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DIGITAL PIRACY IN MALAYSIA

By: Adli Amirullah & Meyshna Ravindran, Institute for Democracy and Economic Affairs, Malaysia
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By Adli Amirullah¹ & Meyshna Ravindran²

Abstract: Pirated computer software, books, music CDs, and videos is a gross violation of intellectual property rights and increasingly a significant concern for both industry practitioners and the government. In Malaysia, the software piracy rate is 53% which cost the economy around USD 456 million (Business Software Alliance, 2016). With the growth of the internet, piracy is becoming even more prevalent as digital software allows intellectual property to be copied with ease and distributed globally with seeming impunity. In this case study, we examine the causes and consequences of digital piracy in Malaysia and the effectiveness of measures to tackle the problem. There are three theoretical perspectives argued by Hill (2007) on the causes of digital piracy which are moral development, equity theory, and moral intensity. These factors, combined with limited options for enforcement, contribute to digital piracy which will reduce sales and profits of rights holders as well as demotivate new inventors to innovate since potential returns are lower. However, some studies have argued that digital piracy has the potential to strengthen demand for the original digital goods through product sampling and strong network effects. Efforts to tackle digital piracy in Malaysia include greater use of technology by industry, enforcement by the government and the emergence of low-cost legal alternatives. In some cases, the government is best placed to lead efforts to tackle piracy, such as in strengthening enforcement or educating the public. In other areas the government needs to play a supporting role to industry, so it can develop superior technology and provide a flourishing market place of legal alternatives.

Keywords: Intellectual Property, Digital Piracy, Malaysia, Digital Goods, Innovation

I. INTRODUCTION

Digital piracy is a growing concern for 21st-century economies. Piracy per se is illegal as it violates the intellectual property rights of entrepreneurs (Hill, 2007). Professor Charles Hill of the University of Washington raised a concern that piracy copyright protected works is a growing problem in the music, software, video game, and entertainment industries. These piracy activities are usually done through illegal file sharing over a peer-to-peer computer network. According to the Global Software Piracy Report 2016 commissioned by the Business Software Alliance, it is estimated that 39% of software is pirated, which leads to an estimated loss of more than USD 52 billion to firms. In ASEAN, the highest software piracy rates are as high as 84% in Indonesia which cost more than USD 1 billion. It is followed by Vietnam 78% (USD 598 million), Thailand 69% (USD 738 million), Brunei 66% (USD 19 million), and so on.

¹ Adli Amirullah, BSc Economics, works as an economist at the Institute for Democracy and Economic Affairs (IDEAS), Malaysia, adli@ideas.org.my
² Meyshna Ravindran, BSc Economics, works as a junior associate at the Institute for Democracy and Economic Affairs (IDEAS), Malaysia, meyshna@ideas.org.my
Malaysia 53% (USD 456 million), and Singapore at 30% (USD 290 million). However, copying of intellectual property is not limited to software. In fact, piracy of music and movies are a significant concern to the entertainment industry. For instance, according to a 2016 study by International Federation of the Phonographic Industry (IFPI), more than 33% of internet users said they had accessed copyright-infringing music.

This case study will provide a literature review of digital piracy in the Malaysian context. Malaysia provides an interesting case, as it is a high middle-income economy which has experience rapid growth in access to the internet. Direct censorship of the internet is minimal and access to foreign services and content is high. But the government does have extensive power and has shown willingness to regulate strictly where it deems it necessary. Malaysia therefore provides an interesting case for how digital piracy can be addressed in the developing Asian markets.

This research study, is divided into seven main sections: introduction in section 1, methodology in section 2, literature review in section 3, digital piracy in Malaysia context in section 4, conclusion and policy recommendations in section 5, references in section 6, and acknowledgement in section 7.

2. METHODOLOGY

The research will be conducted using a mixture of purposive sampling in the form of expert interviews, triangulated against and complemented by the following literature review. The literature review will cover publications from government agencies including official statistics, academic literature, and an analysis of news coverage.

Expert interviews will cover the following categories:

1. Relevant researchers who have studied the topic;
2. Representatives from industry; and

3. LITERATURE REVIEW

3.1. Factors of Digital Piracy

To understand the causes of piracy we need to look at the behaviour of individual consumers and ask why they knowingly consume pirated goods. According to Hill (2007), digital piracy is a theft of intellectual property rights, it robs someone’s effort and distributes it without crediting the owner.

