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Chinese OFDI in Europe

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DIW Berlin — Deutsches Institut für Wirtschaftsforschung e. V.
Mohrenstraße 58, 10117 Berlin
T +49 30 897 89 -0
F +49 30 897 89 -200

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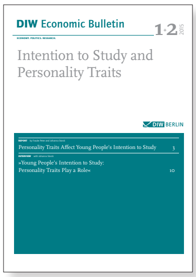

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Chinese foreign direct investment in Europe follows conventional models

By Christian Dreger, Yun Schüler-Zhou, and Margot Schüller

This report examines China's strategy for investing in Europe. While investing in Western Europe is primarily about obtaining access to advanced technologies, investing in Central and Eastern Europe is more about establishing a presence in the EU common market and expanding infrastructure—which also fits into the framework of the New Silk Road Initiative. An econometric analysis reveals that the investments largely follow conventional explanatory patterns. If we distinguish between different forms of market access, the determinants become much more specific. A high industrial share, sound institutions, and unit labor costs in the target country all have a negative impact on investment in new ventures, but not on investment in existing companies. Differing investment patterns, as well as the heterogeneous interests of the EU member states, make it difficult to implement a coordinated response to the Chinese investment offensive. At the very least, however, a kind of reciprocity should be introduced within the framework of an investment protection agreement between the EU and China. This could reduce the growing skepticism surrounding Chinese investment activities.

Chinese outward foreign direct investment (OFDI) has increased substantially in the years since the global financial crisis (Figure 1). In 2015, it reached a value of 145 billion USD, which is equivalent to roughly ten percent of global foreign direct investment flows. China has quickly become the world's second largest investor after the United States.

The EU is an attractive region for Chinese investors, and according to data through the end of 2015, the member states accounted for roughly 42 percent of China's OFDI in developed countries (Figure 2). Chinese investment can benefit both China and the EU member states alike. By investing in a member state, Chinese companies gain access to the EU's internal market, while Chinese capital helps the debt-ridden EU countries that consolidate their budgets by privatizing state-owned assets, such as those in the utilities, logistics, and transport sectors. The most prominent example is the investment in the Greek port city of Piraeus, for which China's state-owned shipping company has acquired permits for operating container terminals.

Chinese investment activity is likely to intensify over the next few years as markets become more integrated. The weak euro—which opens up investment opportunities for Chinese investors—could also play a role here.[1]

In this article, we outline China's investment strategy with regard to individual EU regions. We then use econometric methods to analyze the determinants of Chinese OFDI. In order to give the most comprehensive overview possible, we make a distinction between two different forms of direct investment: investment to establish new production sites, greenfield projects, and the acquisition of shares in existing companies (mergers and acquisitions, or M&A).[2]

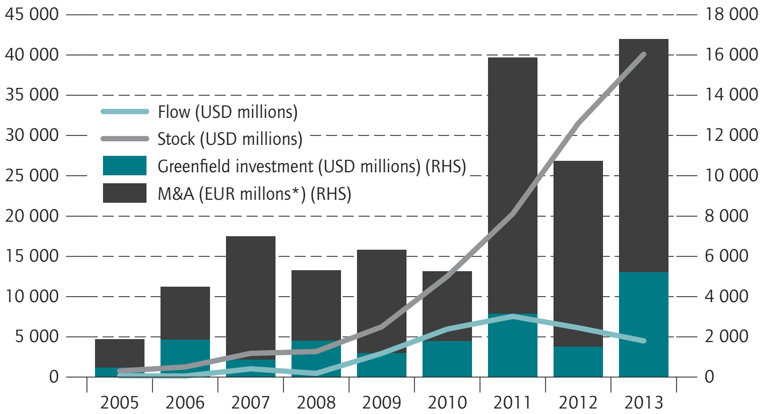
1 This article is based on Christian Dreger, Yun Schüler-Zhou, and Margot Schüller, "Determinants of Chinese direct investments in the European Union," *Applied Economics*, DOI: 10.1080/00036846.2017.1279269 (2017). See also Yun Schüler-Zhou, "Chinesische Investoren entdecken die Vielfalt Europas," *GIGA Focus Asien* no. 5 (2015).

