Fickle Formulas

Measuring Foreign Direct Investments

Working Paper
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FOREIGN DIRECT INVESTMENTS*

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“The disturbing conclusion is that the market value measures of FDI ... are ‘made up’ or constructed numbers, that is, ‘heroic imputations’ rather than direct measurements. It is therefore surprising that (...) there seems to be little or no awareness of the extent of our ignorance about the quality and reliability of these data.”

Willem Buiter (2006)

With the growing transnationalization of production chains, trade and foreign direct investment activities have become intrinsically linked phenomena. And in consequence, statistics indicating the size of flows and stocks of foreign direct investments (FDI) are widely used in trade negotiations, as well as in many other types of expert discussions and scholarly as well as public debates about the world economy. The figures are commonly associated with the notion of capital coming into a country from abroad with the purpose to build a new company. However, this is not precisely what statisticians measure when they measure FDI. In effect, as this chapter will explain in more detail, substantial shares of measured global FDI flows actually do not cross any border and aren’t directly associated with the creation of any new factories or jobs either. At the same time, the problems associated with FDI as a statistical unit are not limited to conceptual mismatches between what people normally think of when they talk about FDI and the content inside the statistics to which they typically refer to when making their points; they are further exacerbated by a compounding series of necessarily arbitrary accounting-technical decisions. And because conceptual mismatches and technical decision-making processes are handled differently by different national statistical agencies (as well as by the same agencies over time), different agencies frequently measure different things when they measure ‘FDI’. Needless to say, the combination of these factors makes FDI statistics a rather problematic construct in manifold ways. It is no secret, for instance, that the discrepancies between the 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 channeled through special
purpose entities (SPE) that make the identification of the function, ultimate ownership and
destination of these capital flows virtually impossible. And yet, although many of these
problems are fairly obvious and despite the repeated warnings and caveats issued by
statisticians collecting this data, more often than not, FDI statistics are simply taken at face
value, a ‘hard fact’ reflecting the ‘true’ levels of FDI.

The primary goal of this chapter is therefore to explain and illustrate some of the basic issues
related to FDI as a statistical unit. Yet the purpose of doing so is not merely to highlight
some of the serious shortcomings of FDI statistics, but to raise some 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 are unlikely to
entail major distributional consequences on their own and, as a result, it is not ultimately
clear if there are any clear ‘winners’ or ‘losers’ of a certain definition of FDI. In this sense, the
theoretical implications do not primarily refer to political power dynamics, but instead to
the more subtle ways through which the epistemic deliberations giving rise to statistical
indicators can affect our understanding of the world economy. In this sense, the first key
point that the chapters aims to make is to show that statistical indicators do not only feed
political discourses about the world economy, but that they are themselves at the same time
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, it demonstrates that the role of statisticians
as a special type of international bureaucracy girded with a notable level of expert authority
(cf. Brunsson and Jacobsson 2000; Barnett and Finnemore 2004) deserves greater analytical
attention. As the chapter illustrates at the example of the central role played by IMF
statisticians in the creation and dissemination of global standards how to measure FDI,
statisticians do not merely report objective figures, but they act at the same time as powerful
meaning-makers in international affairs that do not only provide information but
simultaneously shape the ways how we make sense of that information in a discreet but all-
important manner. Thirdly, the chapter describes an empirical pattern, which emphasizes
the importance of cognitive ‘stickiness’ within discursive dynamics. While most of the other
contributions to this volume highlight how changing discourses have driven the social
reconstruction of key concepts in international trade, this chapter instead illustrates how
discursive resistance to change in the face of substantial structural changes in the world
economy – 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. As the chapter shows, the theoretical concept of FDI that underlies the collection of balance of payments statistics has remained more or less the same throughout the post-war era, but the sharp increases and changing nature of transnational economic transactions in the late twentieth century made the statistical operationalizations that were originally derived from the theoretical concept increasingly inappropriate, leading to ever wider divergences between what FDI statistics are supposed to measure and what they actually measure.

