SET # 01

Official Statistics:-

Definition:-

By official statistics we mean a set of data or information released by an organization for the knowledge of others.

SYSTEMS OF OFFICIAL STATISTICS IN PAKISTAN:-

Different countries have different statistical systems. At present, the statistical system in Pakistan is divided into following categories.

(1) Social and Economic statistical system.
  (a) Federal system _____ statistics Division.
  (b) Provincial system _____ provincial Bureaus of statistics.
  (a) Financial statistical system. Federal _____ state Bank of Pakistan.
(2) General statistical systems.
  (a) Federal _____ Offices of different Ministries.
  (b) Provincial offices functioning under different Ministries.
  (c) Autonomous _____ Statistical cells functioning in autonomous organization.
  (d) Private statistical organizations.

Statistics Division:-

The statistics Division is and important body in Pakistan which is responsible for preparation of integrated development plan for improvement of statistics, formation of policy regarding. National censuses and surveys and general statistics. Co-ordination with provincial and federal government, autonomous bodies and international organization on statistical matters. It is also responsible for annual work programmed and clearance of budgetary proposals.

Following area the three departments attached with statistics Division.

(1) Federal Bureau of statistics (F.B.S)
(2) Population Census organization (P.C. O)
(3) Agricultural Census Organization (A.C.O)

Federal Bureau of statistics (F.B.S)

Federal Bureau of statistics is the single biggest statistics organization in Pakistan. If collects, compile and polishes data on various aspects of social, Economic, Manufacturing, Trade prices Demographic, Agriculture and General statistics of Pakistan.

Main Functions of F.B.S:-

(1) Collection, compilation and Analysis of statistical data relating to the various sectors of economy.
(2) PU Of statistical data.
(3) Supply of statistical information to central Ministries, provincial governments and other organization.
(4) Exchange of statistical information with foreign countries.
(5) Technical advice and statistical co-ordination with other departments.
(6) Undertaking the national census and surveys.

Publication of F.B.S

Following are major publication of F.B.S

(1) Monthly statistical Bulletin.
(2) Statistical Pocket Book of Pakistan.

(3) Pakistan key Economic Indicator.

(4) Pakistan statistical year Book.

(5) Village statistics.

(6) Wholesale price index number of Pakistan.

(7) Consumer price index number of Pakistan.

(8) News letters, etc.

Sindh Bureau of statistics:-

The Sindh Bureau of statistics was created in March 1971 under the planning and development department of Govt. Of Sindh. The main aim of creating the S.B.S. was to obtain reliable, timely and sufficient inputs for the provice of sindh in order to prepare and implement the various development plans. The S.B.S acts as co-ordinating agency for the province in respect of data collection of F.B.S , P.C.O and A.C.O Besides acting as secretanate for provincial statistical council, it extend technical guidance and assistance to various statistical cell and provide field assistance to provincial and Federal Government in conducting statistical census and surveys.

Main Publication of S.B.S.

Following are the main publication of S.B.S.

(i)   Development statistics of Sindh (Annual).

(ii)   Statistical Pocket Book of Sindh (Annual).

(iii)   Crop Acreage statistics Karif.

(iv)   Census of Manufacturing Industries.

Department of statistics (state Bank of Pakistan)

The department of statistics was established in state Bank of Pakistan soon after independence in 1947, with the aim of channelizing and handling of barking and financial statistics.

Function of statistics department of S.B.P.

(i)   Compilation of Pakistan Balance of payments

(ii)   Maintenance of Exchange Accounts.

(iii)   Compilation of statistics relating to bank's liabilities and assets, deporits profit and loss accounts.

(iv)   Conducting adhoc surveys of Pakistan's international balance of payments position and foreign investment in the country etc.

