

Investment Screening Mechanisms: The Trend to Control Inward Foreign Investment

*Vera Z. Eichenauer (ETH Zurich), Michael Dorsch (Central European University),
Feicheng Wang (University of Göttingen)*

headed by

ifo INSTITUTE

Leibniz Institute for Economic Research
at the University of Munich



CPB Netherlands Bureau for Economic
Policy Analysis



INSTITUT FÜR HÖHERE STUDIEN
INSTITUTE FOR ADVANCED STUDIES
Vienna

KOF

KOF Konjunkturforschungsstelle
KOF Swiss Economic Institute



RESEARCH IN
ECONOMICS AND
MATHEMATICS



Toulouse
School of
Economics



ZEW



EconPol POLICY REPORT

A publication of EconPol Europe

European Network of Economic and Fiscal Policy Research

Publisher and distributor: ifo Institute

Poschingerstr. 5, 81679 Munich, Germany

Telephone +49 89 9224-0, Telefax +49 89 9224-1462, email Dolls@ifo.de

Editors: Mathias Dolls, Clemens Fuest

Reproduction permitted only if source is stated and copy is sent to the ifo Institute.

EconPol Europe: www.econpol.eu

Investment Screening Mechanisms: The trend to control inward foreign investment*

Vera Z. Eichenauer[†] Michael Dorsch[‡] Feicheng Wang[§]

December 21, 2021

Abstract

In an increasing number of sectors, concerns are rising that foreign firm participation may pose risks to public order. Many developed countries have adopted or extended their investment screening mechanisms to control inward foreign direct investment in strategically important sectors over the last years. This policy brief documents the development of investment screening in OECD and EU countries and provides the first discussion from an economic perspective. We review existing and propose new explanations for the adoption of investment screening. Our exploratory quantitative analysis suggests that countries with higher levels of technological development and with a stricter regulatory environment for foreign investment are more likely to introduce investment screening. Contrary to the popular wisdom, we do not find evidence that higher Chinese inward investments are associated with the implementation of investment screening.

Keywords: foreign direct investments, national security, investment screening mechanisms

*We thank Sarah Bauerle-Danzman and Sophie Meunier for sharing their data on investment screening mechanisms in OECD countries and Andrea Riccucci for excellent research assistance.

[†]ETH Zurich. Contact: eichenauer@kof.ethz.ch.

[‡]Central European University. Contact: dorschm@ceu.edu.

[§]University of Göttingen. Contact: feicheng.wang@uni-goettingen.de.

1 Introduction and overview

Foreign direct investment (FDI) contributions to the economic production of nations have grown dramatically over the last decades (Figure 1). Neoliberal policy shifts since the 1980s have encouraged such investments, which firms have been keen to make in order to enlarge their markets. While barriers to global commerce have declined on the whole, the rising share of foreign owned capital stock has been increasingly subjected to Investment Screening Mechanisms (ISM) by governments of the receiving countries in the last decade. Indeed, a majority of European countries have adopted or tightened their ISM to more systematically check the security risks involved with foreign ownership takeovers of domestic firms (Figure 2). The EU has even set up a framework to coordinate the screenings. For the most part, foreign investment screenings have been justified within the liberal international economic order by domestic security concerns. Domestic security concerns have broadened. The reasons proposed to explain the shift in perceptions about what constitutes threats to public order typically include the rise of China and other countries with illiberal political institutions as economic powers, new security risks posed by the digitalization of the economy, and the perceived threat of globalization for domestic industries deemed to be strategically (and politically) important. The policy of choice to manage these acquisition-related risks seems to be investment screening, defined as “a procedure allowing to assess, investigate, authorise, condition, prohibit or unwind foreign direct investments” by the EU Screening Regulation 2019/452.

This policy brief provides an overview of the trend of foreign investment screening that is especially pronounced in Europe. First, we document the rise of foreign investment screenings among OECD and EU countries. Second, we review some explanations for the rise of ISM documented in existing studies and provide some additional explanations of our own. Finally, we perform an exploratory quantitative analysis of the structural economic factors that may explain which countries have adopted ISMs.

We employ and extend upon a unique data set of ISMs provided by [Bauerle-Danzman and Meunier \(2021\)](#). Results that are documented in this policy brief are part of a larger research agenda on investment screening initiated by Vera Z. Eichenauer and developed jointly with Michael

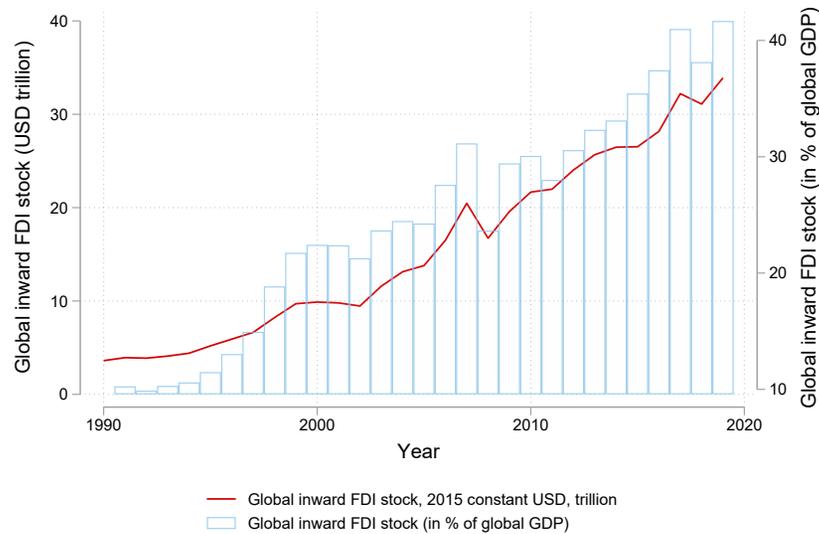
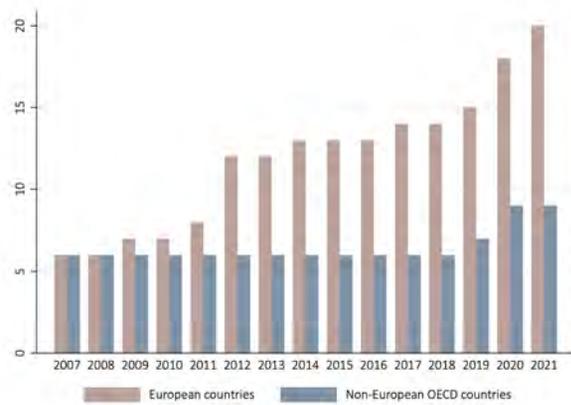


Figure 1: Global stocks of inward direct investment in absolute terms and as share of global GDP. Source: Data from UNCTAD (2021a), own representation

