

A PRESENTATION ON SUMMER TRAINING REPORT

PART 1. WORK FROM HOME(assigned by organisation)

TOPIC:-Assessment of the utilisation services provided under ESIC scheme in India over the period of 2000-2018

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Introduction

- Health is a basic human right of every individual irrespective of its socio-economic class, gender, ethnicity and demographical location.
- The idea of Health for all was conceived in 1978 during Alma Ata Declaration where the idea of health access for everyone was elaborately discussed.
- Throughout history Humans have been living in a societal setup and are thus, also known as Social Animal. A person has so many social duties to fulfill, like looking up after their children, paying for their education, marrying them, taking care of their parents, spouse, etc.
- According to **ILO(international labor organization)** ‘Social security as a right which responds to the universal need for protection against social sides and life risks. Social security systems that guarantee health protection and income security, contributing to the reduction of inequality and poverty, and promoting social inclusion and human dignity’.
- One such Act is the **Employees State Insurance Corporation Act of 1948** (ESIC) which is first and oldest legislation schemes providing social security as well as medical benefits for the blue-collar workers of India.

ESIC Act of 1948 and benefits provided

- The **Employee State Insurance Corporation Act** was the first social security scheme which focused on providing financial aid and certain medical benefits to the labor-class post-independence
- It came into being on 24th February 1952 and was inaugurated by the then Prime Minister Pandit Jawahar Lal Nehru in Kanpur. He was also the first honorary beneficiary under the Scheme.
- In its 68 years of existence, ESIC has successfully catered to several benefits which include Health security insurance covering sickness, temporary and permanent disablement and from certain occupational hazards.

Salient features

It is applicable to whole India, provided that the State Government shows its intention to implement the provision of the act in their State. The following list of establishments come under ESI Coverage, with the condition that they should have 10 or more employees.

- Shops
- Hotels and Restaurants engaged only in sales
- Road Motor Transport Establishments
- Cinema Theatres
- News Paper Establishments
- Private Educational Establishments run by individuals, trustees, societies, or Medical Institutions (including Corporate, Joint Sector, charitable, trust etc.)

ESI Act is not applicable to: -

- Seasonal Factories
- Government owned factories where employees are getting better benefits
- Indian Army, Navy, Air Force.
- Factories with less than 10 workers are employed
- Factories less than 20 workers working without the aid of power.
- Mines

SOCIAL SECURITY BENEFITS PROVIDED UNDER THE ESIS ACT

Benefit: -	Features
Medical Benefit	Full medical coverage to the insured person and the family at annual premium of Rs 120/-
Sickness Benefit	Cash benefit to the insured person of about 70% of the wages for a span of certified sickness of 91 days.
Maternity Benefit	The insured person will receive cash benefit for the period of 26 weeks during the pregnancy.
Dependent Benefit	The family or spouse of the insured person receives 90% of the wages monthly post the death of the IP.
Disablement Benefit	The insured person is entitled to 90 % of the wages for as long as the disability continues in terms of Temporary disablement Benefit. The insured person is entitled to 90% of the wages monthly depending on the extent of disablement.
Others	These include funeral charges and confinement charges given to the IP's wife or insured women as reimbursement where ESIC facilities are not present

Literature review

An exhaustive research was done upon the annual reports, publications, and other websites. Grey literature was also researched to further research the unpublished literature done in context of ESI Scheme in the country.

- **Social Security and its need in developing countries:** Social security is consecrated as a part of universal declaration of human rights and many other conventions. According to International Labour Organisation (ILO), social health protection is a streak of mandates which protects individuals from social distress, and certain life risks. Lack of adequate resources, underfunded public health system, scarcity of manpower are considered main deterrents of the health sector growth which directly affect the utilization of healthcare services and in turn lead to poorer health outcomes in developing countries. Hence to counter this social security in the form of health insurance becomes imperative. Risk pooling where both the government and different ventures like households, communities share the burden of expenses for healthcare is considered optimal resort in achieving the health equity and giant step towards the universal health coverage. Social security initiative automatically involves all the social groups under its umbrella which as a matter of course curtails the inequity.

- **Health Insurance as a road to achieving health coverage:** The idea of healthcare financing isn't new and dates back to as old as 1940-50s when the two important health insurance schemes were introduced in the country as ESIS in 1952 and CGHS in 1954. Up till 2007-10, healthcare financing in India was focussed on supply side of healthcare under which it focussed on strengthening the healthcare infrastructure in the form of creating hospitals and various national programmes. Later on it was felt to establish the demand side by directing its focus upon health financing in the form of health insurance.
- A study conducted in Kerala showed the increased rate of in patient utilization of healthcare among insured people as compared to uninsured, however there was no effect on OOOPE upon households as they continued to spend more resulting in distress financing (Philip et al., 2016).
- A study conducted upon 12,134 households in 8 Indian districts concluded that currently health insurance doesn't protect the households from incurring catastrophic expenditure, in fact this study yielded surprising result as people who were insured under the RSBY scheme had more CHE than other health insurances (Prinja et al., 2019).