Main Publication of S.B.P:-s

(i)   Banking statistics of Pakistan (Annual)

(ii)   Statistics on scheduled banks (Quarterly)

(iii)   Statistics on co-operating Banks (Quarterly)

(iv)   Pakistan's Balance of Payments (Annual Quarterly)

Population Census Organization (P.C.O)

P.C.O is the branch of statistics Division, with the headquarter at Islamabad and provincial census organizations in each of the four provinces. The P.C.O is headedly a census commissioner. It has technical seditions like, Demography planning Geography and Field operation Tabulation, Report writing, policy and co-ordination. Each of the section is managed by technical experts. Besides, there is one technical advisory council which includes experts of P.C.O F.B.S research workers, senior professors and teachers.

Agricultural census Orgtanizat5ion (A.C.O)

The A.C.O was created in 1958 for planning and conducting decennial censuses of Agriculture and live stock in Pakistan. First census of agriculture was conducted in 1960, second in 1972 and third in 1980.

Errors in Official Statistics:-

Error is the difference between the true value and the estimated value As we know that perfect accuracy is not possible and therefore some amount of Statistical error is bound to be present in any investigation.

There are different types of error.

(1) Error of Coverage

This will present when one wants to collect data from a large population so if the in formation about any unit will not be taken into account then the error which arises is called "Error of Coverage".

(2) Error of Response.

The difference between the true value and the error. The unique correct answer to the question whether correct or incorrect provided by respondent is referred to survey value.

(3) Errors of Manipulation:-

These are errors arising out of manipulation in counting, measurement or approximations.

(4) Listing Error:-

Listing error occur in both the complete enumeration and the ram ple survey the list or Frame may be de for a variety of reasons and the most commonly occurring faults which we refer to as listing errors can be surnmerised as.

(a) Omission:-

Omission of units which should be included.

(b) Inclusion:-

Inclusion of units which should not be in the population.

© Mistake:-

Incorrect listing of frames and or person

(d)**Duplication:-**

Units are listed twice or several times.

(e) Listing or Non-existent units:-

Inclusion of units which died or moved away.

(5) Bias Error:-

Bias is a term which is used in official statistics, whenever a statistician becomes the partner of respondent and commits an error under his knowledge.

Measurement of Error:

(i) Absolute Error: Difference between the actual and the estimated value.

(ii) Relative Error: It is the ratio of the absolute error to the estimated and can be expressed in percentage.

Example:-

Actual No of persons present in a meeting is 50, but it is estimated as 49. Find absolute error relative error and percentage error.

Sol

Absolute error = 50 -49 = 1

Relative error   = 1/50

Percentage error = 1/50 x 100 = 2%

Coding:-

Coding is useful in processing of Questionnaire to pre-code the questions so that answers can easily he classified and tabulated. Coding can mean numbering or lettering questions.

Editing:-

The collected data must be edited before it is used because it contains some irrelevant matters which are not needed for the present study.

SET # 02

Official Statistics:-

By Official statistics we mean a set of data or information released by an organization for the knowledge of others. There can be an official statistics of a small organization e.g. an Industry, an office, a shop etc. similarly, Official statistics may comprise of larger spectrum, i.e. a town, a city, province or a country. The similar information may be distinguished between official' and 'non official' e.g. A municipal corporation publisher from official, record that population of their area is 5, 00,000. However, an independent researcher estimated the population of same area as 5, 50,000. The first will be termed as official statistics' and later as 'unofficial estimate' we can contrast the two as population parameter and sample statistics.

Apart from general definition statistics, usually by the term 'Official statistics' we mean data, information and statistics, collected, compiled, published and used by the Government. The government obtains this information through its organizations and offices set up for the purpose. Apart from these organizations, other offices also generate statistics for their administrative use. Some of these statistics are passed on to the statistical organizations for ultimate publication; some are published directly by the office, and few remains unnoticed.

The aims and objects of compilation of official statistics is a mode of information. The usual requirements of the government's administrative set up are on socio-Economic, Industrial and Agriculture sectors. Therefore, most statistics collected and published are on these sectors directly or indirectly. Another administrative requirement is comparability between years. Therefore, most official statistics are presented in time series format.

