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Sharing Economy: A New Economic Revolution to Step into an Era of Ecological Civilization

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Abstract: The sharing economy based on the “Internet plus” has penetrated into all aspects of the economy and society and ushered in the widest-ranging economic revolution which is sweeping the 21st century. The “Internet plus,” by introducing trans-boundary reallocation of social resources, has radically changed the traditional patterns characterizing the market economy, such as the pattern of resource allocation, consumption, innovation, and wealth creation. It implants an innovative nervous system into the traditional market economy and makes it possible for a modern economy to evolve from a mechanical system into a complex living organism. The future economy, owning a life mechanism, will witness wealth being created through wisdom. The current exploding growth of cloud computing and big data signals a transformation from a knowledge-based economy to a wisdom-based smart economy. What is truly worth noticing is that, as humans step into an era of a sharing economy, China, among all the thriving sharing economies, boasts unique late-mover advantages and shares equal opportunities with the developed countries. This requires China to avoid simply following suit and instead taking an approach of self-innovation for economic development.

Keywords: the Internet plus; sharing economy; trans-boundary integration; intellectual economy

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1. Connotation, nature and mission of the sharing economy

1.1 Connotation and features of the sharing economy

As to the definition of “the sharing economy,” the academia and business circles have created many different versions. According to its source and history, the sharing economy might be divided into the traditional sharing economy and modern sharing economy.

Research on the sharing economy dates back to as early as 1984, when Martin L. Weitzman published his book *The Share Economy: Conquering Stagflation*, in which he referred to the sharing system as the rate of sharing established after payment negotiations between capitalists and workers, rather than the mere specific amount of wages. He argued that the root of “stagflation” was the unreasonable wage structure of the capitalist system and proposed to replace it with the system of sharing. In the late 1980s, James Edward Meade, who won a Nobel Prize in Economic Sciences in 1977, further advanced the definition of the sharing economy. He proposed to extend the company revenues to the workers by letting them hold shares. According to Marxism, the root of the unfair economic distributions of the capitalist societies is their economic systems. Real sharing cannot be achieved by improving the distribution system alone.

The study of traditional sharing economics revolves around capitalist economic systems from the perspective of income distribution. It tries to ease the flaws in the microeconomic structures by adjusting the distribution of income between labor and capital to ensure steady, rapid economic growth. The Marxist sharing economy, on the other hand, aims for the transformation of social and economic systems, while the sharing economy currently emerging around the world is a new economic

pattern supported by “Internet technology plus the move toward ecological civilizations.” The sharing economy in the age of the Internet is aiming to distribute social resources and benefits equally, and is thus strikingly different from the traditional sharing economy.

The *2016 China’s Sharing Economy Report* defined the sharing economy as a sum of economic activities that integrate and share numerous scattered, idle resources through modern information technologies like the Internet, and cater to the diversity of demands. Its meaning is threefold: first, the sharing economy is a new type of economic pattern that arises after a certain degree of development of the information revolution which is made possible by Internet technologies; second, it serves as the optimal solution to resource distribution between the demand and supply, as well as the paradoxical co-existence of resource shortages and wasteful idleness; third, it marks a new idea about the development of the information society, and a new concept of consumption and development that cares for people and tries to exploit information to the fullest.

In the essay “*The Sharing Economy: The New Economic Solution to the Supply-side Structural Reform*,” Ma Huateng gave the sharing economy a more direct definition by saying “The sharing economy is an economic phenomenon where the public shares idle resources via socialized platforms with others, thereby earning incomes.”

The Italian Sharing Economy Policy Report notes that in Italy, the sharing economy is universally thought to have four features. First, it is based on new information technologies: people can attain access to specific services on a random basis. Second, no property is to be occupied: the providers of products and services are not companies, but the users themselves. Third, people are the real wealth: the key to a successful sharing economy lies in

gathering a group of people that are confronted by the same problem and bear the same interests. Fourth, convenience must lay in the economy and experience which is the core competence.

After a summation of all related definitions from home and abroad, this research group defines the sharing economy as a new economic pattern that, in light of the interactions between a new consumption style and the Internet information technologies, reallocates and shares the idle social and public resources. It is characterized by four features.

First, the sharing economy is a new consumption-based economy driven by the new consumption view that “ownership comes after usage” and an environmentally conscious consumption arguing that “idleness is a kind of waste, use and do not bother buying,” the new driving force for the modern sharing economy rests in the focused transformation from models of production to models of consumption.

Second, the sharing economy is a new type of information economy that is supported by Internet information technologies and reallocates trans-boundary resources efficiently and at a low cost. Information technology acting as a new booster for modern economic growth marks a new mechanism of growth that is distinct from the traditional industrial economy.

Third, the sharing economy is a new wealth-pursuing economy that enables the sharing of the idle material, spiritual, cultural and diversified resources for living. The economy marked by increases in material wealth and production is replaced by a new economy featuring a compound increase in material and spiritual value benefiting consumers.

Fourth, the sharing economy is an innovative people-oriented economy in which each person may “benefit himself by benefiting others,” and “all the people and things will be made the best use of.” The fundamental connotation of the sharing economy

is that the capitalist economy controlled by a few people will change into a people-oriented economy where everyone is involved.

Thus, the sharing economy is a new economic revolution that starts a new era of ecological civilization based on new impetus, new elements, new wealth and new goals, as well as a new economic pattern that guides future socioeconomic development.

1.2 Mission of the sharing economy: driving the new era of ecological civilization

In his book *The Zero Marginal Cost Society*, Jeremy Rifkin posed that the sharing economy is a subversion of the entire capitalist economic paradigm throughout the recent 300 years or so.

The logic of the economic growth in industrial civilizations is that capital gains could be achieved by expanding inputs of capital and labor forces and by reducing costs through technological innovations. Only by commanding heights in the grappling for capital, labor and technologies can companies survive. Hence contentions, monopolies and blockades on techniques run throughout the industrial civilization as its basic logic and mechanisms of growth. By contrast, the Internet-based sharing economy overthrows it all. The Internet technologies, by integrating those monopolized trans-boundary resources at close-to-zero marginal cost, will radically change the competitive economies in the industrial civilizations, and replace them with a competition that involves diverse subjects and harmoniously coordinates trans-boundary resources. In the sharing system of trans-boundary resources created by Internet technologies, the amount of gain will be in proportion to the number of people and companies involved and the cost of transactions. The capital-driven industrial competition mechanism poses serious threats like winner-take-all and wealth polarization, while the Internet-based mechanisms of coordinated co-

existence could extend benefits to both the general public and relevant companies.

In this sense, the sharing economy overthrows the industrial civilizations in the most basic logic. In the context of industrial civilizations, individuals, in fighting for their increased share of profits and living conditions, try every method they can think of to grab the most resources possible to increase their own wealth. This is an anti-cooperation zero-sum mindset that sees one's gain as another's loss. However, the sharing economy is a positive-sum game, where individuals share resources, reduce production and consumption, and through mutual help realize recycling of individual resources. This marks the pattern for a harmonious, open and sharing economy under the concept of an ecological civilization.

1.3 The function of the sharing economy: a new model for and approach to environmental protection

The biggest breakthrough the sharing economy has made is that it leads to a temporary solution to the energy and environmental crises that confront us.

First, the sharing economy points to a new solution to environmental protection starting from a man's life. The globalized industrial economy, bound by capital, is in endless pursuit of production and speed. If the capitalist economic model forever satisfying man's ever-increasing greed is not changed, then there is no escape from the energy and environmental crises. To break the vicious circle, the most needed step for people now is to launch a revolution to change their consumption models and lifestyles. Environmental protection has until recently only focused on how to reduce energy consumption during production. Evidence has shown that without restraint on the high energy of consumption, work on production alone will never eradicate such problems as pollution and high

energy consumption. The sharing economy, driven by a green, environmentally conscious lifestyle, is a fundamental solution to these threats.

Second, the sharing economy provides a new economic pattern and market mechanism that helps solve environmental problems. The growth of the sharing economy, based on environmentally conscious consumption, brings the work of environmental protection carried out for half a century into a revolutionary upgrading and transformation, namely a shift to a new economy driven by an environmentally conscious consumption from the enlightenment on an environmental awareness. In this way, environmental protection, which has long stagnated as an external driving power, turns into an intrinsic impetus that is powered by transactions in the market.

Third, the sharing economy discovers a new power supply for environmental protection. For half a century, environmental protection has mostly been a job of the government, social elites and non-government organizations. However, the sharing economy driven by green consumption involves everyone in this new ecological movement and that benefits us all.

1.4 Trend of the sharing economy: going from the industrial economy catering to exclusive ownership towards the new era of sharing and ecological civilizations

Ever since the establishment of the Club of Rome in 1968, Western countries have been searching for an ecological development pattern that could better coordinate economic growth and the environment. The pinnacle came in 1972 as the report "The Limits to Growth" was issued by the club. It reflected on the restraining factors affecting global economic growth, such as population increases, mass production of food, over-consumption of natural resources and environmental pollution, and proposed that resource exhaustion might lead to limits to

global economic growth. However, half a century later, many feasible plans for building ecological economies are yet to be fully implemented. The reason is that most entrepreneurs care only about expansion of production and maximization of profits and tend to say “No” to ecological ideas and related measures. In the context of an industrial economy, companies expand by increasing production while in a sharing economy expansion is through the best use of original production elements and resources.

This new pattern resonates with the ecological civilization in logic: both recycle materials and reduce new consumption of resources. The sharing economy is making irresistible headway in overthrowing the traditional industrial mindset. As more and more companies resort to a collective platform to reduce their cost, the sharing economy will be the dominant pattern that guides future economic development. It will also deconstruct traditional industrial civilizations and their economies and construct civilizations with economies that are ecologically friendly.

1.5 Nature of the sharing economy: a revolution to make capitalist economies people-oriented

In a traditional economy, prices come out of competition in the market. Apart from labor, land and capital, no common wealth that gathers human knowledge or scientific technologies has gained independent access to the structure of these costs nor paid its contribution to incomes. The sharing economy will break the monopoly of production elements by only a few people. The in-depth integration, connection, innovation and spread of elements alongside it will bring into view that we are living in a socio-economic, ecological system and share the same interests and concerns. We can only get what we want by benefiting others and by benefiting from what others sharing with us.

The traditional Chinese culture bound

by neighborhood relationships is a sharing, acquaintance society based on the ethic of altruism. It is on a small scale. The sense of “oneself” awakened by the Enlightenment movement in the West, though breaking through the limitations of the small-scale acquaintance society, is based on egoism and caters to self-interest, thereby severing ties between people. In the industrial society, where people are linked with each other by their desire to accumulate capital and wealth, each man is in fact a lonely island. The ideal people-oriented society the Enlightenment Movement pursued turned out to be a capitalist society controlled and manipulated by powerful capital. However, the sharing economy, where people are connected by the Internet and all consumers share and participate, signals the release from capital’s iron hand, as well as the return to a people-oriented economy. While not excluding capital or the market, the sharing economy where everyone can join and flexibly make their personal arrangement, is undoubtedly a combination of altruism, which traditional Chinese culture advocates, and humanism, which the Enlightenment movement pursued.

The return to humanism in economic development also heralds broader equality, respect and connection between regions and ethnic groups, which marks an era of ecological civilization for the entire world.

