DEVELOPMENT RESEARCH METHODS

Week 6, Lesson 2: The importance of Census and other secondary data in Development Studies

Development Research Methods
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What we will cover in today's lecture

1. What is Official Statistics?
2. Fundamental Principles of Official Statistics
3. Historical Perspective of Official Statistics in India
4. An Overview of Present Indian Statistical System
5. Why Census and other Secondary Data are Important in Development Studies

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What is Official Statistics?

- “Official statistics" means statistics derived by the Government agencies from statistical surveys, administrative and registration records and other forms and papers, the statistical analyses of which are published regularly, or planned to be published regularly, or could reasonably be published regularly.
- The primary aim of official statistics is to provide an accurate, up-to-date, comprehensive and meaningful empirical picture of the society and economy to support the formulation and monitoring of economic and social policies by the Government.
- The statistical system is laterally decentralized among the Ministries of the Government of India (GOI), and in every one of them, vertically decentralized, between the Centre and the States.

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Fundamental Principles of Official Statistics

Principle 1

- Official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honor citizens' entitlement to public information.

Principle 2

- The methods and procedures for the collection, processing, storage and presentation of statistical data need to be according to strictly professional considerations, including scientific principles and professional ethics.

Principle 3

- To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.

Principle 4

- The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

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Fundamental Principles of Official Statistics

Principle 5

- Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on Respondents.

Principle 6

- Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

Principle 7

- The laws, regulations and measures under which the statistical systems operate are to be made public.

Principle 8

- Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

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Fundamental Principles of Official Statistics

Principle 9

- The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels

Principle 10

- Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries

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Historical Perspective of Official Statistics in India

1. The foundation of the statistical system in India was laid down by the British administration. The Provincial Governments were required to publish the relevant statistics in their annual administration reports.
2. The first significant development in the pre-independence era was the constitution of a Statistical Committee (1862) for the preparation of forms to collect statistical information on different subject areas.
3. The Director General of Commercial Intelligence and Statistics until 1914 was responsible for the compilation and publication of almost all the principal statistical information on demography, crop production and prices, rainfall, industrial production, education, health, etc.

The first Statistical Abstract of British India (1840-1865) was based on information provided by the Provinces

Statistical Committee published Statistical Abstract of British India from 1868 to1923

The first Agricultural Statistics of British India, was brought out in 1886 following recommendations of the Indian Famine Commission

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Historical Perspective of Official Statistics in India

4. In April 1914, a separate Directorate of Statistics came into being. Subsequently, the Directorate of Statistics and the Commercial Intelligence Department were merged into a single organization.
5. Professor P.C. Mahalanobis, who is regarded as a pioneer in both theoretical and professional statistics, was appointed as the first statistical adviser to the Cabinet, Government of India in January 1949.
6. The coming of the era of developmental planning in India, gave significant impetus to the development of statistics
7. The National Sample Survey (NSS) came into being in 1950 to collect information through sample surveys on a variety of socio-economic aspects

The first complete Population Census was conducted in 1881 on a uniform basis throughout the country.

In 1948 following a Census Act, a permanent Office of the Registrar General and Census Commissioner was created

Professor P. V. Sukhatme, as Statistical Adviser to the Ministry of Agriculture, was responsible for the development of Agricultural Statistics

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Historical Perspective of Official Statistics in India

8. In April 1961, the Department of Statistics was set up in the Cabinet Secretariat
9. In 1973, the Department of Statistics became a part of the Ministry of Planning.
10. In October 1999, the Department of Statistics and Programme Implementation was declared as the Ministry of Statistics and Programme Implementation (MoS&PI).

The Indian Statistical Institute (ISI) was registered on 28 April 1932 at Calcutta as a nonprofit- distributing learned society under the Societies Registration Act, 1860, with Professor P.C. Mahalanobis as its founder Director.