To understand why there is a demand for digital piracy, we need to grasp the consumer behaviour theories. Hill (2007) argued that three factors affect consumer behaviour in purchasing digital piracy goods which are moral development, equity theory, and moral intensity.

3.1.1 Moral Development

It was first introduced by Kohlberg in 1969 where he suggested that there are three levels of moral development; pre-conventional, conventional, and post-conventional. Pre-conventional moral development is where an individual begins his or her moral development with an internal focus by avoiding punishment first and then to achieve a certain level of self-gratification. The second level of moral development, conventional, is when individual action is affected by others’ disapproval. The third
level of moral development, post-conventional, is when the individual develops strong ethical principles that they will always adhere to.

Hill (2007) explained that digital piracy consumers are mostly young males whose moral development is at the pre-conventional stage. It means the digital piracy user decided to consume digital pirated goods to achieve a level of self-gratification and their expectation of punishment was extremely low.

3.1.2. Equity Theory

Equity theory was first introduced by Adam in 1963 and later developed by Kabanoff in 1991. Hill (2007) described that equity theory is based on an individual that is searching for fairness and equity in social exchange. It means a person is motivated to do anything including something that is illegal to gain justice and equity in social exchange. Equity theory argues that when someone finds themselves in a state that they perceived to be inequitable, that particular individual will become distressed and will take action to ‘restore’ equity. Hill (2007) believed that some digital piracy users fall under this category where the pirates feel that the price of the original digital goods is high while the copyright owner earn a massive amount of profits and that is why the pirates perceive it as inequitable. Therefore, pirates use this disparity to justify their illegal behaviour in engaging in digital piracy.

3.1.3. Moral Intensity

Moral intensity was introduced by Jones in 1991, and it has an essential impact on the probability of individuals to perform an unethical action. Hill (2007) clarified that moral intensity is determined by six characteristics: (1) the magnitude of consequences, (2) social consensus, (3) probability of effect, (4) temporal immediacy, (5) proximity, and (6) concentration of effect.

In the case of digital goods, Hill (2007) argues that if the moral intensity is low, it may lead to a higher level of piracy. Hill (2007) gave an example on each characteristic to relate with digital piracy. For instance, when an individual believes making an illegal copy of software does not do much harm to the copyright owner, it is an indicator that the magnitude of consequences perceived by the pirates is low. Second, the pirate does not have an active social consensus that digital piracy is unethical or illegal. Third, the pirate believes that the effect of copying digital goods would cause harm at all. Fourth, the pirates will have a temporal immediacy and believe their actions are irrelevant due to their perception that harm in minimal or non-existent. Fifth, the pirates see copyright holders as a monopolistic corporation and will not be affected by piracy activities. Sixth, the pirates believed that even if there is harm, the harm that they will cause will only affect a corporation and not specific individuals. Hence, the concentration of effect is low.

3.2. Consequences of Digital Piracy

Digital piracy will dampen the demand for original digital goods and thus reduce its profit. Copyright owners, specifically, face massive losses due to digital piracy, and this is not fair for someone who spends their efforts on producing digital goods which are then effectively stolen. Besides that, piracy has a negative impact on economic growth as it wastes useful economic resources through forgery and counterfeiting. Innovation per se is a risky venture, and if other people can easily steal someone’s idea, this will discourage inventors from innovating. Hill (2007) argued that if digital piracy is widespread, musicians will write less music, filmmakers will make fewer films, authors will write fewer books, and less software will be produced.
However, Hill (2007) also argued that in certain circumstances, piracy can benefit the copyright holder by speeding up diffusion of a digital good, by keeping competitors at bay, and by locking a product in as a standard. There is a possibility that piracy can grow the demand for the original digital goods. First, Hill (2007) argued that piracy can act as a product sampling of the original digital goods. This is true because most digital goods are experience goods and needs to be tested to assess its value. In some case, if the product does not have a sound sample, consumers may use a pirated product before deciding to purchase it legally. Second, Hill (2007) explained that piracy might increase demand when there is a strong network effect in a market. Network effects are particularly significant in the software industry. For instance, the higher the number of people owning the same software, the higher the value for holding the software. Microsoft Office is a perfect example in this case. The ability to exchange notes with other Office users will create value for owners of Microsoft Office which is an increasing function of the number of other consumers in the network. Hill (2007) contended, that if piracy increases the size of the net, it can increase the value of owning an original digital product thus increasing the demand for the legal product.

