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The capital logic of platform economy globalisation and it's critique and transcendence

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Abstract

Purpose — To realise the shared development of the digital economy, people need to transcend the capital logic and advocate the logic of cooperative development, i.e. "co-construction, benefit-sharing and co-governance". This study aims to discuss the aforementioned statement.

Design/methodology/approach – Platform economy is a new economic form produced by the transformation of the social production patterns in the era of digital capitalism. In the neo-imperialist stage, a new stage of capitalist development, capital logic promotes the global expansion of the platform economy and influences its development process, organisational form, contradictions and dilemmas and internal transcendence. Having the spatiotemporal chain of capital circulation repaired, the globalisation of the platform economy is reshaping how the means of production are combined with labour, affecting the local changes in the general relations of production and "international relations of production".

Findings – In the accumulation of digital capitalism, the social contradictions and fundamental contradictions in the capitalist world have been further intensified, making exploitation, income distribution gap, monopoly and other problems increasingly severe. The imbalance and inequality in the global development of the digital economy are increasingly prominent.

Originality/value — Regarding the global governance of the digital economy, China, as a major responsible country, will strive to encourage all countries to co-build a community with a shared future in cyberspace. In the new international development pattern of digital economy globalisation, China must take effective measures to actively safeguard its national security and development interests to meet specific challenges.

Keywords Capital logic, Platform economy, Globalization, The international relations of production **Paper type** Research paper

In the world today, a new round of new technological revolution and industrial changes represented by big data, cloud computing and artificial intelligence (AI) are just unfolding. In the digital economy era, informatisation, networking, digitisation and intelligence have become the new trend of changes in human production and lifestyle. As a new direction of economic development, the digital economy has made up a growing proportion of GDP in major developed countries across the globe. Platform economy, as a new economic form arising from the change of social production patterns in the era of digital capitalism, is a new organisation or exchange system constituted by economic activity units of data acquisition, data drive, platform support, the special division of labour and networked collaboration based on modern communications and digital technologies, which link production, exchange, distribution and consumption, forming new economic relations. Having the spatiotemporal



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chain of capital circulation repaired, the globalisation of the platform economy is reshaping the combination form of the means of production and labour and affects the local changes in the relations of production. In the digital economy era, gaining a deep insight into and understanding of the law of change and the trend of development of platform economy globalisation is significant to Chinese digital enterprises and national interests. It can directly affect the international competitiveness and national interests of digital platform enterprises in China and requires great attention from all parties.

1. Capital is the dominant force driving the globalisation of platform economy: a critical perspective

In the digital economy era, platform economy globalisation is mainly driven by the global division of labour and mass production system based on digital technology. In the digital capitalist production pattern, the fundamental driving factor for the global division of labour and socialised mass production system is capital; in other words, the capital logic is the dominant force driving the globalisation of the platform economy based on digital technology system. The capitalist production pattern is "a pattern of production based on exchange value" (Marx, 1979b, p. 220) or the "capital-based pattern of production" (Marx, 1980, p. 159). The capital logic means that in the capitalist production pattern, "the production of surplusvalue is the immediate end and determining motive of production" (Marx, 2004b, p. 997). As the dominant relation of production, capital dominates the other factors of production and labourers and constantly pursues capital appreciation by organising social reproduction on an extended scale and innovating means of value realisation. The process of capital movement has an inherent logic and pattern. In the digital capitalist pattern of production, capital logic promotes the globalisation of the platform economy, which influences the development process, organisational form, contradictions and dilemmas and internal transcendence of the platform economy.

In Marxist economics, capital has dual attributes. On the one hand, capital is a series of use-values, a factor of production that includes the means of production and labour, which is its material attribute. On the other hand, capital is the value that can create surplus value. Marx (2009c, p. 878) indicated that "capital is not a thing, but rather a definite social production relation between owners of means of production and labour", which is its social attribute. The material and social attributes of capital are dialectically unified. Under a specific social production pattern, the unity of the material and social attributes of capital makes capital continuously release its powerful force based on following the laws of value and surplus-value, which promotes the change of the content, organisation and the capital—labour relationship of the social reproduction patterns.

From the perspective of capital logic, capital is essentially about seeking more surplus value. As Marx (1972, p. 679) stated, in the capitalist production pattern, "the production of surplus-value, or making money, is the absolute law of this production mode." In the system of digital technology, capital is also subject to this absolute law—Capital needs to realise the procurement and possession of "overall social wage labourers" and participate in the market competition amongst capital with an attempt to possess the majority of labour products to complete the transformation from the law of possessing the means of production to the law of possessing the products of labour. The process of capital seeking surplus value combines the means of production and labour force and is also a process of value increment. During this process, as a production relation that plays a dominant role, capital begins to dominate and use the "natural forces" that can produce use-value and create-value. This kind of "natural forces" includes the labour force relying on human life, the "natural force" relying on natural resources and the productivity relying on the division of labour and collaboration in people's labour (Lu, 2006). In the platform economy, capital logic is manifested in the domination and

use of the above three kinds of "natural forces" by capital to pursue more surplus value. However, these "natural forces" have new technical and relational characteristics.

