

# Stanford SOCIAL INNOVATION Review

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## *Features*

### **China's New Model of Blockchain-Driven Philanthropy**

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➔ Blockchain has done more than simply enable Chinese social entrepreneurs to improve the transparency, trustworthiness, and fundraising of the country's charitable causes. It has helped launch a more decentralized and autonomous philanthropic sector.

# China's New Model of Blockchain-Driven Philanthropy

BY XIAOFENG WANG & KEVIN C. DESOUZA

Illustration by Dante Terzigni

**C**hina's philanthropic sector is vibrant and growing. The country now has more than 800,000 registered social organizations—almost twice as many as it had in 2011. This growth gives the public more opportunities to participate. China already has the third largest number of donors in the world, according to the CAF World Giving Index 2018, and more than 50 million Chinese have registered as volunteers.

The rapid increase of charities and public participation has attracted more giving from wealthy donors and private corporations. Today, most of the money comes from the corporate sector. According to the China Charitable Giving Report (2017), the sum of charitable giving in 2017 amounted to 150 billion RMB (\$22 billion), or 1.8 percent of GDP—tenfold more, as a percentage of GDP, than in 2014. Corporate giving, worth 96.3 billion RMB (\$14.3 billion), contributed almost 64 percent of the total amount donated, followed by individual giving (23 percent). But the growth trend also applies to individuals. According to a report by Harvard's Roy and Lila Ash Center for Democratic Governance and Innovation, donations from China's top 100 philanthropists more than tripled, to \$3.6 billion, between 2010 and 2016.

China has taken steps to boost this trend. On March 16, 2016, the National People's Congress passed the country's first Charity Law. It encourages individuals, corporations, and other organizations to give more by enabling them to claim tax deductions on charitable donations. (China has the world's second largest number of billionaires and the largest middle income population.) The law also eases restrictions on the ability to fundraise, permitting any registered

charity that has been in operation for two years to apply for a public fundraising credential, which allows the charity to raise money directly from the public (rather than from corporations or endowments from wealthy individuals). Previously, only a handful of public foundations, most of which were affiliates of state-owned entities, could do public fundraising—a rule that limited the sector's growth.

This law has encouraged new players to thrive. In August 2016, the Ministry of Civil Affairs authorized 13 charitable organizations, including those owned by tech giants such as Alibaba and Tencent, to raise funds online. The looser restrictions have combined with the immense popularity of mobile devices to accelerate online fundraising for charitable causes at an unprecedented rate. Alibaba and Tencent have both integrated into Alipay and WeChat, their immensely popular mobile apps, philanthropic platforms that enable users to contribute to a wide variety of charities. For example, 99 Charity Day, China's largest charitable event, initiated by Tencent, received 830 million RMB (\$123.8 million) in donations from 28 million users on September 7–9, 2018.

Chinese tech giants have used the country's rich digital ecosystem with hundreds of millions of users to create novel ways to donate to charity. Individuals can convert a variety of their activities into money or goods that businesses or organizations then give to various causes and organizations. For example, Tencent partnered with GivingTuesday to launch a global initiative calling for WeChat users from November 23 to 28, 2017, to donate a minimum of 1,000 steps, as measured by their mobile devices, to help children with leukemia. A total of 5 million participants donated 66.8 billion steps, which converted to 4.4 million RMB (\$680,000) paid by sponsor SF Express, a Chinese delivery services company.

But China's philanthropy sector, for all its growth and success stories, faces many persistent challenges. The most serious among them is lack of transparency. According to the Foundation Transparency Index 2018, the average transparency score of 4,960 surveyed



Chinese foundations was only 33.5 out of 100—the majority of Chinese foundations received an “unsatisfactory” score. The survey also found that transparency was the top concern for a majority of donors. In addition, several high profile scandals have made the public less trusting of Chinese charities. For example, in 2011, wealth flaunting socialite Guo Meimei, who was later imprisoned for running an illegal casino, was widely condemned after allegedly claiming to work for an affiliate of Red Cross Society of China (RCSC) and causing a drop in donations that lasted several years. Even charities with no history of misconduct suffered declines. More recently, the growth of Internet charities has ushered in many cases of crowdfunding fraud and grassroots organizations’ profiteering from charitable activities.