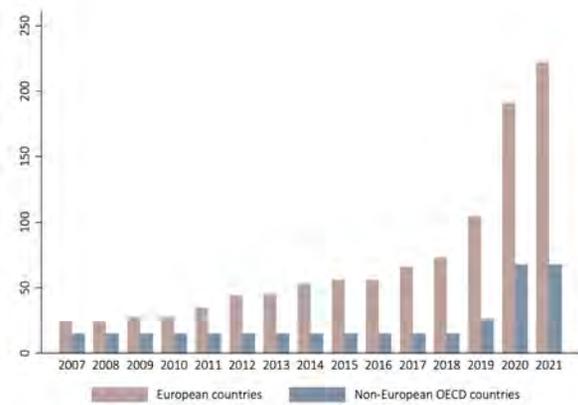
Dorsch, Feicheng Wang, and Renaud Bourlès (Eichenauer and Wang, 2021; Bourlès, Dorsch and Eichenauer, 2021). The basic descriptive statistic that we demonstrate here is that ISMs implemented by OECD and EU countries have risen in recent years, and risen across a broad range of economic sectors. The sectoral breadth of ISM implementation in the OECD and EU countries points quite clearly to the notion that what can be considered as a domestic security concern has broadened in recent years. The sectors mentioned in legal documents do not correspond to classification of sectors used by economists but often refer to a technology (e.g., artificial intelligence, additive manufacturing) or the aggregate product or service to which corporate activity contributes (e.g., food security, healthcare infrastructure). Investment screening today is mostly practiced in developed countries (UNCTAD, 2021b).¹

We extend the hypotheses advanced in the academic political science literature to explain EU member states’ preferences about an EU investment screening (Chan and Meunier, 2021) to explain countries’ decision to adopt a national ISM. We expect ISM adoption to be more likely in countries that have (i) observed a sharp increase in Chinese FDI, and (ii) have high levels of tech-

¹While the developing countries with an ISM during the 1990s had a generally restrictive attitude towards inward FDI, the developed countries that have an ISM in 2020s stress their openness to FDI (Bonnitcha, 2021).



(a) Number of countries



(b) Number of country-sectors

Figure 2: Time trend in the number of countries and country-sectors with investment screening for European countries and non-European OECD countries: 2007-2021. European countries are European Union and European Economic Area members and Switzerland. 43 countries and 1,548 country-sectors in total in the sample. Sector coding is based on countries' regulations categorised by [Bauerle-Danzman and Meunier \(2021\)](#). The list of sectors can be found in [Figure 4](#). Source: Data on OECD countries from [Bauerle-Danzman and Meunier \(2021\)](#), extended by authors to include all EU countries, own representation.

nological development. Our exploratory quantitative analysis supports this view to some extent – in a panel setting, we show that OECD and EU countries are more likely to adopt an ISM if they have high levels of technology and that countries which already have a tight regulatory environment for foreign investment tend to be more likely to adopt an ISM. We find no evidence that higher levels of Chinese FDI increase the likelihood to adopt an ISM, even for countries with higher technological levels. Evidence is far from conclusive, however, as our regression models explain only a relatively small fraction of the variation in ISM implementation.

The policy brief also proposes some alternative explanations for the rise of foreign investment screenings that include insights from both economics and political science. Namely, we discuss (i) the new security threats that emerge as economies digitalize, (ii) the role of economic special interest groups that may view ISMs as potentially protectionist policy tools from which they can benefit, and (iii) the potential for domestic politicians to use ISMs as a signal to their domestic polities that they are taking actions to insulate the economy from foreign economic interests that may be viewed in the public discourse as nefarious actors (e.g., China). While our quantitative analysis does not explicitly test the alternative explanations that we propose, they should be of

interest to policy makers and scholars of international economic policy.

2 Is Europe closing its doors to foreign direct investments?

The answer to this section's leading question about Europe being less open to FDI is not clearly "yes" nor "no". While there remains substantial freedom for economic factor mobility *within* Europe², investors from *outside* of Europe³ find the door into the European ownership increasingly difficult to open. Indeed, FDI into the EU is screened for all non-European countries and in an increasing number of sectors (Figure 2). About 60 percent of global FDI flows are now potentially subject to national security related review under a cross sectoral mechanism (Pohl and Rosselot, 2020, 15). Countries that have implemented ISMs typically stipulate "trigger events" such as thresholds for the size of the investment (as fraction of the target company or sector) or as turnover, above which a formal screening process can begin (see e.g. Bonniticha, 2021). There has been a general trend to lower thresholds, even prior to the COVID-19 crisis. France for example has lowered the threshold above which the acquisitions of shares (or voting rights) is screened from 33.3 percent to 25 percent in 2014 and further to 10 percent in 2020. Several countries also have cross-sectoral screening mechanisms that allow the government to review any investments, sometimes without stipulating any threshold. Figure 3 shows that ISM caseloads have been consistently increasing over the last decades in selected countries (see also UNCTAD, 2019).⁴

Within Europe, there is a large heterogeneity as to the existence and extent of investment screening mechanisms. Figure 4 displays this heterogeneity. There are still more than ten EU countries that have not implemented ISMs at all. Among countries that have implemented ISMs, the coverage of sectors differs widely and more sectors were added in recent years. There seems to be "no obvious factor that would explain why countries have made different assessments of the merits of acquisition- and ownership-related policies [including investment screening] and why

²Investors from member countries of the European Union, the European Economic Area (EEA), and Switzerland tend not to be screened by countries that are part of this club. There are a few exceptions in recent years, especially in sectors like defense.

³This often includes European investors investing via non-European third countries.

⁴Reporting is highly incomplete with public information requirements and definitions differing over time and across countries.

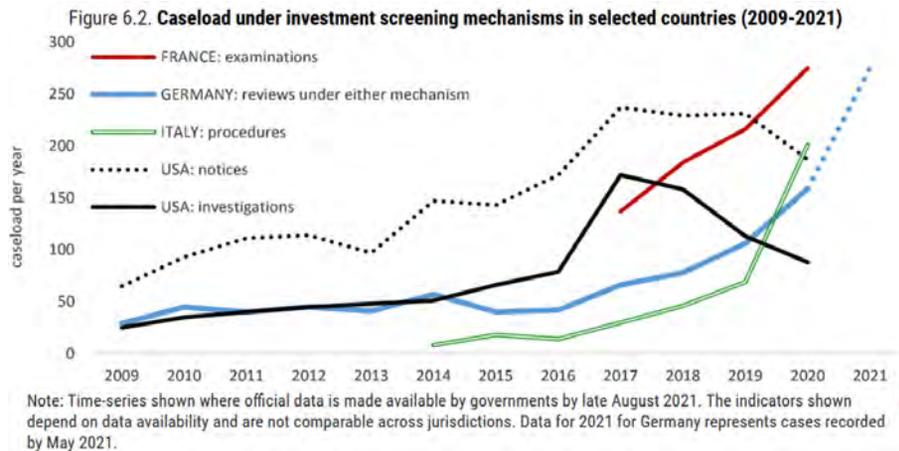


Figure 3: Evolution of caseload under investment screening mechanisms in selected countries (2009-2021). Source: OECD (2021a, Chapter 6).

this diversity of views persists until today.” (Pohl and Rosselot, 2020, 16). Our empirical analysis below identifies some country-level economic factors that may explain the heterogeneity among EU and OECD countries.

