

## E-Cigarettes and Dilemma of Nicotine Regulation in Malaysia

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### Abstract

This article presents the issues and challenges of e-cigarettes (e-Cigs) regulation in Malaysia. e-Cigs are now increasingly popular among young people, but they may have harmful long-term effects on their users. The Malaysian government, through the Malaysian Ministry of Health (MOH), has recently announced that nicotine, including tobacco, patches, chewing gum, liquid nicotine, and nicotine gel, is now exempt from the Poisons Act 1952. The government's decision to exempt the substance from the Poisons Act 1952, allowing e-Cigs containing nicotine and propylene glycol in various flavours, is not mandatory to comply with the rules and regulations set by the government. This phenomenon has sparked a polemic among the general public, medical experts, entrepreneurs, and e-Cigs manufacturers. Based on a literature review and the pathetic dot theory, the researchers have identified the variables and developed a conceptual framework by illustrating the relationship between the constructs in order to gauge the perception of the general public in Malaysia pertaining to the introduction of rules and regulations on e-Cigs. As such, four factors have been identified that can shape the regulation of e-Cigs, namely technology, economics, laws, and societal norms. With the establishment of this conceptual framework, the researchers hope that it can guide this study in a clearer direction subsequently to achieve the research objectives. Next, based on the conceptual framework, the researchers are able to continue to develop questionnaires as an instrument for data collection in this study.

**Keywords:** E-Cigarettes, Health Communication, Nicotine Regulation

### Introduction

E-Cigarettes (e-Cigs) have penetrated the Malaysian market since 2013 as an alternative to conventional cigarettes. Now the use of e-Cigs among teenagers and children, especially school students, has increased in recent years (Das, 2022). Based on data published by the Malaysian Ministry of Health (MOH), it is reported that 15.6 percent of teenagers aged 15 to 19 in Malaysia use tobacco products, including e-Cigs (Malik, 2022). In fact, the use of e-Cigs

is also found to be increasing among young women in Malaysia (Rosli, 2022). There are several reasons why e-Cigs are popular among users. Previous studies indicated that e-Cigs are popular among young people, firstly due to the notion shaped by the media that promoting e-Cigs is less harmful than smoking to their health (Franck et al., 2014; Cherian et al., 2020; Harkati et al., 2020). Secondly, e-Cigs have a lower per-use cost than traditional cigarettes (Lewek, 2019). Finally, both youth and adults find that e-Cigs are able to curb the unpleasant smell of cigarette smoke (Gartner & Yusoff, 2019). Due to the above findings, the MOH has been continuously conducting awareness programmes and preventive campaigns through media communication and engaging with the public in order to reduce the percentage of smokers in Malaysia to less than five percent by 2040, compared to the current 21 percent (Tayep, 2022).

According to Hillstrom (2019), the initial stage of e-Cigs was designed to duplicate conventional cigarettes in order to prevent addiction to nicotine and subsequently help smokers stop smoking. However, the statement is far from true at all. Previous studies have found that e-Cigs have more severe effects on users than cigarettes (Polosa et al., 2013; Minhat et al., 2017; Lewek et al., 2019). In addition, e-Cigs users strongly believe that e-Cigs have lower toxic effects than conventional cigarettes (Majeed et al., 2017; Cherian et al., 2020). Furthermore, e-Cigs are often preferred over conventional cigarettes due to their affordability (Lewek, 2019). However, it contradicts the reality of e-Cigs users in Malaysia. A study conducted by a research team led by Salleh et al (2023) discovered a demographic profile of e-Cigs users where almost three-quarters of users (72.9%) have a low monthly income (below RM 4000) and are from the bottom 40% income group (B40) in Malaysia, who earn RM 4850 or less per month. This means, the price of e-Cigs per unit is not as cheap as thought. As such, this study is of the view that the claim that e-Cigs can help smokers quit smoking is misleading. It not only exposes consumers to health risks but also burdens their economy in terms of disposable income.