It has been said above that a considerable official statistics are obtained as the by product of official requirement of an office. For example for the levy of revenue taxes it is estimated that how much grain is being produced by a piece of land. For making a budgetary allocation the numbers of employees are counted. For the issuance of birth certificate or a death certificate the registration of births and deaths are made which generate statistics of birth 84 deaths.

Similarly a considerable statistics are being produced as the administrative requirement of the office e.g. number of students enrolled and numbers of teaching staff working in a college are required for allocation of funds and other administrative decisions.

As for all other statistics, it is always required for official statistics to be as accurate as possible. By accurate statistics we mean a statistics which is error free. Most of the official statistics are generated Through population, therefore, the only errors which are common are non-sampling errors which are mostly the errors of measurement (Response Errors) and the error of coverage. Some times to focus the government point of view, biased statistics are also produced. As far as the biasness remains of same intensity over the period of time then it will make little difference otherwise it will create a lot of disturbance.

Chart: 1   Statistical System and Factory Production Similarities and Differences statistical system

Statistical Data	Factory production
Statistical processes	
- Collection	Raw Material
- Data processing	Production
- Analysis	process
- Presentation and	Out put
Interpretation	Closed and compact system
Statistics	
Complex and Extended systems	

Example may be cited of C.P.I. (consumer price Index) of Jan. 1986, includes C.P. major requirement of official statistics is its ' timeliness', that is if the official statistics is collected published and released at appropriate time, then its utility will be manifold. After a lapse of time, an official statistics just become a history which may be of use to researchers only. When we talk of time lines of statistics, we come to the concept of time lag in statistics. Time lag is the period of time in months or years between the collection and publication or production of statistics. The 1981 census of population final results were completed in 1983. This means that there is a time lag of 4 years. Another example may be cited of publication of C.P.I. (consumer price Index) of Jan. 1986, includes C.P.I of up to Nov. 1985 i.e. a time lag of 2 months. The recent inventions of computers have reduced the time log to the barest minimum. Some time in quick production of statistics faculty methods of collection, compilation are used, which generate errors in the statistics. Therefore, one has to make a compromise between time lag and quality of statistics being produced.

During second part of the 2oth century it was recognized that a past from collecting statistics as administrative requirement or as a by product, statistics should be collected and generated independently. It has also been felt that statistics be complied independently by a team of experts in the field of data collection, tabulation, presentation and canalization. However it was found that independent generation of statistics some times does not fulfill the aspirations of administrators and users. Therefore, in developing countries, where government is the only prime user of statistics, keeps hinges of statistical organizations under their control, which some time create biases in statistics.

An important aspect of official statistics is its format. By format we mean the way in which statistics presented. The classification of attributes and grouping of variables is an important factor.

Therefore, statistic a has to foresee in consolation with the user to prepare the format in advance. As a matter of fact the best way is to prepare all possible formats. However, this will not only consume considerable time and money, will waste a lot of energy. Therefore, one has to compromise with barest possible formats. With the invention of modern computers, the format framing and its reproduction has reduced the time lag of compilation and processing to the shortest possible. A data kept on computer tapes or diskettes can be reproduced in any format with in minutes.

Besides the requirement of government and public the official statistics is also required by the world body the United Nations. United Nations and its different subsidiary organizations like, I.C.O, WHO, UNICEE, UNESCO, I.M.F, UNDP, World Bank and population council requires data and statistics on their respective domains from their member countries. For comparison purposes the world data should be prepared in similar formats. Therefore, United Nations different agencies have formulated specific formats and definitions for collection, compilation and presentations of official statistics, in observing the International Classification; we not only get comparable statistics, but also save cost and time in preparation of our own formats. In areas where statistics lack considerably the world body conducted surveys and also helped in conduct of surveys by the member countries.

United Nations expert groups have also prepared blue prints for setting up of statistical organization in any country. However, different countries have different statistical set up due to local system and prevailing conditions.

Official Statistics in Pakistan:-

In 1947 when Pakistan comes into existence had no statistical system. Various ministries and other organizations had small cell within their control. The fragmented statistical system demanded an immediate attention of the government. To build a viable system to meet the data needs of government and others users and to co-ordinate statistics, a central statistical office was established in 1950 as an attached department of Economic Affairs Division.