The rise of ISMs in Europe does not seem to be driven by uniform conceptualizations of “security”. In some cases, ISMs are justified solely by national security (securing the nation state), whereas in other cases they are justified also by economic security. A notion of security broadened to include the national economy is anathema to liberal economists, whose instinct is to view ISMs justified by economic security as distortionary protectionism.⁵ No systematic evidence of economic favoritism in screening is available (yet). While no standardized cross-country statistics on screening exist, the available data suggests that the number of rejected acquisitions is low.⁶ Still, the screening of foreign investors does act as a regulatory barrier to inward foreign direct investments. As this regulatory barrier imposes real costs on foreign firms,⁷ economists would not be wrong to consider ISMs as a new kind of “non-tariff barrier” to international economic factor flows.

⁵For example, Commission (2020) encourages member states to interpret the criteria in the EU FDI Screening regulation broadly, mentioning the sale of “undervalued” assets as one risk.

⁶Australia, Germany and the United States each rejected one project, Canada two, and New Zealand no deal in the most recent year with data available (i.e. 2018, 2019 or 2020) (UNCTAD, 2021b, 133).

⁷Financial costs arise from the required (in-house or external) legal advice and support for filing to the investment screening authority and, in some countries, for the screening fees.

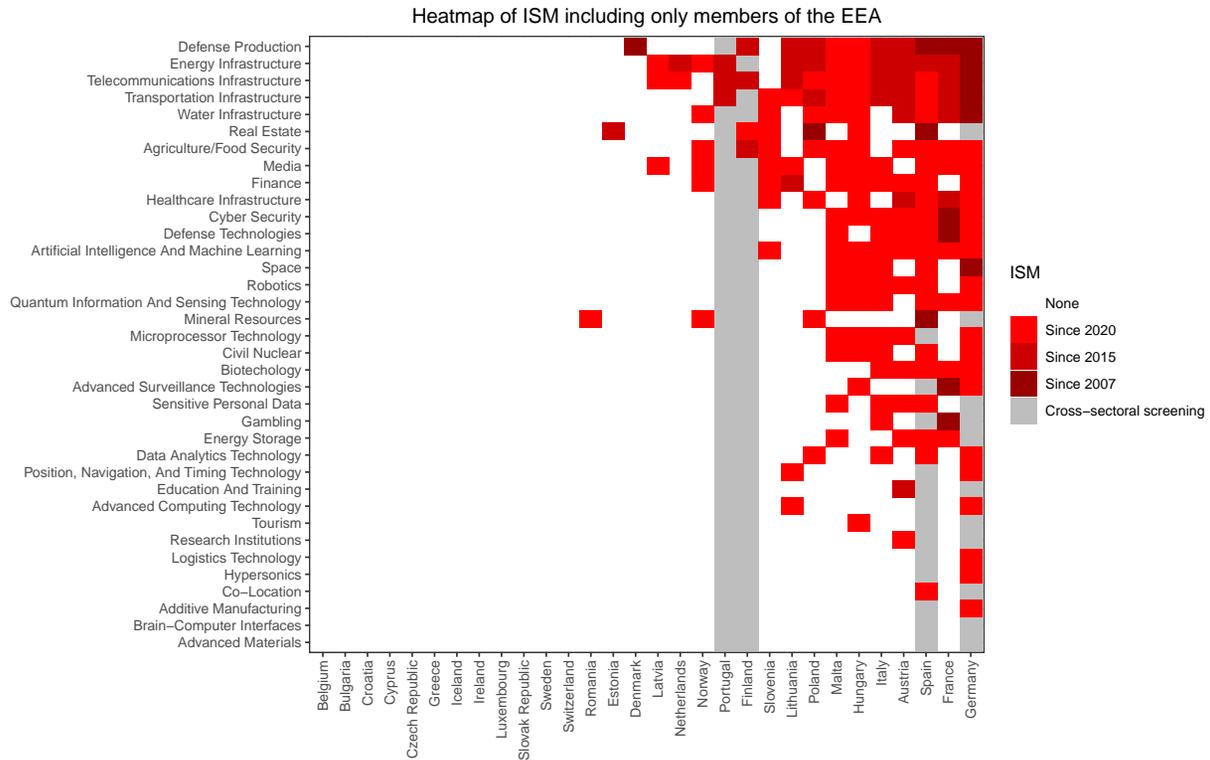


Figure 4: Coverage of sectoral screening in European countries, 2007-2020. European countries are European Union and European Economic Area members and Switzerland. Sector coding based on countries' regulations categorised by Bauerle-Danzman and Meunier (2021). Source: Data on OECD countries from Bauerle-Danzman and Meunier (2021), extended by authors to include all EU countries, own representation.

In the process of setting up and strengthening their national investment screening, the European Commission (EC) and important EU member states realized that the high European integration implied that FDI in one state could pose risks to security or public order in another member state.⁸ At the same time, investment screening seems to be an economic strategy as exemplified by the announcement of the President of the Commission Jean-Claude in his 2017 State of the Union address: “We are not naive free traders. Europe must always defend its strategic interests. This is why today we are proposing a new EU framework for investment screening”(Juncker, 2017). This

⁸The basis of EU competence chosen for the EU screening regulation is the EU's Common Commercial Policy. According to Schill (2019), the choice of the legal basis is somewhat surprising as it links the EU investment screening regulation to the global investment architecture that the EU has started developing.

is a stark rhetorical contrast to the EU's free trade approach.⁹

Adopted with massive support by the European parliament in March 2019, the EU's FDI screening Regulation (2019/452) entered into force in April 2019 and is fully applied since 11 October 2020.¹⁰ The EU regulation sets minimum standards for member states with an investment screening mechanism, and institutes mandatory coordination which allows other member states and the EC to raise concerns related to specific investments in other EU states. However, the member state receiving the inward FDI remains the ultimate decision maker. The Regulation does not establish an independent EU level FDI screening mechanism whenever 'Union interests' are at stake, as the Commission originally proposed.

Interestingly, political support for ISMs seems quite broad within the EU. From ministers at the European Commission, to members of the European parliament, to economic special interests in domestic political debate, neoliberal political opposition to economic barriers seem to be largely a thing of the past.¹¹ Standard economic analysis would be skeptical of investment screening as they erect barriers for foreign capital flows and, potentially, block growth-enhancing capital investments. This skepticism is only magnified by the apparent political popularity of investment screening. Governments prefer large firms to remain domestically owned (Serdar Dinc and Erel, 2013). From this perspective, investment screening might just be an additional method for economic nationalism in mergers and acquisitions. However, some views from the legal studies literature are less alarmist. The legal scholar Schill (2019) makes the case for an "investment screening paradox". While investment screening might be a protective policy in the short term, it may paradoxically lead to more liberalization by providing a bargaining chip in the EU's trade and investment negotiations with economic powerhouses such as China and the United States. Schill (2019) and Chan and Meunier (2021) expect that the framework regulation on investment

⁹Consider, for instance, the statement by EU Trade Commissioner Peter Mandelson (2014) in the European Parliament debate on 14 March 2006. "We cannot block globalisation and economic change. I do not believe it is in Europe's interest to try. Those who think that the Trade Commissioner can reverse global economic change are asking King Canute to hold back the tide. But we can shape globalisation; even harness its dynamic potential for renewal and innovation."

