

# Principal Gaps in India's FDI Statistics: User Perspectives

Findings from interviews with Indian Policy-makers and FDI researchers

ENHANCING THE SCOPE AND QUALITY OF INDIAN FDI STATISTICS: POLICY BRIEF

No. 2, MARCH 2015

## About the Project

India ranks among the world's 15 largest recipients of foreign direct investment (FDI), and the Indian Government is prioritising FDI as a key driver for economic growth, employment and global competitiveness. For this reason, it is crucial to ensure that Indian policy makers have both a thorough and holistic view of India's FDI flows and their economic contribution. Detailed, robust and easily accessible FDI data is fundamental to this insight.

Against this backdrop, NCAER's *Enhancing the Scope and Quality of Indian FDI Statistics* project has sought to determine the FDI data needs of Indian policy makers and experts who examine FDI's distribution and impact in the country, so as to identify major gaps and suggest solutions. It has also examined evolving international best practices in FDI statistics collection, analysis and reporting, and in assessing the economic contribution of FDI.

This project has been supported by a grant from the UK Prosperity Fund, whose assistance is gratefully acknowledged.

## Abstract

*This note summarises the findings of interviews with senior Indian policy-makers and FDI researchers to ascertain the adequacy of India's FDI statistics in answering important FDI policy and research questions. The principal gaps identified are: lack of data on the operations of foreign firms in India, on the state and district break-up of FDI inflows, on the specific nature of FDI activity within a sector, and on the correct country source of FDI inflows. Another major gap is that there is as yet no complete inventory, location-wise, of foreign direct investors in the country.*

## SAMPLE, OBJECTIVES AND METHODOLOGY

NCAER conducted semi-structured, in-person interviews with 55 Indian Central and State Government officials and foreign direct investment (FDI) researchers<sup>1</sup> to ascertain whether India's existing FDI statistics adequately serve to answer important FDI policy and research questions and, if not, what the principal constraints are. Additionally, interviewees were asked to suggest potential improvements and solutions.

## KEY FINDINGS

### Data Sources

All respondents rely on Reserve Bank of India (RBI) and Department of Industrial Policy and Promotion (DIPP) macro-data for a broad picture of India's FDI inflow and outflow. While the RBI reports monthly, quarterly and annual aggregate totals for FDI inflows and outflows,<sup>2</sup> DIPP reports the country source, sector break-up and geographic destination of India's FDI inflow.<sup>3</sup> In both cases, this data is available for free on their websites.

However, all FDI researchers in the sample said they now rely primarily on private databases, such as Prowess, Capital Line and Business Beacon, when studying the financial structure, strategic behaviour and economic contribution of India's inward

## About NCAER

NCAER, the National Council of Applied Economic Research, is India's oldest and largest independent economic think-tank, set up in 1956 at the behest of Prime Minister Jawaharlal Nehru, to inform policy choices for both the public and private sectors. Over nearly six decades, NCAER has served the nation well with its rich offering of applied policy research, unique data sets, evaluations, and policy inputs to central and state governments, corporate India, the media, and informed citizens. It is one of a few independent think-tanks world-wide that combines rigorous economic analysis and policy outreach with data collection capabilities, particularly for large-scale household surveys. NCAER is currently led by its Director-General, Dr Shekhar Shah, and governed by an independent Governing Body, chaired by Mr Nandan M. Nilekani.

and outward investors, even though firm-level data is available with the RBI and DIPP. This is because DIPP's micro-data lacks the necessary detail, the RBI's firm-level data is difficult to access, and there are sometimes breaks in the historical series for individual firms.

#### Data Access

One fourth of all respondents (and 48% of FDI researchers) spoke of difficulties in accessing disaggregated and historical FDI data from both RBI and DIPP, beyond the publicly-reported totals on their website. They say that there does not appear to be a formal mechanism by which FDI researchers can access detailed time-series data from these organisations.

They say that both agencies generally have the data required, but seem hesitant to share it, even though this type of data is now routinely made publicly available even to university students in other leading FDI host economies. All these countries have dedicated FDI cells, which not only collect, analyse and publicly report FDI, but also actively serve and assist FDI data users and researchers as part of their day-to-day work. Even in India, researchers into trade topics can routinely secure reams of specialised and disaggregated trade data from the Directorate-General of Commercial Intelligence and Statistics (DGCI&S), the Ministry of Commerce and Industry's trade statistics wing.

