

# **Interlinked Statistics Aligned with the Government's Long-Term Development Plans for the Emirate of Abu Dhabi**

## **IAOS Conference 2016 Abu Dhabi, UAE**

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Abu Dhabi, August 2016

### **Abstract:**

The National Accounts section in the Economics Department of SCAD, which is responsible for compiling not only National Accounts indicators but also Foreign Investment statistics, can add value to these statistics by creating new interlinked indicators from the existing set of statistics. This paper will discuss an initiative aimed at linking statistics about foreign investment into the Emirate of Abu Dhabi with statistics about the Gross Domestic Product (GDP).

A key objective of the official statistics produced by SCAD is to support government policy and decision makers. GDP and foreign investment statistics are used amongst other statistics to assess the effectiveness of policies aimed at the diversification of the economy of Abu Dhabi and to evaluate progress towards achieving these and other long-term development plans for the Emirate. The development of interlinked GDP and foreign investment statistical indicators will provide the users of SCAD statistics with new indicators, to assess the effectiveness and impact of government policies and provide new indicators to support research into the Abu Dhabi economy. This initiative will support SCAD in its vision to be innovative in its statistical production processes and systems and will contribute towards the development of more integrated statistical outputs.

**Key words:** Interlinked statistics, economic diversification, decision-makers

## **1. Introduction**

### **1.1 Abu Dhabi**

Abu Dhabi is the federal capital of the United Arab Emirates (UAE) and the largest of the seven Emirates. Geographically, Abu Dhabi lies on the borders with the Kingdom of Saudi Arabia, the Sultanate of Oman, and the Arabian Gulf. Over the past 40 years, Abu Dhabi has experienced significant population growth and economic development.

To manage the growth and prosperity of the Emirate, the Government of Abu Dhabi required an official agency that could provide statistics for decision-making and policy setting.

### **1.2 Statistics Centre – Abu Dhabi**

Statistics Centre – Abu Dhabi (SCAD) was established in accordance with Law #7 for the year 2008. SCAD is responsible for the collection, classification, storage, analysis and dissemination of official statistics covering social, demographic, economic, environmental and cultural indicators.

As a young statistical office, SCAD is in the fortunate position of being able to implement best practices from international bodies and leading National Statistical Organisations (NSOs). SCAD is aiming to develop and introduce innovative and efficient methods for data collection, analysis and dissemination.

## **2. AD Economic Diversification**

### **2.1 Purpose of the paper**

The Government of Abu Dhabi has developed a detailed roadmap for the long-term transformation and diversification of the Emirate's economy. The Abu Dhabi Economic Vision 2030 focuses on creating economic activities that reduce the reliance on the oil sector <sup>[1]</sup>.

This work paper describes the linkages between the gross domestic product, gross fixed capital formation (GFCF) and foreign direct investment at the economic activities level in the Emirate of Abu Dhabi. It gives practical examples, and outlines some of the wider issues regarding the presentation of these statistical indicators to users of official statistics in the Emirate.

GDP and FDI statistics for the Emirate are presented in separate statistical tables without showing the interlinkages between these statistical variables. Other government departments and private

sector users do further analysis. However, the analysis is limited in scope by not having access to linked GDP, fixed capital formation and foreign direct investment statistics.

The presentation of linked statistics which are based on the results from the Annual Economic Survey and Foreign Investment Survey is intended to provide users with a more comprehensive set of statistics and new indicators to support policy formulation and research by the users of SCAD statistics.

## **2.2 Foreign Direct Investment (FDI)**

FDI is an engine for economic growth and increase the productive capacity of the economy. It lifts employment rates and introduce modern technologies to local businesses. These properties are the hallmark of foreign investments that are not available from other funding sources. Development and economic reform in the Emirate of Abu Dhabi has been of crucial concern to the political leadership in its endeavour to achieve progress and development. Because of this concern, development in the Emirate has progressed immensely, and the national economy has developed to global comparability, being competitive with various economies regionally and globally.

The local economy has achieved a leading position in all performance indicators, setting-up a unique investment environment, the result of the wise policies of the senior leadership, which has contributed to creating an attractive environment for global investments, capable of attracting world class companies of all kinds. Many factors make the investment climate in the Emirate of Abu Dhabi an ideal one, including: the strategic geographical location; modern infrastructure; well-qualified labour; several bilateral, regional, and international agreements that facilitate the flow of capital and goods between Abu Dhabi and other countries; free zones and industrial cities; very low taxes; cheap sources of energy, and modern financial establishments to facilitate capital flows and serve national and foreign investors.

In spite of the importance and impact of foreign investment in the economy, the analysis and research of developments in the Emirate's economy cannot take full advantage of the complimentary nature of macro-economic statistics without the compilation of linked GDP and Foreign Investment statistics.