2 For a detailed discussion on the various forms of market access, see John H. Dunning and Sarianna M. Lundan, "Multinational enterprises and the

Figure 1

Chinese foreign direct investment in the EU

In USD/EUR millions



* Estimated: product of the average transaction value and the number of transaction.

Sources: 2013 Statistical Bulletin of China's Outward Foreign Direct Investment, China Statistics Press, 2014, pp. 141-2, fDi Markets, Zephyr, authors' own calculations.

Investment—especially in the case of M&A—has increased significantly over the past few years.

China's investment strategy for Europe: access the EU's internal market, move up the global value chain

For many years, China's government has been influencing Chinese companies' investment strategies, taking into account the various stages of development, economic perspectives, and the interests of individual target areas. In Western European countries, Chinese investors are mainly seeking access to advanced technologies and established brands, which should accelerate China's economic development and help Chinese businesses move up the global value chain.

By acquiring "hidden champions"—world leaders in their niches—Chinese companies are becoming more and more competitive. In the market for concrete pumps, for example, the world's three largest manufacturers, all based in Germany or Italy, are now under Chinese control. China has also acquired some of Europe's leading providers of robotics, power plants and system technology, and automotive suppliers that develop methods for locking systems and the reduction of fuel consumption. Chinese investors can benefit from the sluggish growth in many industrialized countries that have caused financial problems for some businesses. Chinese investors gain market access primarily by investing in existing companies (M&A).

Up to now, Chinese investment in Central and Eastern Europe has often come from mid-sized companies in China's private sector. The primary goal is to gain access to the EU internal market, and Central and Eastern European countries provide ideal conditions: they boast low-cost and well-qualified workforces, as well as low barriers to market entry, all of which are especially favorable for establishing new production sites (greenfield investments, GI).

In addition, at the Belgrade summit in 2014, agreements were made to allow for massive investments—financed with the involvement of Asian infrastructure banks—to expand the sea and land connections between China and the Central and Eastern European countries, a development that also fits into the New Silk Road Initiative. One example is the plan for a new railway line between Budapest and Belgrade, which will eventually be extended to Piraeus. The infrastructure expansion will not only facilitate trade relations, but will also promote Chinese investment in Central and Eastern Europe. The economic structure of the region could experience substantial changes as a result of China's "March to the West."

Chinese investment can help combat investment weakness in the EU—but Europeans are growing skeptical

In some ways, Chinese capital is very welcome in Europe. For years, the majority of the member states have been suffering from a significant weakness in investment that is hindering their companies' competitiveness. Chinese capital mobilizes new resources so that jobs can be preserved. Unlike Anglo-Saxon investors, Chinese companies rarely bring their own management staff and are not very much involved in business operations. Moreover, they facilitate the expansion of the firms they invested in into the Asian market. On the other hand, many member states are becoming more and more critical with respect to the increase in Chinese investment. In Germany, for example, there is already discussion of intensifying the Foreign Trade Law *(Außenwirtschaftsgesetz)* in order to make it more difficult to acquire companies of high strategic and economic importance. As of now, acquisitions can only be prohibited if they pose a threat to internal or external security.