First of all, due to the complexity of labour forms, the labour dominated and used by capital in the platform economy gradually evolves into "overall workers". In the digital economy era, the labour process has gradually presented a new trend of digitalisation, which can be categorised into four specific forms: the digital labour in the traditional employment economy; the digital labour in the online-platform casual labour economy; the digital labour of skilled workers in digital capital companies, and the digital labour of self-employed labourers (Han and Liu, 2020). The first three labour processes are paid, and the last is unpaid. Due to the new changes in labour processes, in addition to formally employing some knowledge labourers, capital in the platform economy integrates some unpaid labourers involved in labour processes into the labour allocated and used by capital through technical fixes, comments, online answers and other means, Capital spans wider and deeper worldwide with the rapid growth of digital technology beyond time, space and borders. The global expansion of capital inevitably requires the "cooperation" of the labour around the globe; in other words, it requires that the global labour should become the object of capital control and use. The platform economy can connect various labourers worldwide beyond the borders through network technology. Although some of these labourers are formally employed while others are casual labour, "play labour (playbour)" or self-employed labour, all of them are "overall social workers". And in the era of globalisation, "overall social workers" within a country or region gradually evolve into "international overall social workers". Therefore, in the platform economy, in addition to the labour directly employed, the objects of capitalist exploitation include the "overall social workers" and "international overall social workers" employed indirectly.

Furthermore, the "natural forces" dominated and used by capital in the platform economy that depends on natural resources is unique. In the traditional economy, the "natural force" of natural resources mainly comes from wind power, hydraulic power, mineral deposits and land fertility. In the digital economy era, digital knowledge and information are the key factors of production, while the modern information network is the essential carrier, and the effective use of information and communication technology is the critical purpose. The natural force used by the platform economy as a complex carrying various economic connections in the digital economy is mainly formed based on knowledge and information about digital technology. This kind of natural force is an artificial or social natural force that has transcended the pure natural force.

In the platform economy, capital connects numerous producers on the front end and massive consumers on the back end by building an e-trading platform, forming a typical bilateral market structure (Li, 2019). Massive capital can gain an exclusive market position as long as it acquires a monopoly of digital infrastructure and big data. Within the platform, on the one hand, as massive capital can leverage digital monopoly to dominate plentiful producers and sellers at the platform's front end, the "natural force" used by producers and sellers on the platform can become a natural force dominated by the platform indirectly. In particular, the economy of scale and economy of scope effects of the information network and other services (Jiang and Luo, 2019) can further expand the domination of the platform economy. On the other hand, massive capital can take advantage of big data and algorithms to dominate consumers at the back end of the platform to make consumers accessing the platform become "playbour" or self-employed labour indirectly and support the platform construction through experience and reviews. In this process, consumers indirectly serve the platform economy with the "natural forces" in their possession. In the platform economy, capital is constantly concentrated by virtue of modern financial technology and international financial markets under the intrinsic motivation for profits and external competitive pressure. Especially, the global stock market can realise the large-scale concentration of capital that forms international platform organisations in a short period. With the interconnected digital infrastructures on a global scale, international monopoly platforms have more extensive digital knowledge and information at their disposal and further form international monopoly platforms.

Thirdly, the productivity that depends on the division of labour and collaboration in the process of people's labour, which is dominated and used by capital, has been developed substantially. In the digital economy era, the platform economy is essentially a local "overall production organisation" (Wang and Li, 2018) during socialised mass production, mainly supported by digital technology. Socialised mass production requires division of labour and collaboration on a larger scale. In general, "the simple elements of the labour process consist of the purposeful activity or labour, the object of labour, and the means of labour", as noted by Marx (2004a, p. 208). In addition, as labour develops, new elements, including management, division of labour and collaboration and the invention and application of technology, will be incorporated into the process of labour (Ma and Wei, 2013). During the labour in the platform economy, not only do the three essential elements of labour play an important part but also the new elements play an increasingly significant role after their organic combination with the traditional elements. The social division of labour and collaboration realised in the platform economy has become a game-changer to the division of labour and collaboration within firms, industries and markets, as expounded by Adam Smith, and gradually formed an international labour division and collaboration system that transcends time, space and boundaries. Driven by the capital logic, this kind of labour division system will allow the integration of the digital technology system based on big data, cloud computing and AI, the networked production and distribution system based on the global market, the globalised management and control based on technology and social science and the labour process based on the combination of new skills of labourers and emerging means of production and realise the global collaboration in the production factor market, the product and service market and the capital market, accelerating the circulation and turnover of capital. However, Marx (1979c, p. 297) pointed out that "the social productivity in collaboration with this social labour is manifested as the productivity of capital, not that of labour." Hence, capital remains dominant in the global expansion of the platform economy.

In the platform economy, capital can not only realise global expansion and make "overall social workers" and "international overall social workers" create value continuously by dominating and utilising "natural forces"; it accelerates the realisation of value by virtue of information-based payment tools, modern logistics and warehousing technologies, experience and embedded ad marketing methods and modern consumer financial instruments. In Marx's era of machine industry, industrial capital was dominant; in the post-industrial era, financial capital was on the rise and in the era of the modern information society, commercial capital is rapidly rising based on the platform economy. The rise of commercial capital is the inevitable outcome of relative global overproduction. The development and application of digital technology provide the technical means while the emergence of the platform economy provides the organisational foundation for the rise of commercial capital. With its powerful aggregation capacity, the platform economy can bring together the idle money capital, excess capacity, unemployed or not fully-employed labourers and surplus goods (Harvey, 2006, p. 85). By repairing the spatiotemporal capital cycle, the platform economy finds a new way to realise surplus value. Global chains of commodity, value and innovation and production networks provide a foundation for the global expansion of commercial capital. The rise of the platform economy has facilitated the realisation of commodity value by expanding international markets and accelerating capital circulation on the one hand and led to the monopoly on distribution on the other. With the digital infrastructure and big data, the platform economy has become the controller of the distribution chain. As tens of thousands of producers and sellers have to access the platform to get their commodities sold, they are inevitably subject to commercial capitalist control and exploitation.