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. While FDI flows had for long periods been considered to be simply a part of portfolio capital flows, an expert consensus started to emerge in the early 1950s, which saw FDI as different from other cross-border capital flows. Unlike portfolio investors, direct investors, it was said, were in it for the long term and sought not merely to achieve a yield on their capital, but to control or at least influence the management of the companies they invested in. Once that FDI was discovered as a concept, it then had to be defined as a statistical unit. Investigating the evolution of the statistical definition of FDI in subsequent editions of the Balance of Payments Manual (BPM) issued by the International Monetary Fund since 1948 – the most authoritative guidelines of its kind - , the second section then presents an overview of how the key criteria that the IMF advocated to be used by national agencies to statistically distinguish FDI from other portfolio capital flows changed over time. The overview shows how the emphasis of the IMF recommendations gradually shifted from a flexible bottom-up approach that let national statisticians use their own methods and qualitative judgment to identify ‘FDI’, towards an increasingly top-down strategy that attempts to standardize the measurement of FDI at the global level by using an arbitrary threshold that defines as ‘FDI’ all cross-border investments in which the foreign investor holds at least ten percent of a company’s voting stock. The third section then proceeds to illustrate some of the mismatches between this statistical operationalization and the theoretical concepts underlying FDI. The section lines out the great variety of capital flows that are aggregated under the statistical category of FDI and argues that, on the one hand, it fails to make key distinctions between different types of long-term capital flows
(such as between greenfield vs. M&A, or between locally raised capital vs. funds from abroad) that would be critical in order to make FDI statistics useful for policy analyses, while, on the other hand, it by definition includes a large amount of capital flows that are much more akin to short-term capital flows than the theoretical concept underlying the idea of FDI suggests. Finally, the fourth section moves the discussion towards some of the key accounting-technical issues underlying FDI statistics. It highlights that despite the apparently clear-cut and straightforward nature of the ten percent rule, the estimation of levels of FDI are deeply contingent upon manifold seemingly small ‘technical’ decisions, which are applied differently by various statistical agencies and can have fairly dramatic consequences for the measurement of levels of FDI, with potentially crucial implications for policy issues.

**DRAWING BOUNDARIES: DISCOVERING AND DEFINING FDI**

Economic analysts are primarily interested in a country’s in- or outflows of FDI in a given year and/or its accumulated inward or outward FDI stock. While these numbers are widely used today, they are in fact a relatively recent invention. What is more, not only the history of statistical measurements is relatively short, but also the underlying recognition of the theoretical concept of ‘FDI’ as a specific phenomenon that was considered to be distinct from other types of capital flows (and which was perceived to be something important enough to deserve being measured on its own) dates back only to the aftermath of the Second World War. Indeed, while we take the existence and importance of FDI for granted today, this was not always the case, even though companies operating simultaneously in several jurisdictions have existed for thousands of years (Moore and Lewis 1998).

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). However, in accordance with the observed “general lack of concern about the nationality of [economic] ownership” (Jones 2005:202), 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 most 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 clearly and explicitly recognized FDI as a special
type of capital flow, which they wished to track and monitor systematically (Cf. Whichard 2005:620)\(^2\). In order to collect data on FDI, the concept then first had to be operationalized as a measurable statistical unit. And despite the theoretically fairly straightforward distinction between ‘long-term’ and ‘short-term’ investments, the latter proofed to be (and remains until today) an issue that was fraught with conceptual as well as technical difficulties.

Although the collection of FDI statistics is the responsibility of national governments, international organizations (in particular, the IMF and OECD) have played an important role as coordinators and advocates of the standards guiding the collection of national balance of payments statistics. To better understand the evolution of FDI as a statistical unit over time it therefore seems useful to track the changes in its definition in the IMF’s Balance of Payments Manuals (BPM), which are considered to have decisively “shaped (…) the currently dominant [statistical] definitions of FDI” (Bertrand 2005:597). The first edition of the Balance of Payments Manual (BPM1), published in 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 1948:49 [emphasis added]). In other words, what set FDI apart from other types of cross-border (portfolio) capital flows in the eyes of the authors of the 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 emphasizing 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 regards\(^3\), the authors refrained from establishing one clear threshold. In contrast to more recent editions of the BPM, the authors emphasized that the identification of ‘effective control’ was ultimately a qualitative judgment that is best decided on a case-by-case basis and, accordingly, the ultimate decision was deliberately left in the competence of national statisticians. And 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 - respectively published in 1950 (BPM2), 1966 (BPM3) and 1977 (BPM4) - 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% of a company’s voting stock, or in which one single foreign investor held at least 25%, 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 analyzing 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 1961:120). 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 1977:137) And accordingly the authors reiterated 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.: 138).