2. Historical background and causes of the sharing economy

As to the reasons for the thriving sharing economy, media and academia mostly credit the “Internet plus,” which certainly plays a crucial part. As a new economic pattern, the sharing economy is not only spurred from inside by technological transformations, but also the outcome of many complicated, interactive factors.

2.1 The upgraded awareness of environmental protection: enlightenment on environmental protection going towards environmentally conscious consumption

The concept of environmental protection is nothing new. It has been known in the developed countries since the 1980s, and has been developed being upgraded, from enlightenment to consciousness. The widening environmental problems have made apprehensive people understand the fact that they are themselves the actual victims. Thus, the environmental awareness changed from mere enlightenment to environmentally conscious consumption.

Environmental and health issues concern consumers, who thus demand a better environment, safe food and clean air. It is precisely this environmentally conscious consumption that forms a new market and drives the green economy and the sharing economy.

The environmentally conscious consumption is a re-consumption based on social frugality. It is a radical correction of the long-standing and cheered high-speed consumption and luxurious culture. Analysis of people involved in the sharing economy has shown that apart from the income incentive, there is an additional intrinsic impetus: an environmental consciousness. According to Sunil Paul, the CEO of SideCar, “thanks to those innovations, the car ownership in ten years might be cut in half. Today people think they must buy a car, but in the future they will change their minds and will do well with a car at hand.” Compared with the traditional economy, the sharing economy is a green economy that better serves ecological protection. Its fast growth will put the brakes on the current vicious circle that is caused by the blind pursuit of ever increasing production and consumption.

Meanwhile, inspired by environmentally conscious consumption, the environmental

liabilities companies must bear are transformed into the potential for value and wealth creation. The branding value of modern companies can be seen in their consciousness of undertaking environmental liabilities, the internalization of their environmental costs and the construction of an environmentally friendly image.

Column 1

“Water for Philanthropic Purposes” is an environmental solution that benefits companies, consumers and society

Life Water’s “water for philanthropic purposes” makes a most representative case. Life Water, a company producing and selling drinking water, found from its statistics that each year in Shanghai alone, at least 800 tons of half-consumed bottled water was discarded. The amount of the discarded water was tantamount to the sum of the annual water intake of 800,000 children in water-deficient areas. For that Life Water felt it should do something to ease this terrible waste of water. It made great efforts to adjust the 45 assembly lines in its 15 factories, which would produce 50 million half-full bottles of water every day. So why only half-full? The reason was that Life Water noted that ordinarily only half a bottle of water was enough for a thirsty person, while the other half always ended up inadvertently underused. Hence there was the production of half-full bottled water, while the other half spared would be donated by the company to children in water-deficient areas. To raise public awareness of water protection, the company also printed children’s photo and a QR code on the bottle. Consumers could get details of the water-deficient areas by scanning the code. Though the bottled water was still priced at RMB 2 (USD 0.31), the warm creativity behind it benefited over 530,000

children that are suffering deficiency of drinking water and garnered over 300,000 loyal fans that helped Life Water achieve a miraculous 652% increase in revenue.

2.2 Consciousness of spiritual sharing: a transformation from exclusive ownership to a sharing lifestyle

The sharing economy is a revolution that leads modern people to experience a new lifestyle. It is driven by the awakening consciousness of spirituality sharing based consumption. Under an industrial civilization people are not only afflicted with a visible crisis of energy and the environment, but also an invisible crisis of mindlessness. Materialism, a leading ideology of industrial civilizations, holds that wealth increases are the navigation label for the progress of human civilizations, and that more wealth necessarily means more happiness. However, as time goes by with material wealth being ever accumulated, it occurs to people that in fact the increase of happiness is not in linear proportion to that of material wealth. Worse still, excessive material consumption is the very root of modern energy and environmental crises and also a series of social problems arising from the shortage of spiritual consumption.

Statistics show that, even though its GDP has seen a threefold increase over the past five decades the USA has failed to make its people happier. Instead, its violent crimes have quadrupled, its number of people secluded from neighbors has quintupled, and one quarter of its population feel unhappy and depressed. A press release from the European Union proclaims that about 50 million of its people—about 11% are suffering from serious mental health problems. In the case of China, mental disorders are also escalating as the GDP rises. According to statistics published by the Chinese Center for Disease Control and Prevention,

China now has 160 million mentally ill people, among whom there are possibly over 60 million sufferers of depression. Why is it that industrialized countries always end up with the same problems? They fall into the trap of materialism while being industrialized.

Values of life under modern industrial civilizations feature a life and culture that is mostly competition based on the amount of wealth one accumulates. The more valuable the brand of your house and car, the higher your status. However, all those values currently in fashion will be overthrown by the upcoming era of a sharing economy. The sharing economy is reshaping standards of life and society, according to which not cars, but something one can share with others, marks one's status. In the age of sharing, people are measured by how much they can share with society. The more you can share, the more material and spiritual wealth you will gain in return. It will be a new life that well balances material and cultural consumption.

The sharing economy is also drawing out society's potential to drive spiritual consumption. It is not only about products people would like to share. They also share spirituality. Research has shown that Airbnb's instant rise and wide fame should be attributed to the fact that it lets consumers experience a heart-warming bond between people, which is nowhere to be found in traditional business models. The reason why a South Korean, who has lived in London for twenty years, chooses to rent his unoccupied house is not so much about earning money, but more about cross-cultural communications. Zhu Jingshi, chief strategist of Didi Chuxing, held that "In fact Didi is no longer a mere provider of taxi services. We wish our drivers could earn money and make some friends. The ride-sharing is a social behavior. In a society where people hide inside tall buildings secluded from each other, there is actually a tendency to break

the barriers and experience spiritual consumption through sharing.

2.3 Sharing and reallocation of the surplus consumptive resources

Modern market economies are showering people with products and services through enhanced labor production. A unanimous deep insight into the truth emerges: it might be too late for the modern economy, which has put too much weight on the supply side, to take notice of “the law of diminishing marginal utility” during consumption. Hence there comes a paradox between economic growth and deteriorating living circumstances: overcapacity—sales slump—consumer surplus—consumption slump—resource exhaustion—environmental deterioration. Overcapacity and consumer surplus have become universal around the world. Related figures have shown that food wasted by Chinese—amounts to RMB 200 billion (USD 31,291,683,577), and what is dumped is equal to what more than 200 million people have to eat in a year. Also, the clothing stored by families and companies around the world could meet a decade-long consumption demand.

The sharing economy, instead, realizes real communications and resolves the gap between production and consumption based on new technologies, innovations and new organizational patterns. Meanwhile, it gradually digests the production that came from over-exploitation of resources and initiates a green, sustainable consumption model for the future. It is indeed a giant leap forward. The sharing economy enables consumers to take out their idle houses, cars, durable consumer goods and even time, to join in the reallocation of social resources and to earn money.

According to statistics, a car spends an average of 23 hours a day being unused. It is estimated that, if it is put into the circle of the sharing economy, it

will result in a drop in sales equal to only one car in nine being sold. Larry Burns, the former vice president of General Motors said that “Whenever a car joins in the sharing network, a car factory may reduce its production by 15.”

This re-consumption economy supported by the integration of consumers proves efficient to cater to the personalized and diverse demands of consumers. Unlike those identical, standardized products from the industrial front-end, the idle resources in the sharing economy, sifted and crafted by consumers themselves, seem closer to people’s life. Only when consumers, armed with their personal experiences of consumption, join in the sharing and joint production together with other consumers, can a trust be built in the market that is different from that in the traditional economy. A surge of re-consumption and consumer-producers is now energizing the sharing economy.

2.4 Trans-boundary “Internet plus”— a revolutionary driver of the sharing economy

If environmentally conscious consumption, consciousness of spiritual consumption and consumption surplus provide market and material conditions for the birth of the sharing economy, then the “Internet plus” is a key factor that has made visions come true. Its contribution can be seen in the following categories.

First, it realizes the reallocation of trans-boundary resources. The biggest strength of the Internet as an infrastructure is that it lets a platform integrate all resources and through this integration pushes the boundaries, capacity and scope of the management of production and consumption, then uses the platform to integrate trans-boundary resources and build innovations upon innovations in technology and production. For example, Alibaba Group has tapped into a trans-boundary health care industry by means of smart hardware, Internet and data technologies and launched a health-themed

App, “Parental Care Program,” which enables elder parents, their children and doctors to manage their chronic diseases in an interactive manner.

Second, the “Internet plus” invigorates new elements of the sharing economy. Thanks to its production through the platform, the role of equivalent material elements is weakened, and the production elements are more flexible. Soft elements around information technology, such as knowledge and social capital, not only act as a booster for wealth creation, but also through the superimposed effect of the Internet creates more new elements for economic development. For example, there is a new financial pattern named “mass funding” that is based on the Internet and breaks the traditional financial system. Start-ups may raise funds through the Internet in all kinds of forms. Since the funding cost of the small-scale entrepreneurship is reduced, the path for innovations is well paved. Figures from US research institutes indicate that by 2020, the mass funding will create two million jobs for the US and will total as much as USD 500 billion.

Third, the “Internet plus” catalyzes new markets and business models for the sharing economy, which fully integrate brick-and-mortar markets and online markets. For example, Ele.me, the biggest Chinese O2O catering brand, started with food delivery service in the physical market and then extended into online connections with third-party teams and crowd-sourcing logistics. Currently its delivery business has also tapped into fresh food, supermarkets and family services. The integration of online and offline services largely cuts the intermediate links in the business and forms an innovative “decentralized” business model. For example, handset users may book flight tickets and hotels through Ctrip’s mobile app and get news from the media through WeChat.

Also, the “Internet plus” helps breed a new credit for the sharing economy: e-credit. Credit

marks a crucial prerequisite for the sharing economy. The process of a user linking into the Internet is also a process of e-credit being built. Many companies, while trying to piece together fragmented information about supply and demand on the Internet, could also serve as a credit intermediary. For example, Airbnb, the largest room-letting platform, in 2011 allowed its users to connect through their Facebook accounts, through which tenants could find more information about the houses and the landlords. At the end of a room-letting deal, there is also a bidirectional evaluation system to build credit for the future. Later such information will be seen by more people through the Internet and lay an e-credit foundation for other businesses.

3. Types and operating mechanisms of the sharing economy

Judged from the resource types available to be reallocated via the Internet, the sharing economy could be divided into private resources sharing, public resources sharing and quasi-public resources sharing.

3.1 Sharing economy of private resources

The surplus of private resources has been a common phenomenon, including surplus goods, services, time, spaces and even capital which can all be shared by a broader range of social members via the Internet to have its values better realized and have social welfare improved as a whole.

3.1.1 Sharing of surplus goods

For an individual, the “expected application life” of a product is often shorter than its “expected physical life” which leads to a great deal of individual goods laying idle; in addition, with the family life cycle approaching different phases, there will be more and more goods laid idle. Currently, with the support of the Internet, these idle goods could be rented and re-circulated in

a more convenient and smoother way compared to the old times because the electronic mobile technology now covers the world. The geographic location information is available at low cost and the social network communications is widely accepted, which makes the sharing of idle goods more efficient.

