

A Substance-over-Form Approach to Virtual Currency in Criminal Law

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Abstract. As a kind of complex object with property attribute and financial attribute, virtual currency has caused theoretical and practical controversies about its criminal law classification since its birth. In judicial practice, because of the vague boundary between property crime and financial crime, the criminal case of virtual currency always manifests a state of “malnutrition”: denying its property attribute, resulting in the attenuate protective function of criminal law; generalize its financial attribute, resulting in the criminal law overregulation. This paper insists on establishing a dual regulation model based on property attribute and financial attribute. In the field of property crime, virtual currency’s property value should be acknowledged and regulated according to the traditional property crime such as theft, fraud, and embezzlement. In the field of financial crime, the criminal law should only focus on the behaviors of illegal fund raising and money laundering, considering the anonymity, decentralization and cross-border circulation of virtual currency. More importantly, the criminal law evaluations should follow the principle of “substance over form” to find out the real function of virtual currency in the criminal behavior, thereby protecting property rights, maintaining financial order and promoting the systemic regulation and substantive regulation of virtual currency crime.

Keywords: Property Crimes, Financial Crimes, Virtual Currency, Dual Regulation, Substance Over Form

1. Introduction

With the rapid development of blockchain technology in recent years, virtual currency has been applied in practice, and this kind of currency which originally been an experiment of technology gradually becomes an important part of people’s financial life all over the world. Such phenomenon triggered various legal and regulatory debates. As virtual currency is decentralized, anonymous, cross-border mobile, it is not only used as value transmission and investment, but also used in various criminal activities, such as money laundering, fraud, illegal fund raising. Such phenomenon not only brought challenges to current financial system, but also challenged the basic links of criminal law, and thus become an urgent problem to establish scientific definition and regulation of virtual currency for both legal theory and judicial practice.

In term of academic circle, there are various opinions on the nature of virtual currency. Divergent opinions include "Prohibited goods" theory, "virtual property" theory, "computer data" theory,

"securities product" theory, "currency" (or quasi-currency) theory [1]. Such lack of unified opinion directly lead to the imbalance in protecting legal interests in the application of criminal law. In addition, regulatory agencies' comprehensive ban on virtual currency to some extent aggravated the confusion in applying criminal law, which lead to the classification and discretion in virtual currency cases in a state of confusion. Therefore, both academia and practice have theoretical and practical shortages in categorization and regulatory path of virtual currency in criminal law.

In response to above problems, this paper aims to clarify the different manifestation of virtual currency in property-related and financial crime, which avoided the imbalance in applying criminal law caused by the blurred boundaries. At the same time, by recognizing the real function of virtual currency in criminal act, this paper attempts to establish the principle of "substance over form". Such approach will logically start to recognize the property attribute of virtual currency in criminal evaluation, which will balance the protection of property right and maintaining financial order, and therefore promote the systematization and substantive development in regulating virtual currency crime in criminal law.

2. Legal classification of virtual currency under criminal law

2.1. Property attributes of virtual currency as virtual property

Virtual property refers to the assets with economic value that exists in the form of electromagnetic data in cyberspace [2]. The basic characteristic of virtual property is that it is generated by information technology, and it exists in the form of data, but it still has disposability and tangible property value. As the important subset of virtual property, virtual currency is based on blockchain technology and cryptographic algorithms for operation. It not only can store and transfer value, but also has scarcity and liquidity, and therefore, it also shows the typical property function. Therefore, it is both legitimate and explanatory to include virtual currency in the theoretical system of virtual property. In term of criminal law evaluation, recognizing the property attribute of virtual currency can be logically started from the general concept of virtual property.

However, there has been long-term academic controversy on whether virtual property can be directly regarded as "property" in criminal law, thus causing theoretical differences and practical obstacles in recognizing the nature of virtual currency.

One view believes that the crime forms of acts of acquiring virtual property illegally should be directly classified as property crime to plug the gaps of criminal law in the field of computer crime [3]. Another view believes that virtual property should be regarded as a kind of "right certificate" and should be protected differently according to whether it is registered or not [4]. There are also scholars who believe that civil law and criminal law should recognize virtual property as having dual characteristics of "data" and "property" consistently [5]. Generally speaking, there is relatively wide agreement on the property attribute of virtual property, and the controversy mainly exists in the recognition of the realization form of possession and the basis of value. However, the three characteristics of blockchain technology have reduced the differences of debate to some extent. Compared with virtual property in general, blockchain-based virtual currency has following advantages in operation mechanism, thus making the attribute of property clearer: first, the operation mode based on distributed ledger technology realizes the direct control of digital currency by users and solves the problem of incomplete possession; second, the characteristic of scarcity and market transaction of digital currency based on blockchain technology can ensure the relative stability of its value, and give it an independent value as a digital asset, which is not limited to the attribute of

property right; thirdly, the characteristic of direct control by users makes the digital currency based on blockchain technology further show the characteristics of financial assets with multiple functions.

