haven policies, then its process of opening-up will not be U-shaped in the process of economic development; rather, it will be a slanting line with increasing openness, or a horizontal line without significant upward or downward trend.

3. Wave-shape changes in the opening-up trajectory

Admittedly, many factors have a bearing on the level of opening-up of a country or economy to the outside world. They do not only include size of the country or economy or economic development process. In reality, a more complicated scenario is that many countries and regions have experienced a bumpy and on-off economic development process, without a unified and clear track. In some countries, once a new government comes to power, it will readjust its policies; some will continue the policies of the previous government, and others will completely overthrow them. Even the current level of development has been the result of accumulation of various policies in many years; conversely, at this level of development, it is possible for policymakers to adopt a variety of completely different policy options in the future.

After the World War II, many developing countries adopted the protectionist policy of import substitution, with a very limited opening-up to the outside world, and they had achieved a certain degree of economic development. After the 1980s, for various reasons, they adopted an export-oriented opening-up policy, which greatly raised their level of opening-up. Later, after suffering from different forms of economic or financial crises, especially the 2008 global financial crisis, some protectionist measures were taken, leading to declining level of openness. Therefore, the trajectory and level of openness of these countries has shown a wave-shaped trajectory. As long as they do not reach a certain level of development, these countries will undergo similar wave changes in the future.

III. Opening-up Practices in Foreign Trade and Investment

Mankind has had opening-up practices in many fields, especially cross-border trade opening-up and investment opening-up. Both history and reality have shown that mankind has had very rich experiences in opening-up to the outside world, and they have been very different from each other, whether in terms of fields of opening-up or levels of opening-up, or in terms of process of opening-up or outcomes of openingup. The opening-up practices vary in different economies, or in different times within the same economy. Understanding these similarities and differences in opening-up to the outside world is essential for scientific understanding of the theories, methods, and results of analyzing opening-up to the outside world. This report takes human crossborder trade and investment opening-up as examples to understand the corresponding opening-up practices.

1. Effect of trade openness in economic development

A country's of choice of "optimal" trade openness system cannot be independent of its domestic economic characteristics (Edwards, 1993^①). It is because trade openness has both positive and negative effects on the local economy of concerned countries. Given differences in development stages, resource endowments, and technological conditions, among others, countries should maintain a degree of trade openness that is compatible with their level of economic development.

Trade openness is conducive to giving play to domestic comparative advantages and promoting overall domestic economic growth through economies of scale effect. Trade policy and economic growth are endogenous to each other. Most literature have directly or indirectly proved that trade openness actively will promote overall economic growth (Grossman & Helpman, 1990⁽²⁾; Davis, 1996⁽³⁾). Trade liberalization can promote the division of labor and cooperation among different countries and thus improve the efficiency of the knowledge accumulation process of *learning by doing*, which is conducive to unleashing domestic comparative advantages (Devereux, 1990⁽⁴⁾). The openness of the domestic market is also conducive to improvement in market competition and weakening the degree of domestic market monopoly, thus forcing

⁽¹⁾ Edwards, S. (1993). Openness, Trade Liberalization, and Growth in Developing Countries. *Journal of Economic Literature*, 31(3), 1358-1393.

⁽²⁾ Grossman, G. & Helpman, E. (1990). Trade, Innovation, and Growth. *American Economic Review*, 80(2), 86-91.

③ Davis, D. (1996). Trade Liberalization and Income Distribution. NBER Working Paper No. 5693.

⁽⁴⁾ Devereux, M. (1990). Growth, specialization, and trade liberalization. University College Dublin. School of Economics, UCD Centre for Economic Research Working Paper Series; WP90/4..

down the average market cost curve (Tybout & Westbrook, 1995⁽¹⁾; Kim, 2000⁽²⁾). It can also promote domestic economic growth through economies of scale (Krugman & Helpman, 1985⁽³⁾). Historical facts and empirical studies have provided support for this. Historical studies by Kindleberger (1987)⁽⁴⁾ and Bhagwati (1988)⁽⁵⁾ found that the high growth stages since the World War I had basically been accompanied by low tariffs. Edwards (1993)⁽⁶⁾ studied the first batch of developing countries that first adopted export-oriented policies and found those with lower degree of distortion in export sectors. Bautista et al. (1998)⁽⁷⁾ found that Zimbabwe's free trade measures, such as abolishing import and foreign exchange controls and lowering import taxes, had significantly increased the total disposable income of households.

