

**OECD/UNESCAP/ADB Workshop on
Assessing and Improving Statistical Quality:
Measuring the Non-Observed Economy
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Country Paper: Singapore

Introduction

1. The Non-observed Economy (NOE) is defined to include productive activities which are underground, illegal, in the informal sector and those undertaken by households for their own final use. The Singapore Department of Statistics (DOS) recognises the importance of including contributions from the NOE in the Gross Domestic Product (GDP). Significant sub-sectors of the NOE include the informal sector and household production for their own final use whose value added as a share of nominal GDP are estimated to be 2.3 and 3.5 per cent respectively in 2000.
2. The main data sources used in the estimation of the NOE come from the Censuses of Population which are conducted once every ten years, the General Household Surveys conducted in between census years, as well as the Labour Force Surveys conducted annually. DOS also makes use of administrative data obtained from other government agencies such as the Inland Revenue Authority of Singapore (IRAS), and Agri-Food and Veterinary Authority of Singapore (AVA). Results from ad hoc surveys and studies, for example on taxi services and private tuition, conducted by other organisations are also used as supplementary data sources.
3. Although a large amount of useful information is presently available, it is not surprising that not all the NOE activities are captured. Hence, DOS undertakes the ongoing process of improving the NOE coverage. However, DOS, like most other countries, do not presently include explicit estimates for illegal production.
4. For countries like Singapore where GDP is compiled from all three approaches, namely production, expenditure and income, much of the NOE activities could be accounted for when the three approaches are balanced through an Input-Output Table. This is because NOE activities that may have escape from one measure of GDP might be captured in another measure of GDP.

5. This paper is divided into two sections. The first section describes the Singapore Business Register. The second section explains the treatment of the NOE in Singapore.

Section I Business Register

6. DOS is responsible for the maintenance of the Singapore establishment register, known as the Commercial Establishment Information System (CEIS). The CEIS is a centralised database which contains a comprehensive range of basic information pertaining to establishments in Singapore.

Coverage

7. To-date, the CEIS contains some 300 000 records of live establishments. It covers mainly companies and businesses sourced from the Accounting and Corporate Regulatory Authority of Singapore (ACRA) which regulates the formation of businesses and companies in Singapore.

8. In Singapore, all incorporated companies are registered under the Singapore Companies Act. Unincorporated entities are registered under the Business Registration Act. These businesses include every form of trade, commerce, craftsmanship, profession and any activity carried on for the purpose of gain. However, some entities such as licensed hawkers, registered societies and statutory authority are exempted from the Business Registration Act. A detailed list of exempted entities and individuals is provided in the Appendix.

9. Besides including those companies and businesses registered with ACRA, the CEIS also contains the following type of establishments:

- (i) commercial establishments registered with professional associations, eg clinics, legal and accounting firms;
- (ii) government and quasi-government institutions;
- (iii) non-commercial establishments, eg societies, co-operatives, religious organisations;
- (iv) representative offices of foreign companies;
- (v) others such as foreign embassies and other non-profit making organisations.

Information Available and Sources of Updates

10. The CEIS contains basic particulars of establishments such as name, address, business activity, registration date, commencement date, paid up capital

and legal organisation. Information on the CEIS is updated on a continuous basis from various sources:

- (i) Accounting and Corporate Regulatory Authority of Singapore (ACRA)

The main sources of updates come from ACRA, which provides information on newly registered and ceased companies and businesses on a regular basis;

- (ii) Survey of Establishments (SOE)

DOS conducts the quarterly survey of establishments to collect basic information from newly registered establishments. An average of 8 000 establishments is covered each quarter;

- (iii) Other updates

Other updates come from DOS's other surveys, as well as other government agencies such as the Economic Development Board, Building and Construction Authority and Monetary Authority of Singapore which administer some of the other comprehensive annual surveys. Information is also obtained from newspapers, government gazettes and trade magazines.

Sampling

11. One of the main objectives of maintaining the CEIS is for it to serve as a survey frame to be used in statistical surveys.

12. The sampling method used is based on stratified random sampling. All establishments in the sampling frame are first stratified by activity and operating receipts. Establishments with large turnover are selected with certainty (take-all stratum). A simple random sample is then drawn from the remaining establishments (take-some stratum), which was further stratified by legal organisation. This is to ensure that establishments of varied legal entities namely, incorporated companies, sole proprietorships and partnerships and other organisations are adequately represented.

13. It is important to maintain an up-to-date business register as it determines the quality of survey frames which are derived from it. The coverage of the "observed" economy depends very much on these survey frames.

Section II Non-Observed Economy

Informal Sector

14. In general, Singapore's coverage of unincorporated businesses is relatively comprehensive as a significant portion of these businesses are already covered under the Business Registration Act. This has greatly facilitated the tracking of these enterprises and allowed them to be included in the sampling frames of various surveys.

15. The estimates for these 'registered' unincorporated businesses are derived mainly from survey data and benchmarked against data from Censuses of Population, General Household Surveys and income data from the Inland Revenue Authority of Singapore (IRAS).

16. The informal sector in Singapore comprises of the rest of the unincorporated businesses which are exempted from the Business Registration Act i.e. own account workers. These include hawkers, real estate agents, driving instructors, private tutors, tourist guides, taxi drivers, remisiers, and freelance real estate and insurance agents etc. Singapore's informal sector is not as significant as other Asia Pacific economies. Its value added as a share of nominal GDP is estimated to be 2.3 per cent in year 2000.

17. Information on own account workers are limited and often unreliable as they do not maintain good sets of accounts. In some cases, however, compulsory licensing/registration by relevant authorities, such as licenses for hawkers by the Ministry of Environment, have facilitated in the tracking of employment of hawkers etc.

