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A study on Criminal Regulation of Infringing Trade Secrets

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Abstract

With the development of the times, there have been more and more violations of trade secrets, which are characterized by internationalization and huge losses. Due to the relatively weak protection of trade secrets in criminal law, there are still many problems in legal practice, so that the interests of the parties are difficult to be effectively protected. On analyzing the current situation of the protection of commercial secret criminal law in China and comparing with the crimes of commercial secrets in the United States and Germany, this article puts forward some suggestions on perfecting the criminal law of infringing trade secrets, such as supplementing the crime of violating trade secrets, specific explanation for "heavy losses" and perfecting the allocation of "crime and punishment".

Keywords: Crime of infringement of trade secrets; Criminal legislation; Judicial identification

1. Introduction

As China's economic strength keeps growing up, its exchanges with foreign countries become more frequent and its enterprises have more interactions with each other, which also leads to more and more commercial espionage against Chinese enterprises. In 2009, there was a case of violating commercial secrets which shocked the whole world, namely the "Rio Tinto case".[1] Four employees of The Shanghai Office of Australian Rio Tinto company, with Stern Hu and Yong Wang among them, took improper means to spy on and steal the information of dozens of steel enterprises cooperating with Australian Rio Tinto Company, and the information they illegally obtained was the commercial secrets of the steel industry of these dozens of enterprises. This case is just the tip of the iceberg of espionage against our commercial secrets, and there are likely to be many more, which have caused great damage to our country and our businesses. According to the relevant data

survey, the ratio of first-trial criminal cases of infringing trade secrets to the hundreds of thousands of criminal cases stands quite low. The underlying reason why our country is not so efficient in investigating and fighting against the criminal cases of infringing trade secrets partly lies in the loopholes and deficiencies in our criminal law.

The Law Against Unfair Competition is the main law, supplemented by the General Provisions of the Civil Law, the Contract Law, administrative regulations and relevant judicial interpretations, which is the legal system for the protection of trade secrets in China. In particular, the General Provisions of the Civil Law, which took effect on October 1, 2017, included trade secrets as objects of intellectual property rights for protection, and the Anti-Unfair Competition Law, which took effect on January 1, 2018, added amendments to relevant provisions on trade secrets. However, the protection of trade secrets in criminal law has not been improved and has been in a relatively backward state. This paper discusses and analyzes how to perfect the protection of trade secrets in criminal law through the study of the crime of violating trade secrets.

2. Overview of the crime of infringing trade secrets

2.1 Definition of trade secrets

When a term is defined, three types of patterns may be usually used: comprehensive, general, and simple enumeration. The legislative definition of trade secrets can be roughly divided into comprehensive and generalized forms. In every country, pure enumerative forms, impossible to cover all aspects completely, appear to be rarely used. But, by contrast, having the power of fully covering, comprehensive forms are the most suitable way to define proper nouns.

2.1.1 Comprehensive forms

The protection of commercial secrets in The United States can be dated back to the last century. In the journey of its entire development course of business secret protection, it can be seen that the legal protection system has been more and more mature, among which two laws play a major role: H.R.3723 - Economic Espionage Act of 1996 is the first specifically designed to protect commercial secrets of federal criminal law, while H.R.5233 - Trade Secrets Protection Act of 2014, the latest on the civil law of the protection of business secrets. Both these two laws define trade secrets and adopt the comprehensive definition method. For example, H.R.3723 - Economic Espionage Act of 1996, " (3) the term "trade secret" means all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing if— (A) the owner thereof has taken reasonable measures to keep such information secret; and (B) the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information;"[2] It can be seen from this law that its mode is to enumerate the scope in the first place, and then limit it with two

features, that is, the mode of "generalization + enumeration", that is, the comprehensive definition method. The same model is used in H.R.5233 - Trade Secrets Protection Act of 2014.The advantage of this model is that it not only enables people to intuitively feel what trade secrets are, but also brings them into the scope of protection when new things about trade secrets emerge in the future. There will be no embarrassing situation where the law cannot be governed, which makes the law less rigid and increases more flexibility.