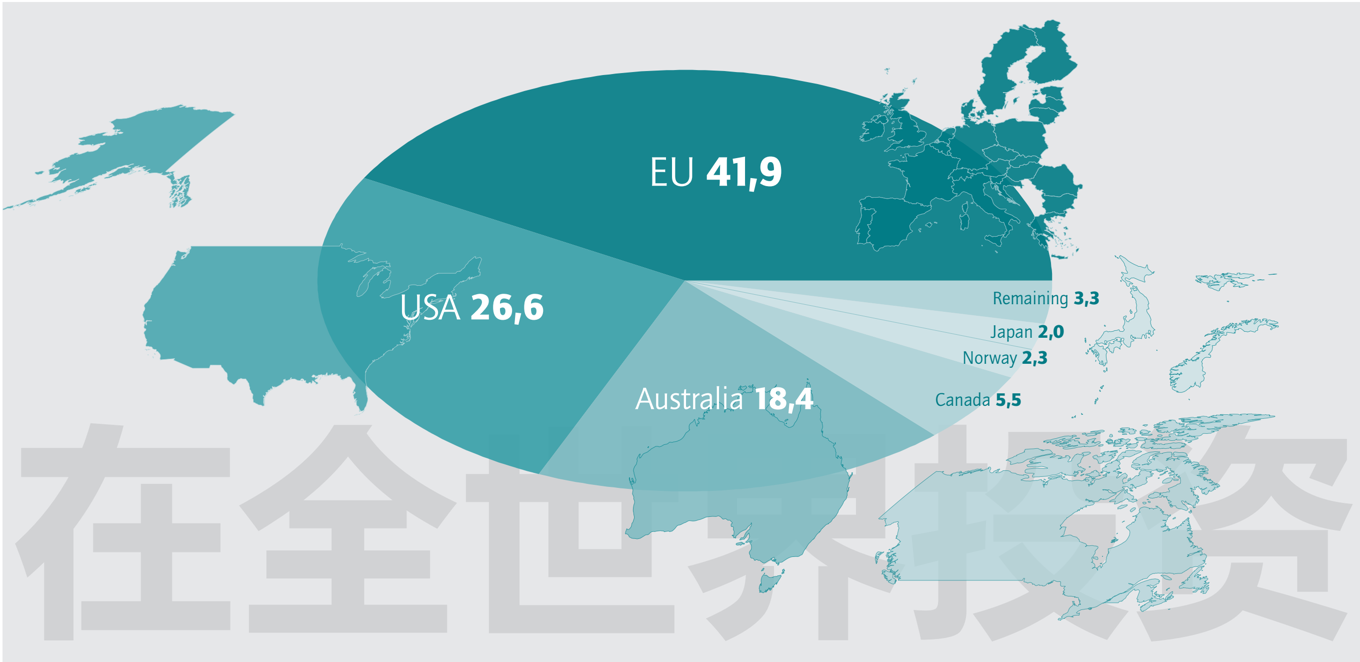
Chinese investment often comes from state-controlled companies—and increasingly, from state funds. Critics are thus concerned about the close relationships between investors and political interests. The Chinese govern-

global economy," 2nd ed. (2008).

Figure 2

Volume of Chinese OFDI in industrialized nations at the end of 2015

In percent



Sources: 2015 Statistical Bulletin of China's Outward Foreign Direct Investment, China Statistics Press, 2016, 18.

The bulk of Chinese OFDI flows into the EU.

ment—within the framework of the Made in China 2025 strategy—is striving for worldwide leadership in some key technologies by 2049, the hundred-year anniversary of the People's Republic. These include information technology, computer-controlled machinery, industrial robots, energy-efficient vehicles, and medical devices. China is thus rising up from being the world's low-cost workbench to a key high-tech country—and OFDI is an important tool for catalyzing this process.

China's OFDI is linked to a knowledge and technology transfer that the country is using to modernize its economy, and it has been able to enter the EU market quite freely. This is not the case the other way around, however: the rules governing EU investment in China are far more restrictive, which is a problematic and pressing issue. Among other unfavorable conditions, there is an obligation for European investors to establish joint ventures with local Chinese partners, which often results in a reduced level of intellectual property rights protection.

Overall, European firms—especially Germany's manufacturers for investment goods—run the risk of losing their position as world leaders in technology.