Trade openness optimizes resource allocation through competition mechanisms and promotes productivity. Two channels promote productivity improvement as follows. First, competition leads to *the survival of the fittest* in productivity. Trade openness allows companies with low production efficiency to withdraw from the market, and the surviving companies with high productivity will have higher profit margins. Their high profit margins further attract more highproductivity companies to settle in, thereby pushing up the market's marginal productivity (Melitz, 2003). There will also be redistribution of resources among firms with varying productivity (Epifani, 2003[®]), with resources flowing from low-

⁽¹⁾ Tybout, J. & Westbrook, M. (1995). Trade liberalization and the dimensions of efficiency change in Mexican manufacturing industries. *Journal of International Economics*, 39(1~2), 53-78.

⁽²⁾ Kim, E. (2000). Trade liberalization and productivity growth in Korean manufacturing industries: price protection, market power, and scale efficiency. *Journal of Development Economics*, 62(1), 55-83.

③ Helpman, E. & Krugman, P. (1987). *Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition, and The International Economy*. The MIT Press, Edition 1, volume 1, number 026258087x.

④ Kindleberger, C. (1987). *The World in Depression:1929-39*. Penguin Books Ltd, New Edition.

⁽⁵⁾ Bhagwati, J. (1988). *Protectionism*. Cambridge: The MIT Press.

⁶ Edwards, S. (1993). Openness, Trade Liberalization, and Growth in Developing Countries. *Journal of Economic Literature*, 31(3), 1358-1393.

⁽⁷⁾ Bautista, R., Lofgren, H. & Thomas, M. (1998). Does Trade Liberalization Enhance Income Growth and Equity in Zimbabwe? The Role of Complementary Policies. The TMD Discussion Paper No. 32.

⁽⁸⁾ Epifani, P. (2003). Trade Liberalization, Firm Performance, and Labor Market Outcomes in the Developing World: What Can We Learn from Micro-Level Data? *SSRN Electronic Journal*, 3(5).

efficiency firms to high-efficiency trade firms (Pavcnik, 2002⁽¹⁾), especially to more efficient, export-oriented, and skill-intensive firms (Epifani, 2003). *The survival of the fittest* mechanism, therefore, elevates the average productivity of the industry, and also optimizes the domestic industrial structure. Second, trade openness enables enterprises to have more methods to reduce costs. Trade openness encourages local enterprises to participate in international market exchanges and competition and corporate managers will have more choices in productivity improvement and cost reduction (Kruger, 1985)⁽²⁾. After tariff barriers are reduced, enterprises can obtain more and cheaper inputs (Khandelwal & Topalova, 2011⁽³⁾), and competition will improve the efficiency of resource allocation, alleviate economic distortion, and encourage R&D formation to promote local well-being (Grossman & Helpman, 1991⁽⁴⁾).

Trade openness accelerates the diffusion of technology and promotes the local technological upgrading. Countries that adopt opening-up policies are more capable of absorbing advanced technology (Barro & Sala-i-Martin, 1995⁽⁶⁾). With opening-up policies, the less developed countries can make use of the large amount of knowledge capital that has already accumulated in industrialized countries to promote their domestic technological upgrading (Grossman & Helpman, 1990). Trade has become an important channel for the diffusion of technology among countries (Lichtenberg & Potterie, 1996⁽⁶⁾; Kelle, 2002⁽⁷⁾; Bylde, 2004⁽⁸⁾). Developing countries can import large amounts of intermediate goods and capital goods and, through them, benefit from foreign technological knowledge spillover to promote their domestic technological

⁽¹⁾ Pavcnik, N.(2002). Trade Liberalization, Exit, and Productivity Improvements: Evidence from Chilean Plants. *Review of Economic Studies*, 69(1), 245-276.

⁽²⁾ Krueger, A. (1985). *Developing-country trade policies and the international economic system*. The World Bank.

③ Khandelwal, A. & Topalova, P. (2011). Trade Liberalization and Firm Productivity: The Case of India. *The Review of Economics and Statistics*, 93(3), 995-1009.

⁽⁴⁾ Grossman, G. & Helpman, E. (1991). Trade, knowledge spillovers, and growth. *European Economic Review*, 35(2~3), 517-526.

⁽⁵⁾ Barro, R. & Sala-i-Martin, F. (1995). Technological Diffusion, Convergence, and Growth. *NBER Working Paper* No. w5151.

⁶ Lichtenberg, F. & van Pottelsberghe de la Potterie, B. (1998). International R&D spillovers: A comment. *European Economic Review*, 42(8), 1483-1491.