Interestingly, by the early 1990s the IMF’s view on this key issue for the statistical definition of FDI, as well as its more general approach towards the harmonization of statistical rules, had transformed fairly dramatically. In contrast to the pragmatic bottom-up approach advocated throughout BPM1-BPM4, the BPM’s fifth edition issued in 1993 adopts a markedly different approach. While the IMF had previously emphasized 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 instead corresponds to the logic of a strict top-down approach toward the harmonization of statistical measurements, leaving as little room as possible for discretion on behalf of national statisticians. With regards to FDI, rather than admitting the inherent subjectivity of the distinction between FDI and portfolio capital flows as previously, 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 1993:86). 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 flows⁴ (henceforth referred to as the ‘10%-rule’).

**OF APPLES AND ORANGES: CONCEPTUAL PROBLEMS**

Although the 10%-rule is still not universally implemented today⁵, it has become the dominant criterion that national statistical agencies use in order to identify FDI. The obvious advantage of this clear-cut mechanical rule as opposed to more qualitative evaluations of FDI is that it is relatively straightforward to implement cross-nationally. The drawback, however, is that the statistical unit that the rule defines does not directly correspond to the theoretical concept of FDI. In effect, as this section aims to illustrate briefly, the statistical operationalization of FDI lumps together such a great variety of economic transactions - failing to distinguish between fairly different types of long-term cross-border investments with potentially very different policy implications on the one hand, while at the same time also including a large amount of transactions that do not correspond to the theoretical concept of FDI at all - 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 operationalization undermining its usefulness for policy purposes is that it fails to distinguish between different 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 that is commonly attributed to FDI is that it supposedly adds to a nation’s physical capital stock because it ‘brings in money’ from abroad. However, as mentioned earlier, a substantial amount of the transactions, which are statistically defined as FDI, actually do not cross any border as a large share of registered inflows of FDI is constituted of re-invested earnings (that is, the profits generated by affiliates from their activities in their host economy) and money that foreign companies raise on local capital markets⁶. From a national monetary perspective, this appears to be a fairly important distinction, yet the statistical
operationalization of FDI fails to take it into account. Furthermore, to assess the economic
effects of FDI, a vast literature in international business studies emphasizes the importance
to distinguish FDI flows by their mode of entry. Most essentially, foreign multinationals can
invest in an economy either through the creation of an entirely new company (so-called
‘greenfield’ investments) or through the acquisition of an already existing local company
(that is, mergers and acquisitions (M&A), also dubbed ‘brownfield’ investments). As
previous research has shown in great detail, the economic and political issues associated
with each one of these two types of FDI can be very different. For instance, the single most
important perceived benefit of FDI - certainly so from the perspective of politicians - is that
they supposedly create new jobs. Whether they do or not, however, critically depends on a
MNC’s mode of entry: while the identification of the net effect of FDI on employment is a
perennially complex issue that depends on many other factors as well\(^7\), all else equal, the job
argument in favor of FDI is far more likely to hold in cases of greenfield rather than
brownfield FDI (in which, technically, the economic transaction consists merely of a swap of
ownership shares). And yet, despite this fundamental conceptual difference between these
two types of FDI, the statistics measuring them classify them as one and the same thing.

The second major, and for several reasons even more problematic, conceptual issue of the
dominant statistical operationalizations of FDI is that they at the same time include a large
number of economic transactions that are much more akin to short-term rather than long-
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,
as it is typically assumed, we would expect the correlations between FDI in- and outflows to
be low or even negative (supposedly, investments would unambiguously increase in
situations in which the fundamental growth prospects were good, or decrease in cases that
they were not so good) and largely immune to short-term fluctuations in global capital
markets, such as major monetary policy changes. In contrast, however, 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 and Acalin 2016:1).
The principal reason for this observation lies in the existence of a significant third category of ‘FDI’ flows other than typical greenfield or M&A FDI: ‘special purpose entity’ (SPE) FDI, or, if you will, ‘indirect direct investments’. SPE FDI refers to a variety of cross-border capital flows involving ownership shares above the imposed 10%-threshold that passes through or is destined to holding companies (colloquially also known as ‘letter-box companies’), which are legal entities created not to oversee any industrial activities but merely to ‘hold’ shares in other companies. In most instances, the main reason for their existence is to allow owners to take advantage of favorable tax provisions.