2.2. Financial attributes of virtual currency as consensus-based, non-redeemable currency

The clarification of the property attributes of cryptocurrency is to clarify whether it can be regarded as "property" in criminal law. Based on the analysis in previous parts, a relatively clear conclusion can be drawn: cryptocurrency, as a kind of digital currency generated by blockchain technology with independent economic value, should be regarded as real property, which provides a theoretical basis for applying the norms of traditional property crime in criminal law. But as mentioned above, the illegal acts committed by some subjects in blockchain practices are not limited to the crime forms of property crimes. For example, the serious damage to the rights and interests of investors caused by some subjects of blockchain projects cannot be completely included in crimes of theft, fraud or embezzlement. Therefore, the legal status of cryptocurrency should also be studied from the perspective of financial asset attributes.

From the perspective of securities, competitive coins and tokens are the most representative ones. Even though competitive coins and tokens have not been officially recognized as securities in accordance with securities law, they have the essential characteristic of "common investment and risk exposure." In practice, even for the blockchain projects that are completely decentralized, the project parties can still control the issuance and pricing and cause legal harms similar to securities fraud and insider trading. Therefore, interpreting specific types of cryptocurrency as securities in criminal laws not only supplements the vacancy of judicial objects in practice, but also better protects the right of investors. While, for the fully decentralized cryptocurrency, since there is no centralized person that can be held criminally liable, the cryptocurrency generally does not have the essential characteristic of securities and criminal law has a limited intervention in such cases.

Another way to understand the financial characteristic of virtual currency is to treat some cryptocurrency as "quasi-currency." In practice, bitcoin, stablecoins and others are widely used as payment and settlement instruments, and they do have the two basic features of money---accounting symbols and general recognition. In addition, bitcoin not only serves as a store of value in the real world, but also has been declared legal tender in some countries. Therefore, interpreting currency as criminal law violations. Since stablecoins are more likely to be involved in money laundering and other illegal activities due to their price stability and wide circulation, posing a threat to financial order, criminal law should pay more attention when regulating financial crimes involving stablecoins. Only by recognizing the stablecoins as quasi-currency can we know them well enough to charge them with illegal business operations and financial fraud.

There is no doubt that currency attribute does not necessarily depend on the prior laws to be recognized in criminal law, but should follow the logic of legal protection and take into account the form of money in a digital society.

In summary, cryptocurrency has property attributes and diversified financial attributes. Regarding property attributes, we recognize its basic value in the form of virtual property but it is insufficient to mitigate the complicated risks emerging from blockchain financial activities. From the financial angle, different types of cryptocurrency with different degrees of decentralization and different functional orientation can be regarded as securities or quasi-currency corresponding to different financial crime norms. The interaction between the two attributes makes the legal evaluation of virtual currency crime extremely complicated and challenges financial order and judicial consistency and certainty. Therefore, the legal classification of cryptocurrency should not be stuck in one dimension, but should follow the logic of legal protection and take into account the form of

money in a digital society. Only by adopting differentiated and substantive classification methods can we balance the protection of property right and financial order and provide more systematic regulation for virtual currency crime.

3. The real dilemmas in the handling of virtual currency crimes

Based on the above analysis, we can learn well enough about virtual currency so as to strike a balance between property right and financial order and impose charges such as illegal business operations and financial fraud on virtual currency.

