

HR Analytics In-Depth

Using Excel tools to Solve HR Analytics at Work

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REUBEN RAY



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**Subhashini Sharma Tripathi
Reuben Ray**



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Dedicated to

Our mothers

Mrs. (Dr.) Mridula Tripathi & Mrs. Subhra Roy

and

our daughters

Sharanya, Idha, Toshani & Shreya

About the Authors

Subhashini Sharma Tripathi: An Analytics and Data Science enthusiast with 20 years of professional experience in Analytics & Data Science in Banking, Financial Services, Start-up Co-founder, Educationist, and Author sum up the range of experience. She is the co-founder of Pexitics <https://pexitics.com/>

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About the Reviewer

Partha Majumdar is just a programmer. He has been involved in developing more than 10 Enterprise Class products which have been deployed in Customer locations in more than 57 countries. He has worked with key ministries of 8 countries in developing key systems for them. Also, he has been involved in development of key systems for more than 20 enterprises.

Partha has been employed in enterprises including Siemens, Amdocs, NIIT, Mobily, JP Morgan Chase & Co. Apart from developing systems in the companies, Partha managed highly profitable business units. He has set up 3 reasonably successful companies as of 2021 in India, Dubai and Saudi Arabia.

Partha has a passion for sharing knowledge. He documents his experiences in technical and management aspects in his blog <http://www.parthamajumdar.org>. Also, he regularly publishes videos on his YouTube channel - https://www.youtube.com/channel/UCbZrZ_aeyiYVo1WJKhIP5sQ.

Partha has worked on developing OLTP systems for Telcos, Hospitals, Tea Gardens, Factories, Travel Houses, Cricket Tournament, etc. Since 2012, Partha has been developing Data Products and has been intensively working on Machine Learning and Deep Learning. Partha has a panache for finding patterns in most of what he gets involved in. As a result, Partha has been useful to teams for developing Rapid Development Tools.

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From Subhashini: On a personal note, I want to thank Mr. Jose PV, Maths teacher and guide from Ranchi, who has ensured my foundation understanding of Maths in school.

Concluding remarks for students:

शुनैः पठथाः शुनैः कन्था शुनैः पर्वतलङ्घनमा
शुनैर्विद्या शुनैर्वित्तं पश्चैतनि शुनैः शुनैः॥

A long journey is covered little by little. The cloth is woven little by little. The mountain is climbed little by little. Knowledge and money are also gained little by little.

We are happy to be part of your knowledge journey. Reach out to us for any doubts on our LinkedIn profiles: <https://in.linkedin.com/in/reubenray> ; <https://www.linkedin.com/in/subhashinitripathi/>

Preface

This book is intended for learners as well as practitioners of HR & Analytics. Today the subjects are rather intertwined into a technological helix due to the advances in the digitization of information in the form of data. However, due to the primary approach of catering primarily to a learner, we as authors have been careful in including both areas while remaining limited to the boundaries of the aforementioned subjects.

Organizations of today sit amidst the social eco-system, commanding both wealth and respect to turn policies and resources in its favor from the policymakers at the top to the bottom-of-the-pyramid settlers at the bottom, who in turn drive the wheels of fortune and our civilization forward. In its pyramidal affluence, the management of organizations often let slip away fluid realities like People Management and its data as wasteful expenditure, only to be paying a price far costlier when the same systems and structures turn into a growth impediment while aiming for a progressive yet a symbiotic relationship with its people.

In this book, we have endeavored to explore the use of time-tested theories involving measurements and analytics to find answers lying within the box before thinking outside as a vehicle of excellence. The reality is that systems and processes today produce enough and more data; organizing and managing it, however, is a challenge based on our levels of understanding and knowledge about the application of it in everyday people management practices to deliver meaningful results for the organization to thrive and provide a bounty of benefits to the labors of passion and focus for its employees and stakeholders. Our efforts are to improve on both the understanding and the levels of knowledge.

This book is a first in a few unique ways within the space of People Analytics; to begin with, it is written by practitioners of the subject rather than pure academic theorists; it covers practical frameworks to learn and apply as HR practitioners; it covers HR People practices with the same nomenclature and terminologies used at work and hence makes it a practical guide and learning tool; it provides working models and practical guides to put the learning into practice; it deep dives into the practice as well as the

analytical tools and concepts with equal importance and solutions are provided using Excel, which is commonly available and widely used in the workplace.

The book comprises **07 chapters** and each chapter of this book is dedicated to key people practice problems – starting from hiring and ending with attrition. The chapters are linked as a flow of events in the life of an employee where each practice is interlinked to the forthcoming one along with the previous. A common thread is a competency-linked approach to understanding the interlinkages between each practice, its numbers, and its further effects elsewhere using analytics.

In this book, a practical case study has been solved for each chapter and the Excel workings of the same have been provided. Please reach out to the publisher for any queries regarding these Excel workbooks which contain the data and the solution. Hands-on learning is the best way to master how to execute HR Analytics projects in real life.

We would love to engage further with our readers and the learning Institutions on our subjects and welcome engagements to further expand and explain them in greater detail, as and when the need is required. We welcome your feedback and further comments for improving and further adding to the forthcoming editions of this book and turning it into a ready reckoner for HR Analytics practitioners.

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CHAPTER 1

Factors to Measure in HR Analytics

Any function, be it human or system, contains an input, which could be a sensor or information, leading to measurement and its output. All inputs are subject to perceptive measurements. Humans measure through comparative sensory and intellectual limitations, whereas complex systems such as computers use logic-based sequences to derive meaning before deciding the output. These factors are at most times quantifiable or can be measured using a comparative scale to denote the input's scale, logic, and intention using the five available core agencies of communication; *text, numbers, signs, symbols, and color*. However, scale and logic are often contained within the input, like the count of words or the pitch of the voice. Intention can be derived by the tone or arrangement of the words, numbers, or symbolic colors. The comparative scale hence becomes the most important factor while measuring the input. We shall henceforth recall it as the benchmark as it denotes the scale, logic, and intention of the output. Be it numbers or human behavior, both are subject to input and output based on inherent comparison scales or benchmarks.

Structure

In this chapter, we will cover the following topics:

- Five factorial scales of efficiency
- Factors of efficiency for HR analytics practices
- The role of human bias

Objectives

After going through this chapter, you will be able to understand the factorial scales and their utilization for measuring people efficiency benchmarks using HR analytics. The framework of HR analytics involves an understanding of the factorial scales and their applications.

Five factorial scales of efficiency

Analytics, or for that matter, every measurement comprises a combination of the five key factors of efficiency:

1. Time
2. Cost
3. Quantity
4. Quality
5. Human ability

Every process, practice, production, or output are a culmination of both material and human efforts in terms of effective efficiency:

- **Time** is normally denoted by the number of minutes and hours spent as part of an effort. But time can also be viewed as the number of events that could be achieved in pursuing an alternative. If you are studying, as you are doing right now, you are foregoing the alternate of playing or reading or watching content. This measure of time ensures that processes and practices are more effective towards outcome-driven efforts or what we call occurrent time. If an employee is managing a process, can it be relegated to a machine so that the time can be freed up for a higher cost resource in engaging with more intelligent endeavors? That is where human progress is today headed toward, and rightly so. Or, what else are robots for!
- **Cost** is the value we exchange for the efforts required. Efforts may not be effective, and hence value must affect efficiency. Again, the traditional measure of cost as merely price is no longer relevant, and hence, measuring for effecting efficiency for every unit of the resource becomes more prudent as an analytics professional. The concept of *sunk costs* are efforts lost in gaining efficiency.
- **Quantity** is the amount of effort sacrificed to achieve efficiency in productive pursuits. Effective efficiency is the amount of quantity saved compared to the previous practice by measuring efforts and improving practices for increasing efficiency. If a previous effort required x quantity of resources or delivered y quantity of output, an effective efficiency releases the amount of effort required or increases

the amount of output with a similar quantity of input through improved processes.

- **Quality** is the perceived effectiveness in the eyes of the customer. Hence, it might differ across different organizations and different segments of output. However, quality is more of a factor of effectivity and determines higher efficiency when applied to improving performance. The reduction of waste or costs towards measuring quality as an output is a measure of the effort of effective input. All processes are thus measured at both the input and output levels, and the variations of results are factors of quality.
- **Human ability** is the last and final measure of efficiency. Humans can be measured for four factors:
 1. **Physical:** The ability to endure or the special capabilities and traits
 2. **Cognitive:** The ability to solve problems and think through complex reasonings
 3. **Conative:** The factors that determine our biases; our education, interests, and so on, are determinants of why human ability is directed towards specific areas of excellence
 4. **Affective:** There are many specifics that affect human behavior, and our temperament, mood swings, and social skills are key to how we are affected in our ability to deliver efforts.

HR analytics attempts to measure these factors from recording to relating, and finally, predicting the future. It is in this attempt that we believe that this book will turn into a handbook for all HR professionals and specifically HR analytics practitioners. We hope our effort turns into effective efficiency for all of you.

Factors of efficiency for HR analytics practices

HR analytics as a business derivative exists within the realm of people metrics but derives its insights from business processes and data to help the goal of the business to endure and grow in its future journeys. Although certain datapoints might seemingly exist in isolation, but without aligning them to performance objectives, their role remains incomplete. Let us

uncover them for aligning ourselves as performance-oriented HR practitioners.

Hiring efficiency: While all HR functions begin with hiring, the efficiency scale must look at hiring efficiency as a by-product of the factorial scales of efficiency applied to hiring objectives.

Let us be clear that the outer boundaries of hiring might include performance, but the core is about hiring people within a defined budget and timeframe. Applying the five factorial scales to measure hiring practices can improve its efficacy. This can be achieved using HR analytics.

- **Employee count efficiency:** This factor measures the efficacy of resource utilization at the workplace and seeks to optimize HR utilization while helping in identifying the use of automation for repeatable tasks. This is the future of HR, where tasks are identified based on competencies, and combined task management using the right mix of human and automation can result in higher utility and business outcomes.
- **Learning efficiency:** No workplace can exist today without learning interventions and initiatives as a core HR practice and responsibility. Hence, the use of HR analytics for measuring learning efficiency can undoubtedly be a sound practice where inputs from employees on content, faculty, and application efficacy provide clear insights on areas of improvement. We have dedicated an entire chapter to this subject.
- **Performance efficiency:** This is the core purpose of HR analytics and provides outputs for building higher growth organizations. Performance is often limited to appraisals, and this perspective can be observed to be expanding now, with multiple avenues of outputs using inputs from assessments and surveys, feedback or listening posts, and secondary data sources using technology tools coming to the rescue. More follows in a detailed chapter, as you would have noted in the index.
- **Attrition efficiency:** The factor of measuring attrition in general and within key resource roles are critical to organizational sustainability. Measuring attrition is about not just counting the heads exiting the system but being able to restrict it using people policies and enhancing

engagement practices for retaining critical talent. Retaining talent is currently one of the biggest challenges for HR & Business Managers, whereas Employee Lifecycle based **Return on Investment (RoI)** is an excellent benchmark that uses the factorial scales of time as the base parameter. Finding and addressing gaps in people practices using HR analytics tools for a long-term and consistent efficiency is an important goal for Talent Management.

- **Budget efficiency:** The need to do all the above within limited resources needs measuring for balancing and delivering talent objectives within a defined framework of efficacy plus costs. No business survives without a key focus on spending, but an efficient system operates by optimum allocation of its resources rather than looking at the cost angle. The role of HR analytics practitioners should be to be on the hunt for drawing insights into people operations and optimizing for a balance of objectives and efficiencies. Although the reality of cost versus quality is an over-discussed phenomenon, the objective of observation lies in focusing on balancing between the devils.

[The role of human bias](#)

Quietly hidden among these efficiencies lies the impact of human traits.

The importance of scale of the benchmark is important to be discussed here, as it is the distance from the standard which pushes the output to affirm or revise itself based on the distortion or confirmation. To explain this, let us consider we have a candidate who is wearing casuals during an interview. The first such candidate might be rejected *not* because of lack of knowledge but due to distortion of the image of the ideal candidate in our minds. However, as more such candidates start appearing in casuals, the distortion is embedded and calibrated to become acceptable as standard clothing. These images are being standardized by new-generation business leaders, who have been appearing much more casual in their public appearances, making casual wear at work as an acceptable benchmark.

We are faced every day with the predicament of finding the best talent for promoting or pushing fresh talent up the ladder as People Managers. Whether hiring new talent or promoting an existing employee for the workplace, when we push someone up, we do two things.

We leave a space vacant for someone else to occupy. We fill up a position that merits fresh talent. To do so, we can use our own understanding based on both self-understanding of fitment and the organizational policy. There can be no cause for concern if we are using the entire knowledge factors available at our disposal to do so, which is what is needed to fill the gap of wisdom. But wisdom, as we know it, is tricky. The brain, as we know and shall observe in our biases, tricks us into believing things we love to believe; though we need not necessarily need to do so.

Let us take an example of an average government office in India; files are stacked up, with soot and, at times, cobwebs filling up except for the space the public servants sit in. This is simply as our eyes become trained over time to see it as acceptable behavior and practice. There are rarely questions asked or even expectations that we maintain them in a separate well-stacked library of document archives when there is no dearth of land and space.

It is our behavior that can bring about a change when we see the more organized spaces of senior bureaucrats and officials of the same departments and systems. The stark neatness and well-defined spaces for staff to operate are but everyone's own business. It is simply an adaptation of behavior that becomes regularized over time to be seen as acceptable and not necessarily demeaning.

Let us look at some of the behavior biases that creep within us as both humans and resource contributors, specifically during talent spotting and promoting or hiring talent for a new role.

Naivety bias

Although emotions have a role to play in our decision-making processes, they should not take precedence over critical thinking. This cognitive bias can affect inexperienced recruiters as they can be won over by the easy manner of certain candidates and forget to check whether the candidates' words match their accomplishments.

Entomologist bias

Being the opposite of naivety bias, entomologist bias influences recruiters who totally disregard emotions and judge candidates on pure facts. They

look at the future employee's technical skills, experience, and education but neglect their personality and interpersonal skills.

Confirmation bias

This tendency causes us to seek information that confirms preconceived ideas and hypotheses. A recruiter might interpret certain information in their own way and, for example, minimize a candidate's shortcoming as a result. A recruiter must remember to ask questions that are not merely intended to reinforce his own convictions.

Projection bias

Projection bias goes along with confirmation bias—it is a tendency to be attracted to people who share our values, way of thinking, and psychological state of mind. A recruiter may tend to select a certain candidate because of their similarities.

Stereotyping bias

We all have our own beliefs and assumptions, and we unconsciously tend to associate a set of characteristics with a certain group. Some recruiters still tend to think that a candidate who just graduated from business school or from a prestigious establishment will possess all of the required skills. This notion has been well explained by Malcolm Gladwell in various his various books and public talks and is suggested as a good initiative to understand the effects of stereotyping.

Conclusion

The strength of being human also includes the fallacies of imperfections. Although animals are busy leading their lives based on food, friend, and fear objectives, humans are enticed to think, innovate, and find solutions to problems both in the present and the unknown future. It will remain a difficult journey for us as a race till perhaps humans are born without the reptilian brain, which dictates our spurs and spines. Till then, we need to keep adjusting, measuring, and calibrating ourselves for better tomorrows.

- The role of data does not exist in isolation but can be linked to people's practices using factorial scales for measurement.
- Every human activity is a culmination of behavioral triggers and abilities.
- Our decision-making must not be guided by biases but by using data as empirical evidence to draw conclusions.
- We shall explore this in further detail in our chapter on hiring, where we shall examine human bias in action during the process of hiring and interviewing.

Key learnings

- The five factorial scales which help us measure are time, cost, quantity, quality, and human ability.
- The six efficiencies to measure using the factorial scale for people practices are hiring efficiency, employee count efficiency, learning efficiency, performance efficiency, attrition efficiency, and budget efficiency.
- The role of human bias in our decision process by understanding the impact of the five key biases. They are naivety bias, entomologist bias, confirmation bias, projection bias, and stereotyping bias.

Questions

1. What is the importance of the factorial scale in HR analytics?
2. What are the key applications of the efficiency factors for HR practitioners?
3. How can we avoid biases? What causes them?
4. How can we measure consistency in Talent metrics using the factorial scale?
5. Provide with example the use of time factorial in measuring attrition.

Analytics—Introduction

The processes and practices in the Human Resource function today demand smart decisions through Analytics; using MS Excel makes for the most practical implementation and the reason of learning for HR practitioners in the Indian and Middle East subcontinent. Includes accessing Analysis Tool pack in MS Excel 2007 and above. It will involve a discussion on HRMS and other data repositories in HR:

Top 10 skills

in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

in 2015

1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity



Source: Future of Jobs Report, World Economic Forum

Figure 1.1: Top 10 skills in the decade of 2020

Structure

In this chapter, we will cover the following topics:

- Introduction to Analytics

- Six-Step Process for Analytics : DCOVA&I

Introduction to Analytics

You might be wondering what HR Analytics is and why should you study it. The application of Analytics comes from the school of thought of evidence-based decisions.

Let us understand this further. *Evidence-based*. Evidence-based is a term that was originally coined in the 1990s in the field of medicine, but today its principles extend across disciplines as varied as education, criminology, public policy, social work, and (recently) management.



Figure 1.2: Evidence-based management relies on facts

Management decisions should be based on a combination of critical thinking and the best available evidence, and not on anecdotes and out-dates practices.

Data can be from systems, scientific research, and experience. Data is another name for facts.

Thus, evidence-based decisions in management are when the leaders of a business take decisions on how to run the business based on trends seen in business data as opposed to experience, anecdotes, or *gut feeling*:

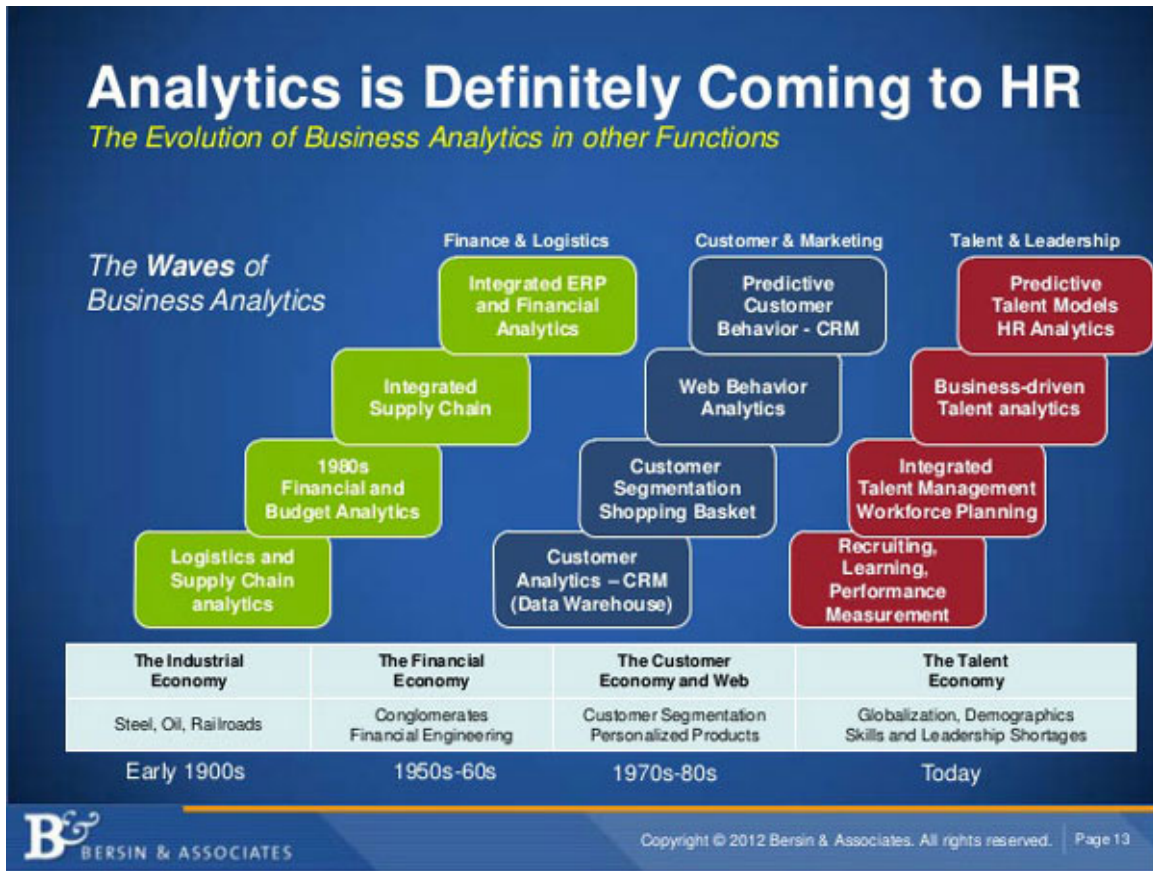


Figure 1.3: Adoption of Analytics across business practices

Process for Analytics

A checklist of DCOVA&I is recommended to help us navigate various and different types of projects. This checklist helps us to:

- Make a project plan for time and effort estimation
- Understand the steps which will be used in the project

Thus, it is a good tool to do Project Management for HR analytics projects.

The basis for statistical problem solving are six steps, known by the acronym DCOVA&I:

NOTE: The details of each step will be covered later in the chapter.

1. **Define:** The business/HR problem “Y”
2. **Collect:** Relevant data (ETL)
3. **Organize:** Create project data-mart (ETL)

4. **Visualize:** Reports to understand the data
5. **Analyze:** To solve for “Y”
6. **Insight:** Final solution or Key Take-away

D—Define Y

Define—Create Y—Convert the business problem to a statistics problem:

| S. No. | Business Problem | Analytics Define - Y |
|--------|--|--|
| 1 | Do people taking more leave have a higher tendency to leave ? | Is taking more leave correlated to attrition |
| 2 | Is the quality of manpower and therefore, productivity , of some locations better than others? | |
| 3 | Do people who undertake more trainings become more productive ? | |

Figure 1.4: How a business problem is converted to an Analytics problem

Some other problems to discuss:

- Do millennials behave differently within my organization across productivity, performance, and engagement?
- Do people with prior experience stay with my organization for long
- How does performance get impacted by engagement scores and 360-degree feedback?
- Do people taking more leave to have a higher tendency to leave?
- Should I keep a bench strength?
- Is the quality of manpower, and therefore, productivity of some locations better than others?
- Where should I spend my employee engagement money to get the best bang for the buck?
- Are talent assessments a good predictor of productivity post joining?
- Do people who undertake more training become more productive?

- Do we need to improve Interview practices in the company to improve productivity?

Creating variables in Excel

Use the formula bar to pick out a formula and create the outcome as a new variable, which will be the Business problem/Y variables. For example, if the problem is that the Hiring team is taking too long to hire, check out the average time to hire for the past six months.

There are two methods to create a new variable:

- If you know the formula, then you may type it out. Thus, in Excel, the mean or average is written through the formula called **AVERAGE**:

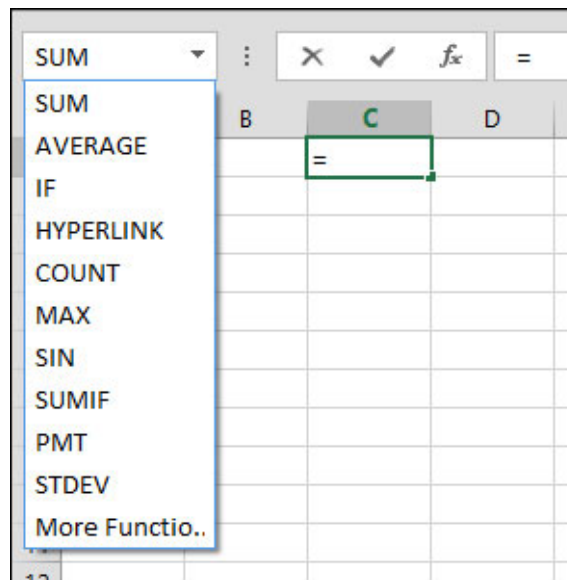
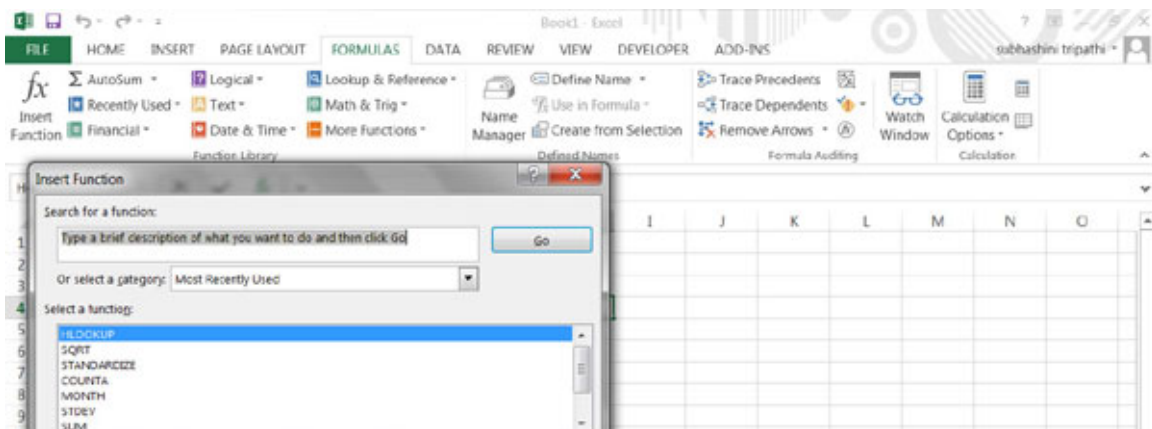


Figure 1.5: Typing out the formula in Excel

- If you do not know the formula, then use the **Insert Function** tab:



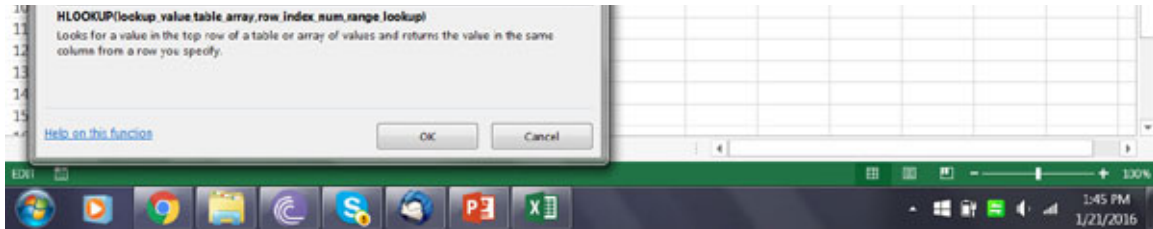


Figure 1.6: Inserting a function in Excel

Data can be divided based on the source or manner of collection of data. Thus, the two factors can lead to:

- **Sources of data:** Primary/secondary:
 - **Primary data:** This is the data from the business systems, which are internal to an organization.
 - **Secondary data:** This is the data from common sources, such as social media, newspapers and magazines, or government sources. The information is not limited to use only by one organization.

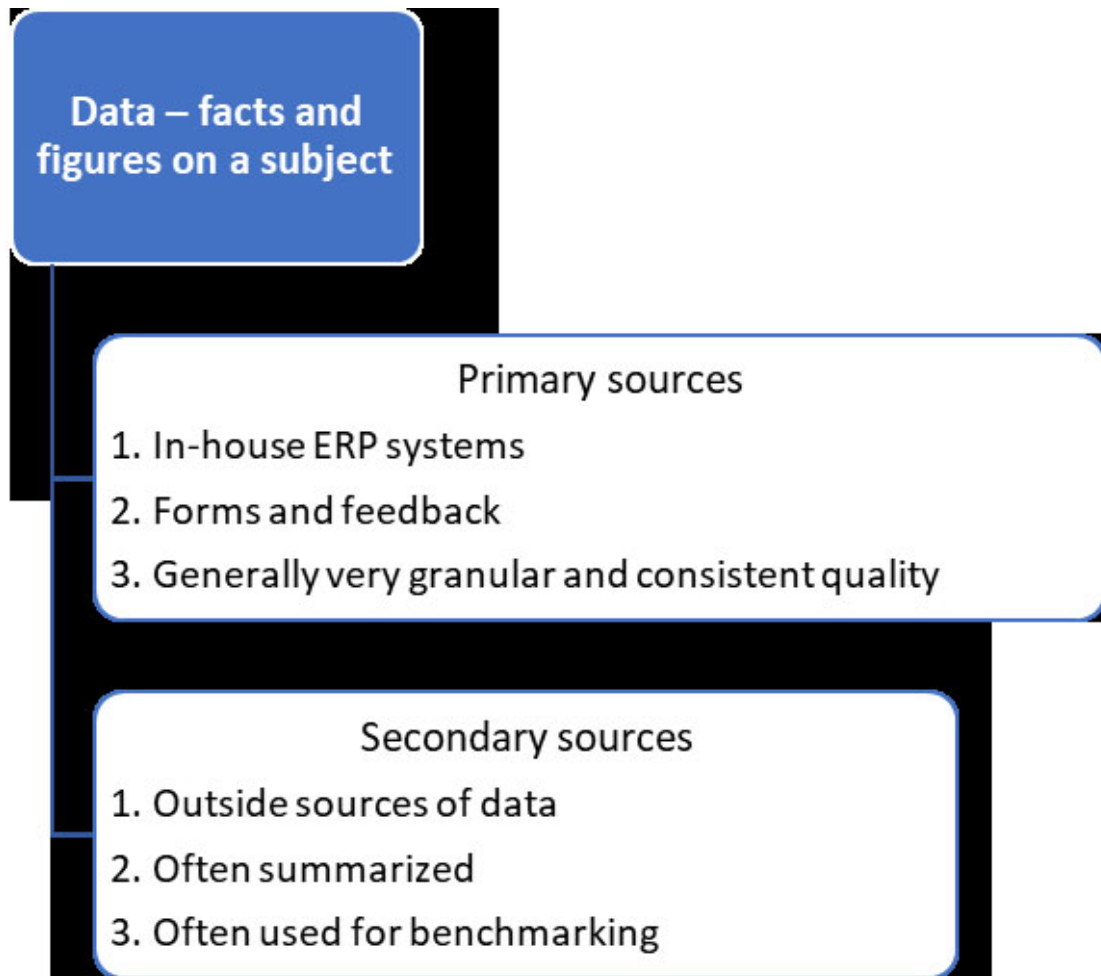


Figure 1.7: Sources of data

- Types of data—structured/semi-structured/unstructured
 - **Structured data:** Most of the business data comes from enterprise resource planning (ERP) systems, where the data is maintained in tables with rows and columns (such as our Excel sheet), which have a primary key. The primary key is a unique identifier that cannot have any duplicates. For example, PAN number, Aadhar number, Employee ID, and so on. Ninety-percent of the business data is structured.
 - **Semi-structured data:** In this type of data, some part is structured, and some part is not structured, for example, e-mail data. The name of the sender, time of sending the e-mail, and the subject are structured, but the content of the e-mail is not structured and has many variations.

- **Unstructured data:** Data such as images and voice recordings have no structure and cannot be fit into rows and columns in a table.

Structured



Figure 1.8: Types of data in business

The two ways to bring different datasets together are:

1. **Merge:** Join using a common, primary key (for example, Employee ID), using VLookup.
2. **Append:** Put the data one below the other; the columns should be aligned; you can use HLookup.

To see how to use Basic Excel features, please refer: <https://edu.gcfglobal.org/en/topics/excel/>

Often, we cannot run a survey/assessment and so on for all the employees to gather data—because it becomes a costly affair, can take a lot of time and effort (continuous follow up).

There are two ways to pull out relevant sets of data:

- **Sampling:** Creating a small subset of the entire employee base and running the survey/assessment/experiment/

Sampling, which is statistical, is of two primary kinds:

- **Random sample:** The outcome sample mirrors the characteristics of the population. For example, if the male to female ratio in the organization is 80:20, then the same ratio will exist in the Random sample.
- **Stratified sample:** With stratified sampling, we divide the population into separate groups, called strata. Then, a probability sample (often a simple random sample) is drawn from each group. This is also especially useful when we need to pull out a sample where we want to change the ratio of male to female from 80:20 to 50:50 in the study sample.
- **Cohort study:** A cohort is a group of subjects who share a defining characteristic. Thus, if the organization starts using talent assessments from June 2019, the cohort for studying the impact of talent assessments on productivity will be done only for employees recruited from June 2019 onwards.

There are two ways to study the impact of any changes experimented/rolled out in process or policy:

1. Pre versus Post
2. Test versus Control

Pre versus post-study is when a sample of employees (check the ways to create samples above) are measured before and after (Pre and Post) the incidence like to understand the ROI of training, engagement impact of an event, and so on.

Test versus Control, where a study is done on a segment of employees and the remaining employees are not affected. Both the samples—Test and Control groups—are measured, and the effect is checked. Thus, an evidence-based understanding of the effectiveness of a policy/process change can be tested on a small, random sample (which represents the entire population of employees) and then roll it out to the entire population. This ensures a certain assurance of success before mass rollout:

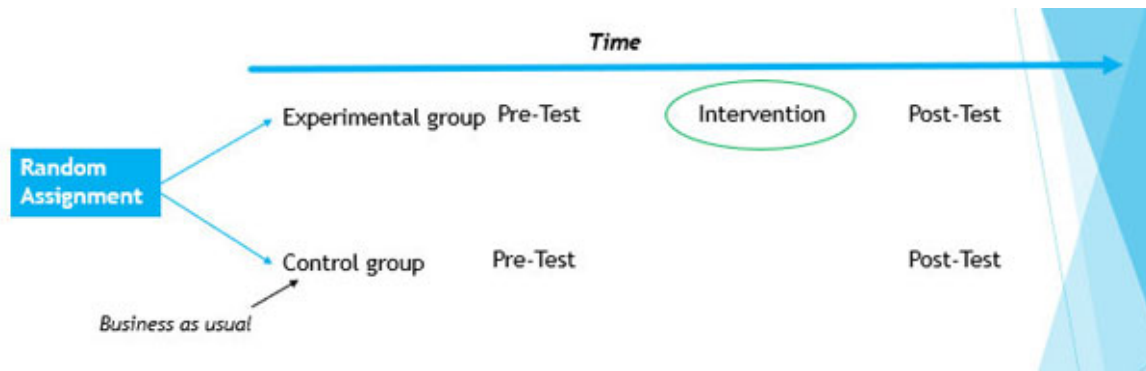


Figure 1.9: Types of samples

Both the preceding should be part of the sampling plan and should lead to take-aways at the Insight stage of the DCOVA&I.

Tip: You can work on large datasets outside Excel using the Power Pivot.

O= Organize data

Organize = make data ready for statistical analysis.

This is the stage for extraction, transformation, and loading (ETL)

The four problems that we will solve at this stage:

- **Missing values:** Missing values impact the numerical calculations-the mean, median, and so on change if there are missing values. We need to understand how to deal with the missing values and clean up the data before running Statistical Analysis.

The three questions to be answered are as follows:

1. Are there too many missing values in any Variables/Attribute/Column?
2. Can we get additional data to fill in the missing data?
3. Can we put some derived values to complete the data?

The answers should help us decide how to address the question of leaving out some variables from the project.

- **Outliers:** Statistical models are made for the 80%–90% common trends. It became important to remove the outliers (too high/too low values) before making a model for the majority.

The three questions to answer at this stage:

1. Do we have data outliers
 2. Do we have policy outliers
 3. What is the size of the outliers? If the size is significant, can we treat them as a separate sample and make a different model for that?
- **Dummy variables:** A lot of the data in People management is qualitative, for example, the highest qualification, the previous company worked in, and so on. This has to be converted into numeric data.
 - **Derived variables:** These are calculated variables created from the numeric columns/variables in the dataset. For example, CTC = Salary plus Bonus:

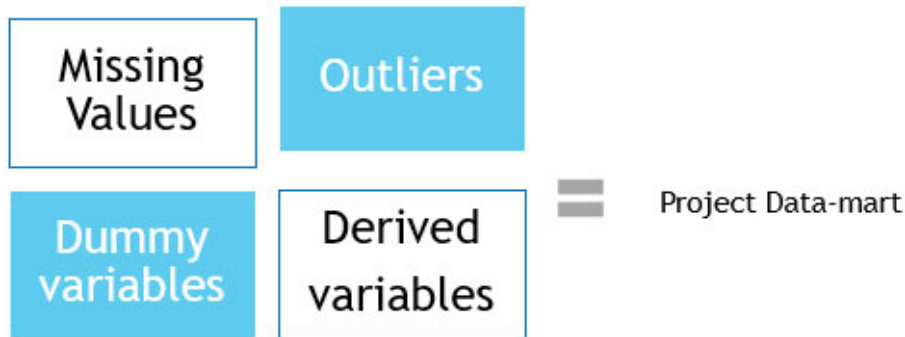


Figure 1.10: Data management takes up a lot of time

Rule - inclusions in C and O

The basis for statistical problem solving are five steps, known by the acronym DCOVA

1. **D**efine: the business problem 'Y'
2. **C**ollect: relevant data (ETL)
3. **O**rganize: create project data-mart (ETL)
4. **V**isualize: Reports to understand the data
5. **A**nalysse: To solve for 'Y'
6. **I**nsight: Final solution or Key Take-away

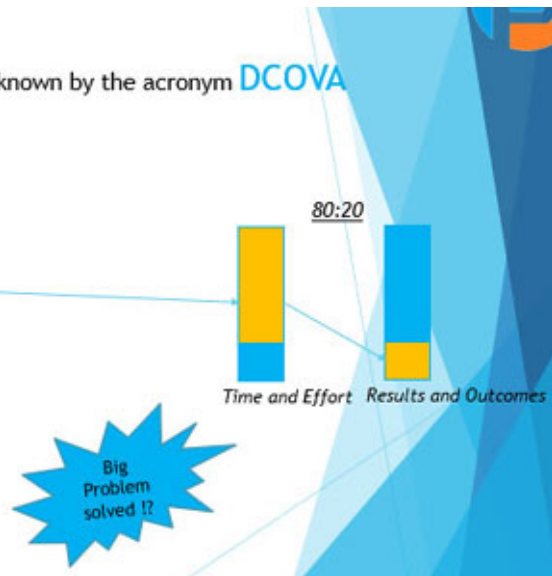


Figure 1.11: Different stages in the project and the impact on time

V= Visualize

A picture is worth 1,000 words. The concept of using pictures to understand data has been around as maps and charts since the 17th century. Now with Tableau, Power BI, and good old Excel, we can create a host of charts and graphs and visual storyboards to explain the business numbers.