To give one simplified real-world example (based on Davies and Marks 2016): All European operations of the US online distributor Amazon are channeled through a holding company based in Luxembourg (called Amazon Europe Holding Technologies, AEHT), which officially 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.

It is fairly obvious that these kinds of ownership structures (besides the clear normative issues) also create huge challenges for the collection of FDI statistics. What is more, the shares of global FDI flows that are channeled through such structures have increased so rapidly in recent years that they have turned into an extremely widespread phenomenon. Recent estimates from the US Bureau of Economic Affairs, for instance, suggest that in most recent years as much as 50 per cent (!) of total outflows of FDI from the United States go to a SPE in the first place (Ibarra-Caton and 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) provides. 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 MNCs abroad such as the
geographical distribution of their declared net income, total assets, sales revenues or the number of employees. Table 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 last row calculates the declared net income per employee.

The results are quite 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 rather weak. More specifically, the FDI stock data and the reported profits suggest that the bulk of operations of US MNCs happens 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, for example, Germany, France, Italy, Spain or Russia. If we calculate the declared profits per employee (cf. last row), the disparities become very clear: while the reported net income per employees is USD 30,263 in Germany and 18,792 in France, the ratio reaches extremely high numbers above half a million USD per employee in Ireland, Switzerland and the Netherlands11. It is of course rather unlikely that US MNC-employed workers in Ireland really are 50 times more productive than their counterparts in France... Instead, the unrealistically high ratios in small tax-haven jurisdictions are almost certainly due to transfer pricing structures, which heavily distort the location of profits declared by US MNCs in their financial statements - and, as a result, also FDI flows and stocks statistics, which heavily rely on the latter to estimate the presence of foreign companies in an economy.
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.
In addition to the phenomenon of transfer pricing to low-tax jurisdictions, the complexities of holding company structures can lead to many further complications for the purposes of 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 that are channeled 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 doesn’t hold a majority position in any other company, but instead rather 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.

In combination with the US BEA’s estimations that the share of US FDI outflows going to a SPE in the first place, these various problems thus leave us with the troubling prospect that for roughly half of current US FDI outflows – and likely a similar share of global FDI flows as well12 - , 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 USA.
THE DEVIL IS IN THE DETAILS: TECHNICAL 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 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 still faces other substantial further obstacles of a more ‘technical’ nature.

A particularly important challenge in these regards consists of the definition of clear rules how to calculate the net value of FDI inflows and their accumulated stock\(^\text{13}\). 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 here. But it is worth noting that despite all the sustained efforts of international organizations to standardize such practices, cross-national differences continue to persist on a large 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 process of aggregation of historical flow figures can compound the effect of seemingly minor technical differences. Historically, the dominant valuation method used by most countries 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\(^\text{14}\). The goal of these techniques is to revalue the current value that a past investment would have today, by taking into account the evolution of such things as inflation, exchange rate movements or stock market developments since the original investment was made. While these procedures can be relatively straightforward for
assets that are publically traded (e.g. shares of companies listed on major stock market exchanges), they are more complicated for those that aren’t, such as the majority of FDI flows going into unlisted equities.

The differences among the two methods can, however, result in fairly dramatic divergences in estimates. For example, a study by Ricardo Hausmann and Federico Sturzenegger (2007) (following up on earlier work undertaken by the USBEA in the early 1990s; see Landefeld and Lawson 1991), which received a fair amount of political attention in the mid-2000s when discussions about the US current account deficit were heated, argued that not only the size but even the direction of the US economy’s actual net investment position depends crucially 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, indicated that the US’ net investment position had deteriorated sharply since the mid-1990s, Hausmann and Sturzenegger showed that a very different picture emerges if we were to revise the FDI stock data for the changes in US stock market indices over that period. Because, historically, US MNCs had expanded long before MNCs from other countries started investing in the US at a large 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 rather dramatic results suggest that the US economy might actually not be a net debtor to the rest of the world at all, but in fact rather a net creditor; in other words, one of the most heated topics of debate in US foreign economic policy of recent years thus seems to disappear almost magically by simply switching between different (in principle both legitimate) valuation methods!