2.1.2 Summarizing forms

The WTO is an international trade organization, of which many countries are members. Trade exchanges among these members will inevitably involve the core technology, mostly business secrets. But because the definition of business secrets varies from country to country, disputes are likely to pop up at times. Given that, Article 39, TRIPS Agreement, of the WTO, also presents the definition of trade secrets. This definition mainly describes three characteristics of trade secrets to let members know what is a trade secret. The first characteristic is secrecy, that is, the information cannot be easily obtained or already known by ordinary people engaged in related fields. The second characteristic is commercial value, which can bring commercial benefits to the obligee. The third is protection which entails that the obligees have taken effective measures to protect the information. This method of defining by describing three characteristics is the typical generalized definition method, and the same model is adopted by Germany and Japan.

In Germany, the protection of commercial secrets are mainly concentrated in the "anti-unfair competition law", which, however, does not specifically formulated the concept of business secret, but according to the German court cases in real life as well as some researches on the issue, commercial secrets must meet the following three characteristics: first, the legal owner of the information is in secret; Second, it must be information about trade activities that is not publicly available; Third, it can bring legitimate economic benefits to the obligee. Japan, which is directly imitating Germany, also makes similar provisions in article 2, paragraph 4 of the Law on the Prevention of Unfair Competition. To sum up, we can see that the generalized definition method is generally defined by describing the characteristics of trade secrets. Although this method is not as perfect as the comprehensive definition method, it is much better than the pure enumeration definition method.

2.1.3 Definition of commercial secrets in China

China first mentioned the term of trade secrets in article 66 of the Civil Procedure Law of 1991, but the civil Procedure Law of that year did not directly define the concept of trade secrets. Until the Anti-Unfair Competition Act of 1993, it was clearly defined that trade secrets must conform to the following characteristics: i), they are not public and not known by the general public; ii), it can bring commercial benefits to the legal right holder of the information; iii), it is practical and has been taken confidential measures; and iv),it must be technical and operational information. The criminal Law of 1997 also added provisions on the crime of infringing trade secrets, in which the definition of trade secrets is directly copied from the Anti-Unfair Competition Law of 1993.It is obvious that China adopts the general definition pattern for the definition of trade secrets. However, in the new

Anti-Unfair Competition Law, which took effect on January 1, 2018, the concept of trade secrets has been redefined. The mode still adopts the generalized definition method, but the content has been changed. Therefore, the definition of trade secrets in our country has always adopted the generalized definition method. While the old Anti-Unfair Competition Law applied by the criminal law has started to change on the commercial secrets, should the criminal law also be changed, such as adopting a more perfect comprehensive definition law?

2.2 The constitutive elements of the crime of infringing trade secrets

2.2.1 Concept of crime of infringing trade secrets

Article 219 of the Criminal Law stipulates: "Whoever commits one of the following ACTS of infringing on commercial secrets and causes heavy losses to the obligee of commercial secrets shall be sentenced to fixed-term imprisonment of not more than three years or criminal detention and shall also, or shall only, be fined;(1) obtaining the business secrets of an obligee by stealing, luring, coercion or any other illegitimate means;(2) disclosing, using or allowing another person to use the business secrets of the obligee obtained by the means mentioned in the preceding paragraph;(3) disclosing, using or allowing another person to use the trade secrets he has in violation of the agreement or the obligee's requirements for keeping trade secrets. Anyone who knowingly or should know the ACTS listed in the preceding paragraph to obtain, use or disclose the trade secrets of others shall be regarded as infringing on the trade secrets. The term "trade secrets" as mentioned in this article refers to the technical information and business information that is not known to the public, can bring economic benefits to the obligee, is of practical use, and has been kept confidential by the obligee. The obligee mentioned in this article refers to the owner of the trade secret and the person who USES the trade secret with the permission of the owner." This article prescribes the definition of trade secrets and the types of ACTS infringing trade secrets, as well as the concept of the right holder of trade secrets and the crime committed by the unit in article 220 of the Criminal Law.