The sector also suffers from bureaucratic limitations. Despite the new charity law, small organizations still face barriers to obtaining fundraising status. Regulators are reluctant to issue fundraising permits because of some grassroots organizations’ bad reputations and their doubts about small organizations’ ability to handle the responsibility. Since the law leaves the definition of a charitable organization somewhat murky, regulators have the discretion to deny status. With limited experience in implementing the new law, regulators tend to be cautious. Consequently, private foundations and social organizations without preferential status still far outnumber public foundations. Many small, grassroots organizations cannot carry out projects that depend on public fundraising.

It is long past time to address these problems. Fortunately, China’s philanthropists and entrepreneurs have already started looking for solutions and have found some success by using blockchain, the technology underlying cryptocurrency Bitcoin, to establish a trustworthy framework for the sector that gives small organizations equal opportunities to develop. Blockchain is not too hard to understand: It is just a chain of blocks—packets of digital information or records (“blocks”) that are stored in a public database (the “chain”). As digital records are created, a distributed network of computers confirms them and pairs them with the previous entries in the chain. Since this distributed network retains the blockchain, no one has control over it and it is fail safe.

Blockchain promises to reform China’s philanthropy in three ways. First, its distributed ledgers enable the public to monitor donations, thereby encouraging transparent and effective giving. Second, smaller grassroots organizations can use its decentralized and open platform to raise funds publicly and carry out projects independently—things that would otherwise be impossible for them to accomplish. Third, a blockchain driven, transparent philanthropic sector with dynamic community organizations will play a bigger role in addressing social problems, such as poverty and rising health care costs, independent of business and government, and will thereby inspire public confidence.

#### GREATER TRUST

Tech corporations have already experimented with blockchain enabled technology and had significant success. Alibaba’s fintech arm, Ant Financial Services Group, is a pioneer in applying blockchain for public benefit. In 2016, it collaborated with China Social Assistance Foundation to use blockchain technology in a small experiment to raise money for 10 hearing impaired children. It quickly received 198,400 RMB (\$29,560) from 50,000 donors. This successful trial

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encouraged Ant Financial to integrate blockchain into its charity platform, Ant Love, which organizations use to raise money through mobile payment system Alipay.

Since blockchain enables every donation to be transparent, immutable, and traceable, donors can monitor when and where their money is transferred and spent. Charities, especially those hit by scandal that need to win back public trust, have welcomed Ant Financial’s call for greater transparency. Blockchain helps win public confidence in transactions, including charitable donations. If the trust is there, money flows in.

The Chinese Red Cross Foundation (CRCF), an affiliate of RCSC, is one of the first charities Ant Financial invited to experiment with its blockchain based program to raise money for kids who have aplastic anemia, a rare disease in which bone marrow doesn’t make enough red blood cells for the body’s needs. CRCF had suffered from a decline in donations because of the Guo Meimei scandal and had made a variety of efforts to restore credibility, including disclosing operational information and financial statements, enhancing its public interactions on social media, and hiring public relations specialists to improve its brand image on Weibo, China’s popular microblogging site. But these attempts brought very little success. The public did not trust philanthropic organizations enough to accept their own or government sanctioned ad hoc attempts at transparency. Traditional financial statements are too complex for the ordinary public and do not enable donors to track their donations and evaluate the expenses of the specific projects they support.