Chinese investment in Europe is diversifying

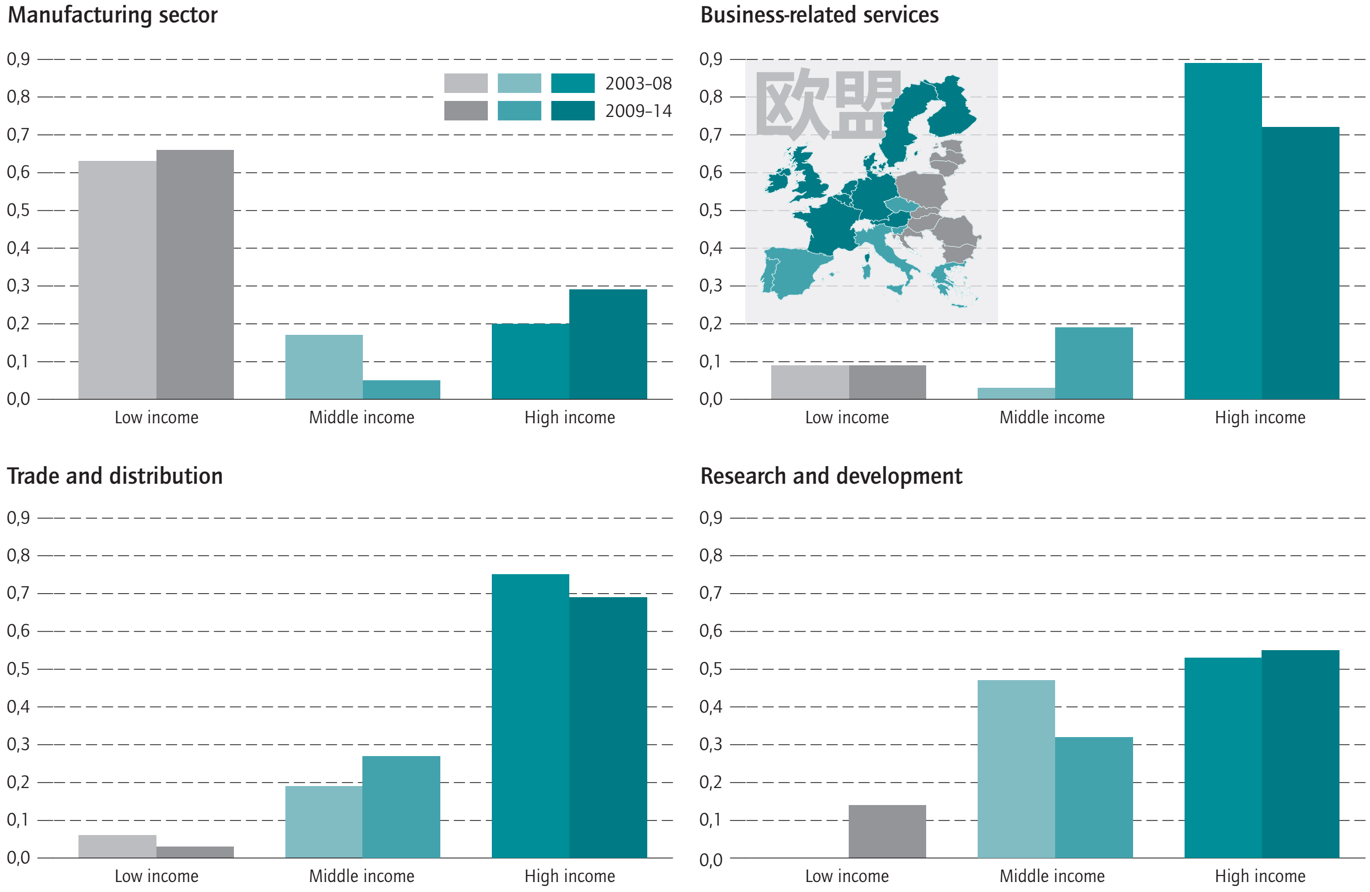
Over the past few years, a sectoral pattern has begun to materialize in Chinese investment activities. Depending on the target region, greenfield investments from China have had different purposes depending on the sector (Figure 3). (The corresponding data for M&A investment are not available.) The sectors shown here are manufacturing, business-related services such as banks and insurance companies, trade and distribution, and R&D. To gain insights into possible shifts, we consider two periods: 2003 to 2008 and 2009 to 2014. While these four sectors were absorbing about two-thirds of the investment flows prior to the financial crisis, they are currently taking 40 percent. This indicates that investors have broadened their scope.

The EU countries with relatively low per-capita income—all of which are in Central and Eastern Europe—are the primary recipients of investment in the industrial sector. In countries with high wages and income levels, the funds flow mostly into business-related services, trade, and R&D. No dramatic shifts over the past few years

Figure 3

Sectoral distribution of Chinese greenfield investment in EU countries

Share of Chinese investment



__Low-income countries:__ Bulgaria, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia. __Middle-income countries:__ Czech Republic, Cyprus, Greece, Italy, Portugal, Slovenia, and Spain. __High-income countries:__ Austria, Belgium, Denmark, Germany, Finland, France, Ireland, Luxembourg, the Netherlands, Sweden, and the UK.