2.2.2 Subjective elements and objective elements

Firstly, the object of infringement is the legitimate rights and interests of the business secret holder and the normal and orderly market economic order protected by the state. The object of this crime is business secrets. Secondly, the objective aspect of the crime is the violation of the laws and regulations of the state against unfair competition, the infringement of trade secrets, and the behavior causing heavy losses to the obligee of the trade secrets. The subject of the crime of violating commercial secrets again is the general subject. Natural persons who are old enough to bear criminal responsibility and have the ability to bear responsibility can constitute the subject of the crime, and the unit can also constitute the subject of the crime. If the unit commits the crime, the person-in-charge directly responsible and other persons directly responsible shall be investigated for criminal responsibility in accordance with the provisions of this article. Finally, in the subjective aspect of the crime, the actor is required to be intentional or negligent subjectively, but whether the negligence constitutes the subjective aspect of the crime is controversial.[3]

3. Problems existing in the current law of the crime of infringing trade secrets

At present, the protection of commercial secrets in the criminal law of our country is only stipulated in article 219 of the Criminal Law, that is, the crime of violating commercial secrets. However, this provision is governed by the provisions of the Anti-Unfair Competition Act of 1993. Now the newly revised "Anti-Unfair Competition Law" has been implemented, but the criminal law has not changed correspondingly. Moreover, there have always been disputes over the provisions of the crime of infringing trade secrets in the academic world. Here present the current disputes from the following three aspects.

3.1 There is a dispute over the subjective "knowingly"

In article 219 of the Criminal Law, there appears a word that has caused controversy among many scholars, namely "should know". The understanding of the corresponding knowledge of these scholars is ambiguous. These differences can be generally divided into two theories, one of which is "deliberation" and the other, "negligence".

3.1.1 Theory of "deliberation"

Theory of "deliberate" means that the subjective aspect of the crime of violating trade secrets can only be intentional. However, in the articles of criminal law of the Crime of Violating Commercial Secrets, there is not only "knowing overtly" but also the term "knowing necessarily". Some scholars think that "knowing necessarily "should be understood as presumptive intention, while some scholars think that adding "knowing necessarily "is a legislative defect.[4] In any case, both believe that the subjective side must be intentional. Firstly, the criminal law takes the intentional crime as the principle and the negligent crime as the exception. If the criminal law applies the penalty to the negligent tort of the third party, it violates the modesty principle of the criminal law. The principle of modesty of criminal law means that when the infringer is punished, other laws should be applied first. If other laws are insufficient to protect the obligee, then the punishment can be applied in this case, which means that the criminal punishment must be the last resort to protect the obligee. In short, it can be understood that punishment is a means that has to be done. If such a means is applied to a third party, it can be said that it is relatively severe and inappropriate, and other means should be adopted instead. Secondly, the first paragraph of Article 219 of the Criminal Law stipulates three types of ACTS infringing trade secrets. Most scholars agree that these three kinds of ACTS refer to the intentional crime of the direct infringer, while the negligent crime refers to the negligent tort of the third party. In this case, the criminal law does not punish the direct negligent tortfeasor, but should punish the indirect negligent tortfeasor, namely the third person, is it unreasonable? Finally, in the whole criminal system of intellectual property, there are all intentional crimes, and negligence does not constitute such a crime. However, if the crime of infringing trade secrets is understood as negligence, it can constitute such a crime, which can also be said to stand out from the rest in the criminal system of intellectual property, and does not conform to the criminal system of intellectual property at all.