Pie chart

It explains the ratio of the components of a univariate (one variable) series:



Figure 1.12: Pie chart

Column chart

The Column Chart very effectively shows the comparison of one or more series of data points. But the Clustered Column Chart is especially useful in comparing multiple data series. A simple cluster Column chart can be replaced with a stacked column chart, which performs the function of a pie-chart:

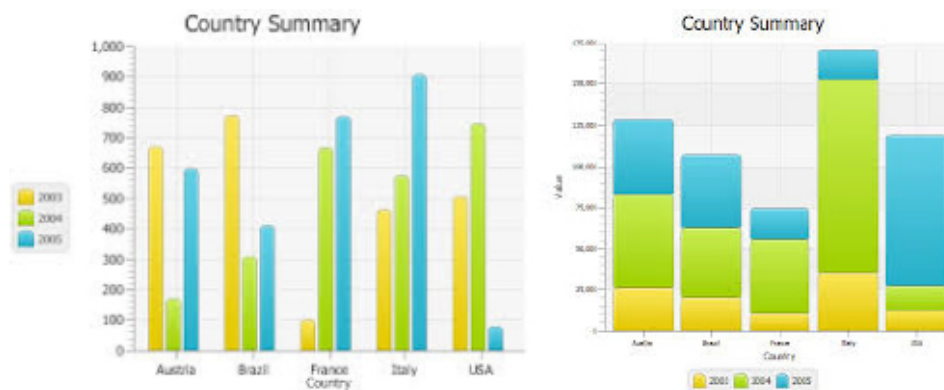


Figure 1.13: Bar graph/Column chart

Line chart

The line chart is used to represent a trend line on bivariate (two variables, for example, time versus revenue) data:



Figure 1.14: Line graph

Scatter plots

Scatter plots help to understand the dependencies of one variable against the other. It is one of the most common types of charts used in analytics:

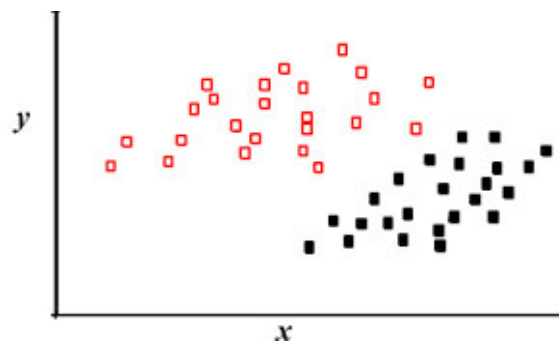


Figure 1.15: Scatter plot

Six new charts in Excel

Excel is the most widely used software in business and management. The past few years have seen many additions to the basic functionalities of Excel. One of the recent additions is a set of six new charts, added around 2015.

Histogram

We only need one column of data. Excel will group this into sensible bins, but we can adjust the boundaries manually later on. Select all your data and head to the **Insert** tab, then find the **Charts** section.

Select **Insert** **Statistic Chart** > **Histogram**.

When you are unsure what to do with a large set of measurements presented in a table, you can use a Histogram to organize and display the data in a more user-friendly format. A Histogram will make it easy to see where the majority of values fall on a measurement scale and how much variation there is:

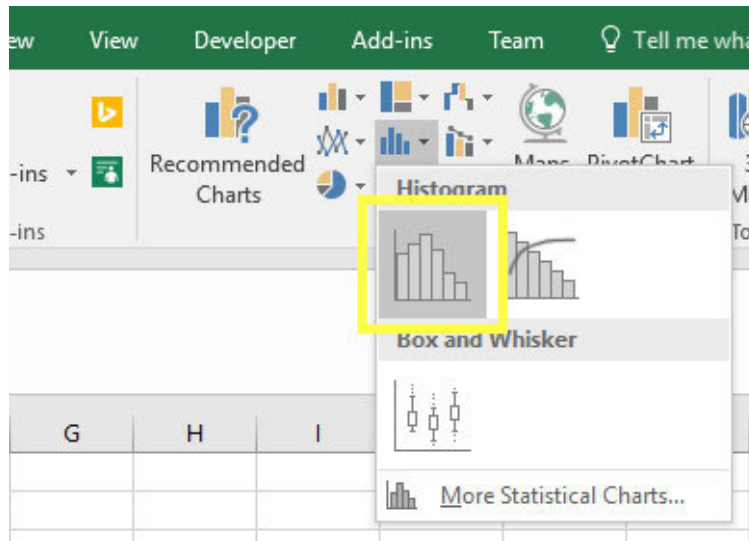


Figure 1.16: Histogram

Pareto charts

To create a Pareto chart, we need to select all the data and head to the **Charts** section of the **Insert** tab. Then, select **Pareto**.

When analyzing the data about the frequency of problems or causes in a process. When there are many problems or causes, and you want to focus on the most significant. When analyzing broad causes by looking at their specific components:

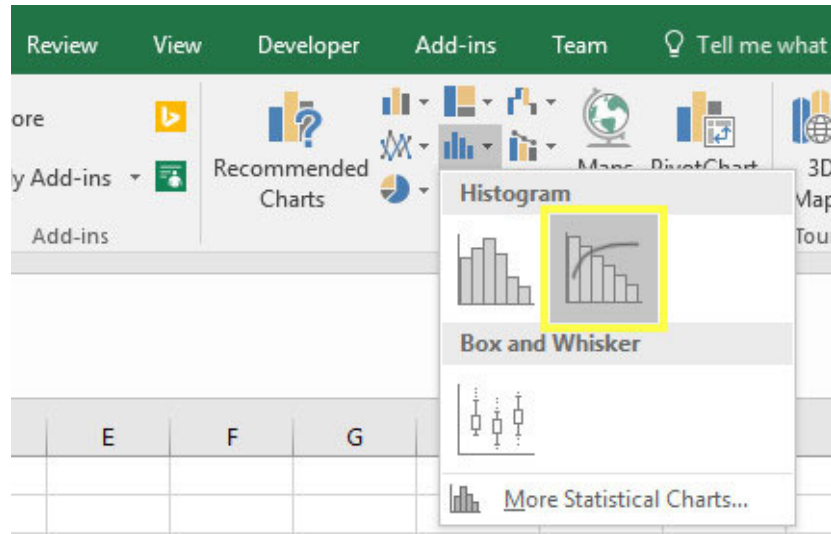


Figure 1.17: Pareto chart

[Box and Whisker Charts](#)

Select all your data and navigate to

Insert > Insert Statistical Chart > Box and Whisker.

Box and whisker charts are useful when you want to show the spread of a particular set of data. It is a good way to compare the range of different sets while picking out useful details such as the mean and median:

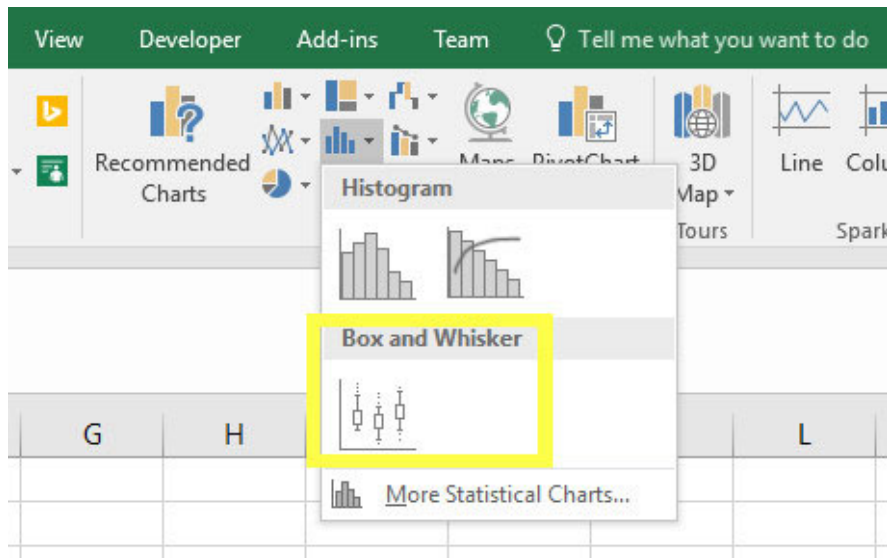


Figure 1.18: Box and Whisker chart

[Treemaps](#)

Open the **Insert** tab.

Find the **Insert Hierarchy Chart** drop-down in the **Charts** section, and click **Treemap**.

Treemaps are useful when you want to see a proportional overview of a particular data set:

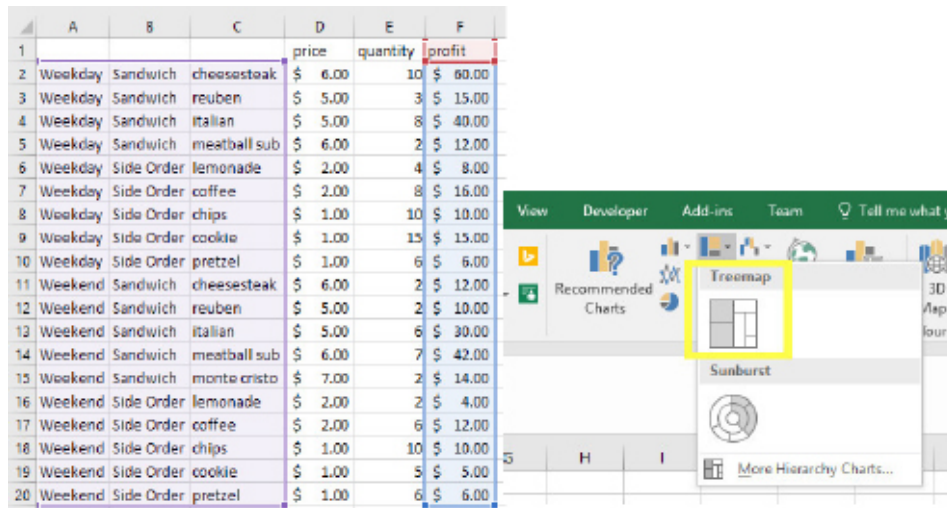


Figure 1.19: Treemap data and chart

Sunburst charts

Select all your data and head to the **Insert** tab. From the **Charts** section, click the **Insert Hierarchy Chart** drop-down and select **Sunburst** chart.

They represent proportions in a slightly different way. They are a bit like stacking several different pie charts on top of one another:

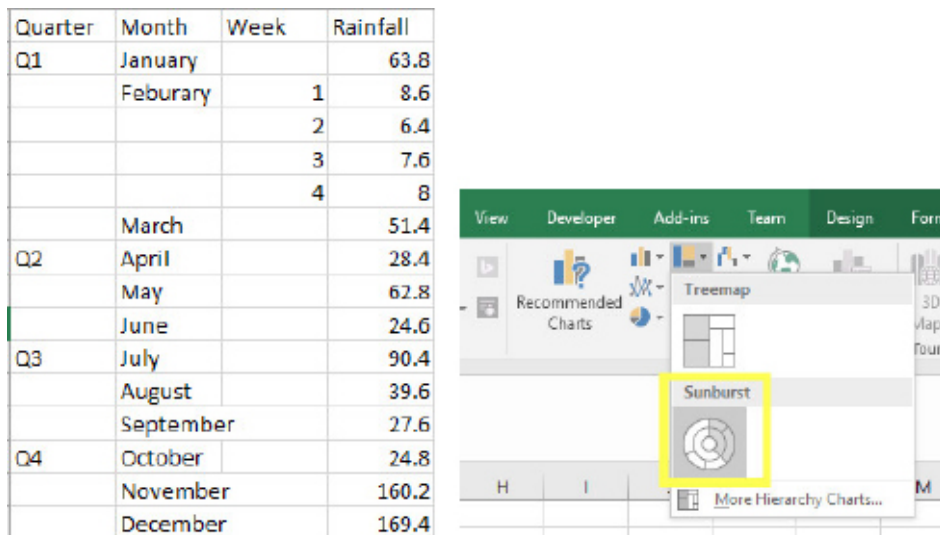


Figure 1.20: Sunburst chart which helps you see the sub-parts and their contribution.

Waterfall charts

Once you have set up your data, select it and head to the **Insert** tab. Navigate to the **charts** section and use the **Insert Waterfall** or Stock chart drop-down to select the Waterfall chart.

Waterfall charts are great when you want to track a running total. As your total increases or decreases, bars will represent the difference, which makes this type of chart particularly useful for financial visualizations:

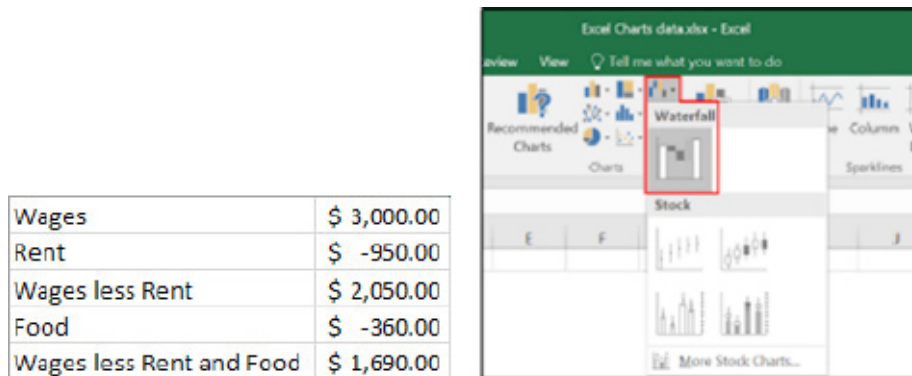


Figure 1.21: Waterfall chart, this is often used to show the break-up of the components

A= Analyze

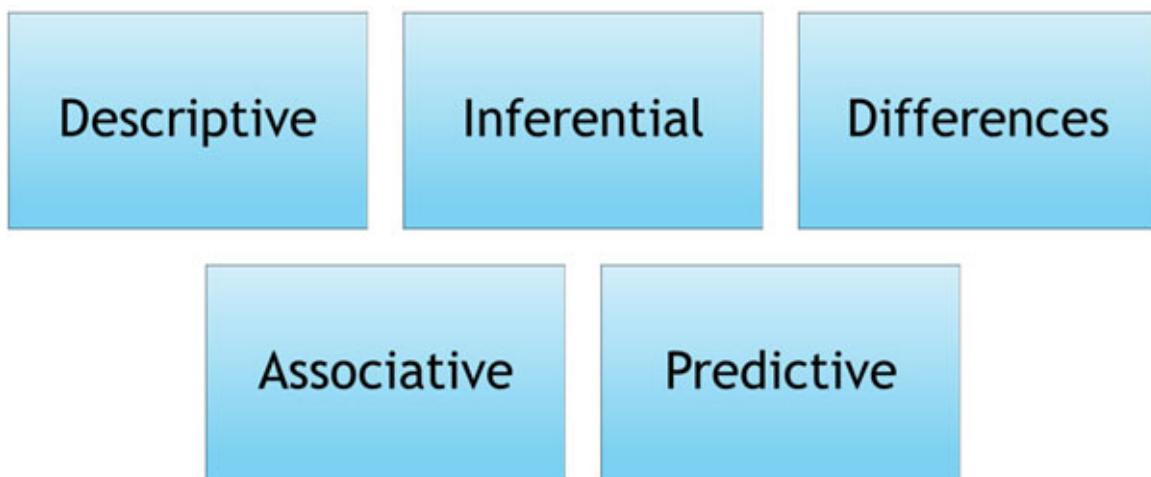


Figure 1.22: The five types of Statistical techniques

NOTE: this will be covered in detail as we solve the case studies in the subsequent chapters. You are requested to install the Data Analysis

Toolpak (this is a free Excel add-in into Excel), to use the statistical functions.

- **Descriptive statistics:** This covers the central tendency (mean, median, and mode), spread, and shape of the data.
- **Inferential statistics:** This includes probability, the empirical rule to understand probability, and conditional probability—Bayes' theorem.
- **Differences statistics or hypothesis testing:** This covers levels of confidence, *T*-tests, ANOVA, and chi-square test to compare samples and understand the data—similarity and differences.
- **Associative statistics:** This covers correlation, multi-collinearity, clustering, segmentation, and principal component analysis.
- **Predictive statistics:** Includes forecasting and trend prediction, linear regression, and logistics regression.

How to install Data Analysis Toolpak:

- **File > Options > Add-Ins > Analysis Toolpak > Go;** Tick the box and click **OK**.

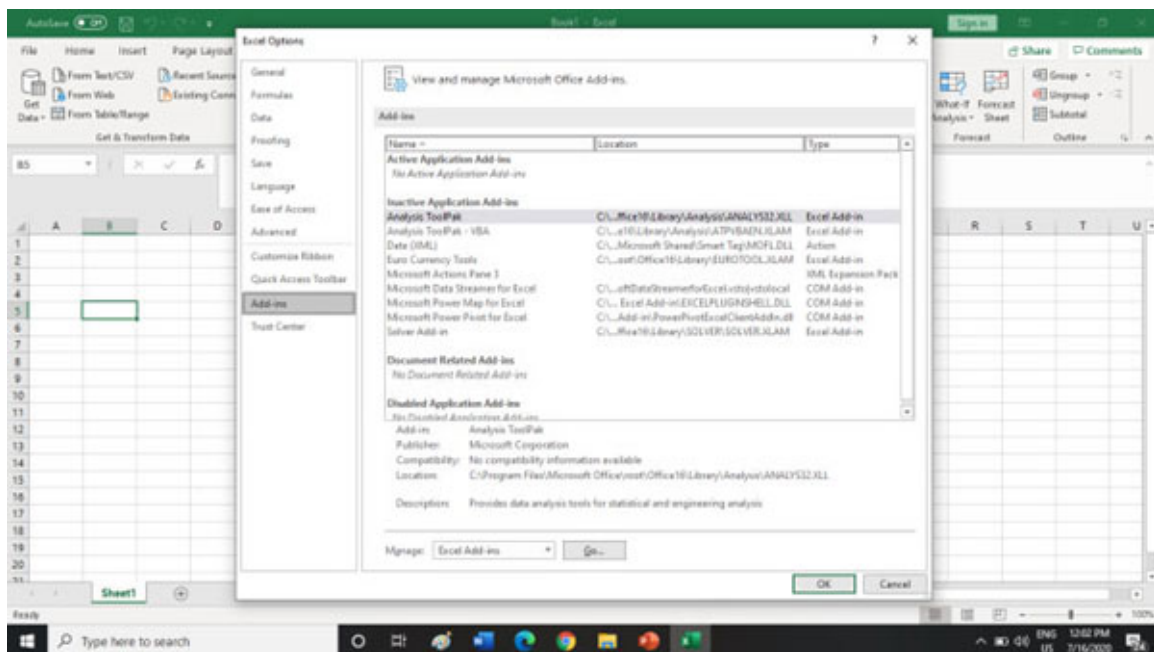


Figure 1.23: Data analysis toolpak 1

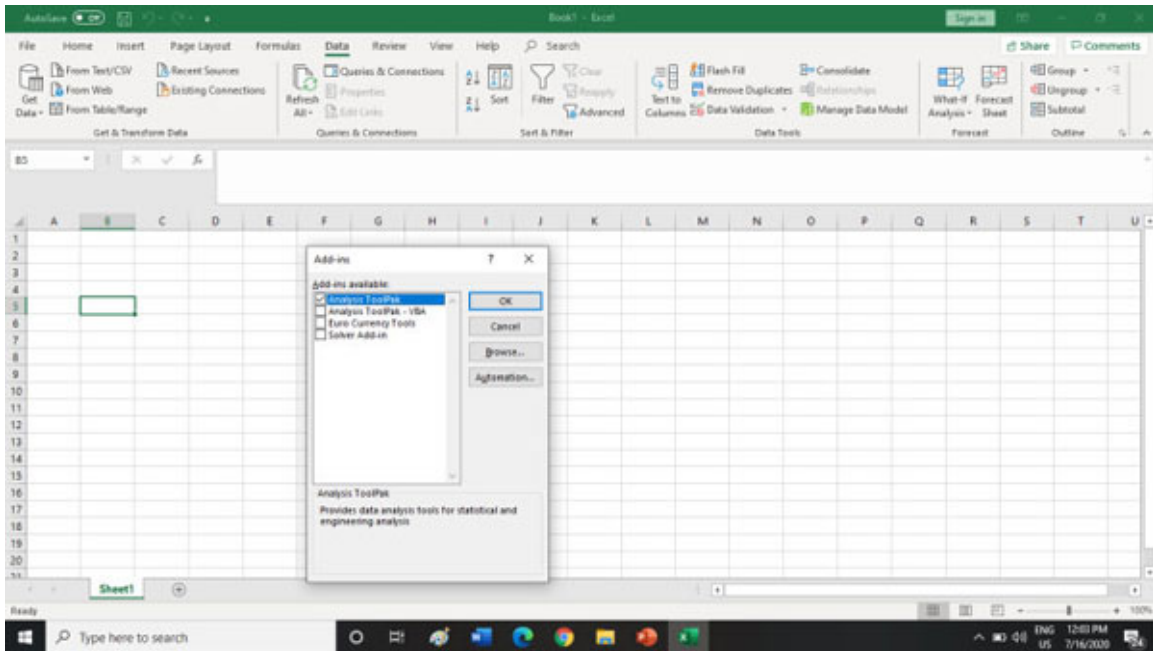


Figure 1.24: Data analysis toolpak 2

- Check on the right, the top part of the DATA tab:

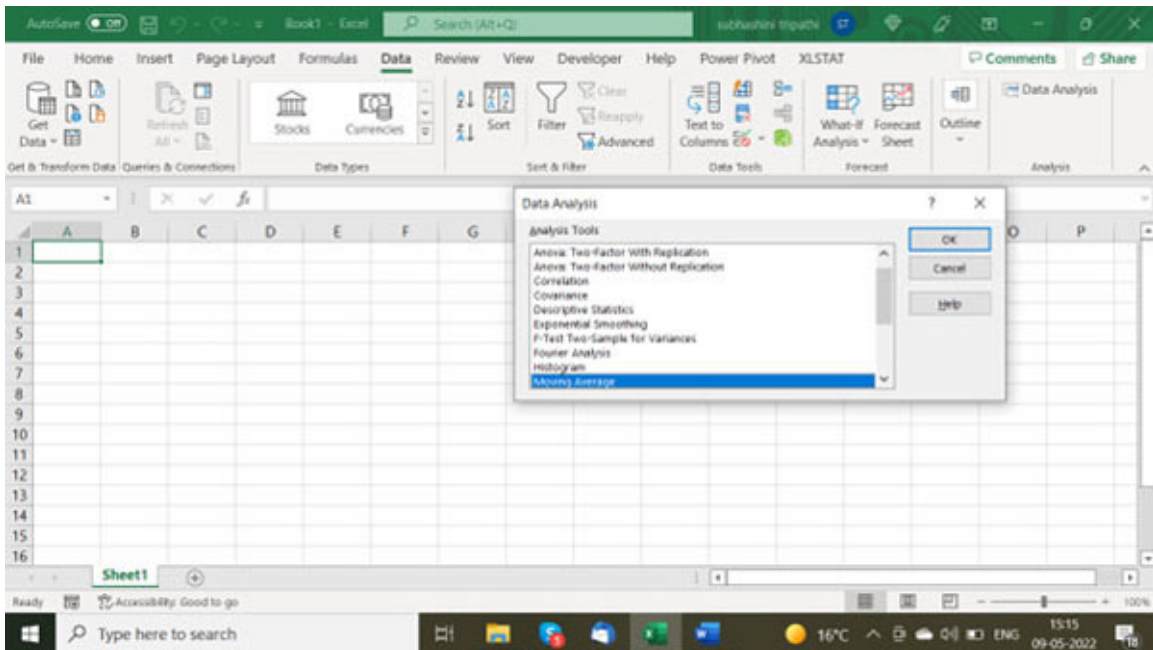


Figure 1.25: Data Analysis toolpak 3

I = Insight

At this stage, we will look at the outcomes of the visualization and statistical analysis phases and come up with recommendations and conclusions like:

- Data characteristics and accuracy
- Policy inputs
- Model and important relationships
- Process inputs
- Segmentation
- Stress testing results
- Data quality improvements inputs
- Risk score and choosing the right fit
- Identify the best fit within the given constraints
- Dashboards and tracking

Conclusion

Ensuring that all steps are adequately covered during a project helps us manage the project well. The DCOVA&I framework also makes it easy for us to create a storyboard for our project presentation.

You can see a YouTube video on this: https://youtu.be/E_qn79w0M1g

In the upcoming chapters, you will see practical case studies and learn how to do HR analytics projects in real life.

Key terms

- Analytics is a process of using data to create insights that the management can use to take good decisions.
- DCOVA&I is a six-step process to help execute an HR analytics project
- Extracting data, structuring, and cleaning it often take a lot of time during a project
- Excel has an in-built add-in *Data analysis Toolpak*, which makes it easy to do statistics using a button-driven interface.
- HR analytics is becoming increasingly important in the post COVID era because of the increase in digitization of HR processes.

CHAPTER 2

Hiring

Hiring is the first challenge for any organization, as the first step for any organization begins with hiring people to roll out the vision of the founding team. As the organization progresses, there are structures which are defined using the policy and culture. Policies are the written rules while culture forms the backbone of operations in an unwritten code of workmanship. One thing to note here is that the principles can be borrowed from accounting principles and will remain purposeful in understanding any process or action; there is a reason behind every action. Knowing the reason can turn out to be the right guide in improving, rather than eliminating or innovating without investigating the reason for the current practice. The same is equally true for analytics practices.

Structure

In this chapter, we will cover the following topics:

- Hiring challenges
- Role of benchmarking in hiring
- Interviewer bias

Objectives

After going through this chapter, you will be able to identify the key role of analytics in reducing hiring mistakes and the key factors which can make hiring objective and purposeful for the organization through the application of data and interpretation.

Hiring challenges

There are multiple practices in hiring and where does analytics come to play a role? Again, the answer lies in measurement. Hiring is important

from the perspective of both the candidate and the organization, and here is why:

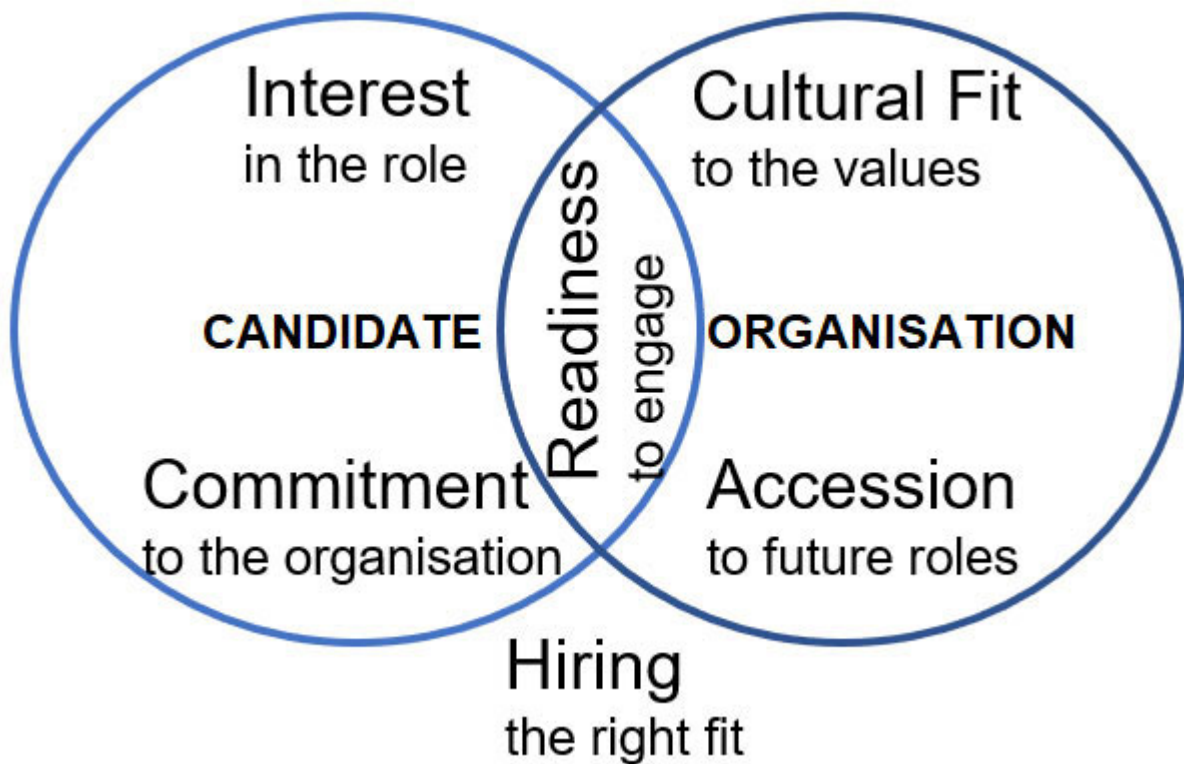


Figure 2.1: Hiring challenges

Both the candidate and the organization are equal stakeholders in the hiring process as seen in [Figure 2.1](#). The organization requires a set of readiness factors in the candidate which includes the qualifications, skills, behavioral, and cognitive fitment while the candidate needs to display them for ascertaining their fitment to the demands of the organizational culture and ethos. It is in this area that interviewing plays a bigger role and which brings in bias. Consider the number of times you were unable to convince your teacher that while you knew the answer but were unable to articulate it; it is not merely an issue of communication from your end, but also what the teacher wanted to hear! This is where assessments play a major role. Assessments ensure every candidate applying for the position is assessed against the same yardstick and only those who emerge successful need be called for the interview. This ensures that interviewer bias ends up affecting the selection much lesser as all the interviewees would be among the top qualifiers:

- **Interest:** Most candidates apply for multiple jobs without even reading the job description. The apply button on online job portals plays the culprit as it allows candidates to apply with a click without forcing the candidate to read through and evaluate the requirements to ascertain self-fitment. An assessment ensures that the candidate interest is ensured plus checks for match of job requirements match by undergoing the assessment. The uninterested wouldn't take up all that effort in the first place; hence, it is wise to assess the true level of interest in the candidate.
- **Commitment:** Our temperament and beliefs play a major role in our commitment to the job role and the larger environment of organization practices and values. During an interview, a candidate would typically agree to every clause and norm due to the pressures of getting the offer letter; however, they would quit once they have steadied themselves financially and would begin hunting for new jobs. The organization, in the meanwhile, would have spent a large amount of time and resources in inducting new resources and further engaging and nourishing their talent. Measuring these perspectives ensures that candidates are committed long-term and truly have the temperament to flourish as part of the team.
- **Cultural Fit:** Every organization has its *own ways* of doing things which help them command their respect and create market positioning of their products and services. This is driven by values assessment and whether it is the military, the academics or a product organization, it is the behavior of its employees which distinguish them from competitors. Cultural fitment comes from assessing the basic premises of observed traits along with training and delivery practices which ensure that the organization progresses in its journey towards growth and customer satisfaction.
- **Accession:** As the organization progresses, resources are driven to higher roles and responsibilities based on their competence. However, predictive psychology has now demonstrated that resources can be measured to predict their ability to perform not only for today, but also highlight their potential for tomorrow. Organizations do not hire for today, but for a longer horizon and assessments help measure for traits

to predict a future employee's potential to take on leadership roles in the future.

- **Readiness to engage:** The commonality of all the four factors can be covered using assessments as clear indicators for today's capabilities and can often be misjudged by the interviewer for lack of articulation at the candidate's end. Consider how easy it is to learn to speak a language for communicating in a foreign land; most tourist guides are fluent in multiple languages as they pick up key reference terms to engage. However, in-depth knowledge can only be understood when writing skills are involved. This is why an assessment can predict true knowledge and level of command of various skills and domain knowledge along with behavioral predictability of cultural fitment.

While we have kept on emphasizing on assessments, one of the key reasons can be found in its ability to measure and hence create benchmarks for analyzing hiring data. Going back to the core, most organizations which flounder as they increase their numbers lies in the reality that while senior hires are hand-picked by the founding team, this role is delegated to the middle rung managers. Having no benchmarks means that our biases influence outcomes in hiring, thus leading to a breakdown in the cultural and readiness measures for hiring the right fit. This reasons why the weightage of scores for assessments versus interviews should be in a 70:30 ratio to hire the best resources.

Having assessment data also helps find other purposes beyond hiring. Relocating resources to newer roles or added responsibilities means having data on readiness and potential to decide on promoting and succession planning, among others. But at the core, having scores to denote who fits and who needs to let go becomes a scientific basis for hiring practices rather than pure interviewing techniques, which account for 30% of mis-hires. While one may argue that assessing for skills is enough, but research by SHRM tells us that certain behavioral traits like motivation and engagement reason for over 55% of terminations.

Role of benchmarking in hiring

Talent availability is based on the pool of resources. Not every engineer is available for hire at a given point in time. The universe of resources can

also be bifurcated into clusters of educational qualifications, the quality of the educational institution, the amount of work experience, age, previous industries et all. All of this plays a role for HR analytics to derive meaningful outcomes and draw insights which can impact the future performance of the workplace.

Finally, every role begins with a research and thorough understanding of the role and its demands in the first place. A job role which has not been researched enough has not met the dynamics of time and management-oriented understanding of why something is needed and why. Here the answers could be found by asking the following initial questions:

Why do we need someone for the role? Are the job processes involved relevant today?

If yes, can they be automated?

If not, what are the minimum requirements in terms of skills, behavior, and knowledge?

How did we determine the minimum requirements and who determined it?

What addition requirements could be foreseen in the role a few years ahead from now?

All of this brings us to the point of benchmarking. Let us look at some newer approaches at benchmarking. One of the difficulties often faced by HR practitioners is the creation of career paths for employees for longer loyalty and growth prospects for every member of the organization. The scope narrows as one rises the ranks, and hence, one of the most interesting factors is to create pathways which can provide means of career growth and newer learning abilities for every aspiring employee. How can one approach this problem, remain objective, and yet provide a true picture of the scope to employees within the organization to feel excited and challenged over the years? This is where benchmarking comes into play.

Competencies are broadly of two types; work competencies or functional skills, which can include cognitive skills and behavioral competencies. While functional skills focus on competencies required to address work level challenges, employees are also expected to exhibit behavioral traits which are in sync with organizational and cultural philosophies like the vision mission statement to align the employee towards the organization's espoused path to mandated success. A customer facing organization like

Amazon will have to find employees who keep customers at the center of their efforts; this needs to be exhibited in the workflow, and in the behavior, else customers will spot inconsistencies and the same will also get reflected in the work behavior.

To find these competencies within existing employees, there are two approaches: top-down or bottom-up approach. The top-down approach mandates the adoption of management-driven competencies and is an early approach while mature organizations will need to use the bottom-up approach, adopting common competencies among the performers as ideal behavior to be adopted and benchmarked for both existing and future hiring and training. So why separate approaches for an organization at varying stages of maturity? This is because the adaptability of the process becomes easier while making it meaningfully accurate. We will discuss competencies in greater length in the forthcoming chapters as we progress from the theory to the practice of competencies and its role as people excellence indicators.

Impact of competency-based recruitment

Consider a young organization with much less workforce; it would be easy to introduce changes like driving a set of required competencies using the carrot-stick psychological approach with little impact of its fallout. However, at a mature stage, the fallout, even at miniscule percentages, can affect larger numbers, causing catastrophic outcomes for the organization and its core purpose. The other factor for competencies, when not measured at the hiring stage will result in multiple variable levels of competencies with no control mechanisms. Thus, it is better for large organizations to find what works at select levels and categories of employees rather than encompassing a set of task-driven external set of competency variables which might find little resonance or adaptability within the existing set of employees.