Sources: fDi markets, authors' own calculations.

Investment in low-income countries takes place predominantly in the industrial sector; in high-income countries, it is more likely to be directed into business-related services, trade and distribution, and R&D.

have been observed, though the low-income countries have become somewhat more attractive as locations for R&D investment.

Determinants of Chinese OFDI

The various determinants of OFDI are an important topic in research[3]—yet empirical studies often produce contradictory results depending on the region, time period, and econometric methods involved. Theoretical approaches also fail to provide a clear explanation.

For example, trade relations can lead to more investment, resulting in a positive correlation between trade and OFDI. But when a country invests in a foreign production site, that site can also be used to supply goods for the local markets there—and this reduces the exports of the investing country, thus having an overall negative effect on trade.

The effects of the development of labor costs in the target country are likewise two-sided: rising wages make investment less profitable, which can lead to a decline in capital inflows, but they can also stimulate investment, because high wages are indicative of a high level of productivity of the workers. The latter is of particular relevance when OFDI are made in human-capital intensive areas.

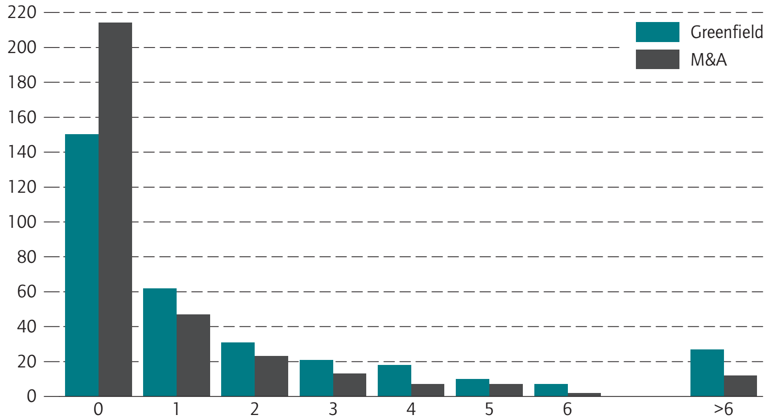
3 See Bruce A. Blonigen, "A review of the empirical literature on OFDI determinants," NBER Working Paper 1129 (2005), which also provides an overview of the empirically oriented literature.

The extent to which Chinese OFDI in Europe is in line with standardized approaches of investment behavior can be determined using regression models. The empirical analysis is based on two of the world's leading databases—fDi markets and Zephyr—that contain comprehensive information on individual investment projects broken down by EU country. FDi markets contains data on new ventures, while Zephyr tracks the M&A transactions. Various factors influence the choice between the two kinds of market entry. M&A might be preferred in markets with high competition and established companies; due to information asymmetries, however, the investor must pay high monitoring costs that are not necessary in the case of a new company. On the other hand, new ventures are often associated with higher risks for the investor, and they generally require higher levels of investment.

The dependent variable is the number of new ventures and M&A projects carried out in the respective EU countries. Because this count variable is available for both kind of market access, the results can be compared directly.[4] Figure 4 shows the distribution of the variables. The values are aggregated across the EU countries and the years 2003 to 2014. The variable approximately follows a Poisson distribution, which is often used to model rare events: indeed, many countries did not receive capital inflows in some years, as the first bar of the graph clearly shows.

Figure 4

Frequency of Chinese direct investment



Reading example: the third green bar from the left indicates that over a period of 12 years, there were 31 instances where two Chinese greenfield investment projects were undertaken within one year in one specific EU-country.

Sources: fDi markets, Zephyr, authors' own calculations.

On average, Chinese investment projects in Europe are still thin on the ground.