3.1.2 Theory of "negligence"

"Negligence" means that the subjective aspect of the crime of infringing trade secrets can be either intentional or negligent. Scholars here directly presume "should know" as negligence, and according to the provisions of article 15 for negligence crime of the Criminal Law, the fault can be divided into the faults of negligence and overconfident negligence. And overconfident negligence refers to the behavior that a person did when he had foreseen their behavior might produce the result that would do harm to society, but as it turned out, the credulity of his psychological attitude to avoid the damage caused the result thereby. Obviously, it does not conform to the infringement of commercial secrets in the understanding of "should know". Therefore, "should know" should be presumed as negligent fault, in which, the third person who should foresee their behavior will undermine lawful rights of the holder of the indirect infringement of trade secret, however, due to negligence, did not fulfill his reasonable duty of care, which resulted in certain consequences. Of course, when it comes to the third person referred to in the above-mentioned subject of negligence as most scholars agree with, a small number of scholars believe that the subject of negligence can also refer to the direct infringer, because in the second act of the three ACTS in the first paragraph of Article 219 of the Criminal Law, they believe that the subjective aspect can be either intentional or negligent. In a word, no matter what category of scholars, they all believe that the subjective aspects of the crime of infringing trade secrets include intent and negligence.

3.2 The objective aspect of the "act of implementation" and "significant loss" is not clearly identified

3.2.1 Enforcing behavioral rules is too simplistic

Here is a case in point: five employees of Xinhua Travel Agency, ready to move to Hongqiao Travel Agency, deleted all the important data of Xinhua stored in the office computers before they left the company, which put Xinhua Travel Agency, a vital rival of Hongqiao Travel Agency, in a very passive position. Even if those data could be restored later, it still caused an indelible damage to Xinhua, not to mention the potential loss when it comes to the following patent application. If the two rival companies apply for patent for the same kind of technology, whoever applies first will obtain the patent right. In the midst of competition, the fact that Xinhua's technical data were deleted completely would undoubtedly be forced to slow down their application due to data-preparation. Consequently, Hongqiao would get the edge of obtaining the patent right while Xinhua failed, suffering enormous losses. Such infringement of trade secrets is the damage or abandonment of trade secrets mentioned in the United States' Economic Espionage Act, which means that the actor will delete, modify and destroy the contents of trade secrets when it is difficult to obtain them.

But in Article 219 of The Criminal Law of China, 3 categories of improper behavior are stipulated, in which the above damage, destroy, or abandon behavior are not included. And in the real life of many related cases, these three kinds of behavior are increasingly not fully included. With the development of economy and society, these three behaviors are too general and simple to adapt to today's more complicated situation.

3.2.2 Identification of heavy losses

Article 219 of The Criminal Law of China defines the crime of violating commercial secrets as a consequential crime, in which whether the act of violating commercial secrets causes heavy losses directly becomes the threshold of whether the act of violating commercial secrets is to be committed. Therefore, the grasp of heavy losses is decisive. However, in the judicial interpretation issued by the two authorities, only two sentences mentioned the heavy loss, and these two sentences only stipulated the specific amount: the loss caused to the right holder amounted to 500,000 is a heavy loss; The loss caused to the obliger reaches 2.5 million is a particularly serious consequence. It did not specify how those losses would be calculated, in detail, including: when calculating losses, whether the scope includes the value of trade secrets, whether it includes indirect losses, whether it includes spiritual losses, whether it includes future interests and many other issues. Plus, regional living standards are different, and the judge degree of understanding of the calculation method is different also, which will lead to an excessive discretion of the judge, thus resulting to various degree of a judicial injustice for region to region and making the interests of the obligee suffer irreparable damage.

3.3 Crimes do not match penalties

The so-called "mismatching of crime and punishment", is put forward for the sake of "principle of adaptability between crime, responsibility and punishment", which indicates that the crime committed by a person should be consistent with the responsibility he should bear and the punishment he should receive. However, China's provisions on the crime of violating commercial secrets do not reflect this principle, and some even violate this principle.