Researchers Sanchez and Levine (2009) concluded that competency-based approaches are more effective as they tend to look at performance through influencing and thus have a higher impact on future performance compared to job analysis, which rather looks at how the job is done and does not include any modes of further improvement within the practice. The ideal scenario would of course be merging both the practices, as argued by the researchers. A well -designed tool which combines the job requirements of

capability (skills), knowledge (level of skills), experience (years of practice or qualification) and personal attributes (behavior) form the best practices in designing role definitions for hiring or replacing with new talent.

We began with hiring challenges as exhibited in [Figure 2.1](#) and tried to rationale that including the candidate aspirations along with the org aspiration which is a critical feature in hiring processes to make it objective, meaningful, and attract the candidate who truly wants to work for the organization, irrespective of its brand image. When we question this approach, we arrive at the critical aspect of values. I have written a book on this subject titled Reasoning Our Choices and it could be a good read for anyone trying to understand the values we ascribe to for all kinds of choices we make in our lifetime.

Now the question to be pose would be:

Should we ignore competencies and focus on values instead?

Shortlisting for values

Joining an organization is one of those important choices we make in our sustenance plans. This is where the flow of culture within an organization and the values it represents become important as seeking similar values are becoming seemingly important for candidates with multitude of options. This is being addressed by the brand prominence through adverts seeking the aligned ones to apply. Employer branding is one whole book to talk about as a practice and one can find good reading through a lot of books published on this aspect. For us, understanding values and their match should be the first step to shortlisting rather than job descriptions. To do so, use of pre-hiring surveys are gaining prominence as organizations seek to shortlist based on value systems first and look at competencies, albeit important at a later stage.

So how does one find values within an individual?

A per-hiring values survey framework should seek to know the top 5-6 values from a list of values exhibited within the Survey platform. Say, there are 20 values like excellence, integrity, opportunities, togetherness, autonomy, and the candidate needs to identify the top 5-6 values. The secondary linking question would be to understand whether the value selected is a hygiene principle or a motivating factor for them to perform.

Pexitest.com Surveys are pre-designed for such assessments, and one may explore them for such purposes. The findings would be useful to understand from the perspective of the values one identifies with, the ranking denoting the level of importance one prefers over another and the secondary linking question highlighting whether the candidate is more socially driven for being part of an organization or more aligned towards self-goals.

My personal research as I have worked with dozens of organizations seeking interventions in people management practices have often found HR managers rushing towards engagement surveys for improving the performance where the problem lies in the values espoused by employees; this can be easily corrected through hiring right in the first place, and the price for the same far outweighs the results and its benefits in the long term. However, we often fail to budget for such practices while providing expensive tools and technologies to the employee and yet fail in luring them to perform:

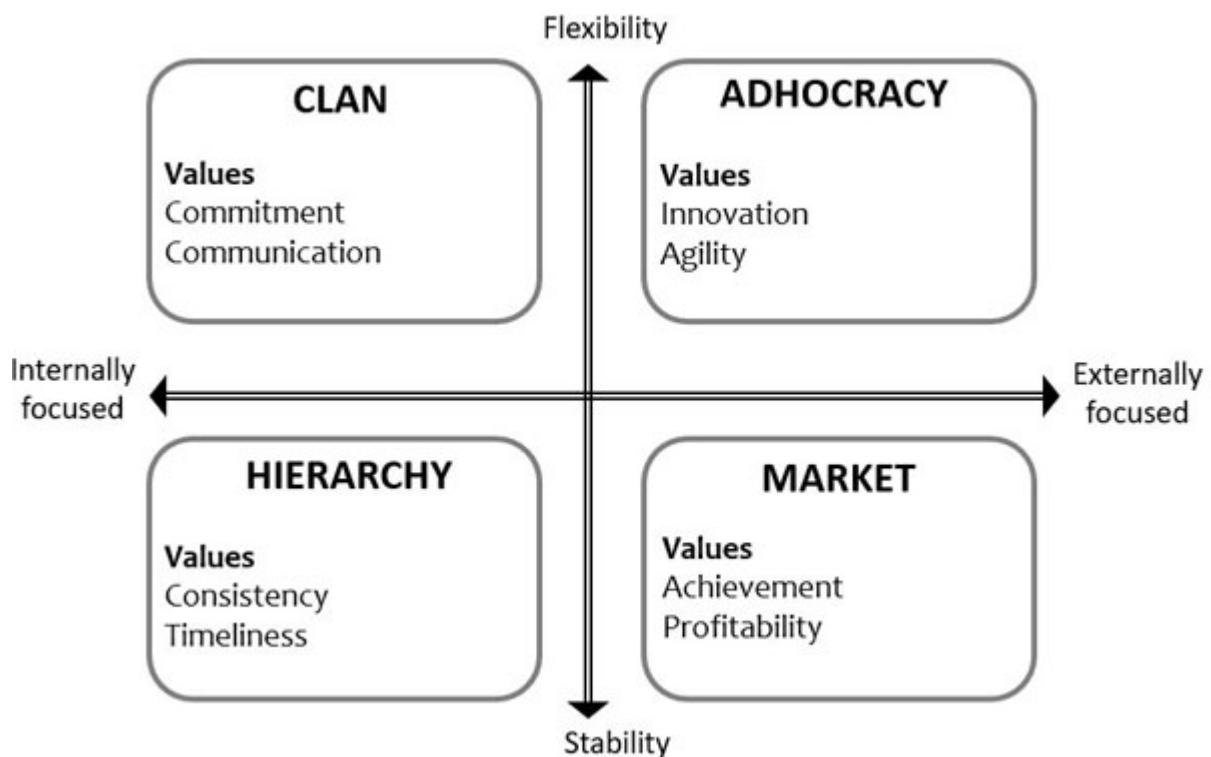


Figure 2.2: Cameron and Quinn Model (1999), Competing Values Framework

Which are the values to be sought can further be determined. For example, the Competing Values Framework as exhibited in [Figure 2.2](#) by Cameron and Quinn (1999), where the organization could be determined operating

within a matrix of openness and consistency through operating values. However, any organization can conduct a Values Survey to establish its values practiced by different departments and shortlist based on the same.

This is the reason for benchmarking the Values and Competency data becoming important while hiring for the twin factors of effectivity and efficiency. Competencies and values may become dated or may have a particular need to be re-evaluated and reinforced among the team from time to time (typically once in 18-24 months) due to market or business demands. Finding levels of decline or the rise of new competencies and their impact on workplace effectiveness and efficiency brings to the fore to align the findings to hiring as a dynamic plate of ever changing needs to push growth and success at the finishing line.

Competency measurements do come with the caveat of effectiveness of the assessment. Most behavioral assessments are claimed to be untrue because they do not predict with mathematical accuracy; but the efficacy of the findings can be found to be accurate more than 80% of the time. Well, what about the 20% time when it may not be a good predictor? We need to consider other tools along with competency to find the causes of variation to better explain its impact of relative non-impact during such times. This reminds us of the clause of defining such findings analytically. *What exactly happened? Did the person behave as predicted or was the prediction limited to predicting only the true negatives? How and when were the observations in contra observed? How was it recorded and who determined the analysis?*

More often than not, behavioral indicators need to be understood not as pure arithmetic determinants, but a more fluid effect of multiple traits colliding and conniving to determine our behavioral choices. We will understand this at depth going further. As for now, we can be assured that it is beneficial to have data which can guarantee 80% accuracy of effectivity and efficiency of purpose rather than none at all.

Interviewer bias in hiring

Many of us would have faced or will face the interviewer bias in the interviewing or shortlisting stage. This is caused by human biases and which has been discussed in the previous chapter itself. Interviewers are humans and have their own preferences for what they might consider as the

right hire. But the goal for using analytics is to solve it with as much accuracy possible. To highlight a real-life example, Google initially had 14 interview rounds to hire the right fit. On analyzing the findings of the interviewers, validating the questions asked and the responses of the candidate, it has been able to reduce the same to 4 rounds, post which they have found it not adding any further value to the process and its objectives. But the story does not end there.

One key strategy used by organizations like Google is to select interviewers from departments other than the ones the resource is to be deployed. This helps reduce the buy pressures from the department and ensure that the hiring process is kept with the organization culture and a strict adherence to the key objectives of hiring in mind.

Role Contribution triad: QUALITY | TIME | MONEY

People contribution to each role can be expressed within a triad of quality, time, and money. Certain roles have a higher contribution to one of the triads while roles higher in the org hierarchy end up contributing to all the elements of the triad in varying measures. Pick up a role from the receptionist to the CEO and you would find each person contributing to one of the elements of the triad. Interviewers need to recognize the triad element for the interviewing role and seek answers to analyze the candidate's understanding of the role with respect to the triad elements.

What according to you is the most important contribution you can offer through this role?

Key to analyze as an interviewer is the emphasis the candidate offers to the particular element of the triad and whether it links to the role element in similar weightages.

Now that we have discovered what to follow to search for *right-fit* in a candidate, let's find out how to approach it in a structured way without falling prey to the innumerable distractions that gets presented during an interview. We have discovered the 8 most common distractors and listed them as follows:

- Specific before general

- Internal before external
- Current before historical
- Time efficiency
- Open-ended questions
- Interviewer to counsellor approach
- Networking approach
- Relationship/cognitive bias

As humans, we fall prey to hear the specifics before the general, try to gather information on their current contributions without understanding how such strengths got build up and often end up asking open-ended questions to allow the candidate to conduct the interview than the other way around. To reduce such biases, the list of questions to be asked, the order and sequencing with jump clauses, in case the candidate has offered answers already and then assigning scores to the same will help us build a clear path to the use of analytics in interview rounds.

Most candidates showcase a lot of creativity during interviews while explaining their potential worth as a **Situations | Tasks | Action | Results (STAR)**. The Star method finds candidates overstating their importance in their role with the aim to getting hired and such claims (with little or no ways to verify) can rather be analyzed through the use of the 3Cs framework as shown in [Figure 2.3](#):

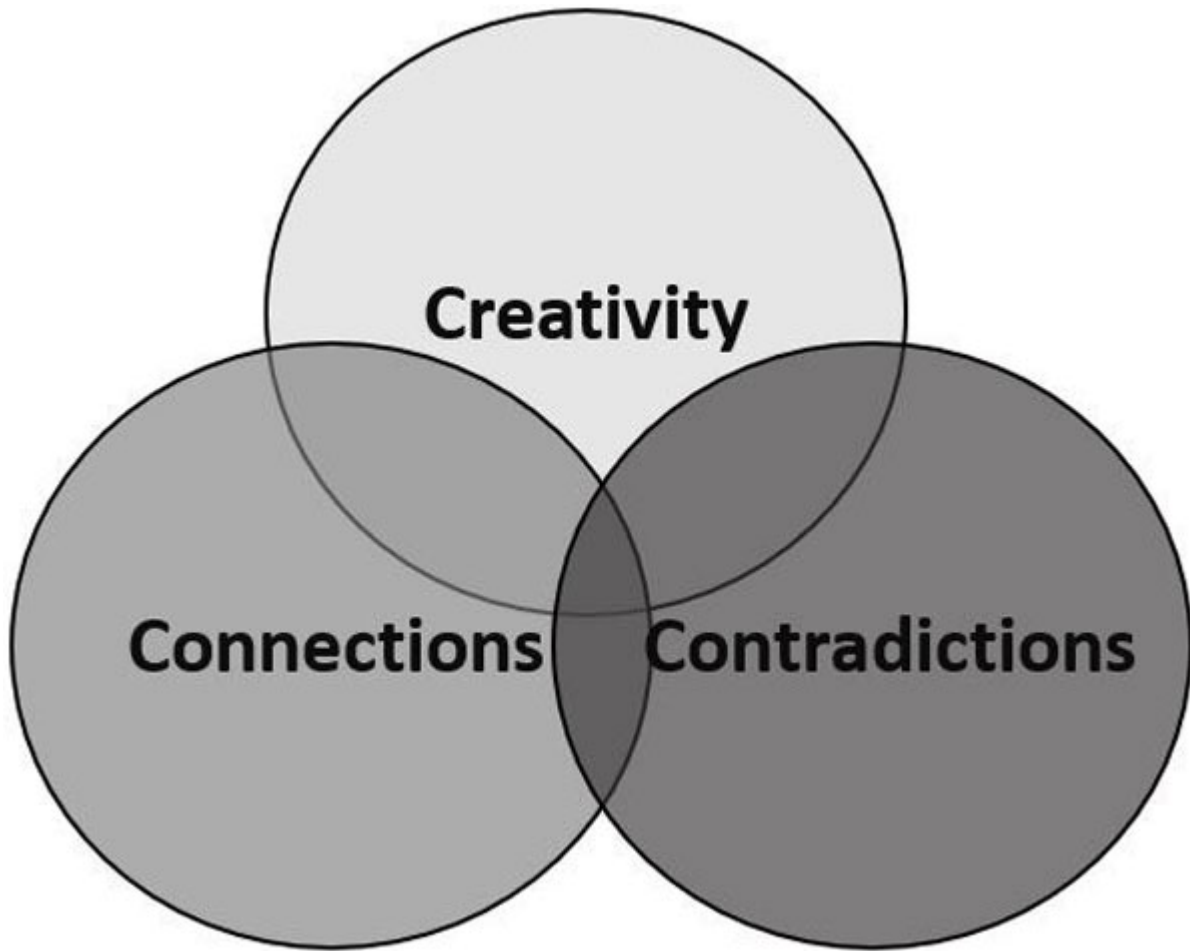


Figure 2.3: 3Cs framework

Rather than getting drifted by candidate expressions, it would be rather wise to seek to understand a candidate's response to a certain situation within the hiring organization and within the domain knowledge of the candidate and analyze the responses for the following:

- How creative is the candidate in finding relevant solutions to a process problem?
- Do the solutions link up to offer answers are they disjointed arguments?
- How logical do the solutions sound? Does it include contradictory logic?

[Analyzing the interviewer bias](#)

The scores allotted by the panel of interviewers as individuals can throw light on the interviewer being biased or being a great ‘spotter’ for talent. In a panel of 3, if one interviewer offers contra scores, it might be difficult to understand whether the candidate was correct, or the interviewer failed to assess accurately. Average the scores while retaining each panel member score to their own with a final decision to be taken by the head of the panel or the relevant authority. However, once hired or tracking the rejected candidate’s performance through LinkedIn or GoldenCircle type of platforms can highlight whether the lone ‘spotter’ contradicting with the rest of the panel was right and whether there are certain interviewers who are biased or not good in their role as interviewers and maybe be better left to their individual roles.

A post analysis of the scores using tools like Pexitest.com PMS can offer great solutions to ensure the limitation of such biases and lowering them to less than 2-5% in hiring decisions. The flow of scoring interviewers as a secondary data from the interviewing process ensures a fair and measurable process is followed and the scores are calculated, analyzed, and available for further analytics.

The 8 key factors to score the candidate can also be later analyzed for interviewer bias. These factors can then split into a scores, totaling 100, along with the Triad elements with varying weightages and leading up to 130 for an overall interviewer score as seen in [Table 2.1](#):

| CANDIDATE A SALES | Interview Scores | | MEMBER 1 | MEMBER 2 | MEMBER 3 |
|----------------------|------------------|---------|----------|----------|----------|
| | Maximum | Average | | | |
| Money Focus | 10 | 7.7 | 6 | 9 | 8 |
| Time Focus | 10 | 3.7 | 2 | 3 | 6 |
| Quality Focus | 10 | 5.7 | 5 | 5 | 7 |
| Domain Knowledge | 12.5 | 10.0 | 8 | 12 | 10 |
| Passion & Confidence | 15 | 7.7 | 6 | 9 | 8 |
| Communication | 15 | 7.3 | 5 | 9 | 8 |
| Appearance | 12.5 | 5.7 | 5 | 5 | 7 |
| Team Player | 12.5 | 7.7 | 6 | 8 | 9 |
| Team Management | 10 | 7.7 | 7 | 8 | 8 |

| | | | | | |
|-----------------------|------------|-------------|------------|------------|------------|
| Work Experience | 10 | 5.3 | 6 | 7 | 3 |
| Background | 12.5 | 5.3 | 5 | 6 | 5 |
| TOTAL | 130 | 73.7 | 61 | 81 | 79 |
| AVERAGE SCORES | | 6.7 | 5.5 | 7.4 | 7.2 |

Table 2.1

As we can observe in [Table 2.1](#), Panel Member 1 is conservative while Panel Member 2 seems quite liberal with their scoring. It can also be seen that Panel Member 3 differs with his co-panelists on Candidate A's time and quality focus. It is important that these scores are accumulated as it might seem easy to do it for one candidate on pen and paper but doing it for hundreds of candidates and maintaining these scores for further analytics needs the precise tools which analytics covers easily under its wings.

Further, these scores can be used for predicting hiring needs or analyzing the quality of resources available within the mini universes we operate and transact. Organizations which seek to scale and grow at a faster pace compared to industry standards need to adapt the right hiring practices and use a lot of digitization in its processes to reduce manual intervention while improving processes and general and particularly hiring practices which involve analyzing both ends for multiple parameters.

Conclusion

Hiring first-time right should be the motto, and to practice it, Business and HR Managers will have to look internally for processes and practices which haven't been yielding results any longer the way they used to do before. This can be blamed on the advent of information and technology combined to make the world smaller but choices wider:

- The changing dynamics demand ascertaining candidate interests with organization interests for hiring first-time right ensures lesser bad hires.
- Every hiring should begin with shortlisting for values and longlisting for competencies and job requirements.
- The final stage of interviewing contains the scope for human error of judgment through biases and the same can be captured and analyzed to

correct for the future.

- The gathering of this data is key not only for hiring, but also can be used to further align with learning objectives as we shall explore in the next chapter.

Key learnings

- The five key hiring challenges are Interest, Commitment, Cultural Fit, Accession, and Readiness to engage. Employer branding plays a key role in addressing them.
- The need to evaluate Culture is based on values and it improves shortlisting while the longlisting process should include looking for the 4 key elements of Capability, Knowledge, Experience, and Behavior.
- Values should be sought based on org and departmental values and benchmarked for future hiring needs and aligning engagement.
- The interviewer needs to firm up the job elements as per the Triad and seek to explore the candidate focus through situational questions and hunt for the 3Cs of Creativity, Connections, and Contradictions in their responses.

Questions

1. What is important to understand the candidate interest in the job role?
2. What are the key elements and factors to be analyzed before hiring for a role?
3. How do we ascertain values? Why do values differ and how to spot them?
4. How can we measure interviewer bias?
5. Provide with an example an ideal scoreboard for a Marketing Manager.

Case Study - Hiring Through Numbers -Using Hands-On Excel

In this section, we will cover a case study to understand how to create hiring benchmarks for Talent Assessments. As discussed earlier, Talent Assessments are driven by the measurement of attributes.

This case study is for Aadyaa Retail, which has a strong network of 1,031 brand stores across the country. It is present across 5,000 multi-brand outlets and 1,000 plus points of sales in department stores across India.

Every year they pick up 40-50 MBA freshers at a Deputy Manager (DM) Level for their Brand stores. These often rise through the ranks and become Business Leaders in a timeframe of 12 – 15 years. Currently, in the AVP and above levels, 40% of the employees had joined at a DM level.

The CHRO wants to execute a project to understand if they can recruit more freshers with the *right* attributes to succeed at Aadyaa Retail.

The Analytics team pulls out the data of 40 DMs of the previous year and their performance. They look at this time-based cohort (a cohort is a group of subjects who share a defining characteristic) to focus on the latest trends in data.

NOTE: Selecting the appropriate sample of data to analyze is critical to the success of any project. Careful deliberations should be done before proceeding.

The solution will involve the concept of correlation. Correlation is the statistical measure of dependence and measures the degree of linear relationships. It tells if two variables move together in the same direction (positive correlation) or opposite direction (negative correlation).

Thus, when the summer heat goes up, the use of air conditioners and fans go up. This is a positive correlation.

When the winter cold goes up (becomes colder), then the use of air conditioners and fans go down. This is a negative correlation.

The presence of correlation in itself does not imply causality. Thus, correlation should be used as an indicator that shows promise of further relationships existing. The first level of Linear Association between variables is correlation.

The measure which describes correlation is called the Correlation Coefficient. This can have values between -1 and + 1 on the number line. Thus, 0 correlation coefficient values mean no correlation and the 1 value means complete correlation. The + and - signs indicate the direction of the relationship.

What does correlation really look like?

Quoting from Math Is Fun, <https://www.mathsisfun.com/data/correlation.html> A correlation is assumed to be linear (following a line):

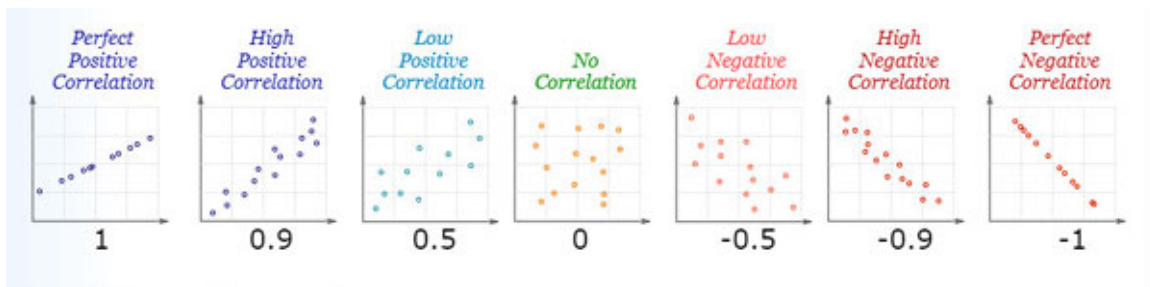


Figure 2.4: Correlation seen as a scatter plot

1 is a perfect positive correlation

0 is no correlation (the values don't seem linked at all)

-1 is a perfect negative correlation

The value shows how good the correlation is (not how steep the line is), and if it is positive or negative.

The fields in the data are:

- **Employee ID:** Employee ID
- **Performance_score:** This is the performance rating given by the manager. It has values between 1 – 5.
- **Talent Assessment Scores:**
 - Competency (behavior):
 - Achieving Goals & Objectives

- Team Player Qualities
 - Meeting Expectations
 - Value Systems & Adherence
 - Workplace Management
 - Managing & Organizing
 - Enterprising Qualities
 - Analysis & Interpretation
 - People management
- Reasoning:
 - Inductive
 - Deductive
 - Abductive
 - Verbal
- **Location:** This is the location at which the DM was located:

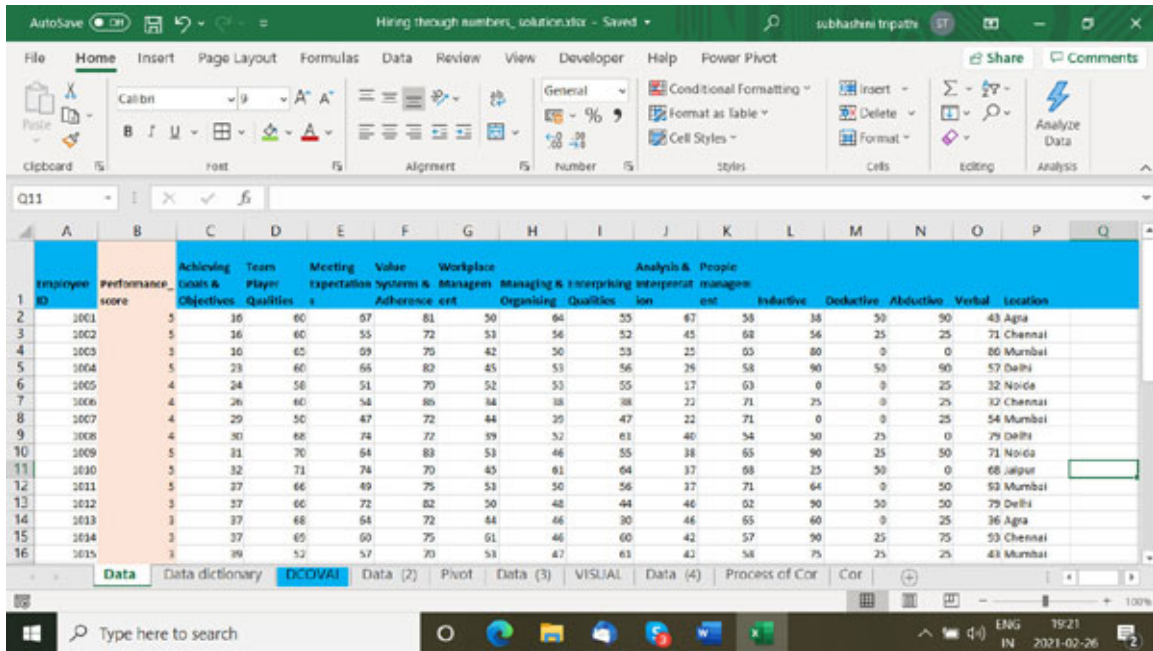


Figure 2.5: How the data looks

Let's start by creating a summary sheet to track the project: Sheet name DCOVAI.

Step 1 - (D) Define

The company wants to analyze if Talent Assessment Scores during the hiring process for Deputy Managers (DMs) can be linked to future performance on the job:

- DMs are management trainees from MBA colleges.
- They have 40 DMS in the last year batch.
- They have assessed these 40 DMs on the competencies at the point of recruitment through Talent Assessments.
- They want to link Quantitative Assessment outputs and Performance appraisal results.

Step 2 - (C) Collect

The data is limited to the Excel sheet provided.

Step 3 - (O) Organize

Refer Sheet: Data (2).

Problem YY variable: Performance_score:

- MISSING VALUES:
 - Rows/ Observations : 40
 - Columns/ Variables : 16
 - No Variable has missing values
- OUTLIERS
Since the Y variable is a finite set (1-5) of ordinal numbers (1<2<3<4<5); no outlier check is required:
 - The whole dataset will be used for analysis.
- Dummy Variables
 - Location is a Character Variable with 7 options
 - Convert Location to Dummy Variables (0 /1 variables)

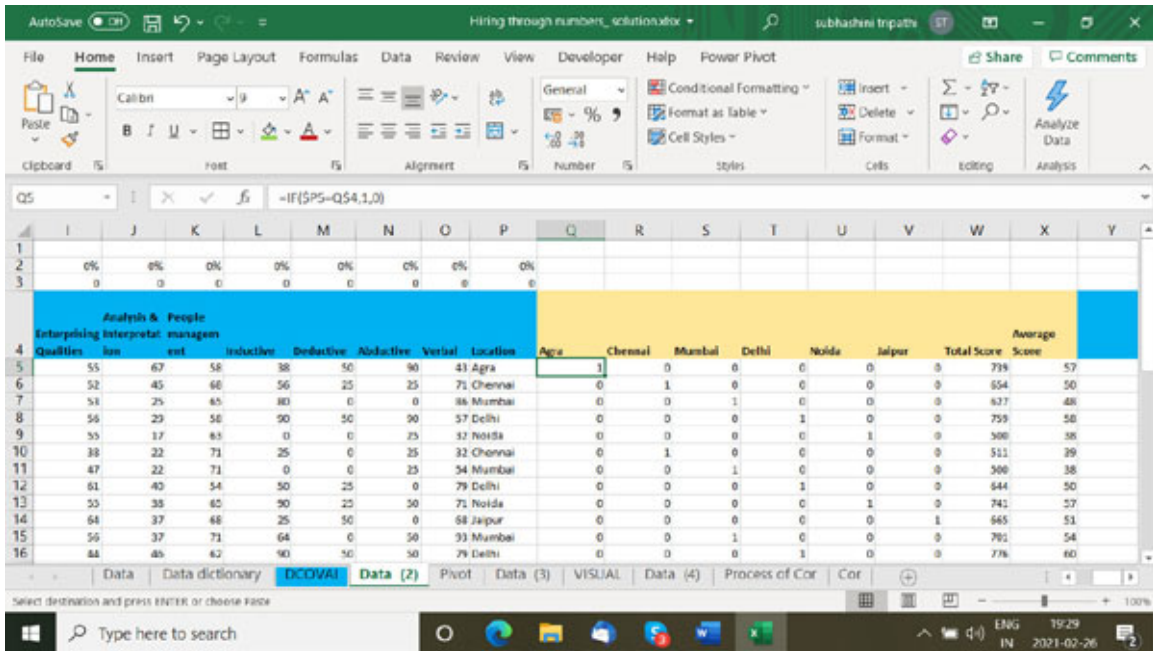


Figure 2.6: New variables added into the data

- Derived Variables: Create two columns: Total Score and Average Score

Step 4 - (V) Visualize

Refer Sheet: Data (3) and VISUAL and Pivot.

Let us see some of the graphs:

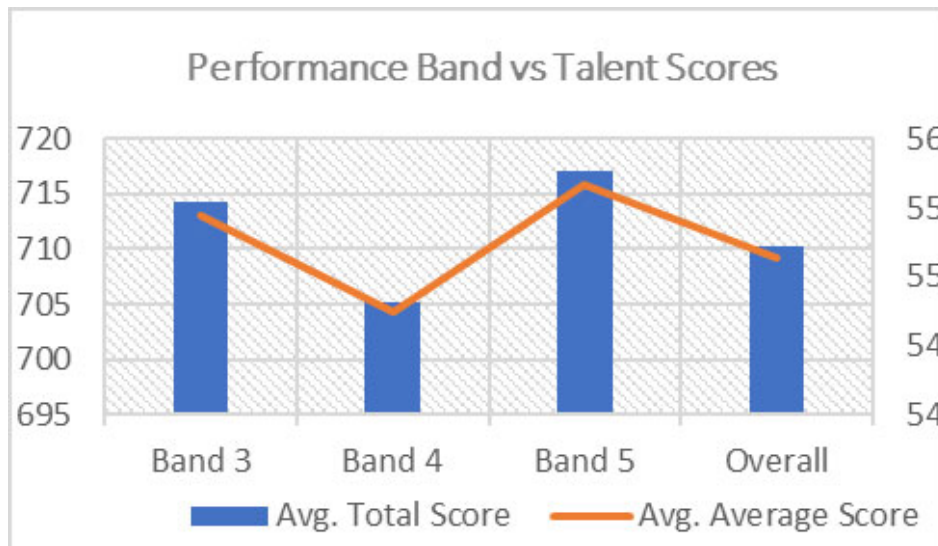


Figure 2.7: Graph 1 - Performance band versus Total score

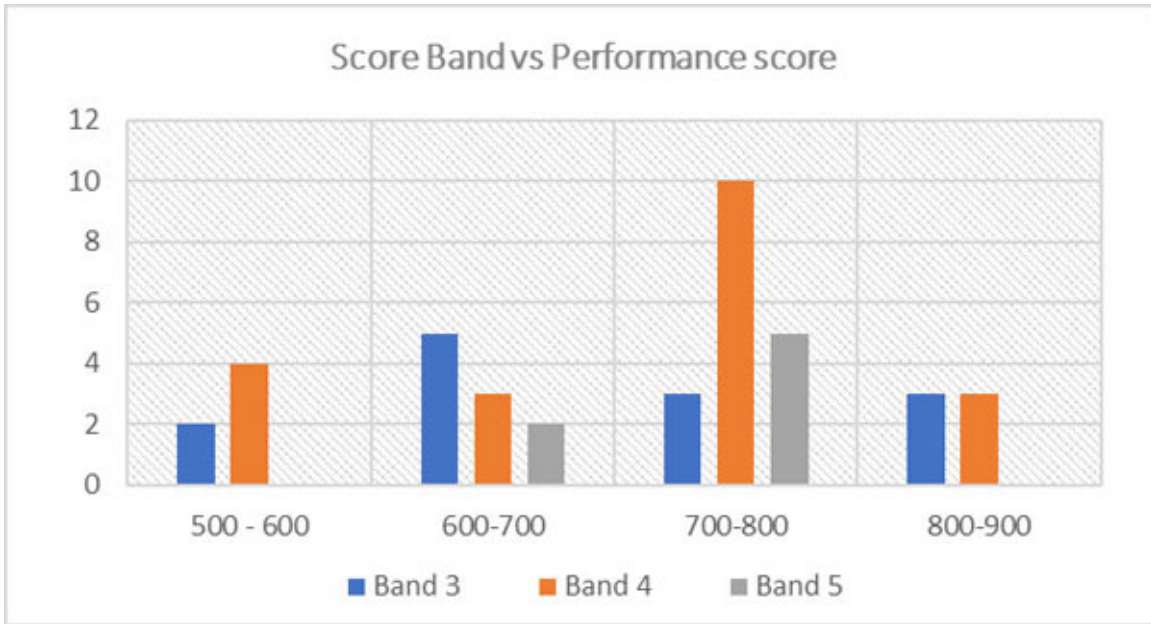


Figure 2.8: Graph 2 - Score Band versus Performance Score

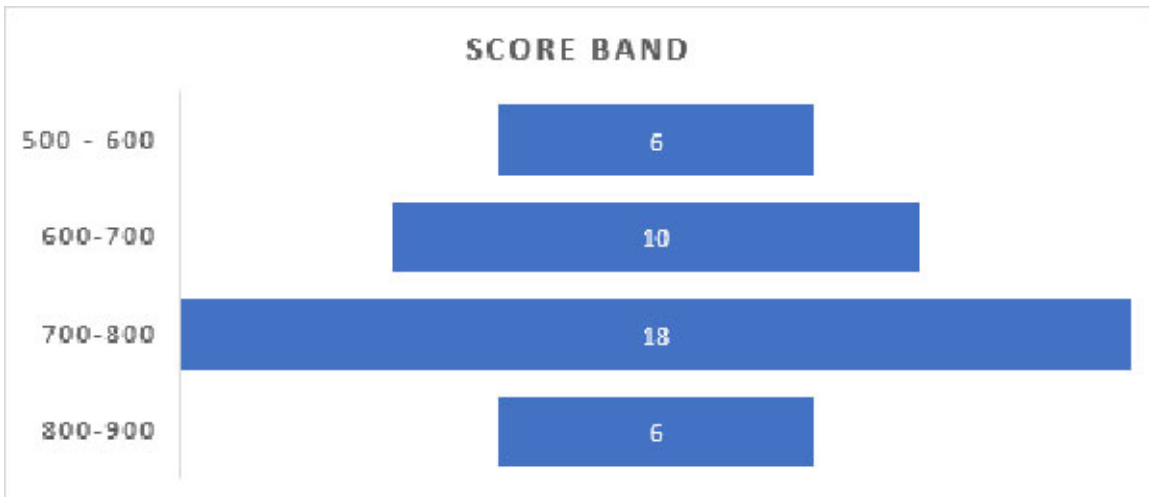


Figure 2.9: Graph 3 - Score Band frequency

Conclusion : In the graphs, we are unable to make out any trends for Total score and its effect on Performance.