- **Utilization of Employee State Insurance (ESI) Scheme at different Sectors :** Like other health insurances, ESIS also suffers from major drawbacks in terms of providing actual benefits.
- A study done in Tamil Nadu indicated that ESI has many flaws from poor quality of care to percolation of its benefits among rightful beneficiaries. Long waiting time, lack of remuneration of claims, lengthy paper work are many of the causes which deter people from using this insurance scheme (VR, 2011).
- Another study done in Kerala covering a period of 10 years from 1994- 2004 yielded similar findings. It inferred that ESI though keenly collects funds in its corporation but it doesn't care much about whether the beneficiaries are availing services from it or not (Hose, n.d.).
- A study done in Erode district, Tamil Nadu concluded that lack of medicines in ESI dispensaries, misbehaviour of the staff are major concerns related to usage of ESI healthcare services. They suggested many reforms which can increase the uptake of utilization of ESI dispensaries and hospitals one of them being good co-ordination among the different stakeholders (Parri and Renjithkumar, 2016).



Aim and Objectives

Aim: This comprehensive review intends to know about the utilization of different social security schemes under ESIS in the past 20 years from 2000-2018. The overall aim is to assess the current utilization of ESIS in order to improve the uptake of its services by the beneficiaries at the receiving end in the future

Objectives:

1. To assess the total beneficiaries and family units covered under ESIS over the last 20 years
2. To assess the utilization of medical services covered under ESIS.
3. To assess disease specific utilization of medical care over the 10 years period.
4. To study other benefits provided under the ESIS.
5. To assess the various gaps in the utilization of services provided under ESIC

Methodology

The present study was designed to assess the Employees state insurance scheme in India. ESI annual reports have been used to know about the sources of utilisation trends of the ESI scheme. Let us look into certain data provided by the annual reports of ESIC over the years and analyse the trends and patterns.



THE PRESENT STUDY WAS DESIGNED TO EVALUATE THE PARAMETERS OF ANNUAL REVENUE AND EXPENDITURE OF ESIC AND ITS TREND FROM THE YEAR 2000 TO 2018.



**STUDY DESIGN:
DESCRIPTIVE
STUDY**



Source of Data & Study Period:
ANNUAL REPORTS OF ESIC FROM 2000-2018, JOURNALS AND ARTICLES ON ESIC, LITERARY PAPERS AND THESIS BASED UPON ESIC. THE STUDY COVERS TIME OF EIGHTEEN YEARS, I.E. FROM THE YEAR 2000 TO 2018.



DATA ANALYSIS: THE DATA WAS COLLECTED IN TABULAR FORM, WHICH WAS THEN USED FOR DESCRIPTIVE ANALYSIS, MAKING GRAPHS ETC. THE COLLECTED DATA HAS BEEN ANALYZED BY USING DESCRIPTIVE STATISTICS AND CAGR.

Findings-

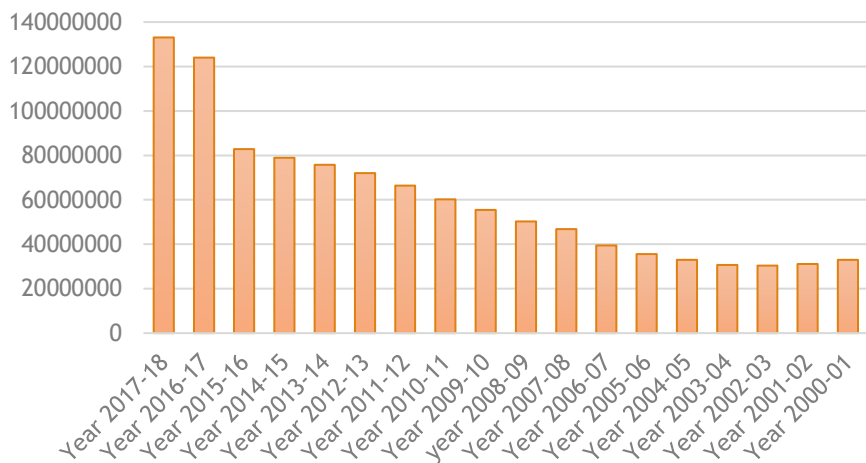
Coverage of ESIS beneficiaries over the years 2000-2018 in India.

Year	Employees insured	IP/Family Units insured	Females insured	Total beneficiaries	Employers
Year 2017-18	31118680	34331300	4542029	133205444	1033730
Year 2016-17	29321060	31962910	4089773	124016091	898138
Year 2015-16	18921250	21361880	3786827	82884095	783786
Year 2014-15	17954970	20343800	3360697	78933944	723756
Year 2013-14	17412130	19547620	2922345	75844766	669880
Year 2012-13	16504500	18582000	2679552	72098160	666161
Year 2011-12	16348908	17100958	2407302	66351717	580028
Year 2010-11	15428054	15530049	2488576	60256590	443010
Year 2009-10	13896150	14300000	2600250	55484000	406499
year 2008-09	12569295	12937577	2264076	50197799	394332
Year 2007-08	11180866	12070500	2029440	46833540	352508
Year 2006-07	9238530	10157573	1797657	39411383	331744
Year 2005-06	8400526	9148605	1622300	35496600	305294
Year 2004-05	7570200	8498250	1543250	32973200	280871
Year 2003-04	7082000	7912000	1347550	30701000	263650
Year 2002-03	7000350	7828150	1430650	30373200	253929
Year 2001-02	7159350	8003800	1405350	31054750	248213
Year 2000-01	7754450	8493500	1464000	32954800	238486

1.Coverage of ESI Scheme over the years:

Over the years, the mandate of ESI scheme has increased significantly due to increase in the coverage of more formal establishments over the last 18 years. It has happened overtime in a phased manner which makes it one of the largest social protection scheme in India covering around 130 million beneficiaries under its umbrella in 2018 from 30 million in 2000, an increase of around 4 times.

