The Economic Advantages and Disadvantages of Foreign Takeovers

August 2014
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In Brief

Common objections regarding foreign takeovers are that

- a takeover could be to shut down a rival, allowing an increase in market power and sales at higher prices, while there is no offsetting gain from larger employment and higher profits at the acquiring firm — for the acquiring firm is abroad;
- takeovers of “strategic” industries (e.g. defence sector, mineral extraction, food, energy or nuclear power) from potentially hostile rival countries could be a threat;
- a global conglomerate taking over and residing abroad feels no emotional connection with the firm, its products or its workers;
- a new innovation is “lost” to the domestic economy via takeovers by firms from countries that specialise more in commercialization;
- instead of investing domestically the previous owners take their money to invest it abroad;
- the takeover is intended to allow the acquirer greater ease of allocating tax liabilities internationally;
- foreign takeover creates scope for managers or executives to act in their own interests rather than in the best interests of the owners of the firm.

The authors argue that

- the EU’s merger control framework is designed precisely to prevent mergers that would materially reduce effective competition without some sufficient offsetting gain;
- there are certain sectors (mainly defence-related) where it is recognised that takeovers require governmental approval;
- lack of emotional connection and “empire building” ambitions of managers are not per se an issue of domestic versus foreign ownership — rather one of small and local versus large and global;
- if one country is good at producing innovations and another at commercialising them, it is only natural that there will be takeovers at the interface between these phases of the product life;
- investing abroad does not mean capital is “lost”. The investors remain domestic citizens, and will receive dividends or interest income on their investments abroad.

However, foreign takeovers might appear (wrongly) associated with negative economic and social implications because

- foreign takeovers could prove to be a mistake for the acquiring firm,
- there might be a disproportionate number of takeovers, leading to closure or asset-stripping, by firms based in particular Member States.

Furthermore, national governments have little means to prevent a foreign parent company from shutting down operations or limiting investment.
Therefore, to test the economic impact of foreign takeovers, the authors look at available empirical data. UK and Eurostat data show that

- the largest EU sectors in terms of value added are manufacturing, wholesale, retail trade and repair, which generate €1.4 and €0.9 trillion, respectively, accounting for almost half of the total value added in the EU.

Using a scatter plot, were each dot is the pair of the indicator’s values for domestic and foreign-owned firms in each sector, and calculating the ratio of the foreign to domestic values of the indicators for each sector, the authors demonstrate that

- for the wide range of sectors in the different Member States (including all observations in the period 2008-2011) it is the domestic firms that take the larger share of employment,
- apparent labour productivity is larger in the group of foreign-owned firms,
- investment per employee is more than two times higher in foreign than in domestically-owned firms,
- findings do not imply causality from one variable to the other.

Proposing a model that measures different performance variable (related to productivity, investment and gross operating rate) 3 years after the change in ownership took place, the authors show that

- there is no significant relationship between an increase in the number of foreign-owned firms and the key performance indicators,
- the same is true when looking only at the increases in the number of domestically-owned firms,
- there are no significant differences between the effects resulting from an increase in the number of domestically and foreign-owned firms.

The authors conclude that empirical analysis identifies no problems with foreign ownership in sectors, or increasing proportions of sectors that are foreign-owned, that might not have been obvious from the theory alone. If anything, foreign ownership appears to be associated with better economic performance — though it is possible that it is the anticipated improved economic performance that causes foreign takeovers, rather than foreign takeovers driving the improved performance.
1. Introduction

When a firm is taken over by a foreign firm or foreign investors, there is often political unease and sometimes calls for intervention to prevent the takeover or to limit what the new foreign owners are able to do with the firm they acquire. In this report we shall investigate to what extent (if at all) such concerns might have some justification either in economic theory or in the empirical data, and to the extent they are unjustified to attempt to explain their origin.

1.1. What is a Foreign Takeover?

A takeover is, for our purposes here, the acquisition of one company (which we shall refer to as the “acquired firm”) either by another company or by a new investor or group of investors (which we shall refer to the “acquirer” or “acquirers”). Acquisition consists in the transfer of ownership (e.g. in the form of shares), which will often involve payment (though not always — sometimes a bankrupt entity might be taken over without payment for any existing equity, that existing equity having no value). Acquisition typically implies taking on responsibility both for the firm’s assets (e.g. plant and equipment, patents, contract pipeline, staff) and for its liabilities (e.g. debts).

A “foreign takeover” is, for our purposes here, one in which the acquired company was previously majority-owned by citizens and tax resident of the country in which the firm is based and in which the acquirers are resident in another country.

1.2. The EU Merger Framework

The legal framework governing situations in which one firm takes over another to form one merged entity is merger law, which in turn is a subset of competition law. The key EC Merger Regulation¹ requires that when mergers are sufficiently large (i.e. where the combined business has a worldwide turnover exceeding €5bn and a turnover within the EU of over €250m) and the merger transcend national borders, the firms concerned must notify and be examined by the European Commission. European Parliament and Council Directive 2004/25/EC of 21 April 2004 establishes minimum guidelines across the EU for the conduct of takeover bids for cases where some or all of the equity or debt of the firms concerned is traded on a regulated market (e.g. the main national stock exchange).

¹ Merger Regulation 139/2004
2. How Might a Foreign Takeover be of Domestic Benefit and How Might it Go Wrong?

2.1. The Benefits of Takeovers

Like all free transactions, a takeover will occur only if it is regarded as mutually beneficial by the parties concerned — i.e. only if those acquiring the firm believe it is worth more to them than the sale price and those selling believe it is worth less to them than that price. Takeovers that are termed “hostile” occur when the current management of a firm is opposed to the change of ownership. But the management are not the owners — they work for the owners. The transaction between the former owners and acquirers will occur only if both parties gain.

2.1.1. Benefits for the seller

Sellers gain three key forms of benefit by selling:

- First, they typically receive money (or, sometimes, valuable stock in some other firm). For example, the UK government received around £4.5bn by selling its 36 per cent stake in British Energy to EDF.
- Second, they lose the responsibility (legal or moral) for the debts of the firm — which in some cases may be sufficiently large that the sellers would have defaulted. For example, when in January 1999 RBS took over the National Westminster Bank, it acquired responsibility for its balance sheet.
- Third, they lose the responsibility for the ongoing management of the firm — e.g. the responsibility for executing projects that have been taken on, which in some cases might have turned out to be extremely unattractive. For example, when the Panama Canal was built, the original French company formed to build it in 1876 was La Société internationale du Canal interocéanique. When this company collapsed the project was taken over in 1894 by the Compagnie Nouvelle du Canal de Panama. When that failed, the US Isthmian Canal Commission purchased the French project, including paying €40m for the French-held land.

2.1.2. Benefits for the acquirer

Acquirers gain in three key ways:

- First, they obtain the existing assets and organisation. For example, when it took over the Alliance and Leicester Building Society in 2010, the Spanish Santander Group acquired its banking licence, its branch network, its credit card division, and its Isle of Man-based subsidiary.
- Second, they have the opportunity to manage the assets of the firm better than the previous management (this is a key motivation for takeovers). A variant of this might be a case in which the previous management’s failures have led the firm to be in financial distress. Then the acquirer might close operations or sell off assets or
liquidate the entire firm — such liquidation being, of course, a consequence of the firm’s failure not of the takeover.