¹⁰For member states operating an ISM, this mostly required adapting the national legal basis for their ISM to accommodate the new cooperation and information exchange mechanism and the defined requirements.

¹¹Chan and Meunier (2021) suggest three reasons for why some EU member states initially opposed an EU screening mechanism (and thus also were less likely to adopt a national ISM): (i) dependence on Chinese investment, (ii) intermediaries of FDI (Cyprus, Ireland, Luxembourg, Malta), (iii) liberal ideology.

screening is a first step towards more screening competencies at the EU level.

3 The politics and economics of ISMs

The liberal international economic order allows countries to control foreign investment proposals if the receiving countries determine that the foreign investment imposes risks to national security or public order. We distinguish between two types of security risks: traditional national security risks and new economic security risks.

Traditional security risks involved with FDI typically concern the foreign investor's possibility to acquire technology and pass it along to the government of the sending country (espionage) or to sabotage the firm's operation. For example, a national government may be reluctant to allow a foreign firm to acquire a stake in a firm that produces fighter jet missile guidance systems, even if this is a small part of its operation. While the firm producing missile guidance systems (and its workers) could benefit from a capital infusion, the national government may view the cost of a potential violation of sovereign security to exceed the benefit to the firm and its workers (in expected value). Thus, it is rational for the national government to screen the investment proposal and block it if the probability of a security violation or the extent of its impact is determined to be high.

New economic security risks involved with FDI typically concern the possibility that the foreign investor's influence on the acquired firm has a negative impact on the domestic economy even if the firm follows the receiving country's laws and regulations. To the extent that the negative economic impact jeopardizes the viability of economic firms or sectors that are deemed to be strategically important, then national governments can justifiably claim that the investment threatens their security. Some sectors that would fall under this category would include biotechnology, robotics, data analytics and logistics technology. The negative impact can occur through a variety of channels. For example, the acquisition of a firm by a foreign investor could result in a foreign firm and its government obtaining skills and knowledge that provides them with a competitive advantage in "strategic" technologies. Strategic technologies are often dual-use, important for future economic growth in the country of origin, and developed with substantial amounts of pub-

lic funding. Traditional anti-trust concerns are also at play when foreign firms seek to acquire domestic shares, such as single-supplier-risk through the absorption of competitors.

Less clear are the risks involved with foreign ownership of firms in the new digital sectors. Concerns over protection of personal data, for example, have led national governments to screen and even block foreign acquisitions.¹² Even in advanced democracies, political instability can follow macroeconomic downturns and unemployment. To the extent that the potential negative impact of the foreign investment disproportionately affects the economic fortunes of political important jurisdictions or demographics, national politicians could make the argument that the nation's security is put at risk.¹³

Thus, from the point of view of policy-makers, the security risks involved with foreign investments indicate that there is some benefit for screening foreign investments. However, foreign investment screening also entails costs for the domestic economy. For one, it is literally costly to allocate public resources to implement the investment screenings. Second, screening foreign investments may lead to some deals getting blocked during the screening process, preventing capital inflow which may have led to productivity gains in the affected sector.¹⁴ Third, ISMs impose costs on foreign firms from making investments in the domestic economy. This may have more dynamic economic costs, disincentivizing foreign firms from future investments and lowering future productivity growth in the domestic economy as a result.¹⁵ Thus, in this new dimension of international economic policy, which we termed the new economic economic security risks, we seem to face a classical economic policy tradeoff between a more liberal, higher growth economy versus more secure, less dynamic economy. In ongoing research, we model this tradeoff (Bourlès,

¹²For example, the U.S. administration blocked the acquisition of the money transfer company MoneyGram International Inc by Chinese Ant Financial because of concerns about the possible identification of U.S. citizens (Roumeliotis, 2018). Reportedly, data privacy concerns made the U.S. authority request the Chinese gaming company Beijing Kunlun Tech to divest Grindr, a gay dating app (UNCTAD, 2019; Bauerle-Danzman and Gertz, 2019).

¹³Martin (2021) suggests that one motivation for France's rejection of the proposed acquisition of Carrefour, a large food retailer, by the Canadian group Couche-Tard is to protect national jobs. Carrefour has 100,000 employees and food security is considered a "sensitive" sector in France since a new rule took effect in 2020.

¹⁴We can differentiate between different cases. First, decreased productivity gains because of a deterrence effect of ISMs (uncertainty, legal costs etc.). Second, less acquisitions due to economic protectionism or false positives (i.e. deals that would not have had any security consequences in a counterfactual scenario) will certainly occur as policy makers apply precautionary thinking and err on the side of enhanced security. Third, lower productivity gains because of blocked acquisitions with security risks.

¹⁵Serdar Dinc and Erel (2013) find economic nationalism in mergers and acquisitions deters foreign companies from bidding for other companies in that country in the future.

Dorsch and Eichenauer, 2021) and examine the effects of sectoral screening on mergers and acquisitions, deal values, and investor composition (Eichenauer and Wang, 2021).

Executives have to justify a broadening nature of security concerns to justify the adoption or extension of an ISM. We are interested in the economic and political factors that may explain the variation that we see in terms of where ISMs have been implemented (see Figure A.1 in the Appendix). We put forward a few speculative theoretical explanations in the remainder of this section.

The first class of explanations has to do with *policy preferences*. As national security violations are “tail risk” events (low probability but high cost), risk averse polities are more likely to favor policies that mitigate those risks even if it means foregoing economic growth. Those countries facing high costs from national security violations through FDI are also more likely to favor risk-mitigation policies. For example, economies with frontier technologies have more to lose in case an investor abuses the acquired knowledge to hurt the host countries’ national security or economy.

The second class of explanations has to do with *domestic political economy*. As in the Public Choice view of regulation, economic special interest groups in the domestic economy may view ISMs as a method of protecting economic rents. If the value of protecting their rents exceeds the cost of organizing and lobbying policy-makers, then special interest groups will try to influence policy-makers to implement ISMs. Alternatively, the incumbent government in the domestic economy may be using ISMs for more straightforward electoral purposes. While the real economic bite of implementing investment screening may be limited, there may be great symbolic value for an incumbent appealing to nationalist segments of the electorate of putting high-profile foreign investment projects under review. Moreover, ISMs may be one tool in a limited executive policy toolbox for executives to demonstrate concrete steps to wind down globalization, which may have electoral benefits in some domestic political contexts. ISMs are implemented at the discretion of the executive, with little oversight from the legislative or judicial branches of government (only one single case of judicial review is known (Pohl and Rosselot, 2020)).

The third class of explanations has to do with *international political economy*. ISMs could be used

to limit economic engagement with foreign firms from countries that compete for international power or are at odds with domestic values. On the first point, popular wisdom holds that ISMs and other kinds of barriers to international economic factor flows that are being implemented by the EU and other OECD countries are specifically targeted at China. On the one hand, China has risen as an economic superpower to the level of the United States and the European Union and policy-makers may simply seek to put some barriers to Chinese growth in European markets. On the other hand, the Chinese economy and political institution are illiberal and against the values of the advanced industrialized democracies. While ISMs may be intended as a kind of “sanction” targeting countries with such divergent political and economic values, countries with ISMs do not have different *de jure* screening rules for different type of countries (except within the “European club”). The *de facto* security assessment of a specific transaction by the government is likely to depend on the country from which the proposed foreign investment originates and its proximity to the government (Bourlès, Dorsch and Eichenauer, 2021). State-owned and -affiliated firms are perceived as particularly opaque and several countries have lower screening thresholds for such investors.¹⁶ The logic of diverging values could also lead to ISMs being implemented against foreign firms with labor practices or environmental standards that fall short of the norms in the EU.

