Problems and pitfalls in the statistical measurement of foreign direct investments


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March 2018
Introduction

Due to the growing transnationalisation of production and wealth chains, trade and foreign direct investment (FDI) activities have become intrinsically linked phenomena. Recent estimates suggest that intra-firm transactions account for no less than one third of global trade flows (Maurer & Degain, 2010, p. 10), making FDI an influential determinant of global trading patterns. As a result, FDI statistics have become increasingly important pieces of information in trade negotiations as well as scholarly analyses and public debates about global trade. When being used in such contexts, FDI statistics are commonly interpreted as indicators of the volumes of capital going from one country to another to finance the establishment of new companies there. However, this corresponds to only a small part of what statisticians measure when they measure FDI. As a matter of fact, substantial shares of measured global FDI flows do not cross any physical border in a meaningful sense, nor are they directly associated with the creation of new factories (or jobs). In short, the conceptual gaps between common notions of FDI in economic discourses and the content inside the statistics that measure those transactions are pronounced. Simultaneously, statistical agencies’ ability to track capital flows between nation-states in a globally integrated system of offshorised finance is further complicated by daunting technical difficulties, which can lead to large measurement inaccuracies in these figures. And because not all statistical agencies handle these challenges in the same way, different agencies can be measuring different things when they measure ‘FDI’, limiting the degree to which these statistics can be compared across countries. Needless to say, the combination of these factors makes FDI statistics a problematic construct. It is no secret, for instance, that discrepancies between total reported global in- and outflows of FDI are large and persistent (although, at least theoretically, the difference should be zero) and that close to half of global FDI flows are channelled through special
purpose entities (SPE) that make the identification of the function, ultimate ownership and destination of these investments virtually impossible. And yet, although many of these problems are fairly obvious and despite the repeated warnings and caveats issued by statisticians who collect this data, more often than not, FDI statistics are simply taken at face value, a ‘hard fact’ reflecting the ‘true’ levels of FDI.

In this light, the chapter pursues a dual function: on the one hand, it intends to inform readers about some of the serious issues underlying FDI as a statistical unit and highlight the practical implications they may entail. On the other hand, the chapter uses these issues as an entry point to engage with deeper questions about the production of economic statistics and their significance in the world economy. Unlike other economic statistics such as inflation or debt indicators, FDI statistics on their own do not carry major distributional consequences and it is not clear that there are any ‘winners’ or ‘losers’ of a certain statistical definition of FDI. The theoretical implications thus do not so much refer to traditional political power dynamics, but to the more subtle ways through which the epistemic deliberations that create statistical indicators can affect our understanding of the world economy.

In this view, the first point that the chapter wishes to highlight consists of the observation that statistical indicators do not only feed political discourses about the world economy, but that they are themselves simultaneously shaped by the latter. They are not simply neutral reflections of real economic developments, but powerful mind maps that affect what we see and how we see what we see (Hirschman and Popp Berman, 2014; Mügge, 2016). Secondly, the chapter demonstrates that statistical communities deserve greater analytical attention as a distinct type of international bureaucracy (cf. Brunsson and Jacobsson, 2000; Barnett and Finnemore, 2004). As the chapter illustrates at the example of the central role played by IMF statisticians in the creation and dissemination of global standards on how to measure FDI, statisticians do not merely report objective figures. They play critical roles in international affairs as...
meaning makers who, through discreet but powerful ways, shape the lenses through which we see the world. Thirdly, the chapter describes an empirical pattern, which emphasises the importance of cognitive ‘stickiness’ within discursive dynamics. While most of the other contributions to this volume conceptualise discourses as a source of change, this chapter illustrates how discursive resistance to change in the face of substantial structural transformations—a dynamic akin to Thelen et al.’s (2013) concept of ‘institutional drift’—can have equally important effects on common (mis)understandings in international economic affairs. While the theoretical concept of FDI as long-term investments with a controlling interest has remained largely uncontested during the post-war era, the fundamental structural changes in the nature of transnational economic transactions in the late twentieth century have led to an ever-wider divergence between what FDI statistics are supposed to measure and what they actually do.

