Proceedings of the 3rd International Conference on Financial Technology and Business Analysis
DOI: 10.54254/2754-1169/139/2024.19285

Decentralized Autonomous Community: Concept, Model, and Innovation

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Abstract: The current economic organizational forms are increasingly inadequate for humanity's long-term development. Blockchain technology, much like the advent of steam engines and power systems, is transforming national governance and market operations. A substantial body of literature has explored Decentralized Autonomous Organizations (DAOs) built on blockchain technology. This paper builds upon existing literature to introduce the concept of a Decentralized Autonomous Community (DAC), delineate its legal framework, and propose a technical model based on the Consortium Blockchain. DACs not only address internal and external decision-making and governance within community systems but also ensure appropriate national supervision. By leveraging the innovative potential of blockchain, DACs promise a more efficient and equitable economic structure that aligns with contemporary societal needs.

Keywords: decentralized autonomous community (DAC), decentralized autonomous organization (DAO), blockchain, system.

1. Introduction

Blockchain technology facilitates the creation of decentralized systems that operate without a central authority, first applied in Bitcoin and other cryptocurrencies. With its continuous development, blockchain's applications have expanded beyond the financial sector, enhancing efficiency and providing benefits across various fields including business, art, and more. For instance, in the financial sector, the market value of Bitcoin has surpassed one trillion US dollars, and the Chinese government is leveraging blockchain technology and smart contracts to establish a digital currency system that safeguards currency sovereignty and promotes RMB internationalization. In supply chain finance, blockchain accelerates credit capital flow, enhances security, and provides the technical foundation for industrial interconnection. In art trading, blockchain introduces Non-Fungible Tokens (NFTs), improving copyright verification efficiency, enhancing the scarcity of artworks, and facilitating transactions, ushering in a new mode of digital creation[1][2][3][4].

Simultaneously, the era of Blockchain 2.0, represented by smart contracts, is reshaping the organizational structures and operations of enterprises, governments, and communities. The Decentralized Autonomous Organization (DAO) model, based on blockchain technology's smart

DOI: 10.54254/2754-1169/139/2024.19285

contract system, is increasingly being applied and promoted. This paper analyzes and synthesizes the conceptual definition, technical foundation, and application prospects of DAOs, and on this basis, innovatively proposes the concept of Decentralized Autonomous Community (DAC). The DAC model aims to adjust rights, responsibilities, and ownership relations among stakeholders to achieve a more effective and mutually beneficial system.

2. Review on Decentralized Autonomous Organization

2.1. Concept

The Decentralized Autonomous Organization (DAO) is emerging and attracting a lot of attention in recent years, thanks to the popularity and development of blockchain technology.The first DAO represented an experiment with a new organizational design known as “Decentralized Autonomous Organizations (DAOs)”[5][6][7],There is no consensus on how to define a DAO,. A more comprehensive definition is that "a DAO is an internet-native entity with no central management which is regulated by a set of automatically enforceable rules on a public blockchain, and whose goal is to take a life of its own and incentives people to achieve a shared common mission [8]."

Another definition states that: "A Decentralized Autonomous Organization (DAO) is an organization whose essential operations are automated agreeing to rules and principles assigned in code without human involvement. A DAO is a novel scalable, self-organizing coordination on the blockchain, controlled by smart contracts [9].[10]".

Some academics have emphasized the technical characteristics of blockchain-based DAOs, providing the following definition: "A DAO is a blockchain-based system that enables people to coordinate and govern themselves through a set of self-executing rules deployed on a public blockchain, and whose governance is decentralized (i.e., independent of central control) [11]."

In a nutshell, a DAO is a group of people who share common goals and collaborate through a blockchain infrastructure that enforces a set of shared rules. Members of a DAO are typically registered, each with their own address. They also have a certain number of 'governance' tokens associated with that address, which are usually required for participation and may play a role in the DAO decision-making system. DAOs are also commonly used to manage resources, such as cryptocurrencies. DAO members can decide how to distribute them using a decision system [11][12][13][14].