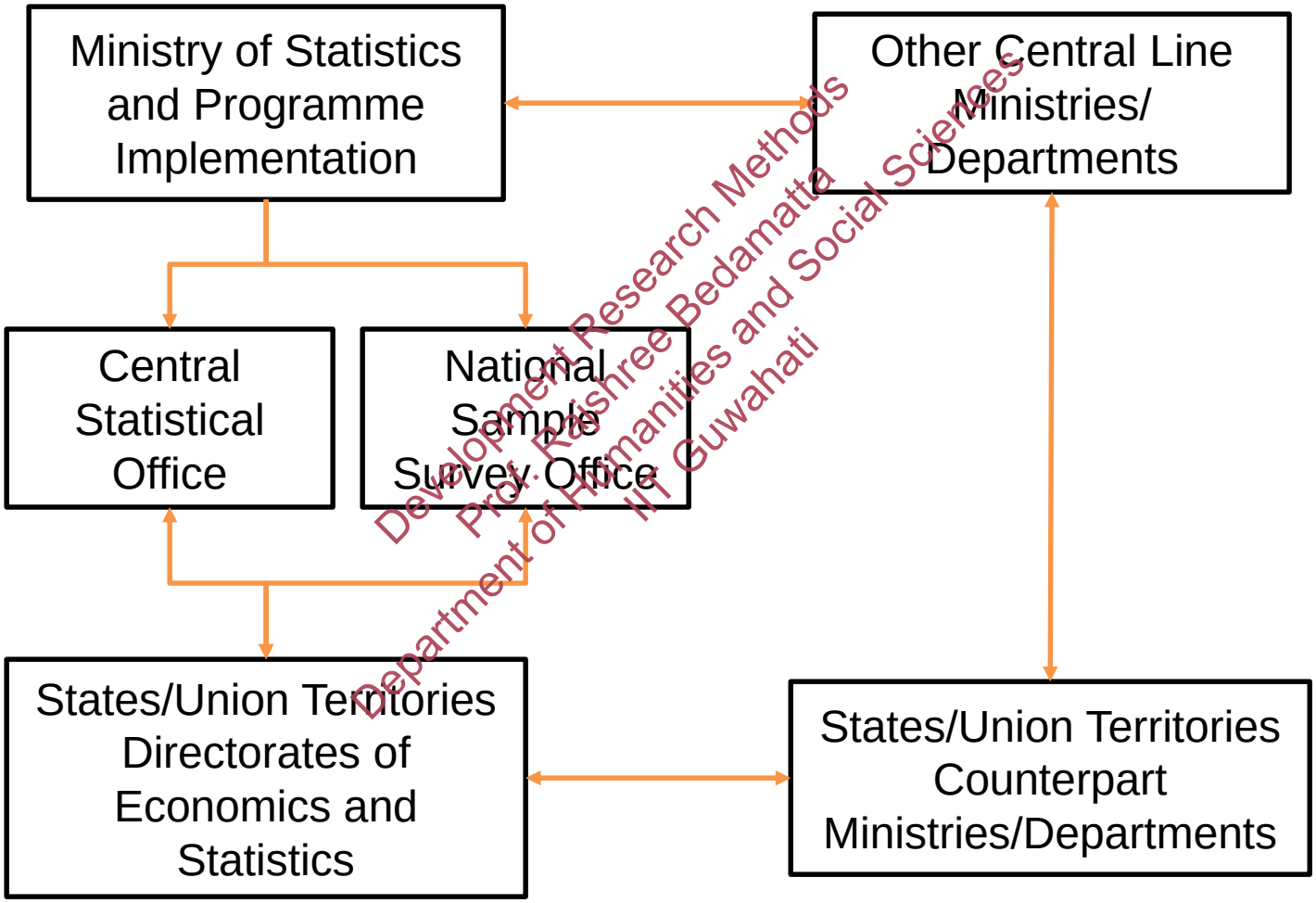
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An Overview of Present Indian Statistical System