Based on Hillstrom's opinion, this paper acknowledged that e-Cigs have been considered as an alternative for individuals who want to quit smoking. However, there are some opinions that these e-Cigs has potential risks to the users (Chan & Harun, 2017; Salleh et al., 2023). Therefore, many medical doctors and MOH raised their concerns about the increased use of e-Cigs, especially among adolescents. The reason for this is that there are negative effects from using e-Cigs that are similar to those from conventional cigarettes that contain tobacco and nicotine (Chan & Harun, 2017).

Recently, the Minister of Health made a statement that nicotine, including tobacco, patches, chewing gum, nicotine liquid, and nicotine gel, is now exempt from the Poisons Act 1952. The exemption also applies to nicotine patches and gum, which are registered under the Drugs and Cosmetics Control Regulations 1984 (Patah, 2023). However, the exemption had created polemics among the public, medical practitioners, and the business sector. In a clear context, Malaysia is now in a dilemma about whether to introduce a law to curb the dangers of using e-Cigs from a health aspect or generate the economy from the e-Cigs business.

Based on the above-mentioned context, although e-Cigs have been available in the Malaysian market since 2013, no research has been done to gauge public opinion on e-Cigs laws. Over the past few years, there have been only a few published studies on e-Cigs interventions designed to prevent the initiation and escalation of e-Cigs (Kenne et al., 2017), the negative

effect of e-Cigs on university students Minhat et al (2017); Abdulrahman et al (2020), and the ban on the use of e-Cigs on university campuses (Malaysia, 2015).

Based on the research gap above, this study employed pathetic dot theory to gauge public opinion if a bill regulating the use and sale of e-Cigarettes is introduced in Malaysia. This theory was introduced by Lawrence Lessig in 1998 via his article and later in his book entitled *Code and Other Laws of Cyberspace*, published in 1999, which is more geared towards socio-economic regulation. According to Lessig, humans are governed by four forces: technology, law, economics, and social norms (Lessig, 2009). This paper justifies the use of this theory because the dilemma phenomenon faced in Malaysia pertaining to the e-Cigs problem is in line with Lessig's opinion that all individuals are governed by four forces: technology, law, economy, and social norms. Thus, we cannot ignore the four factors mentioned above in determining the direction of the rules and regulation of e-Cigs in Malaysia.

### **Literature Review**

This paper discussed the issues and challenges in reinforcing the regulation of tobacco and nicotine products for both conventional cigarettes and e-Cigs, which is often a central debate in the community, especially for medical doctors and parents on the one side who support regulation and businessmen and manufacturers on the other side who demand more relaxed regulation. This study used the pathetic dot theory to explain the elements in developing the research concept for this study after taking into account the public's concerns that there are no rules or regulations that e-Cigs may harm the public and the impact on the business sector if the government decides to introduce the rules.

### **Technology**

There are several versions of the history of the invention of e-cigarettes. There are many versions of who invented the e-Cigs. Some sources say that e-Cigs started as early as 1930, when Joseph Robinson filed a patent for an electronic vaporizer in Mained (Allen, 2020). However, the latest modern history has recorded that Herbert A. Gilbert invented the e-Cigs in 1963, and according to Hillstrom (2019), Gilbert has been recognised as the ancestor of modern e-Cigs. In general, the purpose of technology is to meet a human need in order to solve a human problem. Thus, e-Cigs are a new type of cigarette that is expected to minimise the negative effects of traditional cigarettes.

In the above-mentioned context, first of all, Gilbert managed to address the problem experienced by smokers, especially the unpleasant smell of cigarette smoke. The bad smell of cigarette smoke is also a problem for non-smokers, especially for those who are close to smokers. Advances in technology have accelerated the invention of e-Cigs a device that can be small like a traditional cigarette or look like a universal serial bus (USB) drive. As such, a smoker is able to use e-Cigs as simply as bringing them to their mount and, either with a button or just by inhaling a battery-activated heating coil, warming up a substance that is then aerosolized. Subsequently aerosolized into tiny particles that the smokers can inhale. Gilbert has managed to transform the bad smell into a pleasant aroma by replacing the burning of tobacco and paper with heated, moist, flavoured air.