After distinguishing the property and financial characteristics of virtual currency, it can be seen that although the basic skeleton of legal classification under criminal law is gradually clarified, there are still many unavoidable problems in the practical criminal judgment. On the one hand, the property and financial characteristics of virtual currency give rise to theoretical obstacles due to the fusion of boundaries and, in practice, they also give rise to many practical problems such as different classifications, different application standards, and unbalanced value recognition. As a result, the handling of virtual currency crime has entangled itself in a dual dilemma of institutional and practical problems: uncertainty in regulation and vagrancy in application, which not only damages the predictability and consistency of criminal law but also causes the fluctuation in the direction of legal protection and thus need more reflection and response. In addition, the decentralized, anonymous, and cross-border characteristics of virtual currency attract people to use it in illegal activities such as money laundering, terrorist financing, avoidance of foreign exchange control and tax evasion, and the current regulatory and legal system have not yet covered it [6]. This dual dilemma of property and financial characteristics make the virtual currency exists in a sticky and uncertain gray area of criminal law for a long time, test the adaptability of current criminal law, and reflect the deep-seated problems.

3.1. Normative dilemma: different classifications and dependence on preceding laws

At the normative level, the most prominent problem existing in virtual currency is the fluctuation in criminal law classification. Due to the property characteristics such as liquidity and disposability and the de facto status of financial instruments in some cases, judicial practice is often in a fluctuating state between property crime and financial crime. Some cases hold that virtual currency amounts constitute theft and fraud and focus on the damage to the subject of personal property rights; some cases hold that virtual currency amounts constitute illegal fundraising or illegal business operations and focus on the damage to financial order. There are great differences in the handling of similar cases in different regions and even different courts, which directly damages the consistency in the application of criminal law. Technological and financial innovation transform computer and Internet from a communication system into a new form of production and trade and financial transactions, so that give rise to all kinds of new criminal forms.

In addition, the vague legal position of virtual currency in previous laws also makes the application of virtual currency in criminal law even more tenuous [7]. Germany, Japan and Australia have recognized Bitcoin as a legal payment method, while China has long held a rigid attitude and treated virtual currency as a virtual commodity since 2013. In 2017, it strictly prohibited the conversion between legal currency and virtual currency, and further identified virtual currency-related behavior as an illegal financial operation in 2021.

Given that the law has not yet provided virtual currency with a clear position as currency or security, when applying related criminal offenses, the judicial authority often falls into a dilemma:

On the one hand, if one insists that virtual currency is not a financial instrument, certain serious disruptions to financial order that do not constitute any specific crime can be ignored; On the other hand, if one prematurely recognizes that virtual currency is a financial instrument, it will inevitably conflict with current laws and violate the principle of legality in criminal law. In this case, judicial practice has formed a tendency towards "administrative criminalization": drawing conclusions from administrative regulations into criminal law assessments, rather than relying on criminal law principles for independent legal protection. This approach may satisfy current policy needs, but it weakens the independent protective logic of criminal law and loses accurate evaluations of risks based on the substance of the behavior.

Moreover, judicial authorities also have the tendency to use expansive interpretations and even analogical applications in virtual currency cases. To meet the practical need of punishing crime, criminal law norms are arbitrarily applied to plug the gap in virtual currency governance institutions. This approach may satisfy current policy needs, but it weakens the independent protective logic of criminal law and erodes the fundamental principle of legality in criminal law. Therefore, the normative dilemma in dealing with virtual currency crimes originates from the ambiguity of positioning between property and financial characteristics and the lack of adequate preceding laws, which leads to regulatory uncertainty.

3.2. Practical trap: the technicality of virtual currency and the judicial disadvantage

According to the normative issues discussed above, the technicality of virtual currency also brings new practical problems in criminal justice practice.

First, investigation and collection of evidence are restricted. As virtual currency is anonymous and decentralized, the subjects of the transaction cannot be identified, and the flow of funds cannot be traced. Due to the cross-border nature of virtual currency, judicial cooperation is also disturbed. Even with powerful technical support, the investigation authority may still be unable to trace the criminal chain. The dilemma in identifying facts of the case also affects the application of penalty.

Uncertainty in value recognition is another issue. Price of virtual currency is volatile, and the difference between the price at different times is considerable. In practice, some courts identify the price at the time of the offense as the basis, while others identify the price at the end of the investigation or even at the time of the verdict. The differences in the standards of identifying the amount involved not only cause differences in the identification of the amount involved, but also affect the establishment of criminal charges and the sentence directly. There is no consensus on whether virtual currency can be directly converted into legal tender, and the difference in value recognition makes the judgment of the case unknowable and the authority of the law shaken.

Due to the lack of unified judicial interpretation and sentencing standard, there is a general judicial disadvantage in the balance of sentencing in virtual currency cases. For the same case, different courts may make vastly different sentencing decisions, and some courts may make excessively lenient or harsh judgments. The disparity not only shakes the fairness of criminal justice but also enlarges the uncertainty. The disparity is more obvious in high-risk financial cases, and the credibility of justice directly affects the public.