- The Indian Statistical System is largely decentralized with elements of central supervision
- The Ministry of Statistics and Programme Implementation is the nodal agency for all statistical activities at all-India level.
- The State Directorates of Economics and Statistics (DESs) carry out the responsibility of coordination of all statistical activities at the State level and keeping liaison with the MOSPI for the purpose of coordination at all-India level, and for maintaining norms and standards in the field of official statistics

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Organisational Structure of Indian Statistical System

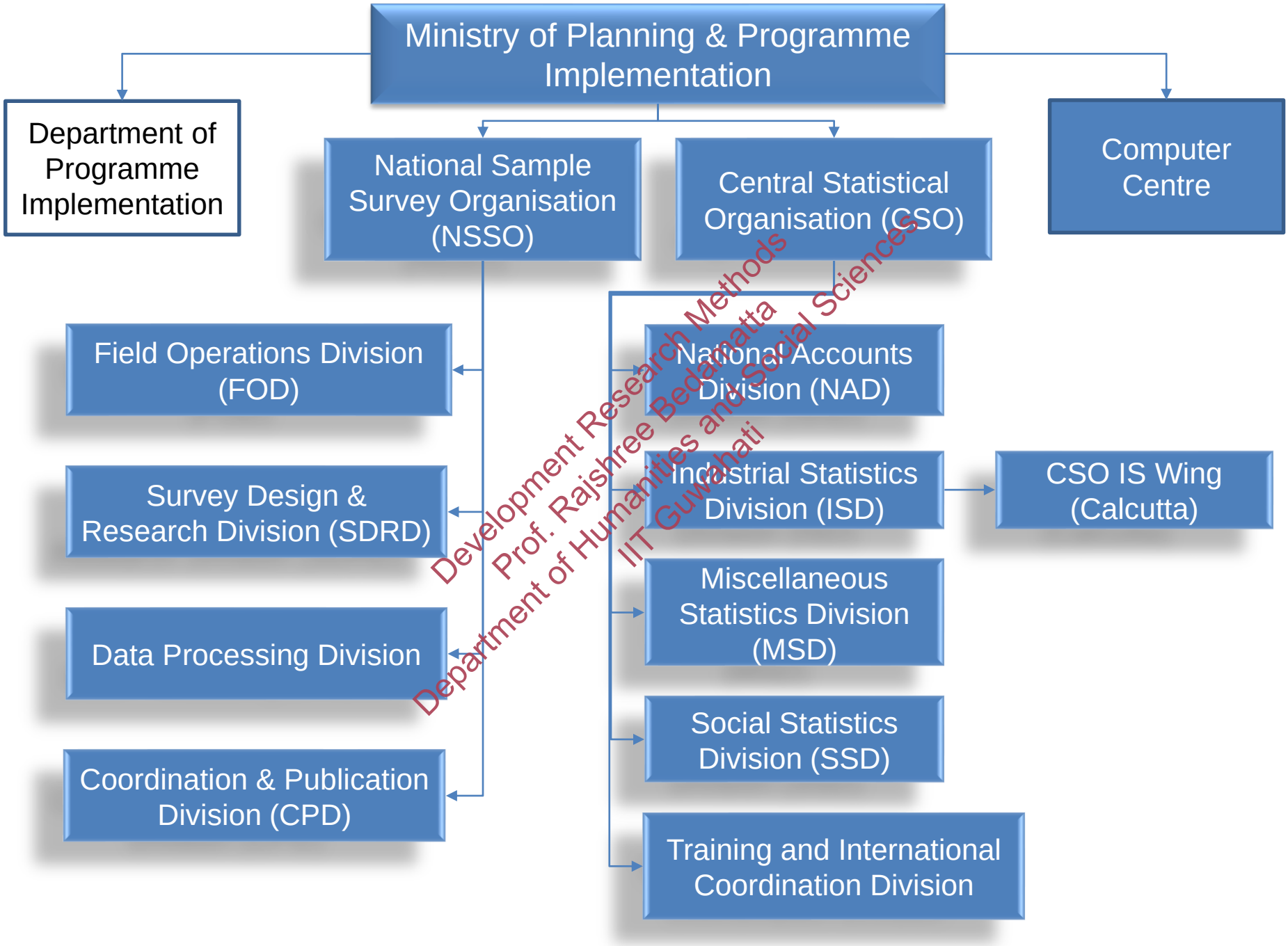


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An Overview of Present Indian Statistical System

- The Ministry of Statistics and Programme Implementation has two wings, one relating to Statistics and the other is Programme Implementation.
- The Statistics Wing called National Statistical Organisation (NSO) consists of the Central Statistics Office (CSO), the National Sample Survey Office (NSSO), the Computer Centre and Coordination & Publication Division. The Indian Statistical Institute (ISI), which is a premier statistical institute, receives budgetary support from the MOSPI.
- The CSO consists of five Divisions, namely, the National Accounts Division (NAD), the Economic Statistics Division (ESD), the Social Statistics Division (SSD), the Training Division and the Coordination & Publication Division (CAP). The CSO has an Industrial Statistics Wing, namely, the CSO-IS Wing
- The NSSO functions under the overall direction of a Steering Committee with requisite independence and autonomy in the matter of collection, processing and publication of NSS data.

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Ministry of Planning & Programme Implementation
Department of Programme Implementation
National Sample Survey Organisation (NSSO)
Central Statistical Organisation (CSO)
Computer Centre
Field Operations Division (FOD)
Survey Design & Research Division (SDRD)
Data Processing Division
Coordination & Publication Division (CPD)
National Accounts Division (NAD)