Step 5 - (A) Analyze (Statistical)

Refer Sheets: Data (4) and Process of Cor and Cor:

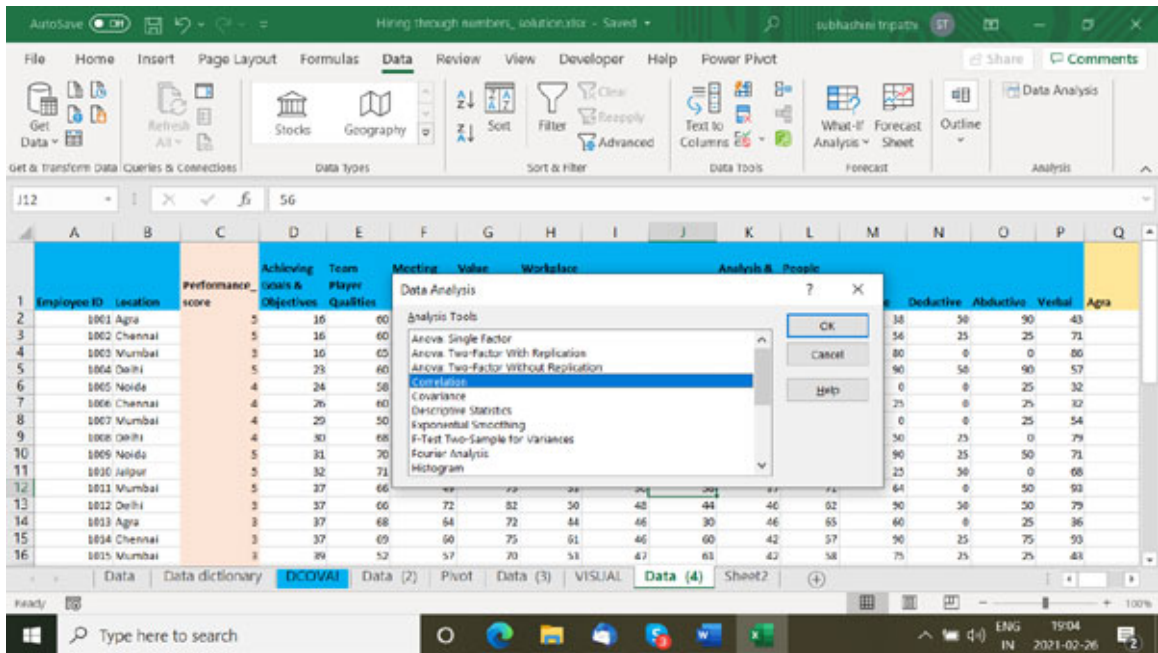


Figure 2.10: How to run a correlation - Correlation_Analysis toolpak_1

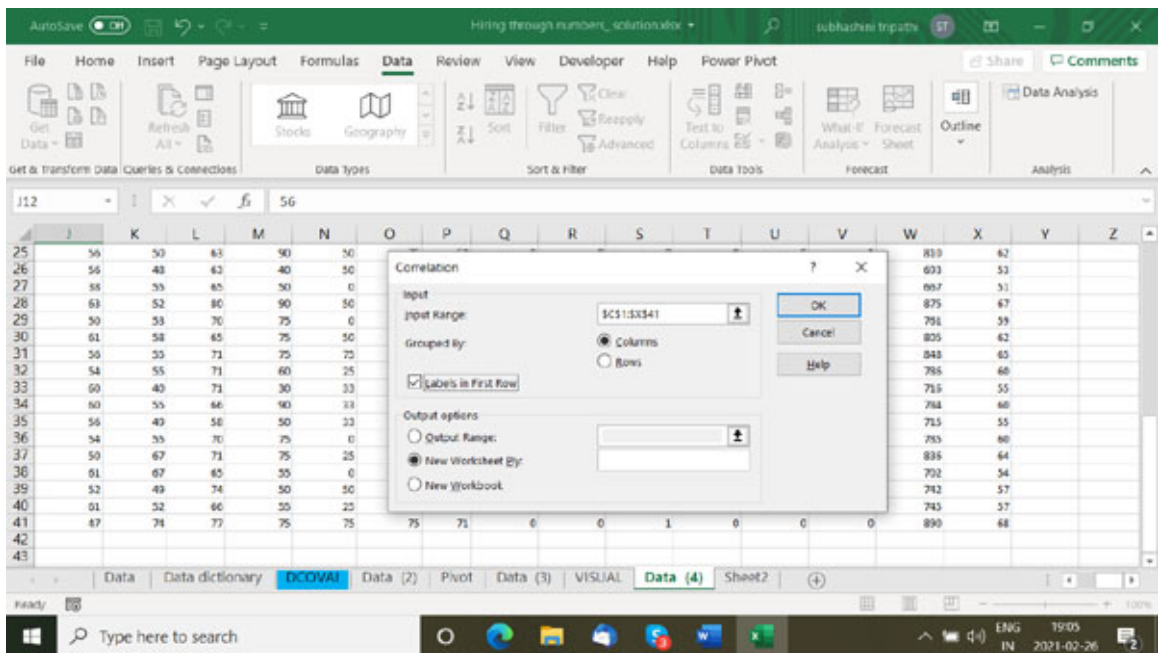


Figure 2.11: How to run a correlation – Correlation Analysis toolpak_2

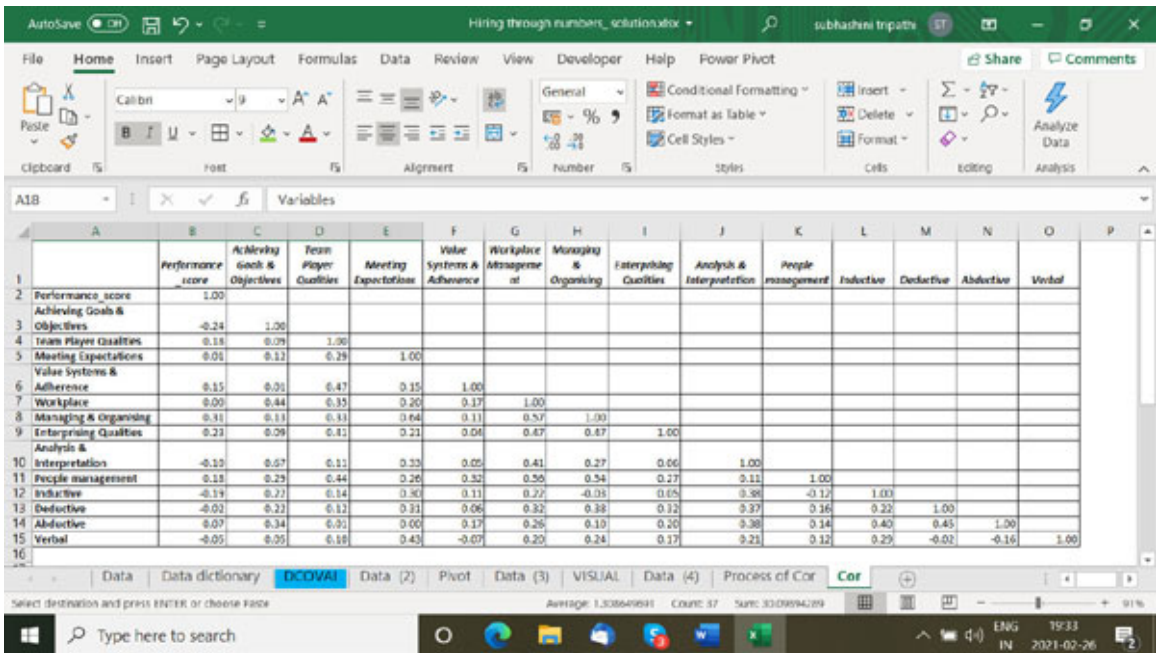


Figure 2.12: How to run a correlation - Correlation outcome

Correlation Grid: The first level of Linear Association between variables is Correlation:

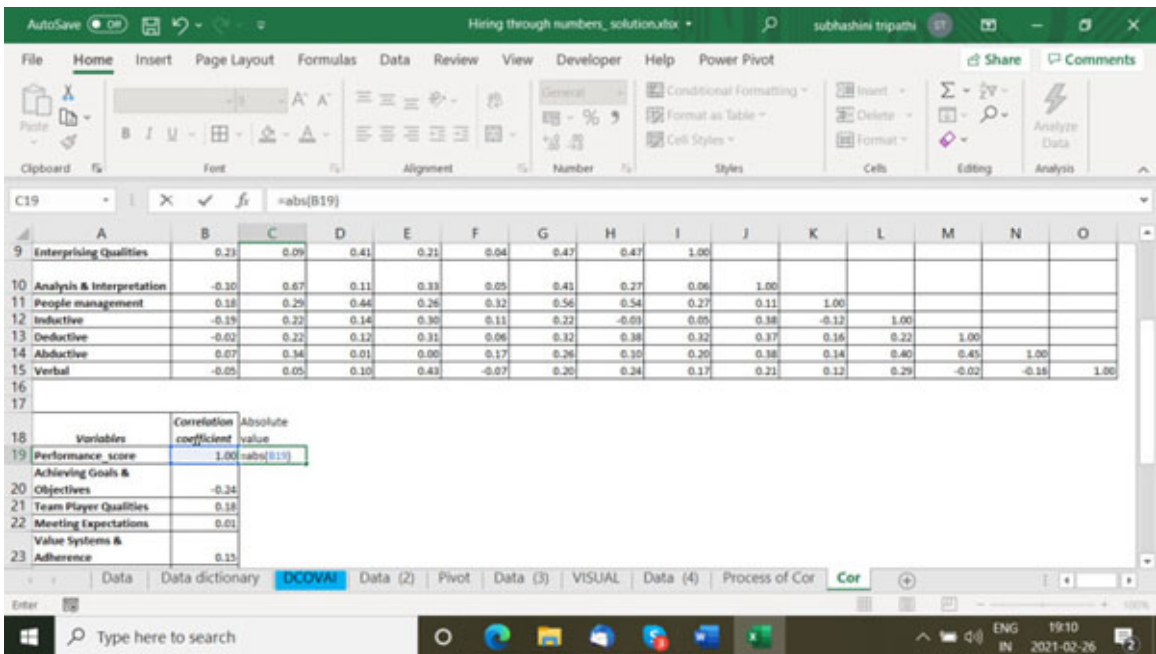


Figure 2.13: How to run a correlation - Correlation _grid_ calculation_ Absolute Value

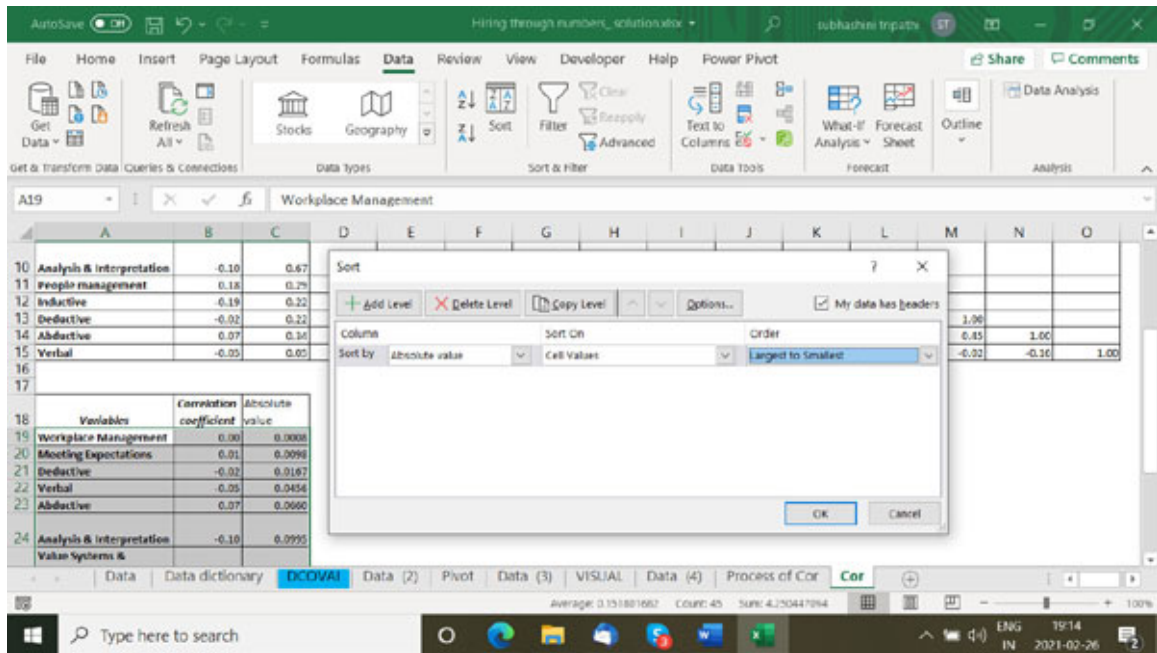


Figure 2.14: How to run a correlation - Correlation_grid_calculation_Absolute Value_sorting_descending

Thus, the outcome of the preceding steps is seen in the following table:

| Variables | Correlation coefficient | Absolute value | Top Drivers | |
|------------------------------|-------------------------|----------------|-------------|----------|
| Performance_score | 1.00 | 1.00 | | |
| Managing & Organizing | 0.31 | 0.31 | 1 | |
| Achieving Goals & Objectives | -0.24 | 0.24 | 2 | negative |
| Enterprising Qualities | 0.23 | 0.23 | 3 | |
| Inductive | -0.19 | 0.19 | 4 | negative |
| People management | 0.18 | 0.18 | 5 | |
| Team Player Qualities | 0.18 | 0.18 | 5 | |
| Value Systems & Adherence | 0.15 | 0.15 | 6 | |
| Analysis & Interpretation | -0.10 | 0.10 | | |
| Abductive | 0.07 | 0.07 | | |
| Verbal | -0.05 | 0.05 | | |
| Deductive | -0.02 | 0.02 | | |

| | | | | |
|----------------------|------|------|--|--|
| Meeting Expectations | 0.01 | 0.01 | | |
| Workplace Management | 0.00 | 0.00 | | |

Table 2.1: Correlation outcome

Step 6 - (I) Insights

Higher the better scores for:

- Managing & Organizing
- Enterprising Qualities
- People management
- Team Player Qualities
- Value Systems & Adherence

Lower the better scores for:

- Achieving Goals & Objectives
- Inductive

Conclusion

Correlation is one of the best ways to establish an initial relationship between the data and helps us make a few important takeaways like, which variables (fields) have the strongest relationship and impact on the problem statement. It becomes the first step to take before doing any type of regression.

Often, when datasets are very large, it is a good way to identify which variables to choose for visualizations and reports.

Key terms

- Correlation is the statistical measure of dependence and measures the degree of linear relationships.
- It tells if two variables move together in the same direction (positive correlation) or opposite direction (negative correlation).

CHAPTER 3

Learning and Development

The purpose of academic learning is to extend the experience into workplace progress. Workplaces are also turning into learning boards for employees as new skills are encountered, observed, and adapted for future growth. Meaningful learning leads to higher engagement, which in turn translates into higher productivity. Making learning meaningful through the adaptation of unknown skill traits, quality, and valuable content using a culture of learning and adaptation and based on the interests and motivation of the employee is key to a successful L&D program management.

Structure

In this chapter, we will cover the following topics:

- Learning needs identification
- Role of content and learning culture in organizations
- Aligning learning with skill needs

Objectives

After going through this chapter, you will be able to identify the new approach in learning objectives for aligning the performance and making learning focused for job roles and hierarchies. The new learning approach ensures learning is not a separate function but aligned to work towards a learn-as-you-work philosophy.

Learning needs identification

Learning Needs Identification or Training Needs Identification (LNI/TNI) is an effective first step to identify the domains to be covered within a training calendar, which will enhance the expertise of the employee

to improve his/her productivity. Even when we consider employees for promotion into new roles, we need them to be part of some training to ensure avoiding the Peter Principle. How can the organization decide for a group of individuals the areas which need to be covered under a particular training calendar?

Note: Peter Principle

The Peter Principle is an observation that people rise to their own levels of incompetence. The concept was developed by Laurence J. Peter and has two ends; on one end, it assumes that people are unable to grow beyond their own levels of competence and can improve their positions within the structures based on how competent they are presumed to be. On the other hand, it has also been found that people refuse to take up responsibilities when they assume that they would be incompetent to perform and thus remain stuck at their own levels of competence.

The three common methods in hierarchy of effectiveness are as follows:

- **Learning gap identification:** When a measurement tool (assessment or survey inventory) is undertaken to identify the gaps in skills and competencies, it identifies the strengths versus areas of improvement among employees by measuring them and equally benchmarking against peers to lead to an unbiased scoring for Learning Needs Identification.
- **By Managerial recommendations/Self Nomination:** The Reporting Manager is often aware through observation about the learning gaps or future potential of an employee and thus lists areas of Learning & Development for their team members. The employee can also be required to select a minimum count of subjects to cover as part of learning needs using self-nomination; this is particularly done for senior members to allow them the freedom to choose while ensuring mandatory learning hours on the job for better performance and expertise.
- **By experience:** The Learning and Development team has the experience to decide and hire Subject Matter Experts who are aware of happenings and new insights across the industry and conduct training

for employees to either adopt faster or remain ahead of the curve. This is often done as part of a central or an Org level initiative based on strategic inputs from the Board or businesses for aligning to external factors.

The four cornerstones of effective learning in this digitized age of HR 4.0 are as follows:

- **Content:** This can be parameterized into micro and macro learning content.
- **Skills:** This can be classified into Functional, Cognitive, Behavioral & Value-based skills.
- **Digital Exchange:** The medium of exchange has become digital, and technology contains within itself a plethora of options for learning through exchange of knowledge and ideas.
- **Complexity:** This can result from experience, culture, and capability for all the three above factors, based on organizational maturity, size, and influence.

When we talk about needs of learning, we must include the priority behind it first. Organizations shifting gears to move into newer directions or adopt newer approaches need communication and training for the newness as a clear mandate. With this express thought, the aim for L&D Data Scientists would be to measure the impact from the point of view of manhours and manpower commitment within a defined calendar timeline to introduce the learning mandate.

The second level of priority for L&D would be learning gaps identified as part of appraisal or performance scores for learning interventions. These need to be completed within the first few days to ensure sharper and focused delivery of employee standards from the point of view of skills.

Measuring LNI gaps

Measurement of LNI gaps can be found from two key indicators: Operational Efficiency scores and Customer Satisfaction scores.

Operational efficiency

This looks at process efficiencies aimed at improving processes, lowering costs, lowering timelines, and reducing **Turnaround Time (TAT)**. All of these are aimed at the single objective of making the operations effective through tweaking of one of multiple parameters to meet the objective guidelines.

Customer satisfaction

This aspect goes a bit beyond operations and can be linked to design, communication, and value worthiness of the product and services as perceived by the customer. One thing to note here would be to understand the importance of satisfaction versus importance and there are different things in the eyes of the customer. Where they aren't different, however, the need for learning needs to be identified as gaps in meeting the objective scores.

Customers are not only the external entities, but internal customers within the organization to satisfy as part of a department or skill segment. The Purchase Department staff has production as customers to satisfy just as a Credit Department has the Sales Department as its customers in banking parlance.

For the HR Analytics Manager, the role of providing a calendar to pull out manpower from respective departments without derailing the business operations is a challenge and a key goal. Additionally, it can trigger the need for higher bench strength when there are too many training needs identified and which can disrupt the flow of operations. Using both calendars and optimum manpower requirements along with competencies can address this with a higher element of ease for addressing the gaps. When certain departments are identified as stressed, the development of an alternative taskforce to provide critical support while the other undergoes training is a challenge. Therefore, the new approach of learn-as-you-work is a useful approach to explore for HR & Learning practitioners.

Standards and measures to determine learning gaps

While learning needs are typically identified by supervisors, modern tools can help identify learning needs based on certain principles identified;

primary one of them being defined by external standards.

- **Fundamental standards** refer to the existing standards expected based on average levels found in adults based on content and knowledge parameters.
- **Transferable standards** refer to the ability to share and educate others and highlight skills at a level above fundamental knowledge levels for skills and competencies towards a mentoring approach.
- **Enduring standards** refer to deepened skills which can not only address normal or everyday application of skills but also address critical functions within a skill or competency.

Defining these levels for skills within the workplace become a first approach towards identifying and grading gaps towards identifying learning gaps. While these are external-based standards, learning gaps can also be identified from the individual perspective.

The individual gap analysis can be summarized through certain principles, also known as the Learning Laws of Thiagi, where learning principles have been segregated into three key segments, seven learning laws for adults, five learning laws for all human beings, and two learning laws for all creatures. For the sake of focus, we shall discuss the seven learning laws to be kept in mind for adult learning here, while the rest can be accessed from www.thiagi.com - **14 Important Laws of Learning — The Thiagi Group**.

The following content further has been reproduced and can be found at www.thiagi.com/articles/2014/12/28/laws-of-learning:

- **Law of previous experience:** New learning should be linked to (and build upon) the experiences of the learner.
- **Law of relevance:** Effective learning is relevant to the learner's life and work.
- **Law of self-direction:** Most adults are self-directed learners.
- **Law of expectations:** Learners' reaction to a training session is shaped by their expectations related to the content area, training format, fellow participants, and the trainer.

- **Law of self-image:** Adult learners have definite notions about what type of learners they are. These notions interfere with or enhance their learning.
- **Law of multiple criteria:** Adult learners use a variety of standards to judge their learning experiences and accomplishments.
- **Law of alignment:** Adult learners require the training objectives, content, activities, and assessment techniques to be aligned to each other.

All measuring standards must keep in mind these laws and their effects into the measurements for validation of efficacy. For example, the first law of building upon earlier experiences is useful only when we can provide learning as a continuum with the pre-learning levels measured and validated.

Role of content and learning culture in organizations

Content is often based on strategic and organization-based requirements.

While leaders need strategic micro inputs from Subject Matter Experts which might also be helpful in grooming Senior Leadership, behavioral content turns out to be more useful for Senior, Middle, and Junior roles. This has been exhibited in [*Figure 3.1: Content Customization Framework*](#) to exhibit the importance of content creation for learning needs.

Functional content, which might be macro and hence more subject-driven content, can be found effective for Junior and Middle role employees.

For learning effectiveness which can be innovative or specific to the organization, it requires customization and is strategic in nature due to its capacity to impact. This should be built in-house to ensure core learning is captured and influenced through the organizational learnings rather than fixed content.

Multiskilling and functional diversity in approach distinguishes one organization from another. The importance of strategic content comes into effect also as the importance of services in manufacturing is also impactful.

Observe the impact and use of content based on needs as a framework for ease of understanding as explained in [*Figure 3.1*](#):

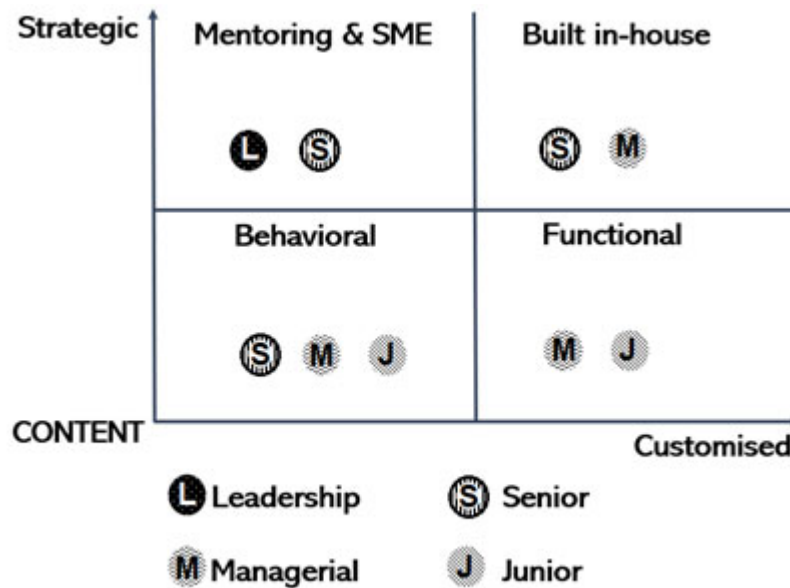


Figure 3.1: Content Customisation Framework

Figure 3.1: Content Customization Framework

Content can differ based on design and purpose. Here, you can notice the content design and its application based on the hierarchy of the organization plus the purpose; the need for strategic learning is higher for the senior and Leadership team while behavioral and functional training is mandated for mid and junior team members. However, due to organizational dynamics and efficiency based on personalized application of domain knowledge, content needs to be customized for specific functions or for the Senior and Managerial teams for strategic insights, thwarting competition, or creating a specific learning culture which carries its unique practices to remain focused to its objectives.

[Skills as an organizational culture](#)

Skills for every role at the workplace today is an eclectic mix of functional skills, problem solving skills, varying levels of curiosity, and a set of values in sync with organizational principles.

Instituting learning for both current and future professional skills, many of which could affect core fundamentals and frameworks lose relevance to newer approaches. However, the basis for such can be found to be different in consequences rather than approaches, which remain the same in HR 4.0.

One of the manifestations of skill-focus can be attributed to increasing complexity based on information overload. Re-organizing and re-skilling of employees along with re-orientation of values becomes important in an ever-changing universe of diversified cultures and globalized localization.

Let us find the classification of skills using the 4Cs at the workplace today:

- **Capability:** This deals with functional or generic human skills like accounting, communication, or specific job role-based competencies like negotiation skills or team player qualities. Capabilities are easy to score quantitatively and can be benchmarked for purposes of hiring or defining performance.
- **Cognition:** The ability to solve problems based on reasoning is one of the most sought-after skills to deliver new insights in the age of technology and AI. Specialized knowledge of managing information as numbers or text is the requirement for moving faster forward with the aid of technological tools and digitized applications for exchange of value. Logical reasoning skills like deductive and inductive reasoning or use of verbal and language skills to communicate in crisp, simple one-liners are the need for any growing organization.
- **Curiosity:** This factor is often neglected by organizations, abdicating the importance of the very core of human progress. Curiosity led human civilizations to discover and invent tools to march forward, and personal levels of motivation, openness, learning interests, and leadership styles are derived from the basis of curiosity.

Have you wondered what was the curiosity which drove you to read this book?

- **Core Values:** Value-based skills are areas of social cognition and driven by our cultural values and ethos and we discussed this in the earlier chapter of this book. The need to adapt to diverse languages, habits, and signs for integrating into the global village requires a set of values to be self-nurtured for its natural embodiment. Our values of reputation, ethics, and what we consider right and wrong are entirely value-driven; what is right in one land can be seen as an evil practice in another, thus highlighting the importance of a value-based approach.

Digital exchange and the new approach

Digital exchange of knowledge, skills, and values are becoming the norm across geographies, functions, and mediums. Ignoring the technology revolution and its impact can only be at the peril of self-sacrifice and sciolism.

The five key reasons for digital applications to enhance learning efficiency can be described as follows; while they cannot be emphasized enough, let us ponder through the important aspects of the findings and discuss them in brief:

- **Micro learning is in:** Measuring and personalization of learning deliveries in bit sized packets requires digital platforms as learning at work is less academic and more design based.
- **Outcome is key:** Rather than learning, the business metrics-based outcome is the key in discovering the effectiveness of learning interventions.
- **LMS is no longer enough:** Legacy approaches alone cannot help here; the role of L&D is now being challenged as learning is no longer the express domain of HR, as business is on auto-learning mode; thanks to digital and social platforms delivering in a click and free learning platforms pushing lateral shifts in career aspirations.
- **Upgrade learning infra first:** ‘Learn to work, work to learn’ is the motto. Surveys and studies have highlighted how millennials are more inspired by the ability to learn new things rather than consider the workplace as a holy cow or just a source of income. Adapting new learning approaches requires upgrading the infrastructure to combine work and learning as a behavioral change to develop higher curiosity and adapt learning values.
- **Measure to deliver:** Finally, measuring both pre and post learning will help in delivering the right portion and proportion of learning needs’ required for organizations to pace forward to combat skill redundancies and market shares to competitive versions.

Aligning learning with skill needs

The complexity of business approaches underlines the importance of accounting for learning as a part of work skills. It is the most important transformation needed for individuals and Learning & Development executives to implement a learning culture.

Till we keep considering learning polarized from working, we will not respect it the way we respect and admire hard work. Learning needs to be embedded into work and considered as a part of the everyday activities we perform at the workplace to truly create a learning culture.

One of the clear complexities arises from the culture of the organization itself. However, one strives as an L&D executive in driving learning as an important pillar of growth; there are bottlenecks which need to be identified, managed, and manipulated to ensure learning is not neglected. And it begins at the top always.

Learning as a culture needs to be consistent, practical, and repeatable. Measuring them allows contrivance of consistency, practicality, and repeatability of learning objectives. Application of these frameworks is beyond the scope of this book and will be revisited in some other reading format soon. However, it is important to note and begin with to justify the sharing of [*Figure 3.2*](#):

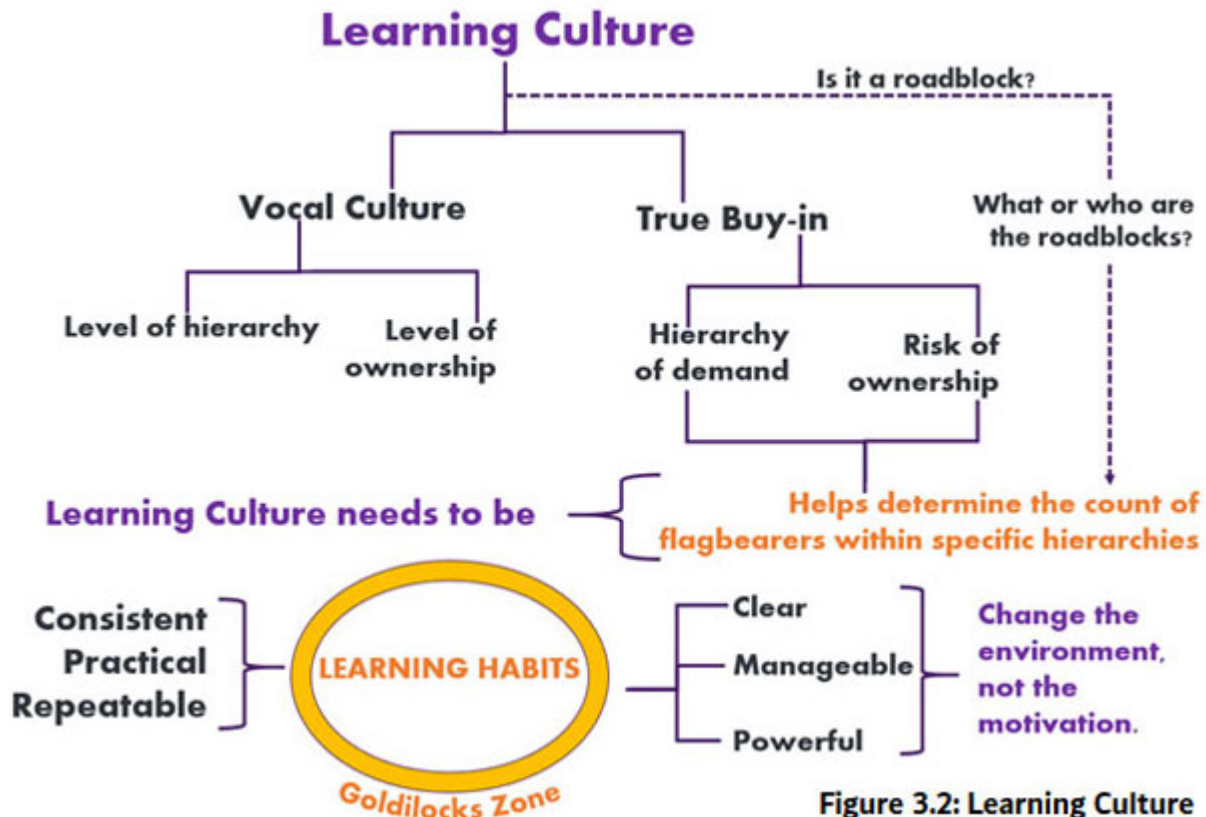


Figure 3.2: Learning Culture

Figure 3.2: Learning Culture for readiness

It is a challenge for Human Resources professionals in finding ways to push learning endeavors for the larger good and goals which organizations profess to deliver to its stakeholders. Within the vision and the performance are the humble employees and their motivations undergoing generational shifts with changing times.

As shown in [Figure 3.2](#), Learning Culture needs to have true buy-in distinct from those who are purely vocal with no ownership. Often, the demand for learning comes from the bottom of the hierarchy, who has no ownership of the process, and hence such roadblocks need be addressed to drive a learning culture. Hence, creating flag bearers of learning culture across all levels of hierarchies makes for a democratically increasing count of ownership.

Finally, one needs to keep in mind that the motivation must not be altered through learning. These address learning factors to improve the environment without lowering or misaligning the primary motivation to learn. Why is motivation important in learning?

Factors of Employee Motivation have undergone generational shifts:

- **Skillsets:** from functional isolation to specialized focus
- **Locus of Work:** from individuals to projects and teams
- **Focus of Work:** from tasks to outcomes
- **Work cycles:** from production to business objectives
- **Performance metrics:** from performance to efficiency
- **Drivers of performance:** from regular to rapid and agile metrics
- **Career Growth:** from organizational loyalty to influencing society
- **Engagement loyalty:** from organization hierarchy to peer networks
- **Personal Goals:** from local perceptions to global aspirations

Employees have six basic psychological requirements at work to feel respected:

- Ability to abdicate responsibility with autonomy
- Optimum amount of variation to dilute work monotony
- Scope to do meaningful work which brings repute to self and society
- Mutual respect and support among peers and colleagues
- Learn new skills at the workplace for personal progress and ambitions
- Ability to create a future for self and future generations

It is not an easy task for L&D Managers to incorporate all of these in a careful web while designing L&D interventions. But it is also equally true that not many are consciously aware of its effects for effective learning practices.

Human preferences and priorities define what we want to learn. Call it motivation or survival, we have learnt through ages not necessarily out of motivation always, but surely out of compunctions and complications. Our learnings can thus be limited to not only what we want to learn, but also what is available for learning. This limitation can be addressed by understanding the faculty and its preparedness to teach.

TRAINERS | *How about the training faculty and how well are they prepared to teach the future?*

One of the core limitations of data approach is the inability to pursue the meaning beyond the realm of data. And hence, the higher the data coverage to determine the prediction the larger lies a chance of the prediction being proved effective. We can term this experience as exhibited in the following [Table 3.1](#):

| Your prediction | The event happened | The event didn't happen |
|--------------------------------------|---------------------------------|---------------------------------|
| You predicted the event will happen | You were right (True Positive) | You were wrong (False Positive) |
| You predicted the event won't happen | You were wrong (False Negative) | You were right (True Negative) |

Table 3.1

In addition to predicting, pursuing meaning becomes a bigger and significant agenda of data analysts. This can be observed due to the following:

- The objective purpose behind owning the data
- The meanings hidden in the interpretation of the information
- The inability to spot trends and outcomes through plain sighting

You may consider this across multiple situations beyond the workplace; if you have to consider the performance of knowledge, it might take a lifetime to find the true impact of its performance. However, an immediate impact can be found in placement records. While placement records or educational scores in silos may mean nothing, put together, they do highlight the impact of its joint potential to realize the meaning and effectiveness of education. This can then be used further to understand the performance impact of faculty members at colleges and universities. Consider the data in the following [Table 3.2](#):

| Placement | 1st Round | 2nd Round | 3rd Round | 4th Round | 5th Round | 6th Round |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Faculty A | 60 | 125 | 30 | 15 | 20 | |
| Faculty B | 10 | 70 | 100 | 30 | 20 | 20 |
| Faculty C | 60 | 70 | 80 | 10 | 15 | 15 |
| Faculty D | 50 | 60 | 70 | 30 | 20 | 20 |

Table 3.2

Which faculty member among the preceding four would you consider to having done a better job? While it might be clear to claim Faculty A to be the best Faculty for placing the batch of 250 students within 5 rounds while everyone else took six rounds, it may not be so easy to predict the 2,3rd & 4th rankers using plain sight. Analyzing the preceding data tells us (as in [Table 3.3](#)) that success as a percentage of placements can be as shown in *Table3.3*:

| Placement | 1 st Round | 2 nd Round | 3 rd Round | 4 th Round | 5 th Round | 6 th Round |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Faculty A | 0.24 | 0.74 | 0.86 | 0.92 | 1.00 | |
| Faculty B | 0.04 | 0.32 | 0.72 | 0.84 | 0.92 | 1.00 |
| Faculty C | 0.24 | 0.52 | 0.84 | 0.88 | 0.94 | 1.00 |
| Faculty D | 0.2 | 0.44 | 0.72 | 0.84 | 0.92 | 1.00 |

Table 3.3

If you now said that the ranking in order of placement performance from highest to lowest stands as Faculty A, Faculty C, Faculty B & finally, Faculty D, you would be correct!

How would you further discern whether the credit truly belongs to a single faculty?

It is true that the placement may be a concerted effort of multiple faculty members teaching varied subjects to the students. In such a case, it would be reflected based on the scores achieved by students from the individual Faculty classes, or by assessing the response to subject specific skills while attempting placement could be a wise determinant.

The collection of data at different points during learning at work is arrived at from the purpose of localizing principles. Finance collects data to use for financial jurisprudence while L&D functions focus on application of learning principles and performance data. However, any Learning & Development initiative using analytics should be keen in measuring the data with respect to two factorial outcomes of data:

- Business metrics
- Recall metrics

Alignment with business metrics highlights the application and effectiveness of the learning initiative while recall metrics underline the level of interest and learning ability of the employee.

Business metrics are operational efficiencies achieved post learning.

Recall metrics are the motivational efficiencies in undergoing learning.

While business metrics are easily understood and measurable, recall metrics tell us quite a few things about the effectiveness of learning:

Was the learner interested enough or is there a pure lack of motivation?

Was the content in line with the experience and expectation of the learner?

Does the trainer need to improve their delivery to generate higher recall metrics?