Total beneficiaries



total number of beneficiaries from 2000-2018.

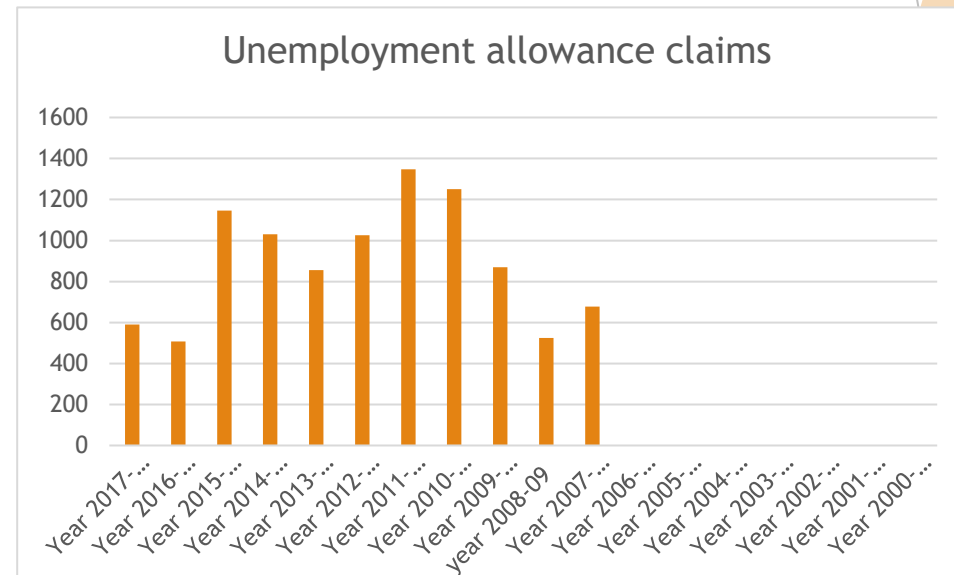
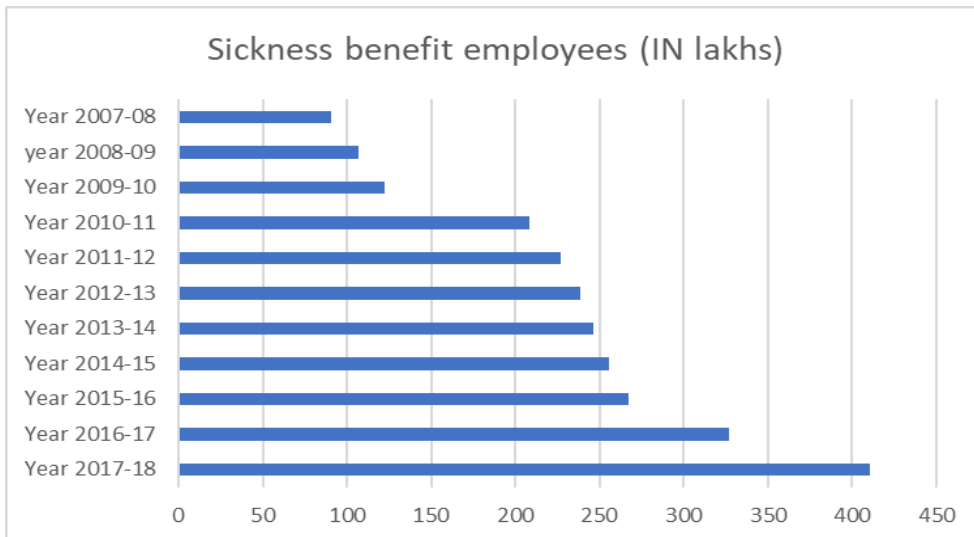
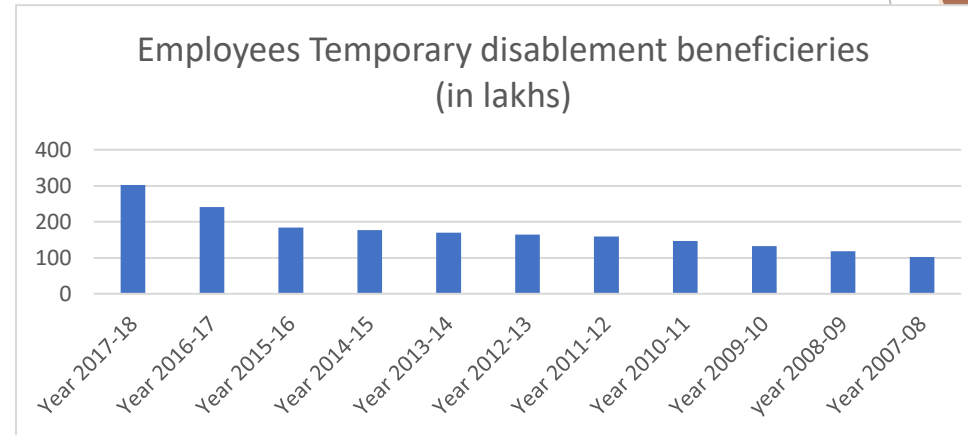
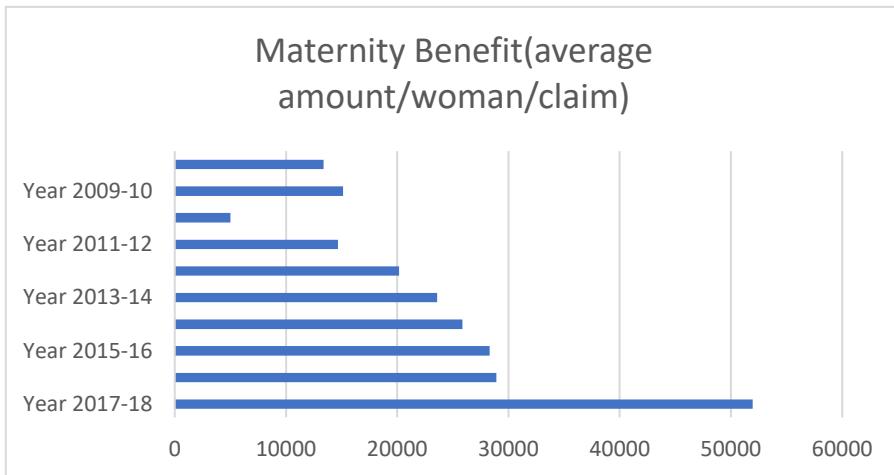
2.Medical infrastructure of ESIS: ESIC

