admin/download/4-30-1387795341.pdf)
- [3] Narongploy K. & Wichiansuchotirat D. (2012). The behavior of Youth Gambling: Case Study in Bangkok. *KKU Research Journal*, 12(4), October – December 2012.
- [4] National Statistical Office. (2010). Nationwide statistical service, census, and housing in 2010. Retrieved May 22, 2015, from <http://www.novabizz.com/NovaAce/Behavior/อิทธิพลทางสังคม.htm>.

- [5] Leksrinak, K., Ploydanai, N. & Sukchotiratana, W. (2012). The gambling behavior of youth: Bangkok case study. *KKU Research journal*, 12 (4), Aug. – Dec.
- [6] Ministry of Science and Technology. (n.d.). Digital Economy: Cognizant understood and applied. Retrieved July 12, 2015, from <http://www.most.go.th/main/index.php/product/sciencetalk/4054-digital-economy-.html>.
- [7] Kongrat, P. (2011). The study of teen uses social networks in the case of Facebook. Master of Science, Management Technologies. Innovation Academy Thammasat University.
- [8] Petchdum, J. et al. (2011). Risk factors affecting deviated behavior of junior high school students: Nakorn Nayok case study. Nakorn Nayok, Thailand: Nakorn Nayok Cultural Office.
- [9] Singh, A., Jain-Chandra, S., and Mohommad, A. (2012). Inclusive Growth, Institutions, and the Underground Economy, n.p.: IMF Asia and Pacific Department.
- [10] The Board of Trade of Thailand. (n.d.). The concept behind the “digital economy” The board of Trade of Thailand Through ICT. Retrieved July 12, 2015, from <http://www.thaichamber.org/scripts/detail.asp?nNEWSID=13499>.
- [11] Thairath online. (n.d.). Unfolding Thailand 57% of people addicted to gambling. Retrieved July 12, 2015, from <http://www.thairath.co.th/content/42483>
- [12] Phongpaichit, Pasuk and Piriyanangsan, Sunghsidh, Seminar paper Centre of Southeast Asian Studies, Kyoto University, November 1999.