This section has gone through some theoretical arguments for implementing ISMs. While some of the specific explanations we put forth are speculative, one element of our discussion seems uncontroversial and a useful starting point for future work on the political economy of ISMs. Implementing an ISM has both costs and benefits that policy makers must think through when deciding on the sectors and thresholds subjected to screening. Popular alternatives to investment screening like a prohibition of foreign investment in some sectors (e.g. defense or water infrastructure) or public ownership (or voting majority of the state) of firms in strategic sectors seem less bureaucratic but also less liberal. The costs and benefits of an ISM need to be compared to these alternatives. The evaluation will likely be specific to each economy and to each sector. The next section presents some preliminary empirical analysis of the factors influencing the adoption

¹⁶Pohl and Rosselot (2020, 6) note that the rise of Sovereign Wealth Funds contributed to concerns about FDI and spurred interest in ISMs already in the mid-2000s.

of an ISM.

4 What Determines the Adoption of Investment Screening?

4.1 Literature review

The peer-reviewed academic literature on the new wave of investment screening mechanisms is small. Our research question is most closely related to [Chan and Meunier \(2021\)](#). They aim to explain the variation in preferences of EU Member States for the EU investment screening framework. They provide quantitative evidence that countries with higher technological levels were more supportive of FDI screening, and report that interviewed policy makers were concerned over lacking reciprocity in technology transfers. They find no evidence that countries with high Chinese FDI inflows were more favorable towards the EU initiative but note that investments in different types of sector (low-tech vs. high-tech) might affect support for the EU screening mechanisms differently. [Bauerle-Danzman and Meunier \(2017\)](#) document that the Covid-19 has accelerated the investment screening trend. [EC \(2019\)](#) shows a continuous rise of foreign ownership of European firms and the increasing diversity of investors' countries of origin.

A number of political scientists study investment screening. To the best of our knowledge, there are currently only two research projects in economics that focus on investment screening mechanisms. [Bourlès, Dorsch and Eichenauer \(2021\)](#) hypothesize that changing norms in a network of close economic partners led to the proliferation of investment screening mechanisms. [Eichenauer and Wang \(2021\)](#) investigate the effects of sectoral screening on the number and characteristics of mergers and acquisitions.

4.2 Method and Data

In this section, we empirically investigate possible determinants of ISM adoption using a sample of EU and OECD countries. Because countries introduced the ISM in different years, we consider the following fixed effects panel model:

$$ISM_{it} = \mathbf{X}_{i,t-1}\boldsymbol{\alpha} + \gamma_i + \theta_t + \epsilon_{it} \quad (1)$$

where the outcome variable ISM_{it} equals 1 if a country i implemented investment screening in any sector and 0 otherwise. $\mathbf{X}_{i,t-1}$ is a set of possible determinants lagged by one year. Specifically, we consider three alternative measures of the importance of high-tech production in the economy. Our preferred measure of a country’s technological level is value added of high-tech production (logarithm). Alternatively, we use the total output of high-tech production (logarithm) or a country’s R&D expenditure as share of GDP. The value-added and production data come from the Trade in Value Added (TiVA) data set published by EuroStat (2021). The latest available TiVA data dates back to 2018. Variables are constructed as in Chan and Meunier (2021).¹⁷ Data on R&D expenditures is from Bank (2021).¹⁸

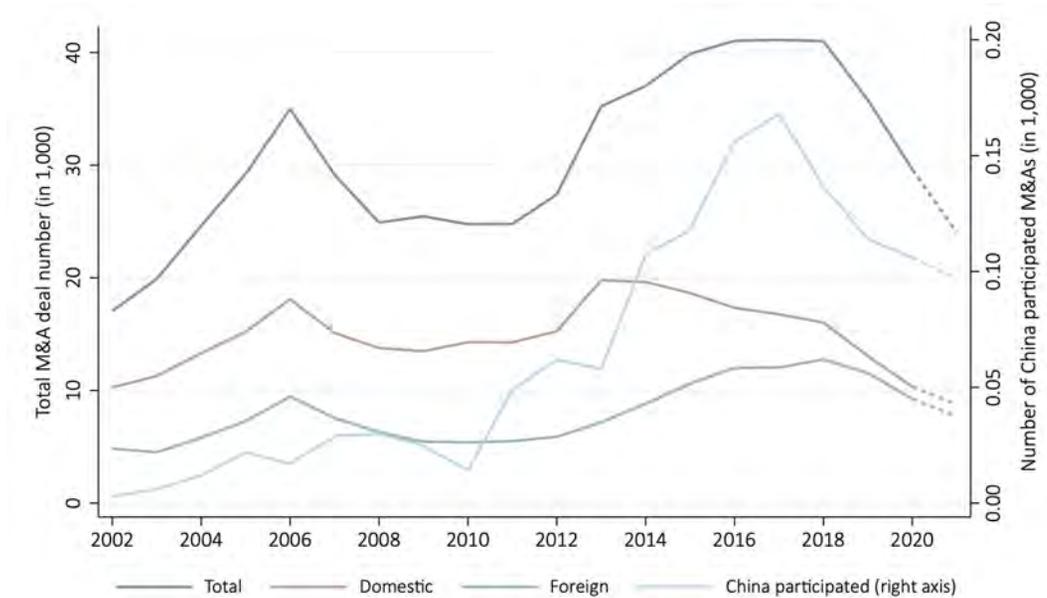


Figure 5: Time trend in the number of M&A deals in Europe: 2002-2020. European countries are European Union, European Economic Area members and Switzerland. Data in 2021 (dashed line) represents the number of M&A deals until October. Source: Data from the Bureau van Dijk’s Zephyr database, own representation.

¹⁷Industries that are classified as high or medium-high R&D intensity in International Standard Industrial Classification (ISIC), Revision 4 (see ?).

¹⁸R&D expenditures are missing for a few observations. We linearly interpolate missing values within countries.

We also test the popular wisdom that the growth in Chinese investment between 2010 and 2017 (Figure 5) made countries receiving such FDI more likely to adopt an ISM. We include total Chinese FDI inflows (in log) in the regression as a potential determinant (UNCTAD, 2021a).¹⁹ Chan and Meunier (2021) suggest that concerns about Chinese investments and the lack of reciprocal technological transfer were especially high in countries with high levels of technology. They do not test this argument in their empirical analysis of EU member states' initial preference about an EU investment screening. We systematically test this claim by interacting Chinese inward FDI with any one of the three alternative measures of high-tech production. This interaction allows to check for possibly heterogeneous correlations of Chinese investments in countries with different levels of technological development. We further control for the level of economic development by including (logged) GDP per capita (in 2015 constant USD) (Bank, 2021). We use the inward FDI stock as share of GDP to control for a country's reliance on foreign capital (UNCTAD, 2021a).²⁰

Our second set of possible determinants relates to the existing regulatory environment for foreign investment. While it is possible that countries with a tightening environment for foreign investment are less open to foreign investment and thereby more likely to adopt ISM, it could also be the case that existing regulations provide sufficient protections such that an ISM becomes less urgent. We employ the FDI regulatory restrictiveness index generated by OECD that measures statutory restrictions on foreign direct investment in 22 economic sectors.²¹ We then consider two specific measures: FDI screening approval and FDI equity restrictions. Data on the FDI-RRI and the two components of interest (FDI screening and approval and FDI equity limitations) is available for 2006 and then from 2010-2020. We linearly interpolate missing values within countries.