Yet, the crucial question how to value past FDI flows does not simply boil down to a binary choice set consisting of either historical cost or market value methods, since a number of ways exists to calculate each of them. For instance, 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 (BPM6, issued in 2009), although in principle agreeing on the use of market valuation principles, recommends seven different methods to estimate the value of unlisted FDI. Somewhat problematically, re-calculating the inward FDI stock at the example of Denmark according to these seven methods, the authors come to vastly different results regarding Denmark’s ‘real’ investment position, with figures for the inward FDI stock ranging anywhere between 48 and 340 billion euro (respectively
corresponding to numbers accounting for anything between 22 and 156 percent 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, as this chapter has shown: 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 don’t 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) and excludes others, albeit there would in principle be good theoretical reasons to include them (such as the appointment of a foreign investor to a company’s board of directors coinciding with a substantial investment in the company by that investor, which falls just short of the 10 percent ownership threshold); and at the same time, statistical practices to measure and calculate the value of FDI flows vary greatly across countries.

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 actually being left with. Nonetheless, the purpose of this chapter is not to argue that all FDI statistics are ‘meaningless’ and that we’d rather stop collecting them. Instead, its aim is to encourage users of FDI data to think more critically about what the measures they use actually measure. FDI is certainly a crucial phenomenon in current economic affairs, which 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 tried to show, the most commonly used aggregate figures on FDI flows and stocks are fraught with conceptual and accounting-technical difficulties.
and it is oftentimes not clear that they represent a useful approximation to the phenomenon of FDI that analysts typically want to refer to when they use the data.

In practical terms, it thus seems important for FDI data consumers to acknowledge the difficulties surrounding the collection of FDI statistics and to be very clear what they ‘talk about when they talk about FDI’ (Kerner 2014) (e.g. greenfield or M&A?, FDI in general or in specific sectors?, etc.), to pay special attention that the data they use is aligned with the theoretical concept they are referring to (e.g. Flows or positions? Including or excluding SPE FDI?, Book values or market values?, etc.) and, crucially, making sure that the data that is compared is actually comparable (e.g. did the agencies assembling the data use the same methodology?).

At the same time, on a theoretical level, the more general issues raised in this chapter are applicable far beyond the case of FDI statistics, as similar problems are inherent in nearly all economic indicators. In this sense, the broader point of the chapter is to encourage a more critical engagement with economic measurements more generally, which acknowledges that they are not simply objective truths, but socially constructed products (cf. Mügge 2016). And, as such, to make sense of them, questions about how economic statistics are constructed and by whom should be all-important considerations that deserve much greater attention than they have received so far.
REFERENCES


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1 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’.

2 Academic economists took even longer to distil this insight, with the pioneering studies by Charles Kindleberger, John Dunning and Stephen Hymer that started to make a clear conceptual distinction between FDI and short-term portfolio capital flows only appearing in the late 1950s-1960s. See Dunning (1958), Hymer (1960), Kindleberger (1969)

3 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; 49 [emphasis added]).

4 In reality, the simultaneous embrace of the principles of a ‘fully consolidated system’ (FCS) in BPM5, 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% threshold (in a direct relationship) are also to be recorded as FDI. For example: if a foreign parent company holds 50% of the voting stock in company X, which in turn holds 50% of company Y, which holds 10% 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 percent. Cf. Bertrand 2005:613.

5 For example, a recent OECD/IMF survey revealed that two OECD member countries (Italy and Turkey) did not use the 10% rule and 6 further member countries used other criteria in addition to the 10% 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.

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

7 Such as the import-propensity of affiliates, their usage of labour-saving technologies, etc.


9 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.


11 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.

12 The focus on the USA is solely due to the exceptionally detailed breakdown of FDI data in this regard provided by the US BEA.

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

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