

# University of Mumbai



M.Sc in Information Technology  
Revised Syllabus 2019-2020

**PSIT101 & PSIT1P1 - Research in Computing**

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# UNIT III - BEGINNING STAGES OF RESEARCH PROCESS

BASED ON WILLIAM G. ZIKMUND

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# Chapter 8:

## Secondary Data Research

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Data that have been previously collected for some purpose other than the one at hand.

Advantages :

1. Availability
2. Faster and less expensive
3. Eliminates Sampling and Data processing
4. Essential when primary data not available using collection procedures

# Chapter 8: Secondary Data Research

Disadvantages of secondary data:

- Not designed specifically to meet the researchers' needs.

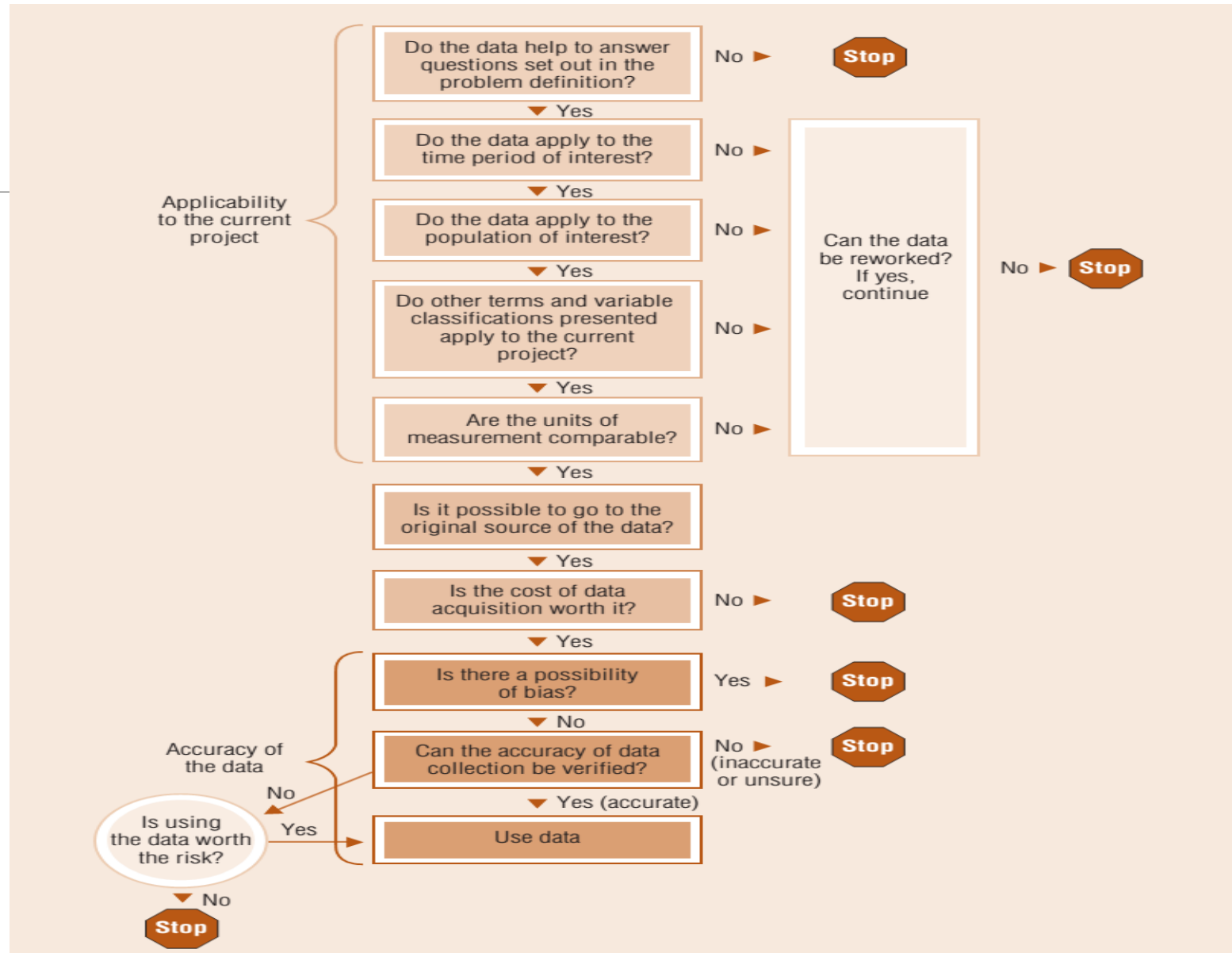
To evaluate secondary data, researchers should ask questions such as these:

- Is the subject matter consistent with our problem definition?
- Do the data apply to the population of interest?
- Do the data apply to the time period of interest?
- Do the secondary data appear in the correct units of measurement?
- Do the data cover the subject of interest in adequate detail?