The Department of statistics in state Bank of Pakistan was established in 1949. The population census organization under Ministry of Interior was inherited by Pakistan and First Population census was conducted in 1951.

The Agricultural census organization was setup in 1958 and the provincial Bureau of statistics for whole of Pakistan (West Pakistan) was functioning up to 1970. Therefore, NWFP and Punjab (which constituted West Pakistan) organized separate Bureaus of statistics. Sind Bureau of statistics was setup in March 1971.

The statistical system and its organizational setup saw various changes, from 1950 through 1985. At present it seems to be divided into following categories.

1. <u>Social and Economic Statistical System:-</u>
(a) Federal system – Statistics Division.
(b) Provincial System – Provincial Bureau of Statistics.
2. <u>Financial Statistical System:-</u>
(a) Federal – State Bank of Pakistan.
3. <u>General Statistics System:-</u>
(a) Federal – Offices of Different Ministries.
(b) Provincial – Offices functioning under different Ministries.
(c) Autonomous. – Statistical cells functioning in autonomous organizations.
(d) Private Statistical Organizations. Some of the organizations do publishes regular and adhoc data pertaining their functions, but without any understanding that is being statistics; e.g. prices quoted at stock Exchange, bullion rates released by bullion traders group etc. For the general traders they may be prices for that day, but for an analyst these daily prices over a period of time constitute the statistics. Meaningful analysis can give logical policy decisions.

Statistics Division:

In 1972, the central statistics office established in 1950, was given a status of fulfledged Division, making it fully responsible for formulation of policies and plans in the statistical field and their implementation. In 1978, population census organization and Agriculture census organization were transferred from respective ministries and merged with statistics Division, as its attached Departments.

(1) Federal Bureau of statistics with H.Q. at Karachi.
(2) Population census Organization with H.Q. at Islamabad.
(3) Agricultural census Organization with H.Q. at Lahore.

Statistics Division

P.C.O   F.B.S   Ag. C.O

The statistics Division as prime statistics body is responsible for preparation of integrated development plan for improvement of statistics in Pakistan, formulation of policy regarding national censuses and surveys, and general statistics; coordination with provincial and federal government Autonomous bodies and International Organizations on statistical matters. It is also responsible for annual work programmed and clearance of budgetary proposals. It prepares 8th implement in service and foreign training programmed in the field of statistics. Statistics Division is also responsible for the administration of:

1: Central statistics Act 1975.
2: Census Ordinance 1959.
3: Agricultural census Act 1958.s
4: Industrial statistics Act 1942.
   It also administratively controls its attached Departments.

Over and above the statistics Division, there is an advisory council Named "National Statistical Council ". This council comprises of secretaries of.

1. Statistics Division.
2. Economic Affairs Division.
3. Finance Division.
4. Planning & Development Division.
5. Interior Division.
6. Agriculture Division.
7. Industries Division.
8. Commerce Division.
9. Labor and Manpower Division, and Additional Chief Secretaries of Planning and Development Department of four provinces. The chairman of the council is Minister for Finance and Economic Affairs.

Under the General statistics Act 1975, Secretary, statistics Division Acts as the Federal statistics Authority and the Additional chief Secretaries (Development) as of the National Council, every province also has a provincial statistics council, besides a Technical Advisory committee constituted under the council for assisting it in technical matters. All these councils and take vital decisions towards improvement of official statistics of Pakistan. Special panels for specific topics have also been constituted to assist Technical Advisory committee. This panel includes private users. Researches and teachers besides the officers of the federal and provincial governments

Federal Bureau of statistics:-

Federal Bureau statistics (FBS) is the single biggest statistics organization is Pakistan. It collects, compile and publishes data on various aspects of social, Economic Manufacturing, Trade, Prices, Demographic, Agriculture and General statistics of Pakistan. It also coordinates in publication of various statistical series for government and other users besides supplying data to International Organizations. Major Sections are given below:

(a) POPULATION AND RELATED STATISTICS.
(b) AGRICULLTURAL STATISTICS.
(c) PRICE STATISTICS AND PRICE INDICES.
(d) INDUSTRIAL MINING AND ENERGTY STATISTICS.
(e) TRADE, FINANACE AND MARKETING STATISTICS.
(f) TRANSPORT AND COMMUNICATIONS STATISTICS.
(g) STATISTICS ON EDUCATION, HEALTH & CULLTURE.
(h) ENVIRONMENT STATISTICS.
(i) NATIONAL ACCOUNTS.
(j) DEVELOPMENT OF SAMPLE DESIGNS.
(k) RURAL DEVELOPMENT STATISTICS.
(l) DATA PROCESSING SECTION.
(m) FIELD SERVICES SECTION.

F.B.S constantly tries to get their officers and men better equipped through various seminars, symposia, workshops and courses. Country courses on various topics were arranged by F B S in collaboration with UNDP. There country courses were also opens to other organizations and universities. Besides, F B S also sends its officers for training abroad.

To initiate original thinking and analytic approach F BS has started publishing quarterly Research Review, in which research articles of officers of F B S and other working statisticians and research workers are being published.

Population Census Organization:-

The population census organization is responsible for planning and execution of decennial population and housing census, processing of their data and release of census results. It also provides data on population, housing during intercensal periods.

Initially the population census organization was created in Ministry of Home Affairs. It conducted first census in 1951, second in 1961 and third in 1972. Thereafter PCO was shifted to statistics Division as its constituent organization.

The last population census was conducted from 1 – 15 March 1981, was preceded by housing census from 1 – 15 Dec. 1980. The Housing census was undertaken for the first time in Pakistan.

The results of population and Housing census have been published in various publications. The last series of publications were completed in 1985.

In 1981 census of population, two types of questionnaires; one short and the other long were used. The long questionnaire was conversed in respect of 10 percent population, scientifically selected on probability basis and the reaming population was covered through the short questionnaire. The long questionnaire contained all questions of the short with some additional question namely, field of education, migration, labor force fertility etc, since the job of editing and tabulation of the population census data was quite budge, therefore, it was decided to have advance tabulation of the population census on sample basis from the long questionnaire comprising 10 percent sample population. Advance tabulations, with their rural / urban distribution which were made available to the concerned planning, administrative and research agencies. Two bulletins based on some of there tabulations were released. One on sex, age. Literacy and educational attainment and the other on labor force by occupation and industry.

The salient features of 1980 – 81 Housing and population censuses were that a separate housing census was conducted, elaborate and effective arrangements were made for field enumeration and its supervision census area were delimited with greater consideration of population distribution and topography; census and field training was intensively carried out; massive publicity programmed was launched to enlist the support of people; individual enumeration was extended to the Federally Administered Tribal Areas (FATA) etc; Further more the release of the census data was quite timely.

Organization:-

Population census organization is the constituent organization of statistics Division, with Headquarters at Islamabad, and provincial census organizations in each of the four provinces. The PCO is headed by a census commissioner. The PCO has technical Sections like Demography; Planning; Geography and field operation, Tabulation and Report writing and Policy and coordination. Each of the section is manned by technical Experts. Besides there is one technical Advisory council which includes experts of PCO, FBS, administrators, research workers and senior professors and teachers

Publication:-

Besides publishing various census reports the PCO also published detailed coding of Occupation and Industry Data of the 1981 population census, Comparative data of Mauza / Village have also been compiled.

Since 1951 numerous changes in administrative areas have taken place. As such PCO is adjusting population data for comparability. Similarly maps and delimitation of census areas have also undertaken.

The PCO also evaluated official fertility levels in Pakistan by Provinces. It also projected the population of Pakistan up to 2001, for Pakistan and provinces.

Agricultural Census Organization:-s

The Agricultural Census Organization (ACO), was created in 1958 for planning and conducting decennial censuses Agriculture and live – stock in Pakistan. It was decided to conduct census of Agriculture in the

year ending with digit ' zero' and live – stock census in the year ending with ' Five ' Besides, the ACO also undertake adhoc surveys on related fields i.e. Agriculture Machinery, Rural Credit, etc.