2.2. Technical Basis: Blockchain

Organizations can use blockchain and, in particular, blockchain-based smart contracts to implement all or parts of their governance rules and procedures using code, effectively memorializing governance in a set of smart contracts that will be stored on a blockchain. As The DAO and other more mainstream blockchain-based governance implementations demonstrate, some have already done so. The impact of blockchain technology on organizational governance goes beyond incremental improvements to existing organizational forms through targeted adoption of blockchain technology for specific functions. DAOs rely on blockchain technology and smart contracts for primary or sole governance [14][15].

The use of blockchain as a governance infrastructure has generated two opposing viewpoints.The use of blockchain as an infrastructure for governance has confronted two points of view. Those with a high degree of techno-determinism, who embed the concept of "market" in decisions made or the way an organization must operate, on the other hand, tend to ignore the complexity of social organizations [16][17][18]. On the other side, critics defend the traditional role of central authorities. They believe that central authorities are required to enable democratic governance. These points of view typically advocate for regulating blockchain markets in order to strengthen the role of the state.

DOI: 10.54254/2754-1169/139/2024.19285

Furthermore, blockchain governance is difficult per se, because it is difficult to steer a decentralized community and promote its development without sacrificing decentralization. DAOs are a tool that has emerged to allow organizations to operate on the blockchain [19][20].

The emergence of blockchain-based governance is significant in terms of corporate law. Smart contracts hold the promise of removing practical barriers to the adoption and implementation of a variety of individually tailored governance mechanisms. Smart contract-based voting schemes enable a greater number of people to participate in decision-making, at least when compared to more cumbersome and expensive systems for collecting and verifying votes. The availability of smart contract voting protocols may enable some businesses to implement their own, individually tailored allocation of decision-making power among stakeholders [14][15].

2.3. Legal Entity

A decentralized autonomous organization is both a conceptual product and an organizational model, and it necessitates a carrier, such as blockchain technology, which can be quickly applied via Bitcoin. Bitcoins established a networked payment mode based on encryption technology and peer-to-peer payment, eliminating the need for a third-party platform and significantly improving security, transparency, and traceability. The resulting public ledger made tampering with the perma-stored data impossible for any participant.

Based on smart contracts, miners in Bitcoin have realized an autonomous organization with Bitcoin as the core. Mining machines that provide computing power are unrelated to each other, but together they have made great contributions to the expansion and premium of Bitcoin. This group has no leaders and no need for organizational governance. This group, with no leaders and no organizational governance, achieved its goals far better than expected in a loose, dynamic, and decentralized organization.

Currency is an important carrier that has always existed in the real world. Blockchain technology does not create a new one but only changes the storage method and transaction mode of currency. Similarly, a decentralized organization also needs a carrier. In practice, a variety of decentralized autonomous organizations keep emerging, but there are many problems due to the difficulty in defining their legal nature and the ambiguous rights and obligations.

Taking The DAO on Ethereum as an example, it was initially established as a decentralized venture capital fund and was committed to becoming a hub for various investors to invest in blockchain innovation projects[21]. On June 12, 2016, hackers took advantage of the project loopholes and stole more than 3 million ethers, causing huge losses. After the incident, the US Securities and Exchange Commission (SEC) determined that the responsibility was borne by the sponsor, and this decision sparked widespread debate[17].

There is still no consensus on how to characterize the new organizational form of DAO. There are different opinions in academic circles, such as crowdfunding theory, partnership theory (including a joint venture), and company theory.