Industrial Statistics Division (ISD)
CSO IS Wing (Calcutta)
Miscellaneous Statistics Division (MSD)
Social Statistics Division (SSD)
Training and International Coordination Division
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Why Census and Other Secondary Data are Important in Development Studies-1

1. Vital to evaluating development progress and making comparisons over time and between countries.
2. To provide a context for in-depth field studies
3. To make wider generalizations from the results of small-scale questionnaire surveys and focused interview research
4. Useful in making an initial exploration of potential relationships in the development arena that can later be examined in more detail through primary fieldwork
5. Can be used as essential evidence to test ideas in development studies
6. Should be an essential starting point for most evidence-based research concerned with past and future policy-making
7. Provides a means to interpret trends over time and to generalize about the processes responsible for demographic change.

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Why Census and Other Secondary Data are Important in Development Studies-2

8. Censuses provide the best method to relate population data to a wide range of other socio-economic information at a particular point in time for a national or regional population as a whole.
9. Provides unique opportunities for researching inter-relationships between population and the key drivers of demographic change.
10. Possibility of detailed spatial disaggregation, which is of special value to planners and policy-makers.
11. Official statistics provide a benchmark for what government and state organizations recognize to be the state of affairs about the populations and economic systems
12. Lack of reliable statistical information is not only an obstacle to doing research, but it also opens the door to politicians making un-testable assertions about the validity and success of their policies.
13. Figure 1 reveals that it is the locations with the poorest political stability and those with the harshest authoritarian regimes which have failed to enumerate their populations.