First census of Agriculture was conducted in 1960, second in 1972 and third in 1980.

Mouza lists are compiled for use as sampling from for the regular in 1983. The sampling Frame (Mouza list) is kept on computer tapes was updated on the basis of 1983 census results.

The main objectives of census of Agriculture are:

   (1) To develop basic information on the structure of agriculture in the country.
   (2) To provide detailed basic information about the agricultural resources of the country, state of their utilization and to find acceptability of modern forming practices; for the purpose of regional, provincial, and national development, planning and research in the field of Agriculture; and.
   (3) To fulfill data needs of the international Agencies like FAO, ILO.

Organization:-

The Agricultural census Act 1958 provided the necessary legal cover for the census operation. It provides secrecy of the information, binding on the respondents to cooperate with the census staff.

The 1980 census of Agriculture was conducted on sample basis like 1960, and 1972 censuses due to the following consideration.

   (a) The accuracy of results. The requirement of field staff, its training and supervision could not be possible in case of complete in case of complete count; where as for the sample highly skilled field and supervisory staff was deployed.
   (b) In view of the exhorbitant expenditure on tabulation and publication of census data it was considered appropriate to publish data at district level even in case of a complete census on the other hand a sample census could provide almost equally good results at a much lesser cost.
   (c) Inspite of the increased expenditure, a larger time lag between census enumeration and release of data was visualized in case of a complete count.s

The C.O Ag 1980 was extended to all parts of the country including following areas which were not emunerated previously.

Part of some agencies of NWFP, sub Division shakargarh, cholistan and de-excluded area of D.G. Khan in Punjab, Sub Division Mithi in Sind and Sub Division Mari Bugti in Baluchistan.

Scope of the census is restricted to the Agricultural Farms whether held or operated by the government or by private households. Consequently the undistributed Govt. land and other than govt. farms and land in use for other than farming are excluded from census operation. The agricultural farms also includes land less livestock holdings.

The census data on land and its utilization pertain to the agriculture year 1979 – 80 i.e. Kharif – 1979 and Rabi 1979 – 80 However the data on number and size of farms as well as the data on other items refer to the day of enumeration if not otherwise mentioned, The census emumeration was conducted during Feb. March 1980 in relatively hot areas and during April May 1980 in other parts of the country.

Census pretest was organized which resulted in sufficient experience by conducting censuses and large scale surveys, in the field of agriculture.

The objectives of pretest were:

   (1) To test the census questionnaire.
   (2) To examine suitability of methodology.
   (3) To determine the time requirement for numbering and listing of households, sample selection in the field.
   (4) To examine of the within mouza sample selection of the proposed design could be implemented.

(5) To examine the working of the estimation procedures, to study the sampling variability of various census items and to ascertain the data processing requirements for the census.

In 1972 census, cluster sampling was adopted for the selection of households from the selected mouzas at the third stage. In view of the better performance of a stratified sample, it was decided to test the various implication involved in selecting a stratified sample, cations involved in selecting a stratified sample at the third stage. Households are divided into IV categories as follows:

(1) Households operated 50 or more acres of land and keeping 50 or more heads of cattle, buffaloes, sheep and goats and or 500 poultry birds and / or owing tubewell and / or tractor.
(2) Households operating 12.5 to under 50 acres.
(3) Households operating less than 12.5 acres.
(4) Households not operating any land.

All household following in category I were selected with centainity, while those in category II were sampled at the rate of 1/3. Households in category III were sampled at the rate of 1/5 and those in category IV at the rate of 1/10. In all 3668 households were selectged for emuimeration

Sampling Plan:-

Different sampling Designs were evolved for different parts of the country depending upon the local conditions and quantum of relevant information available for selecting areas of NWFP, Punjab and Sind provinces, a THREE STAGE weighted and stratified sample was used where as a single stage weighted sample was used in rural settled areas of Baluchistan. In rest of the country comprising entire urban areas a single stage systematic sample was used. Barring a few exceptions where sample was selected at district level a separate sample was selected for each sub-division. In the three stage, sample patwar circles in the first and mouzas in the second stage were selected with probability proportional to size and households in the form of roughly equal clusters, were selected in the third stage with equal probability.

