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Final Thesis

ELECTRONIC CIGARETTE

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THESIS
Abstract

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Abstract

As we know E-cigarette is becoming increasingly popular all over the world. It is a new product that the most of smoking people would like to buy and use. However, we are not realizing advantages and disadvantages of e-cigarette clearly. My objective was to research the development of electronic cigarette whether it is under control or a good way of marketing.

The thesis has two main parts. They include answers to questions what is electronic cigarette and how to manage the whole industry of electronic cigarette. It is necessary for us to make a deep research how it became such a popular product and why it is under discussion. Especially, the safety of electronic cigarette is the key element of development of electronic cigarette. As a result, governments still control and limit the development of electronic cigarette by different regulations.

Also, how to manage and operate the marketing of electronic cigarette is quite important under the limited environment. There are some reports about the specific ways of selling and managing of electronic cigarette industry. . Global operational management is the key of success for an individual company.
In my thesis, it will research the business of electronic cigarette and use the knowledge i have gained during my bachelor studies. It includes the product process, manufacturing and operations management as well as business management.

Moreover, it is possible to use the knowledge and information for real business management of e-cigarettes in China.

Keywords
e-cigarette, health, marketing, regulation

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1 INTRODUCTION

Electronic cigarettes are battery power products which are simulating the normal cigarette smoke without tobacco. Compared with normal cigarettes, e-cigarettes have the same appearance, smoke, taste even feeling. Instead of normal cigarette smoke, the vapor often can be used as an aerosol, commonly called vapor, and typically released by a heating element that atomizes a liquid solution known as e-liquid. The users take the button or power switch while they try to use it. Most of products are just like traditional cigarettes, but they have so many variations. The main construction feature is e-liquid which is combined with propylene glycol, vegetable glycerine, flavour and nicotine. Moreover, optionally e-cigarette could be added vegetable glycerine and others part. (Electronic cigarette Wikipedia)

1.1 The target of thesis

E-cigarette are designed and manufactured mainly in China. After 2013, there was wide development in e-cigarette product engineering, including varying nicotine concentrations in the solution used to generate the nicotine aerosol. It was called e-liquid that had varying volumes of solution in the product as well as different carrier compounds, a wide range of additives and flavors, and battery voltage. It is variable to quality control and users can modify many of the products, including using them to deliver other drugs. These engineering differences result in variability in how e-cigarettes heat and convert the nicotine solution to an aerosol and consequently the levels of nicotine and other chemicals delivered to users and the air pollution generated by the exhaled aerosol.

E-liquids are flavored, including tobacco, menthol, coffee, fruit, candy, and alcohol flavors, as well as unusual flavors such as cola and Belgian waffle. Tobacco products are used by young and children. There are still so many uncertain problems about safety, health and harm reduction when the market of e-cigarettes develops rapidly. With the change of product, e-cigarettes could be safer and more effective and become one of popular product all over the world. However, different countries have different policies on the market of e-cigarettes and the development will be affect by the environment and marketing. (Hayden McRobbie 2014)

1.2 The target of influence

There has been quite fast market development of e-cigarettes despite many uncertain questions about their safety, health, and total effect on public health. E-cigarette market is changing quite quickly and most of the results from survey of older products could not be relevant to the evaluation of newer products that could be safer and more effective as tobacco production. What is more, there still are regulation in different countries effecting e-cigarette marketing and other environment. So it is different impact on public health patterns. The unique hazard and benefits and the total impact of these products happen on the context of the widespread and continuing availability of normal cigarettes, with high levels of dual use of e-cigarettes and conventional cigarettes at the same

time among adults and youth. It is important to assess e-cigarette toxicant exposure and individual risk, as well as the health of e-cigarettes as they are actually used to ensure safety and to develop an evidence-based regulatory scheme that protects the entire population children and adults, smokers and non-smokers—how the tobacco industry is marketing and promoting these products. Health claims and claims of efficacy for quitting smoking are unsupported by the scientific evidence to date. In order to minimize the potential negative impacts on prevention and the undermining of existing tobacco control measures, e-cigarette use should be prohibited where tobacco cigarette use is prohibited and the products should be subject to the same marketing restrictions as tobacco cigarettes. (Rachel grana 2014)

2 CONSTRUCTION THEORETICAL BACKGROUND AND APPLICATION OF DIFFERENT TYPES

E-cigarettes are battery-powered devices that have cartridges or refillable tanks containing a liquid mixture composed primarily of propylene glycol and nicotine, as well as flavorings and other chemicals. During use, inhalation activates a pressure-sensitive circuit that heats the atomizer and turns the liquid into an aerosol that is inhaled by the user through the mouthpiece and exhaled as a fine mist. Some e-cigarettes have buttons that allow the user to manually activate the heating element. (Andy McEwen and Hayden Mcrobbie 2014)

The following steps will illustrate the different kind of generation with the development of e-cigarette.

2.1 Development

The development of electronic cigarette history can date back to 1963. Then it appeared equipment as instead of tobacco cigarette, which was designed by American named Herbert A Gilbert, called "no smoking, no tobacco". The equipment can simulate the feeling of smoking by the way of heating the liquid nicotine and product lots of vaporization of nicotine. Then in 1967, several companies from the USA tried to product the kind of e-cigarette, but they failed in the end. In 2000, Chinese medicine Hon Lik from Beijing did the experiment which atomization the nicotine liquid also combined with propadiene through the technology of medical. Due to the success of experiment, Hon Lik got the patent in 2004.