From the two characteristics of an online platform and relying on the community public, crowdfunding has the decentralized characteristics of DAO. Some scholars believe that the blockchain is essentially the embodiment of the concept of crowdfunding and blockchain economy is a new form of crowdfunding based on technology [22]. According to the method of return, crowdfunding can be divided into donation crowdfunding, presale crowdfunding, lending crowdfunding, and equity crowdfunding [23]. Equity crowdfunding refers to the rights of investors to acquire equity or become members of the organization, which is most similar to the equity token issuance of decentralized autonomous organizations, but the two have essential differences:(1) From the perspective of the organization subject, equity-based crowdfunding needs to register the company in advance and then divide the rights and interests, while decentralized autonomous organizations do

DOI: 10.54254/2754-1169/139/2024.19285

not have the support of the organization subject when they are launched; (2) From the perspective of project sustainability, equity crowdfunding is difficult to achieve sustainable growth because it corresponds to specific goals of specific projects; The formation of decentralized autonomous organizations does not directly correspond to specific projects, but is decided by collective voting after the establishment of the organization, and can realize the simultaneous implementation of multiple projects and long-term sustainable value growth. Therefore, crowdfunding does not generalize DAOs.

Business trust has realized the distributed and decentralized mode in its agreement and operation mode, but the trust property is nominally owned by the trustee, and the trustor is generally not allowed to manage and use it, nor has the right to vote and other common affairs management, and its property rights have not been substantially transferred. In a decentralized organization, its members have independent and deterministic property rights and can independently carry out business activities and enjoy business freedom. Carla L. Reyes, who advocates that decentralized autonomous organizations are business trusts, also admits that not all DAOs are constructed in the form of business trusts [14].

3. Decentralized Autonomous Community

3.1. Concept and definition

Xi Jinping mentioned the value of a community with a shared future for mankind in " Building a Community with a Shared Future for Mankind "[15], which requires a country to accommodate the legitimate concerns of others when pursuing its interests and promote the common development of all countries when advancing its development. This paper uses this concept to analyze the characteristics and concepts of the decentralized autonomous community.

A decentralized autonomous community is a new type of system to accomplish a certain mission and vision, which is based on blockchain technology to realize cooperation, record contributions, and distribute incentivizes between each independent organizational unit, person, and machine.

Its characteristics are as follows : (1) The system management mode is decentralized and autonomous ; (2) The internal and external relationships of the system are dynamically linked ; (3) The system achieves contribution recording and incentive distribution by distributed storage technology.

A decentralized autonomous community is not an organization, and an organization becomes an independent unit in the community. In comparison, the two have the following differences: (1) The organization has a clear boundary, but the decentralized community is a borderless system formed by blockchain technology, which can be arbitrarily combined and linked. (2) The organization is defined to be human-centered, and the machine is not the core element, but in the community, the machine is the core unit and participates in the management, collaboration, and distribution of the entire system. (3) The relationship between organizations and people and between organizations and machines is no longer subordinate, but an independent unit. From one person to one organization, it becomes a network-mode system of multiple individuals to multiple organizations. (4) The organization gives top priority to performance goals and economic interests, while the community gives top priority to the mission and vision of all members of the system.

In the process of building a community, the contributions of community members (organizational units, people, and machines) are recorded and incentivized through the distributed storage and encryption technology of blockchain[24][25][26]. Specifically, the composition of an organization requires two or more people, but a person and a machine can become a community; A person can be a professor at a university and a CEO of a company at the same time. In a certain community, whose organizational affiliation can no longer be determined, and whose identities are parallel and independent across organizations. The local government, upstream and downstream manufacturers

DOI: 10.54254/2754-1169/139/2024.19285

of the industrial chain, and customers invest in a company and hold its tokens. They are no longer independent competitions with each other, but a dynamic relationship to complete certain innovation activities. When an organization is established, it is necessary to register a company, a public welfare organization, a limited partnership, and other entities. However, the community can be short-term, disembodied, and temporary, which aims to achieve a certain mission and vision through smart contracts.

All in all, a decentralized autonomous community is a new system that combines decentralized autonomy, dynamic links, and distributed storage and integrates technology, economy, and management. It is a higher dimensional structure built on the organization and is not subordinate to the organization.

