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Uses and Practice of Demographic Software's to study and statistical analysis of Vital Statistics system in India

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Abstract:
A demographic analysis of the information provided by censuses and surveys should be made as soon as possible after the data become available. One of the purposes of this manual is to facilitate making such an analysis of data, once information is available. The use of the computer programs presented in this manual will help to accelerate the calculation process. But still, the researcher must produce a report about the national level data to organize within short time of various analysis. This article presents some guidance on preparing a demographic report for various analysis and future data, if the data is very large, the role of software is the key role of all aspects i.e. analyzing and interpretation of data in a simple command of require.

Objective:
some demographics software packages, which are frequently used in the file of population studies. Through this article we intend to give you sufficient information regarding these packages, their data requirements, the outputs which you get out of these packages and last not the least the way to use package for our research work.
Its deals with the description of various software's, which are very frequently used in the field of population studies. The software package that we are going to discuss in this article in detail Spectrum, Mortpak and other software in detail below (SPSS, R) and STATA.

Introduction:
Vital statistics means different types of collection of data, in the data have specific area, we have use the various factors such as age at marriage, contraceptive use to reduce the population and control methods,morbidity,rural and urban migration and so on. Now a day's software is the main role all aspects, in this software packages more relevant in demographic and population studies also, not only using developed countries, developing and under developing countries also using their indicators like health, insurance, lifeexpectancy, fertilityrates, socio economic conditions, literacy, projection of population in these all aspects much more using the software. The U S Census Bureau firstly developed the PAS means Population Analysis System in the year 1981, after words PASEX in 1994, MORTPAK, SPECTURM and then SAS, R, STATA updated versions

also using the Research scholars, policy making and other Administration purpose. From 1961 to 2001 large survey of India is only one i.e. India Census, in that also from 1961 to 2001 upgraded every 10 year depend upon the population increase and using the software facility of accuracy getting data

Brief History of Indian Census Data Processing and Software methods Upgraded:

For each decennial Census, the census organization using upcoming technology

In 1961, Unit Record Machine for producing the census results in India

In 1971, IBM 1401 Main Frame was used

In 1981, Cyber-720, Borough, S-3845, IBM-370, DEC 20 was used

In 1991, Media Cyber 930 used

In 2001, ICR Data capturing technology and coding of descriptive items was used to publish the large data in India census System.

Key words: Mortpak, Fertilityanalysis, SPSS, R, Spectrum, STATA, SAS

Data Measures:

There two types of data analysis first one to conduct various surveys and fit the specific software to analyze, whereas second one is secondary data, majority of Researchers and marketing side, Health purpose used the secondary data to forecast the future aspects, Indian Census is the secondary Data, NSSO collection Data is the secondary Data, NFHS is the secondary Data these data very useful for WHO, UNFPA etc.

It measures of reliable and it gives us accuracy and efficiency of the relevant data to data users

Software	**No. of Spread Sheets**
PAS(Population Analysis Spread Sheets	45
Age Structure of Population	11
Analysis of Mortality	15
Analysis of Fertility	13
Migration	1
Urbanization and Distribution of Population	1
Other Spread Sheets	4

Methods applied.

Generally, the software's of Mortpak, Farmplan, Rapid, PMTCT, NewGen, SPSS are very useful to generate the data analysis for software Demography study. This section presents the selected estimates and a possible range of variation of the selected levels.

Reliable information on the indacene of death by different causes we study i.e. using software technology means it will help the past history death. The data for State as well as rural urban male and other indicators will generate is as follows:

STATA: Now a days most using software is STATA, STATA means Statistics and Data it will useful for Various Analysis of Age, sex, migration, Birth rate, Death rate all the statistics related data.

STATA mainly using for analysis and various Major source of India census data fitting and estimate the future and various statistical methods and also using in NFHS big data of health and social indicators.

SPSS	STATA
SPSS can be used to model very complex data	STATA can be suitable for complex analysis
SPSS can be used to perform multi variant analysis procures for large amounts of data	STATA Provides normal analysis procedures
SPSS used in medical and Social Sciences	STATA is mostly used in Econometrics
SPSS can directly generate the output into reports	STATA has command line and documentation feature which is highly useful
SPSS is mainly used for complex data management like familiar excel spread sheet	STATA is useful in cutting edge research and ideal for developers or researchers
SPSS is a bit stronger in this area	STATA is relatively weak in this area
SPSS is used to improve the agile development life cycle	STATA is used for large scale applications development

R Programming:

R is a one of the programming language software for the study of statistical analysis. It was created by Ross Ihaka so that his initial name R, it was popularly called as R' Programming and later Developed by the New Zeland core team is the one freely accesses to Graduation Students, Research Scholars and other work of statistical related.

Uses of Software Technology While studying Demography/Population Research:

Now a days India like Big countries have large number of data to handle all aspects of statistical packages is little bit difficult, now exclusively for the study of large-scale sample study purpose, online mode software avaible which was copy right from certain Software Developer. While collecting data from the public various aspects, for this data researchers to use data process and analysis are as mentioned in the appendix.