- Third, they have the opportunity to exploit potential synergies between the acquired firm and their other operations (e.g. there might be economies of scale in the purchase of factors of production, or staff might benefit by training or working together with staff from the other company, or customers might prefer bundled combinations of the acquired and acquirer’s firms’ products to purchasing the products separately). For example, when Google took over Motorola Mobility in 2012, it was a combination of an upstream firm (Google) and a downstream company (making high-end smartphones) that could use Google services. At the same time Google also acquired 17,000 patents and 7,500 pending patents that it could use to add value to its activities.

2.1.3. Benefits for broader society

A takeover can lead to a number of benefits for broader society:

- If the acquiring company manages the firm better or achieves synergies through combining the firm with the acquirers’ other assets, that can lead to an increase in productivity, meaning higher quality products sold at lower prices to domestic consumers, and raising domestic wages and tax revenues (e.g. taxes on labour income or VAT on sales).
- The firm may service debts that would otherwise have been defaulted upon and complete projects that might otherwise have been abandoned.
- The previous investors receive money from the transaction, which they might invest in new projects or use to consume domestic products, boosting demand.

2.2. Disbenefits of Takeovers

2.2.1. Takeovers discourage investment in firm-specific human capital

One standard objection to permitting takeover is that they often entail a step-change in the nature of a business, potentially leading to the replacement of key staff (e.g. in management roles) or the relocation of activities. But certain forms of firm-specific human capital can be built up only through sufficient continuity and may be lost in such step-changes. Therefore the threat of takeovers diminishes the expected value of investing in firm-specific human capital and so might deter it.

2.2.2. Takeovers might go wrong

Typically takeovers are intended to create or exploit synergies between the purchasing and the purchased firm. However, such synergies are rarely certain. Sometimes therefore a takeover that seemed profitable at the time will prove a mistake, and the purchasing firm may respond to its mistake by extracting what value it can from the other firm’s assets.
2.2.3. Takeovers might reduce competition

Takeovers, almost by definition, increase market shares. Often such increased market shares will not constitute any material reduction in competition and may even make competition more effective (economic theory does not suggest that any particular market share is required for competition to be effective, and larger firms may be more credible rivals — e.g. a merger between two smaller players in an industry may create a more effective rival to a third, much larger firm). But on other occasions takeovers might reduce competition.

2.2.4. Takeovers may represent a lost opportunity for shareholders or an opportunity to hold up a deal

Suppose that a company develops a new product or production process or breaks into a new market — or seems about to do so. Alternatively, suppose that a company’s rivals are about to fail, leaving it a strong opportunity to expand to take up the market slack. In such cases, the shareholders of the company are likely to make a gain — the expected value of future dividends will rise.

But by how much? One way for the shareholders to find out might be to wait and see how dividends actually move. But some shareholders might be interested in trading. For them to discover how much these new developments are really worth would require some analysis. Such analysis might be difficult to conduct or costly to acquire. Where analysis is costly and there are many different shareholders, there may be a temptation to free ride. After all, if someone else does the analysis and it proves favourable, then the share price is likely to rise naturally as existing owners than have done the analysis are more reluctant to sell. So shareholders that do no analysis can benefit from the analysis done by others.

This free-riding problem is a well-known issue where ownership is diffuse. But it can create specific problems for takeovers, particularly when ownership is moderately diffuse (e.g. if there are significant minority shareholders). If there is a takeover bid following some development of the sort set out above (e.g. new products, etc.), shareholders may not have done analysis that helps guide their view as to how much the outlook as truly improved. That might lead them to under-value the sale. Alternatively, however, some minority shareholders might prefer to hold up the sale in the hope of securing an increased bid price.

For these and related reasons there are typically rules or regulations guiding the takeover process. In the EU the most important of these is the Takeover Bids Directive of 2004.²

2.3. Remarks

Setting aside the damaging of competition (which we consider further below), the central purpose of takeovers is to allow the acquiring firm to add more value, via synergies such as

² Directive 2004/25/EC on takeover bids
economies of scope or scale with the acquired firm. Like any business proposition, takeovers can go badly, but they should be seen as part of a spectrum of business activities that includes business start-up, investment, expansion and takeover.

3. Concerns with Foreign Takeovers

Foreign takeovers can be highly controversial. Two recent examples include:

- The 2014 Pfizer bid for AstraZeneca. AstraZeneca is a British-Swedish drugs and biologics company, headquartered in London and listed on the London Stock Exchange. In January 2014 US drugs company Pfizer and UK drugs companies AstraZeneca began meeting to discuss a possible takeover by Pfizer that would have left Pfizer as the largest drugs company in the world. Many British politicians expressed concerns and the matter was raised repeatedly by Leader of the Opposition Ed Miliband at Prime Minister’s Questions on 7 May 2014. Later in May 2014 the AstraZeneca board rejected a "final offer" from Pfizer of £55 per share (implying a £69.4bn valuation for the company as a whole — which would have made it the biggest foreign takeover of a UK company), claiming the bid was too low and imposed too many risks.

- The 2014 GE bid for Alstom. Alstom is a French electricity and rail transportation company, headquartered in Paris. In April 2014 it was reported that the US conglomerate General Electric (GE) had entered into talks about taking Alstom over. As of the time of writing the bid stands at €12.4bn. The French government passed a special decree, nicknamed the décret Alstom, purporting to grant the French state additional powers to veto foreign takeovers where there are "strategic interests" into the areas of energy supply, water, transport, telecoms and public health. The European Commission responded negatively to this decree and its legal status remains untested at the time of writing. In June 2014 the French state agreed terms with GE, allowing the purchase of its Alstom shareholding.

In this section we shall consider two categories of concern with foreign takeovers:

- Concerns regarding what in principle might happen
- Concerns regarding what in practice appears to happen

3.1. Concerns Regarding What in Principle Might Happen

3.1.1. The "shutting down a rival" problem

In principle one motivation for a takeover could be to shut down a rival, allowing an increase in market power and sales at higher prices. In the case of a foreign takeover that could be doubly problematic, as not only do domestic consumers lose out through higher prices and the loss of their preferred brand, and not only do domestic workers lose out as their firm is shut down, but there is not even the (partially) offsetting gain from larger employment and higher profits at the acquiring firm — for the acquiring firm is abroad.
This is a genuine problem and risk, and has been recognised as such for many years. To mitigate such a risk, there is a framework of merger control designed precisely to prevent mergers that would materially reduce effective competition without some sufficient offsetting gain (such as dramatically increased efficiency).