Second of all, advanced technology accelerated the invention of e-Cigs were created with the aim of providing an alternative or solution to smokers motivated to quit smoking. Many studies have proven that smokers try to use e-Cigs to quit smoking (Franck et al., 2014;

Cherian et al., 2020). In contrast to conventional smoking cessation methods, which require nicotine-addicted smokers to refrain from tobacco and nicotine completely, e-Cigs are able to relieve withdrawal symptoms and reduce nicotine cravings, which smokers can experience when they first quit smoking. Subsequently, e-Cigs users are able to cut down on the number of cigarettes that they smoke. From a technological aspect, e-Cigs have been designed with three important components (as illustrated in Figure 1): a plastic tube, an electronic heating component, and a cartridge containing a liquid of propylene glycol, with or without nicotine. Nowadays, demand for e-Cigs has dramatically increased due to the variety of flavours that offer traction in the market (Gartner & Yusoff, 2019).

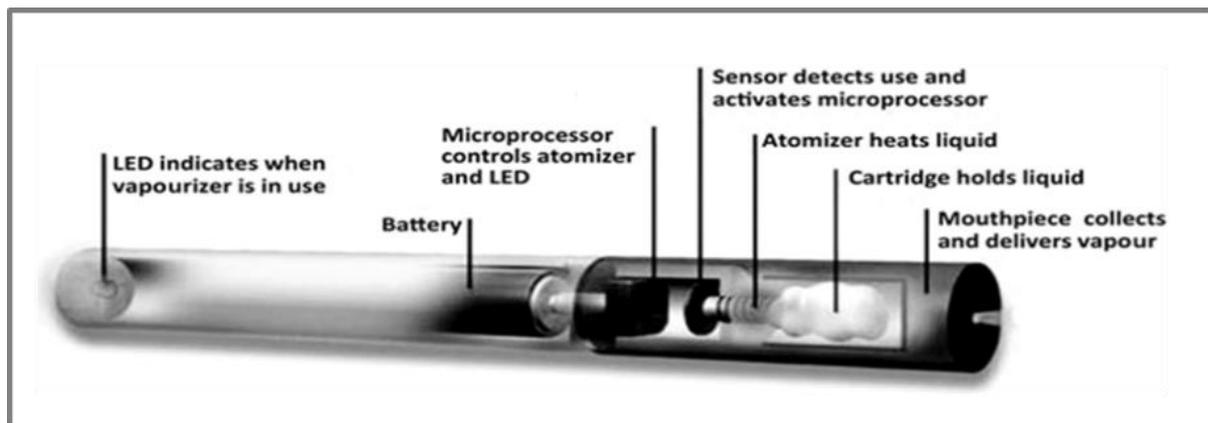


Figure 1. e-Cigs Components

Source: Franck et. al., 2014

This paper acknowledges that e-Cigs invented as an alternative to cigarettes, but the issue is: are e-Cigs less harmful than conventional cigarettes? This question is often raised by medical experts who dispute the idea that e-Cigs can help heavy smokers quit smoking (Polosa et al., 2013). The reason being that there are no scientific studies with a concrete basis that can prove that e-Cigs can reduce harm if it is true that vaping can help smokers quit smoking (Kenne et al., 2017; Hillstrom, 2019; Tayep, 2022). Concerns were also expressed by parents where, the ban on selling e-Cigs to minors is absent Minhat (2017); Harkati (2020) and the Consumer Association.

