



Informing a Data Revolution

COUNTRY REPORT ON TRINIDAD AND TOBAGO



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Introduction

A High Level Panel, set up in 2013 by the UN Secretary General to advise on the international development agenda to follow on from the Millennium Development Goals after 2015, issued a call for a data revolution – the idea being to ensure that the statistical information needed to eliminate poverty and to monitor development progress is available to the right people at the right time and in the right format.

PARIS21 is carrying out a project entitled “Informing a Data Revolution” (IDR), financed by the Bill and Melinda Gates Foundation. The project will prepare and publish a road map for a data revolution in July 2015 as part of the lead up to the UN General Assembly in September, where it is expected that the new development agenda will be agreed and launched.

The project is carrying out a number of country studies to provide an understanding of the situation facing statistics in 2014 in countries at different levels of development. In essence, the studies will be a stocktaking exercise, including an inventory of the needs of both users and producers of statistics, covering the agencies in the official statistical system and other public and private producers, where they are important. The project will assess the current capacity to produce and to use statistics as well as the main gaps between supply and demand. It is hoped that the studies will suggest ways of how to close the data gaps and assess, from the point of view of the country, what changes may be needed to the international statistical system to make it more effective.

A comprehensive database has been assembled from publicly available information on the structure, activities and outputs of statistical systems in all developing countries. The database has been used to classify statistical systems into a limited number of groups with similar characteristics, facing similar problems and development challenges. A questionnaire covering the activities and organisation of the national statistical system as well as priorities and challenges for the future will be sent to all countries. This will be used to analyse the situation in countries and to help identify where and how the data revolution could have most impact.

In addition to the country survey, six in-depth investigations and analysis in six countries will be carried out. The country study findings, together with other components of the project including a study of existing and potential innovations that might have an impact on the production and use of statistics, will feed directly into the road map document

The present report aims to summarise the outcomes and conclusions of the *Informing a data revolution* Trinidad and Tobago country study. Its objective is to assess the current capacity of the country to produce and to use statistics, as well as identifying the main gaps between supply and demand. The report considers the extent to which the national statistical system is currently making use of and is planning to use innovations to improve the quality, effectiveness and efficiency of statistical operations. It concludes by setting out priorities for the next five years and how the country could and should respond to the data revolution.

Chapter 1 – The national statistical system

1.1 The extent to which statistics have been used and recognised as important in national development policy

The consensus view across the Trinidad and Tobago national statistical system is that, in principle, statistics are recognised as important information for policy development and monitoring. The national budget and macroeconomic management are, according to interviewees, based on economic evaluation of the data – the recent 2015 Budget Statement¹ made extensive use of macroeconomic statistics. However, in other areas, there are considerable impediments to taking effective steps to make this vision a reality. In sum, most interviewees considered that there is insufficient political will to change the situation.

The debate about the use of statistics in policy formulation has been going on for some time: the ‘comprehensive re-organisation of the Central Statistical Office’ was made a priority in the ‘2011-14 Medium Term Policy Framework - Innovation for Lasting Prosperity’² but the issue was not noted in the 2015 Budget Statement. At the programme planning level, the Ministry of Planning and Sustainable Development has moved towards a planning framework based on international monitoring and evaluation methodologies, although project output indicators are the only ones currently used.

There were a number of different views among interviewees about how to link policy making and monitoring more closely to statistics. One view considered the problem to be a lack of supply of fresh data: if the statistics are available, the policy-oriented users will come. A second viewpoint noted that the systematic use of statistics requires a change in policy culture among both decision-makers and the public. Some holding this view suggested that some policy-makers and their advisors might be reticent about their ability to adapt to the change in statistical culture.

1.2 The status of the NSDS or plan for the development of the national statistical system

There is currently no National Strategy for the Development of Statistics or similar Master Plan in Trinidad and Tobago.

The closest that there has been to such a plan was a study of the CSO funded by the Inter-American Development Bank and carried out by a team led by Per Cronholm and Leif Norman in 2012/13.³ This study was based on analysis of statistics production and use and identified a prioritised set of statistics for the CSO to focus on. The study summary is reported at Annex 5. Almost all interviewees, including those outside government, were aware of the study, which worked closely with the CSO at all levels from Executive Director down and the Ministry of Public Administration (at Programme Manager level). However, the level of direct contact the study had outside these

¹ <http://finance.gov.tt/wp-content/uploads/2014/09/Budget-Statement-2015.pdf> 8 September 2014

² <http://finance.gov.tt/wp-content/uploads/2013/11/Medium-Term-Policy-Framework-2011-14.pdf> (page 19). The same document commits the CSO to the ‘use of electronic means of collecting and disseminating information’ (page 74).