Using assessments post learning can measure for both business and recall metrics to establish skill and knowledge levels post training. The use of learning at the workplace can be practiced keeping in mind the need to learn-as-you-work as expressed in [Figure 3.3](#). The complexity of the human brain has been understood and still being studied for the base of all learning; how do we learn? This can solve a lot of problems in general learning issues across the globe to eradicate poverty and silo mentality across cultural ideals:

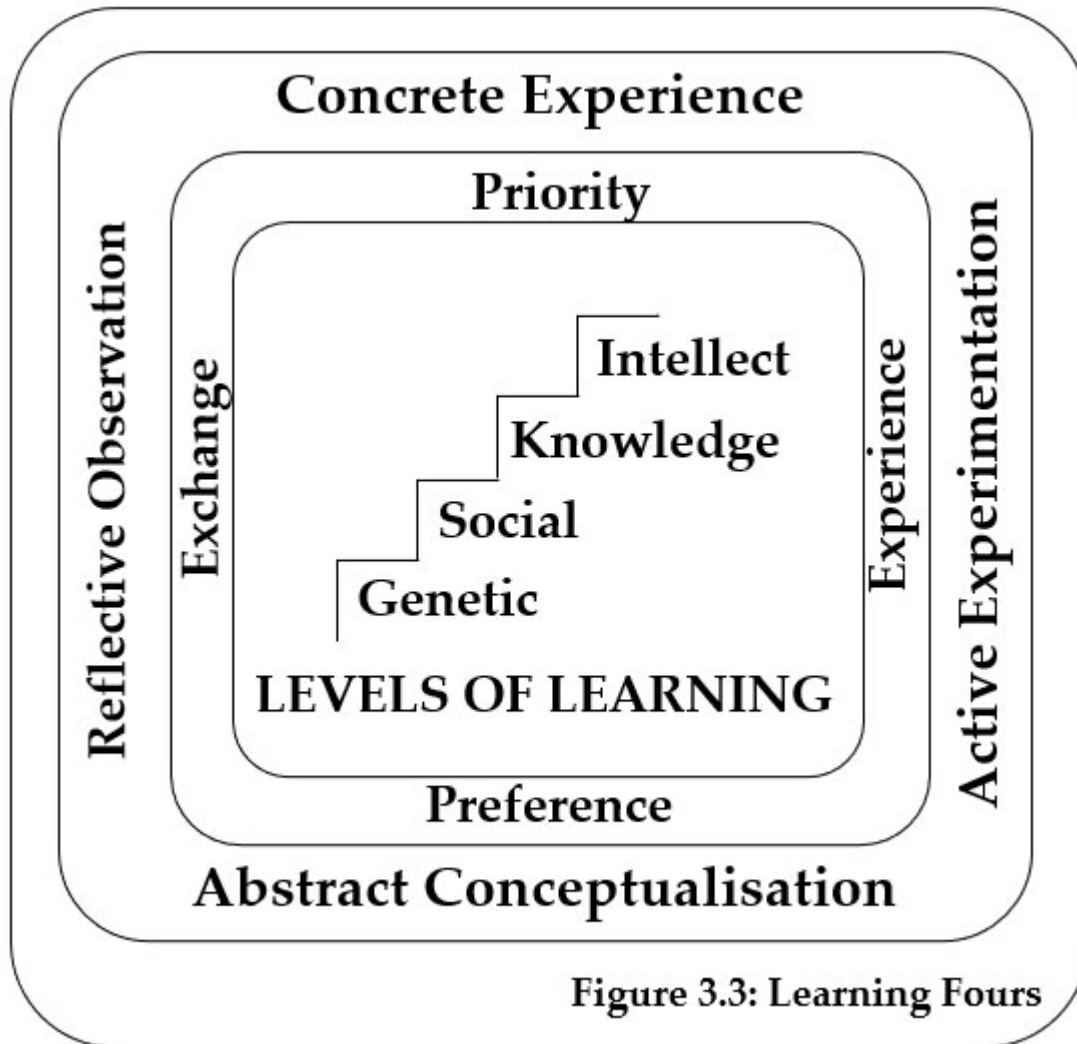


Figure 3.3: Learning Fours for building a human-oriented approach

Conclusion

There is a need for a wider discussion and intervention in the area of learning and developmental practices across workplaces. While the pre 80's workplaces focused on worker loyalty, the changing dynamics demand higher skills and are willing to push for loyalty only after employees achieving a certain hierarchy within the organization where loyalty counts equal to skills. It is thus important to understand the factors impacting and influencing learning with an aim to improve it. Till we learn more about how we learn and what triggers our motivational neurons to spring into action, we will have to rest upon the existing knowledge, abstractions and

observations to build our case for designing learning experiences suited to the learning culture our workplaces demand.

- Define the business outcome metrics at the start of learning interventions to avoid shifting goalposts.
- Every learning should include the learner and the level to determine what to teach, how to teach, and to be taught by whom for best end results.
- The learner must be a willing participant not only to the learning but also to the application of the same. This allows us to measure both business and recall metrics.
- The objective of learning must be taken seriously by not including the participant in additional tasks to ensure complete priority and engagement as we shall explore in the next chapter.

Key learnings

- Learning needs can be identified through learning gaps, nominations, or by experience and improved using the four cornerstones of Content, Skills, Digital platforms, and complexities of culture and practices.
- Measuring the LNI gaps involve seeking data from Operational Efficiency and Customer Satisfaction scores to determine the learning participants.
- The standards and measures to identify learning gaps can be classified into fundamental, transferable, and enduring standards across skill levels.
- The individual learning experience can be summed up by observing the seven learning laws by Thiagi and implemented to ensure total learning objectives.
- Content plays an important role in learning and HR 4.0 suggests using differential content at different levels within the organization for effective learning.
- Defining skills and competencies and aligning them with motivation can improve delivery along with focus on faculty and the psychological dimensions of learning.

Questions

1. What is the importance of identifying learning gaps and how can we do it?
2. What are the business data elements to explore in identifying gaps and analyzing them before introducing a learning intervention?
3. How do we ascertain what type of training would be required at a certain level?
4. How would you summarise the shifting motivational trends in learning?
5. What are the key factors for establishing a learning culture at the workplace?
6. Explain the factors impacting data prediction and its meanings.

Case Study - Learning Needs Identification

Learning Needs Identification (LNI) or Training Needs Identification is an effective first step to identify the areas/subjects to be covered in a training, which will enhance the expertise of the employee to improve his/her productivity. Even when we consider employees for Growth/Promotions, we need them to be part of some Emerging Leadership Training and some such. How can the organization be sure that for a group of individuals, what are the topics that need to be covered?

The three common methods are as follows:

- **By experience:** The Learning and Development team has the experience to decide/hire Subject Matter Experts who know what is happening in the industry and conduct the training.
- **By Managerial recommendations/Self Nomination:** The Managers need to list areas of Learning Gaps for their team members, or the Employee is required to declare his Self-Assessed Learning needs to better perform in his role.
- **By Learning Gap identification:** When a measurement (assessment or survey-based) is undertaken to identify the gaps in skills and competencies. This is an unbiased way and scientific approach to Learning Needs Identification.

It is the 3rd point that we will be doing in the following case study. A manufacturing organization has 10 oil mills across the country. It wants to invest in training its employees, as a good practice. The starting point has to be to understand the important training for employees of two departments – Finance and Admin. Can a Training Needs analysis be done to decide which areas and subjects should be covered?

At the beginning of the financial year, all employees undergo some mandatory digital programs on the **Learning Management System (LMS)** for competencies that are important for the organization, their respective

departments, and their roles. The scores of this exercise are available on the LMS. The L&D team decides to start by looking at this data.

We will use the DCOVA&I process to solve this problem.

Step 1 - D (Define)

The problem statement: Can a Training Needs analysis be done to decide which areas and subjects should be covered?

Step 2 - C (Collect)

Get the data for the Admin and Finance departments.

At the beginning of the financial year, all employees undergo some mandatory digital programs on the **Learning Management System (LMS)** for competencies that are important for the organization, their respective departments, and their roles. The scores of this exercise are available on the LMS:

- **Job_Class_info:** This data contains the Job level attributes (32 Jobs).
- **LMS_data:** This data contains the LMS scores for the Job level attributes for all employees (71 employees).
- **Combined_data:** This is created by doing a v-lookup formula (merging) Job_class_info data with the LMS_data.

Step 3 - O (Organize)

On the Combined_data (2), we will work at doing the following steps:

Missing values:

The 0% means Not Applicable under the fields:

- Organization_customer centrality_score
- Organization_Time adherence_score
- Organization_Inductive Reasoning_score
- Dept_Accounts_score
- Dept_Basic Business Law_score
- Dept_Basic Taxation_score

- Dept_Coordination_score
- Dept_Communication_score
- Individual_Adherence to Policy Guidelines_score
- Individual_Analysis and Planning_score
- Individual_Team Management_score

Outliers: This data does not have any outliers/unusual values.

Dummy Variables: Do we need to change any of the fields/variables into 0/1 variables?

- All the scores are in numerical values.
- The analytics we aim to do is around descriptive statistics, hence, we do not need to convert Department and Job Role data into numeric.

Derived Variables: Do we need to calculate any numerical variables from the existing variables?

- **PG_num** = PG - convert it into 1,2,3,4... To create descriptive statistics Education.
- **Overall_avg score:** We can create an overall score from the Scores given. Descriptive statistics can be created for this too.
- **Organization_score_Avg:** For Organization level competencies.
- **Dept_score_avg:** For Department level competencies.
- **Individual_score_avg:** For Individual Job role competencies.

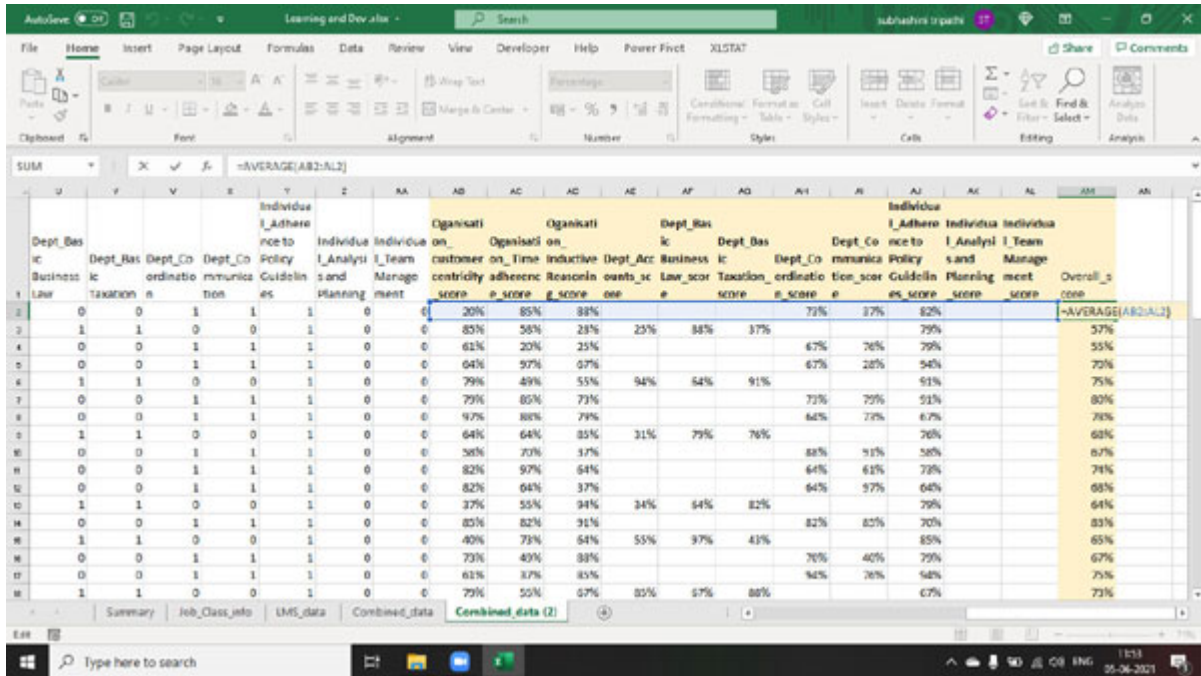


Figure 3.4: Data Management

Step 4 - V (Visualize)

See the sheet **Visualize** in the solutions.

- This sheet has been made using the sheet **Pivot**. A Pivot was created on the data **Combines_data (2)**.
- The process to create a pivot table is **Insert > Pivot Table**:

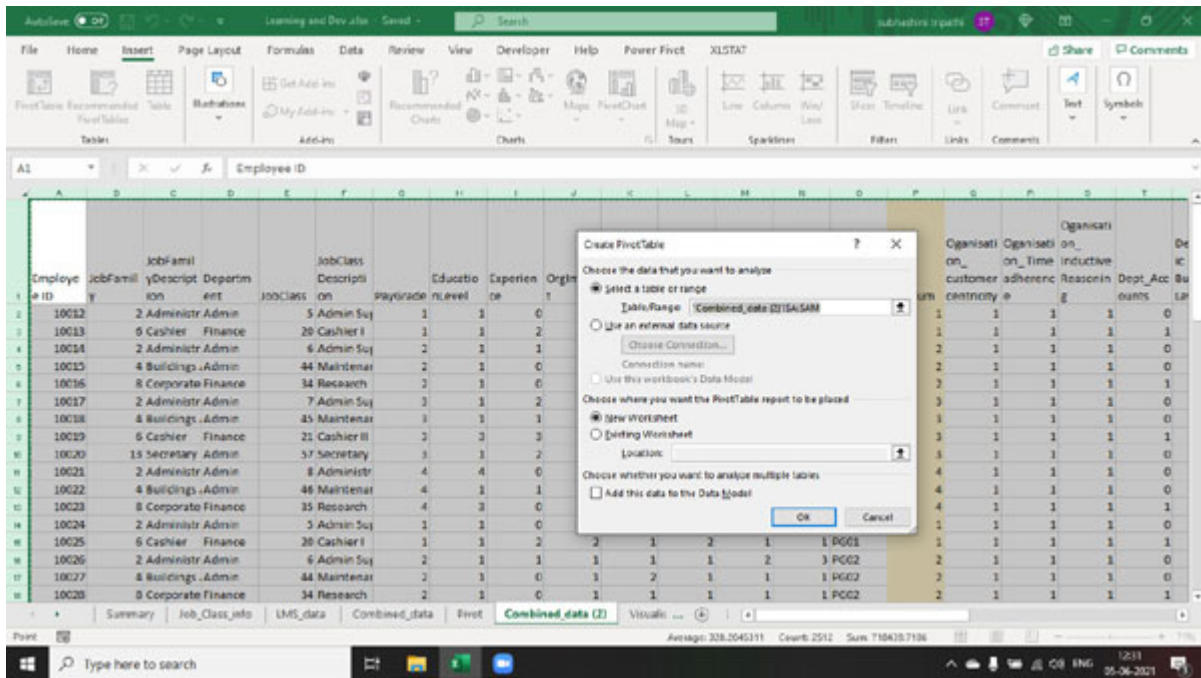


Figure 3.5: Creating a Pivot table

Insight 1: The Admin staff has an Average of Overall_score which is 5% higher than the Finance dept:

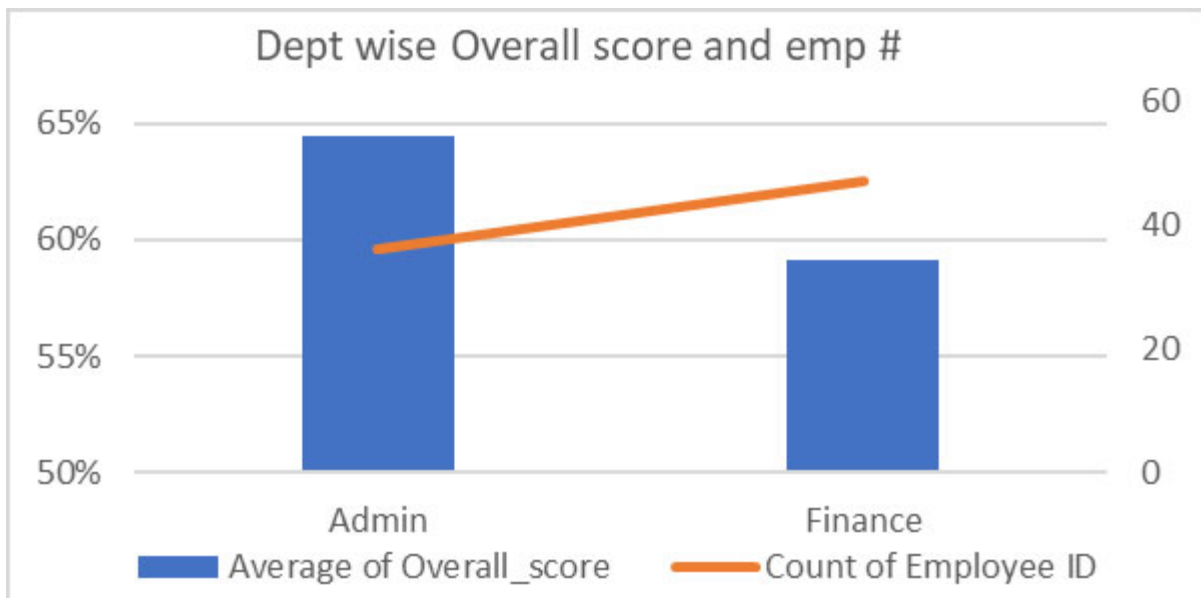


Figure 3.6: Department wise overall score and employee count

Insight 2: Lower PayGrade staff has done better than middle and higher PayGrade employees:

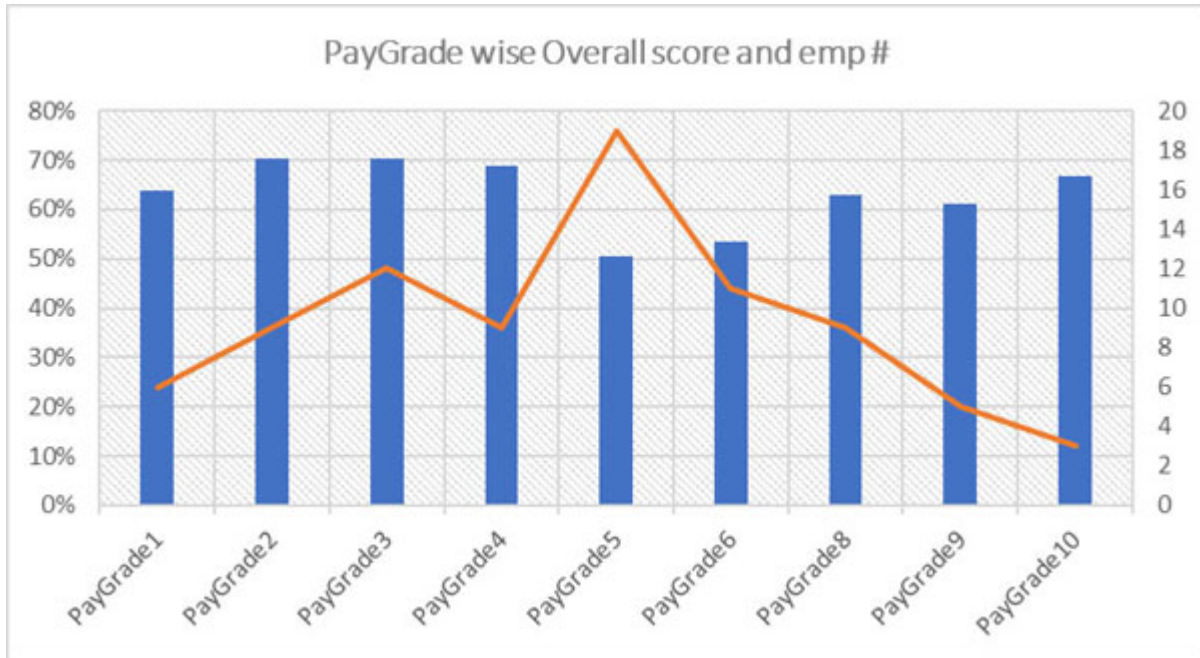


Figure 3.7: Paygrade wise overall score and employee count

Insight 3: Admin department employees have done better than Finance department employees across all the competency groups:

| Department | Average of Overall_score | Average of Organisation_score_A vg | Average of Dept_score_avg | Average of Individual_score _avg |
|-------------|--------------------------|------------------------------------|---------------------------|----------------------------------|
| Admin | 64% | 66% | 70% | 56% |
| Finance | 59% | 67% | 63% | 45% |
| Grand Total | 61% | 66% | 66% | 50% |

Figure 3.8: Scores across department

Step 5 - A (Analyze)

We will use descriptive statistics of Mean, Median, and Standard Deviation to understand the data patterns:

- We will use sheet Combined_data (3) for the calculations
- The variables for comparison will be:
 - Overall_score
 - Organisation_score_Avg
 - Dept_score_avg

- Individual_score_avg

The calculation will be done using the Data analysis Tab; **Data > Data Analysis > Descriptive Statistics**:

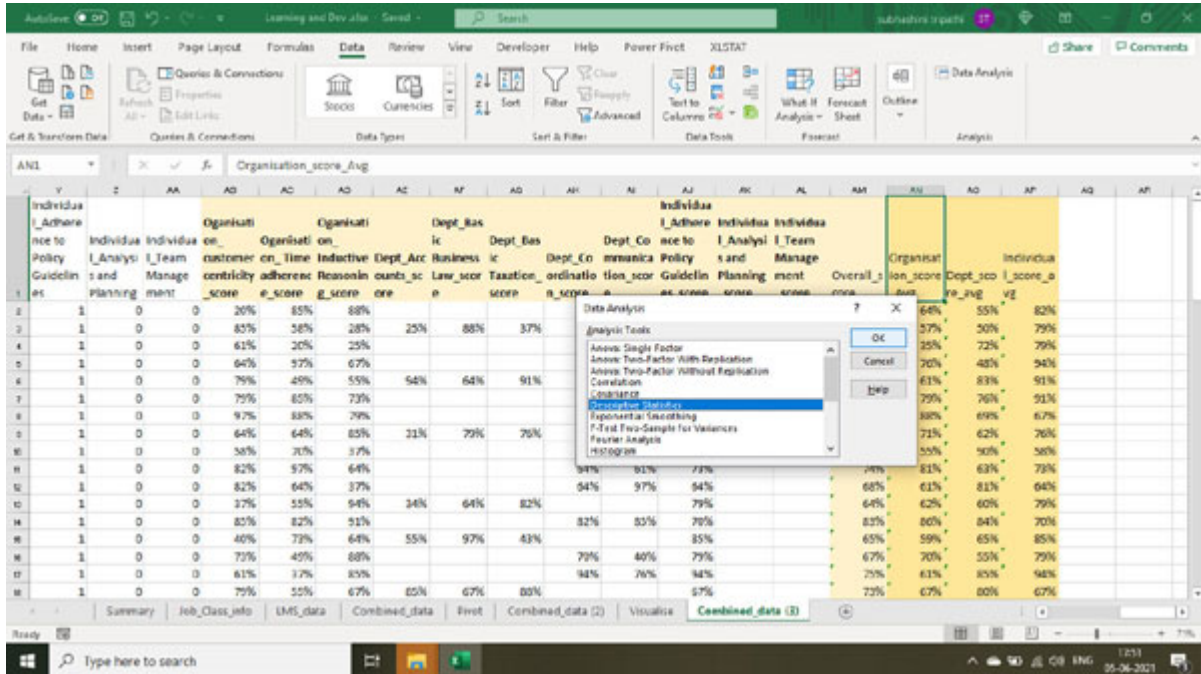


Figure 3.9: Running Descriptive statistics

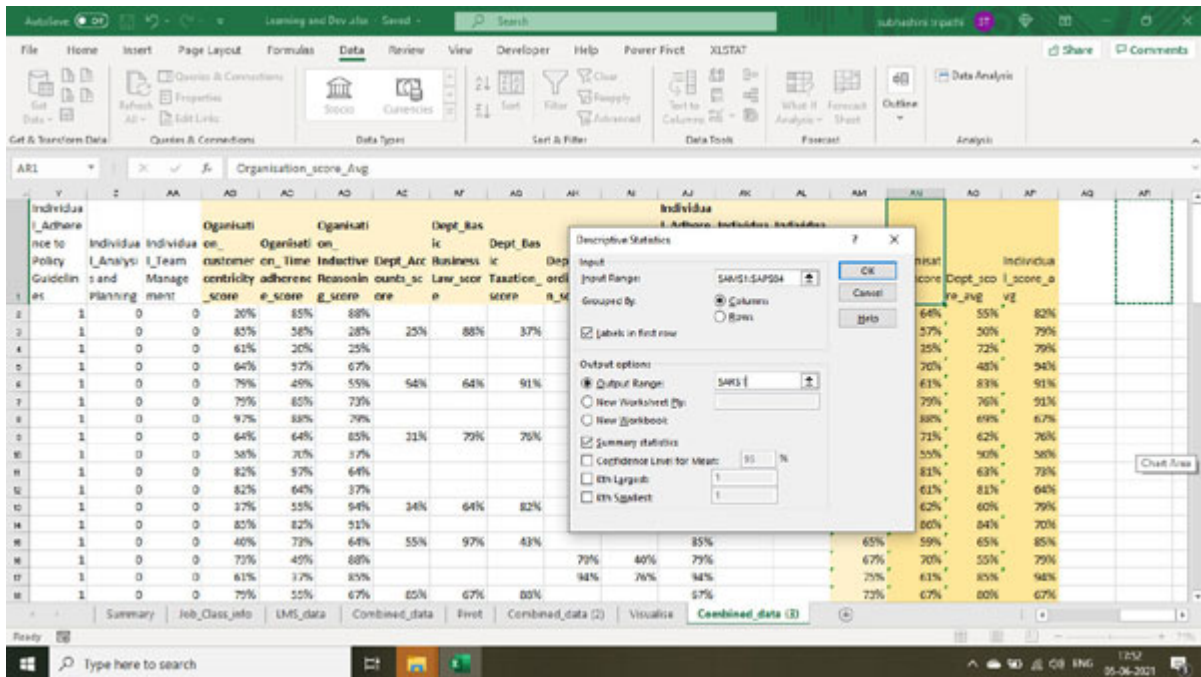


Figure 3.10: Choosing options under descriptive statistics

We will compare the descriptive statistics on three levels:

- For all Employees
- For the Audit team
- For the Finance team:

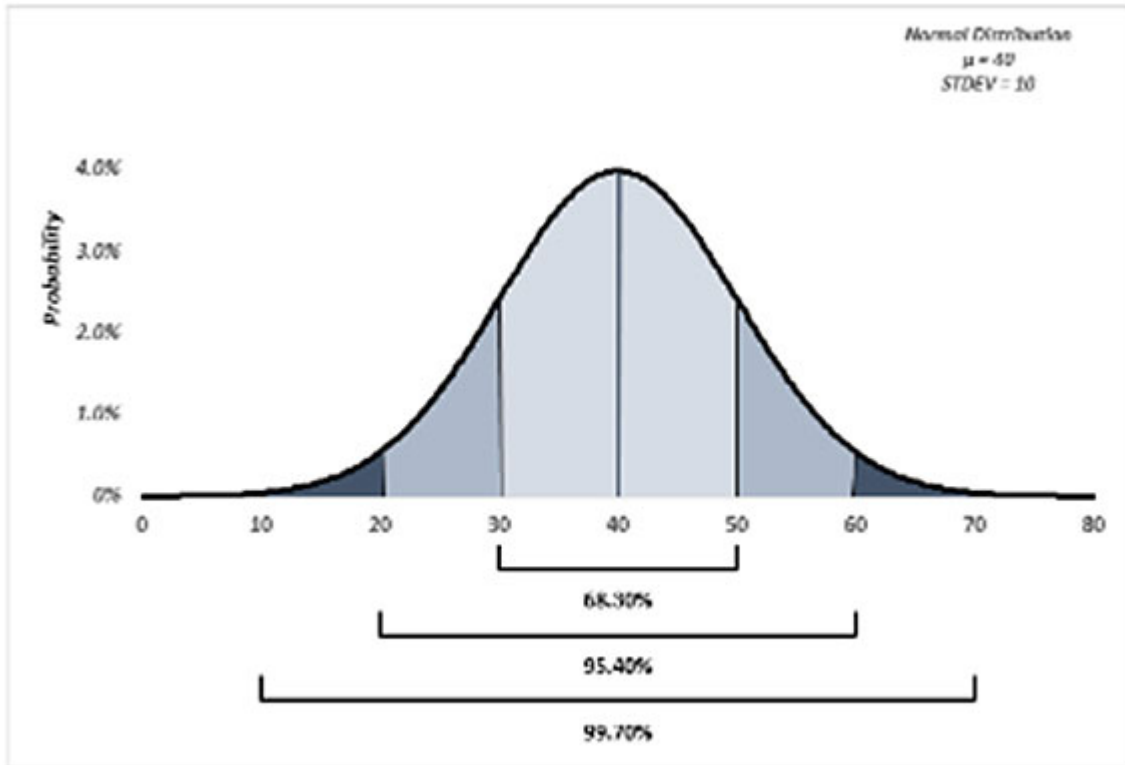


Figure 3.11: Empirical Rule

We will use the Empirical Rule for normal distribution to understand the data outcomes. This rule is also called the 68–95–99.7 rule. This rule helps us understand the spread of data if the data is distributed normally as a Bell curve. Refer to the preceding figure. 68% of the most common values will lie within mean \pm 1 standard deviation, 95% between mean \pm 2 standard deviations, and 99.7% within mean \pm 3 standard deviation.

This looks at the population density of the data and hence is a good way to understand the most likely values for any data:

| | Organisation | | | | AUDIT | | | | FINANCE | | | |
|------------|---------------|--------------------------------|--------------------|--------------------------|-------------------|--------------------------------|--------------------|--------------------------|-------------------|--------------------------------|--------------------|--------------------------|
| | Overall_score | Organisati on_score_ Avg | Dept_scor e_avg | Individual_ score_avg | Overall_sc ore | Organisati on_score_ Avg | Dept_scor e_avg | Individual_ score_avg | Overall_sc ore | Organisati on_score_ Avg | Dept_scor e_avg | Individual_ score_avg |
| Mean | 61% | 66% | 66% | 50% | 64% | 66% | 70% | 56% | 59% | 67% | 63% | 44% |
| Median | 64% | 64% | 69% | 44% | 67% | 64% | 73% | 61% | 60% | 65% | 65% | 35% |
| Standard D | 12% | 14% | 15% | 27% | 10% | 15% | 12% | 27% | 13% | 13% | 16% | 27% |
| Minimum | 37% | 35% | 34% | 10% | 45% | 35% | 48% | 10% | 37% | 36% | 34% | 10% |
| Maximum | 89% | 97% | 94% | 94% | 83% | 91% | 90% | 94% | 89% | 97% | 94% | 94% |
| | Organisation | | | | AUDIT | | | | FINANCE | | | |

Figure 3.12: Department and Organization scores

We will use Descriptive Statistics to understand the Data spread. Please refer to the Excel sheet with the solution for details:

| | | | | | | | | | | | | | |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|
| Is the data normally distributed? | | | | | | | | | | | | | |
| Is Mean nearly equal to Median? | | | | | | | | | | | | | |
| Calculate Mean / Median. | | | | | | | | | | | | | |
| Check if the value is between 95% and 105% | 97% | 104% | 96% | 113% | 96% | 104% | 96% | 92% | 98% | 104% | 98% | 125% | |
| | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | |
| 68% of the most common scores are | | | | | | | | | | | | | |
| Upper limit: Mean + 1 standard dev. | 73% | 80% | 81% | 77% | 75% | 81% | 82% | 83% | 72% | 80% | 80% | 71% | |
| Lower limit: Mean - 1 standard dev. | 50% | 53% | 51% | 23% | 54% | 51% | 58% | 29% | 46% | 54% | 47% | 18% | |
| Range of most common values | 50 - 73% | 53 - 80% | 51 - 81% | 23 - 77% | 54 - 75% | 51 - 82% | 58 - 82% | 29 - 83% | 46 - 72% | 54 - 80% | 47 - 80% | 18 - 71% | |

Figure 3.13: Understanding the Descriptive data

This is the comparison chart between the departments:

| Comparison chart | Overall_score | Organisati on_score_ Avg | Dept_scor e_avg | Individual_ score_avg |
|------------------|----------------|--------------------------------|--------------------|--------------------------|
| | Organisational | 50 - 73% | 53-80% | 51-81% |
| AUDIT | 54-75% | 51-82% | 58-82% | 29-83% |
| FINANCE | 46-72% | 54-80% | 47-80% | 18-71% |

Figure 3.14: Comparison table

Conclusion

Implement the following scores to prioritize the Learning Intervention required for everyone. This is the best way to ensure that employees spend time learning what will give them maximum improvement in Job performance:

Cutoff score for training: Anyone below the Lower Limit

| | | | | |
|---------|-----|-----|-----|-----|
| AUDIT | 54% | 51% | 58% | 29% |
| FINANCE | 46% | 54% | 47% | 18% |

Figure 3.15: Cut-off score for training

Other Recommendations: Everyone is scoring low in the Individual Job competencies in both departments. This can mean any one of the following two things:

- The LMS course assessment is very tough and should be aligned to actual competencies.
- At the point of hiring, the focus is not on the Job Role competencies. This should be corrected.

Key terms

We will use the Empirical Rule for normal distribution to understand the data outcomes. This rule is also called the 68–95–99.7 rule.

This rule helps us understand the spread of data if the data is distributed normally as a Bell curve.

CHAPTER 4

Employee Engagement

The use of the term ‘Employee Engagement’ itself reveals to us the gaps we fail to notice for a thriving workplace today; the employee is the person to be engaged, and the further need for engagement highlights the lack of applications like right hiring and training, and calling in for the further need of *engagement*.

Structure

In this chapter, we will cover the following topics:

- Engagement practices and organizational culture
- Engagement and values: a cultural relationship
- Engagement factors and metrics

Objectives

Reading this chapter will acquaint the reader with the relationship of engagement with culture and the role of values in building an engaged workplace culture. As culture drives employee attitudes, organizations striving to maintain its stride towards performance-driven growth reach out to engagement metrics for support. This makes the chapter one of the most important ones among all covered in this book. From the point of HR Analytics, the chapter will also focus on engagement factors and metrics, including designing of surveys.

Engagement practices and organizational culture

As it may be, engagement studies have been in vogue for many decades now and statistical modeling of responses to denote engagement levels have now become a constant annual feature for many large organizations. While there are multiple versions of the practice, improvements through studied

observations reveal outcomes in variance to the objective. Consider Gallup Q12; it's 12 factor Engagement Survey is a better tool for predicting attrition rather than engagement as a culture, which lies beneath as we shall realize later in this chapter. Most engagement practices reach as far as predicting the present engagement levels without any prescription for improving or including factors responsible for lower engaged profiles within the workforce.

At the human level, we can observe at the granular level the need for two broad categories of needs: the material and the psychological. The material needs are often defined by organizational policies like the quality of the workplace, the colors and quality of the work desk, the type of equipment provided for completion of work, and so on. These, however, are observable distinctions and can be managed or addressed with ease. What cannot be easily spotted and hence neglected are psychological needs of the person, which are the causes for **motivated engagement**.

Before we begin to understand and enquire about engagement studies, it might be important to understand the purpose behind engagement. While on the surface, engagement seems a study of happiness levels to drive performance, technically *engaged employees* benefit organizations and departments through a higher drive towards being *productive employees*. Being productive involves investing *disproportionate performance* for higher revenues and growth. If x employees generate y revenues, the additional performance due to engaged performance can lead to revenues higher than y , making the organization more profitable.

Standard practices for an engaged workplace

For engagement, there are some standards which can benefit the organization and create a workplace where employees feel enthused to deliver performance.

- **SUPPORT GROWTH:** Provide white spaces for individual learning and growth.

Allow practicing skills outside the job role for 15-20% of work time.

- **TRACK SOCIAL BONDS:** People who gel together, do well together.

Social bonds do need to be guided for engaged performance.

- **SET THE EXPECTATIONS:** Aim for a stretch, not a strain.
Stop micro-managing; set goals and observe approach.
- **ENGAGE FROM DAY ONE:** Mentoring | Learning | Consistent efforts.
Create clear boundaries, don't confuse the culture of adherence.
- **HIRE FOR VALUES:** Hire for right behavior, train for skills.
Measure alignment of values as human minds are dynamic.

Looking back at the emphasis for measurement and metrics within the established standards mentioned for bringing a consistent approach to engagement explains the advent of technology. Technology ensures there is no slack at the workplace and hence no need for engagement surveys. Every job role which is monotonous, repeatable, and does not involve cognitive decision making can be automated using technology. When Managers found it difficult to engage and drop engagement levels leading to drop in revenues, technology was the last stop. Earlier HR practitioners could take a lot of that blame. If HRD understood the factors of engagement, there would be lesser need for technological invasion of the workplace. After all, necessity is the mother of invention.

Coming back to the psychological needs, one can scan through tons of research on the neuron excitations based on information and perceived rewards by the brain cells. What affects us psychologically impacts and infects our ability to deliver the highest possible energy at the workplace. An ill parent, an unresolved past issue and even at times the trigger for newness.

While finances are often the evident need, the intrinsic need could be for obligations and responsibilities beyond the workplace.

[Drivers of engagement](#)

What drives engagement at the workplace? The following factors are contributors to engaged workplaces for driving higher productivity as a cultural practice:

- **Role-based alignment:** Right hiring processes ensure alignment of role versus the individual. An alignment to the role ensures employees

are engaged due to natural alignment of preference to the job role. This is where the flow-approach of competency versus complexity of task is at perfect perpendicular harmony. This is the most important aspect of engagement and can lead to a severely disengaged yet highly satisfied workplace population. Most public services pick some of the brightest minds through a strict assessment-based selection process and put them into mediocre job roles, making them severely disengaged though highly satisfied as it fulfils extrinsic motivational factors of earnings and social reputation.

