Statistical agencies over the world face many problems and challenges to produce and disseminate statistical data, such as; the response rate, data quality and timing. To overcome these challenges statistical agencies follow different statistical estimation methodologies and processes for correction of survey data, but few of these approaches have resorted to trying to overcome such challenges through developing of the tools used in the data collection forms. Following this approach, Statistics Centre-Abu Dhabi studied the challenges and difficulties faced by establishments in completing its business survey questionnaire.

These challenges resulted mainly from the differences between statistical terminologies and the accounting framework applied by the establishments. As a result, more time is required for training of enumerators to explain economic concepts in the questionnaire, as well as to explain these concepts to respondents. The different terminologies and frameworks also lead to delays in completing the questionnaire.

This paper will discuss the experience of Statistics Centre-Abu Dhabi in re-designing the questionnaires used in business surveys, starting from the Annual Economic surveys for 2012. The time needed for training and to complete the questionnaire by the respondent was reduced because of matching the questionnaire with the chart of account.

The paper will also review the results of shifting from a field collection method to electronic collection method of the annual economic survey for all economic activities. The newly designed questionnaires support the collection of questionnaires by e-mails and the development of a web link to e-questionnaires for establishments to complete it online. These initiatives will strengthen the partnership between SCAD and respondents and supports the process of shifting from fieldwork to electronic data collection.

Keywords: Abu Dhabi (AD), Statistic center-Abu Dhabi (SCAD), Business Survey (BS), Questionnaire, Data Quality.
1. Introduction:

Abu Dhabi emirate is the federal capital of the United Arab Emirates (UAE) and the largest of the seven emirates. Abu Dhabi emirate consists of three main regions, Abu Dhabi Region, Al Ain region and Al Gharbia region.

Throughout the last few decades, Abu Dhabi Government devoted outstanding efforts, to promote the emirate’s profile and reputation by the most up-to-date systems, on all levels (economic, social and excellence in government performance,) and laid down a number of plans and initiatives, ensuring an appropriate and effective alignment of development gains/ benefits, and build a sustainable economy serving all the Emirate’s regions. (The Government of Abu Dhabi, 2007)

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

The Emirate of Abu Dhabi aspires to achieve its goals as stated in the "vision 2030" by developing the concept of commodity, service production, provide optimal social services, and build an economy based on production in all focus sectors. This will not be achieved only by increased economic growth rates, but also through working towards increased access to global markets and efficient production methods using modern technology, and organization and management of production in all focus sectors. (The Government of Abu Dhabi, 2007)

The economic activities in the Emirate focus on several strategic objectives; including the improvement of standards of living, and building the foundations of a strong modern economy, establishing a knowledge-based economy, and raising the efficiency of all economic sectors. In addition to diversifying sources of income, investments have become more diverse, while many advanced manufacturing institutions were established with the private sector playing a leading role in many of these developments. (The Government of Abu Dhabi, 2007)

The "Statistics Centre – Abu Dhabi “implemented the annual economic survey among a group of specialized economic surveys during 2012. It is one of the most important operational projects for the Center for measuring the performance of the Emirate of Abu Dhabi’s economy; the results of the annual economic survey represent a detailed picture of the various economic activities. The results of the survey aims to identify the characteristics of establishments operating in the emirate’s various economic activities, and provide the necessary basic data and information to assess the extent of economic diversification and development taking place in the non-oil sectors. SCAD managed the results of this survey, by publishing the key economic indicators, including gross domestic product (GDP) of the Emirate of Abu Dhabi and the preparation of the most important indicators of national accounts. In addition, survey data results enable companies and investors to make the best investment decisions.
2. The links between business accounting and national accounting

The use of business accounts to compile national accounts statistics is not a new approach. Some countries use business financial reports directly, others use business accounts indirectly through censuses and surveys of business or tax returns. Many countries, however, combine both direct and indirect sources. No matter how business data are obtained, it is important that the collection instruments are clear on how to link their data to national accounts concepts, that it is clearly understood.