The remainder of this chapter proceeds as follows: the first section briefly outlines how ‘FDI’, although practically existing for thousands of years, was only really discovered as an economic concept in the post-war era. The second section presents an overview of the evolution of the key criteria advocated by the IMF to distinguish FDI from other cross-border capital flows in statistical terms through an analysis of subsequent editions of the Balance of Payments Manual (BPM), the most authoritative guidelines for the collection of international economic statistics. The third section illustrates some of the mismatches between the statistical operationalisation of FDI and the theoretical concepts that underlie it. The fourth section zooms in on additional issues of an accounting-technical nature. The last section concludes.
Drawing boundaries: discovering and defining FDI

Economic analysts are primarily interested in a country’s in- or outflows of FDI in a given time-period and the accumulated FDI stock. While these numbers are widely used in contemporary debates and even though companies operating simultaneously in several jurisdictions have existed for thousands of years (Moore & Lewis, 1998), they are in fact a relatively recent invention. As economic historians have estimated retrospectively, the type of capital flows, which we would today define as FDI, had already grown to fairly substantial levels during the so-called ‘first period of globalization’ before World War I (see Wilkins, 1981; Jones, 2005). Yet, in accordance with the observed ‘general lack of concern about the nationality of [economic] ownership’ (Jones, 2005, p. 202), they were typically not seen as substantially different from other types of cross-border capital investments. This started to change during the First World War when warring parties began expropriating domestic assets held by foreign companies domiciled in enemy countries (ibid.). But it was only in the aftermath of World War II that economic policymakers explicitly recognized FDI as a special type of capital flow, which they wished to track and monitor systematically (cf. Whichard, 2005, p. 620). In order to collect data on FDI, the concept then first had to be operationalised as a measurable statistical unit. While the difference between ‘long-term’ and ‘short-term’ investments is more or less clear on theoretical grounds, the statistical implementation of the distinction proved to be (and remains until today) an issue fraught with conceptual as well as technical difficulties.

Although the collection of FDI statistics is the responsibility of national governments, international organisations (in particular, the IMF and OECD) have played an important role as coordinators and standard-setters for the collection of national balance of payments statistics. To better understand the evolution of FDI as a statistical unit over time it is therefore useful to track the changes in its definition in...
the IMF’s Balance of Payments Manuals (BPM), which have decisively ‘shaped (...) the currently dominant [statistical] definitions of FDI’ (Bertrand, 2005, p. 597). The first edition of the Balance of Payments Manual (BPM1; IMF, 1948) did little more than provide a short general definition of (outward) FDI as ‘the amount invested by [a country’s] residents in an enterprise or other commercial property abroad effectively controlled by its residents’ (IMF, 1948, p. 49 [emphasis added]). In other words, what set FDI apart from other types of cross-border (portfolio) capital flows in the opinion of the authors of BPM1 was the notion of ‘control’; that is, the idea that FDI investors seek not merely a yield on the invested capital, but also some sort of managerial influence over the company they invest in (cf. Lipsey, 2001). Yet, otherwise, albeit emphasising the importance to record short- and long-term capital flows separately, BPM1 remained largely silent on the question how to differentiate the two from each other. Even though BPM1 mentions the share of a company’s voting stock held by foreign investors as a potential key indicator in these regards⁶, the authors refrained from establishing one clear threshold. In contrast to more recent editions of the BPM, the statisticians in charge emphasised that the identification of ‘effective control’ was ultimately a qualitative judgment that is best decided on a case-by-case basis. The ultimate decision was deliberately left in the competence of national statisticians.