#### Data Adequacy and Sufficiency

Over 90 per cent of respondents expressed satisfaction with the quality of India's statistics on its overall inward or outward FDI total. This is because India's stringent Foreign Exchange Management Act requires that all inward or outward capital transactions be reported to the RBI.

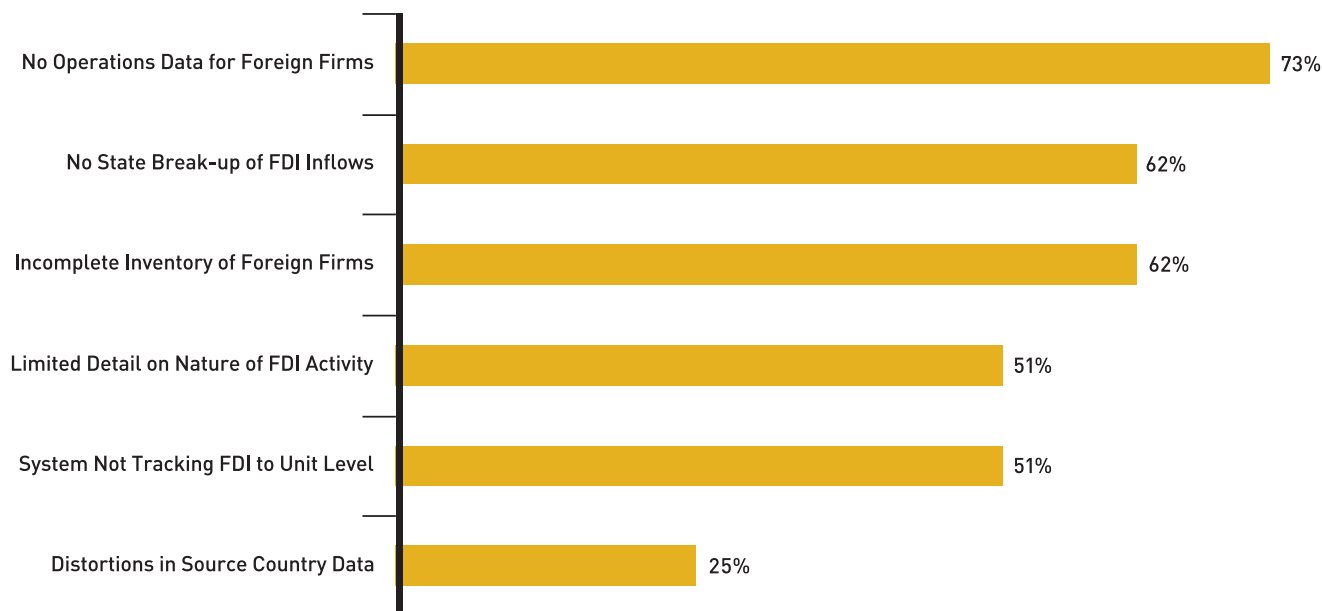
However, respondents flagged six principal shortcomings in Indian FDI statistics (**Figure 1**). Discussed below, these gaps curtail India's understanding of the contribution, distribution, nature and source of its FDI inflow over time, and constrain FDI policy formulation and research.

#### Lack of Operations Data for Foreign Firms in India

73 per cent of respondents - primarily FDI researchers and state government officials (**Figure 2**) - cited the lack of data on the operations of foreign firms in India as a principal handicap. Without information on the actual employment, production, sales, value-added, trade and research and development (R&D) by foreign direct investors, especially at a local level, it is impossible to evaluate their contribution to economic development. This lack of data also makes it difficult for the Government to ascertain whether foreign direct investors are actually meeting the employment, production, trade and other commitments set out in their investment proposals and, therefore, whether they merit the incentives offered to them.