With the progress and changes in economic globalisation and financialisation, the development of contemporary capitalism has entered the stage of neo-imperialism. Neoimperialism is a special historical stage of monopoly capitalism, with the characteristics and nature manifested in five aspects: the new monopolies of production and circulation, financial capital, US dollars and intellectual property rights (IPR) and international oligarchic alliances, as well as the economic nature and mega-trends (Cheng et al., 2019). According to Lenin (2012a, p. 597), monopoly is the last achievement in "the latest phase of capitalist development". In particular, the new monopolies of finance capital have a significant influence on industrial development, Lenin (2012b, p. 615) pointed out in his discussion of financial capital and oligarchy that financial institutions such as banks could achieve control over joint-stock firms through the participation system, which in turn increased the monopolist's power to gain relatively high interest and dividend income. In the neo-imperialism stage, the platform economy is a vital intermediary to realise the new monopoly; financial monopoly capital can boost the rapid expansion of the platform scale through venture capital, shareholding, equity participation and company listing. In particular, the global financial market gave wings to the global expansion of the platform economy, accelerated the capital circulation and expanded the scale of capital appreciation, leading to the formation of international monopoly platforms. For example, Alphabet, the parent company of Google, once reached \$1 trillion in its market value by virtue of the effect of capital concentration created by the stock market, and Google, as a search engine platform company, enjoys absolute dominance in the global search engine market. Meanwhile, Google and the financial capital group behind it intervene in politics and justice with capital power and political influence and reap enormous monopoly profits as a mega-company that is "too big to break up".

2. Perspective on the production relations in the globalisation of platform economy driven by capital

On the one hand, the development of the platform economy has profoundly changed the way how labour is combined with capital in the production process, leading to a more radical transformation from formal to the actual affiliation of labour to capital. On the other hand, it has also accelerated the accumulation of digital wealth, bringing about local changes in the social relations of production.

2.1 General relations of production

According to Marx (2009e, p. 922), "capital is not a thing, but rather a definite social production relation, belonging to a definite historical formation of society, which is manifested in a thing and lends this thing a specific social character." The political-economic analysis of the globalisation of platform economy from the perspective of capital logic necessarily involves the issue of production relations. In a narrow sense, the relations of production are those of the direct production process, and in a broad sense, they are a system involving the ownership of the means of production, the way the means of production are combined with labourers and the corresponding exchange and distribution relations in the production process (Ma and Wei, 2013).

The ownership of the means of production is the foundation of production relations. In the capitalist production pattern, the platform economy is still running based on the private ownership of the means of production. The nature of the ownership of production means determines the relations between people in the production process, as well as the distribution, exchange, consumption and other relations. With the socialisation shift of the means of

production, the owners of the means of production are no longer separate individuals in the platform economy but a combined aggregate of industrial, commercial and financial capital owners, labourers who hold shares in firms, stockholders who own social capital, etc. With the interconnection of international trade, investment and financial markets, these aggregates are mostly global, in which whoever holds a relatively dominant position will determine the distribution, exchange and consumption relations in the platform economy. From the development of prominent global online platform companies, the owner of institutional financial capital is often the actual ultimate controller. This determines that in terms of distribution in the platform economy, the interests of various types of large capital owners, especially financial capital owners, will be given priority. However, the socialisation shift of the means of production also allows intellectual and managerial labourers who acquire part of the capital through labour or other means and ordinary stockholders to gain part of the value-added returns.

The development of digital technology systems is changing how the means of production are combined with labour in the production process. In the digital economy era, large numbers of casual and self-employed labourers have emerged, who may be labourers with knowledge and skills or small producers with partial means of production. They participate in the production process of the platform economy directly or indirectly through the aggregation effect of the network platform. In the platform economy, digital infrastructure and big data generated based on supply, production and marketing are the critical means of production. Diverse combinations of labourers and means of production emerge: The first type is the combination of labourers without any means of production and the critical means of production possessed by capital owners, namely, the traditional capital-employing-labour mode of production. This is at the bottom level of the employment relation structure in the platform economy, including labourers engaging in the peripheral work of the platform, who mostly can only earn general wage income by selling their manual or mental labour. The second type is the combination of labourers owning part of the means of production and the critical means of production possessed by capital owners, namely, the capital-semiemploying-labour mode of production. This is at the middle level of the employment relation structure in the platform economy. In some car-sharing platforms, drivers access the platform with their private cars and earn income by jointly inputting the means of production and labour. The third type is the combination of individual labourers possessing essential knowledge-based factors of production and owners of other means of production, namely, the shared-capital-and-labour mode of production. This is at the upper-middle level in the platform economy. Knowledge-based labourers, including top managers, senior engineers and scientists in the platform economy, earn income mainly through their unique expertise. The fourth type is the combination of owners possessing part of the critical means of production and owners of other means of production, which is the shared-capital mode of production. It is at the upper level in the platform economy and is essentially the cooperation between capital owners. For example, the cooperation between industrial, commercial and financial capital owners includes collaborations of entrepreneurs and, mostly, between capital owners. With the development of global labour and means of production markets, platform capital can allocate means of production and wage labourers worldwide based on the digital economic system that spans time and space and transcends borders. Regarding the globalisation of platform economy driven by capital logic, on the one hand, the global allocation of means of production has improved production efficiency, repaired the capital cycle in space and time and provided opportunities for faster and more extensive creation and realisation of surplus-value; on the other hand, it causes the imbalance of productivity between regions, which results in the growing wealth gap between developed and developing countries and the formation of an industrial reserve army worldwide, plunging labourers who earn their living only by selling labour into more severe "relative poverty".