By contrast, blockchain powered transparency has proved successful at restoring donors’ confidence in the flow of their gifts. For example, users of the Ant Love platform can see the entire movement of their money via Alipay, which 552 million Chinese use to deliver payments regarding every aspect of their daily lives. Through blockchain, Ant Love users can extract all transaction details automatically and in real time, and know that nothing can be altered or erased. They can see for themselves how and where their money is used. Any potential information asymmetry among donors, charities, and beneficiaries is eliminated. Ant Love users also have full and up to date access to project information and fundraising progress, including the number of donors and amount of donations. Each donation is linked directly to a specific recipient, rather than to a group of beneficiaries, and receives a time stamp when the beneficiary receives the money. And since the Alipay system verifies recipients’ identities, each donation is delivered to a real beneficiary, not a fake one. Ultimately, users do not need to understand how blockchain works to see it as trustworthy; blockchain’s transparency enables them to see their donations going into the hands of people who need them.

Greater transparency gets more people to participate in charitable activities, the data show. Ant Love’s 2017 operational report indicated that 190 million Chinese donated 339 million RMB (\$50.5

million) to 799 blockchain supported projects in nine months since the organization completely adopted blockchain technology in March 2017. This trend, in turn, gives the public a bigger say in charitable causes, gradually replacing the state dominated granting system with a competitive fundraising market. Nowadays, even state affiliated charities rely on blockchain powered charitable platforms to raise money from the public. What matters is not how much money these platforms raise but how many people or small donors entrust their donations to them. The charities use these votes of confidence as a credible record to convince corporate donors, who account for the largest share of charitable giving in China, to entrust the charities with their big money. For example, CRCF now needs only one week to complete a regular project with a fundraising target of 200,000 RMB (\$29,800) something it cannot do as quickly on its own web site. More than 100 charities with public fundraising status have followed CRCF and joined the Ant Love platform, because they cannot thrive without donations from the public, and they can't secure those without the public trust that the blockchain based platform affords.

### GREATER AUTONOMY

Social entrepreneurs are using blockchain not only to enhance transparency but also to help small social organizations grow and become more autonomous. Qingsongchou Network Technology, known in English as Easy Fundraising, is one of only 13 crowdfunding platforms that the Ministry of Civil Affairs has recognized. With 550 million users, Qingsongchou is China's largest blockchain based health care donation platform for people who have serious diseases but cannot afford their medical expenses. Noticeably, it both facilitates charities' online fundraising campaigns and enables individual users to do so. For the past three years, it has raised more than 20 billion RMB (\$2.98 billion) for 1.6 million families struggling with medical bills.

In 2017, *China Philanthropy Times* chose Qingsongchou as the country's Philanthropreneurship of the Year (Nian Du Ci Shan Qi Ye, 年度慈善企业) for integrating blockchain into its crowdfunding platform to facilitate peer to peer transactions that are traceable, transparent, and visible in real time to all participants. To promote blockchain, Qingsongchou has tried to make it more accessible to ordinary users. For example, it once used the HASH code, a hexadecimal file, to help users understand what was recorded on the blockchain. When donating money, donors were automatically assigned a code to track the record on Sunlight Chain, a public blockchain network. The technicians also tried to use a fluctuating curve to visualize how information is added to the blockchain when donation occurs. The curve tracks the amount of donations received at a specific time. But they eventually found that most of the users did not understand the HASH code and moving curve, so they replaced them with a live ticker tied to the blockchain database to update real time donations.

"Since Blockchain is an abstract underlying technology, rather than a visualized product, we have to translate it into a visually appealing and easily accessible form," says Li Xi, cofounder and chief technology officer of Qingsongchou. "The better the donors understand blockchain, the more they trust it."

Qingsongchou is harnessing blockchain to create a decentralized community of social organizations with greater autonomy. Previously, many Chinese social organizations in China languished because of their lack of public fundraising status. Under existing regulations,

they could raise money online for their projects only by partnering with foundations that had public fundraising status and yielding some control over the projects. To solve this problem, Li Xi and his team incorporated a franchising model into philanthropic practice. As a franchisor, Qingsongchou freely licenses its digital fundraising platform to a franchisee, such as a small social organization. The franchisee's platform has a layout and function similar to Qingsongchou's and occupies a node on the Sunlight Chain network. In this way, the franchisee can conduct a public fundraising campaign independently and increase its exposure by adding the campaign to a subscription account on WeChat, which facilitates business marketing in China.