Column 2

The “Idle Fish” for sharing idle goods

The “Idle Fish” stands as a flagship for surplus goods sharing among other idle goods exchange communities. By March 2016, it has attracted more than 100,000,000 real-name registered users and has exchanged 170,000,000 pieces of idle goods. In April 2015, it launched the “Fishpond” program (that is, to establish different exchange communities centered around residential communities, companies and schools respectively according to their locations and radius-covered range or based on common interests). By March 2016, as many as 125,000 “fishponds” had been established in China. People under the age of 30 tend to be more open about this kind of idle goods sharing and account for nearly 70% of all “Idle Fish” users.

3.1.2 Sharing of surplus service

Apart from surplus goods, surplus service is an even more promising unexplored bonanza. At present, the information between the supply end and the demand end has failed to properly match, regardless of general labor services or professional skills. However, the Internet platform has reduced the communications cost substantially and the comment mechanism which emerges to answer the requirements of this Internet-based era really injects great faith to all parties involved in the exchange. So, the thick ice of old times concerning surplus service sharing is melting gradually.

Column 3

The “Zaihang” for skill service sharing

In the skill service “sharing” field of China, the platform of “Zaihang” shines as an emerging star which has gathered over 8,000 insiders and experts from all walks of life across more than 10 cities, who are dedicated to sharing their skill services and who have helped hundreds of thousands of people solve their problems, including parent-child travel planning, career planning and bottlenecks facing start-up companies. If you have any problems or personal service needs concerning your life, you could turn to the experts for an answer, a solution, or for advice and suggestions or a tailored service.

3.1.3 Sharing of surplus time

In a modern sharing economy, people could not only sell their idle goods but also could sell their time for services like dog walking, doing laundry, furniture assembling, caring for the aged or simply helping with errands. This is called the surplus time sharing economy. The Instacart, a US-based startup, which offers its clients “delivery to the door within one hour” service, has stood out in the Silicon Valley with its appraised value after only two and a half years in business putting it on the Forbs 2014 list of positive potential companies. This company has been fully availing itself of the surplus time of free-lancers located in different communities via the Internet to honor its one-hour-delivery promise. And all the free-lancers involved are of double identities, namely, they could either be on the receiving end of this service, or on the offering end as long as they have some idle time available. So, the one-hour-delivery service is actually the alternative sharing of idle time and labors of people who live in adjacent communities.

3.1.4 Sharing of surplus space

The vacant buildings and rooms and even a sofa in one's living room could all be rented on a short-term basis, which, on the one hand, could answer the accommodation needs of tourists and business travelers, or on the other hand, could allow landlords to make a profit while keeping their real estates from being redecorated or redesigned completely by long-term renters. Therefore, it is predictable that this kind of sharing might be well received. For example, a Airbnb-like “Xiaozhu” (piglet) website which engages in short-term rental of lodging has been available on line since August 2012. It has established its own branch companies in 13 cities including Beijing and Shanghai and its lodging resources are accessible in more than 130 cities throughout China. It aims to provide landlords and

tenants with a reliable online exchange platform where they can communicate honestly.

3.1.5 Sharing of surplus capital

Unlike traditional financial institutions, the Internet-based “micro-financial” platforms, including the peer to peer (P2P) lending and crowd-funding lending which are the major two types of this platform, allow an individual's surplus capital to be shared rapidly, developing a whole new population group to boost the economy. Apart from the purpose of fund-raising, Internet crowd-funding also aims to share the investment objects with the public. Currently, the P2P and crowd-funding lending are mainly applied in such fields as movie and video making, music and publication, cultural creation and real estate, etc. Taobao crowd-funding serves as one of the most popular Internet crowd-



funding platforms in China, which, by mid-May of 2016, had raised a total of over RMB 1,800,000,000 from more than 14,000,000 supporters, with the largest amount raised for a single project being RMB 35,590,000 and the largest number of people supporting one single project being 350,000. If you have a dream or plan to fulfill, regardless of who you are, you are more than welcome to show it to everybody on the platform and invite those who are interested in supporting you financially.

3.2 Public resources sharing

The public resources are meant to be shared in the first place, however, the public resources of different fields are about to be further integrated and exploited for a better and more comprehensive utilization. The development and sharing of public resources are extraordinarily promising for both urban and rural areas.

3.2.1 Sharing of urban public spaces and resources

The recent emergence of Internet cities and intelligent cities makes it possible to bring traditional urban public resources into a broader application, including public spaces, hospitals, libraries, sports facilities, communities, universities, scientific research institutions, innovation centers, etc. In the west, localized resources sharing has been achieved in urban communities. In China, the government has launched the crowd innovating initiative to rejuvenate the cities through innovation sharing and collaborative innovation. March 28, 2015 witnessed the establishment of the “dream town” of Yuhang district, Hangzhou city which, with the support of urban Internet resources, has drawn over 500 start-up projects and more than 4,000 “makers” to locate here. It will attract more young people with wonderful dreams to come from all over China, even the world. On September 28, 2015, Guiyang city announced that its big data traffic incubator had been made accessible to the public and close

to 2,000 GB of big data would be uploaded to this platform by Guiyang Traffic Management Bureau to enable makers to download relevant data and cloud computing resources from the incubator. This helps more and more people to benefit from big data while expanding the influence of Guiyang Traffic Management Bureau.

3.2.2 Sharing of rural resources

The strong and boundless integrative ability of the “Internet plus” model enables rural areas with no direct connections to modern societies and economies in the old times to play an important role in the development of the sharing economy, especially under the promotion of the “Internet plus rural green resources” model. Currently, the sharing economy of rural areas has been flourishing and expanding rapidly in various aspects and its advancing momentum is no less strong than that of the urban areas. Specifically, the rural sharing economy consists of the following types: (1) The community sharing economy where the urban and rural areas are bridged, which derives from the Community Support Agriculture of Switzerland of the 1970s. Under the circumstances of urban food being polluted by modern agriculture, those urban citizens who wished to eat organic food sought to establish a stable demand-supply relationship with rural citizens. This community sharing economy could also be called urban-rural sharing agriculture. (2) The collaborative sharing economy based on Farmers Cooperatives. As of 2014, as many as 1,240,000 Specialized Farmers Cooperatives had been established in China, whose members take up 35% of the total farming population of China. (3) Urban-rural E-commerce sharing economy. Data from the Electronic Commerce White Paper on Agricultural Products (2013) released by Ali Research indicates that there were 394,000 agricultural producers selling their products via the platform of Alibaba. E-commerce is marching its

way unstoppably to every corner of the rural regions.

“Cuntao”, short form of Rural Taobao, is emerging vigorously in rural areas. It is Aibaba’s plan to invest RMB 10 billion to set up 1,000 county-level service centers and 100,000 village-level service centers within 3-5 years through deep-seated cooperation with local governments. Based on the e-commerce platform, Alibaba aims to build a network covering both county and village areas so that a two-way circulation channel will be created to ensure the “village access to online shopping” and the “urban access to agricultural products”. On October 12-17, 2015, the “rural pig straight to city” activity was initiated on line via the Cuntao platform. On the one hand, cities boast strong consumption abilities and technological advantages, on the other hand, rural areas intend to promote their agricultural products and ecological resources to urban areas, which could be connected effectively

via Internet technologies and platforms, so these two parties are able to share what they have reciprocally ultimately removing the old exchange barriers between urban and suburban areas.

3.3 Quasi-public resources sharing

Economically speaking, the road networks and information networks which cover all of China should be categorized as quasi-public resources with an external nature. Owing to the Internet integration of cross-field resources due to modern economic development, the amount of quasi-public resources has been increasing rapidly. The Internet information technology which serves as a quasi-public resource has two major roles which are worth our attention.

First, the three-in-one sharing system integrating “cloud computing”, the “Internet” and the “end connection”. The “cloud, Internet and end” information engineering collaboratively funded and developed by government and private enterprises



Taobao Village

is the most shared quasi-public resource and has the largest number of participants in the sharing economy era. The biggest advantage of the cross-field integration ability of the Internet is to break the traditional boundaries between private resources and purely public ones, which makes those formerly individually owned resources accessible to the public and allows more individuals to share these finite public resources. For example, the “Alibaba cloud computing” platform, which aims to create a data-based cloud computing service platform open to the public, is funded privately but shared by everyone with Internet access. On November 11, 2015 (double-eleven shopping festival), this platform was required to process activity from as many as 140,000 transaction establishments and 85,900 transaction payments per second during the peak hour. As the largest cloud infrastructure integrating the private cloud and the public cloud and the very first cloud platform to put its core transaction systems on the public cloud, the “Alibaba cloud computing” platform offers its clients cross-regional payment services where the purchases and payments could be processed separately by Internet systems 1,000 km away from each other. It has also developed its own OceanBase, which is the first Distributed Relational Database used for financial business. The advanced cloud computing technology has become a critical media to bridge for sharing private and public resources.

Also, the Internet serves both as a quasi-public resource itself and an inter-medium through which other quasi-public resources, for example the public transport resources which are closely associated with logistics, are made available and accessible to the public. The *Cainiao* network which dedicates itself to the development of modern logistics, has established a modern logistic grid integrating the sky-net, ground-net and people-net to include data concerning logistics, e-commerce, consumers and

manufacturing into a unified logistic data platform. Specifically, the sky-net, ground-net and people-net refer to, respectively, the open data platform, physical infrastructures for future commerce and the *Cainiao* station (the infrastructure covering the last kilometer of the transport link). The data platform can bridge logistic enterprises and e-commerce companies to form a collaborative working chain. After accelerating the turnover rate with the help of intelligent warehousing and stocking-in-advance technology, the requirement for delivery-in-24-hours can be met in most cities.

3.4 A new industry in the sharing economy era: the quasi-public industry

Regarding the traditional market economy, a clearly established ownership is a prerequisite for an entity to participate in the market. However, under the influence of the Internet, ownership of many enterprises is gradually being shared, which often converts many private enterprises to quasi-public organizations.

3.4.1 The sharable “Internet plus finance” model

The current “Internet plus finance” model grows out of the flexible manufacturing technology, long tail market and the economies of scale. Supported by increased data sources and the strong information processing power of cloud computing, Internet finance breaks the regional barriers existing in traditional financial industries and is able to cover a much broader area at a lower cost so that a great number of new clients can be included in a short time to alleviate the pressure of inadequate availability of financial resources. In the traditional economy model, it is the government’s responsibility to evaluate and supervise the enterprises’ credit which is considered an important asset in the financial industry, however, in the modern “Internet plus finance” system, this item can be finished by the system itself. For example, Zhima Credit boasts this very function.

Column 4 Zhima Credit

The “Zhima Credit”, similar to the FICO grading system in the USA, is the first credit grading service agency established in China and is based on the mass transaction records of Alipay. The “Zhima Credit” of a specific Alipay user is usually calculated by taking his/her multi-dimensional information into account, so the higher the grade, the more trustworthy the user. Backed by “Zhima Credit”, “Alitrip” has initiated the “credit-access” hotel service where users are allowed to enjoy a “zero deposit” stay at hotels. In addition, “Zhima Credit” and Ant Micro-loan have co-launched a “credit loan” program where the applicant’s credit will be verified by records from “Zhima Credit” and the applicant will receive his/her loan within 3 seconds of being approved and then allowed to pay back the loan within a period up to 12 months.

The sharing of credit infrastructures, on the one hand, reduces the risk of the merchants while facilitating public consumption. When credit equals access to fortune, it will upgrade the overall credit level of society.