³ Per Cronholm and Leif Norman, ‘The Restructuring of the Central Statistical Office of Trinidad and Tobago’. This was often referred to by interviewees as the ‘Statistics Sweden’ report, as the consultants were employed by that organisation and funded by the Inter-American Development Bank (IADB). However, the report does not necessarily reflect the opinions of either organisation.

agencies is unclear. However, as its title suggests, the study's work did not appear to consider statistics production outside the CSO.

This report was apparently accepted by government, although not explicitly adopted as its strategy. However, there has been no apparent move to implementation. It should be noted that there has been a change of Director at CSO since the report was commissioned. Some interviewees considered that the Central Statistics Office was in the process of implementation of these changes, a view not shared by the CSO. Most interviewees took the view that implementation would require sustained political championing from within Cabinet; and it would entail reorganisation of the CSO. Some interviewees noted the importance of also having support within the civil service at the level of Permanent Secretary. Advocacy for change is needed.

1.3 The legal mandate for statistical activities

The basic legislation governing statistics in Trinidad and Tobago is the 1980 Statistics Act, which modifies previous legislation.⁴ The Act provides for a Statistical Department, which can but is not required to report directly to the Minister responsible. Hence the CSO has been established as a government department within the Ministry of Planning, with specific statistics actions reserved to it in accordance with the above law. The act gives the CSO a coordinating role across ministries, although the coverage of the act means that other ministries have no requirement to be co-ordinated by the CSO. Statistical confidentiality is also covered by this legislation; and according to the CSO, statistical confidentiality has been further developed by jurisprudence following a landmark court case. Paragraph 8 of the act covers the publication of statistics; there is no legal requirement to publish all statistics compiled.

The more recent development of the elected Tobago House of Assembly (THA) has led to the hiring of a number of THA officials who have been given the responsibility for collecting and analysing statistics in their respective fields. Nevertheless, there is no provision in legislation for data collection and no requirement for these activities to be co-ordinated by the Trinidad and Tobago CSO.

The Central Bank Act and Financial Institutions Act empower the Central Bank to collect data from licenced institutions. Some interviewees mentioned the potential impact on official statistics of the 2011 Data Protection Act⁵, especially in terms of the electronic transmission of data, although this was not noted by the CSO.

Statistical relations between various elements of national administration are operated bilaterally through short-term Memoranda of Understanding (MoUs) and, in at least one case, a legal agreement. This restricted exchange of statistics within government is thought to have come about as a consequence of concerns about confidentiality, whether well founded in the legislation or jurisprudence has not been established. More than one interviewee noted the need for the CSO to have free access in practice to government information for statistical purposes.

Ministries were generally aware of the statistics legislation and recognised its spirit of coordination. The consensus among interviewees was that the legislation, while having been generally useful, had served its purpose and needed updating.

⁴ http://rgd.legalaffairs.gov.tt/laws2/alphabetical_list/lawspdfs/19.02.pdf

⁵ <http://www.ttparliament.org/legislations/a2011-13.pdf>

1.4 Organisation, coordination and management of the NSS

The Central Statistics Organisation is a division within the Ministry of Planning and Sustainable Development; its director is responsible to the Permanent Secretary level.

There is no formal co-ordinating committee that brings together the main statistics producers. However, a Standing national labour market council, including the CSO, discusses statistics in that sector. Other informal sector coordination committees are believed to have existed in the past. Statistical co-ordination between administrations is generally bilateral in nature. One bilateral relationship that both sides and the users of the resulting statistics consider works well is that between the CSO and the Central Bank of Trinidad and Tobago. One consequence of this relationship is the publication on the Central Bank's website of statistics compiled by the CSO under the terms of this agreement.

In recent years, there has been a tendency for ministries to compile their own statistics, with varying degrees of support from and co-ordination with CSO. Although no evidence was found for 'competing' data series, with the exception of tourist arrivals / departures in Tobago, interviewees considered that the potential for this exists.

In brief, although there is some bilateral co-operation between ministries on statistics production, the national statistical system cannot be said to be systematically managed or co-ordinated.

The solutions proposed by the majority of interviewees had two elements: re-establish the CSO as an independent agency within government in charge of its own budget and human resources management; and revise the statistical legislation to provide a more effective co-ordination role for the CSO. The CSO itself added a third condition: remove the CSO's legal requirement to collect statistics itself that were either no longer of use or better collected by other organisations under its co-ordination. The potential re-establishment of CSO as an independent agency within government has precedent in the form of ExporTT – The National Export Facilitation Organization of Trinidad and Tobago.⁶

The CSO also noted the need for a statistics system coordinating mechanism and suggested that this could be provided through a national statistical council.

A few interviewees did not consider that significant re-organisation is necessary to improve the co-ordination of the national statistical system. Their view was that improved budget control by the CSO, combined with a reduction in the breadth of its statistical compilation activities and an improved management focus on key activities, would be sufficient to establish the resources to co-ordinate the system.