Under this new model, Qingsongchou's brand and blockchain technology help small organizations to increase their credibility and influence; in return, these organizations have to model Qingsongchou's commitment to transparent and accountable charitable activities. Although grassroots organizations can launch fundraising campaigns independently, they don't have access to the donations, which beneficiaries receive instead in peer to peer transactions.

Huaihua Volunteer Association (HVA) is one of the social organizations that collaborate with Qingsongchou. Huaihua is a mountainous, rural area in western Hunan province whose population has poverty and health problems. Following the central government's commitment to end rural poverty by 2020, the Huaihua local government prioritized poverty alleviation and welcomed assistance from Qingsongchou and HVA and their blockchain powered charitable practice. With the support of the local health bureau, Qingsongchou and HVA partnered with Huaihua Second People's Hospital and Huaihua University's School of Law and Public Administration to launch WeiAi Mutual Aid, a fundraising campaign to address poverty caused by disease or natural disaster. Individuals who need help in health care can request donations on WeiAi's platform, which is associated with the Sunlight Chain network. The money that WeiAi raises is thus processed in a transparent way, which helps HVA avoid suspicions of corruption that once tarnished the reputation of many grassroots organizations. Since it adopted a blockchain based platform in July 2018, WeiAi (which means "small kindness") has raised more than 2 million RMB (\$298,000) from more than 60,000 people within three months. It updates the statistics for donations on the homepage of its platform.

"Adopting a blockchain based platform has not only ensured accountability and transparency but also enabled us to do public fundraising independently for the first time," says HVA president Yang Xiaojun, who has spent a decade working for the grassroots organization. "By doing so, we learned how to operate projects on our own. The technology of blockchain has the potential to transform a grassroots organization like ours from a supporting player into a leading player in the sector."

WeiAi's success has shown how blockchain based platforms can help integrate China's less developed areas into the larger economy. The penetration of emerging technologies in rural China is much lower than that of metropolitan areas, so most of the people there have no knowledge of blockchain technology. For WeiAi's efforts, volunteers established mutual aid sites at local hospitals to raise public awareness and assist patients seeking financial aid to make fundraising requests on the platform. After helping with fundraising, volunteers follow up with patients to get feedback, learn how

they allocated donations, and post their responses on the platform. Volunteers also use their extensive local connections to do background investigations and ensure that the information added to the blockchain is accurate. Because of the low level of digitalization in rural areas, many of their residents barely have electronic financial or medical records, so the due diligence of volunteers is essential for avoiding fundraising fraud and maintaining public confidence.

Given the success they've had so far, Qingsongchou and Yang's team are considering bringing the WeiAi model to the other parts of Hunan province struggling with disease related poverty. If their attempt succeeds, it will demonstrate further how blockchain powered charitable practice can improve public welfare at the local level by tapping into the potential of community social organizations. The model of WeiAi creates a virtuous partnership among the tech sector, the public sector, and local social organizations. The success of such experiments in turn increases the influence and trustworthiness of the philanthropic sector.

#### GREATER INTEGRATION

Blockchain driven innovation in China has already made a tremendous impact, but many of the inspiring applications of this technology still lie ahead.

As we have seen, one of the major setbacks facing blockchain based philanthropic practice is the credibility of the information, which the donation recipients add manually to the blockchain based platform because of the lack of electronic financial and personal records. This process has facilitated many cases of fundraising fraud, which have damaged public confidence. To allay these concerns, charities must conduct thorough background investigations to verify information from multiple sectors, including health care, housing, banking, and social insurance. Such due diligence can consume a lot of time and money. Since nongovernment charities don't have access to government resources, they must rely on staffers to verify the fundraisers' financial and medical records. Even worse, not every charity can afford to pay a team to do this work. For state affiliated charities, although they have administrative power, they still do not have the authority to query all relevant information, such as property records. Given these problems, charities hope that emerging technologies like blockchain will eventually grant easier and more efficient access to the information necessary to review fundraising applications.