Third, Hill (2007) believed that piracy could help lock in a copyright holder's product as an industry standard when the value of that product depends on the supply of complementary products. For example, computer operating systems must work with software applications and peripheral hardware, such as printers, scanners, and modems. According to Hill (2007), the higher the size of the network, the higher the supply of complementary products that work with that operating system and thus the greater the value of owning the operating system. This means higher demand for that operating system in the long run. Such a positive feedback mechanism can rapidly lock a market into a dominant technological solution. Hill (2007) opined that as piracy increases the size of the network of users that have the operating system, it will help to jump-start a positive feedback loop, inducing an enhanced supply of complementary products, which then increases the value of owning the operating system.

4. DIGITAL PIRACY IN MALAYSIA CONTEXT

Just like sugar that attracts an army of ants, the booming digital content world attracts piracy in all forms because it is "free" to access the content online. Inventing, utilising and offering these services without a legitimate permit is illegal, despite the fact that accessing unlawful digital content might be favourable, less costly, or even free. However, there are real costs of "digital robbery" beyond the immediate transaction. It does not only affect the media and content creation organisations negatively, but it can also create a hole in the buyers' pocket over the long haul. Bottom line, digital content piracy is discriminatory to everyone.

Malaysia was ranked at No. 41 with a 4.77% piracy rate, based on the relative piracy rank data compiled by MUSO in 2015. Singapore stood at No. 11, with a piracy rate of 12.34% (Van der Sar, 2016). However, Malaysia’s International Property Rights Index score decreased by -0.14 to 6.61 placing it 7th in the Asia and Oceania region and 32nd in the world. Malaysia's Intellectual Property Rights Subindex decreased by -0.01 to 6.43 with scores 4.7 in Copyright Protections (Property Rights Alliance, 2017). “The International Property Rights Index ranks countries on a scale of one to ten, with ten being a perfect property rights score” (Tongate, 2017).

In comparison to the 2016 report, Malaysia has dropped significantly in ranking. "In fact among all countries which were evaluated, Malaysia is one of only three countries whose sub-indices scores actually decreased" (Wan Jan, 2017). All the improvements in scores acquired that was demonstrated in the 2016 report has plummeted. As intellectual and physical property rights guarantee that organisations have stability, which is critical for a long-haul development, this is a worrisome situation. This implies an immediate requirement for a steady and continuous engagement to ensure the heightening of property rights protections.
4.1. Strategies to Counter Digital Piracy in Malaysia

4.1.1. Better Enforcement

There are laws in Malaysia to help combat piracy, including Malaysia’s Copyright Act 1987. Under section 43A(1) of the act, any person who operates an audio-visual recording device in a screening room to record any film in whole or in part shall be guilty of an offence and shall on conviction be liable to a fine of not less than ten thousand ringgit and not more than one hundred thousand ringgit or to imprisonment for a term not exceeding five years or to both. Under section 43A(2) any person who is guilty of an attempt to commit an offence under subsection (1) shall on conviction be liable to a fine of not less than five thousand ringgit and not more than fifty thousand ringgit or to imprisonment for a term not exceeding one year or to both (Parliament of Malaysia, 2012).

More recently, additional methods have been pursued. In June 2016, website blocking was implemented in Malaysia whereby websites that committed various crimes, including publishing content which could jeopardise public order, would be blocked. In the six months after the government initiated its sixth effort to square such websites, there was a significant decrease of 74% in the visits to pirate websites (Zainul, 2017). “According to the Communications and Multimedia Ministry, 2,837 of 3,110 blocked websites had pornographic, disgusting, false and threatening content under the provisions of the Communications and Multimedia Act 1998” (Malay Mail, 2017).

Our interviews with experts and industry representatives, revealed that building on these actions requires addressing the wider ecosystem that supports digital piracy. For example, Internet Service Providers (ISPs) of course have a crucial role, but so too to advertisers who provide infringing content with an important source of revenue.