The platform economy with digital technology system as infrastructure is reshaping the exchange relations in the social reproduction process. In general, production determines exchange, and the nature of production determines that of exchange. The more advanced the level of production, the wider the scope of exchange. In turn, the development of exchange facilitates the realisation of production and consumption. Marx (2009f, p. 23) stated that "if the market, or the sphere of exchange, expands, then the volume of production grows and tends to become more differentiated". The platform economy is a local "overall production organisation" and, more importantly, a local "overall exchange organisation" during the socialised mass production mainly supported by the digital technology system. The rise of the platform economy has offered a new way of exchange, gradually transforming the traditional offline exchange into an online exchange. The subjects of exchange have changed from dual subjects of producers and consumers to multiple subjects of producers, platforms and consumers; the medium of exchange from credit currency to electronic and digital currency; the organisation form of exchange from traditional venue-based bazaars and shopping malls to networked information platforms; the subject matter of exchange from traditional goods and services to more diversified contents, such as data and information based on personal preferences. The globalised commodity production, trade, investment and financial systems have further facilitated the scope expansion of the platform economy. At this point, the exchange relations in the capitalist production pattern have broken through the limits of firms, industries, regions and countries and become worldwide exchange relations. The platform economy facilitates the formation of global exchange relations, amongst which there are still two major unequal exchanges. One is the unequal exchange between capital owners and labourers in terms of possession and distribution of labour products; the other is the unequal "centre-periphery" exchange between developed and underdeveloped countries.

The platform economy with the digital technology system as the infrastructure leads to increasingly complex distribution relations. Marx's theory of income distribution involves two levels: distribution of the conditions of production and income (Hong et al., 2011). The distribution of the production conditions determines the distribution of income. The conditions of production are the conditions for producing and creating wealth, which include two aspects: "On the one hand, there are the objective means of production, namely, the objective conditions of production; on the other hand, there are the working labour capacities, labour power exerting itself to a given purpose, the subjective condition of production (Marx, 1964, p. 41)." The distribution of production conditions is mainly determined by the nature of ownership of production conditions and is also subject to the specific economic and property rights systems. In the distribution process, the platform economy still follows the basic principle of distribution according to the production conditions. However, how the material means of production are combined with labour has changed in a new way. Through digital infrastructure, the platform gathers manufacturers and sellers owning the means of production, self-employed labourers owning partial means of production or other employed labourers owning labour only, and pure consumers as well as self-employed consumers, leading to more diversified combinations of material means of production and labour force and modes of distribution. In the platform economy, the distribution of labour products depends on the scale of value generated and realised and also the combination mode and proportion of material means of production and labour in the production process and is affected by the degree of market competition and resource scarcity at the same time.

In terms of the income distribution in the platform economy, owners of the means of production, especially capital owners, still hold a dominant position and gain relatively much income. The development of the platform economy, on the one hand, makes it easier for owners with different means of production and labour to access the platform, participate in the exchange system of products and services worldwide and obtain certain income, and on

the other hand, the capital owners of the platform keep expanding the platform scale through means such as shareholding system and transnational listing, achieving the rapid accumulation of formidable wealth. This manifests the "Matthew Effect" in the platform economy, which will bring new issues of unbalanced development.

2.2 International relations of production

In general, Marx mainly studied the capitalist production pattern from the perspective of domestic relations of production and exchange. However, He also highly valued the international relations of production and stated (Marx, 2009a, p. 588) that "the debates on free trade and protective tariffs caused me in the first instance to turn my attention to economic questions." Also, in the Preface and Introduction to A Contribution to the Critique of Political Economy, Marx (1979a, p. 46) mentioned "the international character of production, the international division of labour, international exchange, export and import, and rate of exchange" and developed a special research and writing plan for it. Although this ambitious writing plan was not completed, Marx's "international relations of production" became an essential theoretical tool for studying foreign trade and global markets. Inheriting and carrying forward Marxism, Lenin creatively proposed the theory of imperialism in response to the new changes in capitalism worldwide in the 20th century. He points out that monopoly is the last word in the latest phase of capitalist development (Lenin, 2012a, p. 597). In the era of digital capitalism, Lenin's theory of imperialism still has a positive guiding and reference significance in the face of new changes in international relations during the globalisation of platform economy driven by capital logic. The globalisation of the platform economy has changed the relations of exchange and production, making the platform economy partially have the attributes of "international relations of production", as mentioned by Marx. Meanwhile, the relations between countries with the monopolistic platform as the core also imply the division of "spheres of influence" between hegemonic states and finance capital, as described by Lenin.

During the globalisation of the platform economy, the "international relations of production" have presented some new changes. By virtue of the globalised production network and the systems of trade, finance and market, the platform economy promotes the scale of value produced and realised driven by capital to become worldwide, which catalyses new changes in the international relations of production while facilitating the development of the international division of labour and collaboration system. The new changes are mainly reflected in three aspects: First of all, there is a dynamic imperfect competition amongst digital platform organisations. There is a dominance—dependence relationship between platform and non-platform organisations, a dynamic nested hierarchical structure that closely combines control and dependence between large and small platforms, and a monopolistic competition amongst large platforms (Xie et al., 2019). The globalisation of the platform economy extends this imperfect competitive relationship to the realm of competition between platform organisations amongst leading countries worldwide. Apart from gaining a competitive edge through innovations in technology, organisation, model and service, monopolistic platform companies often resort to government administrative power to restrict the development of non-local companies through political lobbying and interest capture. For example, Facebook in the USA used the administrative power of the US state to suppress and restrict the development of the Chinese company TikTok to gain a non-competitive advantage. In the era of neo-imperialism, monopolies of hegemonic states led by the USA dominate the world market, curbing and suppressing rival enterprises of other countries through financial capital export and control, international monopolies, hegemonic state intervention, military and war threats, etc. in an attempt to curb competition and reap high profits from global monopoly.