3.1.2. The “strategic industries” problem

Some industries, such as those in the defence sector, mineral extraction, food, energy or nuclear power, are sometimes regarded as “strategic” and takeovers by companies from potentially geopolitically hostile rival countries may be seen as a threat. Problems might include that

- the takeover could be associated with the leakage of sensitive information (e.g. if an Iranian firm took over a UK-based nuclear power station company);
- the takeover could lead to the deliberate destruction of a national company rivalling a company in the hostile country so as to leave the domestic country vulnerable to sudden withdrawal of service (e.g. if a Russian company took over a German green energy supplier and shut it down, increasing Germany’s dependence on Russian gas exports);
- the takeover could lead to deliberate attempts to create volatility in prices at economically weak moments, so as to damage economic performance over the medium term;
- the takeover could lead to attempts to subvert sanctions on certain countries (e.g. a foreign-owned arms manufacturer might attempt to export weapons to an ally of the foreign government, even in defiance of national arms export prohibitions);
- the foreign firm could suddenly withhold supply of a vital product.

This is again a genuine problem that has been recognised for many years (though there is some dispute about to which sectors it correctly applies). To mitigate such risks, there are certain sectors (mainly defence-related) where it is recognised that takeovers require governmental approval.³

There is limited information on the impact of foreign takeovers on prices and quality in the utility sector. The water sector is highly regulated including the prices and hence, prices would not change due to a change in ownership during a price review period. Five year price

³ It is worth observing that approval is sometimes forthcoming, even in sectors such as nuclear power. For example, consider the 2008 takeover of British Energy by the French state-owned electricity company Électricité de France (EDF). On 24 September 2008, it was announced that EDF, had agreed a takeover of British Energy, paying 774p per share (a total of £12.5bn). In December 2008 the takeover was cleared by the European Commission subject to EDF agreeing to sell two power stations (Sutton Bridge and Eggborough), sell minimum volumes of energy in the UK wholesale market, and make a UK site available to a competitor to build one of the then-planned third-generation nuclear power stations.
controls mean that changes in prices are difficult to attribute to ownership changes. However, there might be an impact on the quality of the services within period, but we have not come across any evidence supporting that.

In October and November 2013 a survey was conducted by Which? Switch asking 8,525 adults in the UK who pay for household energy about their experience with their gas and electricity suppliers. They constructed a percentage customer satisfaction score based on the response from customers on their overall satisfaction and their willingness to recommend the supplier, given equal weight. The responses were analysed and given a 0-100 per cent rating scale. However, limited analysis can be based on the survey results since it only covers the responses made in 2013. One can see that there are smaller energy suppliers at the top of the list and that the larger companies have the lower scores. The three foreign-owned companies Eon, EDF and Npower have fairly low scores along with larger British companies such as British Gas, but no causal interpretation can be drawn from this.4

The question “And which, if any, would you definitely not consider switching to?” was asked in a survey conducted by OFGEM in 2008. In accordance to the previous survey results, British Gas and Npower are the top listed companies that would not be recommended by the survey respondents. 29 per cent of the total respondents would not recommend at least one of the six largest companies.5 This suggests that there might be a correlation between company size rather than the nationality of the company.

3.1.3. The “remote executives may care less” problem

Setting aside the case of takeovers to destroy rivals, it will not typically be in the interests of a purchasing firm or investor to damage or underinvest in a business it takes over. However, a suspicion about foreign takeovers might take the following form. A modestly sized firm in one country might be the “baby” of the owners, who would see its thriving as their project and its enduring as their legacy. They might like to read of its project successes in the trade press or even the newspapers, to see the results of its output in the shops or streets of towns they live in and travel to, and to see and hear about the flourishing lives of its workers. Such non-monetary benefits may be an important type of value the owners of such a firm gain from it.

By contrast, if a firm is taken over by some global conglomerate operating all over the world, ultimate decision-making power may reside with those that feel no emotional connection with the firm, its products or its workers. (And this point may not be intended as a criticism,

4 Which? Switch http://www.which.co.uk/switch/energy-suppliers/energy-companies-rated

but merely an inevitable by-product of distance and scale.) The result might be that if the firm enters a rough patch with low profitability, there may not be the same patience, for the existence of the firm does not provide these much more remote executives with the same non-monetary benefits that compensate for the loss of financial benefits. Investment may be withheld, assets may be sold off, and staff made redundant in conditions where matters might have been otherwise if the firm were owned by those with a more personal and emotional stake.

A problem with this argument is that is “proves too much”. The issue raised is not per se one of domestic versus foreign ownership — rather it is of small and local versus large and global. The implications of accepting it would include rejecting takeovers of small local firms by large national players, or of trying to prevent large national firms entering foreign markets. But there are two more basic difficulties.

First, business decision-making based upon seeking efficiency, profitability and added value may lack some of the homely values of emotional connection, but one should not ignore the disbenefits of over-rating emotional connection or the benefits of decision-making based on these “colder” criteria. Investing more in an already-failed project to which one has an emotional connection may be personally satisfying, but it is not clear that it adds social value. The money invested might well add more social value if invested in a higher-yielding project, and perpetuating a failed project may suck in suppliers and creditors who then lose out if and when the project is finally abandoned. On the other side, a more “corporate” balance-sheet-based investment approach may identify errors earlier, may be more efficient in the deployment of resources (benefitting from economies of scale and scope and other synergies), and may provide more sustainable security and greater clarity to employees, suppliers and consumers.

Second, it is by no means obvious that a large global player will experience fewer consequences from a premature closure of a firm or the firing of staff. The reputational damage of such an error — either in terms of corporate ethics or in terms of lost confidence in the general financial health of the corporate entity — could spread internationally, creating contagion for many different parts of the business. It simply does not follow that a larger firm will bear fewer costs from local business events.

3.1.4. The “lost stages of product life” problem

Another type of concern arises when takeovers occur at key staging posts in product life. For example, there is a widespread view (justified or not) that some countries are good at producing innovative new ideas (e.g. the UK is often quoted here) but much less committed to commercialising them, with the result that much of the aggregate value added by a new innovation is “lost” to the domestic economy via takeovers by firms from countries that specialise more in commercialisation.
Variants of this are the “lost high value added” and “lost high quality jobs” arguments (of which the “lost headquarters” argument is a well-known case). According to these, foreign takeovers may lead to the relocating of the highest value-adding activities or highest-paid jobs out of the country, leaving only low quality activities domestically. This could potentially have spillover impacts into other sectors, affecting the wider industry for producing those skills, including training, university courses, suppliers and so on. It might also damage “cluster” effects whereby companies have higher productivity if they are geographically closer to similar companies in the same or related sectors.

Each of these objections is really a version of other familiar complaints such as that some countries grow all the food / make all the manufactured products / produce all the services or whatever other specialism countries might have. Since the days of Ricardo economists have recognised that this is simply comparative advantage and indeed much of the purpose of trade — it enables countries to specialise in what they do best. So if one country is good at producing innovations and another at commercialising them, it is only natural that there will be takeovers at the interface between these phases of the product life.

Now, there is the familiar “infant industry” argument for protectionism — that if an industry is protected from foreign competition for a short time, it could develop enough to subsequently stand on its own feet. The idea is that some difference characterised as “comparative advantage” is no such thing, but is, instead, simply the reflection of barriers to entry that modest and time-limited protectionism could overcome.