⁶ <http://www.exportt.co.tt/>

Chapter 2 – Assessment of the main data compiling agencies

2.1 Human resources

The Central Statistical Organisation considers that it has considerable difficulties in managing its human resources. Its diagnosis is that it has too few staff; too low a proportion of professional grade staff; too low salaries, leading to a high turnover among professional grade staff; and insufficient control over staff recruitment.

Most other interviewees agreed with this assessment. The solution was generally felt to be the re-establishment of the CSO as an independent agency within government, in control of its human resources policies. However, one interviewee called for the creation of a government statistical service, managed by the CSO, with statisticians seconded from the CSO to other government departments as necessary. The two proposals are not easily compatible.

The CSO's staff regulations in 1972 legislation stipulate its established posts; the resulting structure is no longer felt to be compatible with current statistics compilation methods. There are, for example, no posts of demographer or network administrator. It was commonly agreed that the CSO's existing posts are graded at salaries that are not competitive with comparable public sector employment. One interviewee considered that, in order to achieve an appropriate staffing structure with the correct skills, a programme of voluntary severance might be necessary to accompany a recruitment drive for people with the required skills.

CSO staff recruitment is handled through the Ministry of Public Administration. The request for a vacant position to be filled can, according to the CSO, take a considerable time, making it difficult to recruit suitable persons and leaving posts vacant.

Both the CSO and Central Bank reported difficulties with recruiting information technology staff with appropriate knowledge. There appears to be a general information technology skills shortage, at least in the public sector.

One interviewee noted that the CSO had always recruited its Director from within and that historically CSO Directors had not been further promoted within the civil service. Coupled with the salaries available, this practice was thought to restrict the management skills available to the CSO.

2.2 Equipment and infrastructure

It is generally agreed that the CSO is in crisis and that its office accommodation is the immediate cause of this crisis. A number of interviewees considered that CSO's office accommodation and equipment issues are the sole causes of the crisis; the majority believe that these issues have to be addressed prior to solving the other problems affecting statistics.

The CSO currently occupies very cramped temporary office accommodation. A number of non-CSO interviewees contended that there is absolutely insufficient accommodation for all CSO staff and that some staff are consequently working from home without effective communications with their office. In 2013, following industrial action, the CSO urgently vacated its previous office accommodation, as this was apparently not compliant with occupational health and safety regulations.

Some interviewees outside the CSO raised the possibility that some data had been inadvertently destroyed during the move between offices.

A permanent office building is under construction in downtown Port of Spain for the CSO. This is not nearly complete and, in accordance with this fact, the CSO was not mentioned in the 2015 budget speech as one of the government agencies that will be rehoused during the coming year.

Both the CSO and other interviewees stated that limited and out-dated computer equipment, both hardware and software, is a serious problem. There is limited networking of computers and internet access; the CSO staff e-mail addresses listed in annex are mostly personal, rather than official addresses. The computers themselves are not recent and there is a lack of statistical software. There is no integrated database, partly due to the lack of software.

Moreover, the CSO is not in full control of its information technology infrastructure. Its web pages are managed by another division within the Ministry of Planning; requests for changes have to be made through an administrative procedure. The various constraints together preclude a database-enabled CSO website; even downloadable data files are not regularly updated, leading to out of date statistics on the CSO website. The most recent data on the CSO website is the labour force survey for the 2013 third quarter and provisional 2013 GDP measured by output.

2.3 Financial resources

There are two issues concerning the finances available to the CSO: the funds actually available and the CSO's ability to control and implement its budget. Since it was generally agreed by interviewees that the CSO has difficulties in managing its budget, it is not currently possible to know what could be achieved with the current level of resources if the CSO were enabled to control its expenditure. The Trinidad and Tobago government budget is organised within each ministry by type of expenditure rather than by programme. Therefore, while overall budgets exist for CSO's current and capital expenditure, these are then allocated to expenditure on personnel, on specific items of equipment, on temporary personnel, on consumable items and so on. A request has to be made by CSO to the Ministry's finance office, often through a technical department, for each spending decision. Hence, regular expenditure on surveys, for example, has to be re-justified each time, according to the CSO. Clearly, this state of affairs is not unique to the CSO.

A few interviewees considered that providing additional assistance to the CSO from the ministerial budget office would be sufficient to achieve effective expenditure; these interviewees also considered that the resources available to CSO would then be sufficient. Most interviewees, however, did not hold these views. About half the interviewees considered that a main advantage of making the CSO an independent agency within government would be its control over its own expenditure. The other main advantage of agency status was considered to be the CSO's control over its human resources.

A number of interviewees considered that the CSO should be enabled to take money from the sale of data and from private survey operations. Even in pre-internet days, national statistical institutes were unable to recover more than 5-10% of costs from data sale.