3.2. Legal Entity: Decentralized Autonomous Corporate Governance Based on Blockchain Technology

From the legal perspective, limited partnership and decentralized autonomous community have a natural similarity. On the one hand, they both have limited liability. On the other hand, the partnership between partners is not hierarchical and centralized [32]. In the existing form of corporate organization, decentralized team building is realized through a limited partnership, and corresponding independent property ownership, voting rights, and dividend rights are granted to members of the organization [27]. The most important is that the limited liability system can not only guarantee the rights of the participants but also guarantee their limited liability in law and economy [28][29].

In legal organizations, the online crowd-funding platform can realize the initiation and implementation of a single project and the distribution of benefits in the later stage, which not only reduces the operating cost of the organization but also expands the size and influence of the organization. Trust will also be a choice of the corporate legal person. By entrusting its rights through agreements, the benefits brought by its rights will be maximized and the long-term development of the overall corporate organization will be guaranteed.

The next relatively clear definition is to build a decentralized, distributed, democratic corporate entity with clear goals, boundaries, and visions based on blockchain technology. We call it the carrier of a decentralized autonomous community, i.e. Decentralized Autonomous Corporation (DAC). A decentralized Autonomous Company belongs to the category of community, rather than a form of organization corresponding to a centralized organization. Information asymmetry is a difficult problem in corporate governance for incorporated companies in which the data and information are completely managed and controlled by the management due to the centralized management mechanism, resulting in the inability to confirm the authenticity of a large amount of information, and the information data is not transparent. It has been verified that there is a strong principal-agent relationship between shareholders and management, which makes it difficult to make rational investment decisions. Corporate governance and management costs are relatively high, and a lot of auditing and file management must be carried out [30][31][32].

An incorporated company based on blockchain technology, as a carrier of the decentralized autonomous community, implements distributed and democratic governance for its company operations and management, and at the same time defines and uploads the contributions of its members to the company. Also, cooperation and agreements outside the organization are realized by executing smart contracts. It greatly reduces the cost of governance and ensures the authenticity, traceability, and inability to tamper with the company's original files and bills.

Contract approval and financial payments in administration will be replaced by blockchain protocols and intelligent execution systems, offline court business in the government will decrease, and Internet courts and trials will surge. Evidence collection is the most time-consuming part of a civil case. Since the evidence chain of the smart contract system is all on the blockchain, the efficiency

DOI: 10.54254/2754-1169/139/2024.19285

of law enforcement will be greatly improved with the help of AI and big data models. For companies created by blockchain technology, the problem of obtaining evidence will be completely solved. In addition, information symmetry improves the transparency of financial information, helps companies to make more intelligent decisions, and improves the integrity and authenticity of external information disclosure. Meanwhile, thanks to the birth and development of supply chain finance, the investment and financing problems of upstream and downstream enterprises can be effectively solved.

In addition, the decision-making, board of directors, shareholders' meeting, management, and other community voting will all be conducted on the Consortium Blockchain to ensure the safety and democracy of voting, and will also be documented to the court and regulatory agencies for inquiry.

4. Model for DAC

4.1. Basic Technology: Consortium Blockchain

Blockchain is divided into Public Blockchain, Private Blockchain, and Consortium Blockchain by node and mode. Public Blockchain refers to a blockchain jointly managed by multiple organizations. Each organization or institution manages one or more nodes, and its data can only be read, written, and sent by different organizations within the system. The read-and-write permissions and bookkeeping permissions on Consortium Blockchain are limited by the consortium rules, and the consensus process of Consortium Blockchain is controlled by pre-selected nodes [33][34]. Compared with the Public Blockchain, with low access threshold, transparent data that cannot be tampered with, and strong anonymity but difficult to be managed by the initiator, the Consortium Blockchain with multiple organizations participating in management, good privacy protection, low transaction cost, and fast transaction speed is the technical basis most suitable for DAC architecture.