provides comprehensive medical care to its beneficiaries through the network of hospitals, dispensaries and ISM units. Dispensaries and ISM units are entrusted to provide out-patient services like check-ups, diagnostics and medicines and other relevant services. As per the ESI Act, 1948, the State Governments are responsible for providing medical care to the Insured Persons and their dependents. Till 2018 there are around 154 hospitals operating under ESIC. There is also liaison with more than 1000 Pvt./Govt. Hospitals for Super Specialty treatment

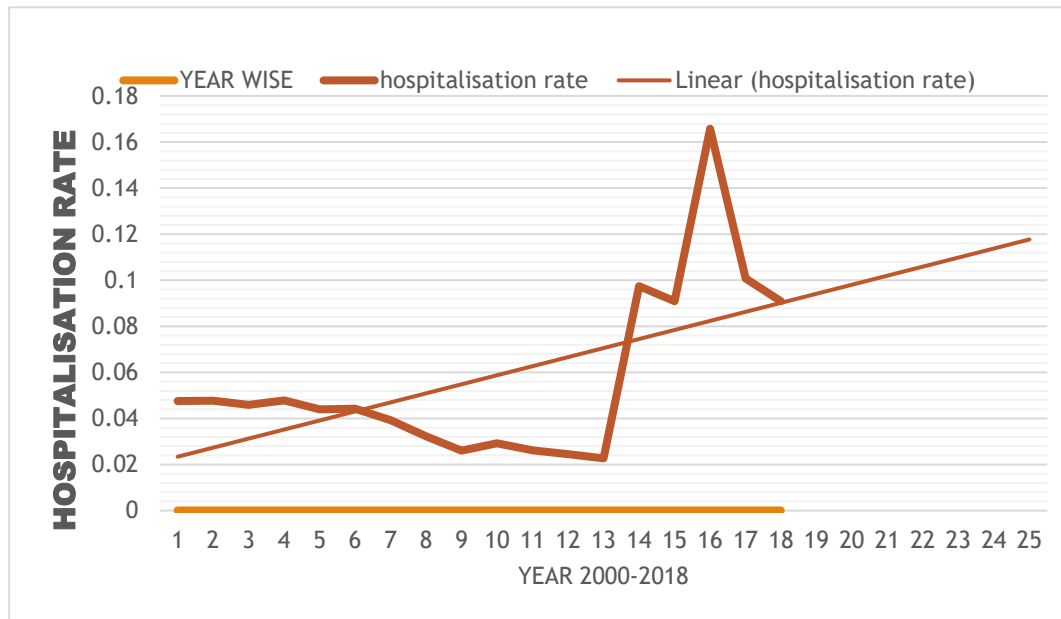
3.Beds commissioned under ESIS: Total number of beds under different ESIC hospitals including empanelled hospitals and annexes have decreased from the years 2000-2018. The reason for it is not certain. The dip may be because of reduction in utilization of ESI services in the empanelled centres which led hospitals to reduce the number of ESI sanctioned beds.



4.Cash benefits : One of the major benefit apart from medical care is cash benefit payment during the time of economic distress in situations like sickness, disablement, confinement in insured women and dependent benefit (in case of death of employee).