The development of the first electronic cigarette is generally attributed to Hon Lik at the Chinese company Ruyan in 2004. Therefore, after 2005 electronic cigarette appeared on the USA and European country market a few years later. The rapidly development of E-cigarette create a huge prospect. On the contrary, e-cigarette apparelled several generation productions all over the world especially in China.

As of early 2014, there were 466 brands and 7764 unique flavors of e-cigarette products. These products are now widely available online and in retail outlets in many countries across the world. In contrast to combustible products, e-cigarette availability in retail outlets in the United States is currently more likely in neighbourhoods with higher median household income and a lower percentage of black and Hispanic residents. E-cigarette availability in retail outlets is also higher in states with weak or non-existent laws for clean indoor air and low cigarette taxes. (Chris Bushore and Barbara Pizacani January 2015)

2.2 The First generation of electronic cigarette

The first generation is one typically cigarette model which is designed as a normal cigarette and used nicotine cartridge frequently. There have been three main constructions which included batter, chamber and cartridge. Also the most first e-cigarettes had a LED light at the end of device. It looks like the real burning of normal cigarette. The process of working will be opened by the button or

taking a puff. With the heating by a lithium ion battery, the temperature in chamber will get hotter and hotter. The e-liquid which is already inside will be evaporating and subsequently vaporises the electronic cigarette liquid creating a mist (or vapour) that can be inhaled. The user can smoke vapour through the cartridge until the end of e-liquid or power of battery.

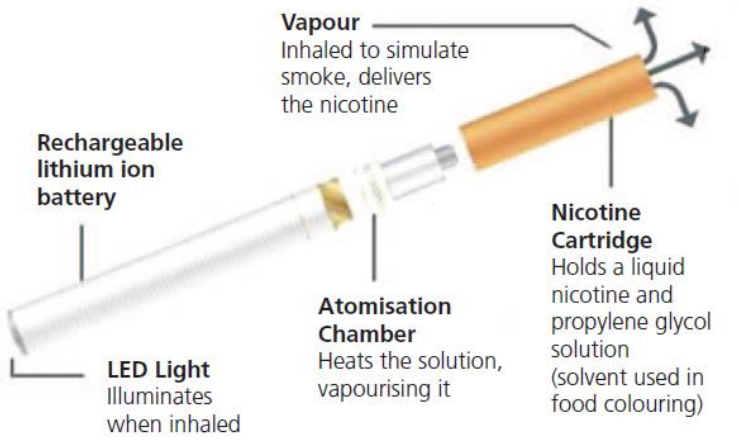

FIGURE 1. First generation cigarette construction （Electronic cigarettes Author: Hayden McRobbie 2014)

2.3 The second generation electronic cigarette

In term of appearance, the second generation cigarette is longer than the first one, which looks less like the normal cigarette and concludes a tank structure that can be filled with the choice of different kind of e-liquid. The user can choose the flavour and strength with the heating of cigarette. Compared with first generation, range of atomisers can be used in construction of it. The system also has the larger battery and replaceable wicks and coils. The atomizer of second e-cigarette will not be easy to burn down. Besides it is easier than the first when changing the clear miser on the top of construction. The main feature of it is that it can produce large smoking vapour and has replaceable atomizer which is convenient.

FIGURE 2.Second generation electronic cigarette construction (Electronic cigarette Wikipedia 2016)

2.4 The third generation electronic cigarette

The third generation is also called machinery type cigarette, which is an automatic control system, especially without any protection board of atomizer. The advantage is that it has rebuildable atomizer, dectable clearomizer, assembled clearomizer, washable clearomizer, cleanable clearomizer and replaceble atomizer. However, there are different kinds of third generation e-cigarette from different design style. The electronic cigarette includes a big battery at the bottom, which could activate a heating device, atomizing liquid nicotine inside a cartridge and producing a vapor that is inhaled.

FIGURE 3.Third generation electronic cigarette (Electronic cigarette Wikipedia 2016)

2.4.1 Tobacco stems

Tobacco stems internal structure uses the same basic components: a light PCBA board, rechargeable batteries, a variety of electronic circuits.

Most electronic cigarettes have lithium ion secondary battery and power supply components. Battery life depends on type, size, the number of using and operating environment. There are many different types of battery chargers to choose, such as socket direct charge, car charger, USB charger interface. The battery is the largest component of an electronic cigarette.

The third generation electronic cigarette airflow sensor to start with heating element, a suction will cause the battery circuit. Induction requires the user to manually press a button, and then smoke. Easy to use pneumatic manual pneumatic circuit ratio is relatively stable, the amount of smoke better than air. With the development of hardware and software, some manufacturers started to develop automated machinery for manufacturing electronic cigarette and put an end to the use of artificial own wiring, solder or electronics, to achieve higher security and reliability.