Although the definition of FDI gradually grew from a few words in BPM1 to entire chapters in later editions, the three subsequent versions of the BPM (IMF, 1950; 1966; 1977) kept to the notion that the identification of ‘FDI’ was essentially a qualitative judgment. All three editions reiterated the identification of situations in which foreign investors held more than 50 per cent of a company’s voting stock, or in which one single foreign investor held at least 25 per cent, as possible criteria that may be used as a shortcut to differentiate FDI from portfolio investment when a more in-depth qualitative assessment of the situation was impractical. But the authors emphasized repeatedly that these were only suggestions and explicitly encouraged national
statistical offices to also use their own criteria. For example, in BPM3 it was underlined that ‘[i]t is not important to draw clear border lines between branches, subsidiaries, and other direct investment enterprises, nor is it desirable to give a rigid definition of the concept of the direct investment enterprise. The following definition of this concept should be applied with flexibility and interpreted by each country in the manner most useful for analysing its balance of payments. In particular, the specific percentages suggested for determining whether a given enterprise is to be classified as a direct investment enterprise should be regarded as no more than rules of thumb’ (IMF, 1961, p. 120 [emphasis added]). Similarly, it was explicitly acknowledged in BPM4 that ‘[t]he establishment of a border line that will adequately serve to set direct investment capital apart from other types of capital, which may have many of the same observable characteristics, is sometimes not a simple matter’ (IMF, 1977, p. 137). The authors went to great lengths to reiterate their view that it was not desirable to impose one specific threshold: ‘As the difference basically depends on the motives of the investor, objective criteria will not necessarily enable the balance of payments compiler to make the desired distinction in all instances. (… ) The[se] national practices [to identify effective control], which have no doubt developed largely out of experience, are currently quite diverse: hence it would not be very helpful to single out any one percentage criterion as the most reasonable standard that could be applied by every country’ (ibid, p. 138).

Interestingly, by the early 1990s international statisticians’ view on this key issue for the statistical operationalisation of FDI had transformed substantially. In contrast to the pragmatic bottom-up approach advocated throughout BPM1-BPM4, the BPM’s fifth edition (IMF, 1993) adopts a markedly different approach. While the IMF had previously emphasised the role of qualitative judgments and deliberately encouraged a certain degree of national autonomy for the collection of balance of payments statistics, the approach shining through the assertive language used in BPM5
corresponds to a top-down approach towards the harmonisation of statistical measurements, which leaves as little room for discretion as possible. With regards to FDI, instead of admitting the inherent subjectivity of the distinction between FDI and portfolio capital flows, BPM5 asserts confidently that ‘a direct investment enterprise is defined (…) as an incorporated or unincorporated enterprise in which a direct investor, who is resident in another economy, owns 10 percent or more of the ordinary shares of voting power (for an incorporated enterprise) or the equivalent (for an unincorporated enterprise)’ (IMF, 1993, p. 86). In other words, the IMF established that, for statistical purposes, any cross-border investment involving at least ten percent ownership of a company’s voting stock is to be recorded as ‘FDI’ while investments below this threshold are to be classified as portfolio capital flows (henceforth referred to as the ‘10 per cent rule’).

Of apples and oranges: Conceptual problems

Although the 10 per cent rule is still not universally implemented today, it has become the dominant criterion that national statistical agencies use in order to identify FDI. The obvious advantage of having such a clear-cut mechanical rule as opposed to more qualitative evaluations of FDI is that it can in principle be implemented in a straightforward fashion across nations. But it also has its drawbacks. Most importantly, the statistical unit that the rule defines does not directly correspond to the theoretical concept of FDI. In effect, as this section illustrates briefly, the statistical operationalisation of FDI lumps together such a great variety of economic transactions that it becomes indeed questionable if the resulting quantity can really be a useful indicator to inform any kind of policy debates.

The first major conceptual issue of the statistical operationalisation of FDI is that it fails to distinguish between heterogeneous types of long-term cross-border
investments that have potentially very different policy implications. For example, it makes no distinction by the source of capital. One of the key benefits commonly attributed to FDI is that it represents an exogenous ‘addition’ to a nation’s physical capital stock that ‘brings in money’ from abroad. However, a substantial amount of the transactions, which are statistically defined as FDI, actually do not cross any border in a meaningful sense because they are re-invested earnings (that is, the profits generated by affiliates from their activities in their host economy), tax-motivated round-trip investments, or money that foreign companies raise on local capital markets. Albeit this appears to be an important distinction from a national monetary perspective, the statistical operationalisation of FDI fails to take it into account. Furthermore, foreign investors can enter a country through different modes: they can create a new company (so-called ‘greenfield’ investments), or they can acquire an already existing firm (M&A, or ‘brownfield’ FDI). And it is very well possible that the economic and political effects of FDI such as its job creation effect does depend on investors’ mode of entry. While opinions on this question are starkly divided in the current literature, the crux of the matter is that it remains very difficult to assess the opposing claims empirically since standard FDI statistics classify them as one and the same thing.