⁽⁷⁾ Keller, W. (2002). Trade and the Transmission of Technology. *Journal of Economic Growth*, 7, 7-24.

⁽⁸⁾ Blyde, J. (2004). Trade and Technology Diffusion In Latin America. *The International Trade Journal*, 18(3), 177-197.

upgrading (Coe et al., 1997⁽¹⁾; Acemoglu, 2003⁽²⁾; Ishikawa, 2007⁽³⁾). Imports of machinery and equipment can also increase the demand for skill-based technological change (Gourdon, 2011⁽⁴⁾). Technology can also spill over through the supply chain interaction between foreign-invested and local enterprises (Epifani, 2003⁽⁵⁾). The generous market rewards generated by technological innovation can further stimulate new technological innovation and market entry of foreign capital (Bustos, 2009⁽⁶⁾). After foreign enterprises enter the market, they authorize domestic companies to use their technology, which is conducive to reducing domestic production costs (Hwang et al., 2016⁽⁷⁾).

Trade openness promotes employment and increases the average factor income, thus narrowing the development gap between different countries. The empirical studies of some developed and developing countries (Salimi et al., 2014[®]), OECD countries (Dan, 1993[®]), Bangladesh and other countries (Munshi, 2006[®]) show that trade openness is conducive to income growth and reduction of income inequality. It is based on the factor price equalization theory, that is, in an open economy, the prices of production factors tend to be equalized across countries as a result of the global

¹ Coe, D., Helpman, E. & Hoffmaister, A. (1997). North-South R & D Spillovers. *The Economic Journal*, 107(440), 134-149.

² Acemoglu, D. (2003). Patterns of Skill Premia. Review of Economic Studies, 70(2), 199-230.

③ Ishikawa, J. (2007). Trade Liberalization and Technology Transfer through an Intermediate Product. *The International Economy*, 11, 3-10.

④ Gourdon, J. (2011). Wage inequality in developing countries: South–South trade matters. *International Review of Economics*,58(4), 359-383.

⁽⁵⁾ Epifani, P. (2003). Trade Liberalization, Firm Performance and Labour Market Outcomes in the Developing World. What Can We Learn from Micro-Level Data. The World Bank Policy Research Working Paper No. 3063.

⁶ Bustos, P. (2009). Trade Liberalization, Exports, and Technology Upgrading: Evidence on the Impact of MERCOSUR on Argentinian Firms. *American Economic Review*, 101(1), 304-340.

⁽⁷⁾ Hwang, H., Marjit, S. & Peng, C. (2016). Trade liberalization, technology transfer, and endogenous R&D. *Oxford Economic Papers*, 68(4), 1107-1119..

⁽⁸⁾ Salimi, F., Akhoondzadeh, T. & Arsalanbo, M. (2014). The Triangle of Trade Liberalization, Economic growth and Income Inequality. *Communications on Advanced Computational Science with Applications*, 1-14, doi:10.5899/2014/cacsa-00026.

⁽⁹⁾ Dan, B. (1993). Equalizing Exchange: Trade Liberalization and Income Convergence. *Quarterly Journal of Economics*, 108(3), 653-679.

⁽¹⁾ Munshi, F. (2006). Does openness reduce wage inequality in developing countries? A Panel data Analysis. Working Papers in Economics 241, University of Gothenburg, Department of Economics.

flowing of the factors (Samuelson, $1967^{(1)}$; Chipman, $1969^{(2)}$).

Excessive trade openness will also cause problems such as harming the development of domestic industries, solidifying dependence on external value chains, and weakening the build-up of domestic value chains. For example, in the value chain system dominated by Europe, the United States and Japan, China not only faces the risk of trade sanctions as a result of protectionism, but also faces the risk of its own value chain being *locked in* and *captured*. In terms of mode of trade, China has long focused on processing trade and OEM-based production, putting it in the middle and low end of the global value chain hierarchy. It is very difficult for China to break through the low end of the value chain. Although it grasps manufacturing technologies, it has failed to build many high-quality brands that is recognized globally. And it is difficult to achieve the transition from *Made in China* to *Created in China*.

Economic historian Paul Bairoch once said that historically, free trade is an exception and protectionism is the norm (Felber, 2019⁽³⁾). Although free trade is more conducive than protectionism to economic growth and social well-being increase (Poole, 2004⁽⁴⁾; Mankiw, 2015⁽⁵⁾), trade protectionists believe that free import will affect domestic employment and corporate competitiveness, and, therefore, import barriers should be imposed on foreign goods. Contrary to the ultra-conservative view, whether a country's degree of trade openness is appropriate should hinge on the capacity of its economy in sustaining such openness and the characteristics of the country's economic development stage. If a country is to maintain the appropriate degree of openness that matches its economic and system fundamentals, it will need to bring out the role of trade liberalization in contributing to economic growth, while preventing excessive openness from harming its economic development.