New ventures and M&A are affected in different ways

Investment determinants include market potential, trade relations, labor costs, size of the industrial sector, the public finances situation, and institutional conditions.[5] Market potential is approximated using real GDP per capita. High-income regions are expected to attract more OFDI because they offer better sales opportunities. Trade relations are measured using figures for the exports and imports between individual EU countries and China. These values are then divided by the GDP of the target country to represent a degree of openness of the economy. The companies' wage burdens are defined by the real unit labor costs, with the price adjustment carried out using the GDP deflator. The prevalence of industry is determined by calculating the share of manufacturing in the gross value added. A high industrial share indicates the presence of production networks. However, a higher level of competition is also likely, as many industrial products can be traded at the international level. Because of its high interest in the economic policy debate, the conditions of public finances—operationalized by debt level relative to the GDP—are included. An increase in the debt ratio could necessitate future tax increases and spending cuts, which tend to reduce the profitability of investment projects.

The regressors are taken from the AMECO database of the EU Commission and the trading data from the International Monetary Fund. Finally, the institutional framework conditions are taken into account. This characteristic is defined as the average of various dimensions (including corruption, government effectiveness, the regulatory framework) that are evaluated in the World Bank's Worldwide Governance Indicator. Higher values of this variable suggest sounder institutions and more efficient economic governance in the target country.

Because the dependent variable is a count variable, a Poisson regression is estimated. This is done using a panel environment in which the individual EU countries form the cross-sectional dimension.[6] The analysis is based on annual data for the period between 2003 and 2014. The findings for greenfield investment and M&A are shown separately (Table). We also include the models for fixed and random effects to demonstrate the robustness of the results.

4 Investment volume data, on the other hand, are not available for both variants. The count variable also protects against problems resulting from the potential endogeneity of regressors.

5 These variables often serve as the basis for empricial studies. See, for example, Peter J. Buckley et al., "The determinants of Chinese outward foreign direct investment," *International Journal of Business Studies* 38 (2007), 499–518.

6 A detailed discussion of this econometric method can be found in A. Colin Cameron and Pravin K. Trivedi, "Count panel data," *Badi H. Baltagi ed., Oxford Handbook of Panel Data*, Chapter 8, Oxford University Press (2015).

Table

Determinants of Chinese foreign investment in the EU

	Greenfield Investments		Mergers and Acquisitions	
	FE	RE	FE	RE
Per capita income	4.790 (0.671)	3.360 (0.592)	2.499 (1.104)	2.206 (0.673)
Bileratal trade with China	0.419 (0.041)	0.439 (0.040)	0.387 (0.075)	0.383 (0.067)
Industrial sector	−0.153 (0.034)	−0.072 (0.032)	−0.078 (0.055)	−0.015 (0.037)
Unit labor costs	−0.082 (0.017)	−0.061 (0.016)	0.027 (0.032)	0.038 (0.031)
Public debt ratio	0.001 (0.001)	0.002 (0.001)	−0.001 (0.002)	−0.001 (0.002)
Institutions	−2.801 (0.725)	−2.974 (0.645)	−2.503 (1.305)	−1.676 (0.850)
Number of cases	297		231	

Note: Panel Poisson Regression, 2003–2014. FE = fixed effects, RE = random effects. Standard error in parentheses.

Source: Authors' own calculations.

Countries with higher per-capita income and more intensive trade relations with China receive more capital inflows, on average. A country's debt-to-GDP ratio, however, is irrelevant to Chinese investors. Differences between greenfield projects and M&A investments occur in three variables that have a negative impact on new ventures only: the industrial share, soundness of the institutions, and unit labor costs.[7] This may indicate that Chinese investors have a somewhat different risk perception than Western companies do. They may prefer regions with weaker institutions and less competitive pressure. This interpretation is also suggested by the impact of real unit labor costs. While higher labor costs make the host country less attractive for new ventures, these costs play only a minor role when it comes to M&A. Established companies are attractive because they have already demonstrated their competitiveness despite high labor costs.

Conclusion

China's OFDI in the EU member states can be explained by a number of macroeconomic determinants. The most important factors are market size and bilateral trade, which tend to stimulate Chinese investment for both new ventures and M&As alike. Unit labor costs, the size of the industrial sector, and the degree of regulation in the target country, on the other hand, affect only new ventures, and their impact is negative. This suggests that Chinese investors have different risk behaviors when it comes to their foreign engagements, which is why they prefer to undertake greenfield investments in regions with less sound institutions and markets with less competitive pressure. These factors play little role for Chinese investment in M&A.

Overall, the results indicate that Chinese investment activity fits within the standard framework of the usual explanatory models.