## **2.3 Descriptive statistics of FDI and GDP**

The contribution by FDI to increase economic growth rates is emphasised in the tables below. It shows the relationship between FDI and GDP. While the stock of inward foreign direct investment into the Emirate shows growth rates of 12.8% in 2014 and 8.6% in 2015, a comparison of the

level of inward FDI with the GDP shows that FDI stocks as a percentage of GDP were 8.4% in 2014 and 11.3% in 2015.

The foreign direct investment stock (excluding Mining and quarrying activity) as a percentage of non-oil GDP were 15.7% in 2014 and 15.9% in 2015. <sup>[2,3]</sup> [See table 1], while the Inward FDI net flows (excluding the 'Mining and quarrying' activity) as a percentage of non-oil GDP decreased from 2.0% in 2014 to 1.1% in 2015. This decrease could mainly be attributed to FDI net flows of 'Construction activity, which changed from an inflow of AED 1,390 million in 2014 to an outflow of AED 902 million in 2015. Figure 1 shows non-oil GDP and the foreign direct investment stock (excluding the 'Mining and quarrying' activity for 2009- 2015) growth rates were positively correlated.<sup>[2,3]</sup> [See table 2].

## **2.4 Descriptive statistics of FDI flows and Gross Fixed Capital Formation**

Inward FDI net flows as a percentage of the change GFCF decreased to 3.9% in 2015 compared with 5.5% in 2014. At the same time, Inward FDI net flows (excluding Mining and quarrying activity) as a percentage of the change in non-oil GFCF decreased from 6.9% in 2014 to 4.3% in 2015. The lower share of Inward FDI net flows compared with changes in the GFCF could mainly be attributed to a decrease of (23.9%) in Inward FDI net flows while domestic investment increased by 7.1% in 2015.<sup>[2,3]</sup> [See table 2]

## **3. Future Diversification indicators**

### **3.1 Linked indicators**

SCAD is working to develop new linked economic indicators from the existing set of statistics. Statistics about foreign investment into the Emirate of Abu Dhabi will be integrated with GDP, GFCF and Production statistics. The objective is to produce new indicators, which will allow users of SCAD statistics to monitor and follow up on the impact of FDI on productivity, GFCF and value added at the economic activity level. It will:

- Enable analysts and researchers to conduct more in-depth analysis and research, into the impact of FDI on the Abu Dhabi economy.
- Improve access to additional information sources about FDI and its impact on the Emirates economic development and encourage wider use and reuse of official statistics.
- Meet current user demand for integrated data to allow more detailed statistical analyses and investigation which can support the development plans for Abu Dhabi.

### 3.2 Planned methodology

The methodology of work focuses on identifying establishments in the Annual Economic Survey (AES), which has foreign direct investment liabilities and foreign owned branches that are operating in the Emirate of Abu Dhabi. This will allow SCAD to compile estimates of GDP, GFCF and productivity for establishments with FDI liabilities for each reference year. The AES data for establishments that are in both the FIS and the AES will be extracted as described in the table below.

Foreign Investment Survey	Annual Economic Survey	GSBPM* sub-processes		
		Integrate data	Derive new variables	Validate outputs
Identify all establishments which have FDI liabilities	Value added variables	Calculate value added for establishments which have foreign direct investment liabilities and for foreign company branches	Calculate the total value added by the FDI establishments and their value added as a percentage of total GDP	Analyse the impact of FDI on value added. Investigate the % share of value added by FDI companies compared with non FDI companies and how it is changing over time in each economic activity.
	GFCF variables	Calculate fixed capital formation for establishments which have foreign direct investment liabilities and for foreign company branches	Calculate the total GFCF by the FDI establishments and their GFCF as a percentage of the total	Analyse the impact of FDI on GFCF. Investigate the % share of GFCF by FDI companies compared with non FDI companies and how it is changing over time in each economic activity.
	Output and number of employees variables	Calculate output and number of employees for establishments which have foreign direct investment liabilities and for foreign company branches	Calculate the total output (production) by FDI establishments. Compile estimates of the productivity of FDI establishments	Analyse the impact of FDI on productivity. Compare the productivity of FDI companies with non-FDI companies and how it is changing over time in each economic activity.

\* The Generic Statistical Business Process Model.

### **3.3 Challenges**

- Some establishments with foreign investment liabilities are not included in the annual economic survey sample. As a result, the AES sample must be increased and this will increase the costs of running the survey. Imputations must be made for the missing establishments.
- The establishment id's are not unified between the FIS and AES for all years. This will require additional work to match the FDI establishments with the same ones in the AES.

### **Conclusion**

The impact of inward FDI on economic development in the Emirate of Abu Dhabi cannot fully be investigated without having access to macroeconomic statistics that are disaggregated according to the contribution made by FDI and non-FDI establishments.