"Enabling blockchain to better serve the needs of the public requires a lot of data within and beyond the sector," says Qiao Ke, the CEO of Zhongtopia, an online mutual aid platform. "If information such as medical and financial records can be added on the blockchain in an encrypted form and accessed by charities, it will improve the efficiency of fundraising." Zhongtopia is employing blockchain to create Xinchain (in English, "a chain of hearts with kindness"), a database that helps corporate and individual donors to establish digital records based on their charitable activities.

A good place to start experimenting is by finding ways to share the data of registered poor households between government and charities, because a large number of people who appeal for char-

itable financial support belong to registered poor households in rural areas. Within the state poverty alleviation campaign, some local governments already use blockchain technology to establish databases of the poor, which can facilitate data exchange across sectors. For example, Ziggurat, a leading blockchain service provider, is developing a blockchain based database for the Shaanxi Provincial Office of Poverty Alleviation to document the financial condition of poor households, including a chronological history of transactions and detailed records of assets.

Giving charities access to the data they need requires cross sector collaboration, yet very little electronic information sharing goes on within and beyond the philanthropic sector, because of concerns over security and privacy, especially in light of rampant telecom scams,

## Blockchain-based philanthropy is governed through mutual consent between participants without a centralized administrator.

ID theft, and counterfeit cards. A vast majority of these crimes rely on the leakage and theft of personal information. For example, in 2017, Chinese police managed to track more than 50 billion pieces of stolen personal information and arrested more than 4,800 suspects nationwide. According to the Ministry of Public Security, the leakage and theft of personal information comes mainly from employees at companies and public institutions. China's Cybersecurity Law, which took effect in 2017, requires that all information related to personal identification be kept private.

Blockchain can help address these worries. It ensures point to point exchange of information without an intermediary. Smart contracts are autoexecuted computer code with a predefined set of rules running on top of a blockchain that follow regulatory statutes govern when and how data is shared. In the philanthropic sector, when a charity requests access to private data, a smart contract must be confirmed and processed before the records can be shared via blockchain directly between the provider and the receiver. Moreover, these transfers of data can be secured and encrypted. For instance, Ziggurat is developing a blockchain based platform for data sharing between the tax bureau and the industrial and commercial bureaus that uses encryption.

If blockchain succeeds in facilitating data sharing within and beyond the philanthropic sector, it will usher in far greater connectivity and efficiency of scale, which large, centralized operators previously had to accomplish. As more participants agree to share data via blockchain based platforms, a virtuous ecosystem will develop. Charities will be able to integrate information from other sectors, such as housing, health care, banking, social insurance, and government, and the philanthropic sector will achieve greater transparency,

effectiveness, and trust. Government regulators will also welcome this new state of affairs, which will not only reduce their workload but also enable them to oversee the sector better and more readily identify irregularities and potential corruption.

### ADDRESSING HEALTH-CARE COSTS

Entrepreneurs can also adapt blockchain to other pressing social problems, such as soaring health care costs. Although the state run health insurance system covers 95 percent of China's population, medical expenses for patients with severe or chronic diseases can be high, for a variety of reasons. First, three major sources secure health care expenditures in China: local government subsidies, state run insurance, and out of pocket payments. Thus, the actual coverage of expense varies by region. Because of inequality across regions, people who live in less developed regions usually get less in subsidies from the local government, so they have to pay a larger share of medical bills than people who live in wealthier cities. Second, hospitals and local health bureaus set restrictions on reimbursement, to prevent abuse and fraud in medical resourcing, so, in practice, the coverage of expenses is lower than the nominal one on paper. Finally, coverage doesn't extend to many essential medical services and drugs. For example, outpatient medicines for treating high blood pressure and diabetes are not reimbursable.