Second, the relationship between sovereign states and platforms has gradually shifted from traditional support to intervention and restriction. The 80-20 rule applies to Internet firms, as giant platform companies can be formed in a short period through international capital and the global market. In the digital capitalism era, giant platform companies have posed tremendous challenges to state and social governance by virtue of their monopoly status and advantages, causing "tension" between capital and the state. Currently, some monopolistic platform companies have created a "squeeze" on the public power of their governments and are dissolving the realm and power of traditional government control through the amplification effect of network and media, resulting in a partial failure of state governance. Meanwhile, through information technologies such as big data, AI and cloud computing, monopolistic platform companies have access to massive private data of citizens, posing the potential risks to big data security. For example, companies including Google and Facebook have been repeatedly exposed for violating and leaking private information. In response, the US government has asked Google, Facebook and others to enhance their system and technical support to safeguard data security and citizens' privacy and imposed large fines on companies that leak private data.

Third, the game of economic and trade interests amongst sovereign states around the digital economy has intensified. From the perspective of economic geography, the development of the digital economy is highly uneven, proven by the growing gap between less-connected countries and highly digital countries and a widening digital divide between various countries caused by differences in the ability of countries to use digital data and cutting-edge technologies, according to United Nations Conference on Trade and Development (2019). The Digital Economy Report 2019 issued by UNCTAD indicates that while 4/5 of the population in developed countries have Internet access, only 1/5 of the population in underdeveloped countries can use the Internet. In addition, the total number of colocation data centres in Africa and Latin America accounts for less than 5% of the world total (China Daily, 2019). This digital divide between "information-rich" and "information-poor" countries will lead to an unequal distribution of income and uneven development and will also affect the changes in the global economic and trade patterns.

There is a growing conflict amongst sovereign states about multinational platform companies. The conflicts are mainly concentrated on the issues of development rights, data security, privacy protection and the distribution of tax benefits. These conflicts are rooted in the destructive effect of the export of monopoly capital on the socio-economic development of host countries. Lenin (2012c) pointed out that "typical of the latest stage of capitalism, when monopolies rule, is the export of capital" (p. 626) and that in the capitalist world system, "the capital-exporting countries have divided the world among themselves in the figurative sense of the term" (p. 631). In the era of digital capitalism, the tool and weapon to "divide up" the worldwide digital economy market are platform companies. As the most developed country in the world in terms of the platform economy, the USA owns multinational platform companies that control the largest resources and markets in the capitalist system. This is not conducive to realising other countries' rights, interests and security in developing the digital economy; other countries are therefore bound to take restrictive measures against platform companies, such as those in the USA, to compete for the relevant economic benefits. For example, to weaken the monopoly position of the US digital technology giants and access to the digital technology dividends of the Internet, the European Union (EU) has issued fines totalling 22 billion euros to Google and Facebook since 2017 and passed laws restricting business practices of digital technology companies, such as the use of private and copyrighted data (Lu, 2020).

3. Globalisation of platform economy and new changes in the contradiction of capital accumulation

Marx believed that capital accumulation in the capitalist production pattern inevitably led to polarisation, with the wealth increasingly concentrated in the hands of a few and the labourers trapped in a situation of relative poverty. In the digital economy era, capital

accumulation is a process of the global expansion of the platform economy, a new economic form; it is also a process of the new change in the contradiction of capitalist accumulation worldwide. From the perspective of capital-driven globalisation of the platform economy, we focus on exploitation, income distribution, monopoly and fundamental contradictions to explain these new changes.

Firstly, the platform economy has reshaped the capitalist exploitation of value and extended the exploitation scope of value. Marx (2009b, p. 272) pointed out that "wherever a part of society possesses the monopoly of the means of production, the labourer, free or not free, must add to the working-time necessary for his own maintenance an extra working-time in order to produce the means of subsistence for the owners of the means of production." This type of gratuitous occupation of surplus products produced by labourers by virtue of the ownership of the means of production is exploitation. In the capitalist production pattern, the platform economy is changing the traditional capitalist system of exploitation. Platform economy incorporates increasing social masses such as digital labour, knowledge labour and "playbour" into the total social production process by crowdsourcing, outsourcing and casual labour, realising the expansion of the scope of capitalist exploitation. Capital has not only realised the exploitation of formally employed labourers but also included labourers in crowdsourcing, outsourcing and casual work without formal employment relationship into the exploitation system and even incorporated consumers and other social masses into the category of "self-employed" or unpaid labourers through platform monopoly for indirect exploitation.

With the globalisation of the economy, the financialisation of capitalism and the development of information technology, the demand for labour products has shifted from material to spiritual products. The expanded scope of labour products has led to more diversified means of production and labourers at the disposal and use of capital, with an increasingly extended range of capitalist exploitation. On the one hand, the development of the financial and logistics industries allows capital to extract value by exploiting social collaboration for both labourers and producers in other sectors (Mezzadra and Neilson, 2018). For example, agriculture, catering, accommodation and cultural industries have all been included in the system of exploitation by platform capital. On the other hand, the emergence of digital labour has led to increasingly hidden means of exploitation and blurred boundaries of exploitation, gradually forming a pattern of exploitation centred on formal employment relationships in large industrial and commercial platforms, with unpaid and hidden labour on the periphery and supplemented by various new forms of exploitation (Zhang, 2019). The platform economy is more likely to incorporate other industries into its scope of domination through social division of labour and collaboration system and to create a multi-layered pattern of exploitation. In particular, the boundaries between consumption, entertainment, social behaviour and mere production are broken in the platform economy—Consumers may be potential self-employed producers, the general public may be included in the industrial reserve army, and ordinary Internet users worldwide may be potential wage labourers who are "deprived of employment relations" (Liu, 2019). In the era of globalisation, the development of information technology and platform economy has facilitated the innovation of this new type of exploitation, making the capitalist exploitation of value more widespread and deeper.