**Figure 1: Principal Limitations in India's FDI Statistics**

% of respondents citing this issue (Total number of respondents - 55)

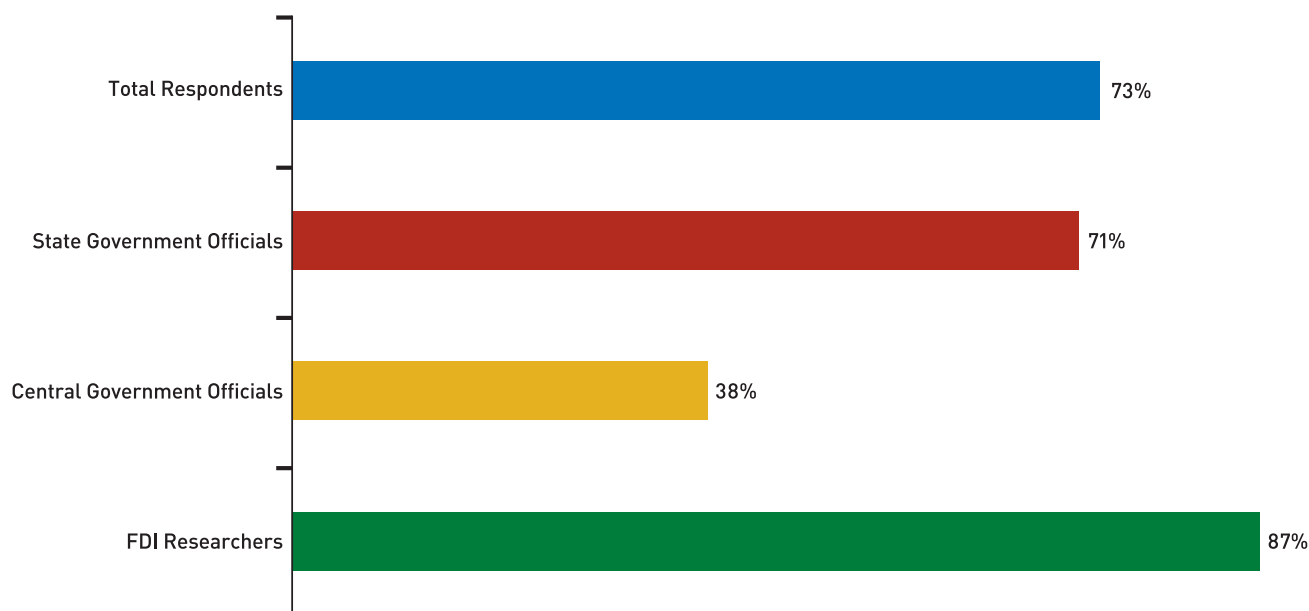


Source: NCAER.

- 1 The sample comprised of 24 state-level and 8 central-level government officials, and 23 FDI researchers.
- 2 RBI's macro data on inward and outward FDI flows is available at [www.rbi.org](http://www.rbi.org).  
A monthly listing of all outward FDI transactions is available at [http://www.rbi.org.in/scripts/Data\\_Overseas\\_Investment.aspx](http://www.rbi.org.in/scripts/Data_Overseas_Investment.aspx).
- 3 DIPP's FDI statistics are available at [http://www.dipp.nic.in/English/Publications/FDI\\_Statistics/FDI\\_Statistics.aspx](http://www.dipp.nic.in/English/Publications/FDI_Statistics/FDI_Statistics.aspx)

**Figure 2: No Operations Data for Foreign Firms**

*(% of respondents within each category citing this issue as a challenge) (Total number of respondents – 55)*



Source: NCAER.

#### Lack of State and District Break-up of FDI Inflows

A majority of respondents (62 per cent) also cited the government's current practice of reporting the geographic disaggregation of FDI inflows by RBI regional office, rather than by state, as a major impediment. This makes it impossible to pinpoint where FDI firms and projects are located in India, a pre-requisite for studying their contribution to the local economy.

As Table 1 (overleaf) shows, the RBI reports state FDI inflows individually for just seven of India's 29 states and seven union territories. In all other cases, FDI inflows are reported as a joint total between two or more states, since the RBI has just 17 regional offices serving India's 36 provincial units. As Table 1 also shows, various RBI regional offices can also cover different parts of the same state. The RBI Regional office in Delhi, for example, reports FDI inflows into Delhi, parts of Haryana<sup>4</sup> and parts of Uttar Pradesh<sup>5</sup> as a single total, while the Chandigarh office reports inflows into the rest of Haryana jointly with those into Chandigarh itself, Punjab and Himachal Pradesh. There is also no geographic break-up for over a quarter of the total inflows that India received between April 2000 and December 2014 (Table 1).