2.4.2 Atomizer

Generally a cartridge is part of the nozzle, while some factories demand to make the atomizer and cartridge or adhesive up together, and then create a disposable atomizer. The advantage of this is that you can greatly improve the taste and the volume of electronic cigarettes, but also quality is more stable. Because the atomizers are easy to break, the separate atomizer of traditional electronic cigarette will be destroyed only in few days. If one professor from the factory improves it, it can avoid the corrosion circuit problem and the e-liquid flow back to mouth. Therefore, it can remain in use longer than others because of more saving e-liquid and good sealing performance.

Atomizer configuration has a heating components, battery powered heat, smoke next to the volatile oil, the formation of smog, so when people smoke they achieve "puff" effect.

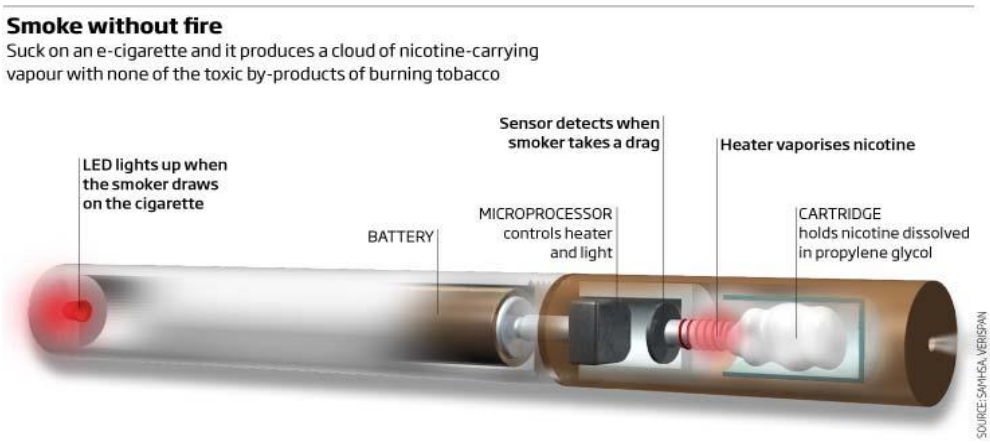

FIGURE 4.Smoke without fire No smoke without fire? States move to ban e-cigarettes from public places （DAILY MAIL. 4 June 2011)

3 HEALTH AND AFFECTION

Recently, with the development of forbidding of smoking and awareness of health, e-cigarette became more and more popular among people who wanted to quit smoking. Meanwhile, the international huge tobacco companies are willing to join the market of e-cigarette step by step. According to statistics, the sales share of e-cigarette reached 30 million dollars all over the world. However, the official organization which includes International Union against Tuberculosis and Federation of Lung Disease claim that electronic cigarettes are not safe scientifically and the control of production is still blank. So far, there is not the system of assessing e-cigarettes.

3.1 Potential benefits of electronic cigarettes

The electronic cigarette is safer than conventional cigarettes. But should people use electronic cigarette as a normal smoking product? Although lack of health data, many researchers believe that the damage of electronic cigarettes are smaller than traditional cigarettes. This is because electronic cigarettes work by the way of vaporing the e-liquid while conventional cigarettes are burning botanical matter. The bar chart in figure 5 illustrates some information about the proportion of several of toxic compounds that are produced in tobacco cigarettes and e-cigarettes. It is assumed that smokers of e-cigarettes would take an average of 15 puffs per session, corresponding to smoking one tobacco cigarette. Compared with conventional cigarette, it can be found from the chart that the higher proportion of toxic compound are emitted by tobacco cigarette with 52-140 in Acetaldehyde, while it is 450 times more than the percentage of e-cigarette. These vapours are not good for health necessarily, but it is better than some of the tobacco cigarettes.

Comparison of sample toxicants emitted by tobacco cigarettes and e-cigarettes

Toxic compound	**Tobacco cigarette** (µg in mainstream smoke)	**E-cigarette** (µg per 15 puffs*)	**Average ratio** (conventional vs electronic cigarette)
Formaldehyde	1.6–52	0.20–5.61	9
Acetaldehyde	52–140	0.11–1.36	450
Acrolein	2.4–62	0.07–4.19	15
Toluene	8.3–70	0.02–0.63	120
NNN**	0.005–0.19	0.00008–0.00043	380
NNK**	0.012–0.11	0.00011–0.00283	40

* The authors assumed smokers of e-cigarettes would take an average of 15 puffs per vaping session, corresponding to smoking one tobacco cigarette.
** Tobacco-specific nitrosamine, a carcinogenic compound that originates in the curing and processing of tobacco.
Adapted from Goniewicz et al. (2014)[4]

FIGURE 5.Comparison of sample toxicants emitted by tobacco cigarettes and e-cigarettes (Vaping and Health: What Do We Know about E-Cigarettes?)

Besides, the biggest difference to traditional cigarettes is that e-cigarettes are produced without combustion when it is produced by high temperature vaporization fog oil smoke. It can also achieve the same level as conventional cigarettes, no tar, no carbon monoxide, no nitrous acid, and no other toxic substances. At the same time there will not be a very big impact on the surrounding crowd of second-hand smokes. E-cigarette is a diverse which can change tastes, and without nicotine, smok-

ers also could meet the taste of tobacco. Compared with conventional cigarettes, e-cigarettes still has several advantages in terms of health and environment protection.