Secondly, the platform economy is also prone to the Piketty effect on income distribution while achieving the shared development (Chang et al., 2018). The sharing economy is a new economic model that effectively combines suppliers and users with idle resources and access rights through specific information platforms and data chains to improve resource use efficiency. There are two types of sharing economy: profit-oriented and non-profit-oriented. From the growth of companies such as Amazon, Uber and Airbnb, the platform economy is more of a profit-oriented exchange platform and a capital-led one. As Marx (2009d, p. 121) notes, "... Because it is value, it has acquired the occult quality of being able to add value to itself. In addition to class relations, it contains a certain social nature based on the existence of

employed labour." In such a platform, the relationship between capital and labour relations has undergone new changes, the most significant of which is "de-labour relations". In the process of "de-labour relations", due to the emergence of crowdsourcing, subcontracting, casual labour and a large number of self-employed labourers, the labour force is not directly subordinated to the platform capital in terms of the form of labour relations when combined with the means of production, the traditional labour-management contractual relationship is weakened or hidden, and the rights and interests of informally employed labourers are not effectively protected by labour laws. Under the capitalist production pattern, the employment relations formed in the platform economy not only create the contradiction between capital and workers but also induce the contradiction between formally and informally employed workers. This can lead to the socialisation of conflicts between labour and capital in the platform economy, the widening income distribution gap between capital owners and labourers, formally and informally employed labourers and even the formation of the Piketty distribution effect. In Le Capital au xxie siècle (Capital in the 21st century), French economist Piketty et al. (2014) summarised the pattern of wealth and income distribution in the major developed capitalist countries such as the UK, France, Germany and the USA, pointing out that in a free-market economy, the rate of return on capital (ROC) always tends to be higher than the rate of economic growth, which leads to a widening gap between rich and poor. The profit-oriented platform economy inevitably results in a wealth distribution structure that favours capital. By virtue of the socialised concentration of capital created through modern financial instruments and international financial markets, the platform economy can grow large and strong in a short period and create super-rich people who can rival the rich and powerful. Platform economy can realise the redistribution of income through its powerful ability to aggregate resources but fails to eliminate the problem of polarisation in the vise of the fundamental contradiction of capitalism.

Thirdly, the platform economy renders a new form of monopoly while adapting to socialised mass production. Regarding the monopoly of capitalism, Lenin (2012a, p. 588) made a classic statement: "Marx, who by a theoretical and historical analysis of capitalism had proved that free competition gives rise to the concentration of production, which, in turn, at a certain stage of development, leads to monopoly". Monopoly in the platform economy is transformed from the competition. The platform economy aggregates various producers. sellers and consumers in relevant industries, forming economies of scale on the supply and demand sides. Meanwhile, by virtue of modern financial instruments and the financial market, the platform economy can quickly achieve the concentration of capital and form the pattern of competitive monopoly or oligopoly. In the capitalist production pattern, the profitseeking nature of capital and the combination of the capital of various kinds are important causes of monopoly. Under the law of surplus value and the equalisation tendency of the average profit rate, the average profit rate may fall as the organic composition of capital increases. However, the platform can expand the total profit by increasing investment and achieving a larger concentration of capital. Individual capital can also earn excess profits through the monopoly formed by the concentration of capital.

Monopoly in the platform economy is the inevitable outcome of both the financialisation and globalisation of the capital accumulation process. With the development of information technology, the innovation of financial instruments and the interconnection of international financial markets, idle capital of various kinds can enter the financial market as potential prepaid capital. Platform enterprises can acquire the right to use the idle capital through the public listing and other means and put the capital into the platform operation, gradually forming a mega-platform for the socialisation of capital ownership. However, when examining the world's major multinational enterprises in the platform economy, entrepreneurs holding initial shares, strategic investors and various fund companies are often the actual controllers of the platform. They can control the decentralised social capital

with relatively concentrated individual capital through the key vote and further control the whole platform, which is concisely summarised by Lenin (1990, p. 142), "The typical ruler of the world became finance capital, a power that is peculiarly mobile and flexible, peculiarly intertwined at home and internationally, peculiarly devoid of individuality and divorced from the immediate processes of production, peculiarly easy to concentrate, a power that has already made peculiarly large strides on the road of concentration so that literally several hundred billionaires and millionaires hold in their hands the fate of the whole world."

The formation of an "overall global market" allows the platform economy to span worldwide. The interconnected digital technology infrastructure facilitates the organisation and distribution of various natural resources, products, labour and capital worldwide in the platform economy. The profit-seeking nature of capital forces the "information-poor countries" to open up their trade areas and domestic markets to provide cheap primary products, semi-finished goods and labour for the development of the platform economy and meanwhile become the consumers in the platform economy, and the development of their industries is trapped at the low end. In contrast, industries in the "information-rich countries" are at the top end of the industrial and value chains by controlling the platform with capital. To some extent, the monopoly of the globalised platform economy is a concrete manifestation of the international relations of production dominated by capital. Under the capitalist production pattern, monopoly is the inevitable result of capital competition and is bound to intensify the various contradictions of capitalism further. As Lenin (2012f, p. 660) put it, "... This is capitalist monopoly, i.e. monopoly, which has grown out of capitalism, and which exists in the general environment of capitalism, commodity production and competition, in permanent and insoluble contradiction to this general environment" and certainly, "at the same time, the monopolies, which have grown out of free competition, do not eliminate the latter but exist above it and alongside it, and thereby give rise to a number of very acute, intense antagonisms, frictions and conflicts (Lenin, 2012e, p. 650)."