3.4.2 Sharing of e-commerce infrastructures

Supported by the sharing of various kinds of e-commerce infrastructure platforms, China has gradually realized an ecological development for commercial systems where the “Distributed Collaboration” is applied to a lot of fields like the design, manufacturing, selling and service etc. These platforms have enabled the medium-sized and small enterprises (even individuals) to interact via Internet and have established a cyberized manufacturing system to replace the old chain manufacturing system centered around several large-scale enterprises, which stimulates the “open

and collaborative innovation” where no party could finish the whole manufacturing process totally on its own and therefore reduces the risk of large-scale economic fluctuation. Up till now, China has become the spearhead in terms of e-commerce infrastructures which, when further shared, will serve as a bigger driving force for China’s economic transformation and upgrading.

3.4.3 Sharing of modern manufacturing infrastructures

By fully availing itself of the Internet and big data, the manufacturing sector could achieve a closer coordination between manufacturing and market demand, which will correspondingly change manufacturing technologies and management methods. At present, the sharing of modern manufacturing infrastructures is showing great potential and is being applied by more and more enterprises. For example, Haier is making great efforts to achieve the “enterprise platformization, employees to be makerization and the users individualization”. Haier aims to serve the world as the global manufacturing infrastructure provider in this Internet era, as it believes that enterprises know no boundary in this age and all the wonderful ideas are more than welcome to be shared and to make use of Haier’s strong manufacturing abilities; its employees are not simply the executors of their managers but are makers who will collect novel and excellent ideas both inside and outside the company and will even come up with their own ideas. Haier will take consumers’ comments as its lighthouse to guide its future direction and will interact with them more frequently and deeply to meet their individualized demands of higher standards.

Column 5 Cooperation among Midea, Haier, and Delan Technology

By cooperating with Midea and Haier,

Delan Technology has successfully integrated the Internet of things with cloud computing and big data and put intelligent home appliances into commercial use, which improves the products' functionality, enriches the consumers' experience and enhances the manufacturers' ability in terms of design, manufacturing and maintenance. The huge Chinese market will produce massive amounts of data concerning the performances of these intelligent home appliances and the users' habits, which are valuable resources for the third-party data service to use to facilitate the orderly flow and sharing of the manufacturing data to activate the huge production capacity required by the Chinese market and bring about reforms in the manufacturing fields to achieve high-end production in the value chain.

3.4.4 Sharing in the age of "new energy + smart grid"

Combining the distributable and mobile new energy with the smart grid will free ourselves from the traditional energy using model which is being monopolized by several big companies owing to the nonrenewable characteristics of traditional energies themselves. For example, coal and petroleum. But new energies including solar and wind are renewable and can be accessed for free and shared extensively, which make the old energy development model obsolete. Combining new energies with public nature and the smart grid is about to benefit everybody in society by providing fair access to effective, low cost new energy sources. Additionally, the smart grid will bring about profound changes in the old relationships between producers and consumers formed under the traditional one-way power grid, where producers produce while consumers consume. Soon, the smart grid will create two-way, even multi-way relationships between the parties, allowing

consumers to participate in production processes.

3.5 Operating mechanism of the sharing economy: symbiosis and coordination

Operating mechanism 1: Cross-field integration and collaborative innovation

What separates the sharing economy from the traditional economy the most is that the former can integrate resources from different fields via the Internet, which indicates that the sharing economy will be operated as a symbiotic and collaborative mechanism which is quite different from the competition-oriented mechanisms of traditional market economies. Internet platforms are truly leading the development of the new sharing economy. As of May 2015, the top 15 global Internet companies by market value were platform companies, among which 11 were from the USA and four from China; the total market value of these 15 Internet companies had reached nearly USD 2.5 trillion, which was 144 times their value in 1995.

These, and other, Internet platforms are leading the world towards a new commercial ecosystem. The enterprises involved will interact more frequently and compete in more aspects in a more open system. Competition will be controllable under this symbiotic and collaborative mechanism created by Internet platforms which function like sunshine illuminating every aspect of the process. In this already large symbiotic and sharing coordination system, more and more new enterprises are emerging via Internet platforms. According to data from the Ministry of Human Resources and Social Security of the People's Republic of China, 10 million new jobs have been created by Taobao's online shopping platform alone.

Column 6

Haken's Synergetics

Synergetics, also known as "Synergetic

Science” is an emerging discipline gradually developed since the 1970s. It functions as a key branch theory of system science. It was founded by Hermann Haken, a well-known physicist and professor at the University of Stuttgart, who introduced the concept in 1971 and expounded its theory in two published works, *Introduction to Synergetics* and *Higher Synergetic Science*. The synergetic theory states that all systems, although they may vary greatly, are mutually inter-influential and interacting in the total scheme of things.

Synergetic action often produces a holistic or collective effect and exists in all natural and social systems even though they may vary greatly. It is an internal driving force that causes the system to form an orderly structure. It is this synergetic action that causes a system to change qualitatively upon approaching its critical point and transform from a disordered and chaotic state to an ordered and stable state. The synergetic effect is the very demonstration of the system self-organization phenomenon.

Operating mechanism 2: Coordination and interaction between macro integration and micro activation

The Internet based symbiotic and collaborative mechanism not only makes it possible for resources from different fields to be integrated horizontally, but also serves as a vertical integration mechanism to connect macro and micro economies, which the traditional economic system lacks. From now on, the Internet is going to cover all aspects related to our lives, including industrial and agricultural infrastructures, communication infrastructures, the Internet platforms, the manufacturing and daily life related service systems, manufacturers/service staff/consumers/free connectors and others. It will provide its users with more extensive access to

higher levels of service, products, performances and systems. The Internet is now the foundation upon which modern agriculture, manufacturing, and logistic will be established.

Operating mechanism 3: Collaboration and symbiosis involving multiple subjects

The horizontal and vertical cross-field integration and coordination of the sharing economy brings multiple subjects into this sharing and symbiotic relationship to boost its development. Among these subjects, consumers are taking on a new role. For example, their needs are more individualized, they have been around and they interact more frequently and actively with each other, which in turn forces manufacturers to adjust their service to a “platform + small enterprises (individuals)” model to meet a great number of “small yet urgent” requirements from consumers. So efforts are being made by many large enterprises to develop a “micro-economy” by defining themselves as platforms through which they can establish many small, innovative options each functioning like a small enterprise. The competition among large enterprises will be subject to the competitiveness of their “platform + small enterprises (individuals)” features. And as the internal “platform + small enterprises (individuals)” features of one enterprise interact with those of other enterprises, more combinations of this kind among different enterprises will be established via the various Internet platforms.

What separates the sharing economy from the traditional economy are the characteristics of horizontal and vertical cross-field integration, multiple subjects’ participation and the symbiotic and sharing coordination mechanism.

3.6 Governance model of the sharing economy: Polycentric collaborative governance

The traditional market economy concerns the relationship between the market and government, while what faces the sharing economy is how to

coordinate the relationships among the multiple market subjects. The governance model of the former is somewhat mechanical and no matter how perfect the market's self-regulation appears to be from the economic point of view, it still works like a machine controlled by the government because it requires artificial regulations even though it could operate automatically. The reason why the traditional market failed to develop a real self-regulation mechanism is because it operates in a single competition mode which usually leads to a one-way target and highly standardized competition. It is the economic version of modern sports competition. The negative effect of this kind of competition is that the winner takes all, the market's development polarizes, social resources are allocated in a malformed manner and the social relationships lose their balance, which finally renders the market ineffective. To make up for these defects the government is required to intervene and regulate, however, the government has its own defects and will sometimes fail to turn the tide. Thus, a single competitive modern market is a flawed market.

Column 7

The polycentric governance theory of Ostrom

Elinor Ostrom, one of the founders of the public choice school of America, won the Nobel Prize in Economic Sciences in 2009 because of her contribution to the polycentric governance theory.

Based on profound theoretical analysis and abundant empirical data derived from an extensive investigation of various kinds of self-organization models, Elinor Ostrom developed the "polycentric governance theory" following the "social order theory" put forward by Polany, a British sociologist. Ostrom's study indicates that whether being governed through a great number of regulations

or being rendered completely under the control of pure market competition, local communities are totally capable of governing their own public resources, like forests, lakes and fisheries. A group of inter-dependent individuals could self-organize to achieve self-governance and sustainable common income by resisting temptations such as hitch-hiking, responsibility evasion and opportunism. Currently, the word "polycentric" has been developed into a kind of thinking model, a theoretical frame and even one of the governance models for the production of public merchandise and for the process of public affairs.

The sharing economy works as a collaborative mechanism where the participants are diversified and the competition and symbiosis co-exist compatibly, which is consistent with the polycentric governance model put forward by Elinor Ostrom. The polycentric governance model indicates that the sharing economy should get rid of the stereotyped mindset where the economy can only be regulated either by the government or by the market. Instead, it is advisable to establish a reasonable governance mechanism where diversified market subjects like the government, enterprises and the public can fairly share the interests of economic development. The sharing economy is an emerging phenomenon, so it requires us to break away from the old mindset applied in the traditional economy and develop a new mindset to understand and cope with the issue of being disordered during this phase.

The government should establish a "polycentric collaborative governance" model where efforts should be made to encourage the participation of various kinds of market subjects by making full use of the Internet to integrate resources and bridge interactions. We should have faith that this network coordination mechanism will be able to cultivate

self-discipline and self-restraint qualities from these diversified market subjects and under such a premise, a collaborative governance model will be shaped where diversified regulatory methods will be applied together with industrial and social supervision.

4. Theoretical innovation of the sharing economy: A new market economy model

The sharing economy will move the traditional economy from production to consumption, from a simple production end to a consumption end with nationwide participation and from a single pursuit of exclusive profit to a diversified pursuit of balanced development among the economy, environment and spirit. Under such circumstances, the market resources allocation mechanism also changes from being competition-driven to something more symbiotic where the allocation media for the market economy exchange shifts from the previous price signal to the current Internet guidance. Since the Internet manages to offer full disclosure of the information and processes involved in market exchanges, it, to some extent, solves the problem of unevenly distributed information. In addition, the socialist pursuit for fairness is made possible under the sharing economy model in that the simple sharing of means of production has been enlarged to a diversified sharing of social resources including the environmental and informational elements. The market decision-making mechanism will also change accordingly from being controlled by capital to the wide participation of consumers.

4.1 A new premise of economic logic: From Adam Smith's self-interested homo economics to Confucian altruistic homo economics

Modern western economics is based on the

premise of the self-interested homo economics hypothesis put forward by Adam Smith, who believed that if you can motivate the self-interest nature of someone and lure them with a benefit and let them recognize that it is for their own good to behave in a certain way, you are half way to getting what you want. It is human nature to pursue one's own interest optimally under the guidance of self-love while being altruistic at the same time. The economic liberalism of Adam Smith advocates maximizing self-interest through the division of labor and exchanges, which may benefit other people and society indirectly in the process. Therefore, Smith's economic logic is self-interest-based altruism.

The rise of the sharing economy in the Internet era has revolutionarily subverted the premise of western economics because it takes altruistic theory as its logical premise. As a matter of fact, the nature of the sharing economy requires its participants to achieve altruism-based self-interest, because the more participants there are to share the elements the faster the elements values will increase. The value of non-material elements in the sharing economy follows the growth law of diminishing marginal cost. In addition, the Internet-based sharing economy separates the rights of use from ownership and renders exclusively owned products sharable. Selling a car stands for a transfer of both the rights of use and ownership. However, the maximized interest will be achieved by transferring the rights of use repeatedly. In a word, self-interest can only be fulfilled through rights transferring and altruism.