1 Electronic cigarette does not burn and has no open flame, which is safer and fire hazard does not exist.
2 Electronic cigarettes are more environmentally friendly which is not burning, no soot, no smoke, no cigarette butts, and no electromagnetic radiation.
3 Health electronic cigarettes do not change the habits of smokers. Therefore, the electronic cigarette is very popular.
4 Electronic cigarettes can produce larger vapor and taste is not bad and make a smoker feels very real.
5 Electronic cigarettes are easy to use and carry. It is convenient for a smoker to take it in your pocket.
6 Electronic cigarettes can help a smoker quit smoking the tobacco cigarette.

3.2 Potential harm from electronic cigarette

Electronic cigarettes have caused controversy among public health professionals due to three main reasons: concerns about the relation between smoking and use of electronic cigarettes; advertising and promotion of electronic cigarettes; and involvement of the tobacco industry.

3.2.1 Hazards from the product itself

According to experiments, showing that when people use electronic cigarettes, it produces variety of other toxic compounds (in addition nicotine) that will be breathe in. At the same time, second-hand smoke electronic cigarette also brings the vapor that has the same hazards as a normal cigarette. Electronic cigarette also releases inhalable liquid fine particles and ultrafine particles, nicotine and carcinogens into the room. Since the electronic cigarette does not produce smoke, it is more likely to mislead consumers that it is safe and healthy.

In addition, a research from USA found that, for young people, the electronic cigarette is regarded as a substitute for conventional cigarettes. Not only will it fail to help them quit smoking, but also leads to nicotine addiction easily. Even it can make young people induce from smoking. For the United States National Youth smoking survey, in 2013, the United States had more than 260,000 teenagers try electronic cigarettes firstly; the figure is three times more than in 2011. After the 2013, 49.3% planned to smoke traditional cigarettes, while in 2011; there were only 21.5% of young people who tried to use electronic cigarettes.
Besides, some e-cigarettes are made with low quality and the high nicotine proportion will be more harmful to the users.

Although the electronic cigarette does not contain tar, pure nicotine will have the same health risks. Nicotine is not carcinogen by itself, but it can affect the initiation factor. Moreover, there is adequate evidence to explain that it will destroy the brain development forever and unrecoverable.

The US Food and Drug Administration had ingredients tested on the market for about 19 models of electronic cigarette and found that electronic cigarette smoking devices contain carcinogens and other toxic chemicals which affect human body. They also analysed the composition of two kinds of smoke pipe in selling electronic cigarettes; it was found that one sample contained ethylene glycol and high-dose exposure which can damage the kidneys. Other samples were found to contain nitrosamines and other carcinogens.

French national consumer researcher also pointed out that the nicotine proportion in some electronic cigarette is very high from the random survey, and even can kill a baby. Moreover, since the heating speed of electronic cigarette device is too quickly, it will produce a toxic molecule called acrolein in the process.

In 2013, the German Federal Health Education Centre director Dr.Elizabeth Potter did a research about electronic cigarette and analysis that the electronic cigarette contains large amounts of propylene glycol, the substance will cause irritation to the respiratory tract, and lead to a number of acute symptoms. Therefore, she believes e-cigarettes to be harmful to human health, may be even more than conventional cigarettes. (Guobing Wang March 31 2014)

3.2.2 Disadvantages to public health and lack of control

Children and young people are attracted by the function of e-cigarette; they might try to use the e-cigarette as entertainment. Even non-smokers will become one of smokers by using e-cigarettes. This is harmful effect to those people who are non-smokers but they want to try to use it. Experimentation with electronic cigarettes among non-smoking children in the UK is currently rare, and only about 1% of 16 to 18-year-old non-smokers have experimented electronic cigarettes and few if any carry on using. Furthermore, experimentation with electronic cigarettes should be considered in the context of current levels of experimentation with tobacco cigarettes, which in Great Britain currently generates a prevalence of smoking of 15% among 15-19 year olds, and 29% in 20 to 24-year olds.

Advertisements have a big influence on how people behave. It is no wonder that non-smokers will be promoted to buy and use the product. However, the nicotine is still contained in e-cigarettes and so more and more people are addicted by the drugs. A recent research illustrates that 60% of young people are attracted by the advertisement of candy-flavoured electronic cigarettes. So there is a bigger possibility that young and children will smoke tobacco cigarettes after using e-cigarettes. The research also found that children who show upward trend are willing to buy e-cigarettes after watching advertisement about candy-flavoured e-cigarette more than that peer child.

Certainly, electronic cigarette has a huge market in the future. Varieties of tobacco companies are already aware of valuably of e-cigarette in the future competition. It cannot avoid improving invest-

ment for electronic cigarette research after it is accept by society. However, safety and health are still big problems that should be solved.

China is the inventor and main producer of the electronic cigarettes, which occupies 90% of the market share especially in Shenzhen. However, the regulation of control is still blank. "No product standards, no quality control, no safety evaluation" is the main feature of e-cigarette in China. It does not belong to drugs, health products, and medical equipment or as tobaccos. Internationally, the governments' attitudes and policies on electronic cigarettes have significant differences. Some countries believe that it is a consumer product while others consider it to be a drug. Even some countries consider it to be a tobacco product. Thus, the policies of electronic cigarettes are also different; some states support, some countries ban, some countries are properly regulated, and there are countries still undecided.