Lastly, the fundamental contradictions of capitalist society have been deepening in the globalisation of the platform economy. The information technology revolution and the global expansion of monopoly capital have driven the development of capitalism into the era of digital capitalism (Schiller, 2001), where the fundamental contradiction of capitalist society remains the contradiction between private ownership of the means of production and socialised mass production. The contradictory movement between productivity and production relations has led to the constant deepening of the fundamental contradictions of capitalism, manifested in the following three aspects.

Firstly, the contradiction between the expansion of social production and the relative shrinkage of workers' effective demand has taken on a new dimension. The platform economy, as a form of organisation adapted to socialised mass production, has shortened the period of capital circulation and created huge digital wealth. Meanwhile, the inequality of income distribution and the widening wealth gap have led to relative shrinkage, or slow growth, in workers' effective demand. Platform economy, a new form of social organisation, makes it easier to concentrate capital and social wealth through the effects of scale, network and the 80-20 rule. For example, in the USA, founders of digital businesses, such as Amazon's Jeff Bezos, have become super-rich out of the rich and powerful. The concentration of wealth in the USA is accelerating towards 1% or even 0.1% of the super nouveau riche, and the gap between the middle class and them is widening (Xiao and Qian, 2017).

Secondly, the contradiction between the organised nature of production in the platform economy and the anarchy of social production remains acute. Although the platform economy connects supply, production and distribution, promoting the socialisation of production, improving the efficiency of exchange and enhancing the organisation of production and exchange in the platform economy, the production sectors or firms linked by the platform economy are still in a state of anarchy, and the problem of relative

overproduction in the market still prevails. In particular, the monopoly of the platform economy has further intensified the contradiction between the socialisation of production and the private appropriation of the means of production and products, producing what Lenin (2012a, p. 593) described as "the yoke of a few monopolists on the rest of the population becomes a hundred times heavier, more burdensome and intolerable."

Thirdly, during the globalisation of the platform economy, the neo-imperialist allied countries are engaged in fierce competition to compete for the global market and dividends of the digital economy. The lack of connectivity and the differences in the ability to use data and cutting-edge technologies determine the position of various countries in the "centre-quasicentre-periphery" structure of the digital economy. Multinational digital companies in the centre reap monopoly profits by virtue of their huge international monopoly capital. advanced digital technologies and globalised market demand, while national capital in the quasi-centre and periphery is often at a competitive disadvantage. In the world today, the USA is the largest digital economy, with the highest number of digital multinationals. Based on powerful international monopoly capital, the USA and its digital companies have gained tremendous economic benefits, while countries in the EU region that could compete with the USA to some extent have stayed in the second echelon of digital economy development. To gain considerable fiscal revenue while fighting for the growth space of the digital economy for the national capital and maintaining economic independence and security, France and other countries have announced to impose a tax on digital services, mainly targeting the international monopoly capital represented by the US companies. According to the conditions of France's digital services tax bill, 27 digital companies are subject to the French digital services tax (United States Trade Representative, 2019). A total of 17 of them are American companies, accounting for about two-thirds of the total [1]. In response to the digital services tax imposition by France and other EU countries, the USA has countered by launching "Section 301 Investigations" and raising tariffs on other goods.

In the era of digital capitalism, the fight amongst major developed countries for the benefits associated with the digital economy is the latest manifestation of the neo-imperialist countries sharing the global market of the digital economy. In Lenin's imperialist era, the alliance of imperialist countries engaged in fierce struggles, even wars, over the division of colonies and spheres of influence. In the era of neo-imperialism, the neo-imperialist countries and financial monopoly capital carve up the global market, specifically, the market shares, international taxes, etc. when it comes to the digital economy. Regarding the division of the world by capitalist alliances, Lenin (2012d, p. 639) indicated that the capitalists would struggle over the division of "spheres of influence", with an insightful conclusion that "the epoch of the latest stage of capitalism shows us that certain relations between capitalist associations grow up, based on the economic division of the world; while parallel to and in connection with it, certain relations grow up between political alliances, between states, on the basis of the territorial division of the world, of the struggle for colonies, of the 'struggle for spheres of influence'." In the era of neo-imperialism, an international capitalist oligopoly alliance featuring "one hegemon and multiple powers" was formed, building an economic basis for the global system of monopolistic exploitation (Cheng et al., 2019). However, there are still fierce fights amongst monopolistic alliances for economic benefits. The battle over the digital tax between the USA and the EU countries is a true reflection.

4. China's response: promoting the healthy development of platform economy based on the philosophy of "co-construction, benefit-sharing and co-governance"

In the digital economy era, at the new stage of capitalist development (neo-imperialism), capital logic has driven the globalisation of the platform economy, achieved the rapid

expansion of the scale of the digital economy, and catalysed the local changes in the general relations of production and "international relations of production". During digital capitalist accumulation, the social and fundamental contradictions of the capitalist world are further intensified, making issues such as exploitation, income distribution gap and monopoly increasingly severe. Meanwhile, as the contradiction of capital accumulation deepens, the imbalance and inequity in the growth of the digital economy worldwide become increasingly prominent, with a widening development gap between information-rich and information-poor countries. In the digital economy era, capitalism maintains its corrupt rule through platform monopoly and "clipping coupons". If the capital logic is allowed to drive the globalisation of the platform economy, it will inevitably lead to monopoly, which in turn will cause economic stagnation. Therefore, to achieve the shared development of the global digital economy, efforts must be made to transcend the capital logic and advocate the cooperative development logic of "co-construction, benefit-sharing, and co-governance", striving to build a community with a shared future for mankind.