2.4 The commitment to quality

Many interviewees, including the CSO, understood this question as referring to the elimination of survey processing errors. Instead the question seeks the respondent's evaluation of the 'Quality of official statistics [which] describes e.g. a formal quality assurance process with standards and procedures in place to make sure that the published statistics meet the standards covering aspects such as coverage, timeliness, accuracy and ease of use.'

Once the question was understood, most interviewees were very critical about the timeliness of CSO's data. At the same time, the majority considered that CSO's statistics are very accurate. However, it is unclear what the basis for this conclusion is – people who were aware of specific surveys and administrative data collection exercises were also aware of poor response levels. In answering this question, there was little consideration of the application of international statistical methods or classifications, although users of international trade data were familiar with the Harmonised System.

It is difficult to escape the conclusion that statistics, when available, are received uncritically by some data users; others were critical of accuracy, including data of non-CSO origin. Both CSO and other interviewees noted a generalised lack of skills in analysis of statistics.

One interviewee considered that the annual national accounts produced by the CSO do not fully respect the internally accepted SNA93 conventions. One agency criticised the accuracy of the Ministry of Energy's statistics. Despite considerable efforts, it was not possible to communicate with the Ministry of Energy.

2.5 Relations with data users

Many interviewees were highly critical of the CSO's relations with data users, with some saying that they had abandoned any expectations of receiving data from CSO and now looked exclusively to other data sources, national and international. In general, data users' relations with CSO are conditioned by their access to data, which is covered in the next section.

Interestingly, many interviewees considered that CSO's relations with data users have been better in the past, when a number of user-producer workshops were held. It is not clear whether these workshops had resulted in changes to statistics availability but they were certainly appreciated as a first step in this direction. There were different views as to when this dialogue ceased: some considered that this occurred in consequence of CSO's difficulties with its building, while others believed that the problems began earlier.

All interviewees outside the CSO had a very similar impression of their direct contacts with the CSO: CSO staff were individually friendly and helpful and made great personal efforts to meet users' needs within the bounds of their resources. Moreover, there was a consistent view that the CSO had maintained its professional reputation and had its integrity intact – there are no politics in the published data.

2.6 Providing access to statistics and data

Access to CSO's statistics is the biggest problem identified consistently by interviewees from all parts of the national statistical system. In contrast, interviewees who used data available from the Central Bank's website were somewhat content with this data, although restrictions in the amount of data available from this source, acknowledged by the Central Bank, were a source of complaint. Data users did not appreciate that some of the data available from the Central Bank, notably the retail price index, is actually compiled by the CSO with support from the Central Bank and appears on the Bank's website through an agreement between the two institutions.

The demand for data to be available on the CSO's website, whether or not the same data is available from other sources, is therefore a key element in the recognition of the CSO's role in statistics

compilation. The limited amount of data currently available from the CSO's website therefore forms the biggest barrier to wider recognition of the CSO's role.

The complaints about the website centre around two points: firstly, that it is not database-enabled so that only a limited amount of fairly aggregate data is posted from the statistics that are covered; and secondly that the range of statistics presented is very narrow, with little social statistics coverage. There was also a widespread complaint that data are presented in pdf format, which is difficult to extract electronically, although at least some data on the website is presented in spreadsheet xls format.

There was common agreement that more data is available on request from CSO than is available from the website. However, the data that is distributed in this way and widely available was considered to be mostly aggregate. Further data is available on special request from CSO. The consensus among data users was that this data is only available through personal contact with specific individuals within CSO.

A common complaint was the limited amount of disaggregated data available. A particular complaint was that much data is for the whole Republic of Trinidad and Tobago and does not identify the two islands separately or provide for geographic breakdown within Trinidad. When data was disaggregated, it was seen as being presented in inflexible reports that were either not what was wanted – international trade statistics being an example – or did not correspond to current classifications.

It should also be noted that some of the requests for geographical disaggregation are difficult to implement or unrealistic. For example, the disaggregation of bank loans separately between Trinidad and Tobago would need to take account of the location of the borrowing entity, rather than the loaning entity – feasible but quite a task. Some interviewees requested data disaggregation down to village level, which would certainly lead to confidentiality problems. It can be concluded that education of users of statistics in analysis of official statistics will be beneficial to all parties.

The causes of this situation appear to be multiple and thus not amenable to quick fixes. Firstly, CSO's data compilation systems are out of date and inflexible, limiting the disaggregation that can be presented. Secondly, the lack of control over its website means that CSO can present less data than it would like to do. This leads to an inordinate amount of staff time being spent on personal handling of routine data requests. Thirdly, the CSO's interpretation of the confidentiality rules – whether correct or not – leads to an unwillingness to provide disaggregated statistics. All of these issues will need to be addressed, plus the information technology and training needs of managing a database-enabled website, before data dissemination can be improved.