Rifkin commented that, "With the establishment of the infrastructure of the Internet of things and its collaborative sharing mechanism, China is moving towards a zero-cost society, which ensures her leadership in the third industrial revolution and paves the way for a fairer, more

sustainable and prosperous post-carbon eco-civilization.” In fact, the altruism-based self-interest in the sharing economy commented by Rifkin was already reflected in China’s holistic economic mindset guided by the Confucian altruism which read “Self-interest alienates people while altruism gathers people.” This was a wealth view based on righteous benefit and sustainable economic growth and was subject to the wealth production elements of the agricultural age. The concept of “benevolence” in Confucian philosophy refers to relationships both among people and between people and other creatures of the universe, which indicates that people are internally associated with all the creatures existing in the universe and is echoed by the “altruistic actions” guided by another Confucian virtue, “forbearance.” This holistic economic mindset of Confucian altruism rooted in the sub-consciousness of Chinese people has been exerting an imperceptible influence in their innovations. Currently, compared with other developed countries, China boasts the same development scale and achievements in the sharing economy and is even leading the rest of the world.

4.2 New elements theory for economic growth: Cross-field elements and non-material elements

The sharing economy breaks the limits of the traditional economy concerning the growth elements theory and the labor force. Land and technology no longer contribute separately to economic growth. Instead, the added value extended from the labor force, land and technology are much bigger than that created by these elements themselves. For example, when labor, capital, technology and resources are allocated cross-field through coordination among industries, system innovation, elements complementation, etc., the “win-win” condition between producers and consumers can be achieved. The integration and re-combination

of elements are involved in various aspects of our lives, including the charged sharing for one’s surplus goods or goods temporarily not used or the mutual sharing of properties with equivalent values. Unlike traditional elements, to which the accumulation and ownership are of great importance, cross-field integration of elements is favorable for broadening the sharing regions of all industries and reducing the exchange cost for economic growth. It is the “big data age” that makes the cross-field integration of elements possible via Internet platforms because the data (information) functions as an independent production element the same way as capital and labor forces work.

The intelligent integration of production elements serves as the new driving force boosting economic growth. When various kinds of production elements are intelligentized with the support of large-scale collaboration and new infrastructures such as the cloud computing, the Internet and the Internet of things, it puts an end to the traditional value chain of top-down division of labor and the old separated internal research and development model which will be replaced by an Internet based interaction and collaboration and cross-field innovation. In the information-dominant economic era, elements like knowledge, technology and information possessed by an individual can be shared quickly by other people and spread extensively. The intelligent integration of production elements via the Internet of things totally changes the traditional economic growth paradigm and creates a brand new economic force driving the economy forward.

4.3 New capitals of the sharing economy: Social capital and natural capital

In the age of the industrial economy, capital, currency capital in particular, has the final say over market decisions while the sharing economy is subject to diversified capital forms including resources, the environment, and the economy which

are integrated by the media of information to be shared by all consumers.

Table 1 Comparison among Different Forms of Capitals

	Social capital, natural capital	Monetary capital, manufacturing capital
Different forms of capital	Public sharing capital	Exclusive and private capital
Capital appreciation goal	Maximization of sharing interests	Maximization of private interests
Capital appreciation mechanism	Equivalent and fair	Unfair distribution of social wealth

Given that communications technology advances day by day and the cost of access to the Internet decreases gradually, the Internet-based sharing economy has produced an economic value-added element based on social capital different from traditional capital forms. The obviously reduced communications cost owing to the Internet platforms lays a solid foundation for large-scale collaboration, nationwide sharing and the full play of micro economies. The nationwide covered networks make information available for anyone with access to the Internet so that the public's expectations in their communications can be satisfied; and the innovation efficiency can also be improved since the latest information is accessible via the Internet. The buyer-seller relationship will be replaced by a sharing relationship and the exchange of ownership will be transformed into an Internet-based exchange of service over time, which is also going to change our understanding and definitions of economic theories and times. In the new capital field created by the "Internet + innovation" model, all types of social capital, including trust, are making their own contributions to economic growth by activating innovation.

Unlike individualism and materialism, the sharing economy breaks the boundary between daily life and production and between consumption

and production because the identities of consumers and producers are interchangeable. The sharing economy turns a new page for the old routine, where consumers were controlled by capital, and puts an end to the monopoly economy. The new wealth produced through innovation of social capital stands for a public and diversified wealth increase paradigm where the producers and consumers are tied together on a reciprocal basis. The interests of the two parties are mutually dependent. As for future competition, it is going to be difficult for the old self-interest-based logic to go farther. Instead, the altruism-based self-interest model is going to take a dominant position because the self-value can be fulfilled more completely in the process of benefiting other people and a benign interaction between self-interest and altruism can be achieved accordingly.

4.4 New wealth of the sharing economy: "Life wealth + production wealth"

It is believed that wealth is created by production, for which controls over useful and rare resources are deemed as a critical method by which to increase one's wealth. The comprehensive material wealth and production level of a country or region is usually characterized by production wealth via such indices as investments, outputs, depreciation, labor forces and technologies. Nevertheless, with the improvement of development and exchange mechanisms and the enhancement of the recognition abilities of the public, the traditional economic wealth model, which only focuses on material gains, is no longer able to meet the requirements of the sharing economy, which makes relevant change inevitable.

The sharing economy frees itself from the traditional production-based wealth form and pursues new economic growth consisting of public wealth and diversified wealth, which integrates measurable, divisible, exchangeable merchandise with non-material products indispensable to our spiritual, moral and

cultural lives to create a new wealth ecology of “life wealth + production wealth.” As a new means to produce wealth, sharing is not going to interrupt your life, instead, it is a process of creating wealth because the two sharing parties are able to enjoy both the exchange of material and spiritual wealth. The integration of production and living will change people’s understanding of wealth, from wealth only being created through production to a combination of consumption and production. To understand the new wealth ecology of the sharing economy, we have to upgrade our recognition system from single value recognition, where production serves as the only wealth source, to a diversified one where production and life are both wealth sources so that the national welfare will be maximized.

4.5 New market model: “Internet plus” symbiotic and collaborative models

For the sharing economy, the boundary between production subjects and consumption subjects is not that distinctly divided, which eliminates some intermediary steps for market transactions and weakens the connection role of the secondary flow merchants so that the market subjects of different fields can freely team together according to their own needs and form new compound subjects. Information platforms like the Internet and the Internet of things greatly reduce the combination cost of different market subjects, which integrates the access to, and withdrawal from, the market of the subjects with their daily lives and endows the individual and family idle goods with a reproduction function for further consumption. The diversification of the market subjects indicates that the sharing economy is advancing towards a diversified, cross-field integrated and compound new economic form. Competition is also a big part of the symbiotic market. However, it is a symbiosis-based competition performed by a group of altruistic homo economics, where the joint development of all

subjects serves as the largest driving force and the competitive logic that “the winners take all” is not applicable to the sharing economy.

Table 2 Comparison Between Competitive and Symbiotic Markets

	Competitive market economy	Symbiotic market economy
Logical starting point	Competition among self-interest centered homo economics	Altruistic economic cooperation
Market cycle	The winners take all and only the government can prevent the market being monopolized.	It enjoys a symbiotic development and a self-regulation mechanism works within the market.
Relationship between the government and market	To solve problems when the market goes out of order	The market enjoys a higher level of self-organization.

Currently, the sharing economy is emerging worldwide where the market subjects, producers and consumers, are in symbiotic, collaborative yet competitive relationships. Internally driven by the rapid development of the Internet technology and by the energy and environmental crisis, the sharing economy mechanism comes into being from the spontaneous sharing of idle goods among individuals and families in order to realize the sharing of social resources and welfare. It is a new economic form where energies and social resources can be greatly saved by sharing, and the market subjects co-exist in a collaborative and symbiotic way. But the Internet-based sharing economy on the one hand, shares the same credit constraints as the real economy and on the other hand, requires even better credit records and a stronger moral constraint. However, if one attributes the market credit of the sharing economy only to the constraint of the Internet, one would fail to see the true nature of the sharing economy. It is the “plus” effect derived from the Internet that controls the market credit of the sharing economy. The real credit spirit originates from the

inner awareness of market subjects, including the awareness of environmental protection, spiritual consumption, embracing a new life style, etc., which make the market credit more resistant to all kinds of temptations.

5. Development of the sharing economy in China

5.1 Being included in the national development strategy

The planned economy has lasted 30 years, since the founding of the People's Republic of China, which could be deemed a sharing economy of that certain period and was best characterized by its single public system and collective system foundation, common possession of public resources, equal allocation and common prosperity. However, the single public system has also proven to be the largest disadvantage of the planned economy because it rejected any market economy related regulations and led to low efficiency in resources allocation and serious shortages of supply. That is why it failed to achieve the ideal "common prosperity" as it had planned.

It has been 38 years since China initiated the Reform and Opening-up policy. This period witnessed China's transition from a planned economy to a socialist market economy with Chinese characteristics. The biggest innovation in this transitional period is to organically integrate the "common prosperity" ideal of the public economy with the high efficient social resources allocation of the market economy.

The market economy with Chinese characteristics endeavors to achieve the common prosperity by making full use of the advantages of the market by efficiently allocating resources. This is a gradually promoted reform starting in several cities in eastern China and then popularized in central

and western China, which is a reform from "part to whole." During this period, the Chinese government has formulated four strategies from the national strategic level to ensure common prosperity; to achieve a moderately prosperous society, to achieve a balanced development among different regions, to achieve the poverty-alleviating strategy, and to improve the social insurance system in an all-round way.

The fifth plenary session of the 18th CPC Central Committee proposed five concepts concerning China's future development; innovative, coordinated, green, open and shared by all, among which the concept of being shared by all was included into the national development strategy for the first time. The 13th Five-Year Plan proposed to expand the network's economic space, to implement the "Internet plus" plan, to develop the technology of the Internet of things and its applications, to develop the sharing economy and to promote the integration of the Internet and the economy, among which the concept of "network economic space" and the "sharing economy" were also mentioned for the first time. To date China has successfully held two World Internet Conferences, the first at Wuzhen, Zhejiang province in November 2014 which attracted more than 1,000 elites, experts and scholars from various fields and government officials of many countries, including Li Keqiang, the Premier of China who pointed out that the Internet served as a "new tool" to encourage public entrepreneurship and innovation and as a "new platform" through which the government would implement its policies. During the second World Internet Conference held in December 2015, President Xi Jinping delivered the keynote speech, demonstrating how much the Chinese government valued the development of the Internet-based sharing economy.

A report from the China Internet Network Information Center shows that during the 12th Five-

Year Plan period, the contribution of the Internet sector to China's economic growth had increased and now tops the world. What is more promising is that the Internet economy has kept growing, reaching 7% of China's GDP and outrunning the USA in 2014. It is predictable that, backed by favorable policies, the Internet economy will be responsible for an even bigger proportion in China's GDP during the 13th Five-Year Plan period.