- **Fluidic policy:** Organization policies are often crafted by management based on broad goals and long-term opportunities without accounting for the larger employee pool and its impact as it rapidly shifts and turns more dynamic as it moves ahead with time. A fluidic approach to look at policy not as a rock-stone code but a means to correct and align with requirements based on the employee segmented values ensures that the population remains provided with required intrinsic needs to remain focused and engaged towards org objectives. A fluidic policy approach includes factors of rewards, goal settings, growth opportunities and career expectations, and autonomy to do what one does best to include some salient impactors.
- **Productive work environment:** A push towards creating a productive work environment is often neglected or not realized full of its potential to deliver higher engagement metrics. While there is great focus to include flexibility of work hours, diversity of work force and create a positive experience through finer details of sports and food facilities, a productive work environment requires the structural finetuning of the team to ensure the right size, strengths, and matching value systems for leading individuals towards productive results. Let us remember that being productive itself is one of the most important factors for self-engagement. To quote an example, the rush to create leaders and hence groom young employees into leadership roles while neglecting the need for self-development and discovery of the leadership milestone, which may not be everyone's goal or aspiration leads to demotivating the individual.
- **Leadership commitment:** Organizational leadership is often over-focused on organizational goals compared to managing and leading

the individuals they are responsible for. This creates a lot of friction between the reportee and the Manager, leading to mistrust. Till one has been made the Managing Director or the CEO, it serves one better being selfishly focused on their own men. That is how leaders led and won wars and today's leadership focus should be no different from the leadership principles of a few centuries ago, as we almost lead similar role profiles at workplaces and societies. The Leadership commitment thus highlights the importance in engagement when we often hear stories of how employees quit on bosses.

- **Individual intellect:** While we often look at factors to be fulfilled by the organization and management, the individual intellect is often a cause which is quietly brushed aside, though being a sizeable factor in the statistical counts. The connection between cognitive ability and learning capabilities are well-established. The *Social Cognitive Theory* further helps us in understanding the causal relationships between our past experiences and its influence in the outcomes of our goals through personal limitations of knowledge. One cannot engage one who has decided to disengage or can find no answers to life's course of challenges. And this brings us back to hiring, the first factor of making engagement a cultural practice rather than just an annual Survey.

Note: Social Cognitive Theory

In 1960, Albert Bandura presented the Social Learning Theory (SLT) which was later developed into the Social Cognitive Theory in 1986. SCT highlights how social influence nurtures and develops our behavioral and cognitive learning through external and internal social reinforcement. It emphasizes the dependency of past experiences, expectations, and expectancies to denote how we would scale our ability to achieve our goals and view the challenges presented within as levels of difficulties.

Impact of motivation

Here, we will take a look at the second aspect of needs by understanding the classification into hygiene versus motivational factors. Why does the

employee prefer a certain value over others? This is where psychology provides us answers to motivation. We are motivated by factors that are either seemingly easy to practice or have been well adapted by us as individuals. Trusting others comes easy to some while others are more focused on creativity as a value system. They find solutions to everyday issues using creativity. Is this what most employees also vote for? Thus, the inherent culture of creativity gets chosen and exhibited by the employees as an organizational value.

- **Hygiene factors:** Hygiene factors are those which are required by employees irrespective of their intrinsic engagement levels. Both a low and a highly engaged employee require well-lit workplaces for performing their tasks. This is an example of a material hygiene need. The need for respect is a psychological need and can find expression as a hygiene gap when there is too much ego and lack of trust among teams. Sometimes, factors like high scores for psychological factors like trust in men and empathy among women are driven by biological biases.
- **Motivational factors:** While hygiene factors are those we need for the team and all employees around in general, motivational needs are driven by what individuals need as an intrinsic factor to motivate themselves for engaging fully into the role and demands of the workplace. Individual psychological needs can range from accountability to learning to transparency, based on their structural positioning within the team and their job roles. It has been often found that bright individuals select a lot of values which can drive their personal success rather than selecting hygiene factors which benefit the team in general. This angle of self-need driven selection of attributes is a realization for HR Managers that intelligence drives selection of high motivational-based values compared to hygiene factors based extrinsic value-based attributes.

In between the preceding few paragraphs, we ended up covering a lot of specifics which almost need a new book to explore and explanation in minute detail. After all, engagement is one of the biggest challenges organizations will keep facing till humans are hired for job roles. One of them is the factor of satisfaction versus engagement and this does need more clarification.

In a 9 to 5 timeline for a job, one may arrive at the pre-defined time and leave just at the right time and yet do nothing or little to improve the organizational goals. This is a case of satisfied employee but highly disengaged when it comes to productivity. However, an employee who values earning their bread rightfully will see this as sin and at least strive to put in more than a satisfied employee as their share of exchange for their earned bread.

Engagement and values: a cultural relationship

Engagement improves productivity at the workplace. Productivity is in turn driven by values. If these values match the culture, performance improves. Engagement surveys should be seen as culture surveys in disguise. Engagement studies finally point towards the cultural aspirations of its workforce and what makes employees contended:

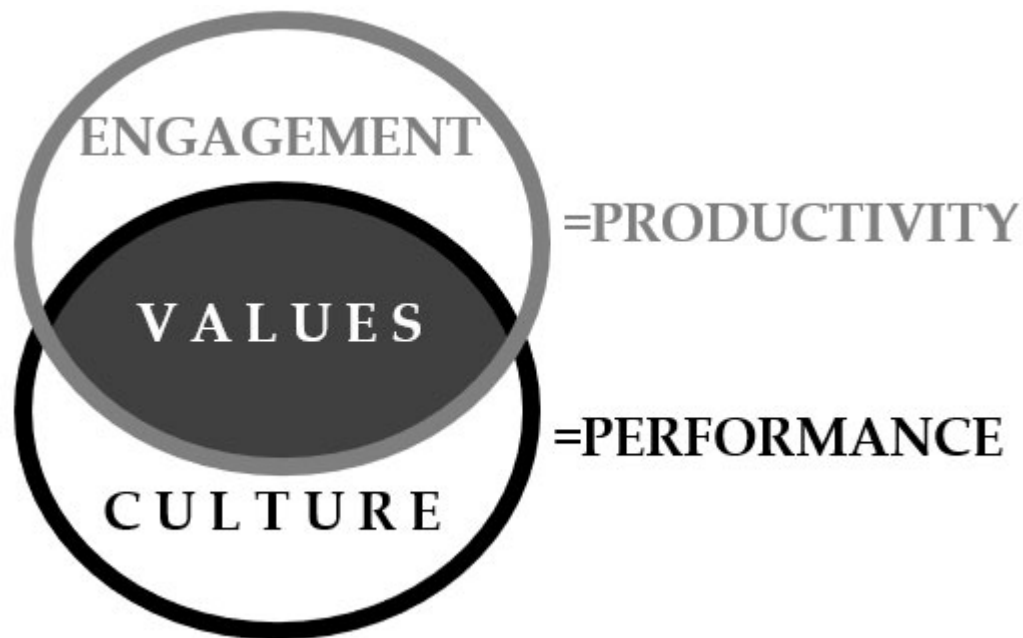


Figure 4.1: Values Framework

Most engagement questionnaires seek to answer a simpler question rather than the complex issue of engagement; they simply seek to know whether the employee is happy and contended with the policy and offerings on behalf of the organization.

But if we need to understand the psychological importance of solving the engagement conundrum, we must involve ourselves to find the point where the two parties meet. Some employees seek lesser of particular functions and offerings while others might seek more for them to feel fully engaged. Like our interest in sweet dishes differ irrespective of age, our tastes in what makes us satiated to offer our best is a scale which varies and needs to be analyzed for arriving at the benchmark numbers based on segmented sections of location, department, or competency as a factor. This will help understand the performance motivation image of the employee based on common factors and provide for gaps as maybe directed for improving the productivity using the engagement study.

While an engaged workforce provides higher productivity, culture resides deep inside as core values which push the performance as a psychological pillar. The organizational function should be pushing towards higher performance by driving the right cultural embracement to ensure engagement for optimum productivity. In other words, culture is the values, beliefs, and behaviors exhibited while engagement is the level of commitment to these values. Thus, they are different but also interlinked.

According to Deloitte, many leaders know they need to do this—in fact nearly 9 out of 10 executives surveyed cited culture and engagement as important or very important in Deloitte’s Human Capital Trends Report. Yet only 12% of companies surveyed believe they understand their culture, while less than half (46%) reported that they are prepared to tackle the engagement challenge. So, what should we measure in an engagement study? Values.

The impact of values

Values play a big role in setting our expectations from the organization as an individual. Values are driven by our motivation based on the expectations we consider important. Consider this; if a chocolate uplifts your mood and one expects you to complete a task, you expect them to offer you chocolates. Similarly, you would prefer spending more time with people who are *like* you and who like you. These are due to similar values bred out of age, culture, environment, experience which we prefer in others as a positive experience.

Certain organizations have predefined core values. These are the driving parameters for our performance while driving productivity. Organizations who have defined values measure them during the hiring stage to ensure employees exhibit a set of common values as behavior. Others can use Engagement surveys to find the changes in values and use them as benchmarks for hiring or bringing about changes in their people policies to align with employees and their dynamic value systems. Without collecting these, an engagement Survey is like your overall percentage in school; it means you are doing well in some subjects and not so well in others, but the percentage itself does not denote which subjects are part of which category.

Engagement also improves when team players, though bearing ethnic diversity, are inspired by similar value systems. Two colleagues who share similar values will bond better and support each other at the workplace. This will lead to higher productivity unless the value systems are out of line for the organizational vision and mission. The larger the number of employees sharing similar values, the higher will be the bonding and results within themselves and their outcomes. This answers why teams which bond well win competitions, whether it is musical, academic, sports, or the workplace. HRD professionals know but often neglect to measure its impact during the course of hiring.

So, what are the steps of ensuring high engagement metrics?

- **Determine the value gaps:** The gaps in certain set of values maybe drifting or reducing the impact of performance for the team. If we have someone smart with technology and the other smart with marketing, that's a startup couple for you. Add one smart with finances and you are bound to be successful if all the three share similar values. Without similar values, the team members are bound to fall out due to what is often stated as *differences of opinion*.
- **Hiring for values:** The hiring process must include a check system for matching values which the teams profess. This ensures a smoother and faster transition and acceptance for new members within the teams. For teams which seem to be caught amidst mixed values, re-assignment and adding new members with focused alignment to values the team that needs to be successful needs to be addressed with priority. This can be done through situational questionnaire and value surveys during the hiring or interview process.

- **Shift of values:** With every milestone shift in life, our values are obliterated and new values ungrounded. This can be observed when children turn into teens, demanding a new set of ways of interactions to denote a shift in their value systems. Similarly, a promotion, raise or new designation can cause a shift in values; hence, it must be accounted for while analyzing team values. Shift of socially moral values or economic conditions can also cause shift of values. The COVID pandemic brought forth exciting and unknown values for fellow humans by aiding others and bringing about a brighter side of the personality hitherto unknown.

Annually once, values need to be assessed, and engagement studies require values to be assessed as a mandatory ritual for organizations to manage disparate effects of engagement.

The role of culture in workplace engagement

While values impact individuals, how does it impact organizations or departments as a whole?

“Patrick Lencioni, in his classic, *The Five Dysfunctions of a Team*, quotes, “*If you could get all the people in an organization rowing in the same direction, you could dominate any industry, in any market, against any competition, at any time.*” You can achieve this drive if all employees believe in similar value systems and which happens to be in line with the organizational objectives. As shown in [Figure 4.2: Alignment Framework](#), most organizations have employees articulating the core values and end up providing conflicting or inconsistent loyalties towards a set of value systems. At times, there are none as the hasn’t any defined value systems. Some organizations set their core values based on industry or embarked upon defining them. Organizations which have done so have done it years ago, but as business climate environments change, there is a need to refresh based on the perspective of today and tomorrow, not yesterday:

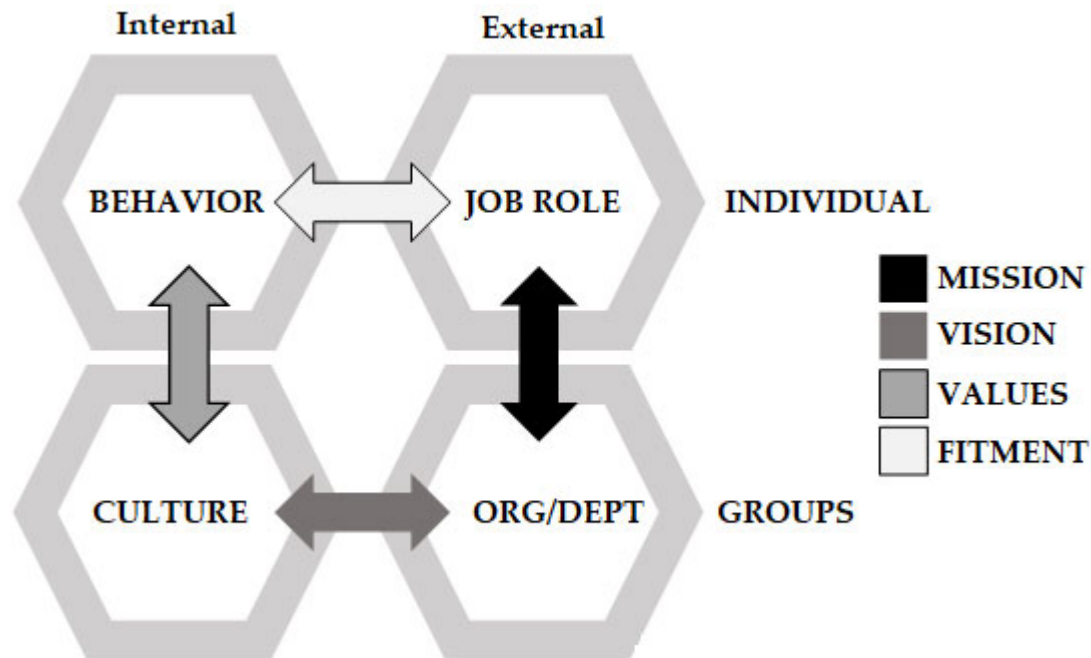


Figure 4.2: Alignment Framework

As shown in [Figure 4.2](#), the culture of the organization is driven by the values based on Org/Dept vision and which exhibits itself as behavior among the team members a.k.a. employees. Both culture and behavior are internal, and hence not visible for Engagement Managers to make it easy to implement or practice. Hence, it becomes important to master the linkages and its effects on the org structure. Engagement is like a river, flowing constantly, and hence the need to manage and control its tides and ebbs. It moves from the individual to the group, from the internal to influencing the external and thus the intent to control is a valid basis for engagement practices. Peter Drucker had famously remarked, “*Culture eats strategy for lunch.*” This simple line summarizes that our strategies would not work if the culture isn’t aligned with org objectives as we found that engagement is akin to oiling the structural wheels of the organizational juggernaut.

A good question to address might be from the data perspective and its measures; can there ever be an over-engaged population of employees? And if so, what is the way to maintain the perfect scale?

Engaged employees can become over-possessive with the job role, and this in turn may cause them to become disengaged if unallowed to pursue. Appraising them to realign with the organizational goals of success and hence working on the next important project is the way to engage high

energy levels, especially among the younger population. For a steady control, HR Managers need to measure engagement levels on a periodic basis and take teams through the organizational objectives every time there is a shift in roles and new project work. Calculating engagement using the HRMS system is not possible; hence, the need to have analytics resources that have specialization in HR Analytics becomes a key prerogative.

HR Analytics needs to measure the attributes with respect to the following clusters other than individual scores:

- Age group
- Gender
- Competency
- Department
- Location
- HR Levels
- Hygiene versus Motivational values

A combination of these clusters helps highlight the weak links or impact of multiple factor analysis and its possible future effect on organizational costs and growth objectives. For example, a particular age group with engineering competency showing low engagement would require introspecting the tools and practices which may conflict with the learning and experiences for the particular batch. A deeper introspection of their demographic data may highlight them to be from a particular college or internship batch and hence corrective measures could be taken easily. Similarly, the anguish of a particular department against another department or within a particular location highlights incompatibility of values and team conflict, which can lead to low productivity from that segment, leading further to low morale.

The second important factor is to keep comparing with previous levels to find the ideal level of engagement for organizational objectives. As mentioned earlier, higher than required engagement levels are signals of conspiring groups or very bright individuals who may deflect the system from finding core causes of low productivity. In such scenarios, analyzing the groups with high scores can point to high camaraderie and hence needs

to be further compared with productivity or revenues to uncover false positive scores.

The final part of the puzzle is in creating the questionnaire for capturing the true response by including both standardized and validation questions for consistency in scoring analysis. The concept of *consistent scores* does not necessarily mean the scores are identical or similar across items in a survey or an assessment. In Psychometric inventory with two items, if all employees agreed with the statement “*I like to have more fun at work.*” and disagreed with the statement “*I do not like a serious environment at work.*”, it would indicate the perfect internal consistency of the response as the two questions being negatively correlated, the degree of the correlation will as high as 1. If there are more items similar to the preceding two items further added, the average interitem correlations could be close to zero because positive interitem correlations can cancel out negative ones. To overcome this problem, it is advisable to either change the polarity of negative items into positive or use the mean of absolute values of the correlations between questions to measure of internal consistency.

Engagement factors and metrics

While applying engagement factors and metrics to our studies of engagement levels, it is pertinent to note the need to observe its need and how impactful it is based on the factors noted impacting engagement scores. Relating it to business metrics scores can be found as an excellent indicator, as explained in [Chapter 3: Learning](#), in this book and can be thus related for referencing. In [Table 4.1](#), we shall provide you with an understanding of how to use the influence of metrics to determine the type of engagement study required for further analysis and insights:

| TACTICS | Expertise | | Willingness | Values | |
|-----------------------------|------------|-----------|-------------|-----------|-------------|
| | Leadership | Alignment | | Influence | Involvement |
| Transformational Engagement | HIGH | HIGH | HIGH | LOW | LOW |
| Modifying Eng. Practices | MEDIUM | MEDIUM | HIGH | MEDIUM | MEDIUM |
| Transparency in Engagement | LOW | LOW | MEDIUM | LOW | MEDIUM |
| Communicative Engagement | HIGH | MEDIUM | LOW | HIGH | LOW |
| Measured Engagement | HIGH | MEDIUM | LOW | HIGH | HIGH |

Table 4.1

- **Transformational engagement:** This links engagement to business strategy. The role of employee expertise is high here while the role of values has low impact.
- **Modifying engagement:** Practices are required to find champions and hence finding willingness to engage becomes prominent as a metric.
- **Transparent engagement:** Practices are deployed to find what works and what doesn't.
- **Communicative engagement:** This focuses on the role of communicating the values extensively and hence requires the involvement of leadership and the influence of values to be more important when involvement is low.
- **Measured engagement:** This targets the metrics to determine the reason for low willingness and/or alignment is lower than standard scores.

It definitely needs an Engagement practitioner to address these five factors if the organization lacks authority on engagement and culture practices, as the relevancy of metrics can be easily determined when the cause and its results are uncovered.

[Key engagement metrics](#)

The key metrics to observe that leads to the need for an engagement survey can be summarized as follows: some of them can be from secondary

business sources and a prior pulse survey is suggested before attempting the engagement survey:

- **Net Promoter Score:** This is the simplest yet key metric to define whether the employee is engaged. On a range of 1 – 10 where 1 is the lowest and 10 is the highest, the three levels are Promoters (9-10), Fence-sitters (7-8), and Disengaged (1-6).
- **Daily and Monthly Activity Scores: Daily Activity Score (DAS) and Monthly Activity Score (MAS):** This denotes the level of interest and attention employees take to put in their goals. These can be measured using different scales, but low scores highlight drop and hint at future attrition spikes.
- **Operational efficiency scores:** This would reflect low morale and engagement within the team when scores are lowering on a consistent level or fluctuating frequently without known causes and can be linked to disengagement.
- **Goal effort scores:** Often goals are not achieved and either the goals are lowered, the timelines are extended, or the goal is dropped. Efforts by the employee do not get recognized in the process, leading to engagement issues. If this happens across levels and locations, there is a clear need to focus on targets being a strain, as explained earlier in this chapter. This can also be observed through performance scores, based on the model used by the organization.
- **Onboarding satisfaction scores:** If the organization collects onboarding satisfaction data through surveys (and which we believe it should), measuring them provides insights on drop in engagement levels among existing employees and deep fatigue.
- **Learning scores:** A rise in LNI scores is highly detrimental unless it is driven due to change management. A high need for learning directs attention to low or non-performance as an outcome, reflecting low commitment to the objectives and tasks.
- **Listening post scores:** A variation in the listening post metrics indicate employees are either bonding too much (causing low productivity) or aren't providing enough feedback (low engagement), highlighting the need for Communicative Engagement.

- **Happiness and wellness scores:** A lot of organizations use Happiness Surveys or use wellness scores to find the levels of health and happiness as a hygiene factor for promoting performance as a culture. Such scores clustering on the western end of the graph would denote the lack of engagement and prompt interventions.

Conclusion

While this is a condensed list and can be extended based on available metrics and business practices, this can be viewed as a global list to identify engagement through external metrics to highlight the need for enhancing engagement levels within the workplace. How to improve would be subject to policies, business practices, financial budgets and having them at the disposal makes the exercise not only fruitful but also focused at delivering excellence at productivity metrics for the growth and attainment of objectives:

- Most organizations jump to conduct engagement practices without studying previous engagement scores and their insights or practicing standard engagement rules.
- Every engagement survey should preclude the factor for the need of engagement to determine direction and focused addressal of the causal factors.
- The organization must improve its hiring practices by shortlisting based on values, as explained in [Chapter 2: Hiring](#).
- The objective of engagement is not to satisfy the employee, but to improve the performance levels. While we shall explore performance in the next chapter, it is important to underline the link between engagement and culture as an outcome of engagement levels.
- The risk of low engagement cannot be observed without looking at both primary and secondary metrics and need to be addressed with critical attention, as the slip down the slope is faster if left unchecked.

Key learnings

- Five standard rules for an engaged workplace include supporting individual growth, tracking team binding, setting the right

expectations, engaging from onboarding, and hiring for values.

- Five drivers of engagement are role alignment, policy intervention based on requirements, designing work environments for productivity, commitment of leadership, and levels of intellect.
- Hygiene-based motivation are known to drive satisfaction while self-motivation drives performance.
- When employees have aligned values, they are engaged and drive productivity. When this spreads across the organizational hierarchy, it creates a culture of performance.
- The role of culture in promoting engagement can be aligned using values, vision, and fitment.
- The five key tactics to drive engagement based on factorial analysis are transformational, modifying, transparent, communicative, and measured engagement.
- We must use pulse surveys in the absence of raw or secondary data to highlight the engagement gap segments and decide on the engagement required for realignment of performance standards.

Questions

1. Why do we need engagement at the workplace and what are its negative impacts?
2. What are the five drivers of engagement and how can we align them in practice?
3. What do we understand by intrinsic versus extrinsic motivation?
4. What would be key factors for improving performance culture within a department?
5. Explain the deployment of engagement tactics and its benefits.

Case Study - Analytics for Employee Engagement

Measuring engagement and culture using MS Excel - Business problem, solution, and insights

We will cover the following technical points:

- Analysis of Employee Engagement scores

Topic - Case Study – Prediction of Employee Engagement

This case study covers interpretation of Employee Engagement scores for a manufacturing unit in pharmaceuticals. The company has multiple units of manufacturing. For its Bangalore plant, the feedback has been that there is high level of in-subordination and non-compliance to some factors like timeliness of reaching the plant. The aim was to understand which factors are driving engagement. Can the company then work on improving the employee engagement levels and thus see the behaviour of the employees change?

The process to be followed remains DCOVA and I and the statistical technique is Linear Regression. Linear Regression is the technique to solve for the questions “How many?” or “How much?”

We have seen how to run the correlation which helps us identify the variables with a relationship to the problem or “y” variable. The correlation coefficient is a binary measure – between one x variable and y variable.

A Linear Regression model helps to connect multiple x variables to the y variable.

D - Define the Business Problem

What are the factors which influence engagement in the shop floor of the manufacturing unit? And to what extent? The salient point to consider is that

no employee ID-based linkage is available and hence, there is no way to link the data back to any individual.

This is a common methodology in engagement surveys. The Y variables are the Engagement Survey Score.

C - Collect the data and O - Organize the data

Here, the data is already collected and organized in the sheet **Survey**:

- **Duplication of data:** We cannot know the same as no unique identification field is present (for example, employee ID, email ID, and so on.)
- **Missing values:** No missing values exist. Use the `COUNTA ()` function to check:

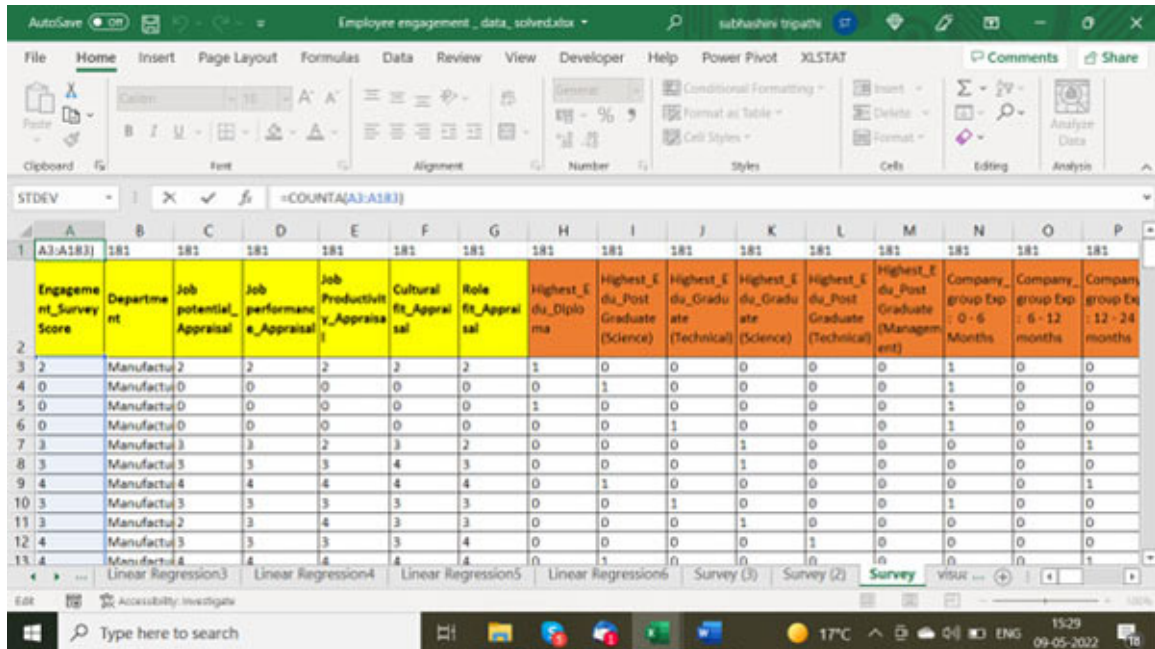


Figure 4.3: Putting the count function

- **Outliers:** The data is created from Multiple Choice questions and therefore, has fixed outcomes only. So, the Y variables – Engagement_Survey Score only has values between 0-5.
- **Dummy variables:** Variables like Education are already divided into 0 /1 variables:

1. Highest_Edu_Diploma
 2. Highest_Edu_Post Graduate (Science)
 3. Highest_Edu_Graduate (Technical)
 4. Highest_Edu_Graduate (Science)
 5. Highest_Edu_Post Graduate (Technical)
 6. Highest_Edu_Post Graduate (Management)
- **Derived variables:** No calculations are required. Data is complete.

V - Visualize

Create a pivot table to help make the graphs and charts for visualization:

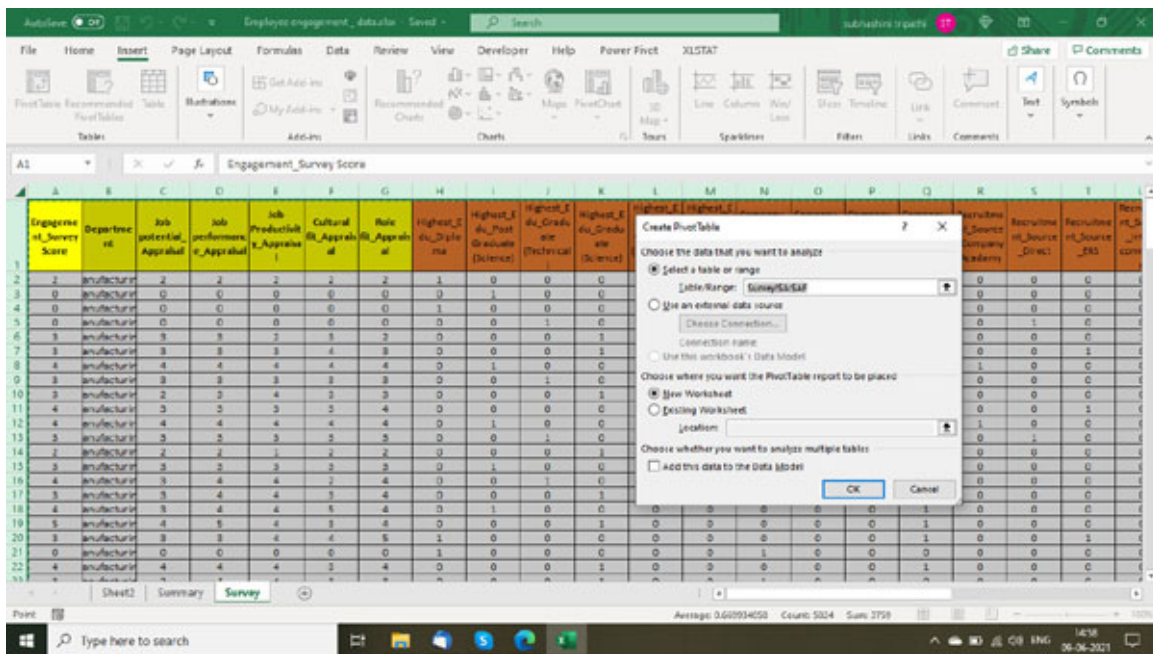


Figure 4.4: Inserting a Pivot table

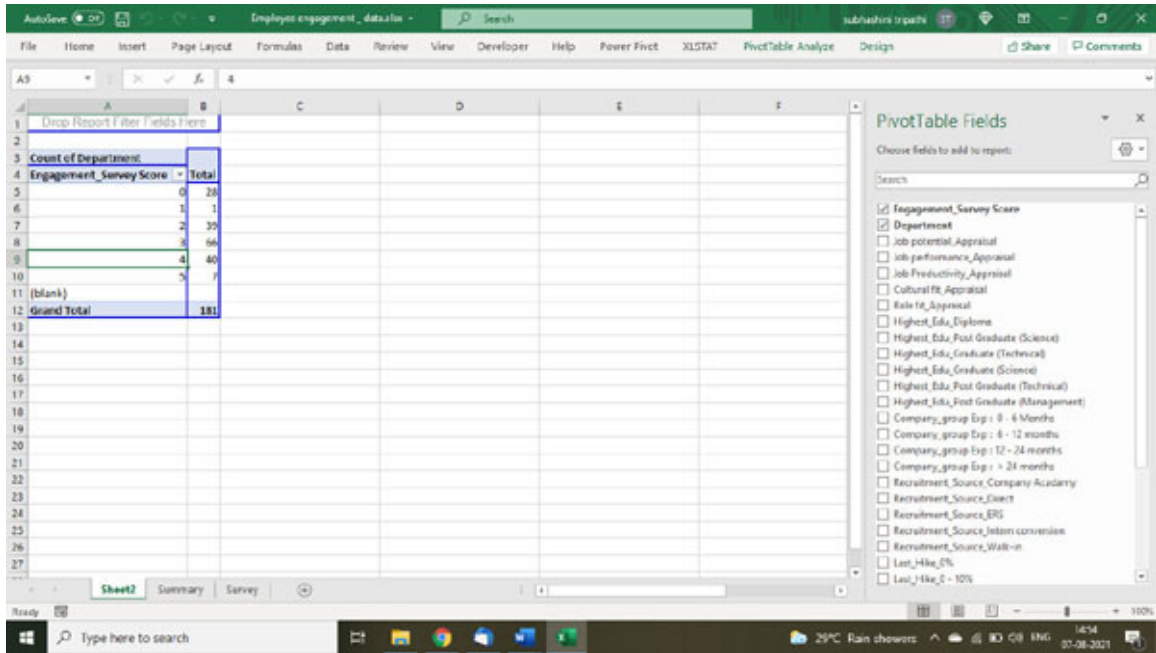


Figure 4.5: Using the pivot table

| Engagement_Survey Score | # of employees | |
|-------------------------|----------------|---------------------------------|
| 0 | 28 | 0 and 1 can be clubbed together |
| 1 | 1 | |
| 2 | 39 | |
| 3 | 66 | |
| 4 | 40 | |
| 5 | 7 | 4 and 5 can be clubbed together |

Table 4.1: Using the summary from the Pivot table

Create a new sheet Survey (2) and create a new Y variable **Final_Engagement_Survey Score** - has three levels:

| Final_Engagement_Survey Score | Engagement_Survey Score | Total |
|-------------------------------|-------------------------|-----------|
| 1 | 0 | 28 |
| | 1 | 1 |
| 1 Total | | 29 |
| 2 | 2 | 39 |
| | 3 | 66 |
| | | |

| | | |
|--------------------|---|------------|
| 2 Total | | 105 |
| 3 | 4 | 40 |
| | 5 | 7 |
| 3 Total | | 47 |
| Grand Total | | 181 |

Table 4.2: Create a new Y variable Final_Engagement_Survey Score - has three levels:

| | Final_Engagement_Survey Score | # count of employees | % of employees |
|--------|--------------------------------------|-----------------------------|-----------------------|
| Low | 1 | 29 | 16% |
| Medium | 2 | 105 | 58% |
| High | 3 | 47 | 26% |
| | Grand Total | 181 | 100% |

Table 4.3: Naming the three Levels

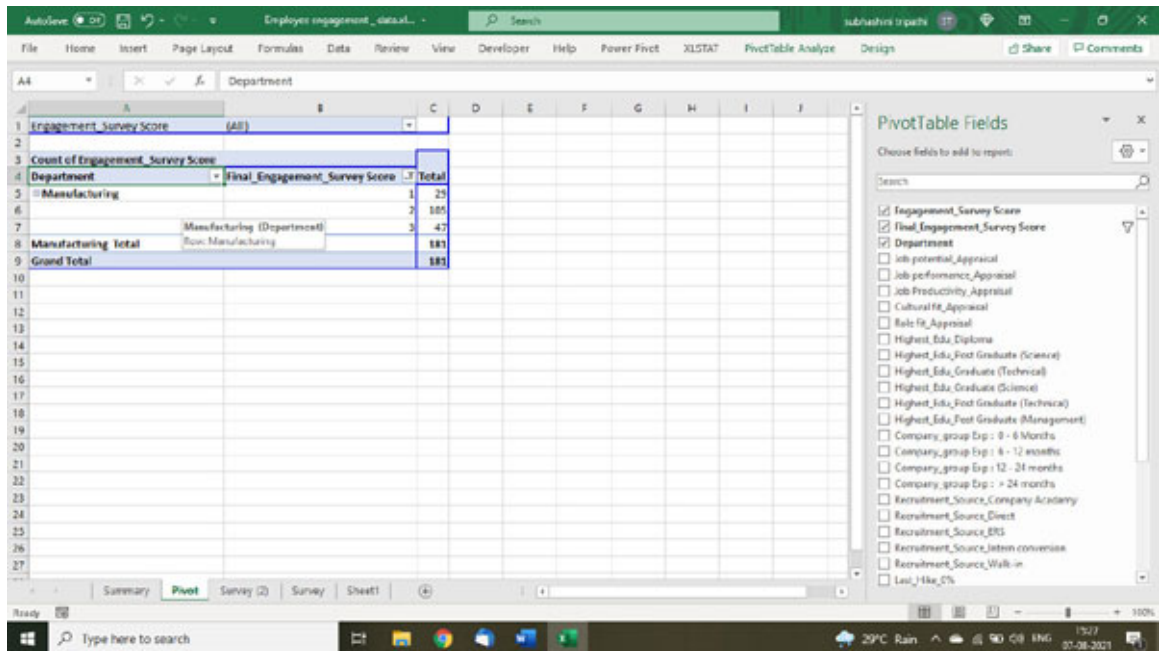


Figure 4.6: Using the pivot table - There is no variation in the department - remove this variable from the area of analysis

NOTE: In excel for Visualization - See the Visualization tab.

- There is a clear correlation between the Potential of Candidate in Appraisal and the Engagement score.