The linking of business accounts to national accounts requires a clear understanding of business accounts, which is, more often than not, a handicap faced by national accounts statistician who are trained mainly in macroeconomics and not in business accounting. An understanding of business accounts formats and the conceptual links between national accounts and business accounts would help national accounts statistician and survey specialists to use data from business accounts properly and to design survey questionnaires that ask the most relevant data from business accounts in a format that is understood by business accountants.

The United Nations / Statistical Division in 2004 has issued the Guide (Links between Business Accounting and National Accounting) which intended to cover the theoretical and practical aspects in linking business accounts to national accounts.

3. The redesign of annual economic surveys:

Statistical agencies over the world face many problems and challenges to produce and disseminate statistical data, such as; the response rate, data quality and timing. To overcome these challenges statistical agencies follow different statistical estimation methodologies and processes for correction of survey data. Few of these approaches have resorted to try to overcome such challenges through developing the tools used in the data collection forms. Following this approach, Statistics Centre-Abu Dhabi studied the challenges and difficulties faced by establishments in completing its business survey questionnaire.

These challenges resulted mainly from the differences between statistical terminologies and the accounting framework applied by the establishments. As a result, more time was required to train the assigned enumerators to explain economic concepts in the questionnaires, in return to enable them to explain it correctly to the respondents. Failure to train enumerators properly could lead to delays in establishments completing and submitting the questionnaire.
4. The objectives/ needs for redesign the annual economic survey questioners:

The main objectives of the annual economic surveys questionnaires re-design was to align it to the structure of the business and financial reports issued by establishments and to link it with the requirements of national accounts.

Additional objectives included:

- Improve the quality of data
- Reduce costs
- Increase the response rate
- Shift the data collection method to be electronic instead of the traditional method

5. Stages of redesigning the annual Economic Survey questionnaires:

The redesign of the questionnaires followed the General Statistical Business Process Model (GSBPM). The following are the main stages that have been studied and focused on while re-designing the questionnaires:

5.1 Identify and study the national accounts requirements of annual economic surveys in details.

5.2 Study and analyze the accounting cycle in Business Accounting, which represents the path of economic events through the establishment’s accounts. These events that have a financial nature that can be measured from the start of the financial process until the financial position can be determined. It was found that the accounting cycle in most establishments have the following common stages, even if the stages where performed automatically:

1. Identify the financial operations
2. Journal
3. Deportation to Ledger
4. Rationalizing accounts
5. Preparing the Trial balance

6. Preparation of financial statements: the financial statements represent the final product and the basic work of accounting in the establishment. It is a result of conducting a range of accounting treatments on the data that are related to the events and activities of the establishment for the purpose of providing an overall summary to all those who can benefit from it in their decision making.

The main financial statements (which must be based on an accounting system developed by the end of the fiscal period) are as follows:
- Statement of financial position (balance sheet) is a report on the financial situation of the establishment on a certain date, it consists of a list showing what the establishments have and own, in other words it is a summary of all assets, liabilities and equity of the business.

- Income Statement: is a result of the activity report which shows the revenues and expenses incurred during the year or accounting period.

- Cash flow statement: consists of cash flows for each of the main activities of the establishment during the financial period, relating to: operating, investing, and financing activities.

5.3 The study of the financial statements of the establishments by economic activity: It was found that the overall structure of the financial statements is unified in most of the establishments in the Emirate of Abu Dhabi but the components and subheadings for these lists vary from one activity to another. The financial statement structure and its sub-components can have similar activities on the first digit such as services activity, transport, storage and communications etc. however, it was found that the sub-components of these lists vary per activity on the first sub digit; financial and insurance sub components of the income statement in banks differ from insurance, holding, and exchange companies. This required a detailed study of the nature of the financial statements and activities on the first sub-digit.