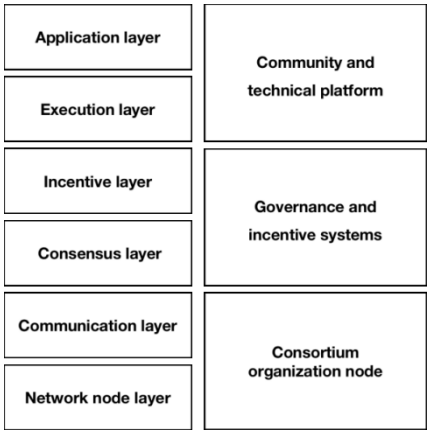

Figure 1: DAC technical architecture

Figure 1 shows how to build the DAC architecture technically. The existing blockchain architecture, from the bottom-up network node layer, communication layer, consensus layer, incentive layer, execution layer, and application layer [35], corresponds to the consortium organization node, governance, incentive system, community, and technology platform. The nodes of consortium organization are mainly the stakeholders corresponding to the legal person company and are linked to the court, intellectual property exchange center, and regulatory agency in terms of public supervision. External stakeholders of the organization mainly include upstream and downstream suppliers, channel providers, and customers. The organization includes investment institutions and subsidiary companies.

DOI: 10.54254/2754-1169/139/2024.19285

4.2. Hierarchy

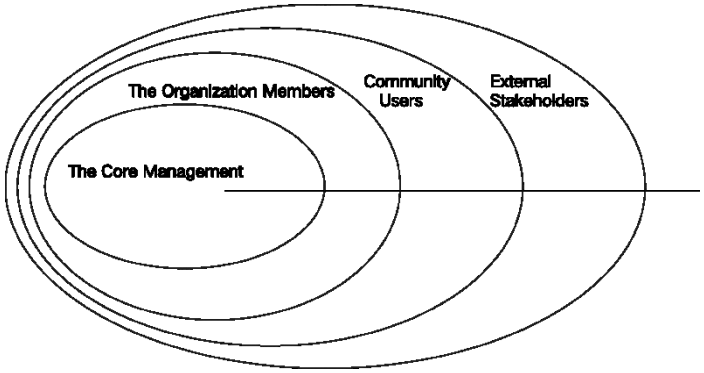

Figure 2: DAC hierarchy

Figure 2 shows the hierarchy of DAC. The members of the decentralized autonomous community are divided into a four-layer structure: the core part is the core management responsible for the decision-making of the entire community, which is embodied as a partner or shareholder of the incorporated company. The second is the organization members. Signing confidentiality and labor contracts with the company is the basic judgment standard for organization members. It is similar to the employee in a traditional incorporated company, but their rank, status, and whether they are full-time are not limited. The third layer is community users, and users' contributions to the platform and organizations have the opportunity to be converted into valuable economic tokens. The outermost part is the external stakeholders, including the government, upstream and downstream manufacturers in the industrial chain, dealers, suppliers, etc.

4.3. Tokens and Incentive Model

The main incentive method of a decentralized autonomous community is the joint incentive on the chain and off the chain with various forms and free choice. In contrast to the Bitcoin community's single token incentive, the decentralized community combines multiple incentive models to provide appropriate tokens to be implemented both internally and externally.

Figure 3 shows different tokens between different members in DAC. Specifically, the following three types of tokens are customized according to the membership of the organization:

Membership Status	The core management	Organization members	Community users	External stakeholders
Token	Equity incentive	Salary reward	Community Contribution Value	
Basis for Distribution	Influence and participate in major decisions and vision culture	Regular salary on contract signned	Bring value to DAC company	

Figure 3: DAC token

4.3.1. Sub heading

Equity incentive is the incentive with the greatest influence, the strongest responsibility, and the greatest possibility of realizing benefits in the community. It is also the highest level and the most difficult token to obtain. It is a reflection of the organization’s values and world outlook and represents the culture and mission. Primarily used to motivate hard-to-quantify contributions, such as

DOI: 10.54254/2754-1169/139/2024.19285

creativity, organizational skills, and self-motivation. Although these capabilities are difficult to quantify, they are a manifestation of an organization's culture. The object orientation of equity incentive is the most core management layer. Through the agreement signing and up-chain storage of limited partnership, on the one hand, the interest distribution mechanism and decision-making system of partners are guaranteed, and on the other hand, the basis for corporate governance and decision-making is provided.