Additionally, we add year fixed effects (θ_t) to account for common shocks to all countries across years (e.g., learning about benefits of an ISM or new types of risks to national security). In some specifications, we add country fixed effects (γ_i) to absorb time-invariant factors at the

¹⁹We add 0.1 to all values before taking the logarithm and set negative values to zero.

²⁰FDI as share of GDP is extremely high in a number of countries that are known as specialising in financial services. In order to avoid the effects of these outlier values, we drop country-years for which the share of FDI in GDP was above 250 percent. Observations dropped due to this concern include Ireland, Malta, Cyprus, Switzerland, and Luxembourg.

²¹Average of scores that measure statutory restrictions on FDI across 22 economic sectors. It looks at the four main types of restrictions on FDI: 1) Foreign equity limitations; 2) Discriminatory screening or approval mechanisms; 3) Restrictions on the employment of foreigners as key personnel and 4) Other operational restrictions. Evaluated on a 0 (open) to 1 (closed) scale (OECD, 2021b).

country level (e.g., time-constant country-specific vulnerabilities in certain sectors, the extent of nationalism, or the risk aversion of a country’s population). The heteroskedasticity-robust error term ϵ_{it} is clustered at the country level.

Our estimation sample for [Table 2](#) includes 40 countries spanning 13 years between 2007 and 2019.²² [Table 1](#) shows the descriptive statistics of the variables used in the figures and regression tables.

Table 1: Summary statistics

	Count	Mean	SD	Min	Max
Investment Screening Mechanism (any sector)	546	0.42	0.49	0.00	1.00
Chinese FDI inflows	472	396.09	1255.25	0.00	17817.05
Global inward FDI stock (constant 2015 USD trillion)	546	25.27	4.98	16.73	33.90
Inward FDI stock (% of GDP)	505	51.23	34.52	2.94	224.04
Global inward FDI stock (% of GDP)	546	33.23	5.07	23.67	41.68
R&D expenditure (% of GDP)	481	1.59	0.98	0.18	4.53
R&D expenditure (% of GDP), interpolated	501	1.61	0.98	0.18	4.53
High R&D Value Added	504	0.08	0.19	0.00	1.24
High R&D production	504	0.22	0.47	0.00	2.85
FDI regulatory restrictiveness index	485	0.06	0.06	0.00	0.24
FDI screening approval	485	0.02	0.04	0.00	0.20
FDI equity restrictions	485	0.04	0.03	0.00	0.14
GDP p.c., 2015 constant USD	546	32527.83	21906.45	4890.28	105454.73

Notes: Table shows summary statistics of variables used in the empirical analysis in [Table 2](#). The sample consists of 40 EU and OECD countries between 2007 and 2019.

4.3 Results

We start by considering possible economic determinants. [Table 2](#) reports the estimation results from a linear probability regression as specified in Equation (1). Specifically, our model includes Chinese FDI inflows, the share of R&D expenditure in GDP and its interaction with Chinese FDI inflows, GDP per capita, and the inward FDI stock in GDP. Column (1) reports the results with only these five variables. We add year fixed effects in column (2) and country fixed effects in column (3). We find that R&D expenditures are a strong determinant of ISM adoption of an ISM. Countries with a higher share of R&D expenditure in GDP tend to be more likely to start screening

²²Sample countries (balanced): Australia, Austria, Belgium, Bulgaria, Canada, Chile, Colombia, Costa Rica, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, The Republic of Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Turkey, United Kingdom, United States.

Table 2: Regression results: Economic determinants of ISM

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Chinese FDI inflows, ln, t-1	0.03 (0.02)	0.02 (0.02)	0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.01 (0.02)	0.00 (0.01)	-0.01 (0.01)	-0.00 (0.01)
R&D expenditure (% of GDP), t-1	0.24*** (0.08)	0.21** (0.09)	0.19 (0.12)						
Chinese FDI x R&D expenditures	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)						
High-tech value-added, ln, t-1				0.43*** (0.10)	0.40*** (0.11)	-0.20 (0.40)			
Chinese FDI x High-tech VA				-0.02 (0.01)	-0.02 (0.01)	-0.01 (0.01)			
High-tech production, ln, t-1							0.31*** (0.09)	0.30*** (0.09)	0.07 (0.39)
Chinese FDI x High-tech production							-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
GDP p.c., ln, t-1	-0.03 (0.12)	-0.07 (0.12)	-0.23 (0.43)	0.07 (0.10)	0.02 (0.10)	-0.17 (0.41)	0.05 (0.10)	-0.00 (0.11)	-0.23 (0.41)
Inward FDI stock, t-1	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Country FE			✓			✓			✓
Year FE		✓	✓		✓	✓		✓	✓
Observations	502	502	502	506	506	506	506	506	506
# Country	40	40	40	40	40	40	40	40	40
R-squared overall	0.12	0.12	0.00	0.22	0.24	0.20	0.22	0.24	0.05

Notes: Sample includes 40 OECD and EU countries between 2007 and 2019. The binary dependent variable is one in the year of the adoption of an ISM and afterwards. VA refers to valued-added. Standard errors are clustered by country. * : $p < 0.1$, ** : $p < 0.05$, *** : $p < 0.01$.

foreign investment. The correlation becomes statistically insignificant when country fixed effects are included, most likely due to limited year-to-year variation. In contrast to popular wisdoms, we do not find that countries with higher Chinese FDI inflows are more likely to adopt an ISM. The non-finding persists for countries with a higher share of R&D expenditure as shown by the insignificant interaction coefficient. These results are consistent with the findings about EU member states preferences about an EU investment screening framework (Chan and Meunier, 2021).