The most common reasons why secondary data do not adequately satisfy research needs are

- (1) outdated information, (2) variation in definition of terms, (3) different units of measurement, and (4) lack of information to verify the data's accuracy.
- (2) When not in format, Data conversion(also called data transformation) is the process of changing the original form of data to a format more suitable for achieving a stated research objective.
- (3) The user has no control over their accuracy

# Evaluating Secondary Data



# Typical Objectives for Secondary-Data Research Designs

## Common Research Objectives for Secondary Data Studies

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Broad Objective	Specific Research Example
Fact-finding	Identifying consumption patterns Tracking trends
Model building	Estimating market potential Forecasting sales Selecting trade areas and sites
Database marketing	Enhancing customer databases Developing prospect lists

# Fact Finding

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The simplest form of secondary-data research is fact-finding

1. IDENTIFICATION OF CONSUMER BEHAVIOR FOR A PRODUCT CATEGORY
2. TREND ANALYSIS
  - Market tracking : The observation and analysis of trends in industry volume and brand share over time.
  - Environmental Scanning

# Model Building

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The use of secondary data to help specify relationships between two or more variables; can involve the development of descriptive or predictive equations.

Objectives : ESTIMATING MARKET POTENTIAL FOR GEOGRAPHIC AREAS

Country	Population Projection for 2010 (thousands)	Annual per Capita Beer Consumption (liters)	Market Potential Estimate (k liters)
Czech Republic	10,175	157	1,597,475
Germany	82,365	116	9,554,340
Japan	127,758	48	6,132,384
Spain	45,108	84	3,789,072

Market Potential for Four Possible Beer Markets



# Model Building

Objectives : FORECASTING SALES

Year	Average Ticket Price (\$)	Percentage Rate of Growth (Decline) from Previous Year	3-Year Moving Average Rate of Growth (Decline)
1996	11.20	5.2%	3.5%
1997	12.36	10.4%	5.8%
1998	13.59	10.0%	8.5%
1999	14.91	9.7%	10.0%
2000	16.67	11.8%	10.5%
2001	18.99	13.9%	11.8%
2002	18.30	-3.6%	7.4%
2003	19.01	3.9%	4.7%
2004	19.82	4.3%	1.5%
2005	21.17	6.8%	5.0%
2006	22.21	4.9%	5.3%
2007	22.70	2.2%	4.6%
2008	25.43	12.0%	6.4%

# Model Building

Objectives : ANALYSIS OF TRADE AREAS AND SITES

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Site analysis techniques : Techniques that use secondary data to select the best location for retail or wholesale operations.

Index of retail saturation : A calculation that describes the relationship between retail demand and supply

$$\text{Index of retail saturation} = \frac{\text{Local market potential (demand)}}{\text{Local market retailing space}}$$

# Data Mining

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Data mining : The use of powerful computers to dig through volumes of data to discover patterns about an organization's customers and products; applies to many different forms of analysis.

Neural networks : A form of artificial intelligence in which a computer is programmed to mimic the way that human brains process information.

Market-basket analysis : A form of data mining that analyzes anonymous point-of-sale transaction databases to identify coinciding purchases or relationships between products purchased and other retail shopping information

# Database Marketing and Customer Relationship Management

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Database marketing :The use of customer databases to promote one-to-one relationships with customers and create precisely targeted promotions