⁽¹⁾ Samuelson, P. (1967). Summary on Factor-Price Equalization. *International Economic Review*, 8(3), 300-306.

⁽²⁾ Chipman, J. (1969). actor Price Equalization and the Stolper-Samuelson Theorem. *International Economic Review*, 10(3), 399-406.

③ Felber, C. (2019). Trading for Good: How Global Trade Can be Made to Serve People Not Money. London: Zed Books Ltd.

⁽⁴⁾ Poole, W. (2004). Free Trade: Why Are Economists and Noneconomists So Far Apart?. *Review*. 86 (5), 1-6.

⁽⁵⁾ Mankiw, N. (2015). Economists Actually Agree on This: The Wisdom of Free Trade. *New York Times*, April 24..

2. Effect of investment openness on economic development

Cross-border direct investment can be seen in most economies in the world, and has a profound impact on the economic and social development of relevant economies. It has a positive effect in terms of promoting technological innovation, upgrading the industrial structure, and increasing international competitiveness. And China is a typical case in point and attention should be paid to direct investment in China.

First, foreign direct investment in China used to be an important part of China's domestic fixed-asset investment. In the 1980s and 1990s, the proportion of foreign direct investment in China's fixed-asset investment was obviously on the rise, jumping from an average 4% in the 1980s to hit 11.8%, the highest record, in 1996. The large amount of direct investment had eased China's financing pressure as it planned to boost its economy through increasing investment, and provided good indigenous incentive for the long-term sustainable development of the Chinese economy^①.

Second, FDI has promoted China's foreign trade development, in terms of not only *quantity*, but also *quality*. From 1992, when Deng Xiaoping carried out his *southern tour* to encourage China to further deepen reform and expand opening-up, to the years ahead of China's accession into the World Trade Organization (1992-2001), the average annual export growth rate of foreign-invested enterprises reached an average 27.9%, and the total export volume of foreign-invested enterprises accounted for 50.8% of the national total, making them the backbone of China's export. The continuously increasing foreign direct investment in capital-intensive and technology-intensive industries has, it is fair to say, promoted the structural upgrading of China's export products.

Third, FDI has increased job opportunities in China and raised the income level of employees. In 1987, there were only 210,000 employees in enterprises invested by investors from Hong Kong, SAR, Macao, SAR and Taiwan region and foreign investors, accounting for 0.15% of the country's total urban employment. By 2017, the proportion had risen to 6.08%. In terms of employee income, the salary level of employees in foreign-invested enterprises is relatively high, and since 1998, their salary level has always been higher than that in urban enterprises, and it has, in most of these years, also been higher than that of joint-venture enterprises. In 1998, the average salary of foreign enterprise employees was more than 1.7 times that in urban

① Source: China Statistical Yearbook, relevant years.

enterprises; by 2017, the average salary level in foreign interprises was still 1.2 times that in urban enterprises.

Fourth, FDI helps China's industrial upgrading and technological progress. The pace of foreign direct investment has been basically the same as that of China's industrial upgrading. In the 1990s, the proportion of China's secondary industry, especially manufacturing, in the national economy had risen rapidly and gradually become the most important driving force for national economic growth, contributing to about 60% of China's GDP, which had been quite stable at that time. The key industry for foreignfunded enterprises at that time was also manufacturing. In recent years, the tertiary industry has gradually become an important growth engine for the Chinese economy, with its proportion in national GDP rising from 42.2% in 2002 to 53.3% in 2018. Meanwhile, the focus of foreign direct investment has gradually shifted from the secondary to the tertiary industry. It can be seen that the industrial upgrading of investment openness has been moving in the same direction with the industrial upgrading of the Chinese economy. With foreign investors continually increasing direct investment in China's capital- and technology-intensive industries, advanced production techniques and management knowhow have also been introduced into China, which, thanks to the spillover effect, have contributed to the country's technological progress.