5.2 Characteristics of China's sharing economy: Internet support, platform promotion and government guidance

Although the sharing economy of China is a step behind America from the micro point of view, it has established its own advantages and characteristics in macro terms, that is, Internet based, platform promotion and government guidance. According to the latest data from the *37th China Internet Development Statistics Report*, as of December 2015, the number of Internet and mobile phone users in China had reached 688 million and 620 million respectively. At present, the Internet has covered 50.3% of the Chinese population. In 2015, China's sharing economy has contributed an economic income of RMB 1.95 trillion, stimulated the establishment of more than 200 new enterprises and attracted a venture capital investment of USD 2 billion. For the following five years, it is expected to keep an annual average growth rate of approximately 40% and account for over 10% of China's GDP by 2020. The platform promotion is another key to the development of the Chinese sharing economy because it is proved by Metcalfe's Law, that the value of the network is proportional to the square of the users and it is owing to this kind of positive externalities that the Internet platforms have been advancing rapidly with their market values soaring at the same time. It is reported that in the market value ranking of global Internet enterprises available at the beginning of 2015, China's Alibaba,

Tencent and Baidu ranked the third, fifth and sixth places respectively. These three companies, guided by differentiated market needs, have been dedicated to creating a top-notch searching platform, shopping platform and social platform respectively and have shaped their own characteristics. Given that their platforms are serving many consumers, sellers and service providers, there will be mass data available from the frequent transactions completed daily, which will in turn create an open and sharing environment for economic development as a whole.

The organic combination of the macro strategic advantage of government guidance and the market self-regulation mechanism is the key that makes China's reform and opening up so successful. When it comes to the development of the "Internet plus" sharing economy, the government guidance has stepped up again to support the rapid advancement of the Internet, especially in relevant systems support. From 2015 until now, the Chinese government has released a series of policies, regulations and opinions to facilitate the rapid and sound development of the Internet industry. For example, in July 2015 the State Council of the People's Republic of China issued the *Guiding Opinions on Actively Promoting the "Internet Plus" Initiative*, which indicates that the government has made it a policy to expand the Internet industry from the consumption field to the production field so that the productive industry is able to avail itself of Internet technology as a new driving force to significantly enhance its innovation and development capacities.

It is also reported that the government considers increasing the capital investment to the Internet sector and relevant investment fund projects of national level are under research and planning and so is the cooperated investment between enterprises administered by the central authorities and local governments. For example, on May 4, 2016 the China Unicom Group signed the *Strategic Cooperation*

Frame Agreement on Promoting the “Internet Plus” Initiative with the Shanghai Municipal People’s Government to plan an investment of RMB 14 billion over 5 years. In addition, investments at the provincial and municipal levels to the Internet sector are also under way.

The “Internet plus” national strategy promoted by the Chinese government is a route which China must take in order to stand as a major global manufacturer by gradually integrating big data and mobile Internet technologies into the manufacturing sector. Such a “Chinese model” will allow millions of Chinese people easier access to share the dividends of economic growth and will have a profound impact on China’s economic development.

5.3 Rapid rise of the urban sharing economy

As for China, the infrastructure construction in the transport sector lags far behind its urbanization. This is particularly true of the first-tier cities. Under such circumstances, to deal with urban public traffic congestion and to make full use of currently available transport facilities, the DiDi car-hailing APP emerged as the occasion required. In 2015, it finished an order amount of RMB 1.43 billion, ranking first among similar traffic APPs worldwide and making itself the largest trader in the global sharing economy. At present, more than 80% of China’s taxis have installed the DiDi APP so that urban citizens can book a service any time if they have such a mobile APP. The DiDi APP offers multiple businesses, including “express” service, “exclusive” service, “hitching” service and the “substitute driving” service, which are able to bring all the available driving forces (including public transport vehicles and private cars) into full play to meet the heavy traffic demands of cities.

Crowd-funding is another financial form of the sharing economy, in which a great deal of small capital contributions is combined as one large investment. During recent years, faced with pressure

caused by the reversal of the supply-demand relationship in the Chinese real estate industry, some real estate companies have endeavored to try this new crowd-funding model of “real estate + Internet + finance.” Meanwhile, crowd-funding models have also started to emerge in PPP (public-private partnerships) projects concerning urban infrastructure construction launched by the Chinese government.

The sharing economy is a new economic revolution led by the change in the public’s living styles and because during recent years sharing has become a popular fashion in many of the big cities in China. In 2014, Mr. N (who prefers to be anonymous) built an “urban Shangri-la” in Shunyi district, Beijing and had it shared by the public as an experiment, which unexpectedly started a fashion of sharing in dozens of big cities and stimulated many real estate companies to engage in the brand-new trial of constructing sharing houses and communities. Although Mr. N’s “urban Shangri-la” stands as a single case, it indicates that a new trend and direction for the future urban development is approaching.

The wide popularity of the sharing economy is closely associated with current consumption models and concepts. The extensive application of smart phones and the Internet has changed the consumption model of the public and rapidly increased online shopping. Currently, 60% of netizens have engaged in online shopping contributing a consumption amount of RMB 413 million. Among these netizens, the post-80s take up half of the total online consumers because most of them are well educated, hold a more open attitude towards new things and a more flexible consumption concept, value “access” over “ownership,” and prefer this sharing consumption model where goods can be “used” and “rented” on a “pay-as-you-go” basis. Participants of the sharing economy aim to bring all

idle resources like houses, vehicles and capital into better play, which is expected to further boost the development of the sharing economy among urban individuals and set the keynote for future online consumption.

5.4 Internet-driven model of urban + rural areas: The emergence of the rural sharing economy

It is noteworthy that the “Internet plus” model is profoundly changing traditional urban-rural relationships because the wide development gap between urban and rural areas was beyond solution using traditional technologies. Under the special promotion of the “Internet plus rural green resources” model, the rural sharing economy has been flourishing and expanding rapidly in various aspects and its advancing momentum is no less strong than that of its urban counterpart. It has been defined as an indispensable part of the sharing economy with Chinese characteristics. Currently, the rural sharing economy mainly covers several entities.

First is the community sharing economy where the urban and rural areas are bridged. Over the past few years, the Community Support Agriculture (CSA), a typical rural-urban sharing economy model, has been flourishing in large and medium-sized cities. In the context of urban food being polluted by modern agriculture, urban citizens who wish to have organic food seek to establish a stable demand-supply relationship with rural citizens, which gives rise to the rural-urban community sharing economy.

Second is the rural E-commerce sharing economy connecting urban and rural markets. Data from the *Electronic Commerce White Paper on Agricultural Products* (2013) released by Ali Research indicates that there were 394,000 agricultural sellers marketing their products via the Alibaba platform with more participants and regions joining everyday. The increase in farmers’ incomes and the

popularization of the Internet in rural areas make rural e-commerce an extremely promising industry. For example, “Taoshihui” (buy cheap products) aims to create a county ecology platform through which agricultural products can be gathered together to ensure a straight-supply from the original production areas, or that special local products from different regions could be cross-shared, which, on the one hand, meets rural citizens’ consumption needs of different regions, and on the other hand, substantially stimulates the rural economy.

Column 8

The E-commerce of Shaji Town of Jiangsu Province

Enlightened by “IKEA,” Shaji of Suining, Jiangsu province opened its first “Online Seed” store in 2006 and now boasts thousands of branches. After accurately analyzing the market demand, Shaji Furniture, also known as the “IKEA of China,” advanced to the phase of large-scale production and online selling. Owing to the intimate relationships among local citizens, the Shaji furniture production model was extensively copied and thus expanded quickly. In addition, along the furniture production chain of Shaji town, there are various kinds of small and large enterprises dealing with different work divisions, including lumber production, transportation enterprises, furniture assembling enterprises and paint processing enterprises. So, the Shaji furniture industry fully reflects the characteristics of the sharing economy from both the establishment and development of its production and selling enterprises and the formation of the entire industrial chain.

Third is the Internet-based emerging rural agritainment. The agritainment serves as a new form

of the sharing economy where farmers offer urban citizens the opportunity to return to the field and enjoy clean air, natural scenery and native ways of living. Thus, the rural living style which originally was exclusive to farmers and had no economic value has been developed to be a source of wealth because of the pressure of urban diseases and the support of Internet technology. In Zhejiang province, agritainment has been serving as an important driving force and a major industry for developing the rural economy. In 2014, RMB 20.8 billion was invested by Zhejiang province to build a “beautiful countryside.” At present, the centralized collection and processing of domestic garbage has covered 97% of the villages while the effective treatment of sewage includes 37% of the villages in Zhejiang province and 42% of the farming households have been benefiting from the sewage treatment measures. By the end of 2015, Zhejiang province had developed 856 recreational and tourism villages of agritainment style and 2,336 village touring spots. In 2015, the total tourism income of Zhejiang province reached RMB 630 billion, a year-on-year increase of 13.8%, among which the contribution made by village tourism was significant.

6. Obstacles and challenges facing the development of a sharing economy in China

The sharing economy in China reached RMB 1.956 trillion in terms of market scale in 2015 and is expected to account for more than 10% of GDP in the next five years. Its annual average growth rate will be around 40% during the same period. Despite its huge potential, the sharing economy faces five daunting challenges and obstacles to its future progress. Specifically, they involve administration systems, interests of groups and authorities, awareness, management systems, and the absence of

relevant laws and regulations.

6.1 Obstacle due to administration systems: Restricting integration of cross-sector resources

Currently, more than 30 sub-sectors of 10 mainstream industries are involved in China's sharing economy, ranging from transportation, finance, to education, healthcare, and catering industries. Development of such an economy necessitates integration of resources in different sectors, which benefits from the model mainly adopted by the Chinese government. But it is, at the same time, greatly affected by separated operations of departments within the government management system. Due to this problematic system design, the potential of huge amounts of public resources resulting from generous investments since the reform and opening up fails to be fully tapped. Nowadays, in Chinese cities, public resources, such as libraries, sports and cultural facilities, parking space, and green space for recreation, which are supposed to be shared among citizens, are exclusively owned by colleges and administrative authorities. Another kind of public resources, namely, temples that are scattered throughout cities and forests, should be visited for free just like European churches. However, they are tools owned by the authorities for the benefit from tourism. In brief, to adapt to the needs of a sharing economy, existing administration systems must transform from departmentalized administration to public administration.

6.2 Obstacle due to interests of groups and authorities: Restraining sharing of quasi-public network resources

The cost of access to nationwide transportation and communication networks, which are quasi-public resources, has tremendous spillover effects on the economy. But the monopoly interests of some groups and authorities have prevented these resources from being used to their true advantages. Theoretically, the larger the population, the higher

the efficiency and the lower the marginal cost of a country's public network resources. But in China, a country with the largest population, the reality shows the contrary, where Chinese people pay a lot for their network resources. Premier Li Keqiang once pointed out that, according to the estimation of the International Telecommunications Union, our ranking of broadband was below the 80th. We still enjoy great potential and large room for growth in boosting the construction of IT infrastructure and increasing bandwidth. He also told people responsible to figure out ways to reduce fees for cellphone data plans, and to promote sales at the expense of profits. In addition, the issue of high highway tolls due to monopolies of interest groups craves for solutions, as it severely affects general logistics costs. Currently, mainstream sharing transportation platforms have attracted more than 10 million cars, exceeding 6.5% of the total number of vehicles. Their service is provided to 250 million users (18.3% of the national population) and can be found in about 60% of Chinese cities.

Increased logistics costs due to expensive highway tolls lead to huge differences between various markets during integration, which results from specific characteristics of the market structures. For domestic agricultural products, the last mile issue is obvious.