State government respondents underscored the challenges that this kind of reporting poses to robust state-level economic policy-making. To start with, even India's top FDI recipients, such as Delhi, have no way of establishing the exact amount of FDI they receive, let alone how it is taking root on the ground.

Moreover, 51 per cent of respondents, especially state government officials, observed that mere state-level reporting of FDI inflows will not suffice to determine the precise location of firms and their contribution to local socio-economic development. Even Government respondents from states with a dedicated RBI regional office stated their inability to track exactly where foreign firms are located within their jurisdictions because India does not yet report the district break-up of FDI inflows. This is why they suggested evolving a system to track inflows down to their final destination at the plant or unit level. They emphasised that location data is essential not just to assess the economic gains from FDI incentives and promotion activities, but also to frame appropriate responses to State Legislative Assembly questions about the district-wise distribution and economic contribution of FDI within their states.

To answer such questions, one respondent state industry department has had to painstakingly create its own database on the district location of foreign direct investors within its state, since this data is not available from RBI or DIPP. It is doing this from scratch, researching each of the firms that the local RBI office reports as having invested in state headquarters, and then tracking it down to its actual district location. Another state has constructed an extensive detailed, searchable database of all industrial approvals, technical agreements, and investments since 1 January 1991. It enables a detailed analysis of all FDI-related approvals, technology agreements and NRI investments, cut by

4. Here, it is largely the inflow into Gurgaon, a city neighbouring Delhi, that is being captured.

5. Here, it is largely the inflow into NOIDA, a city neighbouring Delhi, that is being captured.

**Table 1: Statement on RBI's Regional Offices (with State Covered) Received FDI Equity Inflows<sup>1</sup>**

(From April, 2000 To October, 2014) Amount Rupees in crores (US\$ in million)

S. No	RBI's Regional Office <sup>2</sup>	State Covered	Cumulative Inflows (April '00 -October '14)	% to Total Inflows
1.	Mumbai	1. Maharashtra, 2. Dadra & Nagar Haveli, 3. Daman & Diu	334,281 (70,108)	30
2.	New Delhi	1. Delhi 2. Part of Uttar Pradesh 3. Part of Haryana	224,684 (45,500)	19
3.	Chennai	1. Tamil Nadu 2. Pondicherry	78,614 (15,381)	7
4.	Bangalore	1. Karnataka	68,917 (13,999)	6
5.	Ahmedabad	2. Gujarat	48,221 (10,144)	4
6.	Hyderabad	3. Andhra Pradesh	46,162 (9,519)	4
7.	Kolkata	1. West Bengal 2. Sikkim 3. Andaman & Nicobar Islands	13,842 (2,855)	1
8.	Chandigarh	1. Chandigarh 2. Punjab 3. Haryana 4. Himachal Pradesh	6,345 (1,328)	0.6
9.	Jaipur	Rajasthan	6,707 (1,250)	0.5
10.	Bhopal	1. Madhya Pradesh 2. Chattisgarh	6,095 (1,216)	0.5
11.	Kochi	1. Kerala 2. Lakshadweep	5,128 (1,046)	0.4
12.	Panaji	Goa	3,738 (802)	0.3
13.	Kanpur	1. Uttar Pradesh 2. Uttaranchal	2,004 (412)	0.2
14.	Bhubaneshwar	Orissa	1,957 (397)	0.2
15.	Guwahati	1. Assam 2. Arunachal Pradesh 3. Manipur 4. Meghalaya 5. Mizoram 6. Nagaland 7. Tripura	361 (80)	0
16.	Patna	1. Bihar 2. Jharkhand	248 (47)	0
17.	Jammu	Jammu & Kashmir	26 (4)	0
18.	Region Not Indicated <sup>3</sup>		301,131 (60,839)	26.10

**Notes:**

1. Includes 'equity capital components' only.

2. The Region-wise FDI inflows are classified as per RBI's - Regional Office received FDI inflows, furnished by RBI, Mumbai.

3. Represents, FDI inflows through acquisition of existing shares by transfer from residents to non-residents. For this, region-wise information is not provided by the Reserve Bank of India.

**Source:** Department of Industrial Policy and Promotion, FDI Statistics Newsletter, October 2014

[http://www.dipp.nic.in/English/Publications/FDI\\_Statistics/2014/india\\_FDI\\_October2014.pdf](http://www.dipp.nic.in/English/Publications/FDI_Statistics/2014/india_FDI_October2014.pdf)

source country, sector and product code, investment size, plot number, tehsil and district, and proposed employment. However, by this state's own admission, the database's significant flaw is that it stops tracking investments once projects go into operation, because operating firms no longer have any need to share data with the State Industries Department.