The second major conceptual issue of the dominant statistical operationalisation of FDI is that they at the same time include a large number of economic transactions that are much more akin to short-term capital flows. If it was true that measured ‘FDI’ flows are primarily the outcome of long-term investment strategies based on ‘real’ economic developments in a host economy, then the correlations between FDI in- and outflows should be low or even negative (supposedly, investments would unambiguously increase [decrease] in situations in which the fundamental growth prospects were good [bad]) and largely immune to short-term fluctuations in global capital markets, such as major monetary policy changes. Yet, a recent analysis of
Julien Acalin and former IMF chief economist Olivier Blanchard shows that the correlation between quarterly FDI in- and outflows as well as the correlation between measured FDI flows and changes in US monetary policy is surprisingly high, leading the authors to the conclusion that ‘some of these measured FDI flows are much closer to portfolio debt flows, responding to short-run movements (…) rather than to medium-run fundamentals of the country’ (Blanchard & Acalin, 2016, p. 1).

The principal reason for their finding is the existence of a very significant third category of ‘FDI’ flows: special purpose entity (SPE) FDI; that is, cross-border capital flows involving ownership stakes above the 10 per cent threshold that are passed through holding companies. The function of these colloquial ‘letter-box companies’ is not to oversee any industrial activities but merely to ‘hold’ shares in other companies in order to take advantage of favourable tax provisions.

To give one simplified real-world example (based on Davies & Marks, 2016): all European operations of the US online distributor Amazon are channelled through a holding company based in Luxembourg (called Amazon Europe Holding Technologies, AEHT), which holds the exclusive rights to use Amazon’s intellectual property rights outside of the US. AEHT, in turn, licenses these rights to another Amazon subsidiary in Luxembourg (Amazon EU Sarl, AEU), which operates Amazon’s European businesses. For its right to use Amazon’s intellectual property, AEU then pays very large sums of royalties to AEHT, thereby significantly reducing AEU’s declared profits (and tax bill). In this way, most of Amazon’s profits from its European business are transferred to the AEHT holding company, which is legally incorporated as a structure, which according to Luxembourg’s tax laws is required to pay no more than a minimal amount of tax.

This kind of ownership structures and transactions create massive challenges for the collection of FDI statistics. The parts of profits officially declared as intra-company
transfers or re-invested earnings by AEHT’s in the example above will end up being counted as inward FDI to Luxembourg although Amazon in fact undertakes almost no industrial activity there. In other words, standard FDI statistics will give a heavily distorted picture of the actual economic relationship.

While SPEs are not a new phenomenon, the shares of global FDI flows that are channelled through such structures have increased very rapidly in recent years. Estimates from the US Bureau of Economic Affairs, for instance, suggest that the share of US FDI flows going to a SPE in the first place rose from less than 10 per cent in 1980 to as much as 50 per cent today (Ibarra-Caton & Mataloni, 2014).

To illustrate the scale of this problem, it is instructive to have a look at the uniquely detailed data on the activities of US multinational enterprises abroad, which the US Bureau of Economic Analysis (US BEA) maintains. Unlike other FDI datasets, the US BEA data provides information not only on figures of aggregate FDI flows from the balance of payments statistics, but also operational details of US multinational corporations (MNCs) abroad such as the geographical distribution of their declared net income, total assets, sales revenues or the number of employees. Table 4.1 draws from this dataset to show the official US outward FDI stock, the total net income and the number of employees that US MNCs declared to have in European economies in 2013 (in ranked order), and the declared net income per employee.