Conclusion: Candidates with higher engagement scores are also seen as High Potential as per their appraisal:

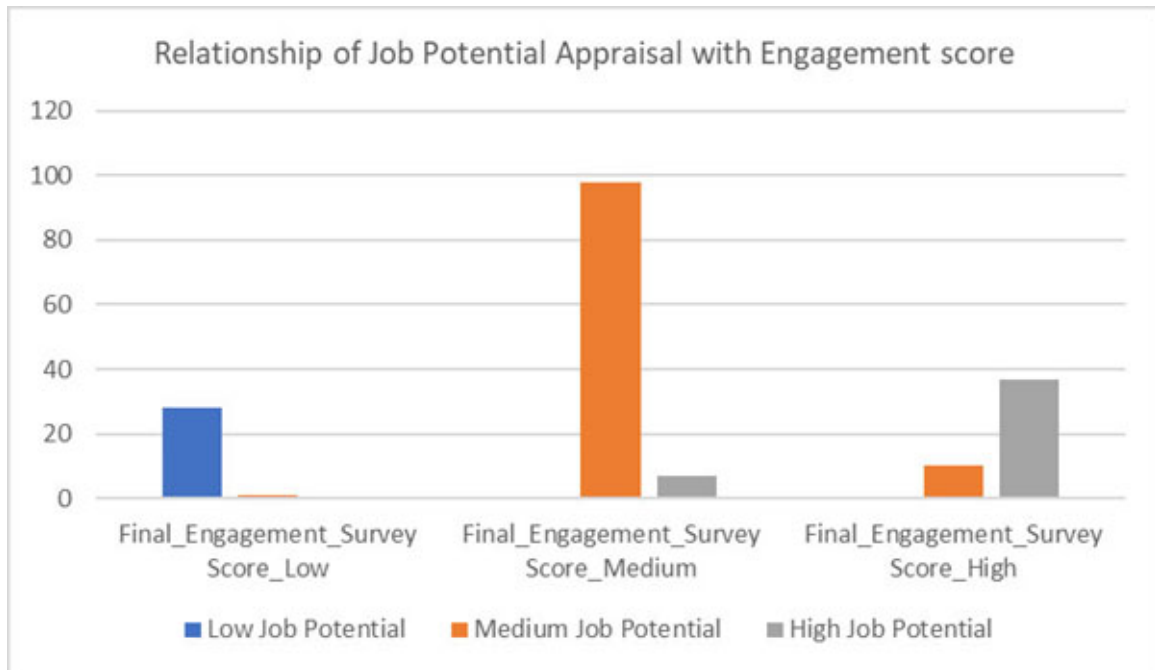


Figure 4.7: Relationship of Job Potential Appraisal with Engagement Score

- There is a clear correlation between Performance Score of Candidate in Appraisal and the Engagement score.

Conclusion: Candidates with higher engagement scores are also seen as High Performance as per their appraisal:

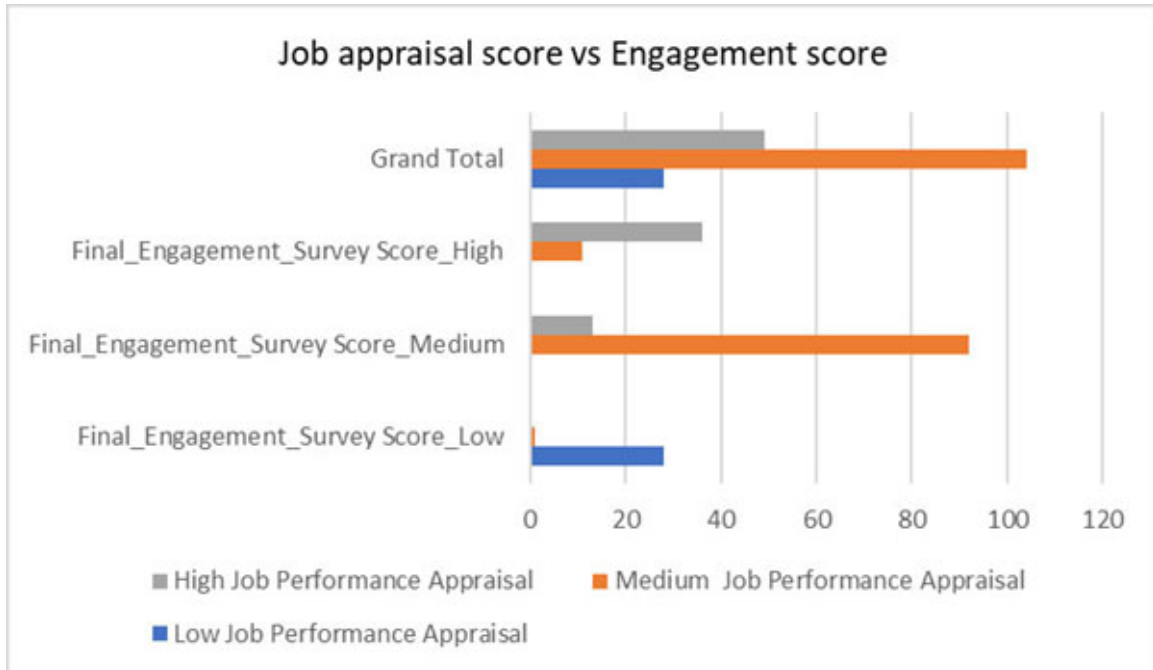


Figure 4.8: Job appraisal score versus Engagement score

This visualization trend seems to be consistent. There are distinct differences between the employees with high, medium, and low engagement scores.

A - Analysis - Statistical models

Create a Linear regression model to clearly understand which variables influence to what extent.

Run a Correlation matrix to understand which variables have important linkages with the Y variable - the top 12 drivers (with a correlation coefficient above .1 are listed here):

| Variables | Final_Engagement_Survey Score_Correlation coefficient | Absolute value (for sorting) | Top 10 drivers |
|-------------------------------|---|------------------------------|----------------|
| Final_Engagement_Survey Score | 1.00 | 1.00 | |
| Job potential_Appraisal | 0.86 | 0.86 | 1 |
| Job performance_Appraisal | 0.84 | 0.84 | 2 |
| Role fit_Appraisal | 0.84 | 0.84 | 3 |
| Job Productivity_Appraisal | 0.84 | 0.84 | 4 |
| Cultural fit_Appraisal | 0.75 | 0.75 | 5 |

| | | | |
|--------------------------------------|-------|------|----|
| Company_group Exp : 0 – 6 Months | -0.38 | 0.38 | 6 |
| Company_group Exp : > 24 months | 0.30 | 0.30 | 7 |
| Job_Role_Engineering and Maintenance | -0.18 | 0.18 | 8 |
| Job_Role_Instrumentation | 0.18 | 0.18 | 9 |
| Recruitment_Source_Company Academy | 0.15 | 0.15 | 10 |
| Recruitment_Source_Direct | -0.12 | 0.12 | 11 |
| Highest_Edu_Diploma | -0.11 | 0.11 | 12 |

Table 4.4: Correlation for Engagement score

Run the Linear regression for the 12 variables and the Y variable.

Take the Y variable and the 12 Correlated variables in another sheet/table:

Data | Data Analysis | Regression:

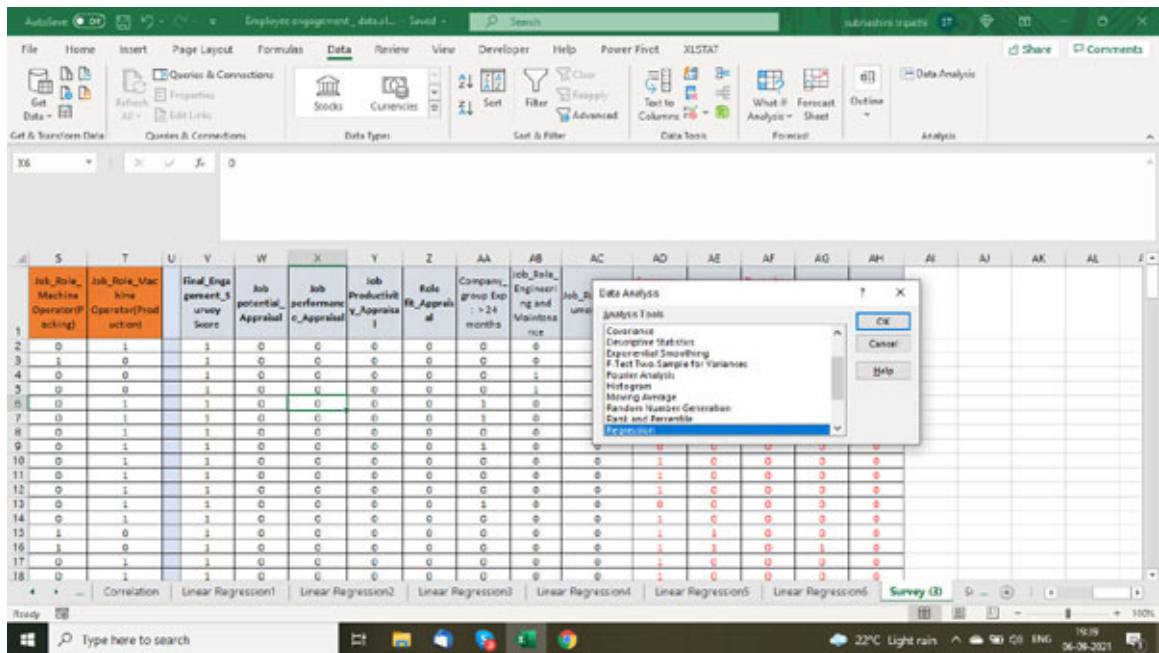


Figure 4.9: Running the Regression model _ step 1

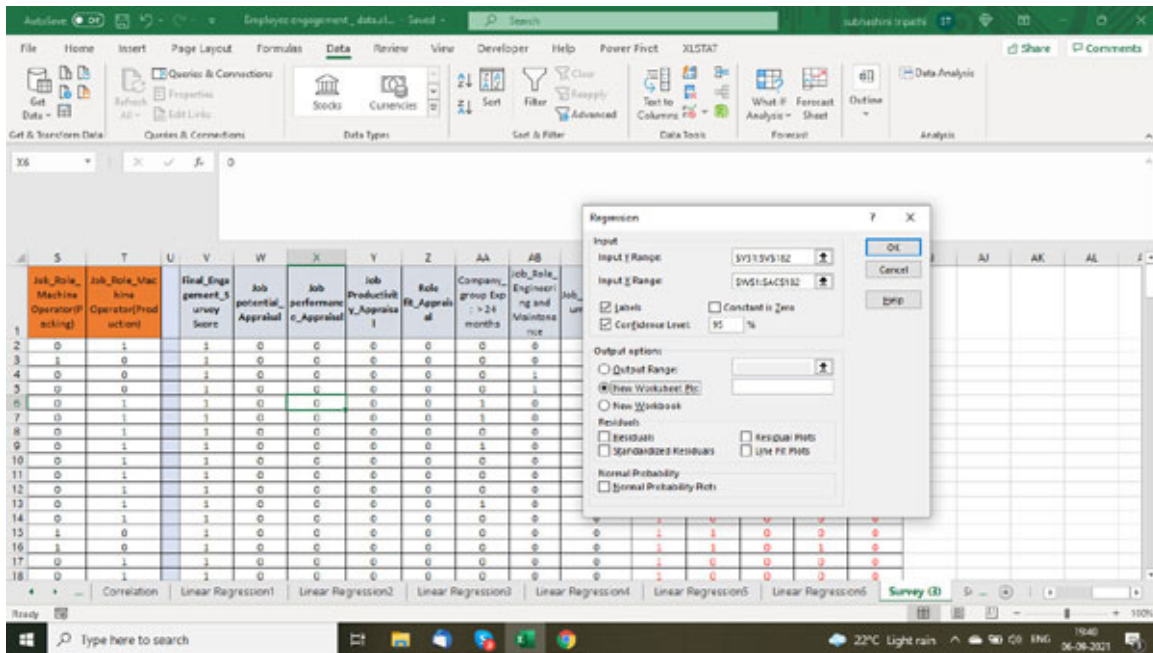


Figure 4.10: Running the Regression model _ step 2

Important:

- Linear Regression is an iterative process: You need to repeat it till you get to the final equation.
- The two things to watch are as follows:
 - **R Square and Adjusted R Square:** The values should be very close to each other.
 - **The p-value:** The *p*-value should be close to or less than .05.
 - Remove the variables which are far away from the *p*-value not near .05.
- Re-run the Linear Regression.
- In the final outcome, take out the equation of prediction (Sheet-Linear Regression6).

$$y = \text{Intercept} + 0.179123791286211 * \text{Job potential_Appraisal} + \dots$$

| | Coefficients |
|--------------------------------------|--------------|
| Intercept | 1.00263812 |
| Job potential_Appraisal | 0.17912379 |
| Job performance_Appraisal | 0.07664698 |
| Job Productivity_Appraisal | 0.09521099 |
| Role fit_Appraisal | 0.09184375 |
| Company_group Exp : > 24 months | -0.09029696 |
| Job_Role_Engineering and Maintenance | -0.15047028 |
| Job_Role_Instrumentation | 0.1979032 |

Table 4.5: Linear Equation

Why is R-square so important?

R-square is a goodness-of-fit measure for linear regression models.

R-squared evaluates the scatter of the data points around the fitted regression line. It is also called the coefficient of determination, or the coefficient of multiple determination for multiple regression.

The larger the R², the better the regression model fits.

What is Adjusted r-square?

R-square always increases when the number of variables increases. Even if a useless variable is added to the model, the r-square will still increase.

Adjusted r-square only increases if the new variable makes the model better and more efficient.

Thus, models, where the adjusted r-square is close to r-square, are the best. This happens when the p-values of the variables are near or below .05

I-Insights - Recommendations

To get good a Engagement score, the company needs to work on the following:

- Job potential_Appraisal
- Job performance_Appraisal
- Job Productivity_Appraisal
- Role fit_Appraisal
- Company_group Exp : > 24 months

- Job_Role_Engineering and Maintenance
- Job_Role_Instrumentation

Thus, from the 12 variables, we are down to the 7 most important variables which influence Employee engagement.

We also know how much each variable influences the outcome – by looking at the coefficient/multiplier assigned to each of the 7 variables.

For example:

| Variable | Coefficient | | | | |
|--------------------------------------|------------------|--|--|--|--|
| Job potential_Appraisal | 0.17912379 1 | for every 1-point movement (for example, from x= 1 to x= 2) the increase in the score is .1791 | | | |
| Job_Role_Engineering and Maintenance | -0.1504702 84 | for every 1-point movement (for example, from x= 1 to x= 2) the decrease in the score is .1504 | | | |

Table 4.6: Multipliers in linear regression

Thus, this linear equation will generate a score for each Employee. The model should be run periodically.

Policy decisions can be taken to minimize factors which have a negative impact on score and increase the factors which positively impact the score.

Key terms

Linear Regression is the technique to solve for the questions “How many?” or “How much?”

We have seen how to run the correlation which helps us identify the variables with a relationship to the problem or y variable. The correlation coefficient is a binary measure – between one x variable and y variable.

A Linear Regression model helps to connect multiple x variables to the y variable.

CHAPTER 5

Performance Metrics

The aim of all HR functions is to ensure the right measure of performance for ensuring that organizational objectives are met. Looking at performance also has multiple perspectives through reviews and setting up of benchmarks to measure what we term as performance. This in itself is a grey area, when observed from a transparent prism of functions. Performance as we foresee is the outcome of aligned productivity at optimum efficiency. The role of Human Resources is primarily to design performance frameworks in congruence with business objectives.

Structure

In this chapter, we will cover the following topics:

- Factors of performance
- The impact of a competency-based approach
- Measuring performance

Objectives

In this chapter, readers will be able to acquaint themselves to the basic reasons of measuring performance by understanding the frameworks used to assess and scale performance, the role and impact of competencies, and finally by the ways to measure them to attain Talent Management objectives. The purpose is not only to understand the factors of performance, but also apply them based on the needs of the organization.

Factors of performance

Let us observe the HR role to begin with as explained in [*Figure 5.1: HR Function flow*](#):

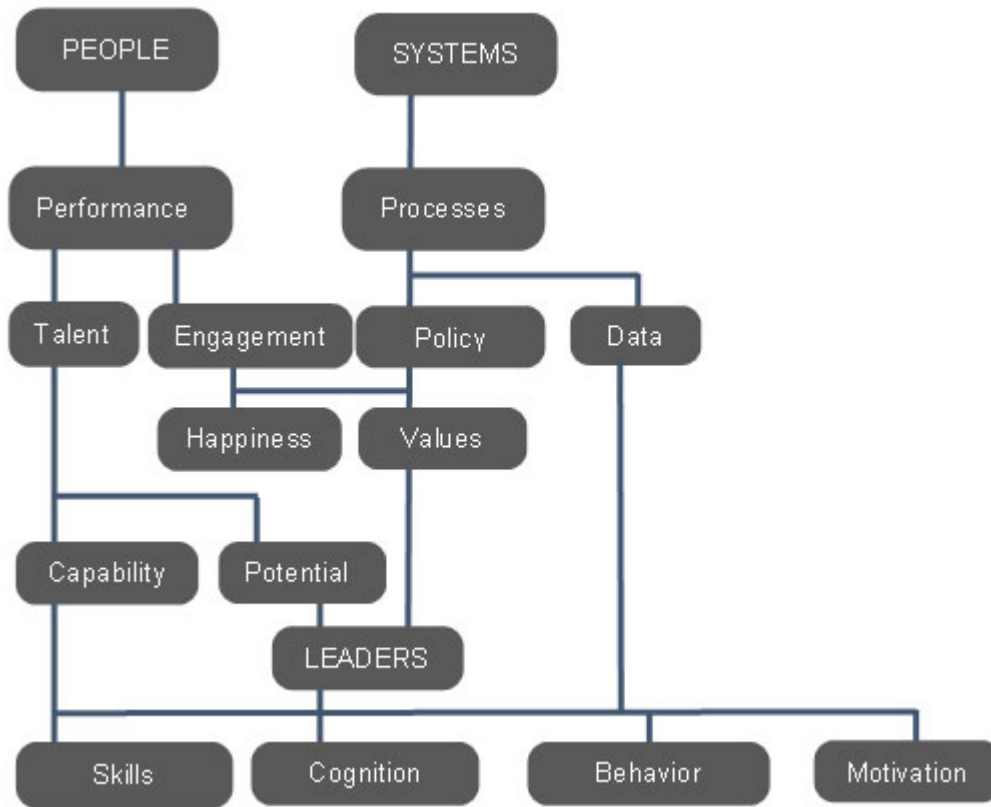


Figure 5.1: HR function flow

HR roles can be classified under People and System functions. Every performance is driven by Talent and Engagement levels, which are, in turn, driven by Capability and Potential.

Engagement is linked to Policy through values practiced by the organization, and leaders are the first in line to exhibit trust towards the values through their skills, cognition, behavior, and motivation. So are employee capabilities driven by the same factors. All of this applies also to HR practitioners and it is that unique perspective where the designer is also the user.

Potential is on the same plane as Capability, as capabilities need to be enhanced to their full potential using Learning and Development practices. Potential is an important factor for observing future capability as growth and learning benchmarks.

Advantages to the organization by approaching this flow are as follows:

- Aligning competencies to find common capabilities to org objectives.

- Aligning with organizational values by alignment with employee motivation.
- Creating policies for short-term objectives or long-term culture.
- Pushing for learning and development plans for employees with gaps.
- Promoting meritocracy using benchmarks for future hiring or talent-based role requirements.
- Using policy to measure; aligning with improving performance and improved behavior.

Performance is productivity at the highest possible levels of optimum efficiency. In measuring efficiency, we need to observe the following elements to estimate the efficacy of individual capabilities:

- **Competencies** include functional skills, cognitive abilities, and behavioral aspects of the job role, including team player qualities, problem solving, negotiation skills, or mechanical engineering skills.
- **Knowledge** includes acquired information one bears with respect to any process, material, information, or idea based on academics and experiences. Knowledge is the level or amount of information we command about any subject.
- **Experiences** vary among individuals due to both learning and practice and are subject to cultural and ritualistic belief systems within socio-economic social structures.
- **Personal Attributes** include behavioral and cognitive preferences based on adaptive elements and biases which can be due to the preceding three factors.

Individual capabilities cannot be expressed in isolation but will be subjected to a framework of productivity for serving the needs of the organization. This requires breaking down our capabilities into four organizational need-based categorizations of competencies; Kindly note that the first two are individual based while the last two are focused on group requirements or strategic needs, which may at times be beyond the scope of the individual but pushes the individual to develop competencies for larger role and responsibility growth:

- **Role-based:** Focuses on individual capability for delivering competencies as prescribed under organizational standards and benchmarks. These can be done by administering subject or behavioral tests to assess levels.
- **Learning based:** These sets of competencies help us understand that there is a clear lack in standards and helps HR Managers introduce learning at personal or team level to improve delivery of performance.
- **Team-based:** Competencies under this category are the ones which are team oriented and have a higher behavioral bent of influence. Team player qualities or trustworthiness are team-based competencies.
- **Org-based:** Organizations need employees to display certain competencies to highlight the org culture like customer orientation or digital leadership skills to empower goals linked to org strategies. Most org-based competencies are required for higher org-based competencies in their senior leadership teams.

[Making performance an org objective](#)

Now that we have found the classification and categorization of competencies, it is not difficult to add weightages based on the role and thus link them to Key Result Areas and then further to Key Performance Indicators as part of objective strategies in designing performance frameworks.

Among the flow of competencies and weightages lies one hidden cause of failure of Performance Management Systems, and which is often ignored; it is the impact of ownership for performance failures. Failed performers are simply let go without understanding the true picture; was it a poor performer or a biased evaluator? This is where the role of 360 feedback provides for accountability of competency and rules out survivorship bias, where the employee is more focused on surviving and thriving in the eyes of the Supervisor rather than exhibiting true performance capabilities. So how can we fix it for aiding the various functions of talent management?

Businesses begin with strategic objectives. These objectives are linked to **Key Performance Indicators (KPIs)** for BSC or any mix of parameters the organization deems necessary.

KPIs are further broken down to the departmental, team, and individual levels.

Key Results Areas (KRAs) are determined to define the KPIs further; Financial goals of achieving an x amount of revenue could contain KRAs of ‘adding 20 customers to the portfolio’ and likewise.

While KRAs are excellent in defining the exacting requirements, it requires a set of competencies, which could be functional (domain-related), behavioral or cognitive to help achieve those results. Measuring competencies linked to KRAs helps establish gaps in learning, (like negotiation skills) which hold back the employee’s potential to realize the KPI. In most cases, it is the lack of skills, be it functional or behavioral, which leads to an otherwise excellent resource ending up being labeled a non-performer.

Competencies drive organizational growth. Hence, they need to be classified across the four pillars as enumerated as follows; the first two highlight the individual need for personal development and learning while the next two categories focus on one’s contribution as a part of the team and org. As one scales the ladder higher in the org hierarchy, the importance for the latter two hold a higher percentage of weightage compared to the individual role-based focus for junior roles:

- **Role-based:** This focuses on role-specific competencies which are required for delivering excellence in an individual capacity. These are functional competencies like mechanical engineering or motivating employees, based on the job role and focused approach on domain specialization.
- **Learning and Growth:** This focuses on improving competencies as a learning driver for the improvement of skills; be it functional or behavioral or cognitive, for learning, growth or improvement of org culture. Competencies where employees are found lacking are to be put into this category and measured for levels of improvement.
- **Team-based:** The focus of this category of competencies is more on team-building and making employees more team-focused to deliver excellence and encourage camaraderie. Behavioral competencies like team player qualities and humility are typical competencies to be

measured under this category to ensure teams are more empathetic to fellow members, peers, and juniors at the workplace.

- **Org-based:** Org-focused competencies may not be applicable for juniors but make a big difference for managerial and executive team members for driving long-term focus and strategic initiatives like innovation, marketing, and product skills. These mandates are higher than role-based focus on functional skills for senior management as a part of driving culture and strategy as part of their deliverance at the desk. The title idea of adding performance as an organizational objective stem from the fact that org objectives are driven primarily by the senior teams.

Linking competencies across the three factors of Function, Behavior, and Cognition to KRAs using weighted average scoring ensures that employees are aware of the skills required and set the right expectations for a defined employee expectation and experience. The framework has been depicted in [Figure 5.2: Key Performance Indicators](#) for practitioners to develop a modular approach towards acknowledging the importance of competencies, leading to a transparent and objective practice of measuring performance:

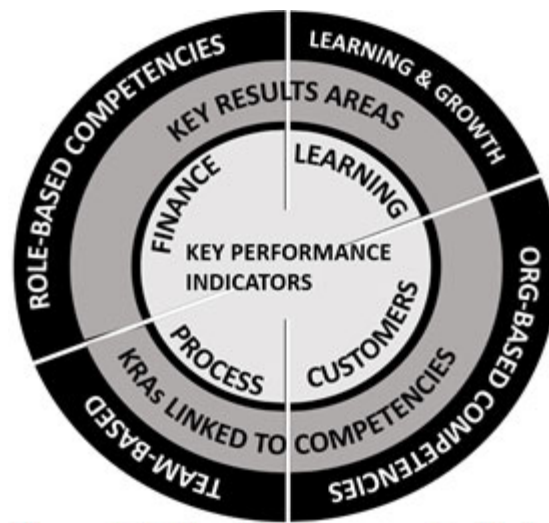


Figure 5.2: Key performance Indicators

Some key points to note while applying the framework are as follows:

- Do not put more than four competencies for each category.
- Add learning competencies based on 360 feedback.

- Everyone should have a minimum of two team competencies.
- A maximum of 16 competencies per employee and ideally 8.
- Clustering these competencies helps understand the common ones versus the ones specific to a department.

[The impact of the competency-based approach](#)

Benchmarking competencies ensures that hiring is based on KRA and KPI linkages to performance. Competency-based definition of categories allows adapting or changing course in a quick manner by putting role-based competencies as learning competencies to push adoption.

At least one org competency for every employee, even at the junior level helps them align to larger goals and interests while serving the organization strategy and its key goals every year. As we suggest all customer-based KRAs to be linked to the org-based competencies, it bonds teams to perform towards achieving a key objective which drives growth and success for the self and the org simultaneously.

At Pexitics.com, we have developed a cloud-based platform based on this framework to address not only the performance, but also link it to other HR modules like Hiring, Learning and Development, and Compensation and Benefits to make it interlinked for addressing all critical people management issues. This adds many benefits to the organization and impacts measuring of performance in a holistic fashion:

- **Higher accountability:** While it is possible to miss achieving KRAs, linking it to competencies ensures that the competency beneath the KRA is addressed and the scope for correction and hence make the employee wholly accountable. This also addresses the issue of market and product mismatches as oft-expressed excuses to shun accountability of one's role and responsibility.
- **Higher ownership:** Employees with higher ownership focus on competencies and improve themselves, irrespective of market conditions, and excel when markets are soaring. Issues like team-based categories make the individual own the team and not push the blame on a fellow colleague, even if the other is a lag candidate. This gets captured by the 3600 approach, which believes on one to rate their peers, juniors, and reporting Manager for their true worth,

bringing larger ownership to the role and its dimensions of team responsibility while making team performance transparent to observation and reporting.

- **Data-driven approach:** Compared to standardized subjective information, the competency-driven approach to performance management ensures quantification of what worked and what didn't for each employee, thus bringing better clarity of the individual versus the role and a clear measurement score to define the role sharper and help managers specify the difference between must-haves and good-to-have competencies. This is one of the most difficult gaps to address as managers are often found complaining about the skill standards of their subordinates and vice-versa.
- **Learning and Engagement:** The individual employee, who is keen to learn and improve turns into an asset for the team and the org based on fitment to the role rather than cognitive biases, while a higher drive towards team and org categories shows eagerness to transition to new roles where one performs better as the job role and the interlinked competencies are defined. This also ensures that succession to higher positions happens by design and not by recommendations and loyalty as an uneven standard.
- **Employer branding:** As an outsider, a prospective candidate is more drawn to organizations where they are assured of being rated for their performance by a transparent system and not years of loyalty. While loyalty benefits the organization in the long run, having non-performing loyal is an added risk to the org budgets. Application of benchmarked performance attributes ensures that employees are confident of transparency in the rating process while it aids the org through its applications of measures to define performance in line with its pursuit of objectives.

It is not a mandate to use a single framework or approach, but while suggesting one, one needs to be wary of its impact, alignment of purpose and resourcefulness for the company and its size and business modules. Depending not only on the headcount, it might be wiser to also look at the count of competencies to determine the right performance framework for measuring talent. However, the role of a competency-based approach has

found no opposition from any quarters purely because of its potential and ability to measure the level of impact it has on performance.

Measuring performance

How should the rating process be?

Every comparative curve turns into a bell curve over time as additional counts of data get fitted in. Hence, the debate on the bell curve as a rating outcome is a constant. However, the greater damage is by refusing to acknowledge that any organization, even with the best of employees will produce a bell curve after performance measures are charted. There are many processes to objectively measure performance. The devil is not the bell curve, as is often made to be, but the way it is interpreted and sliced to differentiate and categorize performance. The Balanced Score Card is one of the most reputed scorecard-based performance measurement frameworks in this space.

BSC Framework

The BSC Framework divides KPIs into four quadrants as shown within the inner circle as shown in [Figure 5.2](#). These KPIs are derived from organizational strategies and segregated into the four quadrants. Employees are measured for their achievements for each of these segments by using either a direct scoring method or further breaking it into KRAs. What I have done further is to add competencies to them in a structured framework as has been explained above to make the measurements not only meaningful, but also measurable and accountable.

The BSC Framework-based KPIs are derived from organizational strategies and segregated into the four quadrants:

- Financial
- Customer
- Process
- Learning

Employees are measured for their achievements for each of these segments by using either a direct scoring method or further breaking it into KRAs. What we need to do is to further link them to add competencies in a structured framework as explained earlier to make the measurements not only meaningful, but also measurable and accountable.

Employee scorecard

An employee scorecard should contain the competencies for measurements of the KRAs and in turn the KPIs for an objective measurement of performance. For adding objectivity, the measurement should come from multiple levels of interactivity and on a regular basis rather than an annual ritual.

A rating tool combines the multiple feedback with weightages to provide the perfect analysis of performance, which often is found lacking in direct reporting structures. Adding a variable weightage can help limit the favoritism within relationships and improve tolerance levels of fairness in rating systems. Observe the scores in [Table 5.1](#):

| Rating Scale (Out of 5) | Supervisor Scores | Peer Scores | Reportee Scores | Average Scores | Final Scores |
|-------------------------|-------------------|-------------|-----------------|----------------|--------------|
| Weightages | 40% | 30% | 30% | 100% | |
| Negotiation | 4.2 | 4.1 | 3.9 | 4.1 | 3.7 |
| Analysis Scores | 3.6 | 3.2 | 3.6 | 3.5 | |
| Abductive Reasoning | 3.4 | 3.4 | 3.8 | 3.5 | |
| Negotiation W.A. Scores | 1.68 | 1.64 | 1.56 | 4.88 | 4.41 |
| Analysis W.A. Scores | 1.44 | 1.28 | 1.44 | 4.12 | |
| Abductive W.A. Scores | 1.36 | 1.36 | 1.52 | 4.24 | |
| TOTAL SCORES | 4.48 | 4.28 | 4.52 | | |

Table 5.1

The raw scores are multiplied by the weightages to arrive at the final scores which have been provided in the last row, while the overall average of 4.41

can be seen as the final score if we consider these to be part of a specific KRA of an employee.

Use of weightages also help to further arrive at a better understanding of the employee performance from multiple stakeholder perspectives.

The MBO approach

The term **Management by Objectives** was first expressed by Peter F. Drucker in his book *Principles of Management* in 1954. Every organization expresses its vision, mission, and goals as objectives to achieve. The achievement of these objectives would mean not only achievement of targets, but also alignment, as objectives are not just statements, but also the means through which goals need to be pursued towards attainment.

One of the strongest criticisms of MBO and why it lost its reputation as a practice was the missing link of how it needs to be pursued. This meant, objectives could be pursued using any means for the goal to be reached and hence could be hurting the long-term objectives. This could be corrected by the **Competency Anchored Rating Scale (CARS)** solution of defining the competencies which could then be attached to the objectives for ensuring a regulated means of achieving goals.

The goal theory is also similar to the MBO approach and is a further refinement to the MBO approach, as evident in the OKR (Objective and Key Results) models made popular by Intel and Google. However, in the both the cases, the need for spending time of discussing and acceptance of the goals may involve considerable time before both parties accept or reach a conclusion in the ideal scenario. The CARS approach could easily eliminate it through its approach of defining the competencies required for the job role within a framework as exhibited in [Figure 5.2](#) and discussed earlier in this chapter.

The role of feedback

While frameworks are excellent in determining the process flow within a system, the rule for humans within a framework is to listen often. Listening to what is being offered prevents misunderstandings and regrets. Listening with intent improves processes and structures, whether it is physical or social. This aspect had long been neglected in modern HR practices but is

resurging as listening posts are coming of age. Listening posts are now in vogue and the use of surveys to assimilate feedback from employees across the various levels offer great insights and development for human interactions within the organization.

The role of feedback can be used to measure performance in a new way and age where constant focus on meeting shorter performance objectives and adhering to goal-based achievements are changing the way we view an organization. Compared to the annual appraisal cycle, a faster, shorter, and focused cycle of winning over one milestone to conquering the next has been finding more converts in both the business and people practices. This also leads to better practices in learning and development with greater learnings from *on-the-job* performances.

Linking feedback to competencies has been found challenging as practitioners need to spend more time determining the job and role competencies in the first place. The categorization of role-based competencies for job roles has been discussed at the beginning of this chapter. Consider if you have ‘lower media spending by 15%’ as part of your financial KPI and one core KRAs of it. What are the competencies linked to the scorecard? Negotiation skills, analysis and interpretation skills, and abductive reasoning are key competencies for the role. One cannot be bad at negotiation skills within the workplace but expected to be excellent with client negotiations as a competency trait. Surveys within the team will highlight how well one meets the competency levels, subject to an objective analysis by the team of one of its own. Assessments and feedback together can account for the objectivity while just listening to employee feedback across levels using a 360 approach can result in an objective performance analysis of competency skills for performance deficiencies.

Measuring feedback

Adding action to feedback is the second aspect towards measuring feedback for assessing performance. Action here could be either learning in case of low scores or celebrating high scores by scoring feedback. This helps in providing employees with a transparent yet disciplined marker of expectations and confidence in the system of rewards and recognition for good versus need for learning in case of the former. Converting feedback into action also makes the process exciting and kills the monotony and

demand of time and effort it brings with it. Actionable feedback carries with it a sense of urgency and meaning of its role as part of the process.

Consider a system which allows one to score feedback at four levels from 0 to 3:

- **0 – A gentle ‘Thank you’:** This is a no score but a thank you ensures that the listening aspect is cultivated through a pre-determined ‘thank you’ note to the feedback provider.
- **1 – ‘Claps’ for thinking through:** Feedbacks often contain some ideas of improving practices and processes and signal a higher level of involvement when there is a clear thought process involved. Rewarding with a 1 score helps acknowledge the thought process.
- **2 – ‘Celebrate’ for original ideas:** Innovative ideas from employees within their feedback highlight a high level of involvement with a creative approach to solve what one may consider as critical to success to a process or problem. Often, all ideas may not be immediately implementable but offering celebratory notes and dining vouchers or whatever the employee fancies encourages the employee to keep pursuing the ideas till they are implemented.
- **3 – ‘Implement’ ideas with practicality:** The ideas which can be implemented should not only be celebrated, but scored the highest and accounted for with the highest scores for the feedback provider to be celebrated as a role model with their ideas implemented within a defined time frame.

With the preceding prescription, organizations signal an important aspect of a feedback loop and which is **recognition**. Feedbacks which are not translated or results out of unclear goal objectives get lost in translation. Linking feedback to goals, be it strategic or tactical, helps measure it for a cause and find answers to the questions and suggestions linked to the purpose. A lot of start-ups and millennial organizations are moving away from performance orientation to goal-oriented measurements of productivity for linking compensation and growth. Pulse surveys are more prevalent in finding answers while strategic moves like moving to a ‘work from home’ decision preceded by feedback can be both interesting and measurable in its dimensions and finding tolerance levels to change management.

Feedbacks can be individual, anonymous, or multiple stakeholder-based opinions. Feedbacks act like a listening post, as it tells us what the employee may have wanted to speak but did not find the opportunity or voice to speak out. It also enables emotional signaling like frustration, mistrust, or high energy for plans and programs the organization creates to deliver objectives.

The six key pointers for good performance practices are as follows:

1. Measurements should be simple yet conclusive, leaving little scope for ambiguity while drawing interventional insights.
2. Within the teams and at least annually, the most productive ideas must be *recognized* by the top brass to feed the individual need for social acclaim.
3. Linking performance with compensation and rewards signals a transparency and meritocracy, and which will be discussed in detail in the next chapter.
4. Investing in a feedback system or a listening post increases not only productive ideas, but it also assures employees of 'being heard' for what each considers an idea.
5. Even laggards in performance or inability to share productive ideas need to be counselled to enrich their contribution through additional learning interventions.
6. Leadership teams must spend maximum time in observing, measuring, and driving performance potential, rather than business objectives, which is an output of the former.

Conclusion

Performance management is today a mix of using multiple stakeholder views using technology to deliver faster results with granular perspectives for further improving employee scores. The competency approach enables the KRAs and KPIs to be organized to apply the framework in a fluid manner, enabling an easy transition from performance metrics to learning initiatives, to hiring benchmarks with further linkages to compensation benchmarking. This ensures a perfect circular loop of transition with the core factors interlinked for the HR practitioner with multiple parameters

and frameworks for enhanced performance with reduced attrition, another core subject which we shall explore in the next chapter:

- Setting up a goal or KPI should involve the employee and the supervisor to enable both to agree on what would be considered a *rewarding* performance.
- The rewards should be encouraging a performance and not just attendance.
- A good goal is one which seeks stretched efforts but not strain but acceptable norms of workmanship.
- It is important to find means to celebrate and encourage performers, but it would be disincentive to target laggards and not motivate them.
- Celebrating goal achievements at frequent intervals delivers self-motivation, and thus should cascade towards a final score rather than an annual or biennial process.
- The prism of morality must not obfuscate the objective reality of business objectives.