2.7 Developing partnerships

Partnerships with data users were addressed in the section above. The CSO is not in a position to conclude agreements with the private sector on, for example, data dissemination. The CSO noted partnerships with the University of the West Indies, St Augustine (Trinidad) on training in SPSS. It also identified its relationships with international statistical agencies.

Its most important partnerships are with other ministries, for example the Ministry of Social Development, the Ministry of Food Production and the Tobago House of Assembly for specific projects. Memoranda of Understanding are required for data sharing between ministries. Administratively these are difficult to obtain and are limited in duration.

A successful partnership between the CSO and the Central Bank has supported the revision of the Retail Price Index and its publication on the Central Bank's website. The Central Bank is now moving to publish quarterly GDP estimates, with technical support from the CSO.

Chapter 3 – The Management of statistical processes

3.1 Relations with data providers

The CSO believes that its data providers understand its guarantee of confidentiality through publicity, leading to a good understanding of the purpose of the data collection. However, interviewees that represent other data collecting agencies note that they have reinforced this message by providing respondents with their own data publications.

The CSO believes that its data collectors are well trained. The CSO also considers that the national culture of openness helps interviewing and that firms are forthcoming with data when they see competitors complying.

The CSO accepts that its data collection instruments have too many questions, which are too complicated. Hence, the cost of response to statistical questionnaires for business is too high. The timeliness of response to surveys or administrative data collection is poor. In some urban areas, there is a refusal to answer or even physical threat to data collectors, an experience in common with other public bodies. In practice, the means of enforcing response are absent.

Outside the CSO, other data collectors noted a recent decrease in survey response rates. This was considered to be due, among other issues, to respondent disenchantment with sector policy and to communication problems with non-professional data collectors used by one agency. In one case, a ministerial statistics unit was unable to compile administrative data due to partial non-response to its enquiry to establishments within its own ministry. There was no effective means to compel response and, until recently, little support from senior management. In this situation, estimation of the mission data might have proved an effective solution but the statistics unit was unaware of appropriate methods.

Unsurprisingly, the Central Bank, as the sector regulator, had no such problems with data collection.

3.2 Managing data processes

In answering the question on managing data processes, the CSO focused on the dedication and training of its field staff, the quality of its supervisors, the motivation of its staff and, in its view, the adoption of current classification systems. It is perhaps unsurprising that the question was not answered in terms of the CSO's management of the group of processes that make its statistical surveys and administrative returns from conception to data collection to compilation to dissemination. Many of the individual issues with the data processes have been considered above, in particular the information technology available to the CSO.

Outside the CSO, one government respondent noted that its own database system was so limited and inflexible that each year it had to erase the previous year's records in order to accommodate the new survey data. In contrast, one data user noted that the Ministry of Legal Affairs had recently automated its data processes.

3.3 Dissemination

From the discussion above, it appears that the lack of dissemination of CSO's statistics is considered by virtually all interviewees to be the most serious deficiency of the national statistical system of Trinidad and Tobago. In this respect, Trinidad and Tobago's commitments under the UN *Fundamental Principles of Official Statistics* are not being met.⁷ Any strategy to improve the system could arguably focus on this area first, prior to improving the quality of the compiled statistics.

One of the most common complaints about CSO data dissemination refers to the Census data. The population census was carried out in January – May 2011 and the first volume of results was published on 30 November 2012 and is available in pdf form from the CSO website.⁸ The remainder of the series of publications, referred to in the census preface, has not appeared.

The Trinidad and Tobago IMF General Data Dissemination System (GDDS) entry that records the metadata for key macroeconomic and other statistics has not been updated since September 2004.⁹ Parts of the entry are not consistent with current practice.

The CSO does not have a timetable for publication of its statistics since it is under no obligation to publish. Nevertheless, the GDDS entry commits to the publication of a statistical timetable. This would be a relatively easy first step for the CSO to take to regain the confidence of its users.

The non-publication of statistics is not confined to the CSO – some other government agencies interviewed did not publish the statistics they compiled, in one case due to partial non-response to an administrative enquiry within government. This situation is perhaps unsurprising, as there is no legal requirement for publication of this data.

The Central Bank noted that shortage of information technology skills limited the amount of data that it was able to disseminate.

One non-government interviewee reported verifiable information about the non-publication of a statistical survey on the basis of a political decision.

3.4 Archiving and providing access to micro-data

Access to CSO microdata is highly restricted, not least by the systems available. One respondent had, after a two-year process and the signature of an extensive legal document, obtained access to detailed data from the population census. It was made clear by this interviewee that this was a privileged level of access. Other interviewees had attempted to obtain anonymised microdata without success.