# Sources of Secondary Data

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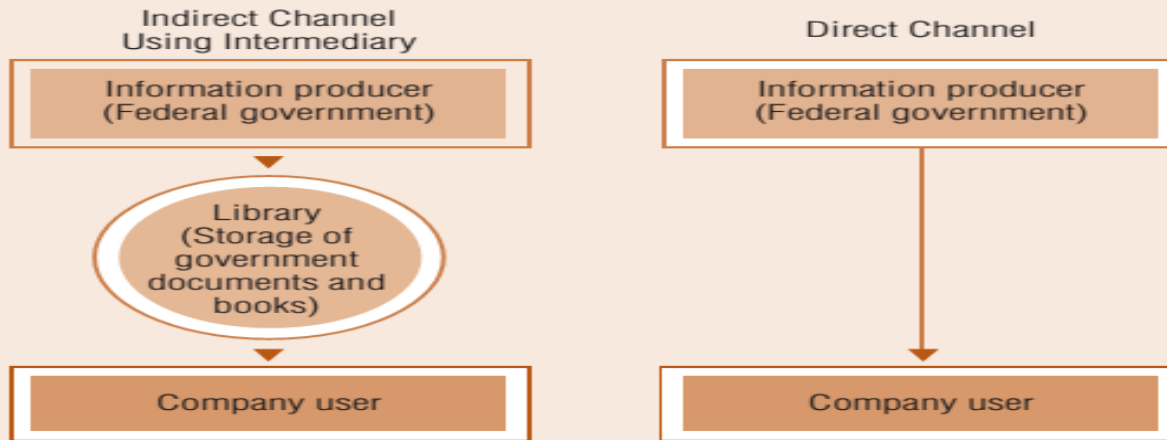
Secondary data can be classified as either internal to the organization or external.

Sources of Internal and Proprietary Data: Most organizations routinely gather, record, and store internal data to help them solve future problems. An organization's accounting system can usually provide a wealth of information.

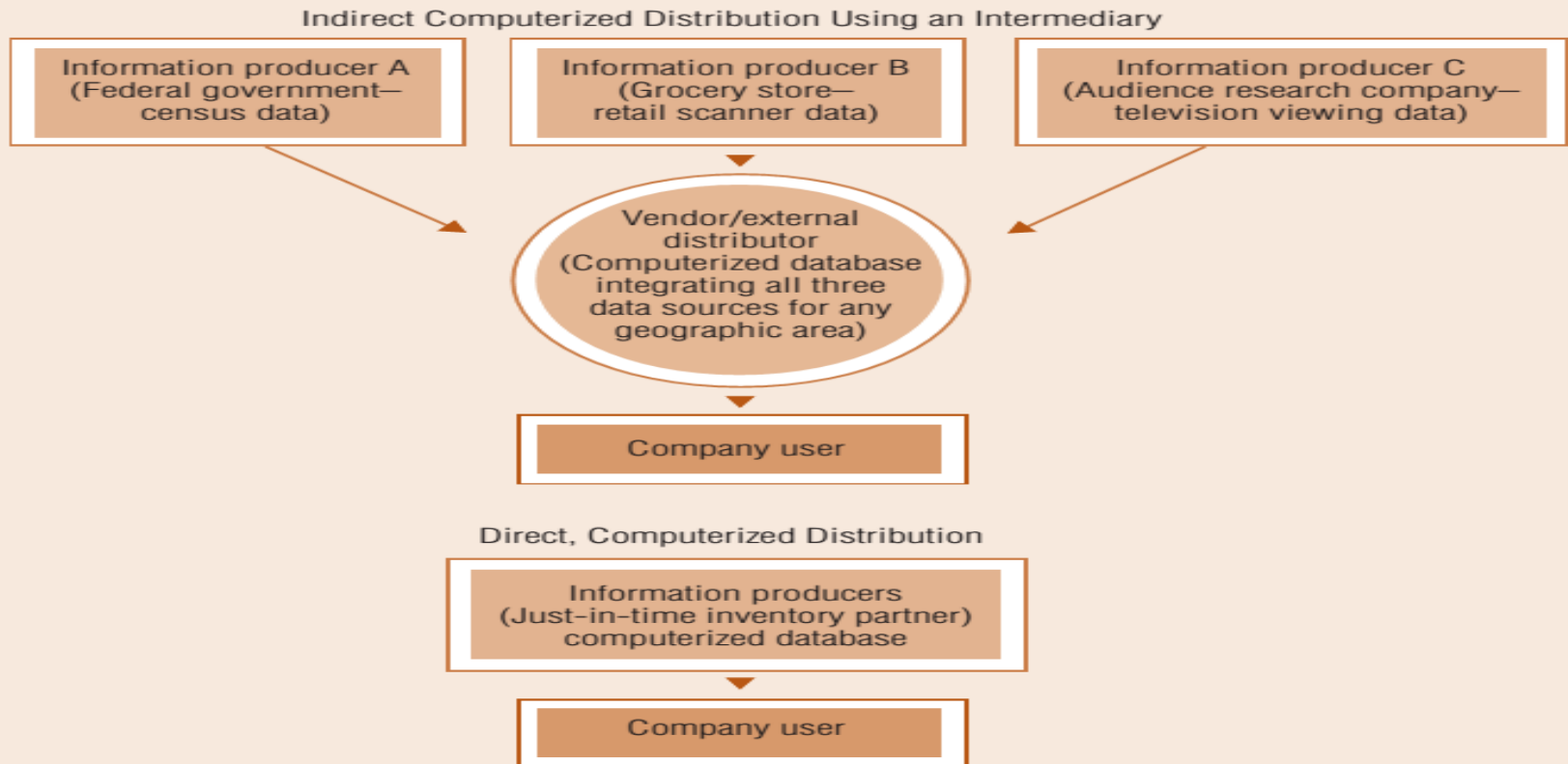
External Data: The Distribution System - Data created, recorded, or generated by an entity other than the researcher's organization.