In recognition of this in October 2017, stakeholders from the Malaysian creative and advertising communities, joined forces to set up the Infringing Website List (IWL) initiative in the attempt to tackle digital piracy of copyrighted content, as reported by The New Straits Times (Muhamading, 2017). The aim of this initiative is to cut off advertising income streaming to major pirate sites in the nation. Malaysian Media Specialist Association (MSA) president Yap Chee Weng said pirate websites generated over US$209 million in advertising revenue alone. At that point in time, in the Asia Pacific region, Malaysia was the third country to launch this initiative.

However, awareness of digital piracy is still low in Malaysia and needs further action. The assistant director of Intellectual Property Corporation Malaysia (MyIPO) stated that supporters need a joint effort or implicit rules to catch unlawful transferring of digital content. “We need technology to counter the digital piracy. To prevent live streaming from cinema to Facebook, for instance, some countries are using jammers that can stop live streaming” (Zulkarnain, 2017).

Among the key stakeholders in fighting digital piracy in Malaysia are National Film Development Corporation (Finas), Malaysian Communications and Multimedia Commission (MCMC), Ministry of Domestic Trade, Co-operatives and Consumerism (KPDNKK), Malaysian Film Production Association (PFM) and cinema operators. These stakeholders set up a committee in August last year that specialise in combating digital piracy. Among the measures that they took was setting up a camera with night vision in the cinema to catch those who record the movie illegally during showtime in the cinema. Besides that, KPDNKK and MCMC launched a partnership with online shopping platform to ensure that there are no counterfeit products being sold at the online platform. Moreover, MCMC started to increase awareness for the consumer regarding digital piracy where they emphasized that digital piracy will lead to cybercrime and the consumer will be exposed to it if they consume digital piracy. These measures are welcome, but the government could also consider other parts of the ecosystem. For example, the government consider whether regulation needs to apply to financial institutions that facilitate payments to infringing websites.
4.1.2. Embracing Technology

One of the strategic responses to digital piracy proposed by Hill (2007) is embracing technology. Technology is growing, and it is crucial for policymakers to keep up with the growth in technology if they do not want to be left behind. Hill (2007) argued that the main culprit in digital piracy is technology. To counter digital piracy effectively, one needs to embrace better technology or at least to have the same level of technology and knowledge as the pirates. This view was corroborated by our interviews with industry, who in some cases described the competition over technology with pirates as an "arms race".

One important new technology in the fight against piracy is blockchain. Hutt (2016) argues that blockchain technology can connect consumer and sellers directly and remove the third party as a middleman. He explained that blockchain technology would allow every single transaction to be recorded and transparent. With the absence of a central location for the blockchain technology, it is harder for anyone to interfere with the trade as the information exists simultaneously in many places. In short, every user that is doing the deal will have a block, and each block has detailed information of the transaction such as the timestamp and a link to the previous block (Dughi, 2017). The link to the previous block will enable users to detect the previous block, and it will form a chronological chain reinforced through cryptography. On top of that, Dughi (2017) explained that when a transaction is happening through blockchain, multiple parties need to authorise the transaction before the transaction is being accepted and thus to make blockchain a formidable defence from hackers and provide a higher degree of trust value to the system. Hence, blockchain technology is a potential countermeasure to digital piracy because the technology involves multiple consumers and transactions simultaneously making it difficult for anyone to corrupt the network by altering the transaction record for malicious purposes.

The potential implications for blockchain are significant. However, our interviews with industry suggested that this was not currently a priority. Instead the focus of industry is on Artificial Intelligence and machine learning, to identify infringing content as soon as possible.

Hill (2007) claimed that most of the consumer value transactional efficiency in obtaining digital goods. He then explained that the consumer appreciates digital goods that come with quick downloads and efficient search capabilities. It is vital for legal digital good providers to adapt to new technology and embrace consumer behaviour by facilitating newer efficient distribution mediums that offer legitimate alternatives to pirated digital distribution. For example, the arrival of Apple’s iTunes services provide efficiency to the consumers and thus evidence confirms that piracy in music has reduced (Hill, 2007).

Businesses can also combat piracy by changing the structure of their products, from selling a discrete product to selling an ongoing service for a subscription (Hill, 2007). For instance, Microsoft changed their business strategy by using technology where they are selling one of their products, Microsoft Office, through annual subscriptions instead of selling it altogether. Moreover, some electronic gaming companies have changed their business adapted their strategy to consumer demand for online multiplayer games by requiring users to maintain accounts that log download activity and force users register their product, thus reducing the feasibility of pirated games.