On archiving, the CSO states that it has stored the census data back to 1990. Documents, such as reports, are stored and form part of institutional memory. The computer systems used then are now obsolete, so that some data was archived on magnetic tape, from which retrieval may be difficult. Storage of data archives remains a problem. One of CSO's objectives over the next five years is to work out how to retrieve and restore the archived data; and to document the data. Training will be

⁷ <http://unstats.un.org/unsd/dnss/gp/fundprinciples.aspx>

⁸ Trinidad and Tobago 2011 Population and Housing Census - Demographic Report, CSO, <http://cso.planning.gov.tt/census>

⁹ <http://dsbb.imf.org/Pages/GDDS/DQAFViewPage.aspx?ctycode=TTO&catcode=NAG00&Type=CF>

required as part of this task. The current situation is that there are large gaps in the historical data record.

Most non-academic interviewees answered on archiving question by referring to physical storage of paper documents. This indicates that there is a lack of awareness of the opportunities for analysis of historical data.

Chapter 4 – Interaction with the international statistical community

4.1 Managing assistance from donors

In general, there is a low level of donor assistance to statistics, since Trinidad and Tobago is classified by the World Bank as a high income country, with GNI per capita of US\$ 15 760 in 2013.¹⁰

Nevertheless, Trinidad and Tobago is the recipient of specialised training in sector statistics from the IMF CARTAC (in financial compliance), ILO (in labour force statistics), UNDP, FAO, IDB and CARICOM. CARICOM has been developing a database of regionally comparable statistics; and has developed a common approach to the population census and common questionnaires.

The Standing Committee of Caribbean Statisticians and the Regional Census Coordinating Committee provide effective regional technical coordination. A high-level advocacy forum for regional statistics was held in May 2014.

The Association of Caribbean States is developing a regional programme on Transport and Disaster Risk Reduction. While the programme is in its early stages, the ACS's information suggests that Trinidad and Tobago has a relatively good level of trained staff in many subjects related to geographic information systems, though not in geo-statistics themselves. This is presumably the consequence of a high level of energy-related engineering education.

The Ministry of Food Production is currently implementing an EU-funded study to assist its agricultural statistics unit to collect, process and evaluate agricultural production data.

There is no coordination of the limited external assistance either at national level or among donors and no particular demand for this. The Trinidad and Tobago agencies interviewed had uniformly very high praise for their interaction with the international organisations. In one case, the agency considered that its own systems had been slow in dealing with its international partner, leading to a delay in the project.

4.2 Participating in the International statistical system

Trinidad and Tobago representatives regularly attend regional and international statistical meetings. Participants greatly valued these exercises, especially the personal contacts it gave them with statisticians from other Caribbean nations.

In at least one important respect, Trinidad and Tobago is not in compliance with its commitments under the UN *Fundamental Principles of Official Statistics*: the lack of a formal rule for the impartial dissemination of statistics.

¹⁰ <http://data.worldbank.org/country/trinidad-and-tobago>

The need for transmission of national statistics to international institutions, for example educational data to UNESCO's International Bureau of Education, is well understood. However, not all data is submitted, in at least one case due to incomplete administrative data collection. Only a partial dataset can currently be submitted to the ILO.

Some ministries had relationships with the international private sector, such as ratings agencies and business intelligence companies.

Chapter 5 – Development of the NSS over the Next Five Years

5.1 Priorities for new statistics

Given the current situation, some respondents answered the question by requesting that the existing data be made available faster. Many interviewees requested greater disaggregation, including geographical disaggregation, of existing data series.

Since the quarterly GDP estimates are a recent innovation, this data was requested fairly frequently. More data on the labour market was requested by employers' organisations and the trade union interviewed. Economic data was generally thought to be in a somewhat better situation than social data, so there were requests for the latter. There were also some requests for environmental statistics. The CSO themselves were aware of the potential of geographically based statistics and wished to develop in this area.

In general, there appears to be a wide range of demand for new data.

The Cronholm – Norman Report describes a set of priorities for statistics.

5.2 Priorities for strengthening statistical capacity

Interviewees all had one or more of the following priorities:

- A new and permanent building for the CSO
- Reorganisation of the CSO and the wider national statistical system, including revised statistical legislation. The twin objectives of the reorganisation are to make the CSO an effective organisation in control over its own operations; and to enable it to carry out its role as an effective co-ordinator and quality guarantor of the national statistical system. In return for improved co-ordination responsibilities for the CSO, some interviewees thought that recent trends to decentralise the national statistical system should be formalised, with the CSO potentially transferring the compilation of some statistics to other agencies. A system-wide reorganisation was felt by many interviewees to require the re-establishment of the CSO as an independent entity within government. Precedents exist for such a move in Trinidad and Tobago.
- Effective budget implementation for the CSO; and an increased budget. There was agreement among interviewees that the CSO does not, in practice, have sufficient resources but some interviewees considered that the solution is simply to implement the current system more effectively. Others considered that the reorganisation should place CSO in full charge of its budget through the re-establishment of the CSO as an independent agency discussed above; and a subset of this group thought that the resource level will also need to be increased.