5. Hospitalization utilization Rate : In present report, we have calculated the hospitalization rate by dividing the number of hospital admission cases with the total number of insured persons. As shown in the figure, there has been sharp spike in the number of hospital admissions for the year 2016-17. For the year 2018, the hospital admission rate was 0.09%.



6. Utilization in terms of specific diseases: Around 298 types of diseases are included for which ESI provides treatment under its purview. ESIS has broadened its disease coverage from 51 disease groups in 2008 to 298 disease groups. In the year 2018 and before that, highest burden of diseases for which care was availed was Acute Respiratory diseases followed by fever of unknown origin and then diabetes.

Conclusion

As one of the largest social security scheme in India for organised sector, this scheme holds much potential for growth. As of now, under vision 2022, this scheme aims to cover whole country under its purview. However there have been many bottlenecks in terms of implementation of the scheme at the ground level.

- Poor quality of services, lack of awareness among many of its employees and lengthy procedure to procure other benefits deter people from utilizing this scheme effectively. Many ground breaking reforms are need of an hour.
- One satisfactory observation is it has covered more and more number of females over the years indicating that there is employment for the women in country and also encouragement of institutional deliveries by the family of insured female.
- Due to availability of excess surplus funds, there can be a good scope to reform this scheme and also extend its benefit to unorganised sector which forms the major part of labour sector in India
- Regular monitoring for quality check of hospitals can prove to help in up gradation of quality services in ESI hospitals. Awareness among the primary stakeholders for example beneficiaries will also increase the uptake of services.

Recommendations:

- A rigorous imposition of the scheme is necessary. One of the major caveat is the lack of awareness about this scheme among its employees especially those who are uneducated.
- There are still exist gaps in ESIC administration, a social movement is required so that more and more employees and their families are benefited from this scheme.
- Since there are regular complaints about poor infrastructure of ESI dispensaries, an up gradation of all the facilities is need of an hour.
- Waiting queues in OPD, quality assurance of medicines and availability of medical doctors and staff should be looked upon by the corporation. Strengthening the liaisons between the public and private healthcare facilities for this scheme can help in increased utilization of medical benefits.
- Many studies revealed that various issues are faced by the insured person such as rude behaviour of the staff, poor availability of medicines, long waiting hours etc. There should be removal of cumbersome formalities at the centres and main focus should be on provision of quality care

References:

1. Verma, Ramesh et al. 2012. “Evaluation of Utilization of Health Care Services under Employees State Insurance Scheme in District Rohtak, Haryana.” *Indian Journal of Health and Wellbeing* 2012, 3(3), 688-691 3(3)(688–691).
2. National Health Portal of India. 2015. “Employment State Insurance Scheme (ESIS) | National Health Portal Of India.” https://www.nhp.gov.in/employment-state-insurance-scheme-esis-_pg (May 15, 2020).
3. Mitra, Deblina. 2017. “Effectiveness of Medical Benefits under ESI Scheme: A Study on the Employees of Organised Sector in Kolkata.” VOL-2*(ISSUE-3*).
4. Garg, Prerna. 2018. “AN ASSESSMENT OF THE WORKING MECHANISM OF EMPLOYEES STATE INSURANCE CORPORATION.”
5. Dash, U, and VR Muraleedharan. 2011. “How Equitable Is Employees’ State Insurance Scheme in India: A Case Study of Tamil Nadu.” Department of Humanities and Social Sciences Indian Institute of Technology Madras.
6. Gakhar, Divya Verma and Kumar, Anil, Awareness of Social Security Legislations in the Industrial Sector: A Study of ESI Act, 1948 (2012). *Indraprastha Journal of Management*, Forthcoming. Available at SSRN: <https://ssrn.com/abstract=2154226>

PART-2- ONLINE COURSE

Topic- Data analytics for Lean Six Sigma

OBJECTIVES

- To learn data analytics and its techniques used within Lean Six Sigma improvement projects.
- To learn how to play with data and operate the software Minitab to find the relationship between variables.

COURSE DESCRIPTION

- Data analytics technique that are typically useful within Lean Six Sigma projects for the belt.
- To analyze and interpret data gathered within such a project.
- Use of statistics for data analysis.
- Learnt to use data analytics tools and interpretation of the outcome to find the relationship between different variables.
- Training on Statistical power tool software Minitab.

LEARNING METHODOLOGY

Video Lectures, Cases, Assignments, Quizzes and Reading Materials

KEY LEARNINGS

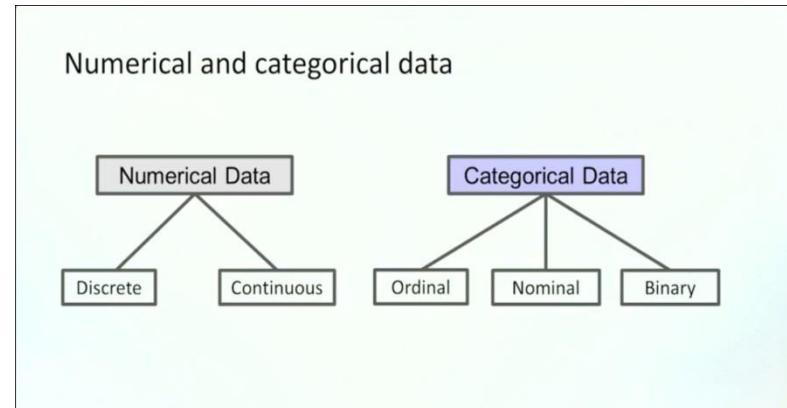
- Statistics
- Lean Six Sigma method
- Data Analysis
- Minitab Software
- Hypothesis Testing