In terms of regulatory electronic cigarette, the better option should be under medicines control. As the main component of the electronic cigarette is nicotine, the Food and Drug Administration of the State should be controlling the development under the regulations of medicine. If the electronic cigarette is controlled by the tobacco sector company, it may cause the explosive growth of the electronic cigarette market and the consequences could be disastrous. It suggested that government should manage professional organizations and drug administration departments to research the safety of electronic cigarettes by scientific assessment, and then propose scientific and rational policies.

If governments cannot control the electronic cigarette as a medicine, in the research evidence is insufficient; we should consider the following measures:

1. The total ban on the electronic cigarette advertising, promotion and sponsorship.
2. Prohibition of the electronic cigarette as a means to promote smoking.
3. Banning electronic cigarettes in the retail display.
4. Banning on the sale of electronic cigarettes to minors.
5. Prohibit the electronic cigarette and its liquid bombs, the use of child appealing taste additives.
6. Banning on the electronic cigarette and disposable electronic cigarette packaging and label the additives they use, nicotine content, and health warning labels.
7. Banning on the use of electronic cigarettes in public places, workplaces and public transport.
8. Establishing electronic cigarette liquid bombs consumer safety standards to ensure consistency of the production process, and sets the upper limit of its nicotine content. (Guangming daily press 09.2014)

4 MARKETING AND OPERATIONS MANAGEMENT

The e-cigarette has rapidly increased with the development of technology and quality. The electronic cigarette industries market has developed so quickly for over decade all over the world. Now, the e-cigarette market is estimated to be worth more than $650 million a year in Europe while $1.7 billion market in the USA. It is expected to be worth $ 2 billion by 2016. The e-cigarette market showing upward trend has quickly made industry grow with important development opportunities. More and more companies are aware of its strong profit, as the products have been improved rapidly and there are lots of several categories to be chosen from. The market is quite new and unique, which is also relative to the conventional cigarette market. Currently, there is a $ 600 billion dollar a year in tobacco industry and it has over 1.2 billion users. According to research, it will be expected to grow to 1.7 billion smokers for normal cigarettes all over the world, with $900 billion. In return, smokers are willing to smoke the e-cigarette after the advantage of that is recognized by public. It has huge potential market worldwide. (E-cigarette Marketing Analysis. Mar 16, 2015)

4.1 Market need

According to survey, in the USA there are approximately 3 billion smokers, with around 28% of the population as conventional cigarette users. It can be seen from the line chart in Figure 6 that the operating profit of e-cigarette increases dramatically over the period from 2011 to 2023. Especially, during 2015 to 2016, it is raising so quickly when compared with other year. In the future, the operating profit of e-cigarette is estimated to be $10 billion in 2021, which is the same level as combustible cigarettes have. However, the market of tobacco cigarette is still increasing from 2011 to 2015, which arrived at top of operating profit pool with $14 billion a year. But in the future it will decrease to $8 billion in 2023. Also despite some evidence, the amount of new tobacco cigarette smokers will grow. 95 % of all smokers will quit smoking, 60% of them will try to quit. Lots of old smokers are willing to buy the e-cigarette because the public is aware of the product. Initially, the selling process of e-cigarette market is only the internet and B2B. Lots of smokers are more willing to buy the e-cigarette than tobacco cigarette. So the electronic cigarette industry will have a great increase. Some researchers predict that the market of e-cigarette will be a $ 6 billion a year by 2016. (Linda Bauld, Kathryn Angus and Dr Marisa de Andrade. May 2014)