The picture is striking. While the distribution of the net income (i.e. profits after taxes) declared by US MNCs correlates strongly with the distribution of the official FDI stock, the correlation with the distribution of employees is weak. Specifically, the FDI stock data and the reported profits suggest that the bulk of operations of US MNCs are located in the Netherlands, United Kingdom, Luxembourg, Ireland and Switzerland. However, the third row shows that in fact US MNCs employ only a small number of people in Ireland, Switzerland and Luxembourg, with much larger workforces being
present in Germany, France, Italy, Spain or Russia. The calculation of declared profits per employee (cf. last row) further highlight these disparities: while the reported net income per employees is USD 30,263 in Germany and 18,792 in France, the ratio reaches numbers beyond half a million USD per employee in Ireland, Switzerland and the Netherlands. The possibility that workers in Ireland are fifty times more productive than their peers in France seems rather implausible, however. It seems much more likely that the unrealistically high ratios in small tax-haven jurisdictions are driven by transfer pricing structures, which heavily distort the location of profits declared by US MNCs in their financial statements.

In addition to the phenomenon of transfer pricing to low-tax jurisdictions, the complexities of holding company structures can lead to several additional complications for the collection of FDI statistics. Because SPEs are frequently used in order to make corporations’ (or individuals’) balance sheets deliberately intransparent, they can not only distort the picture of the distribution of economic activities (as in the Amazon example above), but the laws of certain offshore jurisdictions that do not require companies to disclose the identity of owners mean that it is nearly impossible for statisticians to establish the ultimate origin, destination or ownership of some of the FDI flows channelled through such jurisdictions. At the same time, they can also further dilute the distinction between long-term and short-term investments. For example, if a company transfers money to a holding company, which it fully owns, this will be recorded as an outflow of ‘FDI’. However, it is possible that the holding company in question actually does not hold a majority position in any other company, but instead functions like an investment fund,
which holds a portfolio of minority investments in a large number of companies. Ultimately, SPE structures can even make it unclear whether recorded ‘FDI’ flows actually leave the country of origin, or if they are merely used for corporate inversions or other types of ‘round-tripping’ investments. For example, in 2013 the Russian state-owned oil producer Rosneft acquired the Russian oil company TNK-BP for USD 55 billion; because 50 percent of the shares of TNK-BP were owned by a holding company incorporated in the British Virgin Islands (ultimately owned by Russian individuals), the transaction led to a very strong increase in recorded FDI outflows from as well as inflows into Russia in the same year (Nougayrède 2016). In reality, however, these figures measured little more than the acquisition of a Russian company by another Russian company.

Given recent estimates that roughly fifty percent of global FDI flows are channelled through SPEs, this leaves us with the troubling prospect that for half of global FDI flows we do not know: (i) what the ultimate destination of the capital flow and the associated economic activities really were; (ii) if the investment involved holding a controlling interest in any other company at all; or (iii) whether it was even invested outside of the ultimate owner’s home economy.

The devil is in the details: technical measurement problems

The conceptual mismatches between the theoretical and statistical unit of FDI and the growing complexity and intransparency of transnational company ownership structures thus pose a number of serious problems for the collection of FDI statistics that together seriously threaten to undermine their usefulness to inform policy debates. But even in an optimistic scenario, in which these problems were to be solved, the estimation of the ‘true’ (or at least internationally comparable) levels of flows and stocks of FDI faces many additional obstacles of a more ‘technical’ nature.
A particularly important technical challenge is the definition of clear rules how to calculate the net value of FDI inflows and their accumulated stock. In effect, attributing one single economic value to an FDI transaction involves a multitude of (to some extent necessarily arbitrary) accounting decisions, such as to determine the timing of the recording of the transaction, whether to use values before or after tax, whether or not to deduct write-offs and capital depreciation, whether to record a transaction's book value or to estimate its market value, etc. For the purposes of this chapter it is not necessary to treat these various dimensions of accounting techniques in much depth. But it is worth noting that despite all the sustained efforts of international organisations to standardise such practices, cross-national differences continue to persist on a number of these issues, even among OECD member countries (see IMF and OECD 2003). And although the impact of some of these variations on reported FDI flows may be negligible, others can have substantive impacts.

While issues of valuation are relevant for figures estimating both FDI flows and stocks, they are particularly important for the latter because the aggregation of figures on historical flows can compound the effect of seemingly minor technical differences. Traditionally, the dominant valuation method that most countries used to calculate FDI stock figures was based on foreign investments' historical cost or book value that is, past investment flows were valued according to their price at the time that the transaction took place. However, in more recent years, the IMF and OECD have moved away from this practice towards a preference for market-based valuation techniques. The goal of these techniques is to estimate the current value of a past investment by taking into account the evolution of inflation rates, exchange rate movements and stock prices over the time-period that has elapsed since the original investment was made. While these procedures can be relatively straightforward for assets that are
publically traded, they are more complicated for those that are not, such as FDI flows going into unlisted equities.