■ Week 1

- Data and Lean Six Sigma- Introduction about Lean Six Sigma and the software Minitab which is used for data analytics.
- Lean Six Sigma is a methodology for process improvement, and it makes use of data and data analytics. Lean Six Sigma is a data-driven approach to process improvement.
- DMAIC- The acronym stands for 1. Define, 2. Measure, 3. Analyze, 4. Improve, 5. Control. It is a step wise procedure in Lean Six Sigma for process improvement. Someone leading the Lean Six Sigma project is called a Belt.
- Selecting Critical to Quality Test (CTQ)- In Lean Six Sigma, the CTQ is the metric which is used to change. It is often called Y-variable or dependent variable or outcome variable.
- Units and Measurement definition- Units are things which we collect data on. Example - Objects, People. Units are always stored in the rows of the data set.
- Sampling- Collecting a representative sampling and Minitab is used to make a random sample population.
- Organizing data- Data can be organized in a structured way using units and variables. Variables are properties we measure and It is always stored on the column.

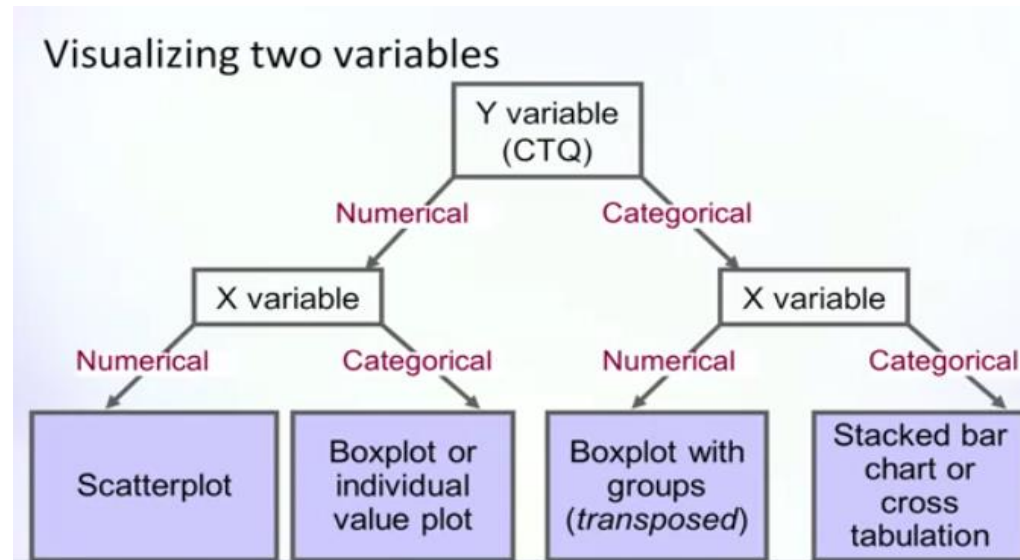
Week 2

- Understanding and visualizing data – Differentiating numerical and categorical variables. Visualizing data of both single variables and two variables using appropriate graphs.
- Numerical & Categorical data-



- Descriptive analysis- Descriptive statistics are only available for numerical data. It summarizes features from a collection of information such as mean, median, Range, Standard deviation, Variance, Interquartile range etc.
- Visualizing numerical data- The histogram and boxplot are the graphs for the numerical data

- Visualizing categorical data- Pie chart, Bar chart and Tally table are used for visualizing categorical data.
- Pareto Analysis- It is a chart in which Pareto principle can be seen and it counts how often each cause on the x-axis occurs.
- Visualizing two variables- The graph to visualize two variables depends on the type of data .

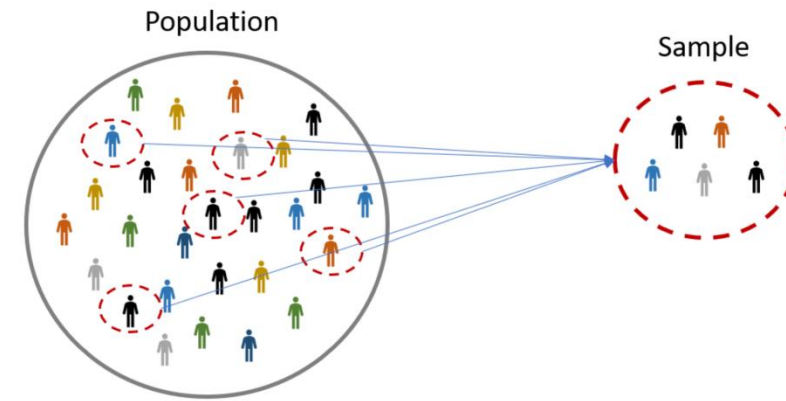


Week 3

■ Using Probability Distributions- Usage of probability distributions and Quantifying uncertainty.