Insofar as there is anything in such “infant industry” arguments, a version of them might apply in this context also. Specifically, one might (for a short period) prevent foreign takeovers at the commercialisation interface so as to force development of a stronger domestic commercialisation skill base.

However, the drawbacks of over-application of “infant industry” arguments are well-known. In particular, once protectionism is put in place it can be very difficult to remove it, even long after everyone has seen and accepted that the industry is no longer “infant”.

3.1.5. The “it’s easier to take away money than a firm” problem

Sale of a firm to a foreign buyer does not in the first instance mean any loss of assets to the country. Indeed, quite the reverse. Since transactions will only occur if they are to the benefit of both parties the price paid to the domestic citizens and residents that were the previous owners must be more than their own valuation of the firm — the money they receive must be of higher value than the assets they sold.

A natural (though, as we shall see, flawed) line of reasoning might proceed as follows. Imagine that the previous owners invested the full amount for the sale in a new domestic company — then all seems well. The previous owners have then kept the money in the
country, adding value. But money is relatively easy to move (certainly easier than a factory). Suppose that instead of investing domestically the previous owners take their money to invest it abroad. Has there not then been some lost added value from the transaction?

The answer is broadly no, for the following reason. First, note that investing abroad does not mean capital is “lost”. The investors remain domestic citizens, and will receive dividends or interest income on their investments abroad. Just because the money is invested abroad that does not mean it has ceased to be an asset of the domestic citizens. (And that applies to tax paid on investment income, also.) Perhaps the thought is that if the money is invested domestically, not only do the investors gain but also those with whom they deal — the workers they hire, the suppliers they use, etc.. But insofar as that is an issue, in the original acquired firm there remains the added value from such dealings. One cannot simultaneously claim that all value from investing abroad accrues to the foreign country and also that no value from foreign investment domestically benefits the home economy!

Of course, if the former owners move abroad, taking the money they receive from the takeover with them, then that capital is lost (as is the human capital — the labour — of the individuals that move). But the former owners could presumably move abroad even whilst remaining owners of the company, causing it to “fall into foreign hands” by their migration decisions rather than via a foreign takeover. Unless we believe that the former owners were more likely to move once they had cash than they were when they had the equity in the acquired firm, nothing material is changed, in this respect, by the takeover. (And if we believe that the point is that owners may choose to locate where they own major assets, why does that not apply to those acquiring the firm? Might they not be more likely to relocate to the domestic country if they have more of a business interest there?)

3.1.6. The “route to tax avoidance” problem

Occasionally foreign takeovers have been objected to on the grounds that the takeover is intended to allow the acquirer greater ease of allocating tax liabilities internationally.

On the face of it, this seems like a very odd reason to object to a foreign acquisition. It would be more easily understood as a concern for the foreign government — the government of the acquirer, which might stand to lose tax revenue. But from the perspective of the country of the acquired firm, the argument appears to be “This foreign firm is only taking over this domestic company because it wants to pay more tax here.” It is most unclear how or why that could be a genuine objection.

3.1.7. The “empire building” problem

According to one standard theory of bureaucratic behaviour, the separation of finance and management that is intrinsic to capitalism (i.e. the division between capitalist and manager) creates scope for managers or executives to act in their own interests rather than in the best
interests of the owners of the firm. One way they might do this is to expand the firm’s activities more rapidly than owners might prefer to do, because in this way the manager/executive increases the significance of her role — building her own “empire”.

One concern about foreign takeovers is that they might reflect empire-building on the part of executives, and that when the acquiring foreign firm’s shareholders discover the error, they may choose to shut down the acquired operation as part of re-asserting their control over the company.

3.2. Concerns Regarding What in Practice Appears to Happen

3.2.1. The “limited enforceability of undertakings” problem

To limit political objections, strikes, demonstrations or consumer action, acquiring foreign firms often provide undertakings. They might promise that there will be no job losses, or that there will be some new investment, or that certain key high-value-added activities will not be relocated to the country of the parent company.

In practice, however, such undertakings are very difficult to enforce. Unless the government is to step in and nationalise the remains of an acquired company, it is unlikely to have any means to prevent a parent company from shutting down operations or limiting investment if it chooses to do so even in defiance of undertakings previously entered into.

3.2.2. The “foreign takeovers more often go wrong” problem

We have noted above that typically takeovers are intended to create or exploit synergies, but that such synergies are rarely certain and hence a takeover could prove to be a mistake. Sometimes a takeover that proves to be an error might even lead to the closure of the acquired firm.

It is conceivable that uncertainties during takeovers might be greater if the purchasing firm is from another country (for simple information acquisition reasons). For that reason it is possible that foreign takeovers might more often involve error.

3.2.3. The “foreign takeovers lead to asset stripping” problem

We have noted above that takeovers sometimes occur when the firm purchased is in financial distress or otherwise failing, and that closure of operations can be the efficient consequence of such failure, executed by an acquirer that specialises in dealing with such situations.

It is possible that certain categories of firm that specialise in taking over and restructuring distressed entities might be based only in a small number of Member States. The
consequence might be that a disproportionate number of takeovers that lead to closure or asset-stripping would be by firms based in other Member States.

### 3.3. Remarks

We have seen in this section three forms of concern about takeovers:

- Those that have a strong potential foundation and are already recognised in policy — e.g. the danger of damaging competition
- Those that might reflect impressions but in truth involve no genuine problem at all — e.g. if firms that specialise in taking over and restructuring unviable or bankrupt operations tend to be located in one country, then foreign takeovers by such firms may very often lead to firm closure or unemployment, but that is a reflection of national specialism and comparative advantage, not a problem
- Those that might under some very particular circumstances represent a problem but are unlikely to constitute a general case — e.g. empire building, infant industries, and errors arising from the difficulties of acquiring information across borders.

As a general rule, theory offers no convincing reason why foreign takeovers should be regarded as materially more problematic than domestic takeovers. Where a firm is taken over, the investors in the acquired firm typically receive money. If they have been skilled at setting up a new firm and taking it to the point of acquisition in this case, they may choose to invest the money they make in some new domestic enterprises. The counterpart of the assets passed to a new foreign owner is the money passed to the former domestic investor. Since a freely entered into trade must be expected to be mutually advantageous, the typical case will be that the acquiring foreign firm will add value to its operations by the acquisition — adding economic benefit — and the investors of the acquired firm will receive more for their shares than they had valued them at themselves. The creating and exporting of a machine is usually accepted to be mutually beneficial. Typically the creating and exporting of a business operation is almost wholly analogous.

That notwithstanding, theory does identify the possibility that foreign takeovers might in some cases, for a variety of reasons we have set out above, be more associated with some of the drawbacks of takeovers than is the case for domestic takeovers. Consequently, it might be of interest to explore, empirically, the extent to which foreign ownership is, in fact, associated with the positive or negative features of foreign control that we identify. We do that in the next section.