For example, in the Rio Tinto case in 2009, the development of China's steel industry suffered the most serious crisis in history, involving a very wide range of enterprises, and then the situation directly rose to a state-to-state trial of the situation. However, there is no difference between the punishment of the person involved and the ordinary crime of violating commercial secrets in some domestic enterprises. The consequences and harms caused by the two are obviously quite different from each other. One is the steel industry which threatens the country, the other is the competition among domestic enterprises. One is to provide foreign countries with trade secrets, the other is to provide domestic enterprises with trade secrets. In the same way, if a person inside an enterprise or a person with a special status violates trade secrets, the punishment is the same as that of an outsider or a person with an ordinary status. It is obvious that the confidentiality obligation of the internal personnel or those with special status should be stronger than that of the external employees or those with ordinary status, but the punishment is still the same regardless of status and purpose. Similarly, an actor who illegally obtains a trade secret does not use it, nor does he allow others to use it, nor does he disclose it, and may simply appreciate it. Such an act is more serious than an actor who illegally obtains a trade secret, not only for their own use but also encourage others to use or even post online, in which social harm is much less, the purpose is simpler, and resulting in harm is also very small. However, the penalty is still lack of differentiation, regardless of the way of behavior, social harm. Therefore, the first

problem in terms of punishment lies in the fact that there is no specific punishment based on identity, purpose, behavior type and other factors. It can be said that the punishment for the crime of violating business secrets is relatively "capricious".

Second, the establishment of criminal types cannot meet the needs of the society. There are two kinds of punishment for the crime of infringing commercial secrets: fixed-term imprisonment, criminal detention and fine. Among them, the former two are freedom penalty, the latter is property penalty. From the perspective of judicial practice, these two punishments did not effectively prevent criminals from infringing on commercial secrets again, nor did they act as a deterrent to the society. On the contrary, with the development of the market economy, such ACTS of infringement became more and more widespread, and even the circumstances became more and more serious.

4. The extraterritorial legislation experience of the crime of infringing trade secrets

3.4 Criminal legislation on the protection of trade secrets in the United States

With the formal entry into force of the US Trade Secrets Protection Act on May 11, 2016, it means that the protection of trade secrets is more perfect and provides the remedies of civil law. Before the Trade Secrets Protection Act, there were four laws protecting trade secrets, of which the Economic Espionage Act was the most important. The Economic Espionage Act, with nine articles from 1831 to 1839, is a typical criminal law, in which the United States defines the concept of trade secrets, covering almost all-important information about a company in a very wide range. At the same time, there are also two crimes of violating commercial secrets, namely "economic espionage" in Article 1831 and "stealing commercial secrets" in Article 1832. Although the names of the two crimes are different, the types of conduct prescribed are the same. Scholars have divided it into four behavioral patterns: the first is unauthorized access; The second is unauthorized use; The third is damage or abandonment; The fourth is theft or abuse. The difference lies in that, first of all, the criminal object of economic espionage does not set any restrictive provisions on it, while the crime of stealing trade secrets has restrictive provisions on trade secrets, which must be the trade secrets produced in the production of intercontinental and international trade or the trade secrets of products in the trade.[6] Secondly, the purpose of economic espionage and business secret theft are different. Economic espionage is a crime that requires the perpetrator to have premeditated or to know that the criminal act is beneficial to a foreign government, foreign agency or foreign agent. The crime of stealing commercial secrets requires a dual purpose: the first is that the criminal must damage the lawful interests of the obligee, and the second is that he or the third party can obtain benefits. The final difference lies in the difference between economic espionage and theft of commercial secrets. Economic espionage carries a heavier penalty than stealing commercial secrets.

It can be seen from the above criminal legislation in the United States: First of all, the United States has issued a special protection law, which can be used for reference by China. Secondly, the United States has a very broad definition of trade secrets, and China should expand the corresponding concept of trade secrets, or even adopt the Comprehensive definition model of the United States. Thirdly, the behavior pattern classified by the United States is more detailed than that of China, and the three categories in China are too vague

and general. Finally, the United States specifically defines the act of violating commercial secrets of foreigners as the crime of economic espionage, and the punishment is also very heavy. China can make similar provisions, which is more conducive to judicial justice.