FDI researchers said location specific data would enable them to correlate the district level FDI inflow with available government data on key local parameters, such as employment, income, education and health. This would enable researchers and policy-makers to answer important policy questions about FDI's contribution to poverty alleviation and socio-economic development.

### Incomplete Inventory of Foreign Direct Investors in India

A majority of respondents (62 per cent) pointed to the absence of a comprehensive inventory of foreign direct investors, whether at a national, state or sector level as a primary gap.

Unlike the RBI, which makes it incumbent on foreign firms to report to it when investing in India, State governments make no such demand on firms investing within their boundaries. As a result, State Government officials said that they do not have a complete listing, with locations, of all foreign direct investors within their jurisdictions and are, therefore, hard pressed to holistically assess FDI's contribution to local economic growth and development.

Likewise, FDI researchers feel handicapped on account of the absence of a comprehensive government listing of foreign

direct investors in India, as they can never be certain about the accuracy and robustness of their research samples. This stands in the way of their work being published in reputed international journals which insist on a statistically valid sample.

This problem is compounded by the fact that many foreign firms do not publicly list in India, since they are entirely owned by their parent concerns. Consequently, there is little public information about them.

### Limited Detail on the Specific Nature of FDI Activity

More than half the respondents, FDI researchers in particular (Figure 3), observed that India's FDI statistics offer limited insights into the nature and developmental quality of its FDI inflow. For a start, they do not yet offer a detailed insight into the specific kinds of manufacturing, service or trading activity that foreign direct investors are engaged in.

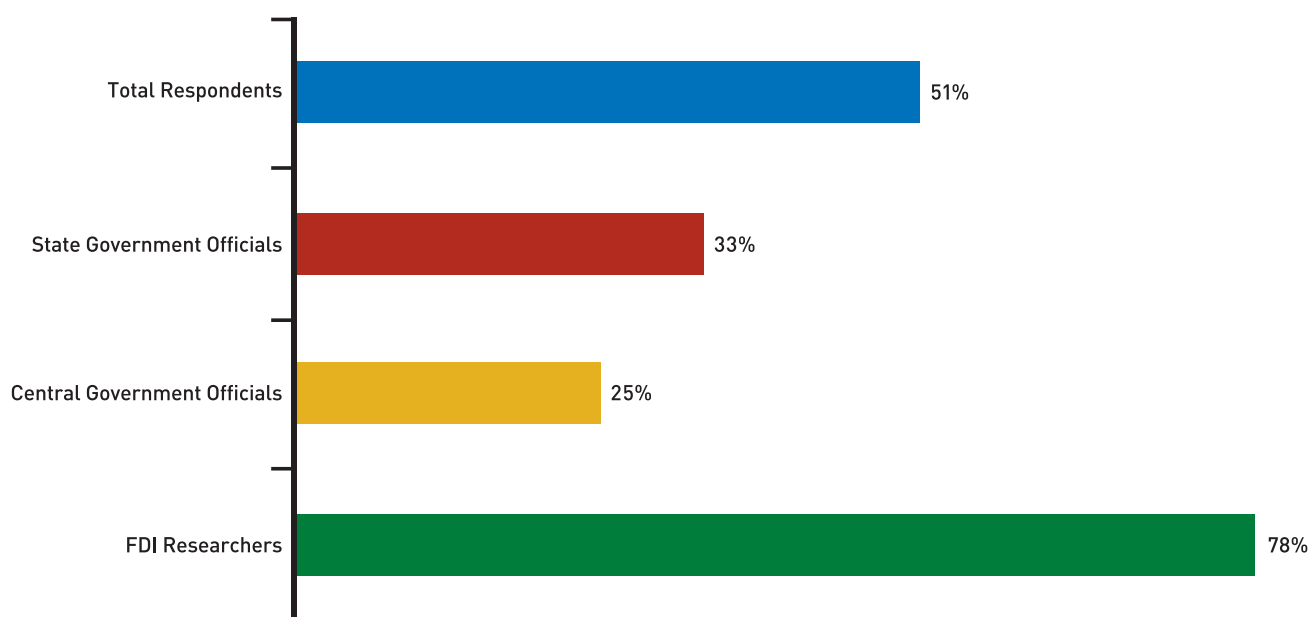
This is largely because India does not report the sector break-up of inflows using the National Industrial Classification (NIC), a system, which derives from the United Nations International Standard Industrial Classification of All Economic Activities (ISIC) - the international standard used to report FDI data. This, even though the RBI uses the NIC when collecting data from foreign direct investors.