### 4. Empirical Evidence on Impacts of Foreign Control

In this section we consider empirically how, if at all, a sector’s being under foreign control or becoming more foreign-controlled affects its economic performance.
As the analysis will be heavily conditioned on data, we first look at the availability of these, before moving on to quantify effects.

### 4.1. Data availability

Most UK studies analysing the effects of foreign investment use a merged dataset of ARD (the Annual Respondents Database) and AIFD (the Annual Inquiry into Foreign Direct Investment). These databases are useful for some purposes because they provide information at the firm-level. However, (i) these datasets contain UK firms only, and would not allow analysis of other regions/small countries; and (ii) they are only available under secure access (that is, for academic research purposes).

Company data, as supplied by some market research companies, contain company information for different years. These data include details of the ultimate owner (including country of residence) but, because these data are not freely available in the public domain, they have not been considered for this part of the analysis.

Eurostat provides good coverage of FDI and foreign enterprise ownership and firm performance in general in two different databases: the BOP (Balance of Payments) and the SBS (Structural Business Statistics).

Our analysis is based on Eurostat inward FATS, which contains annual data from 2008 (the date of the revision of NACE) to 2011. We use the following variables and definitions in the database:

- **Number of enterprises**

---


7. Balance of Payments (BOP) contains the European Union direct investments database (bop_fdi) which covers the EU direct investment positions, direct investment flows, and direct investment income, broken down by partner country and economic activity (sectors defined according to the NACE Rev. 2). In the Structural Business Statistics (SBS), the foreign controlled EU enterprises (inward FATS) database (fats_g1a_08) includes data on the economic activity of domestic and foreign affiliates. The economic activity covered includes interesting variables such as the number of enterprises, turnover, production value, value added, gross investment in tangible goods, or number of employees. Data is provided by controlling countries and NACE Rev. 2 sectors (at 2-digit).

8. Data for 2003-2007 are based on NACE Rev. 1.1. Data for 1996-2006 data were collected on a voluntary basis and thus they were not complete in terms of country coverage and accuracy.
Each variable is recorded for each of the NACE Rev. 2 codes and in each of the EU-28 Member States (a list of the NACE codes is provided in the Annex). However, data for France, Belgium, Greece, and Malta is missing or patchy and thus excluded unless otherwise specified.

The variables are available separated by domestically and foreign-controlled enterprises from 2008 to 2011. A foreign affiliate, under the terms of inward FATS, is an enterprise that is resident in the reporting country, for which an institutional unit not resident in the

9 Expressed in units: this is the number of market enterprises in a sector. Includes only active units which had turnover or employment at any time during the reference period. It also includes local units (branches) which do not constitute a separate legal entity and which are dependent on foreign enterprises.

10 Number of persons employed in units: this is the total number of persons who work in the observation unit. Includes working proprietors, partners working regularly in the unit and unpaid family workers working regularly in the unit, as well as persons who work outside the unit who belong to it and are paid by it.

11 This is defined as value added divided by the number of persons employed (value added at factor cost is the gross income from operating activities after adjusting for operating subsidies and indirect taxes). It is calculated from turnover, plus capitalised production, plus other operating income (including operating subsidies), plus or minus the changes in stocks, minus the purchases of goods and services, minus other taxes on products which are linked to turnover but not deductible, minus the duties and taxes linked to production. Alternatively it can be calculated from gross operating surplus by adding personnel costs.

12 This is gross investments in tangible goods divided by employee (gross investments in tangible goods include all new and existing tangible capital goods, whether bought from third parties or produced for own use with a useful life of more than one year; includes non-produced tangible goods such as land).

13 This is defined as the gross operating surplus (value added minus personnel costs) divided by turnover; the result is expressed as a percentage.

14 This is calculated as employment divided by number of enterprises.
reporting country has control. Finally, control is the ability to determine the general policy of an enterprise by choosing appropriate directors, if necessary.\textsuperscript{15}

\section*{4.2. Testable hypotheses}

As seen in previous sections, takeovers may bring benefits and disbenefits to the economy. Among the benefits we identified the opportunity to improve the management and exploit potential synergies between firms, both of which may translate into an increase in sales and productivity. Among the disbenefits we identified a reduction in firm-specific investment in human capital.

Our approach looks for any statistical relationship between foreign control and several key performance indicators available from Eurostat. The performance indicators chosen for performance are:

- Employment;
- Apparent labour productivity;
- Investment per employee;
- Gross operating rate; and
- Size.

The analysis compares the performance indicators for the group of domestically and foreign-owned firms (for every sector, Member State and year). We also extend the analysis to investigate differences due to changes (over time) in foreign control (measured, for each

\textsuperscript{15} The analysis presented has been conditioned by the data availability and the scope of analysis, which for this study has been limited to the data available from public sources. This has meant that our study has been directed to the analysis of economic performance and different measures of foreign control and ownership available from Eurostat data. In this way, the analysis has been able to show the relationship between foreign control and performance at a European level. The characteristics of the data mean that we have not been able to establish clearly the relationship between mergers and acquisitions and economic performance, as this type of information is not provided in Eurostat (and it is hardly publicly available at a level of disaggregation to be used in our regressions). There are, nonetheless, commercially available datasets providing merger and acquisitions at a firm level which would allow relating take-over activity with firm-specific performance data: Zephyr database published by Bureau van Dijk provides detailed data of cross-border acquisitions and company financial information for different years; SDC Platinum from Thompson Financial also provides details of transactions on merger and acquisition deals. These data have not been considered in our analysis but could be the subject of additional future research.
sector, as the change in the number of firms which are controlled by an institutional unit from abroad).

4.3. Analysis

In this section we present our analysis of the data. We start with descriptive statistics to explain the characteristics (similarities and differences) of foreign- and domestically-owned firms in terms of value added and employment, for different sectors and Member States. We then investigate the relationship between foreign control and several key performance indicators for each of the different sectors in the analysis.

4.3.1. Description of the data

The largest EU sectors in terms of value added are “C: Manufacturing” and “G: Wholesale, retail trade and repair”, which generate €1.4 and €0.9 trillion, respectively, accounting for almost half of the total value added in the EU (Figure 4.1 upper panel, data excludes financial and insurance activities). The contribution of the remaining sectors is less than 10% with just a few sectors contributing less than 5% of total EU value added.\textsuperscript{16} Foreign-owned firms contribute to a significant amount of this value added, with a share that ranges between 7% and 10%\textsuperscript{17} to more than 30%.\textsuperscript{18} The share of foreign-owned firms in the rest of the sectors is between 10% and 30% (Figure 4.1, sector panel).

At a Member State level, the total value added is generated mostly from larger economies: the UK, Germany, Italy and Spain. The highest foreign share is in Ireland (close to 60%), and in new Member States (LT, LV, BG, PL, SK, RO, CZ, EE, and HU) and Luxembourg, all of which are above 30% (Figure 4.1, MS panel).

\textsuperscript{16} “B: Mining and quarrying”; “E: Water supply, sewerage, and waste”; “I: Accommodation and food service activities”; “D: Electricity, gas, and other”; and “L: Real estate activities”.