Fifth, FDI has helped China improve its *soft environment*. In the early stage of Reform and Opening-up, the entry of foreign direct investment into China required Chinese laws and regulations to match it. Statistics show that from 1979 to the end of 1985, China enacted more than 300 economic laws (including administrative regulations and rules), about half of which were related to foreign economy^①. Since then, China has continually enacted or amended laws and regulations related to the introduction of foreign investment. In recent years, as China's traditional advantage in attracting foreign investment has gradually weakened, the focus of its opening-up has been upgraded from *factor flow-based opening-up* to *rule- and system-based opening-up*. At present, improving the business environment has become an important starting point for maintaining and enhancing China's attractiveness to foreign businessmen.

At the same time, we should have a rational view of direct investment openness. On

⁽¹⁾ The editorial committee of Almanac of China's Foreign Economic Relations and Trade (1986). *Almanac of China's Foreign Economic Relations and Trade*. Zhanwang Publishing House of China, p53.

the whole, it promotes economic development, but it also may causes inefficiency and even negative effects in some aspects. Some foreign-funded enterprises have become monopolistic through mergers and acquisitions. In some premature industries, the entry of multinational companies squeeze out host-country companies, and ultimately make it difficult for host-country companies to grow. FDI also poses risks to the host country's economy in terms of capital flow. The influx of foreign capital en masse can push up the exchange rate of the host country's currency and may cause asset bubbles, while the withdrawal of large amounts of foreign capital will put the host country's currency under depreciation pressure. In late 1990s, a financial turmoil erupted in Southeast Asian countries, and the inflow and outflow of foreign capital was an important reason for the formation and eruption of the crisis. The large inflow of foreign capital at that time boosted the region's rapid development. Without the rational guidance of the government, however, large amounts of foreign capital had flown into such industries as securities and real estate instead of industries that play a central role in improving social productivity. As a result, while speculative capital owners gained enormous profits, foreign investment had failed to fundamentally change the development structure of Southeast Asia. When foreign capital owners found that it was difficult to continue to make profits from speculative activities, they would inevitably withdraw capital in large quantities out of those countries, leaving behind an unsustainable development mode that had been built on extravagance and capital speculation. Coupled with the introduction of large amounts of foreign capital, it had led to aggravated foreign debt burden for those countries, ultimately triggering a crisis. Thailand's foreign debt was \$20 billion in 1992, then reached \$86 billion before it started to depreciate its currency in 1997.

Judging from the experiences of major countries all over the world, after World War II, especially after the Cold War, global investment openness and economic integration have become a major trend. However, governments of concerned countries have not had a fixed attitude towards direct investment openness. They have often made discretionary decisions.

— The United States' attitude towards FDI after World War II had gone through a process from *investment liberalization* to *neutral position* and then to *simultaneous openness and supervision*. Tensions between the United States and Middle East oilproducing countries in the 1970s, the large-scale direct investment by Japanese companies in the United States in the 1980s, and the deterioration of Sino-US relations after 2018 were all important reasons for the tightening of FDI in the United States.

— After World War II, Japan was prepared to reconstruct its economy from scratch. In order to prevent foreign capital from taking the opportunity to enter and control its market, the Japanese government implemented a conservative policy for foreign direct investment in Japan. With the rise of the Japanese economy, Japan has begun to gradually loosen control of FDI, although its effect remains questionable. The Japanese government has always encouraged ODI and the country has eventually become a major ODI power.

— Brazil's attitude towards FDI has also undergone changes. In the early postwar period, the Brazilian government had guided and encouraged foreign investment to enter machinery, automobile and other manufacturing industries. However, in the 1970s, the problems of profit remittance by multinationals and trade deficits became more and more serious. The Brazilian government imposed restrictions on foreign direct investment in terms of localization rate and proportion of profit remittance. In the 1980s, a debt crisis broke out in Brazil. To relieve the pressure brought about by the crisis, the Brazilian government started again to encourage the entry of foreign capital, marking another U-turn of its policy stance.

IV. A Framework on Opening-up Model of National Economy

An opening-up economy can form a *sub-system*, that is, an open economy. If it is attached with geographical or territorial limits, such as a country, it can be made more concrete, such as an "open Chinese economy" or an "open world economy". There can be another cycle within this sub-system, including four major links: production, distribution, exchange and final use. In fact, this open sub-system is not independent of other "non-open sub-systems" of the economy to which it belongs, but is inextricably linked to them, whether their linkage is strong or weak.

In the field of economic openness, cross-border exchanges undoubtedly have had the longest history, including but not limited to cross-border trade. Economic opening-up to the outside world has long been dominated by the opening-up of crossborder trade, and cross-border trade has long been dominated by goods. In recent decades, the proportion of services has gradually increased, and it has almost become predominant in some economies. Foreign trade in goods has long been dominated