Yet, the differences among the two methods alone can lead analysts to radically different conclusions. For example, a study by Ricardo Hausmann and Federico Sturzenegger (2007) following up on earlier work undertaken by the US BEA in the early 1990s (see Landefeld & Lawson, 1991) argues that not only the size but even the direction of the US economy’s actual net investment position depends on the valuation method that one uses to calculate the value of its outward FDI stock. While the officially reported statistics (using historical cost valuation methods) indicate that the US net investment position had deteriorated sharply since the mid-1990s, Hausmann and Sturzenegger show that the picture looks very differently if FDI stock data is adjusted to price increases in stock market indices over the period. Because historically US MNCs had expanded abroad long before MNCs from other countries started investing in the US at a similar scale, Hausmann and Sturzenegger argue, the book value of the US outward FDI stock vastly underestimates the US’ ‘real’ investment position. Multiplying the value of historical FDI in- and outflows by the factor by which US stock market valuations increased since then, their results suggest that the US economy might actually be a net creditor rather than a debtor. In other words, one of the most heated topics of debate in US foreign economic policy of recent years seems to be entirely contingent on the choice between two equally legitimate accounting methodologies.

At the same time, the question how to value past FDI flows does not simply boil down to a binary choice of either historical cost or market value methods, since a number of ways exists to calculate each of them. As a striking recent study by Jannick Damgaard and Thomas Elkjaer (2014) illustrates, the most up to date IMF guidelines for the
collection of balance of payment statistics (IMF, 2009) recommends seven different methods to estimate the value of unlisted FDI. Re-calculating the inward FDI stock according to these seven methods with Danish data, the authors come to vastly different results regarding Denmark’s ‘real’ investment position, with figures ranging anywhere between 48 and 340 billion euro (corresponding to numbers accounting for anything between 22 and 156 per cent of Danish GDP). The measurement of FDI is thus not only plagued by difficult conceptual issues, but at the same time key FDI figures are also highly contingent upon the accounting techniques that are used in order to estimate the value of those flows.

Conclusions

FDI statistics are widely used in economic policy debates, most prominently so as supposedly ‘hard’ indicators of countries’ levels of globalization or economic attractiveness. Yet, digging just a little beneath the measurement techniques giving rise to the much advertised headline figures, a great variety of problematic and difficult-to-solve issues arise: Aggregate FDI statistics reflect the sum of a great variety of different types of cross-border flows (e.g. greenfield, M&A or SPE FDI, which can all come from abroad or be raised from local capital markets) that can have very different implications for policy. The measurements include economic activities that do not seem to correspond to the theoretical concept of FDI, such as the purchase of holiday homes or, more problematically in quantitative terms, corporate inversions and other types of SPE FDI. Simultaneously, they exclude others despite good theoretical reasons to include them, such as a substantial investment by a foreign investor that comes with a seat on the board of directors, although it falls short of the official 10 percent ownership threshold used to identify FDI. And last but not least, statistical practices to measure and calculate the value of FDI flows vary greatly across countries, raising serious questions about their comparability. Dissecting the
measurement of FDI is in this sense not dissimilar from peeling an onion: once the first layer is removed, the second comes off fairly easily, and so on: and when all they layers are gone, it seems rather unclear what we are being left with.

FDI is certainly a crucial phenomenon in current economic affairs and undoubtedly does require systematic attention. But analyses of FDI are unlikely to be particularly insightful in absence of a serious engagement with the content of the data that they rely on. As this chapter has shown, the most commonly used aggregate figures on FDI flows and stocks are fraught with conceptual and accounting-technical difficulties. And at the end of the day, it remains fundamentally unclear whether FDI statistics are a useful approximation to the economic phenomenon that analysts intend to scrutinise when they analyse FDI data. In practical terms, it thus seems imperative for FDI data consumers to acknowledge the difficulties surrounding the collection of FDI statistics by being clear what they ‘talk about when they talk about FDI’ (cf. Kerner 2014): greenfield or M&A, FDI in general or in specific sectors, ‘new’ investments only or including the re-invested earnings by previously established foreign enterprises, and so on. Moreover, they will need to assess critically whether the data they use is aligned with the theoretical concept they are referring to: flows or positions, including or excluding SPE FDI, book values or market values, etc. . Finally, there is the challenge to make sure that the data that is compared is actually comparable by checking carefully whether the agencies assembling the data followed the same methodology when compiling them.