The Census system in India is large number of data collection, in that also used various software like e-flow for entering data where as other application purpose used the

There are several methods for construction of life tables. The Sample Registration System data using the life tables have been generated using mortality package for life table estimation (MORTPAK 4), which is a United Nation's software package for mortality measurements. The General Columns are used the abridged life table are nqx, lx, nLx and ex(four components have been used for analysis)

MORTPAK:

MORTPAK means MORT means Mortality and PAK means measurement, overall MORTPAK stands for Mortality Measurement is one of the software packages for the study of Demographic Measurement in the Developing countries like India, which was exclusively study of All types and related to mortality i.e. population projection, life tables indirect mortality estimation, age distribution of the census data, this type of data very much used in the actuaries and other policy making purpose.

SPSS (Statistical Package for the Social Sciences)

SPSS means Statistical package for the Social Sciences is very much used for the Quantitate analysis of Research Study, it was organized by the IBM, this software used most of them in the field of Health Sciences and Marketing. This Software can be used for the Stastical Analysis and Hypothesis testing.

Statistical Analysis	R	SAS	STATA	SPSS
Linear Regression	Yes	Yes	Yes	Yes
T test	Yes	Yes	Yes	Yes
Least Squares method	Yes	Yes	Yes	Yes
Logistic Regression	Yes	Yes	Yes	Yes
Non-Parametric Tests	Yes	Yes	Yes	Yes
ANOVA	Yes	Yes	Yes	Yes
Survival Analysis	Yes	Yes	Yes	Yes

Results:

This article presents some guidance on preparing a demographic report for various analysis and future data of various levels like fertility aspects, mortality and other vital indicators all are very useful for Research and other analysis and interpretation of data purpose. The Results which are getting are more reliable and accuracy.

The life expectancy at birth usually denoted by e0, measures the average number of years a person is expected to live under prevailing mortality conditions. The periods 1970-75 to 2016-20. The life expectancy at birth in 2016-20 has been 68.6 and 71.4 years for males and females respectively. The increase in life expectancy has been 0.2 years for males and 0.3 years for females over 2016-20 from 2015-19. The life expectancy has increased by 0.3 years and 0.2 years respectively for rural and urban areas as compared to 2015-19 these data provided by the Mortpak software using the Sample Registration System Data in India.

Conclusion:

(1) the projected levels were extrapolated, information on both the data and the technique used for the extrapolation should be presented.

(2) If the projected levels were based on assumptions, such assumptions should be clearly specified in the report. In addition, if an interpolation was made between the levels and end-of annual data like year wise method of interpolation should be explained.

(3) This section should describe how vital indicators used by Demographers and other statisticians' aspects of their pattern of age, mortality, fertility and other

(4) The accepted levels and sex-age patterns should be presented in appendix tables. If alternate assumptions were made for any of the component variables, they also should be presented.

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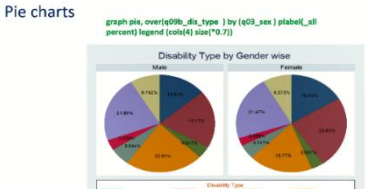
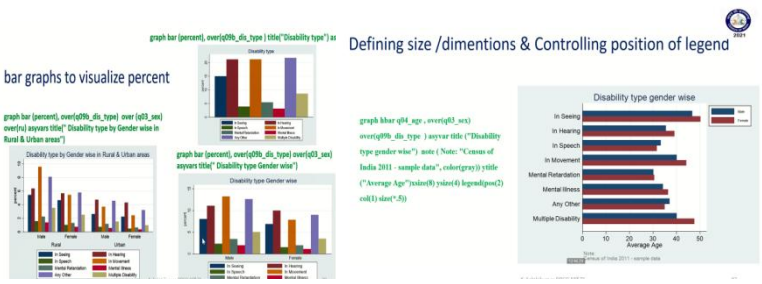
Appendix:

III.Various Data of Census 2011 of fitted in the graphs n Pie chart, bar charts of the huge number of state-wide data, and also run the software system for the result orientation purpose from the given below.

```
. use "C:\Users\DCO AP TS\Documents\set3.dta"

. summarize STATE RU STRATUM_CODE TYHH HHNO SLNO Q03_SEX Q05_MARSTAT Q06_AGE_MAR Q08_SCST
```

Variable	Obs	Mean	Std. Dev.	Min	Max
STATE	1,261,223	6	0	6	6
RU	1,261,223	1.347782	.4762667	1	2
STRATUM_CODE	1,261,223	2.523711	1.179504	1	5
TYHH	1,261,223	1	0	1	1
HHNO	1,261,223	123422.6	81374.39	4	358900
SLNO	1,261,223	3.642883	2.479041	1	46
Q03_SEX	1,261,223	1.469057	.4990418	1	2
Q05_MARSTAT	1,261,223	1.58016	.5861414	1	5
Q06_AGE_MAR	672,953	23.31429	15.85308	4	99
Q08_SCST	1,261,223	2.595616	.8032694	1	3