4.3.2. Salary Reward

Compensation incentive is a kind of incentive mode combined with traditional corporate operation, which is mainly aimed at the internal members of the organization. Whether to sign the corresponding confidentiality and labor contract with the company is the core dividing standard inside and outside the organization. This incentive model is more inclined to the corporate model of modern corporate governance, evaluating members' education background, qualifications, working time, and organizational contribution as the basis for remuneration. However, the threshold for obtaining this incentive is not high. In the operation of the DAC company, part-time and external partners are accepted. The assessment of incentives is not based on time invested or the KPI (Key Performance Indicator) method but is based on the OKR (Objectives and Key Results) method.

4.3.3. Community Contribution Value

In a DAC company, there are still strong related parties, such as community users, suppliers, and distributors, which we call organizational related parties. The incentives for these subjects are centered on the contribution value system. Contribution value is similar to points, and there are many ways to obtain it, such as the number of completed business and orders, valuable suggestions and solutions for DAC organizations, publicity and promotion, and participation in organizational project research and development, etc. In short, as long as it can bring value or contribution to the DAC company, a corresponding consensus and incentive system will be formed so that more people can obtain contribution value in the way they prefer. In this process, it will quickly reduce the cost of starting a business and solve the "chicken and egg" problem in entrepreneurship. Most importantly, it will play a positive role in the employment and motivation of special groups such as disabled people, retirees, minors, and freelancers.

4.3.4. Algorithm Details

To ensure a fair and efficient distribution of contribution values within a decentralized autonomous community, we employ advanced algorithms. These algorithms not only address the complexity of fairly distributing contributions but also leverage cutting-edge technologies to enhance the overall functionality and equity of the system.

(1) Quantum Random Algorithm for Contribution Value Distribution

a) Algorithm Scheme: The quantum random algorithm is used to achieve the random distribution of contribution values while ensuring that the mean value remains proportional to the original contribution value. This method harnesses the probabilistic nature of quantum measurements to ensure fairness and randomness in distribution.

b) Specific Algorithm:

i. Obtain the user's contribution value and calculate the proportion.

ii. Encode the contribution value proportion into a quantum state. The amplitude of each basis state in the quantum state represents the contribution value proportion. Specifically, if the contribution value proportion of user u_i is p_i, then the quantum state is encoded as: $|\phi>=\sum_{i=1}^{2^n}\sqrt{p_i}|i>$. Any shortage is filled with 0.

DOI: 10.54254/2754-1169/139/2024.19285

iii. The encoded quantum state can be prepared using a quantum random access memory.
iv. Measure the quantum state. If the measured basis state is $|i>$, then user u_i receives a contribution value of +1. The total number of samples equals the total contribution value to be allocated.

c) Evaluation: By utilizing quantum superposition and entanglement properties, this algorithm optimizes the allocation process, ensuring that each participant's contribution is fairly recognized. This method not only enhances the randomness and unpredictability of the allocation but also maintains proportionality, thereby preventing any bias or manipulation.

(2) Shapley Value Based Voting Process

a) Algorithm Scheme

The Shapley value from the voting process serves as the basis for contribution value allocation [36]. This method calculates each participant's marginal contribution to the overall value creation, ensuring a fair distribution based on actual impact.

b) Specific Algorithm:

i. Construct a record chain of company decision schemes, recording the iteration process of schemes and the phased records of participants. This includes a front-end (which could be an app like DingTalk) for collecting records of schemes and participants at each stage.
ii. Once the company finalizes the schemes, after the project execution phase, all employees vote on the final schemes to determine the Shapley value of each scheme for the company.
iii. Trace back step by step using text semantic analysis to obtain the contribution value of each stage's scheme to subsequent schemes, thereby deriving the Shapley value of the initial schemes. Each initial scheme corresponds to a project participant.
iv. Sum the schemes of each project participant to obtain their Shapley value.
v. Allocate contribution value based on the Shapley value.