Therefore, due to the technicality of virtual currency and the judicial disadvantage, there are problems in fact-finding, value recognition and the balance of sentencing.

3.3. Value trap: fluctuation in legal interest protection and criminal policy unsoundness

In addition to the above normative and practical issues, the handling of virtual currency crime also reflects the following value dilemmas.

First, the fluctuation in the focus of protection of legal interest according to criminal law. Virtual currency crime has caused financial losses to individual investors, and it may also cause disruption to the financial order. In some judgments, the protection of property is emphasized, and virtual currency is treated like general property in some cases; in some, the focus is on the prevention of financial risks, and virtual currency is included in the scope of financial crime. Due to the lack of a stable standard in evaluating the legal interest, the direction of protection of the legal interest according to criminal law fluctuates with each case. The fluctuation makes the direction of criminal law unstable, and the criminal justice less predictable.

Due to the lack of a stable standard for the legal interest evaluation, the judicial authorities can only rely on the policy guidance to deal with the virtual currency cases in virtual currency cases, and thus criminal law deviated from administrative policies.

In the past few years, the overall tendency of the policy towards virtual currency is "high-pressure crackdown", and we need to strengthen criminal law enforcement. However, due to the lack of a clear legal regulation, the judicial practice can only rely on an expansive interpretation to realize the policy goal. This may solve the governance issues in the short term, but it will weaken the principle of judicial restraint in criminal law.

At the same time, the instability of policy has further intensified the dilemma. On the one hand, administrative regulation and civil remedy remain coordinated, and too much regulatory tasks are burdened on criminal law; on the other hand, the instability of policy makes the application of criminal law wobbly in the long term.

Therefore, the fundamental dilemma in the criminal regulation of virtual currency is the instability in the protected interests and adjudicative standards of criminal law, and at the same time, it is affected by policy objectives, which undermines the independence of criminal law, and reduces the coherence and predictability of criminal law. Since the administrative policy keeps changing, the criminal law is more dependent on the administrative assessment, and loses the space for independent judgment [8]. Its dependency may make the application of penalty more arbitrary in the short term, and turn criminal law into a subsidiary of administrative regulation in the long run. After all, the independent value of criminal law is hard to be sustained in the long run. Criminal law's last line of defense will also be weakened.

4. Binary regulation and the regulatory approach of "substance over form"

4.1. Necessity and logical starting point of the binary regulatory path

As virtual currency always stays in a gray area in criminal law, its dual characters of property and finance cause an obvious bias in judicial application. If we just regard virtual currency as a kind of virtual asset, it is hard to include the risks of social system involved in the case of financial transaction, investment and financing and across-border payment. If we focus on its financial characters too much, it will be hard to protect the value of virtual currency as an independent property object, and the gap of protecting individual's property right will be formed. Due to the above-mentioned structural contradiction, the single-dimensional regulatory path is insufficient to solve the problem of virtual currency crime, and we should construct a binary regulation path to protect two kinds of legal interests, that is, property legal interests and financial order.

Due to its existence form of data, virtual currency owns independent property value in real society by means of its characters of scarcity, substitutability and tradability, and satisfies people's needs of exchange and storage of value. Therefore, the behavior of stealing, defrauding or embezzling virtual currency is essentially no different from the behavior of damaging traditional property. If denying its property attribute, the above-mentioned behaviors will not fall into the category of property crimes. Not only will the scope of criminal law protection be narrowed, but also a legal gap will be created to let the offender evade the sanction. Therefore, only by recognizing the property nature of virtual currency and dealing with it according to offenses of theft, fraud and embezzlement can we maintain the systematic stability of criminal law and respond to the practical need of regulating the infringement of virtual currency.

It should be further clarified that virtual currency cannot be regarded as "foreign exchange" in crimes of evading foreign exchange regulations and falsely purchasing foreign exchange, but it can certainly be regarded as "property" in bribery crimes, and "criminal proceeds and their earnings" in the crimes of concealing or covering up the proceeds of crime and money laundering [9]. In other words, the property nature of virtual currency is not an abstract attribute, but will appear concretely in the functional positioning of the offense in the application of different offenses. At the same time, if the so-called "transaction" is established under the circumstances of coercion or deception, the recipient of virtual currency may also become the object of the property crimes of extortion or fraud. In this case, the transfer of virtual currency representing the right of property interests is not based on the true willingness of transaction, but the illegal coercion or deception. Actually, it is the whole world's violation of another's right to freely control his or her property. Therefore, in the case of determining whether certain behavior constitutes a crime, it is important to see how the virtual currency is obtained and what kind of subjective intent was held, instead of limiting to the technological attributes and circulation characters of virtual currency. Therefore, the criminal regulation of virtual currency should also follow the principle of substance over form, and judge it based on the substantive form of behavior and the harm to legal interests, and recognize its property attributes.