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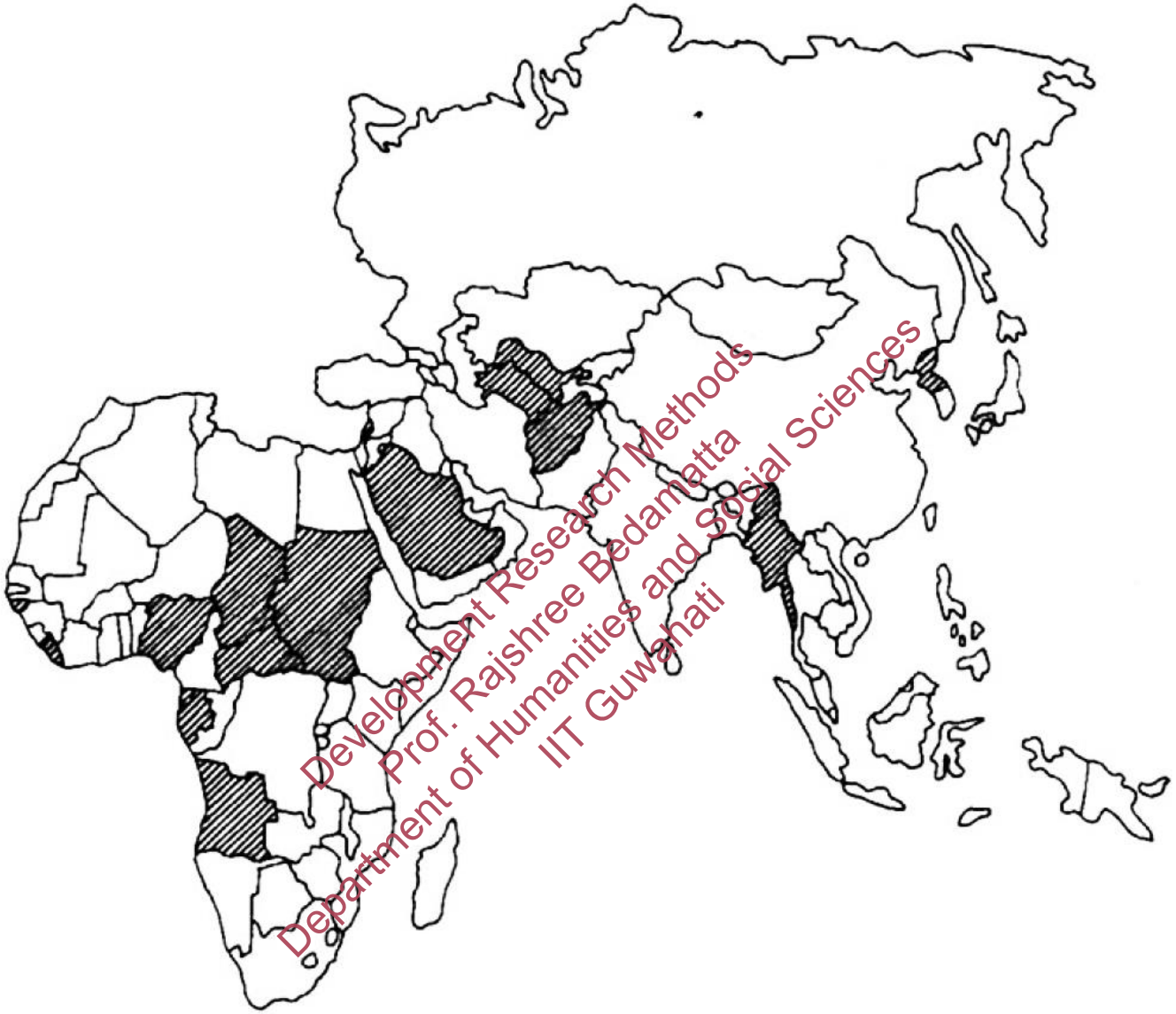


Figure 1

Countries in Africa and Asia with no Census, 1994-2003

Source: Geohive September 2004 as used in Findlay 2006

The Changing Context of Census Taking and Analysis

- Technological development has made it easy to collect and analyse census data
- The penetration of modern transport networks to most of the world's inaccessible regions has reduced the need for population estimates to be made by aerial surveys
- Improvements in literacy have led to more accurate and meaningful responses to census questions and to other demographic surveys
- Hence quantity as well as quality of official statistics information have improved
- In India, like most developing countries, the pace of publication of results has improved, making the most recent census much more useful to researchers than in the past.