Therefore, it is necessary to create new indicators by linking information from the foreign investment survey with statistics about the GDP, GFCF and Production. It will allow users of SCAD statistics to monitor and follow up on progress towards achieving the Emirates development plans and the policy implications of FDI on productivity and other economic variables.

Some remaining challenges needs to be resolved before the new indicators can be compiled. These include amongst others, the need to impute the AES data for FDI establishments that are not included in the AES sample. However, a preliminary investigation revealed that the missing establishments are mainly smaller ones that are not expected to have a significant impact on the results. The first preliminary estimates of these interlinked statistics are expected to be compiled.

### **3. References**

[1] Economic Vision 2030 Abu Dhabi, e council.

[2] Statistics Centre Abu Dhabi, Foreign investment statistics (2014- 2015), Abu Dhabi.

[3] Statistics Centre Abu Dhabi, National Account statistics (2014- 2015), Abu Dhabi.

[4] Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6),2013

[5] The System of National Accounts 2008 (2008 SNA), United Nation.

**Table 1** : Foreign Direct Investment inward stocks by Economic Activity as a % of GDP at current prices

(Million AED, %)

Activities	FDI Stock as a % of the GDP	
	2014	2015
<b>Total</b>	<b>8.4%</b>	<b>11.3%</b>
<b>Non Oil</b>	<b>15.7%</b>	<b>15.9%</b>
Agriculture, forestry and fishing	-	-
Mining and quarrying (includes crude oil and natural gas)	1.4%	3.0%
Manufacturing	28.3%	32.2%
Electricity, gas, and water supply; waste management	33.6%	33.0%
Construction	7.9%	6.5%
Wholesale and retail trade; repair of motor vehicles and motorcycles	0.7%	1.2%
Transportation and storage	4.8%	8.8%
Accommodation and food services	0.2%	0.2%
Information and communication	0.7%	0.6%
Financial and insurance	19.0%	17.8%
Real estate	47.8%	42.7%
Professional, scientific and technical	15.1%	15.6%
Administrative and support services	7.9%	7.7%
Public administration and defence; compulsory social security	-	-
Education	3.6%	3.0%
Human health and social work	0.1%	0.1%
Arts, recreation and other services	3.4%	3.3%
Activities of households as employers	-	-
Imputed bank services	-	-

Source: Statistics Centre - Abu Dhabi

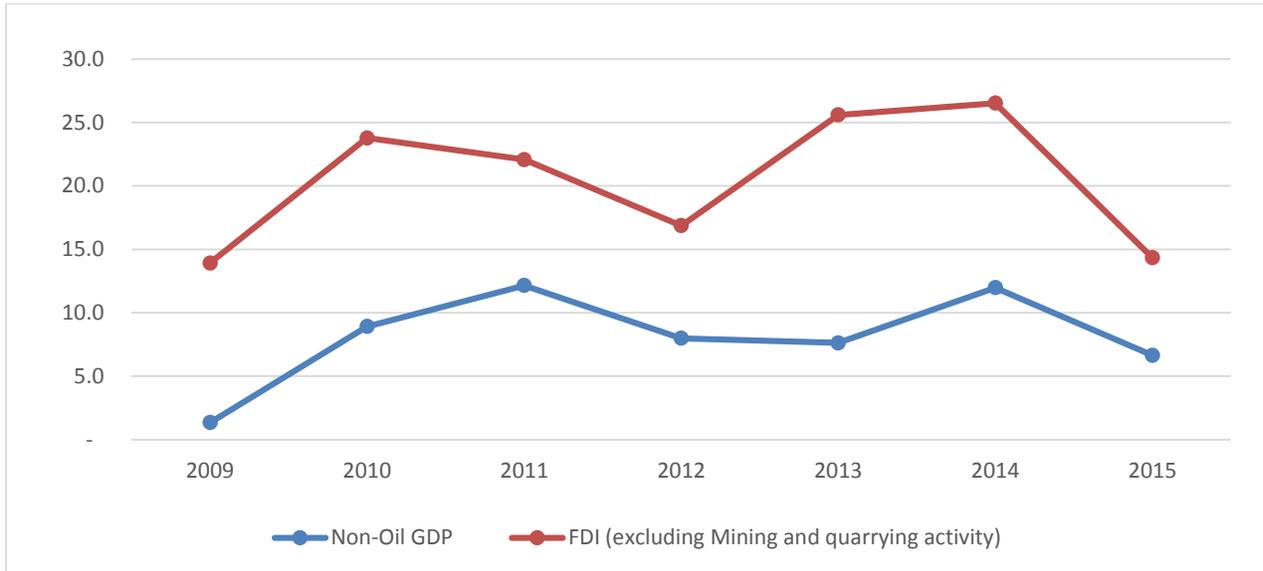
**Table 2 : Inward FDI net flows as a percentage of GFCF and GDP (at current prices)***(Million AED,%)*