\textsuperscript{17} For “F: Construction” and “I: Accommodation and food service activities”.

\textsuperscript{18} For “C: Manufacturing”; “J: Information and communication”; and “B: Mining and quarrying”.


A similar picture can be observed by looking at the total employment across sectors in Europe: the highest share in terms of employment under foreign-owned firms is in "J:"
Information and communication” and “C: Manufacturing” (around 25% of total). The remaining sectors show comparable levels of employment attributed to foreign–owned firms which vary between 10% and 21% of employment (Figure 4.2 – sector panel), except for “F: Construction”; “L: Real estate activities”; “I: Accommodation and food service activities”; and “M: Professional, scientific and technical activities”, all of which are under 10%.

At a Member State level, the shares of foreign ownership in employment are highest in Luxembourg and Estonia (40%), and under 30% for the rest of the Member States (noticeably under 15% in IT, CY, DE, PT and ES, Figure 4.2 – MS panel).

**Figure 4.2: Employment EU by sector and MS**

![Employment EU (2011)](image-url)

- **N: Administrative and support service activities**
- **M: Professional, scientific and technical activities**
- **L: Real estate activities**
- **I: Accommodation and food service activities**
- **H: Transportation and storage**
- **G: Wholesale, retail trade and repair**
- **F: Construction**
- **E: Water supply; sewerage, and waste**
- **D: Electricity, gas, and other**
- **C: Manufacturing**
- **B: Mining and quarrying**
In terms of firm size, it is noticeable how foreign-owned firms are typically larger than domestically-owned firms, when analysed at both a sector or Member State level (Figure 4.3).

Figure 4.3: Size EU by sector and MS
4.3.2. Relationship between performance indicators and foreign control

In this section we will present a graphical analysis of the relationship between foreign ownership and a range of performance indicators (employment, labour productivity, investment per employee, gross operating rate and firm’s size). The graphs compare the values of the performance indicators pairs (for the groups of domestic and foreign-owned firms) so that is easy to see any systematic differences between domestic and foreign ownership enterprises.

Our initial hypothesis assumes no relationship between domestic or foreign ownership. Hence, we would expect to observe, for each performance indicator, similar values among the groups of domestically and foreign-owned firms in each of the sectors analysed. This hypothesis is tested using two different methods, described below. The analysis is exploratory at this stage (statistical inference is part of the next subsection) and the results are assessed visually. We use a scatter plot were each dot is the pair of the indicator’s values for domestic and foreign-owned firms in each sector.\(^{19}\) We also calculate the ratio of the foreign to domestic values of the indicators for each sector.\(^{20}\) The results follow.

\(^{19}\) If the indicators were the same for domestic and foreign-owned firms, we would expect a perfect linear relationship between both variables so that the scatter plot would lie along a 45° bisecting line. As domestic values are on the y-axis and foreign values are on the x-axis, more dots below the bisecting line indicate larger indicators for foreign-owned firms, whereas dots above the line show those sectors where the indicators for domestically-
In terms of employment, we can observe that for the wide range of sectors in the different Member States (including all observations in the period 2008-2011) it is the domestic firms that take the larger share of employment (Figure 4.4, upper panel). This simply illustrates the larger share of domestic firms in the different sectors and it is corroborated by the fact that a large amount of foreign to domestic employment ratios fall below 1 (Figure 4.4, lower panel).

Figure 4.4: Ownership and total employment

Owned firms are higher than those for foreign-owned firms. As the data show a high disparity in the values, the results are presented for the logarithm of each variable, which shows the relationship between growth rates in both variables.

If the null hypothesis were true we would expect to find a high concentration of these ratios around one. This is shown using a histogram of the frequencies of the ratios (for ease of representation the histograms only show ratio values between 0 and 5). Higher counts to the right of 1 would mean more cases where foreign values are greater than domestic values. Higher density to the left of 1 means foreign values are smaller than the domestic values for the sectors analysed.
In terms of productivity, we observe that apparent labour productivity is larger in the group of foreign-owned firms as is visible in both the scatter plot and histogram (Figure 4.5). This finding could be explained by the larger size of foreign-owned firms (this implicitly assumes economies of scale or productivity advantages related to size of enterprises, which is not surprising given the large amount of manufacturing subsectors in the NACE classification), but also by the fact that foreign ownership may result in higher productivity if potential synergies between the acquired firm and acquiring company are exploited (this was explained in the previous subsection).

*Note: variables expressed in natural logarithms.*
Figure 4.5: Ownership and apparent labour productivity

Note: variables expressed in natural logarithms.
Investment per employee does not seem very different in the scatter plot for domestic and foreign-owned firms (Figure 4.6, upper panel), and the large differences between the two groups (sometimes several times larger for foreign-owned enterprises) only becomes apparent after looking at the histogram (Figure 4.6, lower panel, shows a number of instances where the ratio is even greater than 2, meaning that the investment per employee is more than two times higher in foreign than in domestically-owned firms).

Figure 4.6: Ownership and investment per employee
Note: variables expressed in natural logarithms.

There are some differences in the gross operating rates between the two groups, but these seem to be similar on average (equal distribution across bisecting line in the scatter plot and around 1 in the histogram, Figure 4.7).
Figure 4.7: Ownership and gross operating rate

Note: variables expressed in natural logarithms.
Finally, as we have consistently seen, the foreign controlled group includes firms of a larger size than domestically owned group (more observations under the bisecting line in the scatter plot and higher mass of ratios above 1, Figure 4.8).

**Figure 4.8: Ownership and size**

![Scatter plot and histogram showing ownership and size](image)

**Note:** variables expressed in natural logarithms.
We have seen some significant differences of performance for domestically and foreign owned companies. To summarise such differences, we now show the averages of the indicators for domestic and foreign owned firms. We see that the average number of enterprises is much larger in the group of domestically owned firms (11,500 compared to just 151 in the group of foreign-owned firms), but this is compensated by a higher average size in the group of foreign-owned firms. Apparent labour productivity and investment per employee are also higher in foreign-owned firms, but there is no apparent difference in the average gross operating rate (Table 4.1).

**Table 4.1: Performance indicators: averages for domestic and foreign owned companies**

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th>Foreign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of enterprises (units)</td>
<td>11,504</td>
<td>151</td>
</tr>
<tr>
<td>Apparent labour productivity (000€ per person)</td>
<td>41</td>
<td>67</td>
</tr>
<tr>
<td>Investment per employee (000€ per person)</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Gross operating rate (%)</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Size (units)</td>
<td>28</td>
<td>141</td>
</tr>
</tbody>
</table>

*Source: Own analysis using Eurostat FATS.*

Another way to show the relationship between foreign ownership and economic performance is to look at the changes in different performance indicators (productivity, investment and gross operating rate) against a measure of foreign presence. We represent such measure as the share of the value added attributed to foreign-owned companies (for each sector, the share is calculated as the value added of foreign-owned companies divided by the sector total, it ranges between 0 and 100).

