

A STRATEGIC PLAN FOR THE STATISTICAL SYSTEM
OF ANGUILLA

2005 – 9

Chapter 4 Providers of Information to Produce
Statistics and Chapter 5 Quality Control

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4 Providers of Information to Produce Statistics

4.1 Household Surveys

The population of Anguilla has doubled over the past two decades from 6,680 according to the 1984 census to an estimated 12,200 in 2003. Even so the small numbers make surveys a relatively expensive exercise. Sampling ratios in the region of one in six household are necessary to achieve reliable estimates.

More recently telephone surveys have been conducted with success which are less expensive than face to face interviewing. However adaptations to the methodology will need to be made if the telephone is to be used in the future. Cell phones are starting to outnumber land based phones and the prepaid cell card phones are becoming even more popular among certain segments of the population. Samples of numbers have been produced in the past from number listings provided by Cable and Wireless. Whether they would also provide cell phone number listings has to be investigated. An alternative approach would be to use random number generators with the prefixes of 235 and 728/9 for cell phones and 497 and 498 for land-based phones. There would, however, be a certain amount of "wastage" or "out of scope" numbers using this method, which would waste time and money. Testing should be done to determine the upper and lower limits of the numbers in use and also to determine the percentage of wastage.

Face to face household survey will still be used in some instances. In particular where the amount or kind of information cannot be collected over the phone: a household finance survey is such an example. The Visitation record from the census, which forms the basis of a household register, should be kept up to date and new housing added. There is no up to date map of Anguilla showing the location of properties. This was a major constraint to the census of population and housing. A project should be implemented to map the properties of Anguilla and draw up a household register that can be updated regularly.

4.2 Business Surveys

An annual business survey has been conducted in the past to collect financial information for the National Accounts and Balance of Payments. A business register is maintained which includes contact information, industry activity, number of employees and other information useful for surveys. The business community is becoming

more accustomed to providing the information but there is still resistance from some. There may be a need to carry out more business surveys of specific sectors as more use is made of economic information. The register must be kept up to date and tracking of response included for the different surveys.

Many businesses in Anguilla have e-mail addresses and this is a fast and effective method of communicating and tracking businesses. Full advantage should be made of electronic communication, however the businesses which prefer the personal approach should not be forgotten.

There is no income tax in Anguilla and no requirement at present to keep records, financial or otherwise. As a result businesses often do not have records of the information required for the National accounts, work will need to be done to encourage businesses to keep records for the health of their business as well as ease of completing survey forms. In addition most businesses in Anguilla are small, as a result there is little specialisation of duties and it is often the owner manager who has to complete statistical forms.

It will become more important as more information is required from businesses, for government departments, including Statistics to minimise the reporting burden on businesses. The Statistics Department must work with other departments such as Inland Revenue to minimise the reporting burden.

4.3 Databases and administrative information

Given the relative high cost of carrying out surveys of the population, the Statistics Department has relied heavily upon administrative information in the past and will continue to do so in the future. The following is a listing of administrative sources available from the Government to produce statistics along with their uses or potential uses

4.3.1 Customs Asycuda Import Database

Used by customs to monitor collection of import duties. A data file is passed monthly to statistics where imports by commodity are tabulated using EUROTRACE. A windows based system of EUROTRACE has just been made available to statistics, which it is hoped will be more robust than the dos based version, which would not work with the newer versions of Windows.

Improvement required is in getting customs to import quality information wherever possible.

4.3.2 Immigration Visitor Data

The immigration officers at the three points of entry to Anguilla tabulate manually data on the number of visitors by country of residence and length of stay. Not only is this a time consuming task but also is subject to frequent error and restricts the amount of information that can be collected.

A proposal has been made to provide a computerised system for immigration to track visitors to Anguilla. The supplier of the system needs to be identified as well as the funding. This is a high priority for the Statistics Department.

The number of departures using the manual system provides a significant undercount, which means that no reasonable population estimates can be made, as the main source of population growth is immigrants. No information is collected on the age of those entering or leaving Anguilla, therefore inter-censal population estimates cannot be made by age and sex.