- An improved level of skills and knowledge throughout the CSO and into the wider national statistical system. This is to be achieved through a renewed staffing structure, based on CSO's control over staff recruitment, revised employment conditions, including improved salary structures; and a thorough training / re-training programme. The training programme should cover the whole national statistical system, not just the CSO. Statistical methodology, especially sampling and analysis and report writing were mentioned as key issues within statistics. Training decision-makers and their advisers in the use of statistics in policy formulation and monitoring would be advisable.
- The application of information technology by the CSO and other statistics producers to improve data collection, compilation and above all, internet-based dissemination of statistics. A few interviewees considered that information technology is the core issue (apart from the building) facing CSO, the application of which will release sufficient resources, including management time, to allow the other issues to be addressed.
- Achieving improved dissemination of compiled statistics was recognised as being related to information technology, the rules on confidentiality (as well as their interpretation) and a requirement to disseminate all compiled statistics. The existing law does not require publication of statistics. Achieving an appropriate stance on confidentiality will require both training and revised legislation.

Requests for financial support and technical assistance were limited, based on the recognition that Trinidad and Tobago is unlikely to receive high levels of external support for statistics. Nevertheless, there is recognition that not all technical skills required exist in sufficient quantity within Trinidad and Tobago and that recourse will be needed to international sources of training and technical assistance. Interviewees considered that the current assistance they receive from international organisations needs to continue.

In sum, the priorities for strengthening statistical capacity in Trinidad and Tobago are those of a classic National Strategy for the Development of Statistics. Most but not all interviewees thought that such a step was necessary. The biggest barrier to its achievement and hence strengthening statistical capacity is achieving and retaining support from the decision-making level. Advocacy for such support has traditionally been a focal point for Paris21¹¹; its experience in this area would be of great benefit.

5.3 Making use of innovations

Most interviewees who had an opinion about applying current innovations in statistics referred to developments such as the use of hand-held devices to collect and check data in the field; the implementation of wide-area networking to enable distributed data processing and dissemination of statistics within government; and the use of database-enabled websites as a means of public dissemination of statistics.

Some respondents, including the CSO, were interested in the possibilities of statistical exploitation of geographical information systems – the 2011 population census apparently made use of this technology and there is a National Spatial Development Strategy (also, confusingly NSDS) initiative operated by the Ministry of Planning.¹² There was little knowledge of or interest in open data systems or the use of 'big data' to supplement official statistics or speed up existing administrative reporting systems.

¹¹ www.paris21.org

¹² http://www.planning.gov.tt/OurTnTOurFuture/documents/Surveying_the_Scene_web.pdf

5.4 Priorities for financial aid for statistics

See section 5.2.

5.5 Priorities for technical assistance

See section 5.2.

Chapter 6 – Participating in the data revolution

6.1 How can the country contribute

There is no doubt that the Trinidad and Tobago statistical system is currently in crisis. Nevertheless, solutions to the immediate problems will place Trinidad and Tobago in an excellent position to be in the forefront of nations in the field of open data.

Effective dissemination of statistics requires a dedicated dissemination database for published statistics, fed by one or more statistics production databases. In modernising the CSO's dissemination database (as one component of the thorough modernisation of its information technology systems), the ability for external data extraction tools to access the published data can be built in. This will enable third parties to provide their own dissemination and data visualisation tools that would complement those provided by the CSO. For comparison, Eurostat provides an example of openness to data extraction tools.¹³ Of course, CSO would continue to disseminate its own data and, depending on the model of co-ordination adopted, data of other ministries. The open data model could also be replicated in other ministries and agencies. The advantage to Trinidad and Tobago of adopting open data would be much greater access to and use of its data both nationally and globally. Potential beneficial results could flow on international investment, tourism and closer integration of national companies in international production and supply networks.

6.2 What does it need

For Trinidad and Tobago to participate in the data revolution, a traditional Paris21-type approach to advocacy for a national strategy for the development of statistics is needed; followed by the preparation of the NSDS (which could benefit from the previous work performed by the Cronholm – Norman Report) and an implementation plan; and finally by its implementation. The 'open data' aspects of the data revolution would be programmed into the national strategy for the development of statistics.

The immediate input required from Paris21 consists of its traditional services in advocacy for statistical change.

All the usual caveats of preparation of an NSDS would apply:

- Consistent support from the decision-making level
- Commitment to full adherence to the UN *Fundamental Principles of Official Statistics*
- Focus on prioritised demands for statistics

¹³ http://epp.eurostat.ec.europa.eu/portal/page/portal/help/first_visit/extraction_tools . See the SDMX web services in particular.