3.5 Criminal legislation on the protection of commercial secrets in Germany

The German Criminal Code and the Law Against Unfair Competition are two powerful tools for the criminal protection of commercial secrets in Germany which are complement and connect each other, making the protection of commercial secrets more mature. Compared with China, Germany is more systematic and perfect. Three articles, from 17 to 20, in the Law Against Unfair Competition, deal with the protection of trade secrets. Article 17 is the crime of disclosing business or business secrets, Article 18 is the crime of using or disclosing samples of business secrets without authorization, and Article 19 is the crime of inducing disclosure and voluntary disclosure. In the first paragraph of Article 17 of the Law Against Unfair Competition, it is stipulated that the criminal subject of the crime of disclosing business or business secrets can only be the in-service employee of the enterprise. Article 18 adds the act of stealing samples. At the same time, Germany also distinguishes different crimes and different penalties for whether an employee of an enterprise or a person entrusted by an enterprise who is an employee of an enterprise. In Article 17, the penalty is heavier for an employee of an enterprise, and lighter for an entrusted person of an enterprise if it is in Article 18. Then, paragraph 4 of Article 17 stipulates particularly serious circumstances, by which an offender who knows that the secret will be used in a foreign country or that he himself will be used in a foreign country, is liable to imprisonment for a period of not more than five years or to a fine. Clearly, it is more severe than ordinary crimes. Furthermore, when it comes to subjective aspect, the Law Against Unfair Competition only sets up an intentional psychology.

There are two aspects worthy of reference for our country. Firstly, it rules on the most severe cases, according to the trade secrets in their own country or in a foreign country, to use and apply different punishment, which will crack down on commercial espionage, reduce the damage to the society, strengthen the protection of business secrets in China if we take reference to what Germany has done. Secondly, in the subjective aspect, it only sets up an intentional psychology. If the subjective constitutive elements of the crime of infringing trade secrets only limit the intentional psychology, it will be more conducive to the protection of the legitimate rights and interests of the third party, and also reflects the principle of modesty of the criminal law.[7] The rationality of choosing only intentional psychology will be discussed in more detail in the following paragraphs.

4. Suggestions on perfecting the criminal law of the crime of infringing on commercial secrets

4.1 To determine the "should know"

According to the foregoing, because of the different understanding of "should know", there are two interpretations in the subjective aspect of the crime of infringing trade secret: Intentional and negligent. And they all have their own reasons for supporting the theory, but taken together, the negligence argument is more far-fetched, the deliberate argument

is more appropriate, and the author himself is more inclined to say deliberately, for the following reasons:

4.1.1 The name "infringement" of the crime

The name "infringement" of the crime of infringing trade secrets, must be determined by the Supreme People's Court and the Supreme People's Procuratorate after careful consideration of the Criminal Law" Article 219. Then what is the meaning of the word "violation", which appears in the content of Article 219 of the Criminal Code and is applied directly in the determination of the charges? When I consulted Baidu Baike, I found the concept of violation. I found that the act of violation must have the meaning of harming others. This means that the violation has a specific purpose, but it is impossible to have a criminal purpose in the negligent crime, can only exist in the context of a deliberate crime. Therefore, since it is called "the Crime of Infringing Trade Secrets", it cannot literally include the crime of negligence.

4.1.2 The object of "knowledge" is different

According to Article 15 of the General Provisions of the Criminal Law on negligent crimes, the word "should know" in the crime of violating commercial secrets should be interpreted as negligence. However, it cannot be neglected that the objects of "knowledge" are different in the general and specific rules. For example, in Article 14 intentional crime, "knowing" is aimed at "the result that one's behavior will endanger the society", that is, the object is the result; while in Article 15 negligent crime, "should foresee" is aimed at "the result that one's behavior may endanger the society", that is, the object is also the result.