Respondents, mainly FDI researchers (Figure 3), say that DIPP - which reports the sector break-up of Indian FDI inflows - uses a less-detailed classification system derived from India's Industrial Development and Regulation Act (1951).

Table 2 throws light on the different levels of detail available in the DIPP and the NIC systems. While, at its most

**Figure 3: Limited Detail on Nature of FDI Activity: Cannot Gauge 'Quality of FDI'**

*(% of respondents within each category citing this issue as a challenge) (Total number of respondents - 55)*



Source: NCAER.

**Table 2: Comparing DIPP's Classification for FDI Data with NIC (2008)**

DIPP Activity	NIC (2008) 3-Digit Activity	NIC (2008) 5-Digit Activity
Mining Service	Mining of hard coal (051) Mining of lignite (052)	Mining of hard coal (051) <ul style="list-style-type: none"> <li>■ 05101 Opencast mining of hard coal</li> <li>■ 05102 Below ground mining of hard coal</li> <li>■ 05103 Cleaning, sizing, grading, pulverizing, compressing etc. of coal, and</li> <li>■ 05109 Other operations relating to mining and agglomeration of hard coal.</li> </ul> Mining of lignite (052)

**Source:** Adapted from National Council of Applied Economic Research (2009), *FDI in India and Its Growth Linkages*

disaggregated, the DIPP system captures 'Mining Service' as a single activity category, the NIC further disaggregates it into the level of detail shown below to capture the specific nature of each investors' activity. Given the lack of standardisation across these two data bases, it is difficult to research the nature and impact of FDI activities in India down to the fine detail seen internationally, as well as in Indian trade studies.<sup>6</sup>

A related handicap is that India's publicly reported inflows data neither distinguishes between 'greenfield' and 'brownfield' investments,<sup>7</sup> nor joint venture versus wholly-owned operations.

State Government officials and FDI researchers also remarked that neither RBI nor DIPP report the sector break-up of state FDI flows, nor each state's share in the total national inflow into a sector. Consequently, it is difficult for States to form a detailed picture of the types of FDI individual states are receiving, what their sector comparative advantage appears to be, and how foreign direct investors in specific sectors contribute to a state's economic development. In other words, if India received \$100 million in agro-processing FDI last year, how much of it went to Maharashtra or Karnataka, and what were their respective shares of total national inward FDI flows or stocks in this sector?

### Distortions in Source Country Data

Finally, a fourth of all respondents pointed to distortions in the country origin of FDI inflows as a problem. This was more problematic for FDI researchers (39 per cent) and central government respondents (25 per cent), but was less a concern for state government officials (13 per cent).

Table 3, adapted from DIPP's report on the country origin of FDI inflows into India, shows that nearly a half of India's total FDI inflow comes from Mauritius and Singapore, countries with which India has signed Double Taxation Agreements. Foreign direct investors thus appear to be routing investments through such countries to avail of tax benefits, a distortion that the Indian Government is well aware of and is actively seeking to remedy. Until it succeeds in doing so, however, this data skew severely distorts policy-makers' and

FDI researchers' understanding of the true origins of India's FDI.

Some respondents made additional observations on the government's current reporting of country inflows. 25 per cent of central government respondents and 13 per cent of FDI researchers said there is often a large discrepancy between the FDI inflow figures that the Indian government reports for specific source countries and the corresponding FDI outflow figures reported for those countries to India. They urged that this mismatch be examined, suggesting that India might be using a different formula from its economic partners in counting FDI but, more importantly, that these mismatches might result from round-tripped investments of Indian black money.

A few respondents commented that neither the RBI nor DIPP websites yet disaggregate India's FDI inflows bilaterally. In other words, there is still no report of how much FDI India receives from, or has invested in a specific partner economy, as a mirror of its FDI to and from India<sup>8</sup>; nor is there a sector break-up for both.