- Attention to the legal framework for collection, compilation, coordination and dissemination of statistics, employing an appropriate approach to statistical confidentiality and resulting in the incorporation of the *Fundamental Principles*
- Development of a national strategy for the development of statistics through a national coordinating committee representing the whole national statistical system, including users outside government
- Primary use of national experts, both statisticians and users of statistics, to prepare the strategy, with recourse to international experts to provide support in specific areas
- Development of a full baseline of the existing statistics data series and the resources used in their production. A full enumeration is needed of the CSO's staff in post and the staff of other statistics producers, including their education and skills. The Cronholm – Norman Report can be utilised in this.
- The preparation of an agreed set of statistics to be compiled and published, linked to the agencies concerned.
- A workplan to implement the strategy, which will introduce new processes (utilising the Generic Statistical Business Process Model, GSBPM), techniques, methodologies, classification and standards. New standards will include the publication of a statistics release calendar and a methodological compendium. A training and technical assistance programme; and a strategy for systems modernisation will form part of this workplan. The Cronholm – Norman Report will provide valuable input information as concerns the CSO.
- A review of the overall strategy and workplan during and after implementation

Annexes

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Annex 2. Concept definitions used during interviews

All concept definitions were drawn from those used in the written questionnaire completed by the CSO prior to the study visit.

NSDS – National Strategy for the Development of Statistics. The system wide approach is an approach to support a locally owned and locally led programme to develop a country's NSS in a comprehensive and coordinated way, typically centred on implementing an NSDS and moving towards use of country systems and procedures for implementation. The system-wide approach applies the programme-based / sector-wide approach to statistics as a thematic area.

Resources. Resources include personnel, equipment and financing and are defined as available at present to the national statistical agency to carry out its agreed work programme.

Statistical quality – 'Quality of official statistics describes e.g. a formal quality assurance process with standards and procedures in place to make sure that the published statistics meet the standards covering aspects such as coverage, timeliness, accuracy and ease of use.

Processes – New data processes include the development and implementation of data collection, processing and analysis for new data areas as well as major changes to any existing activity. To what extent has the national statistical system responded to new data needs.

Partnerships – include public-private partnerships with companies and joint activities with non-profit institutions such as universities, research institutes, ministries, NGOs etc.

New types of data refer to e.g. spatial data, cellular data, data from social networks, mobile banking data and other forms of 'big data'. New data types are not limited to these examples.

Annex 5. Cronholm – Norman Report Summary: The Restructuring of the Central Statistical Office of Trinidad and Tobago

This report was referred to as the 'Statistics Sweden' report by many interviewees, as the consultants were employed by that organisation and funded by the Inter-American Development Bank (IADB). However, the report does not necessarily reflect the opinions of either organisation.

This report presents a series of measures to take in the process of the restructuring of the Central Statistics Office (CSO) in Trinidad and Tobago. This final report incorporates the previous deliverables from the Mission. It presents the Mission's proposal of the core statistical products to produce, the most suitable organisation model for the restructuring of the Central Statistical Office, and the IT Master Plan. It suggests a way forward with an action plan to move the CSO to its new status. The report including the various appendices provides the full Terms of Reference.

The demands for statistics in Trinidad and Tobago have been investigated. Method used for defining the demands and needs has been organising four stakeholder seminars and through group works letting the participants specify their demands for statistics. Additional needs have been collected from the strategic documents provided by CSO. The demands are specified by subject matter and listed by order of priority.

The statistical areas classified in the priority groups are considered in the following steps of the project when defining the gaps and the core products.

Defining the gaps has been carried out by comparing the demands and the supply of statistics. The supply has been determined on the basis of a survey directed to the public sector of Trinidad and Tobago.

The assessments behind the proposed organizational set-up are based on a comprehensive analysis of the present organisational structure and the needs for adapting CSO to become a modern national statistical institute. The defined core products have also been an important input for the assessments. Main characteristics of the proposal are:

- An improved capacity to manage CSO. This will be achieved by a flatter organization with more clearly defined managerial roles, increased attention to HR issues such as competence development and more systematic career planning, a strengthening of planning and follow-up routines of both the running production and the development work, and also a streamlining of the operations through process orientation
- Increased capacity to manage the coordination role within the statistical system of Trinidad and Tobago
- Focus on service to the users through improved capacity to respond to queries and also by making the external web site the focal point of the dissemination of statistics
- A strengthened development capacity through improved IT development capacity and strengthened skills in statistical methodology
- Increased number of professional staff with advanced skills in statistics, economics and IT
- The third task of the project was to elaborate an IT Master Plan, which includes a statement of the institution's IT direction, a mission and vision statement for IT linked to the CSO's goals, and a set of goals or projects to meet these objectives.
- The IT master plan was elaborated in close cooperation with an IT Master Plan team formed of CSO staff and strategic stakeholders. The plan was discussed in detail at four workshops. Furthermore, there were several discussions with different team members on the IT tasks. At the workshops a list of services currently delivered by the IT organisation and the services to be delivered by the new IT organisation was produced. On the basis of these lists, a draft IT Master Plan was elaborated and discussed.