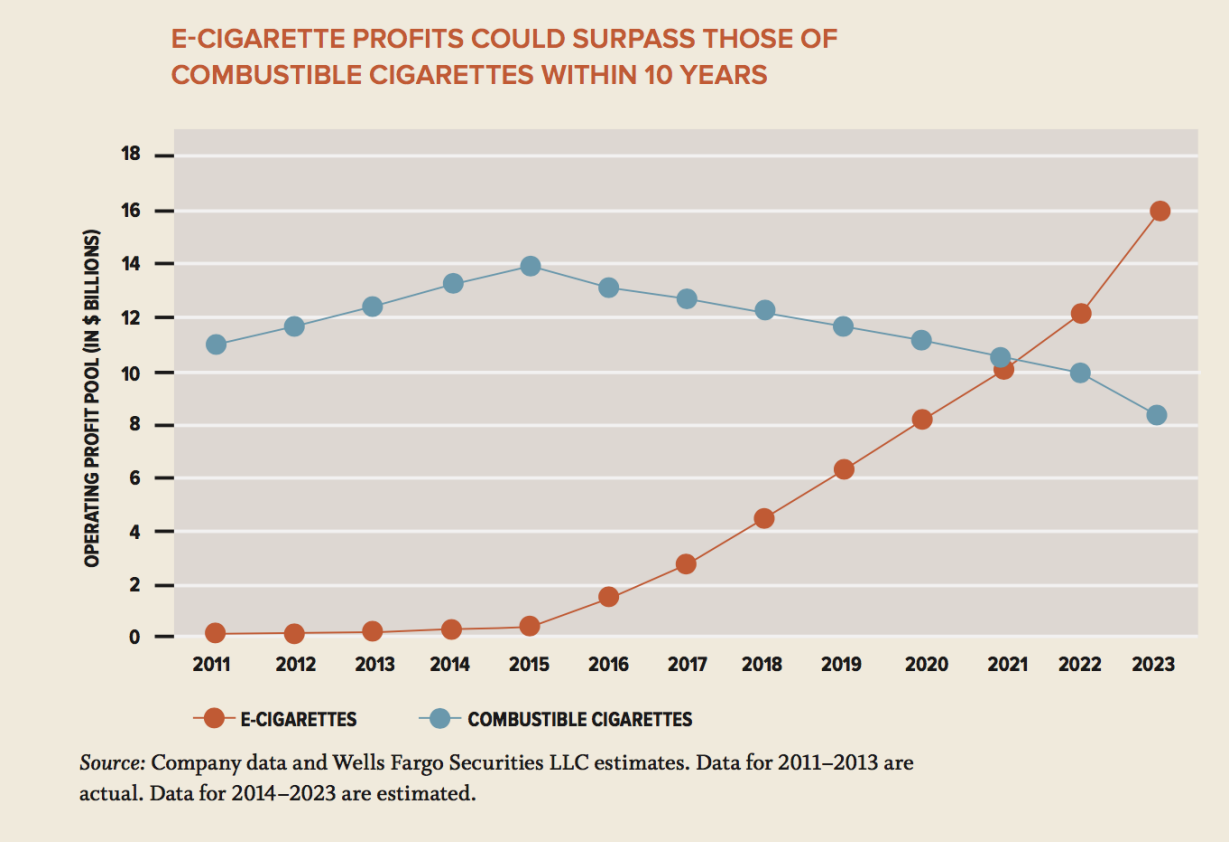

FIGURE 6.E-cigarette profit could surpass those of combustible cigarettes within 10 years (company data and wells Fargo securities LLC estimates.)

4.2 The regulation in different countries and analysis

In Brazil, sales import, or any form of advertising of electronic cigarettes is prohibited. Brazilian Health Surveillance Agency (Anvisa) found that the current electronic cigarette health and safety assessment is still not satisfactory; the electronic cigarette cannot obtain commercial approval.

In the Czech Republic, and the use of electronic cigarette advertising is now unrestricted.

In Denmark, the electronic cigarettes are legal, but due to the nicotine cartridge is currently being examined and the Danish health sector is under a temporary injunction.

In Canada, there is the smoking ban in public places and the use of electronic cigarettes on the legality is being reviewed. Canada has not approved any market licensed electronic smoking products.

In Finland, the sale or purchase of nicotine through the tube network is illegal, but the nicotine cartridge purchase from overseas sources for personal use is not illegal.

In Hong Kong, possession or sale of electronic cigarettes is illegal.

In the Netherlands, it allows the use of electronic cigarettes, but before determining EU legislation banning electronic cigarette advertising.

In New Zealand, the Ministry of Health say that nicotine cartridge is to comply with the requirements of "Medicine Act," except as a registered drug, or cannot sell.

In Panama, ban the distribution and sale of electronic cigarettes is banned from September 2009.

In South Africa, the use of electronic cigarettes is currently unrestricted.

In Tajikistan, the use of electronic cigarettes is currently unrestricted.

In the UK, the use of electronic cigarettes is currently unrestricted.

In the United States, the Food and Drug Administration says that the electronic cigarette is a nicotine delivery device, and it needs to be approved by the FDA. The agency is currently investigating electronic smoking devices, and prevents some electronic cigarette products imported into the United States.