In terms of global governance, China, as a responsible power, has been actively promoting the co-building of a community with a shared future in cyberspace by all countries worldwide while developing the digital economy. On 16 December 2015, in the speech at the opening ceremony of the Second World Internet Conference, General Secretary Xi Jinping put forward four principles that should be adhered to in driving changes in the global Internet governance system: respecting network sovereignty, maintaining peace and security, promoting openness and cooperation and establishing a sound order. Also, he made five propositions on global network infrastructure construction and interconnection, creating a platform for network culture exchange, promoting the innovative development of network economy, protecting network security and building an Internet governance system, with the focus on advocating the joint construction of a community with a shared future in cyberspace (Xi, 2015). Since then, in the speeches or congratulatory letters of the subsequent World Internet Conferences, General Secretary Xi Jinping has actively advocated that all countries in the world should work together to promote global governance in cyberspace and actively promote the co-building of a community with a shared future in cyberspace. Co-building a community with a shared future in cyberspace is an essential connotation of promoting the construction of a community with a shared future for mankind and is also one of the effective means. "Co-construction, benefit-sharing, and co-governance" is a vital principle of building a community with a shared future in cyberspace. "Co-construction" requires countries around the world to strengthen cooperation in the process of building digital infrastructure to achieve digital infrastructure interconnection. "Benefit-sharing" means that all countries in the world, big or small, rich or poor, have equal access to digital economy development opportunities and share the dividends of digital economy development. "Co-governance" requires all countries to participate in solving the issues of technology, security, conflict and governance in the development of the digital economy. Only by strengthening communication, forging consensus, expanding cooperation, adhering to the philosophy of "co-construction, benefitsharing, and co-governance" and striving to build a community with a shared future in cyberspace can the platform economy develop healthily, new impetus for global economic growth be created, and the problems of unbalanced development of the global digital economy and the deficit in the governance of cyberspace be solved.

Regarding addressing specific challenges, China must take effective measures to protect national security and development interests in the new development pattern of the globalisation of the digital economy. At present, the world is undergoing the greatest change in a century, with the hegemonic practices of the USA, the COVID-19 pandemic and geopolitical conflicts increasing the instability of the world's economic development. In the midst of "reverse-globalisation" and a major change in the global landscape, the globalisation of China's digital platform companies faces many challenges: Firstly, to fully contain and

suppress China's growth, the US government has adopted hegemonic practices and state interventionism to suppress high-tech companies such as ZTE and Huawei, as well as digital platforms such as TikTok and WeChat, in serious violation of international rules and the principles of fairness in the market economy. In addition, geopolitical influence has led neighbouring countries such as India to take populist actions to ban or take down the products and services of Chinese digital companies, rendering Chinese digital companies in an arena of unfair competition. Secondly, the unfair competitive practices adopted by international monopoly capital against Chinese digital companies have seriously harmed the interests of Chinese companies. In line with the US government's crackdown on Chinese digital companies, companies such as Facebook have resorted to intervention by the government and copying business models to suppress the international development of Chinese digital companies. Thirdly, the digital services tax to be imposed by countries such as France has exposed Chinese digital companies such as Alibaba to new international tax challenges. In terms of the specific countermeasures, to actively respond to the challenges faced by the globalisation of Chinese digital platform companies, countermeasures can be taken in the following three aspects:

Firstly, to safeguard the development rights and economic interests of Chinese digital platform companies overseas from the national level. The history of globalisation shows that there are two levels of worldwide competition; market competition amongst companies under the established international pattern and order and political and military competition amongst countries on top of market competition. Market competition between enterprises is the basis for competition between countries, and changes in the competition between countries and international relations can affect competition between enterprises. With the overall suppression and containment of China by the USA and the emergence of populist sentiments in countries such as India, Chinese digital companies have been subjected to political censorship, forced delisting, trading restrictions, executive capture and other injustices in the USA and India, which are typical incidents where the competitive relationship between countries has affected the international development of companies. In such cases, companies alone cannot counter the power of political interference from countries such as the USA. The Chinese government must help and support its digital companies to defend their development rights and economic interests overseas through international organisation complaints, political negotiations, economic and trade negotiations, reasonable counterattacks and subsidy support.

Secondly, digital platform companies should actively integrate into the new development pattern of domestic and international dual circulation and cultivate new competitive advantages in globalisation. Faced with the contradiction between international monopoly capital and national capital, Chinese digital platform companies need to strengthen independent research and development of core technologies to form core competitiveness, reshape the supply chain to improve effective supply, establish an industrial ecological value system to improve the added value of products and actively integrate into a "dual circulation" development pattern, in which domestic economic cycle plays a leading role while international economic cycle remains its extension and supplement; meanwhile, they may realise the regionalisation and internationalisation of the platform economy with the support from "ASEAN" and "Belt and Road" Initiative (BRI) cooperation mechanism. In the global market, Chinese digital companies should compete and cooperate with international capital, promote their growth through competition and gain common benefits through cooperation.

Lastly, China should actively advocate a new order of fair and just international tax governance and offer a good international tax environment for the globalisation of China's digital platform enterprises through international tax negotiations. The digital services taxation plan announced by EU countries such as France and some developing countries will harm the development rights and economic interests of Chinese digital companies such as

Note

1. The other companies are: one in China (Alibaba), one in Spain (Amadeus), two in Germany (Axel Springer and Zalando), one in the Netherlands (Randstad), one in Norway (Schibsted), two in Japan (Rakuten and Recruit), one in France (Criteo) and one in the UK (Travelport).

Alibaba in their internationalisation. China should take the lead in reaching a solution on

digital services tax with major countries along the BRI based on the BRI tax collection and

administration cooperation mechanism while seeking more development rights and

opportunities for the internationalisation of Chinese digital platform companies through

international tax negotiations with the EU and related countries.

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