Unlike the above, financial regulation focuses on the order-risk brought by virtual currency at the macro-institutional level. Virtual currency is a technical system based on decentralization. It circulates as a medium of transaction and investment. Price fluctuation is extremely sensitive to virtual currency, and virtual currency is anonymous and circulating worldwide. Therefore, it is almost impossible to bear virtual currency circulation risk for money laundering, illegal fundraising, fraudulent financing, evasion of foreign exchange control and underground finance. The property right is infringed by the above behaviors, and not only individual property right, but also national financial order management, effectiveness of monetary policy and even economic security of the society are infringed. For example, if virtual currency is widely used in cross-border evasion of foreign exchange control power, it will weaken foreign exchange management power and monetary control power of the country's power. If it is bundled as an investment product for illegal fundraising or fraudulent financing, it will cause system financial risks and threaten the safety of finance and property and interests of the people. If the regulation of virtual currency is limited to property crimes regulated in the field of property, this regulatory method will be unable to deal with the system risks brought about by virtual currency. The needs of macro-control and risk prevention of the country will not be met. Therefore, we should regulate illegal financing, market manipulation, money laundering, cross-border evasion of regulation behaviors of virtual currency in the dimension of financial crimes. We should use penetrating approach in the dimension of financial crimes. We

should not focus on formal level and formality of behavior, but focus on role of behavior and its actual damage so that criminal law evaluation can conform to purpose of prevention.

4.2. The proposal and theoretical basis of "substance over form" principle

In the binary regulatory path, it provides macro-structural solution for criminal law adjustment of virtual currency, but whether virtual currency should be included in property or financial crimes is still difficult to determine in specific cases. Traditional methods often rely on formal standard, that is, whether virtual currency is recognized by administrative regulators as currency or securities, or whether there is explicit virtual currency in laws and regulations. But it is easy to be rigid in the application of formality, which may lead to the virtual currency is completely excluded from the evaluation of property crime due to the administrative denial, or the virtual currency may be improperly included in financial crimes with overgeneralized concept, and thus criminal law may be expanded excessively.

To address the vagueness of criminal law classification of virtual currency, "substance over form" should be incorporated. The above principle is born from the regulatory thinking of economics and accounting, aiming at recognizing a transaction or event according to its real economic substance rather than formal arrangement [10]. In terms of criminal law, "substance over form" means that the regulation of virtual currency cannot confine itself to the abstract definition of related concepts, but should base on the functional attributes and risk structure displayed in concrete behaviors and ignore its external symbols and institutional packaging. Therefore, when virtual currency is the object of illegal possession, it should be regulated in property crimes; when virtual currency can be used as a financing tool or payment medium, and its circulation and use endanger financial order and investment safety, it should be regulated in financial crimes. In other words, criminal law evaluation on virtual currency should focus on the real harm it brought to legal interests, and not mechanically rely on its technical form or administrative definition, so as to avoid the contraction of scope of protection or misalignment in application caused by formalistic determination.

The theoretical basis of "substance over form" comes from the protective function of criminal law. The basic task of criminal law is not to formally protect abstract concept, but to protect concrete legal interests in real society. Since virtual currency is a new thing without clear conceptual definition in previous laws, if criminal law formally protects concepts in previous laws when dealing with virtual currency, it may lead to delayed protection. Only by upholding substantial judgment, criminal law can always focus on protecting concrete legal interests, so as to avoid creating protection vacuum or causing over protection caused by formalism.

This principle does not violate the principle of legality (*nullum crimen sine lege*), because the starting point of its application is not to expand the definition of criminal offense, but to reasonably and legitimately apply specific offenses by revealing the real function of virtual currency in certain behaviors.