The three stage sampling plan was use as an administrative convenience and for reducing the non-sampling errors the sampling plan called for preparations of elaborate frames; as follows.

(1) National Centainity Holding list.
(2) Mouza list, including only rural mouzas arranged by patwar and hanungo circles showing mouza-wise total areas cultivated area, and number of households.
(3) A completed list of Urban wards.
(4) A list of households inj selected mouzas showing total areas owned, areas rented in and as to whether operating any land individually or jointly was prepared. Households having 25 aacres or more as area owned and or area rented in an household having joint cultivation were segregated to be treated as Mouza centainity holdings (MCH). Another list of household with 25 or more cattle and /or buffaloes, 25 or more camels; 50 or more sheep and /or goats and 500 or more poultry birds, was prepared. These households were also treated as mouza certainity holdings.

Selection Procedure:-

Each mouza was given a measure of size as the geometric mean of the cultivated acres in 1975-76 and number of households according to 1972 population census- The measure of size of a patwar circle was arrived at by adding thouse of mouzas in the patwar; circles:

First stage selection of patwar circle

The number of pa t war circles to be selected was determined on the basis of number of enumerators available and size of the population in respect of items under study . Each, portional to its measure of size in the sub-Division multiplied by the number of patwar circle to be selected therefrom. Patwar circle

getting prob, = 0.9 or more are selected with certainity and shifted out from the list. Then the procedure is repeated.

Second Stage Selection of Mouzas:-

Two mouzas per selected patwar within patwar circles were selected. Mouzas following within patwar circles were arranged by their measure of size within patwar circle. The method of 1st stage is again used for second stage selection. Mouzas with very small probability were merged, together and treated as one.

Third Stage Selection of clusters of households:-

A systematic selection of clusters of nearly 30 households each was made with equal probability from all the selected mouzas with the help of the list of the households.

Over all 9 % approx. of the total households were selected for enumeration including:

(1) The households contained in the selected clusters.
(2) The households located in the selected urban words.
(3) The households located in the selected mouzas, designated as Mouza certainity holdings.
(4) The household located any where in the country included in the list of National certainity Holdings.

The procedure adopted for selection of sample involved substantiod callculation work. It was feard that while the design was effective in reducing the sampling errors, its implementation might introduce considerable non sampling errors. Calculation errors were reduced through the use of electronic computers.

The census of Ag. Was operated upon through well versed questionnairs spread over more than 8 pages. A separaagte questionnaire for landless household was used. Questiannaire for Baluchistan was also separate. Language of Questionnairs was Urdu except for sind where sindhi was used.

Main questionnaire was of white colour and contained 12 parts having 129 main items bvesides a host of subitems. Questionnaire for Baluchistan was of light green colour and contained 8 parts. With 103 main items besids. A number of sub items.

The census was conducted through well trained emumerators under the network of field organization. A considerable publicity through mass media was given. After the big count a post enumeration survey was also undertaken.

The census data was processed on electronic computers and a strict document control was observed. The questionnaire was procoded as such error of coding are avoided Mannual editing of form was also done to see internal inconsistencies. Before the final results computers editing was performed to obtain quality controlled data.

Estmation of census results was performed after calculating the raising fact or, besides the estimates, variances were also evaluated to obtain sampling error. An attempt was also made to identify no9n sampling errors.

Provincial Bureau of statistics:-

On the pattern of F.B.S. each province has a provincial Bureau of statistics, which functions within its jurisdiction of province on selected topics. The prov. Bureaus serves as statistical coordinating agency between FBS and other Federal and provincial organization. The Additional secretary Planning and Development is provincial statistical Authority. The provincial Bureau also serves as secretariat for provincial statistical councils. These Bureau are also responsible for clearing and acting as technical advisers to various provincial ministries and offices dealing with any type of statistical output or problems therein.