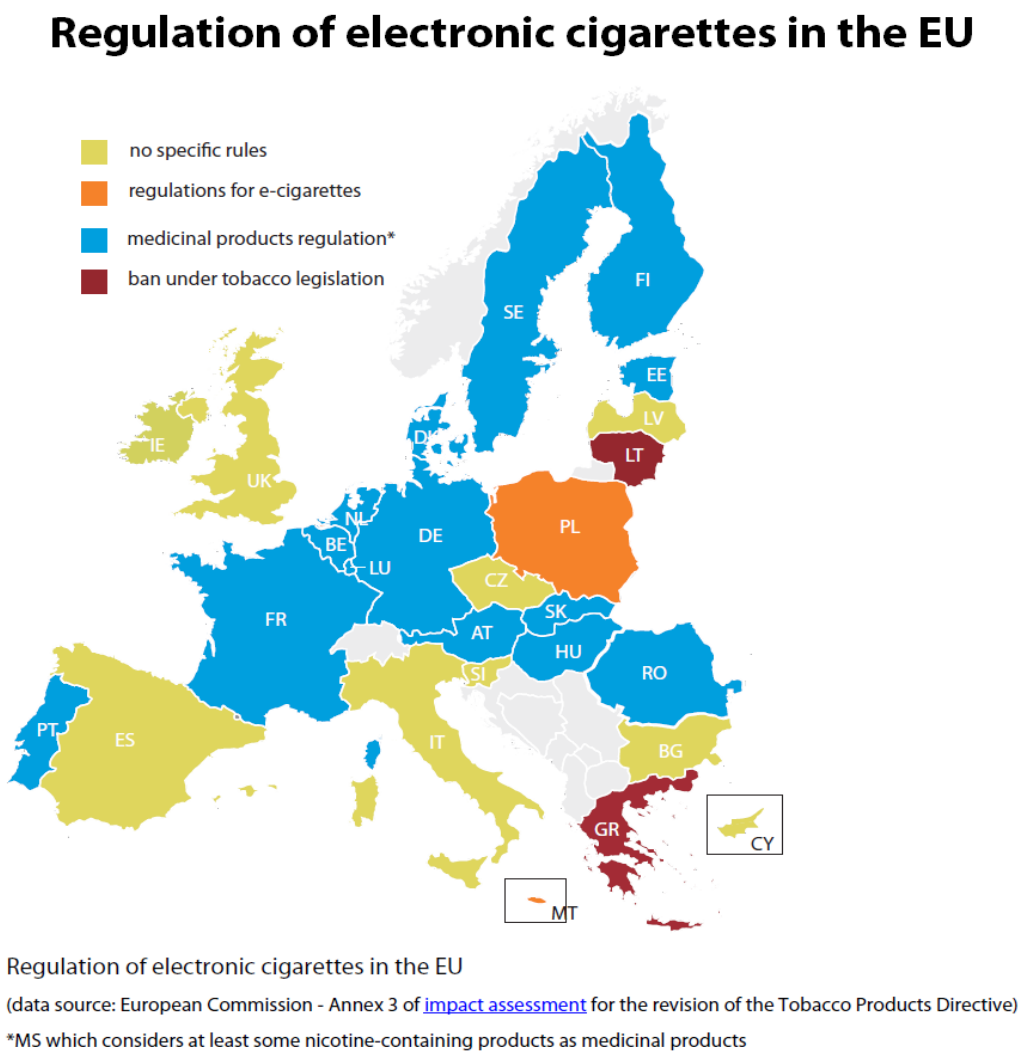

FIGURE 7.Wacky British Idea: Why Not Tell The Truth About E-Cigarettes? (Sullum, Jacob 27 Aug 2015)

4.3 SWOT analysis

The SWOT system is a tool which could analyse the strengths, weaknesses, opportunities and threats. With it the electronic company can make a business strategy and find the problems and issues, which lead to success or failure. For example, as one of electronic cigarette company, it is necessary to make a SWOT plan.

4.3.1 Strengths

1 The total growth of e-cigarette market and it has huge potential in the future.

2 It is no wonder that the biggest growth of e-cigarette is appealing to customer proposition. Generally speaking, it seems to make costumer feel that smoking e-cigarette is no harmful even healthful. Compared with tobacco production, people are willing to choose our electronic production.
3 With the awareness of health, people are interested in some production which can help to avoid quitting tobacco cigarette. It means that electronic cigarette can replace the conventional cigarette.
4 The special feature is that the electronic cigarette is more convenient than conventional cigarette. This is a new development industry at the same time it means huge opportunity and space for promotion. Identifying the needs of customer and the trends of marketing, it is important to build up famous brand for electronic cigarettes and make good quality products. Increasing profit and improving the performance of e-cigarette is the main strategy.
5 It is not difficult to make e-cigarettes. Especially some individual manufacturer companies could make the model easily because of the maturity of technology. In fact, 90% of e-cigarettes are produced in China with low quality control as well as experience. There are still some manufacturing of e-cigarette to be improved.
It is possible to build a famous brand of e-cigarette in the future with big market share.

4.3.2 Weakness

Although e-cigarette is a normal product, customer can't experience and try to use it before purchasing it. Moreover lots of countries make the limited regulation of e-cigarette that it not allows to be on sale in retail store or public. Lack of experience and way of buying is the main problem for e-cigarette company development.

Besides, there are no official researches or reports about the health effect of using e-cigarette or of inhaling second-hand vapour. It is necessary to claim the real impact and effectiveness of electronic cigarette.

The whole e-cigarette market has bad competition without any control. The most of companies have lack of investment in basic manufacture, which lead to very clear product differentiation on the competitive price. Another problem is the lack of official trustful brand. Low price is attracting customers, but it is bad influence on the whole electronic cigarette industry development. In the end, customer will not believe in the production and satisfaction is lacking.

4.3.3 Opportunity

According to survey, 1.2 billion people are willing to become e-cigarette user all over the world. People notice that it is healthier to smoke e-cigarette rather than tobacco cigarette. With the improvement of e-cigarette quality, it can be one of the biggest products worldwide. It is known that new development and technology will attract smokers about the great performance of electronic cigarette. For example, a new product named novel nicotine device will come to the e-cigarette market in the future. It is a product with high technology with different function and advantages if compared with conventional cigarette.