18. Benchmark estimates for own account workers are derived mainly from Censuses of Population and General Household Surveys. For intervening years, the sources of data for own account workers are more diversified. Estimates are based on administrative records, price indices, Labour Force Surveys conducted by the Ministry of Manpower and supplemented by ad hoc surveys from various organisations such as a survey on private tuition by the Ministry of Education etc.

Household Production for own final use

19. The main productive activities of household exclusively for own final use which are relevant in Singapore are rents of owners-occupiers and services of paid domestic servants. As Singapore is a highly urbanised island state, there is

minimal, if any, contributions from the production of crops and livestock for own final use, and the construction of own houses.

20. The output of owners-occupied dwellings is valued at the estimated rental that one would pay, taking into account factors such as location, size of the dwelling and neighbourhood facilities. Estimated annual rental of properties is compiled by the Inland Revenue Authority of Singapore for the purpose of property tax collection. Estimates of expenditures incurred on maintenance and minor repairs are treated as intermediate consumption. Value added of owner-occupied dwellings is estimated to be \$5.3 billion in 2000. Its share of nominal GDP is a significant 3.3 per cent, reflecting a high home ownership rate among Singapore resident households (92.3 per cent in 2000).

21. Domestic servants include babysitters, washerwomen, car drivers and gardeners. Similar to the other activities in the informal sector, their value added contribution consisting of remuneration and income in kind is estimated based on the number of person employed and their average gross earnings data obtained from Censuses of Population, General Household Surveys and Labour Force Surveys. Its value added as a share of nominal GDP is 0.2 per cent in 2000.

Underground Economy (Economic Underground)

22. The underground economy refers to activities that are productive and legal but are deliberately concealed and do not comply with administrative rules. These refer mainly to cases of mis-reporting whereby businesses or individuals understate their actual income to avoid tax. For listed enterprises, counter-checks are frequently made with the audited accounts of the companies to ensure accurate reporting by the companies. Efforts have also been made to account for these underground transactions by benchmarking national account estimates with data from Input-Output Tables during rebasing exercises every five years.

Omissions Due to Deficiencies in Data Collection (Statistical Underground)

23. Information collected from various surveys, whether conducted by DOS or other government research & statistics units are shared among the agencies to allow for consistency checks on the data. This also allows for continuous feedback and improvements to be made to the coverage and scope of the surveys.

24. Due to the enforcement of the Statistics Act, most surveys conducted by DOS have achieved high response rates of 85 to 95 per cent. Imputations are also included in national account estimates to account for non-responses.

Illegal Production

25. DOS does not presently include explicit estimates of illegal economic activities in the GDP. Illegal productive activities (e.g. illegal drugs related activities, unlicensed practice of professional services (e.g. medicine) and illegal prostitution) are, however, not expected to be significant in Singapore.

Conclusion and Future Plans for Improvement

26. Information on the CEIS is updated on a continuous basis from various sources and it serves as an important survey frame used in statistical surveys. This provides the main framework from which information on the “observed” economy is captured. Continuous efforts are being made to improve the scope and comprehensiveness of the CEIS.

27. On the non-observed economy, the review of existing estimation methodology and data sources is an ongoing process. For example, DOS is exploring the possibility of using information from the goods and services tax (GST) returns in the compilation of official statistics in the near future. This would be a more timely data source and would provide a basis to adjust for the under-coverage (statistical underground) of small and medium enterprises.

28. DOS also conducts ad hoc censuses to collect benchmark information for specific industries that are important or have undergone significant changes. For example, a census of the legal industry and profession that covered the law firms and lawyers was conducted in 2001. In early 2004, a census on the agriculture and fishing industry was also launched to take stock of the value added contributions from this rapidly changing industry which has seen the development of high-tech modern farms in recent years.

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APPENDIX

List of exempted entities and individuals from the Business Registration Act

1. Individuals carrying on any of the businesses specified in the First Schedule.*
2. Statutory authority or other body established under any written law.
3. Institution, society or person specified in the First Schedule to the Income Tax Act.
4. Registered Society.
5. Registered co-operative society.
6. Registered mutual benefit organisation.
7. Person carrying on any business consisting solely of the exercise of any profession which under the law can be exercised only by those who possess certain prescribed qualifications and whose names are registered in the manner prescribed by the law (e.g. doctors, lawyers).
8. Charitable institutions which is exempt from tax under the Income Tax Act.
9. The Public Trustee or the Official Assignee of the property of a bankrupt.
10. A foreign company carrying on business in Singapore which is registered under the Companies Act and carries on the business under its corporate name.
11. Any other person or class of persons for the time being exempted by the Minister, by notification of the Gazette, from all provisions of this Act.
12. Any company registered under the Companies Act or any previous legislation carrying on business under a business name that consists of its corporate name.

Businesses specified in the First Schedule :

1. Any business of a licensed hawkker who sells or exposes for sale any drink, goods, wares or merchandise of any kind whatsoever, or who offers for hire his skill in handicraft or craftsmanship.
2. Any business of a craftsman who –
 - (a) exercises his craft on his own domestic premises;
 - (b) does not display the products of his craftsmanship for sale in public;
and
 - (c) does not employ any person other than members of his immediate family for the purpose of his business.
3. Any business of -
 - (a) a taxi driver;
 - (b) a trishaw rider;
 - (c) a sampan man plying his sampan for hire; or
 - (d) a farmer, a fish pond keeper or a prawn pond keeper who
 - (i) does not employ any person other than members of his immediate family;
 - (ii) does not own the land on which his farm or pond stands; and
 - (iii) does not charge members of the public any fee for admission.