c) Evaluation:

The application of the Shapley value in this context ensures that contributions are evaluated in a manner that reflects their true value to the organization. By tracing the contribution value of each stage's scheme to subsequent schemes, the process guarantees that all efforts are fairly compensated. This approach leverages text semantic analysis and structured voting processes to provide a transparent and equitable distribution system.

By integrating these advanced algorithmic techniques, the DAC ensures fair and efficient distribution of contribution values, aligning individual incentives with the community's overall goals and vision. This not only fosters a more collaborative and motivated environment but also upholds the principles of fairness and transparency that are core to the concept of decentralized autonomous communities.

5. Advantages and Innovation Points of DAC

5.1. Advantages

Through the underlying architecture of Consortium Blockchain and encryption technology, the transparency, authenticity, impossibility of tampering, and permanent preservation of information and data are formed.

Outside the organization, the public regulatory structure ensures legal compliance and supervision, and relevant parties of upstream and downstream organizations have a clear and comprehensive understanding of the operation and management data in DAC. Before this, organizations and enterprises were black holes in management. There may be room for fraudulent accounting and tax

DOI: 10.54254/2754-1169/139/2024.19285

evasion, but this problem is fully solved through Consortium Blockchain. Suppliers can keep track of DAC' s internal cash flow and operating conditions, and downstream manufacturers can grasp their inventory and supply capabilities in real-time. External banks and regulators ensure the efficiency of supervision.

Within the organization, all members have learned about the operating data and performance of the entire company, and have clarified the contribution of their organization members. The parent-subsidiary is no longer a controlling and controlled relationship, and the right to benefit and management will be completely separated, forming a network of value-based communities. In this way, it also achieves a large value-based community between different organizations, members of organizations, and regulators.

In this process, collaboration between strangers will become the norm as the problem of trust is solved through Consortium Blockchain. At the same time, payment and transactions will realize smart payment and cross-border payment through digital currency.

The encryption technology of Consortium Blockchain will accelerate the emergence of industry alliances, thus forming new value links between communities. For example, a new cooperation mechanism will be formed between the laboratory community and the bank community on credit and business cooperation. There will also be new interaction and cooperation mechanisms between the laboratory community and the government's science and technology departments in the local economic development and industrial upgrading and between the laboratory community and the investment fund in the investment and financing relationship. This process is no longer about cooperation between enterprises, but the linking and combination of DAC to DAC on a larger scale, which will create more new jobs. The number of archivists, financial accountants, and administrative staff will be drastically reduced, but the number of programmers, creative AI designers, scientists, and creators on the Consortium Blockchain will proliferate. There will also be a corresponding change in the way people work and the motivation model. Everyone will no longer work for a single company or organization, but fight for the common interests of mankind, namely: a community of shared future for mankind.

5.2. Innovation Points

The establishment of the decentralized autonomous company based on Consortium Blockchain begins with determining the company's main business, organizational vision, and goals. Different from the "profit as the ultimate goal" of traditional companies, DAC can have more diversified goals, such as market value growth, which is not necessarily centered on corporate interests, but more on the mission and vision of the company's existence. Such a goal is no longer based on the company's profit as the main consideration, allowing companies to naturally return to products, services, and quality, and satisfy incentives for members within and outside the organization through different tokens. The benefits of tokens lie in the long-term returns, voting rights, and decision-making rights of equity, as well as the rights of quick liquidation and transfer. DAC products and technologies can be rapidly promoted and realize globalization due to the issuance of tokens [30]

In traditionally incorporated companies, the value is mainly reflected by shareholders' dividends and income, while in DAC, the value will gradually be changed to realize capital value through agreement and incentive by tokens, thus generating a new model of corporate investment and valuation[37].