In addition only those without Anguillian citizenship are asked to complete ED cards on entry. As a result there is no count of non-resident Anguillians visiting Anguilla. There is a similar understanding with St. Martin whose residents do not need to complete ED cards when visiting Anguilla. The tourist counts are therefore under estimated due to this omission.

Immigration is also a good source of the numbers of foreigners living on Anguilla, as people staying for longer than a month are required to go to the Immigration office for an extension of stay or some other kind of stamp to allow them to stay longer. Efforts have been made to collect this information, which is at present kept in the files of individuals but the system needs to be examined, as this is important information for nationalisation policy. One suggestion is that when the forms are completed for application of the stamp additional statistical information should be requested and the information scanned to a database.

4.3.3 Court House Registry of Births, Marriages and Deaths

Births and Deaths have been registered at the courthouse since the 1883 and marriages since 1885. The information is hand written but is deteriorating. Since the number of births and deaths registered is small it is not time consuming to count however this information should be in database format.

The deaths and marriages include non-residents and yet there is no consistent way of identifying who are non-residents. Marriages are an importance revenue generator for the tourist industry and therefore make up a significant number of marriages that take place in Anguilla Care must be taken in counting only residents in the marriages and deaths.

Counting births in Anguilla is also a problem. While all births that take place in Anguilla have to be registered and take place at the hospital a significant number of pregnant women go overseas to give birth. The reason being is to take advantage of acquiring the citizenship of the country of birth. Another reason sometimes given is that they prefer the medical services overseas. These births could be counted when the mother returns with the newborn baby to Anguilla. It is interesting to note that these babies return to Anguilla with no passport and immigration relies upon knowledge of the mother being pregnant when they left. If indeed this is the case then it would be easy for immigration to count the babies when they return from their birth overseas.

Births and deaths are also available from the hospital but the shortcomings of including non-residents in the death data and excluding children born overseas is still the case.

It is vital to have accurate birth data for planning pre and postnatal health services as well as education. In addition it is difficult to produce accurate population estimates when the births overseas are excluded.

4.3.4 Building Permits

The building permit database is an excellent source of information for producing statistics for the construction sector and estimating construction investment. The categories available are Residential (*Single Family*), Residential (*Multiple / Apartment*), Hotels / Villas and Business, Agriculture / Industrial. They are categorised by value

ranges. The officer responsible for this database however is not housed within the Physical Planning department for whom he works but is in the MICUH offices which results in his work being oriented toward this ministry rather than the database. It is important that this officer along with the electrical inspector be closer to Physical Planning so that they are able to keep the building permit database current. The law requires that the building be started within 6 months of the permit being granted but there is no recording of completions at present. In Anguilla many homes are built in stages and sometimes the building permit isn't used. However they are a good leading indicator of the construction sector.

Under the new Planning legislation there is a requirement for a completion certificate to be issued which will provide information on the completions of buildings.

4.3.5 Work Permits

The Labour department tabulates work permits manually and numbers are provided for the country of birth of those granted, occupation group and sex. They are also broken down by renewal and new and self employed and employee. A database has been created by the DITES for Labour to input their files on individuals who have work permits. The database has yet to be populated.

4.3.6 Social Security

All employers have to make social security contributions to the Anguilla Social Security Board. The contribution by the employer is 5% of wages and the employee also contributes 5%. All employers have to register and numbers of employed are also available. In 2003 self-employed people under 65 years of age were also required to contribute to social security. Benefits are also paid for funeral expenses, maternity and sickness.

Statistics are therefore available on the number of people employed by sector and the number of employers in each sector. There are however two major problems: firstly employers are not prompt with their payments, as a result the data is usually available only about 3 months after the end of the months; secondly the computer system of the Social Security is on an unfamiliar platform and it is difficult to tabulate the kinds of information required. As results there is much manual tabulation of the data which delays processing. As there is no labour force survey programme and introducing one would be expensive, this database would provide a relatively cheap means of

monitoring employment in the economy if the system could be updated to a modern computer system.

4.3.7 Commercial Banks

The Commercial Banks report to the ECCB and the Statistics Department receives tabulations of deposits, loans and assets. The commercial banks, however, could be an important source of economic information.

One of the issues identified is the amount of debt that households and businesses have incurred. It may be possible to ask the banks to produce statistics on outstanding balances, overdrafts, loans outstanding etc to get an idea of the state of financial health of the economy.