6.3 Lack of awareness of environmental protection and credits: Affecting the development of the individual sharing economy

Since the turn of the century, the purpose of consumption in China has turned from actual needs to possessions, relationships, and luxury goods. This indicates the absence of environmental protection awareness, and honesty in individual consumption in urban areas, which hampers the development of the individual sharing economy. This is reflected in the following three aspects.

First, consumption for personal possession

and status obstructs the growth of the sharing consumption market. Families, especially middle class or above, own many items that are rarely or never used, often amounting to more than 60% of the family's possessions. Luxury consumption in China has also grown gradually in recent years, amounting to USD 116.8 billion in 2015, which was 46% of global consumption for this category of goods.

Second, lack of environmental protection awareness affects the development of the green sharing economy. This economy is playing an increasingly important role in environmental conservation. In 2015, two applications (Express Carpooling and Ride Sharing) alone saved 510 million liters of petrol, reducing carbon emissions by 13.55 million tons. Despite such benefits, a green economy cannot be promoted or maintained if there is no awareness of "going green" in urban consumption models.

Third, the absence of credit in transactions impedes the sound development of the sharing economy. The success of a market economy depends on a multitude of transactions and a solid environment featuring deep trust. Without trust, the sharing economy will not be able to sustain sound growth.

6.4 Conventional economic management systems have yet to adapt to the emerging sharing economy

The dominant economic and social management system currently is established based on the industrial economy and large-scale industrial production. It highlights centralization of power, leveled management, and segmentation of different regions and departments. By contrast, the Internet-based sharing economy operates typically in cross-region and cross-sector networks with clear demands, strong flexibility and elastic supply, which enables it to rapidly mobilize different social

resources. It is obvious that traditional management systems are already falling behind innovative development trends, creating gaps that need to be bridged in adapting to the new system of a sharing economy. One such issue is that the access threshold of sharing economy players is far lower than that of traditional industries. Compared with drivers of taxi companies, those of chauffeured car services do not need to have the various licenses required by the government. In most cases, they're examined by sharing platforms after online registration. The same applies to landlords of short-term rental apartments. Additionally, it is still not clear what tax rate is applicable to platforms featuring the sharing economy, and whether individuals involved should pay tax for their income apart from commissions collected from the platform. Supervision and monitoring are needed.

6.5 Existing laws and supervision measures fall behind the rapid development of the sharing economy

During this initial stage in the development of the sharing economy, some industries expand ferociously at low cost, bringing immediate shock to original interest distributions. For supervising authorities, this makes it difficult for them to coordinate, and leaves many gray areas. As existing policies and systems are not fit for new industrial development, the rights and interests of consumers are at risk.

It is possible that most sharing economy models may be "illegal" under current laws and system requirements, and even face the tremendous business risk of being banned at any time. As a response, the development of the sharing economy presents new challenges to current policies and laws, by forcing relevant authorities to research and formulate new systems applicable to the sharing economy, and develop innovative supervision methods. Thus, from the perspective of connections between

individuals and societies, theoretical research of the sharing economy is multi-disciplinary in nature, encompassing economics, sociology, politics, psychology. It is necessary to further emancipate our minds and promote management innovations.

7. Potential and advantages for growth of the Chinese sharing economy

7.1 Systems favorable to integration of cross-sector resources

The remarkable achievements of China since its reform and opening-up owe a lot to the Chinese government. Now, economic development created by the sharing economy based on the Internet economy takes the lead. China has attached great importance to the progress of the sharing economy driven by the "Internet Plus." The Central Committee of the Communist Party of China Recommendations for the 13th Five-Year Plan for Economic and Social Development, approved by the 5th Plenary Session of 18th CPC Central Committee, clearly proposed to incorporate the sharing economy into the national development strategy. Based on such wise decisions, we're convinced that the powerful Chinese government will continue to contribute to this emerging sector. Especially with the strongly-promoted reform in government administration systems, and under the guidance of national strategic decisions and science, the sharing economy in China will enjoy rapid and sound development with the support of the government.

7.2 Market with a huge population

The market economy based on competitive mechanisms is dominated by the elite, featuring winner takes all. The global economy under this model is controlled by a few multinational corporations, and a few countries. That's why the economic powers that have appeared successively on

the world stage since the industrial revolution have been mostly Western European countries and the USA, all with sparse population.

The sharing economy, on the contrary, is shared by the elite and the public, featuring symbiosis and collaboration. The more the participants, the greater the shared benefits will be. For populous countries like China, this characteristic is beneficial. Nowadays, China boasts the largest “Internet Plus” market in the world. The development of mobile terminals generates a broad market for the sharing economy.

As of December 2015, the number of Chinese netizens had reached 688 million, an Internet penetration of 50.3%. Smartphones have become a new tool for easy access to the Internet. Nationally, the number of mobile phone users exceeds 1.3 billion, of which 90% surf the Internet with mobile data. Didi Chuxing, a late-mover compared with Uber in the USA, has already attracted more users than Uber within a short period, ranking first globally. In 2015, the total market orders of China’s taxi-hailing apps amounted to 2 billion, of which Didi Chuxing accounted for 71.5% (1.43 billion orders), followed by Uber’s 18.3%. The rapid growth of Didi Chuxing serves as an excellent example of the advantages of the large-scale use of the “Internet Plus” in China.

7.3 Cultural concepts in line with the idea of the sharing economy

The symbiosis and collaboration required by the sharing economy call for both the value of altruism, and a culture of integrative thinking, which are exactly the strength of traditional Chinese culture. Altruism enjoyed a long history in traditional Chinese concepts and had already taken shape during the Spring and Autumn Period and the Warring States Period. Examples include some traditional Chinese codes of conduct, such as benevolence, righteousness, manners, wisdom

and credit, and moral injunction of fidelity to one’s parents and brothers and to the monarch and friends, and the sense of propriety, justice, integrity and honor. In addition, based on the agricultural economy, a holographic system theory that advocated harmony between nature and people came into being. It focused on astronomy, geography, and human interactions with nature. Such integrative thinking is exactly what the sharing economy needs. Buyers and sellers are not as clear-cut as in the conventional model. They depend on each other and become a community of shared interests, which is in line with the concept of holism in traditional Chinese culture.

7.4. Late-mover advantages featuring the “urban + rural” model

In the traditional industrial economy, urban and rural area belong to opposite sides, as only the former provides the infrastructure for an industrial economy, while the latter can only wait to be replaced by cities. But the system of the sharing economy supported by the “Internet Plus” will transform such unequal and separate rural-urban relationships to one that is equal and complementary.

For thousands of years, the Chinese countryside has been conservative, but it almost disappeared when facing vehement expansion inherent to industrial civilizations that pursued high efficiency and aggressive goals. The development of the Internet serves as a bridge of communication between cities and the countryside. The sharing economy provides a common ground for industrial and agricultural civilizations, as the urban population are greatly attracted by the idle rural life, green space, beautiful scenery, agricultural activities, ancestral halls, and artifacts. Thanks to the sharing economy, the “urban + rural” model creating mutual benefit embraces vast room for development.

Starting from high-value fixed assets like houses and vehicles, the sharing economy has now

penetrated deeper into all aspects of people’s daily lives, ranging from tangible cars, garages, clothes, sofas, houses, beds for accommodation, and tools, to intangible skills, resources, time, and intelligence. Chinese villages boast a slow life, cheap organic food, a good environment, traditional artifacts, and unique ethnic cultures that cannot be found in the cities. And these are exactly what middle-class urban residents living in an era of ecological civilization hope to buy. That’s where the “Internet Plus” comes in.

The “urban + rural” model injects fresh blood and new space into the Chinese sharing economy. It is no longer a mere concept, but has become a market that develops rapidly. Currently, Ali Research defines Chinese towns and villages as Taobao Villages. As of December 2014, 212 Taobao Villages of various types had been found in 10 provinces and municipalities across China, including Fujian, Guangdong, Hebei, Henan, Hubei, Jiangsu, Shandong, Sichuan, Tianjin and Zhejiang. The number of active sellers in these villages surpasses 70,000. It was expected to directly create more than 280,000 jobs.

8. Strategic responses and suggestions for promoting the development of the Chinese sharing economy

8.1 Improving the socialist system with Chinese characteristics through a sharing economy will create a potential major economic pattern helping to implement five key development concepts

Fair distribution of social wealth and common prosperity are the essence of socialism. But in constructing a socialist economy with Chinese characteristics, the biggest challenge is to find the economic foundation on which to build the socialist

system. During the period featuring a planned economy, dogmatic adherence to fair distribution without the support of an efficient economy turned common prosperity, which is what socialism pursued, into common poverty. Since the reform and opening-up, the socialist system has found its efficient economic foundation, the socialist market economy. But as this economic model was dominated by a competition mechanism, it did not encourage social fairness and sharing behaviors. Governments need to intervene and address the issue of distribution. Nowadays, the emerging sharing economy, which advocates competition with symbiosis and collaboration, combines fairness and the sharing spirit pursued by socialism and efficiency in a complementary manner. In this sense, the sharing economy is a new economic pattern that is suitable for socialism with Chinese characteristics.

Table 3 Specifically, the following measures should be taken

Socialism under the planned economy	Socialism under a market economy	Socialism under a sharing economy
The socialist concepts of fairness and sharing are guaranteed, but not the economic foundation that supports them.	The economic foundation on which to implement socialist concepts are guaranteed, but the strong power of capital prevents socialist fairness from becoming inherent in the economy. Uncertainties exist.	The socialist values of fairness and a sharing concept are integrated into the economy. A new economic foundation is found.

First, we suggest the central authorities consider the sharing economy as an important economic model that facilitates implementation of five key development concepts. We should promote reform of the socialist market system with the idea of a sharing economy, transforming the Chinese market economy from one that only stimulates competition, to one that provides room for coordination and symbiosis.

Second, we should address poverty alleviation

with the idea of a sharing economy. This is because what there is in many poor areas is just what the urban middle class needs, things like organic food, artifacts and green tourism resources. With the “Internet Plus”, we can lift these areas out of poverty, while preserving their dignity. Products in these areas should be included in national procurements.

Third, we can push reform of a mixed-ownership economy through the idea of a sharing economy. As the sharing economy turns personal possessions into shared resources by creating cross-sector mixed ownership, the same approach can be utilized to promote reform in state-owned enterprises. In this way, the shared use of more state-owned and private resources can be maximized.

8.2 Exploring new pathways for economic transformation and upgrading in China with the sharing economy

The sharing economy should be applied to liquidize stock, especially that of real estate. Stock and excess capacity can be divided into three categories: dormant assets (automobiles, houses, and facilities), idle time (college graduates without jobs, and out-of-hours period), and unexploited skills (skills that can be provided not for profit, such as the skills and rich experience of retired professionals). From the perspective of a sharing economy, current excess capacity in China mostly results from information asymmetry. Take real estate as an example. To reduce the large amount of stock and address the housing issue, we don’t build more houses in the process of urbanization. Instead, by applying the idea of a sharing economy, we should promote renting, and maximize the shared use of existing resources to cut down the stock of houses.