The results show some correlation between the share and the different performance variables. In the case of productivity and investment the relationship is positive, indicating that in these variables tend to be higher in sectors where the share of foreign ownership is higher. In the case of gross operating rate the relationship is negative showing that profitability is greater in sectors where the share foreign ownership is lower (Figure 4.9).
Figure 4.9: Share of foreign value added and economic performance

Aparent labour productivity and foreign ownership

Investment per employee and foreign ownership
The relationship appears to be significant in statistical terms. In the regression for productivity, the coefficient is 0.003 meaning that an increase of 1 percentage point in the share of foreign ownership increases productivity by 0.3%. For investment and gross operating rate the estimated coefficients are 0.6% and -0.1%, respectively (Table 4.2).

Table 4.2: Share of foreign value added and economic performance: simple regression

<table>
<thead>
<tr>
<th>Variable</th>
<th>Productivity</th>
<th>Investment</th>
<th>Gross operating profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.38103***</td>
<td>1.361738***</td>
<td>2.423145***</td>
</tr>
<tr>
<td>Share foreign ownership</td>
<td>0.0029376***</td>
<td>0.0055115***</td>
<td>-0.0013078***</td>
</tr>
<tr>
<td>N</td>
<td>4438</td>
<td>4415</td>
<td>4272</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.0058</td>
<td>0.0098</td>
<td>0.0017</td>
</tr>
</tbody>
</table>

Note: * p<0.05; ** p<0.01; *** p<0.001

It should be noted that the previous analysis only shows a simple statistical correlation between variable pairs but it cannot be established any causality between the two: it simply states that productivity and investment are higher (lower in the case of operating profit) in...
sectors where foreign ownership is higher. The relationship between foreign control and economic performance is analysed in the next subsection.

4.3.3. Causality: foreign control and economic performance

The empirical analysis thus far has shown some significant differences in the employment, apparent labour productivity, investment per employee, gross operating rate and size of companies under domestic versus foreign ownership. However, the findings do not imply causality from one variable to the other. The literature that investigates the effects of firm’s foreign control has often pointed at the complex relationship between ownership and performance as a recurrent problem. It is often argued that foreign takeovers may be one of the reasons explaining economic performance (observed in the form of higher outsourcing, plant closures, profitability or changes in R&D investment). But the driver could also come from the other direction, i.e. it is those firms where poor (or high) performance is observed that are more often acquired by foreign multinationals. In this second case, acquisition is a result of the observed performance and not the cause.

The source of this problem is related to the fact that the comparison units (domestically- and foreign-owned firms) are too different and hence the difference in performance could be due to ownership, but also due to the fact that their economic performance was already different in the first instance (which may also have encouraged foreign acquisition). Settings like this are often referred to as performance affecting the intervention (in this case, foreign control).

The most straightforward method to deal with this is by detaching the changes in firm control from the changes in performance. To do so, we propose a model which includes variables at different moments in time and which breaks, as much as possible, the reverse relationship from performance to foreign ownership. This is done by measuring different performance variable (related to productivity, investment and gross operating rate) some period after the change in ownership took place.

As a measure of change in ownership we take the difference in the number of enterprises that were domestically and foreign-owned between 2009 and 2008. As a measure of change in performance we take the difference of the indicator variables between 2009 and 2011. Because the performance variables are measured in 2009-2011 it can be safely said that the increase in foreign control is independent of such performance (as future performance is not observed at the moment of increasing the foreign control). Also, the dataset contains sectoral pairs, which means that the observations in each of the different groups are likely to be affected by the same external factors (for example the economic climate or changes in the monetary policy), so that any differences in performance can be attributed solely to the type of control.
In stylised form our model can be expressed, for each sector $i$ and year $j$, as the following:

$$\Delta_{2011}^{2009} y_{ij} = \alpha + \beta \Delta_{2009}^{2009} E_{ij} + \gamma DF_{ij} + \delta \Delta_{2009}^{2009} FE_{ij} + \epsilon_{ij}$$

Of interest are the estimates for parameter $\delta$, its significance and its similarity, or not (in statistical terms), with the value obtained for the domestically-owned firms. A significant negative estimate would indicate that the performance of firms is negatively influenced two years after foreign ownership has increased. An insignificant estimate would indicate that there are no differences with the effects observed for domestically owned firms.

In the next table we show the results of the analysis for three different indicators: apparent labour productivity (Apalab), investment per employee (Invemp), and gross operating rate (Goprat). As a robustness analysis we present three different models for each indicator. Model 1 and 2 contains, respectively, only the sectors where foreign- and domestically-owned firms increased between 2008 and 2009. Model 3 contains both foreign- and domestically-owned firms and uses $DF$ and $FE$ to control for the differences between the two groups (Table 4.3). The variables have been defined previously. $N$ and $R^2$ denote, respectively, the sample size and $r$-squared of the regression.

The results show the following:

- The different performance indicators used in Model 1 show that there is no evidence of a significant relationship between an increase in the number of foreign-owned firms and the key performance indicators (Apalag, Invemp or Goprat) measured after

$\Delta_t^s$ is a difference operator which takes the difference of a variable between year $t$ and $s$,

$\gamma$ is a performance variable (we use different models for: apparent labour productivity, investment per employee, and gross operating rate), hence $\Delta_{2011}^{2009} y$ is the difference in the indicator between 2011 and 2009,

$E$ is the number of enterprises, so that $\Delta_{2009}^{2009} E$ is the difference (growth or decline) in the number of enterprises between 2009 and 2008,

$DF$ is a dummy for the foreign control group (1 for foreign controlled sectors, 0 for domestic),

$FE$ is the number of foreign enterprises, hence $\Delta_{2009}^{2009} FE$ is the difference (growth or decline) in the number of enterprises foreign-owned between 2009 and 2008,

$\alpha$ and $\gamma$ are parameters for the constant term and for the foreign controlled sectors, $\beta$ and $\delta$ are the parameters associated with the change in the number of total and foreign owned enterprises,

$\epsilon$ is an error term.

[^21]: $\Delta_t^s$ is a difference operator which takes the difference of a variable between year $t$ and $s$, $\gamma$ is a performance variable (we use different models for: apparent labour productivity, investment per employee, and gross operating rate), hence $\Delta_{2011}^{2009} y$ is the difference in the indicator between 2011 and 2009, $E$ is the number of enterprises, so that $\Delta_{2009}^{2009} E$ is the difference (growth or decline) in the number of enterprises between 2009 and 2008, $DF$ is a dummy for the foreign control group (1 for foreign controlled sectors, 0 for domestic), $FE$ is the number of foreign enterprises, hence $\Delta_{2009}^{2009} FE$ is the difference (growth or decline) in the number of enterprises foreign-owned between 2009 and 2008, $\alpha$ and $\gamma$ are parameters for the constant term and for the foreign controlled sectors, $\beta$ and $\delta$ are the parameters associated with the change in the number of total and foreign owned enterprises, $\epsilon$ is an error term.
3 years. In other words, indicators do not change as a result of an increase in the number of foreign-owned firms.