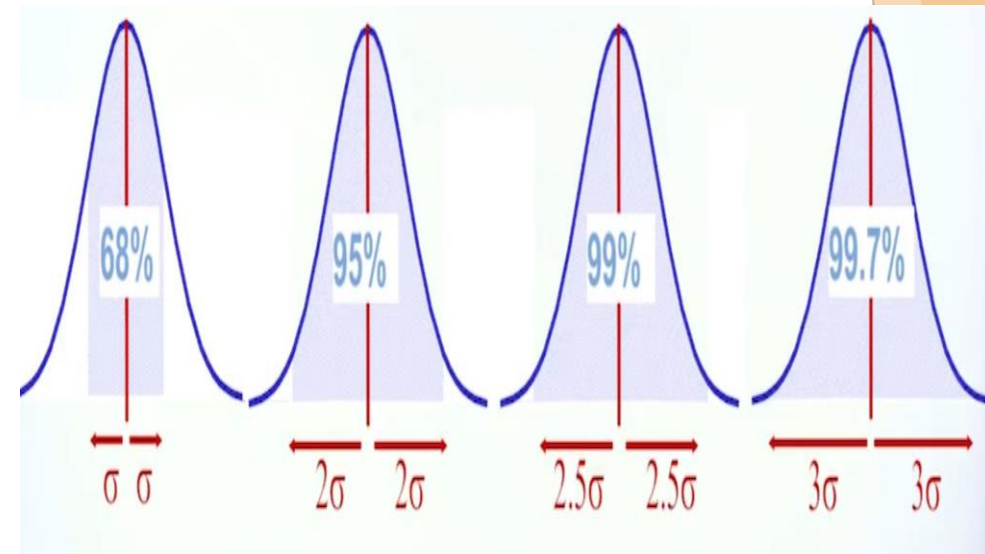
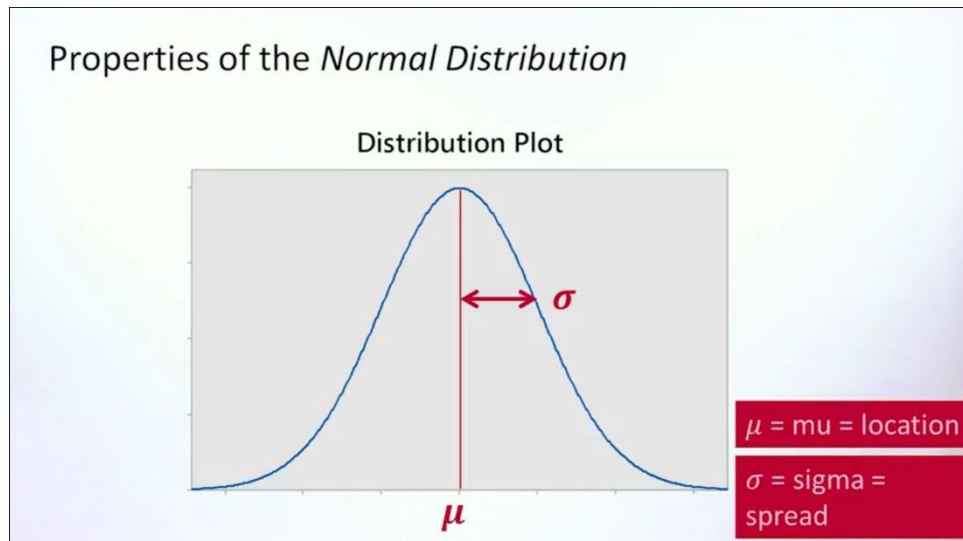
- Population versus Sampling-

The population is a collection of all units of interest. The sample is a subset of the population.



- Estimation and Confidence Interval- Estimates the unknown population parameters and uses confidence interval to quantify the uncertainty.

- Probability distribution- The normal distribution is the most often seen probability distribution while in Lean Six Sigma projects, both Weibull distribution and Lognormal distribution are also relevant.
- Probability Plot- It is a tool used to determine which distribution to be used for modelling the population. It can be used to spot data anomalies.
- Empirical CDF- It is used in the analyze phase of the project and it is used to calculate percentages.
- Properties of Normal distribution- It is symmetrical looks like a bell shaped. It is even called Gauss curve.