Information as a Product and Its Distribution Channels : library, internet, vendors

## Traditional Distribution of Secondary Data



## Modern Distribution of Secondary Data



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## PRODUCERS

Name	Description	URL
Yahoo!	Portal that serves as a gateway to all kinds of sites on the Web.	<a href="http://www.yahoo.com">http://www.yahoo.com</a>
CEOexpress	The 80/20 rule applied to the Internet. A series of links designed by a busy executive for busy executives.	<a href="http://www.ceoexpress.com">http://www.ceoexpress.com</a>
The New York Public Library Home Page	Library resources and links available online.	<a href="http://www.nypl.org">http://www.nypl.org</a>
Census Bureau	Demographic information from the U.S. Census Bureau.	<a href="http://www.census.gov">http://www.census.gov</a>
<i>Statistical Abstract of the United States</i>	Highlights from the primary reference book for government statistics.	<a href="http://www.census.gov/statab/www">http://www.census.gov/statab/www</a>
STAT-USA/Internet	A comprehensive source of U.S. government information that focuses on economic, financial, and trade data.	<a href="http://www.stat-usa.gov/">http://www.stat-usa.gov/</a>
<i>Advertising Age</i> magazine	Provides content on marketing media, advertising, and public relations.	<a href="http://www.adage.com">http://www.adage.com</a>
Inc.com	<i>Inc.</i> magazine's resources for growing a small business.	<a href="http://www.inc.com">http://www.inc.com</a>
<i>The Wall Street Journal Online</i>	Provides a continually updated view of business news around the world.	<a href="http://online.wsj.com">http://online.wsj.com</a>
<i>CNN Money</i>	Provides business news, information on managing a business and managing money, and other business data.	<a href="http://money.cnn.com">http://money.cnn.com</a>
NAICS—North American Industry Classification System	Describes the new classification system that replaced the SIC system.	<a href="http://www.census.gov/epcd/www/naics.html">http://www.census.gov/epcd/www/naics.html</a>
MapQuest	Allows users to enter an address and zip code and see a map.	<a href="http://www.mapquest.com">http://www.mapquest.com</a>
Brint.com: The BizTech Network	Business and technology portal and global network for e-business, information, technology, and knowledge management.	<a href="http://www.brint.com">http://www.brint.com</a>



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Books and Periodicals

Government Sources

Media Sources

Trade Association Sources

Commercial Sources



# Single-Source Data-Integrated Information

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CACI Marketing Systems  
<http://www.caci.com>

Provides industry-specific marketing services, such as customer profiling and segmentation, custom target analysis, demographic data reports and maps, and site evaluation and selection. CACI offers demographics and data on businesses, lifestyles, consumer spending, purchase potential, shopping centers, traffic volumes, and other statistics.

PRIZM by Claritas Corporation  
<http://www.claritas.com>

PRIZM, which stands for Potential Rating Index for Zip Markets, is based on the “birds-of-a-feather” assumption that people live near others who are like themselves. PRIZM combines census data, consumer surveys about shopping and lifestyle, and purchase data to identify market segments. Colorful names such as Young Suburbia, Shot Guns, and Pickups describe 40 segments that can be identified by zip code. Claritas also has a lifestyle census in the United Kingdom (<http://www.claritas.co.uk>).

MRI Cable Report—Mediamark  
Research Inc.  
<http://www.mediamark.com>

Integrates information on cable television viewing with demographic and product usage information.

# Sources for Global Research

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The Japan Management Association Research Institute

The European Union in the U.S.

The CIA's World Factbook and the National Trade Data Bank are especially useful.

The National Trade Data Bank

The U.S. Department of Commerce

The National Trade Data Bank