- The same is true when looking only at the increases in the number of domestically-owned firms. The performance indicators do not change (significantly) as a result of an increase in the number of domestically-owned firms, in Model 2.
- Finally, there are no significant differences, in Model 3, between the effects resulting from an increase in the number of domestically and foreign-owned firms (the coefficient for FE is not significantly different from zero).

### Table 4.3: Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Apalab1</th>
<th>Apalab 2</th>
<th>Apalab 3</th>
<th>Invemp1</th>
<th>Invemp 2</th>
<th>Invemp 3</th>
<th>Goprat 1</th>
<th>Goprat 2</th>
<th>Goprat 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>FE</td>
<td>-0.0229</td>
<td>0.2151</td>
<td>-0.2754</td>
<td>-0.5545</td>
<td>-0.0667</td>
<td>0.1411</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>-0.238</td>
<td>-0.238</td>
<td>0.2791</td>
<td>0.2791</td>
<td>-0.2078</td>
<td>-0.2078</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DF</td>
<td>0.0475</td>
<td>0.0879</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.1502*</td>
<td>0.1027*</td>
<td>0.1027*</td>
<td>0.0983*</td>
<td>0.1076*</td>
<td>0.1076*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>522</td>
<td>413</td>
<td>935</td>
<td>527</td>
<td>407</td>
<td>934</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>0.0003</td>
<td>0.0065</td>
<td>0.0138</td>
<td>0.0071</td>
<td>0.002</td>
<td>0.0058</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: * p<0.05; ** p<0.01; *** p<0.001

#### 4.3.4. Summary

We have analysed the relationship between foreign control and a firm’s performance indicators, using Eurostat’s data at sector level (2 digits NACE Rev. 2). Overall, we have seen that manufacturing is the sector with the highest value added from foreign-owned firms, followed by wholesale, retail trade and repair. We have also seen that foreign-owned firms account for around 25% of employment in the manufacturing sector, but contribute much less in the remaining sectors (between 10% and 21%). At a Member State level, the most noticeable observations are Luxembourg and Estonia that owe over 30% of their total employment to foreign-owned firms. Finally, both across sectors and Member States foreign-owned companies are typically larger than domestically-owned firms.

Our graphical analysis of the relationship between foreign control and performance indicators has revealed a number of interesting results for foreign-owned firms. Overall, foreign-owned firms invest more in their employees (sometimes several times more) than their domestic counterparts and exhibit a higher labour productivity, something that could be explained by the returns to scale of foreign owned companies, as they are typically firms of a larger size. The gross operating rates are similar for both types of firms.

We also show the results of simple regression analysis between the share of the value added attributed to foreign-owned companies and indicators of productivity, investment and gross operating rate. The estimates show that productivity and investment are higher (lower in the case of operating profit) in sectors where foreign ownership is higher.
We have also investigated the changes in several economic indicators that occurred after an increase in the number of firms being controlled by a foreign institutional unit. We used three different econometric models and in all of them we were unable to find a significant relationship between an increase in foreign control and the change in the economic performance, measured by apparent labour productivity, investment per employee, and gross operating rate, after three years of the change in ownership.

5. Conclusion

In this paper we have explored some of the reasons foreign takeovers are regarded sceptically. It is suggested that foreign control of companies can be associated with a number of economically undesirable outcomes.

We have explored the theory behind such objections and found that there are two main ones that appear credible:

- Takeovers can damage competition
- Takeovers in strategically important sectors can be geopolitically dangerous

In each of these cases principles already exist in EU law to forbid takeovers (or make their allowance conditional upon rectifying actions by the companies concerned) or to allow national governments to intervene.

We have gone on to consider whether empirical analysis identifies problems with foreign ownership in sectors, or increasing proportions of sectors that are foreign-owned, that might not have been obvious from the theory alone. We have found no such additional problems. If anything, foreign ownership appears to be associated with better economic performance — though it is possible that it is the anticipated improved economic performance that causes foreign takeovers, rather than foreign takeovers driving the improved performance.
Annex: Sectors

B  Mining and quarrying
B05  Mining of coal and lignite
B06  Extraction of crude petroleum and natural gas
B07  Mining of metal ores
B08  Other mining and quarrying
B09  Mining support service activities

C  Manufacturing
C10  Manufacture of food products
C11  Manufacture of beverages
C12  Manufacture of tobacco products
C13  Manufacture of textiles
C14  Manufacture of wearing apparel
C15  Manufacture of leather and related products
C16  Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
C17  Manufacture of paper and paper products
C18  Printing and reproduction of recorded media
C19  Manufacture of coke and refined petroleum products
C20  Manufacture of chemicals and chemical products
C21  Manufacture of basic pharmaceutical products and pharmaceutical preparations
C22  Manufacture of rubber and plastic products
C23  Manufacture of other non-metallic mineral products
C24  Manufacture of basic metals
C25  Manufacture of fabricated metal products, except machinery and equipment
C26  Manufacture of computer, electronic and optical products
C27  Manufacture of electrical equipment
C28  Manufacture of machinery and equipment n.e.c.
C29  Manufacture of motor vehicles, trailers and semi-trailers
C30  Manufacture of other transport equipment
C31  Manufacture of furniture
C32  Other manufacturing
C33  Repair and installation of machinery and equipment

D  Electricity, gas, steam and air conditioning supply
D35  Electricity, gas, steam and air conditioning supply

E  Water supply; sewerage, waste management and remediation activities
E36  Water collection, treatment and supply
E37  Sewerage
E38  Waste collection, treatment and disposal activities; materials recovery
E39  Remediation activities and other waste management services

F  Construction
F41  Construction of buildings
F42  Civil engineering
F43  Specialised construction activities
G  Wholesale and retail trade; repair of motor vehicles and motorcycles
G45  Wholesale and retail trade and repair of motor vehicles and motorcycles
G46  Wholesale trade, except of motor vehicles and motorcycles
G47  Retail trade, except of motor vehicles and motorcycles
H  Transportation and storage
H49  Land transport and transport via pipelines
H50  Water transport
H51  Air transport
H52  Warehousing and support activities for transportation
H53  Postal and courier activities
I  Accommodation and food service activities
I55  Accommodation
I56  Food and beverage service activities
J  Information and communication
J58  Publishing activities
J59  Motion picture, video and television programme production, sound recording and music publishing activities
J60  Programming and broadcasting activities
J61  Telecommunications
J62  Computer programming, consultancy and related activities
J63  Information service activities
L  Real estate activities
L68  Real estate activities
M  Professional, scientific and technical activities
M69  Legal and accounting activities
M70  Activities of head offices; management consultancy activities
M71  Architectural and engineering activities; technical testing and analysis
M72  Scientific research and development
M73  Advertising and market research
M74  Other professional, scientific and technical activities
M75  Veterinary activities
N  Administrative and support service activities
N77  Rental and leasing activities
N78  Employment activities
N79  Travel agency, tour operator reservation service and related activities
N80  Security and investigation activities
N81  Services to buildings and landscape activities
N82  Office administrative, office support and other business support activities
S95  Repair of computers and personal and household goods