### Market/Economy

Tobacco and nicotine products are major contributors to the national economy. For example, the e-Cigs industry in the United States is currently growing rapidly with a profit of US\$3.28 billion, providing employment opportunities to 87,581 people, and generating taxable income for the US government (Dunham & Associates, 2019). In a clearer context, through the e-Cigs business, the national income can be increased in two ways, namely through employee opinion tax and corporate tax as a result of business profits. The results of the study reported by Dunham & Associates (2019) found that e-Cigs are able to generate income from e-Cigs as shown in Table 1 below

Table 1

*Contribution of the e-Cigs industry to the economy in United States*

<b>Contribution of the e-Cigs industry to the economy</b>				
	Direct	Indirect	Induced	Total (USD)
Jobs Opportunity	87,581	29,427	48,999	166,007
Salary	3,277,220,400	2,092,844,100	2,527,825,000	7,897,889,500
US Economic Impact	9,151,211,700	7,272,386,500	8,033,914,100	24,457,512,300
US Domestic Taxes				3,125,128,300
US Federal Taxes				1,860,313,900

*Source: John Dunham & Associates, 2019*

Based on the figures tabulated in Table 1, e-Cigs can help economic growth with physical economic development such as increased output of goods and services, job opportunities, increased downstream industries, and other economic development. Clearly, e-Cigs can increase GDP, which is a tool to measure the performance of national development. Due to the fact that e-Cigs can have a positive impact on the national economy, the Malaysian government on 1 April 2023 has also taken the same approach by implementing a tax on the sale of vape liquid for e-Cigs at a rate of 40 cents per milliliter (Patah, 2023). Therefore, since the issue of e-Cigs is still new in Malaysia, a comprehensive study must be conducted by examining the economic aspects and their impact on the country and the general public.

### Law

As e-Cigs is a relatively new product, and they may have potential health implications. However, it is important to note that the laws regarding e-Cigs can differ from country to country. However, at least we have a common understanding that smoking-related diseases contribute to the deaths of 27,000 Malaysians each year, creating a heavy economic burden on both the public and Malaysian healthcare systems. The government has also allocated RM7.4 billion for the treatment of major diseases caused by nicotine, including asthma, lung cancer, and coronary heart disease, by 2025 (Tayep, 2022). Currently, the law permits e-Cigs to be sold under the auspices of tobacco products, including liquids and devices. Therefore, teenagers and children who are still in school can buy these e-Cigs products freely on the market. However, at this moment, the law does not permit conventional cigarettes to be marketed to adolescents or children under the age of 18 (Hassim, 2018).

We were in a dilemma when recently a gazette was issued by the Minister of Health, Dr. Zaliha Mustafa, stating that nicotine, including tobacco, patches, chewing gum, nicotine liquid, and nicotine gel, is now exempt from the Poisons Act 1952 (Patah, 2023). Perhaps the economic factor has been seen as a determining factor that influences government decisions, but the removal of nicotine liquid and gel in the Poisons Act 1952 has been seen as a step backward. Equally important to note is that the World Health Organisation (WHO), whose function is to promote health, safeguard the world, and serve those who are vulnerable, has urged that e-Cigs to be banned in all smoking areas, among other reasons, because used aerosols from e-Cigs are a source of new air pollution for hazardous particulate matter (Franck et al., 2014).

This paper is considering the concerns raised by medical experts that the negative effects on smokers of both types of e-Cigs and conventional cigarettes are the same (Kenne et al., 2017;

Baobaid et al., 2021). Taking into account the adverse effects of e-Cigs, government, through MOH, plans to enact the Tobacco Products and Smoking Control Bill 2022 with the aim of protecting the young generation from getting caught up in the habit of smoking, in addition to reducing deaths from smoking-related diseases. Thus, this study would like to explore the public's opinion on the laws and restrictions that may be imposed on the sales, purchase, and use of e-Cigs devices and liquids especially among adolescents.

### **Norms**

According to the Kamus Dewan 4th Edition a norm is defined as a measure to determine something, which also means a rule or provision that has become a daily routine that is expected to be followed by every member of society. In comparison, Lessig defined that the law prescribes behaviour that can be done to avoid legal punishment (Lessig, 2009). As such, societal norms constrain society through the stigma imposed by society. In short, this study supports the view that norms provide order and, to some extent, are able to control society. Malaysia is a country that practises conservative culture and values, so it is difficult to see how Malaysian society could operate without social norms. As Malaysians, we are usually accustomed to and need norms to guide and direct behaviour, including order and predictability in social relationships, and to make sense of and understand each other's actions.