4.3.8 Medical Records

There are no computer databases at the hospital or the health clinics which contain information on all the clients. The hospital maintains a database of deaths and communicable diseases which was provided by PAHO. The Health Authority has plans to introduce a computer system to record patient's information but it is not clear when this will be implemented and whether it will be possible to produce morbidity data or if it will be solely a financial system. It is essential that some means be found to record hospital morbidity data, which is not available at present.

The health clinics have been recording monthly data on number of visits to their various clinics as well as at home visits. This data is on "pink cards" and has not been used to analyse workloads. The Health Authority has indicated that they will be using this data and the Statistics department should make arrangements to tabulate it.

While few people have private health insurance and only a few employers provide health insurance there has never been any efforts to collect health claims information from insurance companies. This information is needed for the planning of the health insurance programme.

According to the 2001 census, about half of the population use either the hospital or public health clinics for their medical services; another 30% use a private doctor in Anguilla and the remaining 20% use medical facilities overseas. As a result it is difficult to get measures of the health of the population. Only a detailed health survey would provide this information.

4.3.9 Education Records

The education planner in the Ministry has put in place a database on enrolments and teachers. It is hoped that in the future this database will provide statistics on enrolment and age in a timely manner. In the past the tables have been produced manually. The database includes both the public and private schools.

The high school has however been lax in providing the necessary information to populate the database within a reasonable time frame. However in September 2004 a computerised registration system is to be introduced where teachers will be able to keep track of students' marks and attendance.

The mobility of the Anguillian population makes the measurement of drop outs meaningless as it is not possible to track students once they have gone overseas as often they are attending school in a different country and should not appear to be a drop out.

One area, which is badly deficient in statistics in Anguilla, is tertiary education. While there are plans to create a tertiary college in Anguilla, at the moment there are only a few courses offered part-time by UWI and some offered by the Adult Education unit. As a result most students study overseas and very few records are kept of the number of students studying overseas.

4.3.10 Police and Court Records

The police are probably one of the least computer literate areas of government. There is a belief that crime is rising but no system is in place to monitor the rise in crime on a monthly basis. The police have put in place manual systems to monitor domestic violence and also produce an annual report giving reports of crime and convictions but there is an urgent need to computerise the report of crime not only for statistical purposes but also to monitor crimes reported.

The OECS has a project in place which would provide funding to create such a database which would include the Justice department, however both the Justice and Police departments need to be sensitised as to the importance of computer systems before activity will take place in Anguilla in this area.

4.3.11 Land Registry

The land registry has not been exploited to its potential for statistics. It would be able to provide information on the amount of land owned

by government, Anguillians and aliens. It would also provide information on the number of Alien Land Holders Properties sold by year. This would be important in establishing alien land holding policy. There is also a property transactions database but it is not always kept up to date. It would be able to provide property sales monthly.

4.3.12 The Treasury, SMARTSTREAM and SIGTAS

While there are no personal or business income taxes in Anguilla, there are all kinds of licenses issued and can provide rich sources of statistics if they are all computerised. The following are considered to have the greatest potential:

- Business license database provide number of businesses by type, births and deaths. It does require some cleaning up as many business licenses are not as they appear.
- Vehicle licenses are recorded on paper cards. This is a database that urgently needs to be created. Not only can it provide the number of vehicles registered by type but also provide a profile of the age of the vehicle population in Anguilla.
- Driving license database. This database was introduced in 2003 and provides information on the age of those holding driving licenses
- The Smart Stream database is a system used to make payments and monitor government spending. A module is to be added soon (SIGTAS) which will also allow for the receipting of revenues. It is therefore a useful source to provide up to date information on government spending and revenues.

4.3.13 Shipping Manifests and Records

The two seaports and airport record in a book the number of vessels arriving and departing along with their size and amount of cargo landed. While not computerised, this source does provide information on port cargo and vessel traffic. It is also an obvious area that could be computerised to introduce efficiencies.

4.3.14 Environmental Health

Environmental Health keeps records of the amount of garbage disposed of using a manual system. They also record inspection of livestock slaughtering. Both sources are used at present to produce data on garbage and livestock slaughters.