5.4 following the detailed study of the financial statements of the activities, 14 specialized questionnaires were designed to be compatible and harmonized with the financial statements of each activity, as follows:

- Industry activity: three forms covering the activities of the extractive industry, water, electricity and manufacturing industries
- Banking and financial services and insurance activity: four questionnaires covering banking, insurance and holding companies and other financial service activities,
- Construction activity: one questionnaire
- Wholesale and retail trade: one questionnaire
- Transportation and storage: one questionnaire
- Services: one questionnaire covering: accommodation and food services, professional, scientific and technical activities, education activities, human health and social service activities, arts and entertainment activities, promotion and other service activities, activities of administrative services and support services
- Information and Communication: one questionnaire
- Real estate activities: one questionnaire
- Small establishments: a standard questionnaire for all small establishments

5.5 The linkage between business accounting and financial statements of establishments with national accounts requirements: the re-designed project included identifying the needs of the national accounts regarding the annual Economic Survey. These needs were addressed through new forms that are designed, for example, to determine the value of production (output) and intermediate consumption as two of the key requirements of national accounts. There are no
financial statements for industrial enterprises with so-called finished production (output). Until we calculated the value of these outputs from the financial statements, the following equation was used:

Total output = Net sales (from income statement) + closing stocks of final products (from balance sheet) - opening stocks at the beginning of the period for final products (from balance sheet).

5.6 After the final design of the questionnaires a group of partners from the private sector were contacted and send these questionnaires for them to provide comments and feedback on it. In addition, the Department of National Accounts was provided with these forms and formulas to ensure all the requirements of the national accounts were covered.

5.7 The responses were collected and the required adjustments were implemented. This new design of the questionnaires was provided to the field collection team to conduct the 2013 Annual Economic Survey collection for the 2012 reference year.

6. Results:

Following the implementation of the new annual Economic Survey 2012, the results were as follows:

6.1: The new design of the questionnaire led to the improvement of the quality of data as follows:

- Respondent burden and time spent on completing the questionnaire: the results of a poll conducted by the Statistics Centre – Abu Dhabi showed on an annual basis the respondent burden of the survey decreased from 43.7% in 2011 to 14.9% in 2012.

- Response Rate: The response rate for eligible enterprises increased for the 2012 survey to 93.9% compared with 91.6% in the 2011 survey.

6.2: The cost of the Annual Economic Survey 2012 decreased compared with 2011 due to a decrease in the number of enumerators to 68 employees, compared with 99 for the 2011 survey while the data collection period decreased to five months in the 2012 survey, compared with seven months for the 2011 survey.

6.3: The shift in the data collection method from the traditional field method to e-mail: During the implementation of the 2012 Annual economic survey, 69 questionnaires were collected electronically by e-mail from key establishments in the Emirate of Abu Dhabi. The value added for these establishments represented more than 65% of Abu Dhabi’s GDP, across the following activities:

- 16 electronic questionnaires to the banks for the activity of banks and financial institutions
- two questionnaires for the transport and storage activity.
- 22 questionnaires to the extractive industry activity.
- 17 questionnaires for the water and electricity activity.
- 5 questionnaires for the accommodation activity.
- 6 questionnaire for the education activity.
- one for the real estate activity.

The Annual economic survey for the 2015 reference year was collected electronically by e-mail from all establishments in the questionnaire. This development in the process of data collection was the result of the new design, making it easier for respondents to complete.

7. **Strengthen the partnership with the business sector:**

The results previously mentioned led to a stronger partnership with the private sector including the signing of a number of service level agreements (SLA) with key establishments in the economy of the Emirate of Abu Dhabi. A total of 45 establishments have signed Service Level Agreements. These establishments represent about 55% of the 2014 GDP of the Emirate of Abu Dhabi, from the following activities:

- Mining and quarrying (includes crude oil and natural gas)
- Electricity, gas, and water supply; waste management: The signing of a service level agreement with all companies operating in this activity.
- Manufacturing: the signing of a service level agreement with eight companies within this activity through parent companies.
- Transportation and storage: The signing of a service level agreement with five companies through parent companies.
- Financial Services: signed a service level agreement with two companies through the parent company. Work is underway to sign a service level agreement with the Central Bank to provide SCAD with all the banks data.
- Other economic activities: the signing of a service level agreement with eight companies through its parent companies.