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Problems in Working with Census Material

1. The data, simply because it has been collected by a government agency may not be accurate. This may be for political reasons or because of the way questions are worded.
2. Some researchers argue that, even if the data could be trusted, human dimensions of development cannot be readily captured in numerical form and that in-depth qualitative research is more effective in extending understanding.
3. Without human dimensions of development it would be all too easy for politicians to focus only on economic growth and to forget that the real end of development is improved human well-being.
4. Census data, like all secondary data, reflects the objectives and value systems of the organizations who pay for, design and publish the data.
5. They are inflexible sources of information relative to the theory-led objectives of most academic researchers as well as being problematic because they are inescapably cultural and political products.

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Problems in Working with Census Material-2

6. The census-takers may be less concerned than the researcher would be in critically evaluating the categories used to collect and later classify the data
7. These problems are magnified in development studies because researchers are often engaging in cross-cultural research and are working in cultures very different from their own
8. Census pictures of population face the difficulty of quickly becoming dated by comparison with continuously recorded registration data
9. Development researchers can seldom check the quality of the data through their own primary research, since the census is not precisely replicable in terms of the date, methods and circumstances of collection.

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Working with Census Material in Developing Countries

- The United Nations provides guidance on the design of census materials, and researchers can usefully compare the questions posed in any particular country with those recommended by international bodies.
- Most census organizations run internal checks on questions that touch on sensitive issues such as income, religion or ethnic identity, but for good reason, people in all countries are suspicious of providing information on these types of topic. Any development researcher using census data therefore, needs to think critically about what precisely has been recorded by the census-taker and what respondents might have been thinking as they responded to census questions.
- Another problem that is widespread in secondary data in developing countries is gender bias in the reporting of key life events. Many countries have a history of widespread undercounting of both female births and also female infant mortality.
- The fact that most countries publish census data for small spatial units, often known as Enumeration Districts (EDs), is particularly useful to geographers and planners. There is, however, a difficulty in using geographical data of this kind that all researchers need to bear in mind. It is the so-called 'ecological fallacy'. The fallacy arises when a researcher makes unjustified causal links based on aggregate statistics for an area, assuming that the data applies to everyone in the area.

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Working with Different Secondary Data Sources

1. **Data Triangulation**:- National census forms only one component of secondary data collection. In most countries large quantities of other survey material are produced on a regular basis. Development researchers, whatever their particular interest, should explore other official statistics in order to triangulate these with the census picture.
2. Differences may arise for many reasons (e.g. sampling error in survey material, differences of timing, differences in the efficiency of different research tools for data capture, etc.), but this should not be a reason for failing to compare the census picture with other secondary data sources.
3. For example, in studying population change, at least two other key sources exist in most countries. These include the vital registration of births and deaths and large-scale sample surveys such as the World Fertility Survey (WFS) and Demographic and Health Surveys (DHSs).
4. It is becoming increasingly possible to link different data sets over time. Not only is it possible to trace individuals and households from one census to another, but it is also possible to link census and registration data (including sometimes hospital registration data).

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Working with Different Secondary Data Sources

Some Limitations:-

1. Unfortunately, registration systems in some developing countries remain weak both in terms of uneven demographic coverage and also, as discussed above, due to selective under-registration, often of births (female under-registration) and deaths.

2. It is generally recognized that migration events are poorly recorded by registration systems. Even where recording movements of population is mandatory, it is very hard to police continuous registration systems, and large numbers of moves go unrecorded. For research on migration within developing countries, researchers are therefore likely to continue to be dependent on censuses.

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Visit www.censusindia.gov.in

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4. Ministry of Statistics and Programme Implementation. (2018). National Policy on Official Statistics (Draft). New Delhi.

For a comprehensive literature on the topics covered in this lecture it is also suggested that students go through the reference list of the above cited papers.

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