4.4 Recommendations with Respect to Sources of Data

4.4.1 GIS Mapping of Anguilla's Physical Features and Buildings.

A major priority for the Statistics Department and Anguilla Lands and Surveys is to have an up to date map showing the roads, buildings and physical features of Anguilla. This should be part of a GIS system, which would have a numbers of users. The Statistics Department will need this for the next census. It would be preferable to do the project as soon as possible to allow for a comprehensive household register to be constructed from which samples can be drawn for household surveys.

In 2002 aerial photographs were taken of Anguilla, which for a cost of US\$30,000 could be used to produce digitised maps of Anguilla, its physical features and building locations. Prior to the 2010 census there is a need to produce up to date maps of Anguilla of this type, which may be done by satellite or aerial photography depending upon the advance in technology and costs.

4.4.2 Random Number telephone Generation Software

Investigate the purchase of software to generate four digit random numbers to be used in telephone surveys to ensure that both cell phone and land based phone numbers are included. The economics of using random number generation needs to be investigated.

4.4.3 Rationalize Government Collection of Information from Businesses

The Statistics Department should work with other government departments, especially Inland Revenue, Treasury, Physical Planning, Social Security, Labour and economic development to minimise paper burden and ensure that duplication of information requests are minimised.

4.4.4 Conduct two household surveys each year

Much of the statistical information that needs to be produced from household surveys does not need to be collected every year. Some can only be collected by means of a face-to-face interview and other can be collected by means of the less costly telephone interview survey method.

One face to face and one telephone survey should be conducted each year. A plan needs to be drawn up of which information will be collected in which year by which method.

4.4.5 Use the Annual Business Survey to Collect Additional Information

The annual business survey is only used at present to collect information for estimating the National Accounts and Balance of Payments. Given the expenditure of resources in this annual survey it provides an opportunity to collect a small amount of additional information from businesses, for example Internet access or a small amount of employee information.

5 Quality Control

Statistics are only useful if they are as accurate as possible. Most users of statistics have little appreciation of the accuracy of statistics as in Anguilla there are few experts in the field of statistics to be able to reward the department for producing high quality accurate statistics. In many cases even users in Caribbean Regional Organisations there is such a thirst for statistics that they are grateful to receive a measure and do not question its accuracy.

Data can be validated by comparisons with alternative sources of similar measures. For example household surveys results can compare their measures of demographic variables with the results from the census, as the demographic structure of the population tends to change slowly over time. Response rates combined with sampling ratios give a measure of the size of sampling variability. However one of the primary means of reducing inaccuracy is through reduced interviewer bias. This includes designing sound methodologies for conducting surveys, through training of interviewers and close monitoring and supervision of interviewers work.

The cost of carrying out surveys is relatively high due to the labour intensiveness of the activity. Organisations are often reluctant to pay this price and think that conducting surveys is simple and that they can reduce the costs by doing it themselves. In these cases usually little attention is paid to the training and supervision of interviewers and results are flawed.

In recent years the Statistics Department has given a higher priority to ensuring that the accuracy of statistics produced is as good as

possible. This involves time-consuming verification with no additional statistics produced at the end; only better quality statistics. The accuracy of administrative statistics requires a review of the whole collection process

As more statistical information is collected there will be more opportunities to compare data series and to ensure that there is consistency between data sets. Use of statistics is a “test” of the quality of statistics. It is only when people question what statistics are saying that abnormalities can be identified and the statistics checked for errors. Initiatives still need to be taken to improve the quality of all statistics.

5.1 Recommendations

5.1.1 Methodology Review of Administrative Statistics

A thorough review to be made of all statistics received from administrative sources of the abstract every five years. This will require the design of plan, which will ensure that all statistics are covered over the five year period. The review should include discussions with those in the various departments and businesses that put together the statistics to ensure that what is being collated corresponds with the definitions. A report should be written on the reviews to document weaknesses and definitions.

5.1.2 Quarterly Analytical Reviews of Economic and Social Statistics

A quarterly analytical document to be produced for social economic statistics. It could take the form of a newsletter, which reviews the data on a time series basis and combines the series to tell a story about what is happening to the Anguillian economy and the society. See section [3.5.2 Statistical Analytical Products](#).