From the perspective of criminal policy, upholding "substance over form" can also help criminal law achieve dual goals of risk prevention and stability of legal order. The development speed of virtual currency makes its risk manifestation very flexible. If one wants to rely on formal regulations, it is impossible to respond promptly to diversification of criminal activities. By using substantial judgment, we can flexibly regulate virtual currency in different criminal fields according to the actual operating mechanism and criminal role of virtual currency, and improve the adaptability and foresight of criminal law regulation.

4.3. Practical application of the "substance over form" principle

At the practical level, the "substance over form" principle needs to be transformed into actionable identification paths to guide the handling of virtual currency cases by judicial authorities. First, in property crimes, the focus should be on whether virtual currency has disposability and independent economic value. If an individual unlawfully controls virtual currency by stealing private keys, hacking accounts, etc., their actions essentially harm another's property interests and should be recognized as theft, fraud, or embezzlement. In this process, its property attributes should not be denied simply because of administrative policies rejecting virtual currency, as this would reduce the scope of criminal law protection.

Second, in cases of financial crimes, attention should be paid to the functional performance of virtual currency in the behavior. If virtual currency circulates in illegal fund-raising, market manipulation, and money laundering behaviors, it will not only possess property value, but also directly damage the order of financial system. At this time, it can be directly regarded as a security or quasi-currency, and the behavior above is included in the corresponding scope of financial crime behaviors. However, it is not necessary that virtual currency must be regarded as a financial product in law form to be recognized as a financial crime. As long as virtual currency plays the role of property value in behavior, if the interests of property legal interests damaged by risks caused by the behavior are consistent with the financial order damaged by traditional financial crimes, it should be recognized as a financial crime.

In some complicated situations, when the demarcation line between property and financial crimes is not very clear, the mechanism of comprehensive consideration on both can be established. For example, when a certain virtual currency is used in illegal fund-raising and the behavior of damaging the property of investors, the analysis should be carried out from the two perspectives of property legal interests and financial order, respectively. Only in this way can we protect the right of individual investors and maintain the macro-financial system, and avoid the situation of being "either too strict or too lenient" in judicial practice, and achieve the more accurate and substantive criminal law regulation.

In short, the binary regulatory path and the "substance over form" principle are the core ways to criminalize the virtual currency crime. The former establishes a dual protection model for criminal law at the macro level, which can balance the interests of individual and institutional entities. The latter provides flexible identification paths for criminal law at the micro level, so that criminal law can respond flexibly to the functional differences of virtual currency in different scenarios. The two complement and perfect each other. Only in this way can we fill the gaps in the criminal law regulation of virtual currency crime in practice and provide a sustainable path for future legislation and judicial practice.

5. Conclusion

As a kind of property with dual attributes of property and finance, virtual currency has been in a state of uncertainty in criminal law evaluation for a long time. In practice, due to the differences in criminal law evaluation on the nature of virtual currency, standards of case handling are scattered. Some judgments protect the property interests of right holders by recognizing the independent value of virtual currency as virtual property; some protect the order of finance by recognizing the financing, payment, and circulation of virtual currency as financial crimes. These lead to the fluctuation of classification and the imbalance in application, which not only weakens the predictability of criminal law, but also harms the protection of legal interest.

In this context, establishing a binary regulatory path is practically necessary. On the one hand, it is necessary to acknowledge the independent value of virtual currency as virtual property, and incorporate theft, fraud, and embezzlement by recognizing the independent value of virtual currency as virtual property into the current property crime system to protect the property interests of right holders. On the other hand, when the financing, payment, and circulation of virtual currency involve the risk of damaging financial order and investors' interests, the interests beyond the scope of property crimes should be protected by financial crime regulations. The parallel binary regulatory path can make a relatively balanced regulation on individual interests and institutional order.

However, only establishing a structural binary path is still not enough to solve the problems existing in specific applications. Virtual currency plays different functions in different scenarios, and the rigid determination based on formalistic determinations may still cause over-regulation or under-regulation. Therefore, in criminal law evaluation, the categorization should be determined according to the substance over form, that is, the actual role that virtual currency plays in each case should be identified. If virtual currency plays the role of disposable property objects, property crime regulations should be applied; if virtual currency plays the role of disturbing financial order or damaging investors' interests, financial crime regulations should be applied.

In summary, the criminal regulation of virtual currency crimes should be implemented through the establishment of a binary path and substantial judgment. The former provides a systematic framework, and the latter ensures the accuracy of case-by-case judgments. Only these two links can complement each other, help solve the current problems in judicial application, and provide an institution and theory support for future legislation and judicial interpretations in this field.

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