At the same time, in DAC, combined with diversified tools such as online crowdfunding, commercial trust, and secondary market securities, a modular management mechanism is formed through the blockchain protocol to achieve a distributed, decentralized, and democratized organizational form. It provides a guarantee for the rapid growth of DAC and achieves the following two innovative advantages:

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(1) Implement modular and distributed organizational structure with blockchain technology

Taking blockchain technology as the underlying structure, first of all, it ensures that the matrix-type organizational structure can be truly realized, and the most important thing is to be oriented by goals and tasks, and realize a modular and distributed organizational structure. Through blockchain technology, after the consensus mechanism within the organization is formed, its benefits will be automatically distributed through the mode of smart contracts or semi-smart contracts, which greatly reduces the risk of moral default inside and outside the organization. In this way, the internal innovation of the organization is accelerated, it is relatively more democratic, and the new organizational form of network and dynamic centralization is realized so that the marginal cost of management is reduced with the growth of the organization, which will be completely different from the traditional pyramid management mechanism.

At present, the research on modular and matrix management mainly focuses on the organizational model, but in traditional information technology, all data and ledgers are still managed in a centralized management model, and improving the organizational model only improves part of the efficiency, but for the management and innovation of the entire organization, it has not realized its value.

Through Consortium Blockchain technology, information and data are all stored in multiple nodes, including national and government databases. A single node cannot tamper with its ledger. When the monopoly of information no longer exists in the organization, the power becomes decentralized, and democratization and decentralization within the organization are achieved.

(2) Realize the value link with the external stakeholders of the organization with blockchain technology

In the traditional organizational structure, incentive, and management are mainly carried out on members in a narrow sense, which fails to realize the substantive value link of external stakeholders (such as community users, suppliers, service providers, governments, NGOs, etc.), and value is realized through rent-seeking and other illegal ways. DAC can define and confirm the contribution of external stakeholders to the organization through blockchain technology. Utilizing online crowdfunding or points, users can gain more value benefits and further gain the voting rights and earnings rights of the organization. At the same time, DAC links with external stakeholders through limited partnerships ensuring its efficient operation through Consortium Blockchain technology, and legitimately links the supply chain system of the entire organization with stakeholders to ensure the benefits of stakeholders.

6. Conclusion

Starting from the reality of national governance and market economy system, this paper defines the difference between community and organization by constructing the theoretical model and concept of a decentralized autonomous community and forms a set of preliminary technical framework, incentive model, and vision mission of the community. At present, state-owned capital, enterprise organizations, public welfare organizations, and regulatory agencies are no longer independent, parallel, and single modes of operation, but a mixed community of interests, which is a new system built on the organization.

Every technological revolution to closer links between people, whether in the industrial revolution, or the information revolution, this time to blockchain value from the connectivity of the network technology, and between market and government, the conflict between decentralization of blockchain and centralization of regulation needs higher dimensions system to reconcile. Using the multi-disciplinary theory as the foundation, DAC arises at a historic moment, through the Consortium Blockchain technology pattern, the legal entity company as the backing, to borrow from the existing mature legal framework and network organization form, effectively meet the demand of the national regulation of blockchain technology, allowing blockchain technology advantage to release, not just a

DOI: 10.54254/2754-1169/139/2024.19285

technological utopia, to promote the realization of common prosperity through the aspects of social equity, national governance, and personal values.

With the transition from Web 2.0 to Web 3.0, mass entrepreneurship and innovation will also enter a new historical period. Through the contribution value system, DAC mode effectively solves the "chicken and egg" or "egg and chicken" problem of early entrepreneurship and enables rapid globalization and internationalization.

The epidemic is making mankind unite and fight together. More natural disasters and propositions of the times need to be faced by all mankind. Countless decentralized autonomous communities are linked together to form a community with a shared future for mankind to realize the vision and mission of mankind.

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