**Table 3: Statement on Country-wise Equity Inflows**

Mauritius	35%
Singapore	13%
UK	9%
Japan	7%
Netherlands	6%
U.S.A	6%
Cyprus	3%
Germany	3%
France	2%
Switzerland	1%
Switzerland	1%

**Note:** Percentages indicate each country's share in India's total FDI inflow (April 2000 - December 2014)

**Source:** Adapted from Department of Industrial Policy and Promotion, FDI Statistics Newsletter, December 2014

[http://www.dipp.nic.in/English/Publications/FDI\\_Statistics/2014/india\\_FDI\\_December2014.pdf](http://www.dipp.nic.in/English/Publications/FDI_Statistics/2014/india_FDI_December2014.pdf)

6. India uses the prevailing international standard - the Harmonized Commodity Description and Coding System (or HS System) - to collect and report its trade data.

7. In a 'greenfield investment', the foreign direct investor sets up a new production or service facility, while in a 'brownfield investment' it purchases or leases an existing facility. <http://www.investopedia.com/terms/g/greenfield.asp>

8. However, RBI does report this data to the IMF, as per India's commitments under the Coordinated Investment Development Survey. <http://elibrary-data.imf.org/public/FrameReport.aspx?v=3&c=11666797&pars=Country,534>.

## SUGGESTED IMPROVEMENTS AND SOLUTIONS

India's publicly-reported FDI statistics can answer broad questions about the total quantum of inflows, their financial and sector composition, and their regional distribution within India. To answer more detailed questions, however, India needs to know who its foreign investors are, where they are locating, what types of manufacturing, service or trading activity they are engaging in, and what their principal operating parameters are. This will require modifications in the manner in which India reports its FDI statistics, as also more investment in its FDI statistical system to enable more detailed compilation.

In this context, respondents had a number of suggestions to make. To begin with, they were unanimous that government data should be significantly enhanced to become the first point of reference for all FDI statistics, even firm-level statistics. Since this data is compiled from mandatory filings by FDI firms, it is significantly more robust than that offered by private databases. Moreover, only the Government has the authority, national spread and resources necessary to comprehensively address major gaps in Indian FDI statistics, by collecting operations data from FDI firms, tracing FDI inflows down to the unit level, and creating a national registry of FDI firms.

Respondents were also unanimous in observing that the RBI, the Central Government and State Governments already maintain most of the data required to address the gaps that they have pinpointed. To access this data, the Government only needs to create a unique electronic I.D. capable of automatically accessing the necessary foreign operations and location data from all relevant Central and State government data bases. Another suggestion was that additional questions be inserted into the Reserve Bank of India's Annual Return on Foreign Liabilities and Assets<sup>9</sup> or into existing surveys, such as the Central Statistics Office's Annual Survey of Industries. Nearly half of all respondents called for an integrated RBI-Centre-State FDI database, capable of 'triangulating' the data on each foreign direct investor/investment from its point of national entry to its final destination in a local operating unit or activity.

All respondents urged that the Government invest significantly more in compiling, disaggregating and publicly reporting its FDI statistics, including the creation of a historical time-series starting at least in 1991. As yet, neither the RBI nor the DIPP offers a 20-30 year historical time series for the data they report, disaggregated by source country, entry route, destination sector and RBI regional office, as is now standard practice in other G20 economies. Each researcher has to construct this individually from past copies of various statistical publications, which are not always easy to locate. It is thus difficult, if not impossible, for researchers to build a long enough data panel for academically robust FDI analyses.

Another difficulty is that DIPP's monthly and annual FDI

reports are only available in PDF format, so cannot be downloaded straight into an Excel sheet for quantitative analysis. This adds considerably to the effort and time required to construct a robust dataset for analysis.

They thus urged the Government to invest in modernising its data reporting, visualisation and access. Although India meets most of the data reporting parameters required in the IMF's, UNCTAD's and OECD's latest FDI statistics standards, it does not present the data in a manner that easily lends itself to further research and analysis. This is in marked contrast to other leading global FDI host economies, which have invested considerably in putting their FDI data online so that it is easily accessible, analysable, and clear, even to a university student.

Many suggested an interactive government portal of FDI statistics similar to that offered by the private corporate databases used for FDI research, or to the DGCIS online Indian trade statistics portal.<sup>10</sup> Should this be too expensive at the moment they suggested that at least a detailed annual handbook of FDI statistics, disaggregating data down to the district level be published.