Our results suggest that Chinese investments are not one of main drivers of ISM adoption. The non-finding may be explained by the fact that Chinese investments, though experiencing a rapidly increasing trend between 2010 until a reversal in 2017, only account for a very small share of foreign investment, especially in Europe (Figure 5). Data on cross-border Mergers and Acquisitions (M&As) from Bureau van Dijk's Zephyr database shows that China participated in only 1.6% of all cross-border M&A deals that closed in European and OECD countries between

Table 3: Regression results: Regulatory environment towards FDI

	(1)	(2)	(3)	(4)
Chinese FDI inflows, ln, t-1	-0.03 (0.02)	-0.03 (0.02)	-0.03 (0.02)	-0.03 (0.02)
High-tech value-added, ln, t-1	0.40*** (0.11)	0.42*** (0.11)	0.38*** (0.11)	0.41*** (0.11)
Chinese FDI × High-tech VA	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)
Inward FDI stock, t-1	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
FDI regulatory restrictiveness index, t-1	1.92* (1.16)			
FDI screening approval, t-1		2.98** (1.22)		2.80** (1.29)
FDI equity restrictions, t-1			1.71 (1.99)	1.20 (1.99)
GDP p.c., ln, t-1	-0.00 (0.13)	0.00 (0.12)	0.02 (0.12)	0.00 (0.12)
Year FE	✓	✓	✓	✓
Observations	467	467	467	467
# Country	39	39	39	39
R-squared overall	0.21	0.24	0.20	0.24

Notes: Sample includes 40 OECD and EU countries between 2007 and 2019. The binary dependent variable is one in the year of the adoption of an ISM and afterwards. VA refers to valued-added. Standard errors are clustered by country. * : $p < 0.1$, ** : $p < 0.05$, *** : $p < 0.01$.

2007 and 2021. Lastly, we find neither the level of economic development as measured by GDP per capita nor the reliance on foreign finance as proxied by the inward FDI stock to be significantly correlated with the adoption of an ISM.

In the remaining columns of [Table 2](#), we replicate the above estimations but use two alternative measures of high-tech production: value added of high-tech production in columns (4)–(6) and total output of high-tech production in columns (7) – (9). The result confirm our finding that a high level of technological development is a major determinant of introducing an ISM. Again, we obtain a statistically insignificant coefficients for Chinese FDI inflows, its interaction with our proxies for technological development, GDP per capita, and the inward FDI stock.

In [Table 3](#), we analyse how ISMs relate to a country's regulatory environment towards FDI. As measures, we include either the one-year lag of the composite FDI regulatory restrictiveness index, or of one of its subindices, FDI equity restrictions or FDI screening and approval. In all specifications, we control for year fixed effects and use high-tech value added as the measure of high-tech production.²³ We find that the FDI regulatory restrictiveness index is positively correlated with the introduction of an ISM (column (1)). This suggests that countries which already have a tight regulatory environment for foreign investment tend to be more likely to adopt an ISM. Similar to the composite measure, both FDI screening approval and FDI equity restrictions correlate positively with adopting an ISM, albeit only the coefficient of the FDI screening and approval measure is statistically significant. Even when controlling for the regulatory variables, high-tech production remains a highly significant determinant of ISM adoption.

Overall, the results in [Table 2](#) and [Table 3](#) indicate that technological development and prior regulations on foreign investment are associated with ISM adoption.

5 Concluding remarks

This policy brief documents that an increasing number of OECD and EU countries have adopted ISMs in recent years and that a broad range of economic sectors is screened. We show that European countries are particularly active in adopting and expanding ISMs. While this trend does not mean that Europe closes its doors to investments from outside of Europe, acquisitions become more burdensome and costly especially for non-European foreign investors.

Common explanations for the shift in perceptions about what constitutes threats to public order typically include the rise of China and other countries with illiberal political institutions as economic powers, new security risks posed by the digitalization of the economy, and the perceived threat of globalization for domestic industries deemed to be strategically (and politically) important.

We examine whether the existing hypotheses about technological levels and Chinese inward FDI explain the adoption of an ISM. Our exploratory quantitative analysis shows that ISMs are

²³Results using R&D expenditure share or total output of high-tech production are similar.

more likely to be implemented in countries at the technological frontier. This tentative evidence suggests that countries that have more to lose from malicious foreign investors are more likely to control inward FDI. In contrast to popular wisdom, we find no evidence that countries experiencing higher levels Chinese FDI are more likely to adopt an ISM, independent of their level of technological development.

We also discuss the politics and economics of investment screening and propose a few speculative theoretical explanations. The first explanation relates to a country's policy preferences when dealing with low probability but high-cost events. The second set of explanations is related to domestic political economy such as economic special interest groups or electoral incentives for incumbents. For example, there may be great symbolic value to implementing ISMs to demonstrate concrete steps to wind down globalization and putting high-profile foreign investment projects under review. Whether ISMs are also used to protect national champions from foreign acquisitions has not systematically been studied yet. The third class of explanations relates to the international political economy. For example, ISMs might be used to limit economic engagement with firms from countries that are economic rivals or hold different values. While we do not test these alternative explanations in this policy brief, they could be of interest to policy makers and stimulate scholarly research on ISMs. Our discussion shows that the costs and benefits of ISMs for FDI receiving countries need to be carefully assessed and to be compared to alternative policies for protecting public order.

References

Bank, World. 2021. "World Development Indicators.". Washington, DC: The World Bank Group, November 22.

Bauerle-Danzman, Sarah and Sophie Meunier. 2017. The big screen: global crises and the diffusion of foreign investment review. Technical report Paper presented at the COVID-19 and post-pandemic investment and development conference. Bloomington, IN, March 11.

Bauerle-Danzman, Sarah and Sophie Meunier. 2021. "The big screen: Mapping the diffusion of foreign investment screening mechanisms." Research Note.

Bauerle-Danzman, Saraha and Geoffrey Gertz. 2019. "Why is the U.S. forcing a Chinese company to sell the gay dating app Grindr?" Monkey Cage Blog, Washington Post. Published Online on April 3. Accessed on December 20, 2021.

URL: <https://www.washingtonpost.com/politics/2019/04/03/why-is-us-is-forcing-chinese-company-sell-gay-dating-app-grindr/>

Bonnitcha, Jonathan. 2021. "The return of investment screening as a policy tool." Investment Treaty News, International Institute for Sustainable Development. Published Online on December 19. Accessed on December 20, 2021.

URL: <https://www.iisd.org/itn/en/2020/12/19/the-return-of-investment-screening-as-a-policy-tool-jonathan-bonnitcha/>

Bourlès, Renaud, Michael T. Dorsch and Vera Z. Eichenauer. 2021. The price of security? A network perspective on investment screening mechanisms. Technical report Unpublished manuscript.

Chan, Zenobia T and Sophie Meunier. 2021. "Behind the screen: Understanding national support for a foreign investment screening mechanism in the European Union." *The Review of International Organizations* pp. 1–29.

Commission, European. 2020. "Guidance to the Member States concerning foreign direct invest-

ment and free movement of capital from third countries, and the protection of Europe's strategic assets, ahead of the application of Regulation (EU) 2019/452 (FDI Screening Regulation)." Communication from the Commission, March 25. Accessed on December 20, 2021.

URL: https://trade.ec.europa.eu/doclib/docs/2020/march/tradoc_158676.pdf

EC. 2019. Foreign Direct Investment in the EU. Technical report European Commission. Commission Staff Working Document.

Eichenauer, Vera Z. and Feicheng Wang. 2021. De-globalization for security: The effects of screening foreign investments on mergers and acquisitions. Technical report Unpublished manuscript.

EuroStat. 2021. "Trade in value added.". Paris, France: Organization for Economic Co-Operation and Development, December 15.

URL: <https://ec.europa.eu/eurostat/web/balance-of-payments/data/database>

Juncker, Jean-Claude. 2017. State of the Union Address 2017. Technical report Speech. Brussels: European Commission, September 13. Accessed November 17, 2021.