The sharing economy platforms can lead mass innovations with strong participation. We should tap the full potential of innovation sharing platforms of maker-spaces, and provide access to the platform

and data to small and micro businesses and startup teams. The whole society should be mobilized to support Sinovention Ventures, maker-spaces, and intelligent startup bases for small enterprises. Through market competition, we can provide convenient social space and resource sharing space at low cost, to speed up the development of the “Internet Plus” startup network system. In addition, we also need to facilitate service for startups, and promote new R&D organization models, including crowd-sourcing and design with contribution from users. This can guide all sectors to establish platforms for communication and cooperation.

The sharing economy can also be a boost to the Belt and Road Initiative. We should work hard to promote the “Internet Plus” and cloud computing internationally in the Belt and Road regions so that relevant countries can avoid repeated construction by integrating and allocating resources cross regions, and exchanging information. For excess capacity the idea is to make full use of it, instead of being obsessed with possession. Therefore, the “Internet Plus” can also be adopted to promote international leasing transactions.

We also need to develop new markets for the sharing economy. During the transition from a heavy chemical industry to a service industry, China enjoys great potential in exploring ways to make good use of the sharing economy. In this way, we hope to promote reusing resources on the consumption side, generate new consumption models, and drive the development of a new service industry in the Internet era. In terms of expanding domestic demand, China should switch from stimulating consumption as suggested by Keynes, to encouraging resources reutilization and re-consumption through the “Internet Plus.” We need to push forward the sharing of tourist accommodation, logistics, transportation, service, and idle items to drive the growth of the service industry.

8.3 Exploring the way to achieve further environmental protections through coordination and joint governance with the thinking of the sharing economy

Concepts determine thoughts, which lead to the way forward. We can not protect the environment solely by technology, but adopt the integration and collaboration idea of the sharing economy. Integration refers to relevant functions of cloud computing and the Internet, while collaboration means to mobilize diversified parties and various resources in a greater space, to explore ways to further environmental protection through coordination and joint governance.

Organize coordination and joint governance. We cannot continue considering that the responsibility for environmental protection lies solely on the Ministry of Environmental Protection (MEP). We need to adapt to the requirement of collaboration and joint governance required by the “Internet Plus.” This paper suggests that the central government establish a National Committee of Further Environmental Protection through Collaboration and Joint Governance, comprising relevant authorities. We also need to adjust the functions and departments of the MEP based on “the five-pronged approach” proposed during the 18th CPC National Congress, and draft management requirements applicable to this new model of environmental protection.

Supervise collaboration and joint governance. Currently, in the sector of environmental supervision and management, two kinds of resources should be collected, properly arranged and fully utilized. One is cross-sector data from the Internet, and the other comes from participation in supervision by civil society organizations. In view of this, this paper suggests the following. First, we can make good use of the established national environmental monitoring network and database. We need to arrange and integrate related Internet resources,

like meteorological data, land monitoring data, etc. to contribute to a full-coverage Internet monitoring and supervision system featuring collaboration and joint governance. Second, we recommend establishing within the MEP, the Department/Division of Joint Governance of Social Organizations, which mobilizes social organizations to participate in supervision and management of environmental conservation. Currently, among 60 Chinese social organizations, most are working in the field of environmental protection. But these resources remain partially used. Third, we should tear down the barrier between supervision and law enforcement and explore ways to establish an intelligent environmental protection system that combines monitoring, warning, command, and law enforcement. One example is the system used in Hengshui city, Hebei province since the end of 2015, which deserves attention and promotion.

Collaboration and joint governance from the beginning: The sharing economy represents a new economic model that is based on full use of resources from multiple consumption sides, and a new breakthrough to tackle the issue of environmental protection from the same side. In this regard, this paper suggests the following. First, the MEP, together with relevant authorities, should promote consumption-side new life campaigns that advocate green and sharing consumption. The new concept that supports this campaign is “Idle items are a waste, we can use without buying.” Second, we should work hard to build green households, communities, school yards, and governments. Third, government should take the lead in green consumption, starting by purchasing green and low-carbon products. Fourth, government should collect a luxury consumption tax as a means to regulate production and consumption, and redistribute social wealth. Meanwhile, government needs to issue new policies encouraging participation in sharing

consumption based on the “Internet Plus.” Japan, for instance, formulated a Green Purchasing Law in 2002 to encourage such behavior among authorities. According to this law, the purchasing activities of government, enterprises and individuals shall not pollute the environment. At the same time, we need to encourage government authorities to take part in sharing consumption based on the “Internet Plus.”

Collaboration and joint governance cross different sectors and regions: Beijing-Tianjin-Hebei Integration represents one important step towards collaboration and joint governance cross different regions in China, but it is only the beginning. Such efforts by environmental authorities in a larger space are recommended. This paper suggests the following. First, relevant authorities should promote the strategy of further environmental protection through coordination and joint governance across the Belt and Road regions. The northwest part of the Silk Road and the Middle East are threatened by the world’s most fragile ecological environment, but at the same time, they are important regions where we should build protection barriers. Thus, the MEP should launch Belt and Road international dialogues, forums, joint initiatives, and similar mechanisms featuring collaboration and joint governance to address this issue. Second, we should strengthen the compensation and coordination mechanisms of collaborated governance between western and eastern China. Third, we also need to launch dialogues, forums, joint initiatives, and other mechanisms at the international level on environmental conservation in Sanjiangyuan and the Qinghai-Tibet Plateau.

8.4 Promoting the construction of sharing cities with the idea of the sharing economy

We should turn the public resources owned by authorities, communities, colleges, and administrative academies and institutions into what can be shared among all citizens. Such resources

include libraries in universities, and sports and recreational facilities. We need to ensure 24-hour access to libraries and temples for citizens, who can choose to learn in libraries, and rest their mind in the temples. The concept of a sharing economy should also be integrated in the process of urban planning, management and construction. We can explore ways to share urban spaces, and well arrange the connections between living areas and industrial areas, and the residential areas and supporting business zones within living areas, to make it more convenient for citizens to share their articles.

We should encourage construction of sharing communities in urban areas. It is a new concept of community management, and an innovative model of social management under new circumstances. New information technologies like the Internet of Things, and cloud computing should be fully utilized to provide a safe and comfortable intelligent living environment for community residents. It is also recommended that communities manage themselves, where all the residents are entitled to becoming part of the property management activities. We should also build better intelligent property management platforms for shared services, including systems for garage management, CCTV monitoring and access control.

We should promote urban planning and governance by adopting the idea of multi-actor co-governance. Transformation is needed in the current urban planning and governance systems, which is led solely by the government. The public, communities, enterprises, as well as the government, should all be involved in this effort. Urban spatial structure and business models should be planned in such a way as to satisfy the needs of development based on resource sharing. Planning that over satisfies land financing and the real estate industry should be curtailed. To facilitate sharing of public economic resources, it is suggested to carry

out reform of multi-actor co-governance in urban streets and communities and push forward direct democratic elections in communities.

8.5 Bridging the gap between urban and rural areas to promote urbanization featuring two-way flow

The countryside should be re-evaluated from the perspective of the sharing economy. With this concept, citizens and rural residents can have a new understanding of each other's importance, and the value of the rural lifestyle itself. We can try to attract more urban investment into nature conservation, ecological tourism, agritainment, which can enhance harmony in villages. Currently, rural areas and villagers present huge demands on the sharing economy. Relevant platforms can strengthen the sales of agricultural products in cities, and industrial products sold in villages, which can help boost rural economies, and increase the income of rural residents.

We should revitalize the resources of hollow villages through the sharing economy. Currently, as villages become hollow, we can transform them into new space for sharing between rural and urban residents, and urban consumption. We need to give impetus to emerging Internet-based consumption models, with online and offline interactions between urban and rural areas and establish incentive policy systems that promote a "urban + rural area" sharing economy. An experience economy can be a tool for developing Internet-based rural cultural activities and tourism. We also need to strengthen infrastructure in hollow villages, including grassland in parks, cultural and recreational facilities, innovation parks for farmers, etc. so that more citizens can share the happiness of rural life.

We should promote sales of unique agricultural products through the "Internet Plus" and great efforts should be made to develop rural e-commerce platforms to facilitate these sales. Relevant

infrastructure should also be enhanced to encourage farmers to develop e-commerce of unique agricultural products with their resources. We support new agricultural production and business entities in managing their activities with IT in a refined way. In this way, consumers can trace the whole process of agricultural and sideline products from farm to table, which guarantees food safety.

We should facilitate urban and community agriculture shared by rural and urban areas based on the concept of a sharing economy. On one hand, urban residents can communicate online with agricultural production and operation companies, order food, vegetables and fruits, that they like in suburban villages, and even participate in farm work and enjoy themselves. On the other hand, citizens can help farmer cooperatives to divert to ecological agriculture and facilitate the cooperation between green consumption cooperatives in the cities and green production cooperatives in the countryside. Through direct mutual help between the two sides, we can work together to establish a new agricultural production and operations system and drive the development of urban customized agriculture.

8.6 Establishing the law and regulation supervision and governance system for the sharing economy with the idea of multi-actor co-governance

With the development of the sharing economy, traditional management models are constantly challenged. The rights, obligations and responsibilities of all subjects are not clearly divided and there are many legal gaps. Therefore, we must improve laws and governance systems based on the idea that the sharing economy requires multi-actor co-governance.

We should be more tolerant towards the sharing economy, with more opportunities for trial and error. As the sharing economy features low cost, convenience, and strong flexibility, the

existing market order is greatly shocked, leading to resistance from traditional industries. Under such circumstances, we need to create a tolerant environment for development of the sharing economy, and provide integrated products and services with wider market access. It is also necessary to reduce the barrier to entry, and encourage services in the form of the sharing economy. As for government authorities, they need to create an inclusive and open atmosphere, which allows enough time for various actors to adjust to this new economic model and to refine their methods of operation.

We should establish new governance, regulation and supervision systems for the sharing economy. Regulations on information protection and disclosure should be improved, and those on cyber security, personal information protection, and Internet information service management should be formulated at a faster pace. The monitoring of a sharing economy should be diversified and comprehensive. We not only need to encourage industrial innovation, but also to consider protections for consumers, and to coordinate all stakeholders to safeguard fair competition. One option can be an arrangement that features a government supervising platform that supervises enterprises.

We should promote a new credit system as a foundation for the development of the sharing economy. The sharing economy reshapes, strengthens, and restructures the trust among people. It brings all those involved closer and connects different communities in a cultural link. We need

to speed up the construction of the social credit reporting system, and connect the various credit information platforms to reduce information silos. It is also important to strengthen online disclosure and sharing of credit records, illegal and dishonest acts, and other relevant information.

8.7 Enhancing theoretical research, consultation and education of the sharing economy

We should provide enterprises and government authorities with more training on the sharing economy. Courses on this subject should be incorporated into the training system of party schools and schools of administration at all levels as soon as possible, so that all the leading cadres can accept and become familiar with concepts and information regarding the sharing economy. In view of the need of integrated development of the sharing economy, we also need to drive cross-sector research and practice among startup research, community management and other disciplines.

We should conduct more research, including research done by think tanks, on the sharing economy. The Central Government should incorporate the sharing economy into the social science funded research plan as an important topic. Related official think tanks should be established to coordinate the research on major issues. Non-governmental think tanks and research institutions should also be mobilized to cooperate with platform service providers on big data analysis of different topics.

(Translator: Xu Qingtong et al.; Editor: Jia Fengrong, Xu Huilan, Yan Yuting, Xiong Xianwei)

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