### India's Outward FDI Data: A Pressing Need for Improvement

A handful of respondents said that the continuing surge in Indian overseas investments also makes it essential for India to systematically study the contribution and impact of Indian outward FDI on the domestic economy and recipient countries. Given the rudimentary nature of India's publicly reported FDI data, little of this analysis is occurring, with clear implications for foreign and domestic economic policy.

The DIPP is only responsible for reporting inward FDI data and, so, outward FDI data reporting and analysis has tended to be neglected. Earlier, the Ministry of Finance publicly reported data on approved outward FDI, but has since stopped. Since mid-2011, the RBI has released a monthly listing of all outward FDI financial commitments in the previous four weeks, but this data has three major limitations. Firstly, the data does not offer an aggregated overview of Indian outward FDI by destination country, sector, mode of entry, and so on. Researchers and policy-makers have to construct this on their own, using the monthly listing of outward FDI transactions. Further, there is no routine detailed analysis of the outward FDI data, in the manner that DIPP undertakes in its annual round-up of inward FDI data in its SIA Newsletter – Annual Issue.

Second, the RBI allocates all outward FDI transactions into the eight broad sector categories below, significantly constraining an accurate assessment of the true nature of the flows:

- Agriculture and Mining
- Community, Social and Personal Services

9. In this mandatory annual return, all foreign direct investors are to report all financial assets and liabilities to the Reserve Bank of India. They are also required to report on all domestic sales and purchases, imports and exports during the year.

10. This portal may be accessed at <http://www.dgciskol.nic.in>

- Construction
- Electricity, Gas and Water
- Financial, Insurance, Real Estate and Business Services
- Manufacturing
- Transport, Storage and Communication Services
- Wholesale, Retail Trade, Restaurants and Hotels

In addition, these sectors have no relationship to those the DIPP employs in reporting India's inward FDI data. Finally, there is no reporting of data on outward investments to their ultimate destination country. Thus, India's outward FDI data suffers from the same distortions seen in its inward FDI data.

#### Call for a Specialized FDI Statistics Agency

To fundamentally resolve the limitations discussed above, many interviewees pressed for the setting up of a specialized FDI statistics agency that would collate, report and analyse all India's inward and outward FDI statistics, in a standardised and internationally harmonised manner, as the Directorate General of Commercial Intelligence and Statistics (DGCI&S) does for trade.

A few interviewees suggested that this agency be part of the

RBI or the Central Statistics Office. Most, however, felt that it should remain within the Ministry of Industry and Commerce, which already analyses and reports India's inward FDI data. Three options were presented in this regard. The first is to build a strong FDI focused unit within the office of the Senior Economic Advisor, DIPP, who is already responsible for compiling and analysing a variety of other industry-related data. The second is to create an FDI statistics wing within the DGCI&S. and, the third, to create an FDI equivalent of DGCI&S, with a similarly large and specially trained staff. Whatever form this agency might eventually take, international experts advised that it is important that this agency be operationally independent, so that statistics are not compromised by political pressure.

Respondents also said that as India considers where it might lodge this FDI statistics agency, it should bear in mind that FDI and trade are becoming increasingly interlinked, as the global outsourcing and unbundling of economy activity make FDI an expanding channel for trade. For this reason, it is essential that India study FDI and trade in tandem, for which it must work concertedly to harmonise its FDI and trade data.

*Premila Nazareth Satyanand\**

## Quarterly Review

The *Quarterly Review* offers reports and seminars on the Indian economy. This service is provided by NCAER on an annual subscription basis. A large number of corporations, institutes, multilateral donor agencies, and embassies are among our subscribers.

The *Quarterly Review* comprises  
Comprehensive Review of the Economy on a Quarterly Basis  
Business Expectations Survey Report on a Quarterly Basis  
Quarterly Seminar on the State of the Economy

Please contact [indpack@ncaer.org](mailto:indpack@ncaer.org) for details on subscription rates or write to  
Secretary, National Council of Applied Economic Research,  
11, I.P. Estate, New Delhi-110 002

Printed and published by Secretary, National Council of Applied Economic Research  
and printed at Cirrus Graphics Pvt. Ltd, B-61, Sector 67, Noida-201 301.

\* Visiting Senior Fellow, NCAER.