Based on the above-said definition, this paper defines a social norm as an obligation to society that is shaped by value, culture, and religion, and sometimes it is further extended to royal institution influences that can lead to sanctions if someone violates it. Therefore, laws are social norms that have been officially enshrined at the state or federal level and can result in official punishment for violations, such as fines, imprisonment, or even death. Social norms are also related to social judgement. For example, women smoking is considered an unpleasant manner that reflects bad behaviour (Martini, 2014). More importantly, this paper would like to highlight that according to the teachings of Islam, which are part of societal norms, smoking is prohibited outright and declared haram due to the severe health risks that it causes (Hameed et al., 2002). The outlaw includes e-Cigs, electronic shisha, and shisha pens, which are haram because the traditional basis of smoking in Islam is haram. In fact, Islam calls on its people to be aware and encourages them to try hard to stop smoking because the risk of using e-Cigs is harmful to their health.

### **Conceptual Framework**

Based on the literature review and the pathetic dot theory, this study has identified the variables and developed a conceptual framework by showing the relationship between one and the other. Therefore, this study intends to give a visual representation of the conceptual framework of the study and the correlation of each variable, which can also be said to be an assumption or an initial stage of the interrelationship between all the elements for this study. Based on the four important elements described above, this study would like to propose a conceptual framework, as illustrated in Figure 2 below

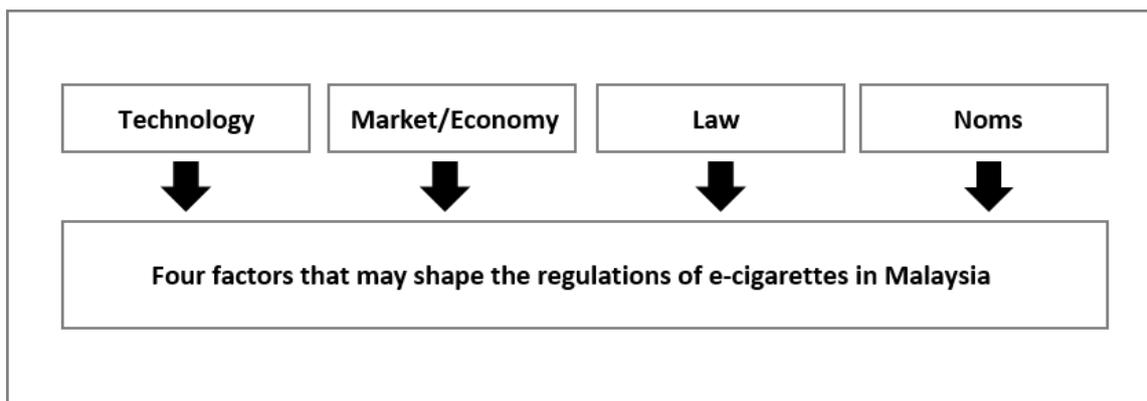


Figure 2. Conceptual Framework

### Conclusion

The tobacco product control and smoking ban bill is aimed at protecting the young generation from getting caught up in the habit of smoking, in addition to reducing deaths from smoking-related diseases. This paper explains a conceptual framework to provide a comprehensive understanding of the dynamic regulation of e-Cigs especially for smokers, sellers, distributors, wholesalers, and the companies that own them, which is a new frontier in Malaysia. Regulation of e-Cigs especially for sellers, distributors, wholesalers, and the companies that own them, is a new frontier in Malaysia. As discussed above, there is a conflict between public interest and economic interest that the government needs to consider before introducing new laws related to e-Cigs. Meanwhile, this study also included two more factors, namely laws and community norms, in building the conceptual framework of the study. Next, this study will develop questionnaire items as an instrument to measure public opinion in relation to four elements, namely technology, economy, law, and societal norms, as discussed above.

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