On a theoretical level, the issues that the assessment presented here highlights are applicable far beyond the case of FDI statistics. Similar problems are indeed inherent in nearly all economic statistics. In this sense, the broader point of the chapter is to encourage a more critical engagement with economic measurements, which acknowledges that they are not simply objective truths, but socially constructed products (cf. Mügge, 2016). And therefore, in order to make sense of them, questions
about how statistics are being constructed and by whom should be all-important considerations that deserve much greater attention than they have received so far.
References


### Table 1 Where in Europe are the US multinationals?

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NOTE: All raw data from US BEA, [http://www.bea.gov/iTable/index_MNC.cfm](http://www.bea.gov/iTable/index_MNC.cfm) [accessed 1 November 2016]. FDI stock and net income in million USD.
Notes

i For helpful comments and suggestions, I am grateful to Daniel Mügge, the editors and two anonymous reviewers. Financial support provided by the Netherlands Organisation for Scientific Research (Vidi grant 016.145.395) is gratefully acknowledged.

ii Conceptually, the FDI stock is simply a measure of the total sum of flows that has accumulated over time. The difference between the inward and outward stock is used to estimate a country’s net ‘investment position’.

iii Academic economists took even longer to distil this insight, with the pioneering studies by Charles Kindleberger, John Dunning and Stephen Hymer only appearing in the late 1950s-1960s. See Dunning (1958), Hymer (1960) and Kindleberger (1969).

iv The manual specifies that in the case of subsidiaries “[c]ontrol” (...) should be inferred if (i) 50% or more of the voting stock is owned by residents of X, or (ii) 25% or more of the voting stock is concentrated in the hands of a single holder or organized group of holders in X, or (iii) a resident of X has in fact a controlling voice in its policies…” (IMF, 1948, p. 49 [emphasis added]).

v In reality, the simultaneous embrace of the principles of a ‘fully consolidated system’ (FCS) in BPM5 (IMF, 1993), which aims to also record all indirect investments of a parent company in an unbroken chain of ownership as FDI, means that investments far below the 10 per cent threshold (in a direct relationship) are also to be recorded as FDI. For example: if a foreign parent company holds 50 per cent of the voting stock in company X, which in turn holds 50 per cent of company Y, which holds 10 per cent of company Z, the principles of FCS define the parent company’s indirect ownership of company Z as ‘FDI’ even though it actually amounts to only (0.5*0.5*0.1=) 2.5 per cent. Cf. Bertrand (2005, p. 613).
vi For example, a recent OECD/IMF survey revealed that two OECD member countries (Italy and Turkey) did not use the 10 per cent rule and six further member countries used other criteria in addition to the 10 per cent threshold to determine a foreign investor’s ‘effective voice’ (a practice that is explicitly not recommended by the OECD and IMF). See IMF and OECD (2003).

vii The latter is especially true in host economies with advanced capital markets.

viii The suggestive findings of Acalin and Blanchard suggest that it is not only well-known tax havens (such as the British Virgin Islands or the Netherlands) that serve as places of conduit of SPE FDI, but a great variety of countries including Hungary, Bulgaria, Chile, Malaysia and many others.

ix For earlier similar exercises, see Lipsey (2001) and Kerner (2014).

x Unfortunately, net income is not reported for Luxembourg; but given the huge size of the reported FDI stock and the very small number of employees there, it is likely that the ratio would amount to several million USD.

xi This is also an important issue for the estimation of many other economic indicators. See, for example, Mügge and Stellinga (2014).

xii Survey evidence suggests that practices are still far from being harmonised, with roughly half of the sample of the surveyed countries using either method in 2002. See IMF and OECD (2003).