URL: https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_17_3165

Mandelson, Peter. 2014. EU trade commissioner Peter Mandelson on anti-dumping measures on Chinese and Vietnamese leather shoes. Technical report Speech in the European Parliament. Brussels: European Commission, March 14. Accessed December 12, 2021.

URL: https://trade.ec.europa.eu/doclib/docs/2006/march/tradoc_127962.pdf

Martin, Didier. 2021. "Protectionism is back on the French economic menu." Financial Times Opinion. Published Online on February 17. Accessed on December 20, 2021.

URL: <https://www.ft.com/content/7a3e0b84-9387-4425-8d05-ffb4f09f70a4>

OECD. 2021a. Chapter 6: Managing access to AI advances to safeguard countries' essential security interests. In *OECD Business and Finance Outlook 2021: AI in Business and Finance*.

URL: <https://doi.org/10.1787/ba682899-en>

OECD. 2021b. "FDI regulatory restrictiveness index.". Paris, France: Organization for Economic Co-Operation and Development, November 23.

- Pohl, Joachim and Nicolás Rosselot. 2020. "Acquisition- and ownership-related policies to safeguard essential security interests—Current and emerging trends, observed designs, and policy practice in 62 Economies (Table of Contents)." *Observed Designs, and Policy Practice in 62*.
- Roumeliotis, Greg. 2018. "U.S. blocks MoneyGram sale to China's Ant Financial on national security concerns." Reuters.com Website. Published online on January 2. accessed on December 20, 2021: <https://www.reuters.com/article/us-moneygram-intl-m-a-ant-financial-idUSKBN1ER1R7>.
- Schill, Stephan W. 2019. "The European Union's foreign direct investment screening paradox: Tightening inward investment control to further external investment liberalization." *Legal Issues of Economic Integration* 46(2).
- Serdar Dinc, I and Isil Erel. 2013. "Economic nationalism in mergers and acquisitions." *The Journal of Finance* 68(6):2471–2514.
- UNCTAD. 2019. "National security-related screening mechanisms for foreign investment. An analysis of recent policy developments." UNCTAD Investment Policy Monitor Special Issue, December. Accessed on December 20, 2021.
URL: <https://www.reuters.com/article/us-moneygram-intl-m-a-ant-financial-idUSKBN1ER1R7>
- UNCTAD. 2021a. "Foreign direct investment: Inward and outward flows and stock.". Geneva, Switzerland: United Nations Conference on Trade and Development, December 8, 2021.
URL: <https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=96740>
- UNCTAD. 2021b. "World Investment Report." World Investment Report. Geneva, Switzerland: United Nations Conference on Trade and Development.

Appendix

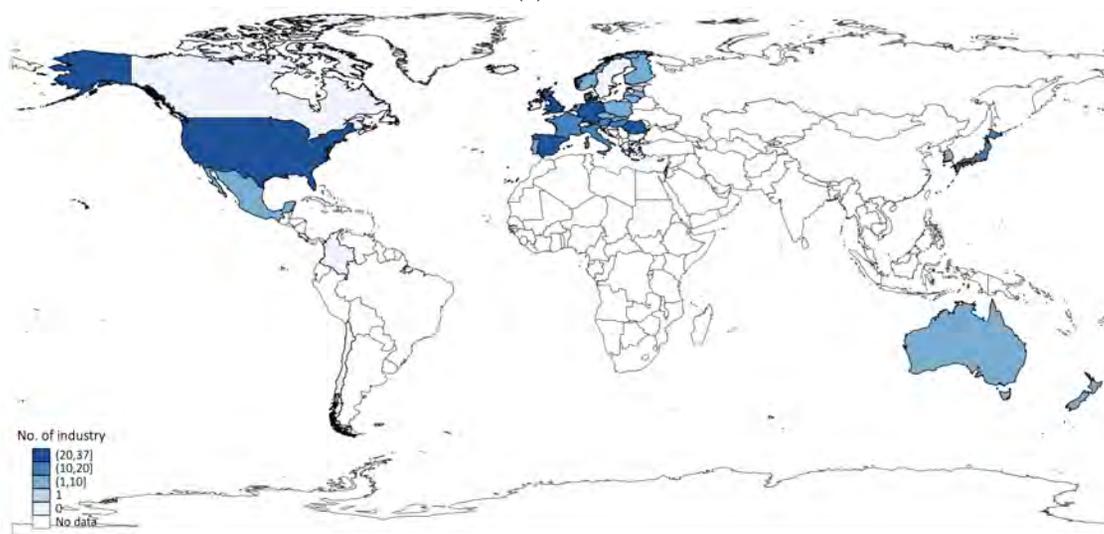
Table A.1: Top 10 industries and countries with Chinese M&A in European and OECD countries: 2007-2020.

		Deal number	Deal value
Rank	NACE sector		
1	Information service activities	520	11063.09
2	Manufacturing of computer, electronic and optical products	444	22700.33
3	Scientific research and development	356	13427.44
4	Manufacturing of machinery and equipment n.e.c.	237	11456.77
5	Publishing activities	226	7759.66
6	Mining support service activities	213	10933.34
7	Computer programming, consultancy and related activities	170	4466.58
8	Wholesale of mining, construction and civil eng. machinery	162	9395.79
9	Other manufacturing	147	2478.52
10	Manufacturing of motor vehicles, trailers and semi-trailers	145	23585.59
Rank	Country		
1	United States	1648	92711.12
2	Australia	433	31719.51
3	United Kingdom	296	25753.09
4	Germany	286	23528.92
5	Canada	246	17515.19
6	Japan	172	2428.99
7	Israel	168	9297.29
8	Italy	140	22544.98
9	Korea, Rep.	135	7273.05
10	France	110	29319.79

Notes: Rank is based on the total number of M&A deals between 2007 and 2020. Deal values are measured in 1000 Euro. Data is from the Bureau van Dijk's Zephyr database.



(a) 2007



(b) 2021

Figure A.1: Number of industries with ISM by country in European and non-European OECD countries. European countries are European Union and European Economic Area members plus Switzerland. Source: Data on OECD countries from [Bauerle-Danzman and Meunier \(2021\)](#), extended by authors to include all EU countries, own representation.

EconPol Europe

EconPol Europe - The European Network for Economic and Fiscal Policy Research is a unique collaboration of policy-oriented university and non-university research institutes that will contribute their scientific expertise to the discussion of the future design of the European Union. In spring 2017, the network was founded by the ifo Institute together with eight other renowned European research institutes as a new voice for research in Europe. A further five associate partners were added to the network in January 2019.

The mission of EconPol Europe is to contribute its research findings to help solve the pressing economic and fiscal policy issues facing the European Union, and thus to anchor more deeply the European idea in the member states. Its tasks consist of joint interdisciplinary research in the following areas

- 1) sustainable growth and 'best practice',
- 2) reform of EU policies and the EU budget,
- 3) capital markets and the regulation of the financial sector and
- 4) governance and macroeconomic policy in the European Monetary Union.

Its task is also to transfer its research results to the relevant target groups in government, business and research as well as to the general public.