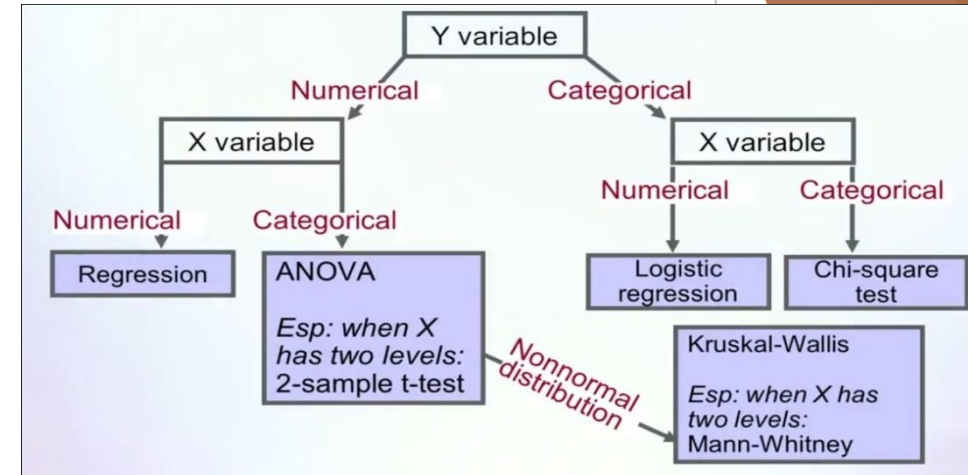


Week 4

▪ Introduction to Testing -Modeling CTQ and influence factors and selecting appropriate tool for data-based testing of the models.

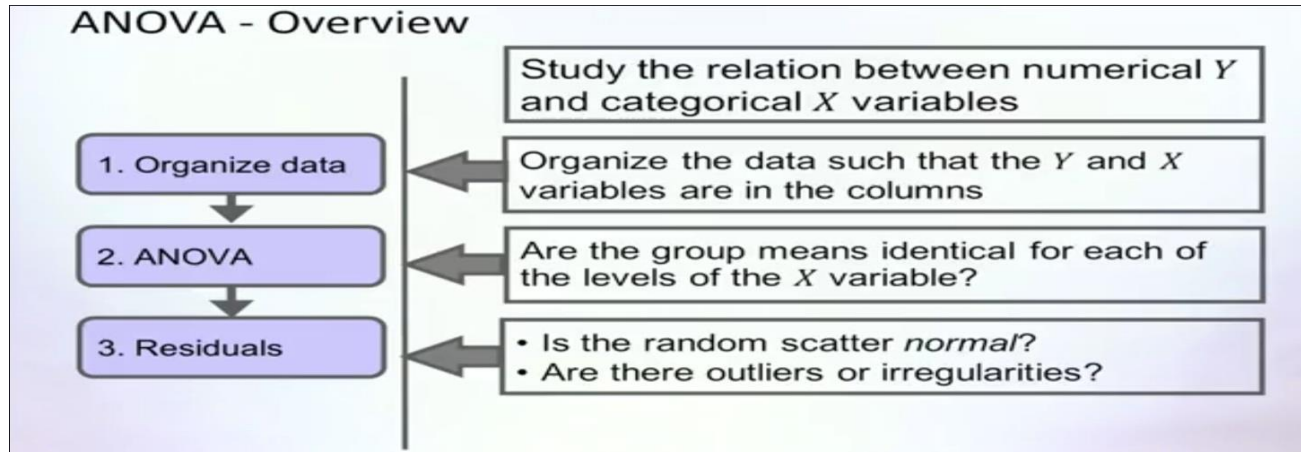
- Introduction to data analysis –

In the Lean Six Sigma project, the main intension is to know whether CTQ is related to the influence factor or not. The suitable method depends on the type of data that is the CTQ and the influence factor is categorical or numerical variable.



- Hypothesis Testing – This is done to find the effect between the variables. The null hypothesis and alternate hypothesis stated have to be checked in accordance with the P-value. If the P- value is smaller than 0.05, reject null hypothesis. If P-value is larger than 0.05, do not reject null- hypothesis.

- Causality- It is about the cause & effect of relationships, example if x variable changes y variable also changes.
- Introduction to ANOVA- It stands for analysis of variance.



- Two sample t-test – This is used to analyze the difference between the means of two groups. The P-value obtained can be used to calculate whether the mean difference is coincidental or truly significant.
- Test for equality of variances-This is used to test the variability across groups as variation shows the consistency of the variables. The hypothesis test shows the consistency of the variance.

WEEK-5

Testing: numerical Y and numerical X- Statistical tests to relate a numerical Y variable (CTQ) and numerical X variable (influence factor).

- Correlation- It shows the strength of relationship between two numerical variables. It is always between the value -1 and +1. A negative correlation shows that the variables are correlated in the opposite direction. Correlation of 0 means there is no relation between the variables.
- Regression- This is a statistical method to test whether two numerical variables are related or not by calculating the best fitting line. Regression analysis is about finding the values of a and b from the formula $y = a + bX$. Regression analysis consists of 4 steps which are, 1. Make a fitted line plot to visualize the data, 2. Perform main Regression analysis, 3. Perform residual analysis, 4. Calculating the prediction interval.
- Quadratic Equation-This is used when the linear regression analysis is not meeting the assumption. A curved line fits to the data instead of a straight line.

Testing categorical Y- Testing relationship between a Y and a X variable, when Y variable (CTQ) is categorical.

- Chi- Square analysis- It is used to find the relation between a categorical Y and categorical X variables. This has two steps, 1. Cross tabulation of data, 2. Chi-square analysis and p-value. The p-value shows the significance of relationship between the variables.
- Logistic Regression- It is used to find the relation between a categorical Y and numerical X variables. This consists of 3 steps, 1. Enter data in event/trial format, 2. Make fitted line plot, 3. P-value. The p-value shows the significance of relationship between the variables.

Thank you