Besides preparing and issuing various statistical publications to disseminate statistical information the provincial Bureaus of statistics provide field assistance to provincial and federal Govt. in conducting of statistical censuses, surveys and case studies.

Sind Bureau of Statistics – S.B.S:-

The sind Bureau of statistics was created in March 1971, under the planning and Development Department of Govt. of Sind the main aim of creating the B.S. was to obtain release, timely an sufficient statistical inputs for the province of sind, in order to prepare and implement the various development plans. The Bureau of statistics acts as coordinating agency for the province in respect of data collection of F.B.S.P.C.O. Ag C.O. Besides acting as secretariat for provincial statistical council, it extend technical guidance and assistance to various statistical cells and provide field assistance to provincial and Federal Govt. in conducting statistical census and surveys.

The S.B.S. with HQ at Karachi has two Divisional field offices at Hyderabad and Sukkur, 10 district field offices and 29 sub-divisional offices spread over whole of the province. The SBS in organized ingto 8 technical Sections. It has the facility of IBM 34 computers in its HQ. S.B.S has 8 technical sections and one administrative sections as:

(1) Agriculture
(2) Population.
(3) Industrial.
(4) Coordination.
(5) Computer.
(6) Current Industrial Production.
(7) Training.
(8) Financial and Commercial Statistics.
(9) Administration.

Major provincial sectors are as follows:

(a) Agriculture.
(b) Industries.
(c) Social sector – Education – Health – Social welfare.

S.B.S Publishes the following regular publications in addition to a number of adhoc bulletins based surveys and inquiries.

(1) Development Statistics of Sind Annual 1971 ---------------------- 1984.
(2) Statistical Pocket book of Sind Annual 1974, 78, 80, 83.
(3) Agricultural Statistics of Sind 1970 – 71 _____ 1981 – 82.
(4) Crop Acreage Statistics = Khariaf 1970 – 1983 Rabi 1970 – 71 _____ 1983 – 84.
(5) Census of Manufacturing Industries 1970 _____ 1984.
(6) Educational Statistics of Sind 1969 – 70 _____ 1979 – 80.

Department of Statistics – State Bank of Pakistan:-

The department of Statistics was established in state Bank of Pakistan soon after independence in 1949, with the aim of channelizing and handling of banking and financial statistics. Later Keeping of exchange record was also transferred to it and external wing expanded rapidly.

The main functions of statistics Department are as follows.

(1) Compilation of Pakistan's Balance of payments.
(2) Main tenance of Exchange Accounts.
(3) Compilation of statistics relating to bank's liabilities and assets. Classification of advances, bills, deposits, and profit & lass accounts.
(4) Compilation of statistics of payments against Registration.
(5) Conducting adhoc surveys of Pakistan's international position and foreign investments in the country.
(6) Collection of statistics on ownership of Govt. Detd.

(7) Collection of financial statistics for supply to local and foreign institutions like, FBS. Ministry of Finance, IMF, IBRD, ECAFE, world Bank and maintenance of an intelligence service.

(8) To accomplish above objective preparation of graphs, chartgs and publishing of various statistical volumes.

To discharge its duties and objectives the DS – SBP has following sections:-

(a) Balance of payments.

(b) Exchange Accounts.

(c) Banking statistics.

(d) Foreign Investment.

(e) Currency Accounts.

(f) Debt survey section.

(g) General statistics section.

(h) Machine section / Computer Department.

(i) Publication section.

The following are major publications of Department of statistics, state Bank of Pakistan:

(1) Banking statistics of Pakistan – Annual.

(2) Statistics on scheduled Banks – Quarterly.

(3) Statistics on Cooperative Banks – Quarterly.

(4) Pakistan's Balance of payment – Annual - Quarterly.

(5) Export Receipts – Monthly – Annual.

(6) Index Numbers of shares of joint stock co-Bi-Annual.

(7) Foreign liabilities & Assets and foreign Investments in Pakistan – Adhoc.