However, the object of "knowledge" changes in the specific rules. Such as article 144, production and sales of poisonous and harmful food, "knowledge" on the object is "toxic or harmful non-food raw materials of food," the object is the food, then the article 145, article 146, article 147, article 148, the objects are medical equipment, medical health materials, electrical appliances, pressure containers, inflammable and explosive products, pesticides, veterinary drugs, chemical fertilizer, seeds, cosmetics and so on. In so many criminal law clauses, there are more than 20 articles with the word "knowing", and only the crime of infringing trade secrets has the word "knowing". In these more than 20 articles, the object of knowing is no longer the result, and by analogy, the word "knowing" is the same. Therefore, it is not easy to apply the general principles of "should foresee and did not foresee" to explain the "should know" in the specific.

4.1.3 The meaning of "should know" in other laws

Although there is no specific interpretation of the meaning of "should know" in the Criminal Law, it is reflected in other laws. We can take the knowledge mentioned in these laws as a reference for the interpretation of corresponding knowledge in the criminal law.

Issued in projects such as "about for theft the concrete application of law interpretation, Article 8, " the receiver, and subsequently charges knew, not only by the confession of the defendant, shall, according to the objective facts of the case analysis, as long as to prove the defendant knows or should know that was a crime of the proceeds of the stolen goods and be

receiver or on behalf of sales, can be identified." Here the word "knowing" clearly includes two states of "knowing or ought to know". Then knowing is intentional psychology, which includes "knowing or ought to know" also refers to intentional psychology.

4.1.4 "Should know" is presumed to be intentional is more reasonable

If 'should know' is presumed to be fault, then its subject is aimed at the third party, that is to say, the third party must fulfill the duty of care, which means, the third party can be calm and prudent when dealing with the relevant information whether it is a trade secret illegally obtained by others. That is a bit difficult in real life, because most ordinary people probably even don't know what a trade secret is, let alone let him to judge. Moreover, if it is regarded as the fault of a third party, it means that if the third party fails to fulfil its duty of care by using or disclosing the trade secret, the same penalty shall be applied to the third party as to the direct infringer. It seems that the punishment for the third party is more severe, which violates the principle of modesty of criminal law. In short, the presumption of intent is more reasonable.

4.2 The crime of violating commercial secrets should be supplemented

There are three types of conduct in our country, which do not include damage or destruction and other forms of conduct, all of which are regulated in accordance with the old version of the Law Against Unfair Competition. The law itself is indeed hysteresis, so it is reasonable to continue to apply the "hysteresis" law when a case occurs, but there is a big premise that the application of such a law will not bring big problems to the society.

However, the three modes of conduct of the crime of violating commercial secrets stipulated in the criminal law are increasingly unable to meet the needs of relevant cases, which also have a certain negative impact on the development of the economy and society. Therefore, it is necessary to improve the legislation. Adding to the category of the crime of infringement of trade secrets damage or destruction and other forms of infringement of trade secrets derived from economic development, not necessarily by way of enumeration, it should be classified according to the characteristics of these behavior patterns to form new behavior types of the crime of infringing trade secrets. At the same time, we should pay attention to some legal acts of obtaining trade secrets, such as obtaining trade secrets in good faith.

4.3 Give a concrete explanation of "major loss"

The importance of "major loss" has been described above, so it is the most important priority to confirm the calculation basis of "major loss". The calculation in the United States is based on the actual damage suffered by the obligee, the illegal income obtained by the actor due to the criminal act and the additional compensation less than two times, [8]while in Japan, the profit obtained by the actor and the value of the trade secret itself are included.

After comprehensive consideration, the author contends that the major losses should include: first, the value of trade secrets themselves. The reason is that when the business secret is violated by the wrongdoers, the business secret holder will not only lose the benefits brought by the business secret, but also will not have exclusive right of use any more, and

the reuse of the business secret will not have its previous value. The loss of the value of trade secrets is the actual loss of the obligee.