Ultimately, the incentives and means for developing new technologies to combat piracy lie mainly with legitimate industry, and the government’s role is limited. However, it was highlighted to us by industry that the government should ensure that industry is able to capitalise on the available technology in the fight against piracy, including by allowing the sharing of data between different industry players to enable them to work together to identify pirates. The government also has a role in making use of the best available technology for its own enforcement efforts.
4.1.3. Improve Education on Intellectual Property Right and Digital Piracy

Historically, Asian culture has not placed as much value on intellectual property rights and one of the ways that they preserve their intellectual property is through secrecy (Vu, 2012). For instance, Vu (2012) argued that the secret of traditional Asian herbal drugs was passed down secretly through the generation of family's members and not through protection of intellectual property rights by the state.

Vu (2012) argued that many researchers have proved that weak intellectual property rights will demotivate investment to come into a country and thus, the nation will lose significantly. Not only will it discourage investment, but the transfer of technologies will also be slower, and there will be less spillover of knowledge and social interest if intellectual property rights remain weak in a country. Vu (2012) pointed out that one of the steps to improve intellectual property rights is to increase the capacity of government officials in intellectual property agencies through education. For example, educating the government officials by enhancing their knowledge of intellectual property will improve their reliability and efficiency in identifying pirated goods. Pirated goods can be physical goods as well as digital goods, and both are equally important that have distinct characteristics to be recognised as pirated or not. Therefore, knowledge is crucial for the government officials, especially for those working in enforcement units.

Besides educating the officials, educating the public at large is also essential. For example, in Brunei, the most common case of digital piracy is software and game piracy (Rahim, Seyal, & Rahman, 1999). Rahim et al. (1999) proposed policy recommendations for the Brunei government to educate the public at large regarding the impact of intellectual property rights and why they are crucial. Educating the public is essential since consumers are not aware of or have moral conscious that digital piracy is unethical and will lead to adverse impact in the long run. Rahim et al. (1999) urged that the government should introduce IT related ethic in the formal education so that the content summer can be nurtured about digital piracy since school. Besides that, Rahim et al. (1999) also suggested producing a code of ethical conduct for a government institution to prevent digital piracy to spread within the government. It is vital for the government to set an example for the public to indicate that digital piracy is bad for the country, economically and socially.

Furthermore, a study by Gan and Koh (2006) showed that in Singapore, the correlation between age and digital piracy user is negatively correlated. It means that the younger population have a higher probability of engaging in digital piracy especially those who are in university. Gan and Koh (2006) proposed a policy recommendation to cater specifically for university students and educate them extensively on intellectual property rights and digital piracy. The government should critically analyse the consumer behaviour that is between age 26-35 years old since they are the most vulnerable consumer group towards digital piracy. Therefore, educational programs that teach an ethical code that shuns digital piracy is vital to counter intellectual property theft in any given country.

In our interviews, respondents comments on the need for a cultural shift in Malaysia on the issue of digital piracy, to tackle the perception that it is acceptable. It was acknowledged that the government had a significant role to play in educating the public and shifting this perception.

4.1.4 Expand Legitimate Business

One of the ways that to mitigate digital piracy is to ensure a wide variety of legal alternatives are available at low cost. Chellappa and Shivendu (2005) and Curieny and Moreau (2007) agreed that one of the reasons why consumers are prompted to choose pirated digital goods is because of the higher price tag on the legal digital products. A consumer in the middle to low-income bracket has a higher
probability of consuming pirated digital goods since their purchasing power is relatively low. Chellappa and Shivendu (2005) and Curieny and Moreau (2007) argued that if businesses that provide digital goods can adopt better pricing strategy to reduce the prices, consumer behaviour will shift from acquiring pirated products to the legal versions of digital goods.