Besides, some markets like African, Latin American and Asian markets have huge opportunities to expand the market in their countries. In the future, the electronic cigarette will be applied for a medicine license when its health and safety is approved. It is now apparent that companies intending to market electronic cigarettes are now going to have to meet either medicines or TPD regulations, and probably this will be from 2017 at the latest. Until the current draft of the TPD was circulated, applications to the MHRA in the public domain were few, but more manufacturers may now be considering opting for the clarity, albeit at a cost, of medicines regulation rather than the uncertainty and advertising restrictions of TPD regulation.

4.3.4 Threats

It is limited that electronic cigarettes cannot be advertised on different public events. For example, they are forbidden on TV, sport events, entertainment programmes because of the regulations of government.

The whole industry of electronic cigarette is not professional, which causes low quality control, unsuitable price competition as well as rules on business. The e-cigarette manufacturer cannot control the construction of the whole industry while it still lacks of management of the industry. Especially in business trade, there are only few ways to selling the product.

4.4 Advertisement and international selling

1 Official Website Marketing

It is necessary for manufacturers companies to build one official website. This is one of the best ways to do the trade with customers and other companies. To be specific, customers are more willing to search and buy the products from the websites. So it is simple for marketing after having one excellent e-cigarette website.

From the customer's point of view, they could find the e-cigarettes products from the website and choose e-cigarette based on the brand, service, images, highlights prices…etc. for example; there has one e-cigarette website:

Ruyan e-cigarette Company http://ecigarettes.cn/

2 B to B Marketing

Current B2B e-commerce platform website is so many, but no one is suitable for electronic cigarette industry promotion. Platforms based on return on investment and the factors proposed here concern Alibaba, Global Sources and EC21. The manufacturers companies should use the e-commerce to do trade with other companies or customers.

The market of e-cigarette is global market, which should be expanded to different counties all over the world. Making sure the need of customers, the e-cigarette company should communicate and negotiate with partners as soon as possible.

3 Forum Marketing

The English electronic cigarette forum is a good marketing channel. There are many electronic cigarette forums. Recommendations can be effectively utilized. The ECF is the largest English-language forum that can bring countries electronic cigarette distributors together.

Sometimes the sellers can answer the questions from different customers who are interested in e-cigarettes. It is good opportunity for sellers to introduce and sale their products to customers directly.

4 Social website marketing

Facebook, youtube, twitter and other foreign social networking sites are the best for electronic cigarette manufacturers to use. It is recommended to use VPN software if the company in China. If there is need for software that can be obtained directly with blogs.

5 Payment methods

1) PayPal (the world's largest online payment platform)

If you have your own electronic cigarette trade website, PayPal can be placed through the website, so that buyers know that you can support PayPal payment this payment method, increase buyers to trust your site and products.

2) TT and Western Union, a traditional form of payment

It is traditional way to paying the fees for the products. If the customers want to buy the product, they should pay the money to a bank first. The e-cigarette company will achieve the business after customers are satisfied with the product and service. It is just like bank transfer.

6 Logistics

With the development of globalization of the world economy, the e-cigarettes company will benefit from the global logistics. The e-cigarettes company should make the specific strategic plan in order to face the need of customer service and high competition. Electronic cigarette is belonging to electronic products, which can manage with the international electronic products strategic. There are four main features in logistics operation.

1) Global logistics negotiations are needed.
   The e-cigarette company should join the global conference meeting actively and talk with different suppliers through a serious negotiation.
2) Exhaustive logistics concept in company.
   In order to meet the needs of customers and services, the company should avoid the errors in the real work and control the project effective. Those projects like procurement, production and marketing projects.
3) The unique transportation business treatments.
   It is important for e-cigarette to find available shipping companies which can achieve the whole supply chain management together. Also, the company should keep the own treatment independent.

4) Keep the good relationship with the branches of local logistic department.
   It is obvious that the local logistics service is becoming increasingly significant and plays an important role in logistics management network.

In details, there are several ways of transport in the USA, China and Europe.
United States - EMS, TNT, DHL, UPS, and EMS is best. Sometimes, air transport is necessary.
China – EMS and DHL. Land transport is the best way to do.
Western Europe - Air, TNT, DHL, UPS; electronic cigarette transport in air is fast and safety while sea transport is cheaper. Also the price is acceptable.

FIGURE 8.SOAR INTERNATIONAL LOGISTICS LTD (2013)

5 CONCLUSION

As we know, there are millions of tobacco smokers in this world who are continuously getting hurt from the harm of conventional cigarettes unless they quit. Governments are trying to build up some regulations and quitting smoking department to prevent people be killed by tobacco products. In order to change the situation of tobacco influence as soon as possible, the option of choosing to electronic cigarettes as one way of solving problems and more safer source of nicotine rather than medicine approach, which has huge potential to benefit persons' health and solve social problems.

Although there are still no official research saying the electronic cigarette is total safe, it will be accepted as a health benefit production in the future. With the development and growth of electronic cigarettes market, it is clear that this market is unique and extensive. The independent e-cigarette company should increase actively in the market and build up a famous brand in order to have better competition in the future.

It is important to continue to carry on product and promotional innovation. Controls on advertising have been called for, which is following an advertising standards consultation, and at international level through the Tobacco Products Directive. Good quality control, customer satisfaction, scientific recognition as well as good government policy are four main elements to accelerate the industry of electronic cigarette.

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