Second, the R & D cost of trade secrets. In the increasingly fierce market economy environment, business secrets are the core of business secrets for enterprises to keep their advantages and enhance their advantages if they want to do well. Therefore, enterprises will increase their investment in the research and development of trade secrets. Once the trade secrets are violated or disclosed, all the money and sweat invested in the early stage will be wasted, which will directly lead to the failure of enterprises in the market competition.

Third, the most direct loss of the obligee, that is, when the trade secret is disclosed, the obligee's product orders decrease, the product price drops and so on.

Fourth, the illegal income obtained by the actor. Actor of the illegal income shall actually belong to the holder of the commercial secret. Even if not use in the production and business operation but to resell business secret obtained huge profits, the profit is obtained by the commercial secret should belong to the obligee.

4.4 Perfect the allocation of "crime and punishment"

According to the foregoing, the Economic Espionage Act of the United States defines the infringement of the lawful rights of the holder of business secrets by foreigners as the crime of economic espionage, while the ordinary infringement is the crime of stealing business secrets, which effectively fights against the crime of commercial espionage. The author thinks that our country should also draw lessons from it, and our law can also be classified according to different subject identities and different purposes, which will be conducive to the economic development of the country and society.[9]

For example, if a foreigner infringes on a trade secret or infringes on a trade secret in order to provide it for foreign use, it can be regarded as stealing, spying on, buying or illegally supplying trade secret from abroad. If the other people's criminal acts conform to the provisions of Article 219 of the Criminal Law, it will be uniformly regarded as the crime of violating commercial secrets. At the same time, it can also stipulate that a third party violates the trade secret crime, but the subjective must be intentional,

When we subdivide the acts of commercial secret crime, according to the degree of harm to the society, we can assign different penalty, which not only follows the principle of the correspondence between crime and punishment, but also reflects the justice of judicature.[10] For example, the penalty may be increased in the case of an alien who infringes a trade secret or who infringes a trade secret in order to make it available for use by a foreign state. Referring to the crime of stealing, spying on, buying off or illegally providing state secrets or intelligence abroad, the crime of stealing, spying on, buying off or illegally providing trade secrets abroad shall be sentenced to fixed-term imprisonment of not less than three years but not more than seven years; if the circumstances are serious, to a term of imprisonment not less than seven years.

At the same time, we can also add a new qualification penalty, similar to the Prohibition of employment system penalties. As long as they have committed this crime, if the circumstances are serious, they are prohibited from engaging in the relevant trade or from entering the relevant places.[11] This kind of punishment can be said to be very severe for those who have

been engaged in economic undertakings all their lives. The imposition of such a penalty would not only deter those who are unsatisfied with the status quo and ready to commit a crime, and make them afraid of the consequences of not being able to engage in economic activities in the future, but also prohibit the perpetrators concerned from committing the same crime again, can effectively suppress the recurrence of the crime frequency.

5. Conclusion

Trade secret has become the core advantage of competition among enterprises, even the essential core weapon of competition among countries. The proportion of crimes against commercial secrets is increasing in the world, and every country has adopted a series of laws to protect commercial secrets.[12]However, the protection of Commercial Secrets in criminal legislation is still in urgent need of perfection.

This article, based on the definition of business secret, infringe the constitutive requirements of commercial secrets, further extends a deep insight into what is the commercial secret, what constitutes this crime condition, simultaneously pointing out the existing questions in our country present criminal law and how to protect trade secrets through criminal legislation in foreign countries, for the sake of enlightening our legitimate practice. Finally reasonable recommendations are put forward. Although the protection of trade secret in our country has defects in the system at present, with the promulgation of the general provisions of the Civil Law and the amendment of the Law Against Unfair Competition, the protection of trade secret in our country will be more and more optimized.

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