For example, Curieny and Moreau (2007) gave a case in the music industry. Curieny and Moreau (2007) suggested for businesses to explore future technology and make an effort to reduce prices in the industry by legally allowing cheap or free download from the internet instead of selling CD’s in an old-fashioned manner. Businesses need a new solution for producing music and today; the best example is Apple’s iTunes and Spotify application that have spurred the music industry successfully (Hill, 2007). Not only has the introduction of these applications increased the affordability for the consumer, but it also has sustained the music industry from overwhelming pirated music over the past decade. Besides that, Curieny and Moreau (2007) suggested that businesses need to reconsider the exploration of technology of peer to peer (P2P) networks and use the internet as a tool to regain the market from pirates. Most of the users use P2P networks because of the lower cost involved in extracting the digital goods (Curieny & Moreau, 2007). Therefore, there is an endless possibility for businesses to reduce their cost by changing their business strategies and thus will be able to lower the prices in the market.

This was corroborated by our interviews with industry, with providers of certain services explaining that they were deliberately developing a pricing model to attract users of pirated content. Furthermore, we were informed that industry would actively identify markets with high levels of piracy as opportunities for future business development.

According to Chellappa and Shivendu (2005), they combined research on pricing in economic theories with information systems on piracy and marketing strategies. Chellappa and Shivendu (2005) argued that one of the characteristics of digital goods is a unique challenge for digital product businesses. This is because the products’ information is deemed unavailable unless it is consumed. With that in mind, Chellappa and Shivendu (2005) explained that there are three investment choices that businesses can choose from. The first choice is investing in product advertisement, the second choice is to invest in technology and legal protection through copyright act, and the third choice is product sampling strategy. Chellappa and Shivendu (2005) explained that investing in legal protection is not worth it because pirates will always find a way to get the digital goods since the marginal cost of pirated goods is relatively lower compared to the legal goods. Businesses should focus their investment resource on the advertisement and product sampling strategy. With the right advertisement strategy, Chellappa and Shivendu (2005) believes that the middle to the high-income consumer would have more inclination to consume legal digital goods instead of going for the pirated version.

Besides that, Chellappa and Shivendu (2005) suggested a product sampling strategy to provide better information to the consumer so that the consumer may have the ability to make a wise decision before buying digital goods. Since the information on the digital goods can only be obtained through consumption, with product sampling, the consumer will have a higher probability to consume the legal product instead of the pirated goods. Therefore, if businesses are willing to invest in improving their business strategies with the combination of technology and tired prices, curbing digital piracy is a possibility.

This suggests that the availability of low cost, legal alternatives to pirated content is effective at combating piracy. The government should therefore focus on creating an enabling environment for legal alternatives. With the right incentives from the government, competition in private sector can flourish and ultimately competition will lead to legal goods at low cost competing with illegal products.
5. CONCLUSION AND POLICY RECOMMENDATIONS

Digital piracy is a serious 21st-century problem. There are still limited studies conducted on digital piracy which future researchers should take up. As mentioned above, it was estimated that 39% of software is pirated, which leads to an estimated loss of more than USD 52 billion to firms. In ASEAN, the highest software piracy rates are as high as 84% in Indonesia which cost more than USD 1 billion. It is followed by Vietnam 78% (USD 598 million), Thailand 69% (USD 738 million), Brunei 66% (USD 19 million), Malaysia 53% (USD 456 million), and Singapore at 30% (USD 290 million). Note that this is only for pirated software. Digital piracy consists of more than just software.

For the Malaysian context, Malaysia ranked 26 out of 127 countries in the International Property Rights Index 2016, and moved to the 32nd rank in 2017. Efforts of the government in combatting digital piracy in Malaysia were examined. The essay in section 3 was structured by firstly explaining the situation of digital piracy in Malaysia, accompanied by the statistics compiled by MUSO and International Property Rights Index. The Malaysian government’s initiatives are discussed accompanied by the available results. It acknowledges the presence of the law in support of fighting digital piracy, however it is still found that the awareness of digital piracy in Malaysia is still low.

Furthermore, this research paper provides policy recommendations for Malaysia to counter digital piracy. This paper recommends that the government consider the whole online ecosystem when developing strategies to counter digital piracy. Second, the government should support industry to develop and deploy the most effective technology to counter piracy and itself adopt the best available technology in its fight against piracy. Besides that, this research recommends improving education on intellectual property rights in order to instill ethical conduct in the public that discourages digital piracy. Lastly, this research proposes that a wide availability of legal alternatives at low cost is a good solution to the problem of piracy and the government should therefore ensure it is acting to enable a flourishing market place to develop.
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