For these reasons, people can see their share of health care expenses skyrocket because of a serious disease. Take cancer: Patients and their families, even middle class households, struggle to pay for treatment because of the sky high price of radiation, chemotherapy, and cancer drugs, most of which are expensive foreign imports that national health insurance doesn't cover. The 2018 movie *Dying to Survive*, which tells the true story of a businessman who smuggles cancer medication from India to China, has become a surprise box office hit. The film struck a chord with audiences anxious about health care costs and the possibility of being impoverished by illness.

To address these concerns, the government has taken significant steps. Between 2007 and 2017, the proportion of health expenditures in China paid by individuals out of pocket fell from 45.2 percent to 28.8 percent. To further reduce the burden placed on individuals, Prime Minister Li Keqiang vowed in the 2019 Government Work Report to lower the deductibles for serious disease insurance, raise the reimbursement rate from 50 to 60 percent, and cover outpatient medicine for treating chronic diseases. However, while the proportion of individual out of pocket expenditures has decreased, the deficit in the health insurance fund looms large in some regions with aging populations and rising medical costs, according to the Report of the State Council on the Distribution and Use of Financial Health Care Funds. Chinese citizens are well aware of the gaps in public insurance coverage and the risks they face in not being fully protected against soaring health care costs. Thus, many Chinese require a flexible and affordable health care plan to supplement their state medical insurance.

To address these needs, Qingsongchou has developed a blockchain based mutual aid platform. One of the programs helps to prevent people between ages 18 and 50 who have cancer or 29 other serious illnesses from being bankrupted by medical bills. (People between 50 and 65 are eligible for a different program.) The program has a onetime membership fee of only 10 RMB (\$1.49). Partic-

ipants must already be in good health when they join the program and must pass a 180 or 360 day probation, depending on their age. After the probation, members who suffer from one of the serious diseases the program covers and who pass a background investigation by Qingsongchou and a third party agency are eligible for up to 300,000 RMB (\$44,675) to pay their medical bills. To get the financial aid, applicants have to furnish original copies of receipts, a certificate of diagnosis, and other relevant medical records. The assessment is based on the applicants' eligibility, severity of illness, and cost of medical treatment. All members of the program share the cost of coverage, which usually totals no more than 1 RMB (\$0.15) for each person, thanks to the large user base of 60 million people. Participants regularly receive text updates about where their money goes, who is using it, and for what reasons. If nobody makes a claim for financial support, the membership fee continues to remain in the user's account and his or her coverage remains valid until the balance drops below 3 RMB (\$0.45). Users can then either refill the account to stay in the program or quit. So far, 1,318 users have received financial support from this program.

### THE NEW MODEL

China's development of blockchain based philanthropy is doing far more than growing the sector and ensuring its transparency and accountability. It's creating a whole new model of charitable giving that is truly community based. Unlike outsider run philanthropy, China's new philanthropy encourages members to work together directly and uses community resources to address shared problems and improve quality of life.

"Community philanthropy can be established by blockchain technology," Qiao Ke says. "Instead of relying on outside endorsement and resources, it underlines the importance of mutual aid between community members. This kind of decentralized autonomous mechanism reflects the future of philanthropy in China."

Unlike traditional Chinese philanthropy, blockchain based philanthropy is governed through mutual consent between participants. The new technology establishes a consensus mechanism for charities to practice philanthropy without a centralized administrator. By engaging in blockchain based philanthropy, participants realize that to thrive, they must rely on public support and social resources, rather than on the endorsement of government officials.

Blockchain based philanthropy is also expanding the sector's role in Chinese society. By facilitating collaboration and integration within and beyond the sector, blockchain is turning philanthropy into a strategic convener, bringing together multiple players including charities, businesses, government agencies, and regulators to work for the common good in a more constructive, transparent, and efficient manner.

Although blockchain has brought many such benefits to the philanthropic sector, it's still new and experimental and faces many hurdles to its widespread adoption. Philanthropy depends on more than the transparent flow of donations; human involvement plays an essential and irreducible role. Blockchain has improved accountability, but oversight is still necessary to monitor the people and data that are recorded to the platform. China and the world are still a long way away from realizing blockchain technology's full potential in advancing the philanthropic sector. ■