Chinese investment patterns in Europe differ according to the target region, which makes a coordinated EU-level response to the Chinese investment offensive extremely difficult. As well, Chinese investment has both advantages and disadvantages for Europe. For countries that suffer from weak investment, the new capital inflows from China can be helpful. The low-income countries also benefit from new ventures financed by Chinese investors, since they create new jobs. On the other hand, major acquisitions of strategically important industries in the advanced countries have drawn increasing criticism. Policy measures designed to make acquisitions of European companies more difficult—especially when it comes to key technologies—should nevertheless be implemented with caution.

It is unclear whether Europe's technological advantage can be sustained in the long run by simply trying to protect its key industries; instead, the EU countries should focus on promoting innovation and entrepreneurship in order to achieve a higher and more stable path of long term growth. This is the only way to compete with a modernized China in the years to come. At the same time, the demand for reciprocity is justified, and agreements should be reached within the framework of an EU-China investment agreement to grant European companies easier access to the Chinese market. Compared to trade relations, investment relations between China and the EU are still relatively low.

7 A negative effect of the institutional framework conditions is also reported by Ivar Kolstad and Arne Wiig, "What determines Chinese outward OFDI?" *Journal of World Business* 47 (2012), 26–34.

Christian Dreger is Research Director for International Economics at DIW Berlin | cdreger@diw.de

Yun Schüler-Zhou is a Research Fellow at the GIGA Institute of Asian Studies, Hamburg

Margot Schüller is a Senior Research Fellow at the GIGA Institute of Asian Studies, Hamburg

JEL: F21, E22, C25

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Prof. Dr. Christian Dreger, Research Director of International Economics at DIW Berlin

FIVE QUESTIONS FOR CHRISTIAN DREGER

»China's investment strategy is different for Western and Eastern Europe«

1. Mr. Dreger, how high is China's OFDI, and how has it been developing over the past few years? Chinese global FDI amounts to 150 billion US dollars—and it is on the rise. The flows have grown substantially since the financial crisis. China is now the second largest investor in the global economy. More than 40 percent of China's FDI in developed countries flows into Europe, and the bulk of that goes to Germany.

2. What is the China's strategy for investing in Europe? The Chinese government is pursuing a country-specific strategy. It appears that they are focused primarily on creating new businesses in Central and Eastern Europe. In addition, there is a massive expansion of infrastructure within the framework of the New Silk Road Initiative. In Western Europe, the key motive is to get access to key technologies. Chinese firms are interested in investing in "hidden champions"—that is, world leaders in their respective market segments.

3. To what extent are European countries dependent on Chinese capital? Large benefits can be observed in euro area countries that have to consolidate public finances through privatization of former state-owned activities. Moreover, the investment activities can stimulate the weak investment in the euro area. Europe has been suffering from low investment for many years—even before the financial crisis—and the new capital from China can help to alleviate this problem.

4. Chinese investors are seeking access to key technologies—especially through their investment activities in Germany. Is Germany at risk of losing its tech advantage? That is always a risk when foreign companies are acquiring domestic businesses or buying shares. There is a risk of technology transfer, which means that China can exploit the more advanced technologies without having to develop them on their own. This is problematic for the high-tech countries in Western Europe. How much we can protect our advanced technology on the open international market is a general issue that extends beyond the recent Chinese takeovers—and such protection measures often do not work. Instead, Europe should focus more on promoting innovation and entrepreneurship in order to reach a higher path of long-term growth. In short, it's less about defending past achievements and more about taking steps to improve the foundations for future growth.

5. Chinese investors are able to access the EU market quite easily, but European investors in China are confronted with numerous restrictions. Should Europe insist on having these laws changed? It would be helpful if we entered into an investment agreement with China. It would replace the current individual country-specific agreements with an EU-wide agreement. Among other things, it should aim at facilitating market access to China. Many of the current restrictions could be relaxed, such as the obligation to establish joint ventures.
There are also other restrictions in place that could be removed, and it is important to find an agreement that benefits both sides. For EU investment in China, it's not about a technology transfer: market access is the focus here, since China is already a pillar of growth for the global economy.

Interview by Erich Wittenberg