Activities	FDI Flow as a % of the GDP		FDI Flow as a % of the GFCF	
	2014	2015	2014	2015
<b>Total</b>	<b>1.0%</b>	<b>0.9%</b>	<b>5.5%</b>	<b>3.9%</b>
<b>Non Oil</b>	<b>2.0%</b>	<b>1.1%</b>	<b>6.9%</b>	<b>4.3%</b>
Agriculture, forestry and fishing	-	-	-	-
Mining and quarrying (includes crude oil and natural gas)	0.0%	0.5%	-0.8%	3.0%
Manufacturing	4.5%	3.2%	12.5%	13.2%
Electricity, gas, and water supply; waste management	5.6%	6.2%	17.4%	18.8%
Construction	1.5%	-0.9%	31.3%	-19.9%
Wholesale and retail trade; repair of motor vehicles and motorcycles	0.0%	0.6%	0.1%	8.3%
Transportation and storage	-0.4%	4.2%	-0.6%	6.7%
Accommodation and food services	0.0%	0.1%	0.3%	0.5%
Information and communication	0.0%	-0.1%	0.3%	-0.4%
Financial and insurance	3.9%	0.8%	89.9%	17.3%
Real estate	-0.2%	0.5%	-0.3%	0.7%
Professional, scientific and technical	6.2%	0.9%	191.4%	32.0%
Administrative and support services	4.7%	0.3%	32.8%	2.0%
Public administration and defence; compulsory social security	-	-	-	-
Education	0.1%	-0.5%	0.3%	-1.8%
Human health and social work	0.0%	0.0%	0.0%	-0.1%
Arts, recreation and other services	1.6%	0.0%	15.2%	0.0%

Source: Statistics Centre - Abu Dhabi

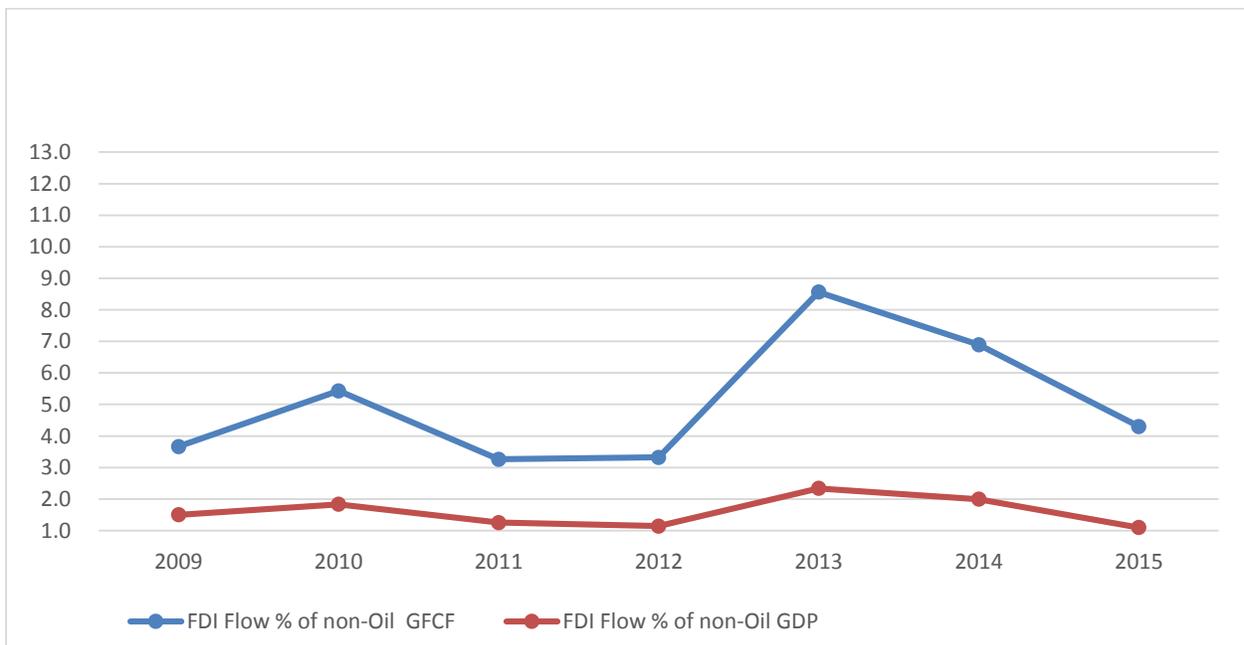
#### 4. Figures

**Figure 1: Growth rate of Non- Oil GDP and FDI stocks (excluding Mining and quarrying activity)**



Source: Statistics Centre - Abu Dhabi

**Figure 2: Inward FDI net flows as % of GDP and domestic investment (GFCF)**



Source: Statistics Centre - Abu Dhabi