Key learnings

- Performance as an objective is intertwined within the role of HR and has multiple advantages by adhering to it.
- Competencies, knowledge, experience, and personal attributed influence individual and team performance are keys for measuring and observing.
- Competencies need to be aligned to roles for fitment towards org objectives. The four types of competencies are role-based, learning-based, team-based, and org-based competencies.
- Role-based and learning-based competencies focus on individual improvement and performance metrics while the latter two are for driving broader objectives and long-term performance consistency within the business domain.
- Adopting a performance framework might be left to organizational and industry discretion, but the need to *listen* and include *employee feedback* is a mandatory process.

Questions

1. What are the key objectives of performance appraisal systems?
2. How can we align performance requirements with individual capabilities?
3. What are the five key factors of a holistic Performance Management system?
4. What is the significance of competencies in performance?
5. Define the BSC framework and its Scorecard approach.
6. How can we use a 'rating approach' in feedback and measure feedback?

Case Study - Performance Analytics Measuring and Benchmarking Performance Using MS Excel - Business Problems, Solutions, and Insights

We will cover the following technical points:

- Measuring performance and identifying high performers who are ready for the next level.

Employee performance is what makes the organization perform. The CEO of a company is very keen to understand what differentiates a top-performing employee from the ones who do not perform.

For the organization covered in the following example, the CEO wants to understand if Employee Satisfaction scores and Employee Engagement scores are good indicators of employee performance.

D - Define the Business Problem

The People Management team is keen to understand which attributes of an employee drive performance in the organization.

The CEO is convinced that employee engagement is linked to the Performance score.

The task at hand is to do hypothesis testing to decide if this hypothesis is correct or not.

C - Collect the data and O: Organize the Data

The employee level data is given in the `data` sheet of the Excel file `Appraisal_data`:

The columns/attributes of interest are as follows:

- `PerformanceScore`: This field is from the annual performance appraisal.

- **EngagementSurvey**: This score is from the Engagement survey carried out for all employees.
- **EmpSatisfaction**: This score is a self-declaration score in a pulse survey.

Since the **EngagementSurvey** and **EmpSatisfaction** score is already numeric, no transformations need to be done.

Take out the following three columns (copy and paste) into a new sheet **data1** :

1. **Missing values**: Use a COUNTA function to understand if there is data missing in sheet **data1** :

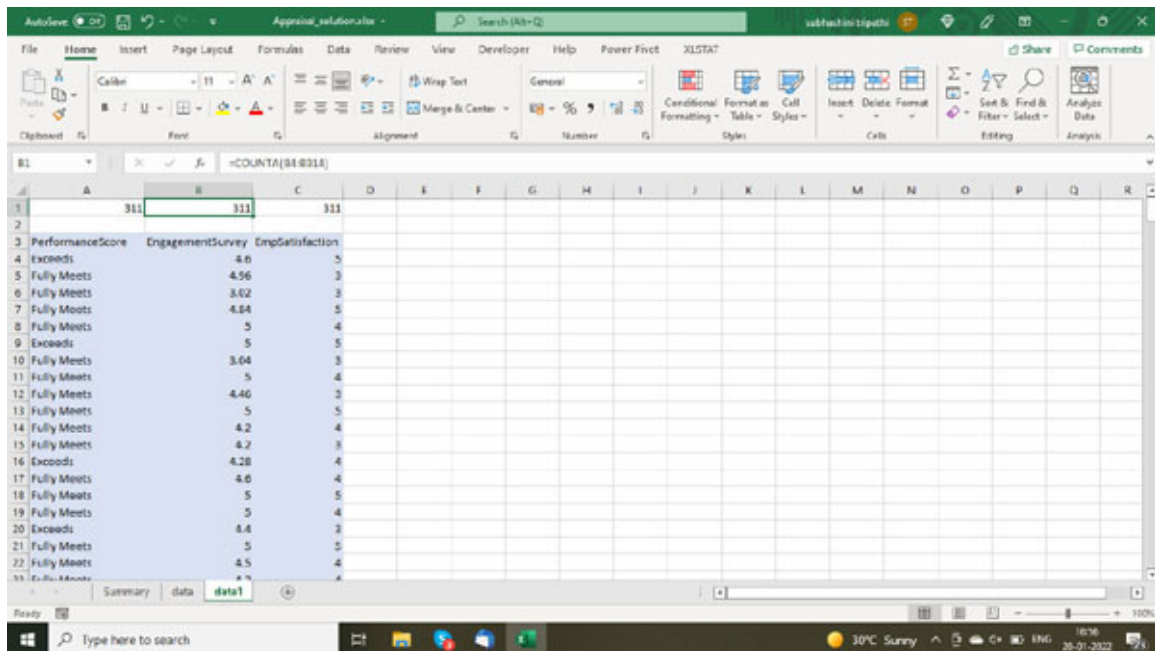


Figure 5.3: Relevant data for the project

2. **Outliers**: There are no outliers since the values are within a pre-defined range.
For both the scores, the range is 1-5.
3. **Dummy variable**: Not required
4. **Derived variable**: Not required

We need to structure the data in a particular format to run the Hypothesis tests.

Process: Take the data for each option of the field **PerformanceScore** and make a separate column for the same.

Do this in a separate sheet **data2**.

Start by sorting the data on **PerformanceScore** in sheet **data1** :

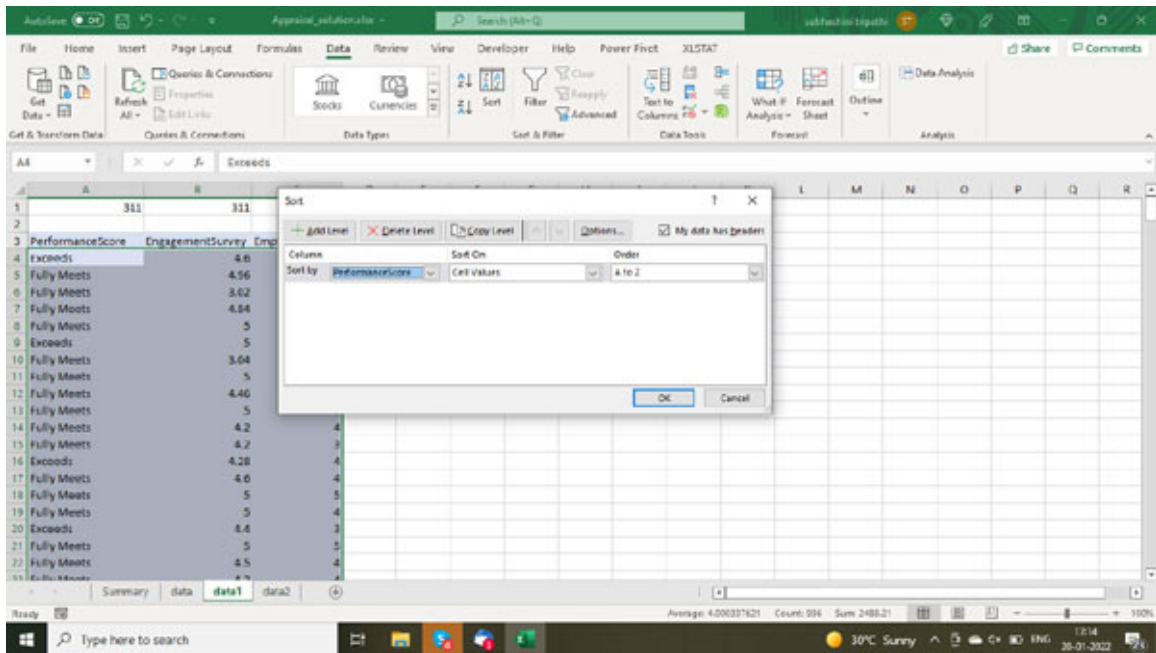


Figure 5.4: Formatting the data

Then, copy and paste the data into sheet **data2** in the required format. I am clubbing the data of **PerformanceScore** as Needs Improvement OR PIP.

PIP means Performance Improvement Plan. Employees who need to improve on performance are put on a PIP plan so that they can get help and mentorship to improve from colleagues and seniors.

Sometimes, it may also mean that they can be assigned to some Learning Programs which will help them perform.

The re-arranged data in sheet **data2** looks as follows:

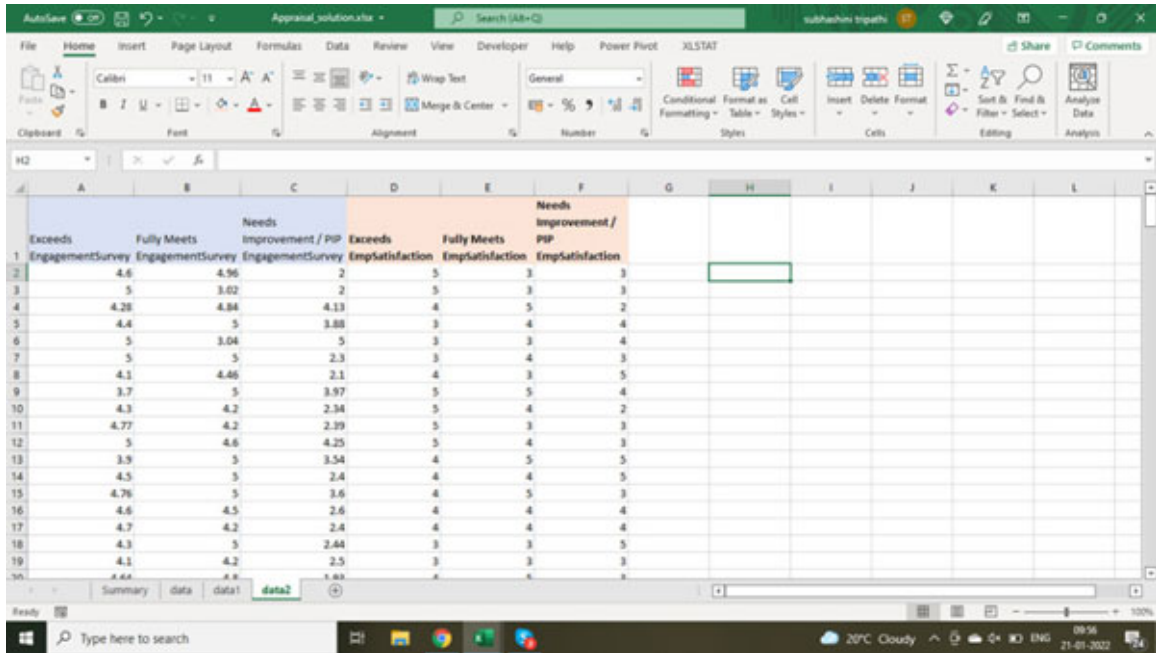


Figure 5.5: Re-arranged data

Now, we can compare the samples of Engagement Survey across Performance levels and also of Employee Satisfaction across Performance levels.

V - Visualize the data

Create the Average of the columns by inserting the function: Average (refer sheet **data2**).

Insert Column chart:

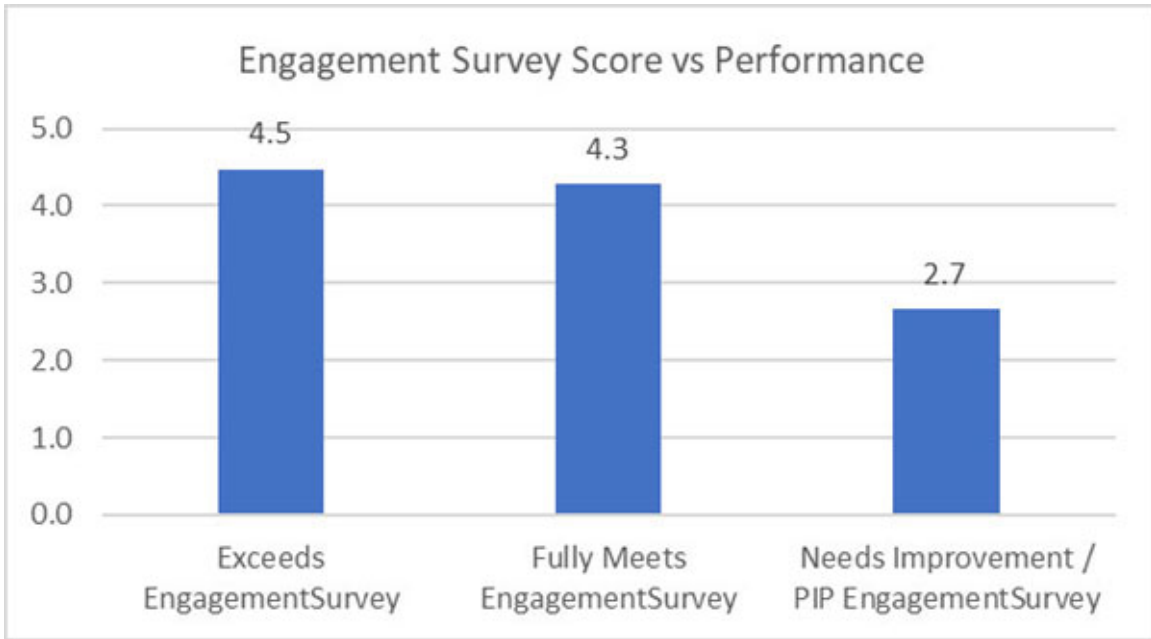


Figure 5.6: Average of Engagement Survey Score vs Performance

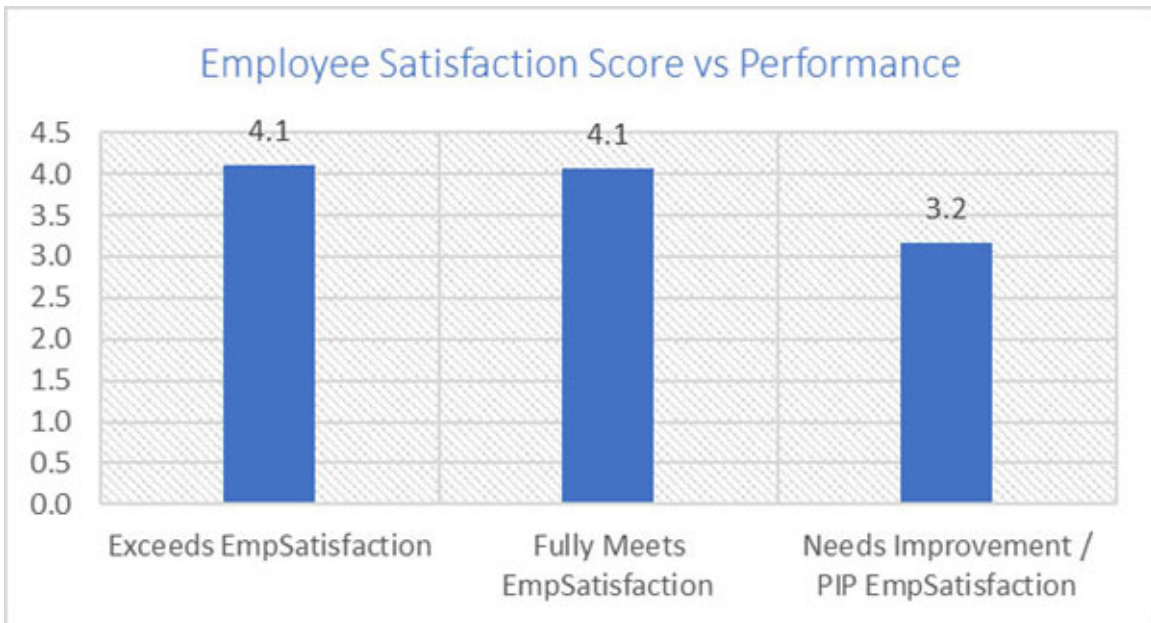


Figure 5.7: Average of Employee Satisfaction Score versus Performance

The Engagement Survey and Employee satisfaction scores for Needs Improvement/PIP employees is clearly lower than the other employees.

A - Analyze the data

Use hypothesis testing to understand if the scores are statistically lower for different categories of Performance.

ANOVA is an Analysis of variance. Though the most common hypothesis testing method is the Student's T-Test, it has the drawback that it can be used for only two samples.

ANOVA is a hypothesis test that can be used across multiple samples.

Here, we have three samples:

- Exceeds EngagementSurvey
- Fully Meets EngagementSurvey
- Needs Improvement/PIP EngagementSurvey

This test helps understand the variation in the means across multiple samples.

A null hypothesis states that the two or more samples have the same means, thus there is no appreciable difference between the means.

The alternate hypothesis is that the means of the samples are different:

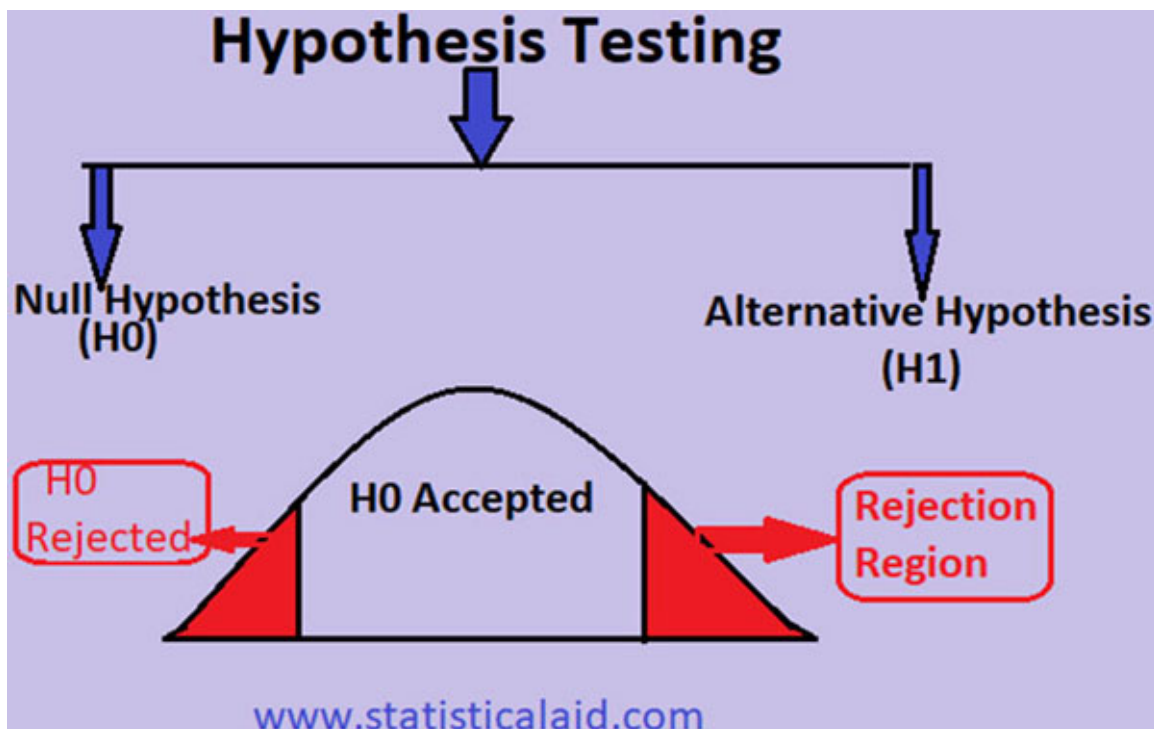


Figure 5.8: Hypothesis testing explained

The way to execute Hypothesis testing in Excel is as follows:

Go to Data Analysis toolpak in the **Data** tab. Choose **Anova Single factor**:

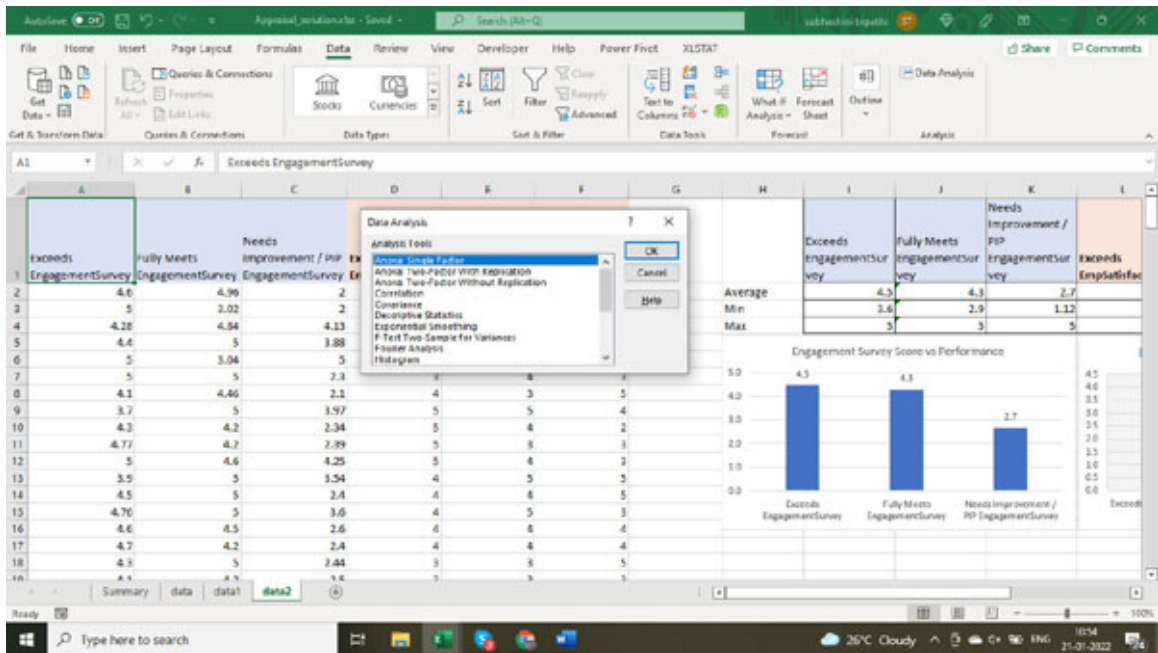


Figure 5.9: Choose Anova in analysis toolpak

Choose the range of data and press **OK** - the output will come in a different sheet - which I have renamed as **Anova**:

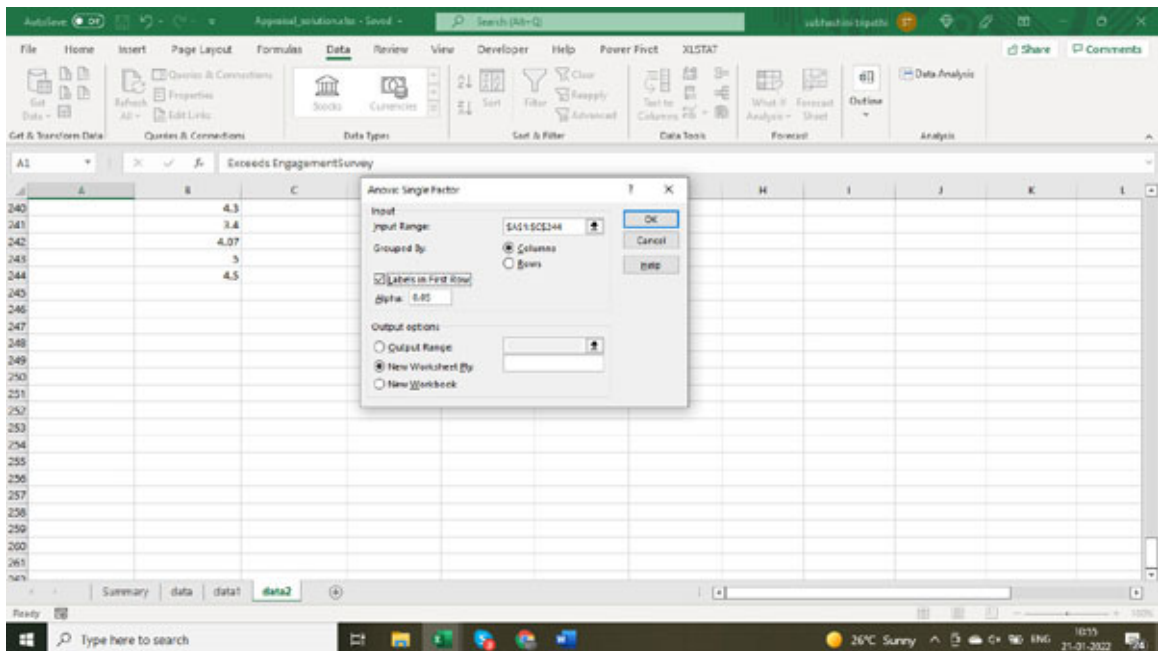


Figure 5.10: Choosing the options

Outcomes of Anova are as follows:

| Anova: Single Factor | | | | | | |
|--|------------|---------|------------|------------|------------|------------|
| SUMMARY | | | | | | |
| Groups | Count | Sum | Average | Variance | | |
| Exceeds EngagementSurvey | 37 | 165.71 | 4.47864865 | 0.14947868 | | |
| Fully Meets EngagementSurvey | 243 | 1029.81 | 4.23790123 | 0.36969764 | | |
| Needs Improvement / PIP EngagementSurvey | 31 | 82.69 | 2.66741935 | 0.83588645 | | |
| ANOVA | | | | | | |
| Source of Variation | SS | df | MS | F | P-value | F crit |
| Between Groups | 73.5157444 | 2 | 36.7578722 | 94.404479 | 1.0559E-32 | 3.02505983 |
| Within Groups | 119.924656 | 308 | 0.38936576 | | | |
| Total | 193.4404 | 310 | | | | |

Figure 5.11: ANOVA output 1 – across 3 samples

The Anova shows a list of summaries where we need to check the F value and F Crit value:

F= Between Group /Within Group

F Statistic: The F statistic is nothing but values we get when we execute the ANOVA, which is used to determine the means between two populations significantly.

We need to check whether the p value is less than or equal to .05 (5%). If yes, then we can REJECT the null that all the means are similar.

P-value: 1.05594E-32 is it <- .05? YES.

Here, we can REJECT the null.

Let us redo this process for only the following:

- Exceeds EngagementSurvey

- Fully Meets EngagementSurvey

The result is saved in the sheet **Anova2**:

| Anova: Single Factor | | | | | | |
|------------------------------|------------|---------|------------|------------|------------|------------|
| SUMMARY | | | | | | |
| Groups | Count | Sum | Average | Variance | | |
| Exceeds EngagementSurvey | 37 | 165.71 | 4.47864865 | 0.14947868 | | |
| Fully Meets EngagementSurvey | 243 | 1029.81 | 4.23790123 | 0.36969764 | | |
| ANOVA | | | | | | |
| Source of Variation | SS | df | MS | F | P-value | F crit |
| Between Groups | 1.86111508 | 1 | 1.86111508 | 5.45493478 | 0.02022447 | 3.87512601 |
| Within Groups | 94.8480621 | 278 | 0.34118008 | | | |
| Total | 96.7091771 | 279 | | | | |

Figure 5.12: ANOVA output 1 – across 2 samples

P-value is 0.020224466. Is it $\leq .05$? YES. Here, we can REJECT the null.

I - Insights

The hypothesis that the CEO has of Employee engagement scores being different across different Performance Levels is correct.

We should run the Anova for the scores across Employee Satisfaction scores.

Conclusion

Thus, we need to conclude that:

- Though the average values of Exceeds EngagementSurvey and Fully Meets EngagementSurvey look very similar, the distribution of values is

different and the samples of employees who Exceeds in performance and Fully Meets Performance have different Engagement Survey scores.

- When we consider three samples, that is, Exceeds EngagementSurvey, Fully Meets EngagementSurvey, and Needs Improvement/PIP EngagementSurvey, the distribution of values across all these three samples are different.

Key terms

- ANOVA is a hypothesis test that can be used across multiple samples.
- A null hypothesis states that the two or more samples have the same means, thus there is no appreciable difference between the means.
- The alternate hypothesis is that the means of the samples are different.

CHAPTER 6

Compensation and HR Analytics

There are two distinct terminologies used and it is important to begin with this clarity; remuneration is what is paid against work done and compensation is what is offered other than remuneration. Both the terms are used interchangeably today while the language has clear guidelines for both the terms.

Remuneration can be based on hourly wages or monthly salary along with allowances and other payments made against the delivery of work. This includes bonuses and financial rewards, or payments made as part of compensation policy. Compensation includes non-financial elements like insurance, housing, cars, and other perks which may not include any direct financial transfers but do need accounting for as cost-to-company (CTC) for an employee.

Structure

In this chapter, we shall cover the following topics:

- Remuneration elements
- Factors to consider for remuneration
- Creating a compensation framework
- Compensation policy and analytics

Objectives

The learnings from this chapter focus on remuneration as one of the most important practices in People Management. Knowledge of the factors to determine the right salary levels and building a sustainable framework to address financial and non-financial rewards at work will remain the key objective. The chapter will also cover the key elements for a remuneration

scale, further aligning compensation to job levels to create compensation levels.

Remuneration elements

As explained earlier, remuneration includes all financial payments for work awarded to an employee. For being objective and honest in the policy, the key factor is equity. Internal equity in compensation ensures that you have a clear policy framework while offering remuneration and allows you to scale and build trust for the brand. Equity is not equality, and it must be clear for the HR practitioner to engage in equality as a sub-element of equity if required for certain elements within remuneration. This means that while there might be equality for how much you would offer each child's education as an allowance, equity ensures that you do not differentiate between an employee with 4 children versus someone with a single child.

The concept of **Cost-to-company (CTC)** is a clear directive towards accounting for each financial cost. While certain costs are fixed or budgeted annually and not included in the CTC, business heads need to include and finance teams need to allocate such amounts to specific teams based on the utilization or spends by each team. The space required by each employee to operate comes at a cost. Similarly, training costs are budgeted at the beginning of each year and allocated to teams based on learning efficiencies at team levels. Typical CTC numbers account for the various financial payments made to the employee within a defined time period and would include fixed, performance, and other benefits.

Fixed compensation element

This includes basic salary and allowances as may be defined by policy and regulation. It would also include provident fund, gratuity, superannuation types of long-term pay options for every employee. All fixed compensations need to be linked to attendance and form the basis of what an employee needs to be paid at the end of the defined salary period, whether it is hourly, weekly, or month-wise. In this model, contractual obligations might require the fixed components to be higher for the month of February, which has a lesser number of calendar days.

All fixed compensations must be linked to levels and with competencies at each level for ease of determining the salary range for each employee, based on existing and improving levels. This element has been discussed in detail in the following sections.

Performance pay element

All payments linked to performance like merit plans, bonuses, and revenue-linked options like cash rewards or ESOPs fall under this element. While payments for performance must be linked to org performance, revising them later hurts employee trust and hence needs clear objective linkages for the employee to feel confident of not only achieving it but finding it credited in their bank accounts at the end of the performance period.

Performance pay policies can be based on individual performance, team performance, or org performance, based on the objective and its impact. A sales representative receiving a quarterly bonus is linked to actual revenue targets and must be rewarded financially or otherwise at the end of each quarter.

Performance pay could also be linked to innovative ideas at the workplace, financial results at the end of the year based on overall organization profits, or talent and efficiency metrics as discussed in [Chapter I](#). This encourages employees and teams to align themselves for achieving beyond the individual role and brings a big scope of scalability for organizations on a growth path.

Employee benefits

Beyond the fixed and variable pay for performance, employee benefits constitute the third element of non-cash rewards which are directed at risks that could hamper an employee's capability to perform. At times, such benefits showcased as a symbolic gesture of caring and addressing social needs to be outside the purview of work skills and are driven by equity.

Insurance cover benefits may include hospitalization benefits, life insurance, and accidental covers for employees. Beyond insurance covers could be benefits like annual health checkups and maternity cover linked to health.

Certain organizations could pay for child education for up to 2-3 children. At senior levels, vacation allowances are also provided.

Leave and travel allowances are costs that get aggregated at the business levels and are either allocated to business overheads or constituted as part of budget allocations, depending on team size and need for such activities.

Loans and grants are benefits, though recovered through salaries and act as additional benefits for employees to benefit during times of duress.

Employee Stock Option Schemes (ESOPs) are now becoming popular where employees are allocated shares to select roles and responsibility functions for wealth creation and greater ownership.

Leaves of both fixed and casual nature, including medical leaves are today considered as part of benefits as leave entails a working day paid for as a financial resource.

The traditional method of calculating basic pay was based on market prevailing rates of labor. Nowadays, labor is considered term-limited to manual and temporary work without access to performance pay and benefits. As we move from labor to workforce to a resource-based approach, accounting for the various elements calls for a framework to address the right pay at which one can access people as resources. It is important here to note that these frameworks need to be flexible to account for local intricacies and geographical traditions, which are often influenced by culture. Certain countries offer bonuses during festive seasons to address the demand for additional spending during such festivities. Regulatory guidelines also are to be accounted for in determining the elements and sub-elements for determining remuneration and can often be seen as a percentage of the basic salary.

Reward programs

Beyond the fixed and variable pay for performance lies rewards for high performers to encourage discretionary efforts from employees. Sometimes, organizations are bound to introduce them beyond performance pay, if they want to initiate change management or introduce a new product or department and volunteering is expected to be rewarded by employees.

Rewards have been scientifically proven to drive high productivity or volunteering when the need arises. While all rewards need not be financial,

rewards programs are not necessarily cyclical nor annual unless the organization finds discretionary benefits and institutes them into an annual affair. Reward programs can be classified under three key categories for ease of understanding how it impacts and which kind of individuals would benefit based on their personal instruments of motivation:

- **Cash rewards** are typically great for revenue-linked targets to be achieved within short time durations. Sales, distribution, or technology functions where the need for turnaround within a stipulated timeframe or running specific campaigns find higher effectiveness using cash rewards. Cash rewards are mostly non-cash, but convertibles like vouchers and discount coupons against online shopping or brand-specific purchases which excite the individual. Certain organizations offer employees to reward employees with stars which the organization converts into financial points as cash rewards.
- **Non-cash rewards** are offered for turnarounds in production, maintenance, or operation functions to meet deadlines or sudden exigencies. When employees, specifically in critical functions are required to put in work beyond standard hours, there is a need to pay them in kind with the organization caring for the employee needs which otherwise would be the employees' own responsibility. Consider a rocket launch, installing a blast furnace, or ambush operations by soldiers. Scientists, workers, and soldiers remain keyed in for over 20 hours during such operations and organizations provide unique rewards other than food and shelter during such dedicated responses to such exigencies. Organizations can offer to ferry their kids to schools, offer shopping solutions, reward with medals and certificates or promote teams and offer vacations at the end of such discretionary efforts.
- **Learning rewards** are the third category and involve sending high potential employees to learning schools of repute or attending important seminars and immersive programs based on their capabilities and potential. People with a high drive for innovation and roles in product, strategy, finance, or human resources are offered such learning rewards, which for certain functions might also include the role and level changes. Organizations should institute learning rewards as permanent benefits for long-term development as part of leadership

succession planning and its impact can be found to benefit strategic objectives of growth.

Factors to consider for remuneration

Remuneration structures are based on management styles and areas of core expertise within an industry. While value systems and internal approaches reflect upon the management style, the industry defines the core expertise and tenure bands to define remuneration structures as per industry standards. However, management style and industry are the two broad structures within which there are four key factors influencing factors for building remuneration brackets.

Market rates

Markets define prices and prices define the quality of talent. Market rates for competency-based talent are defined by the availability of talent and can be either found by data companies in the space or can be found across platforms like Glassdoor or salary ranges from existing employees. It is important here to focus on critical roles and their impact on organizational goals, hence paying such employees at the 75th percentile of the salary range for such scarce skills. This also ensures that poaching them is not easy by competition or market forces.

Job structures

While markets define the range of the market rates, job structures are applied to break it into multiple factorial ranges to arrive at the ideal remuneration. If the market salary for a Marketing Manager is between 5 to 7 lakhs per annum, this could be broken down into five levels or percentiles to denote the importance of the skill type or design the job structures in such a way that it achieves market attractiveness while ensuring that it retains the flexibility to ensure it can be expanded or stretched based on market dynamics:

| | Location 1 | Location 2 | Location 3 | Location 4 | Location 5 |
|---------|------------|------------|------------|------------|------------|
| Level 5 | 650000 | 660000 | 675000 | 670000 | 700000 |
| Level 4 | 645000 | 650000 | 665000 | 650000 | 690000 |

| | | | | | |
|----------------|--------|--------|--------|--------|--------|
| Level 3 | 640000 | 640000 | 650000 | 625000 | 675000 |
| Level 2 | 635000 | 625000 | 625000 | 610000 | 650000 |
| Level 1 | 625000 | 610000 | 600000 | 600000 | 625000 |

Table 6.1

The point-factor system is also used by compensation practitioners to define point-based scores for each competency and level which finally adds up to the locational level-based pricing [Table 6.1](#) highlighted above. Point systems are also used to differentiate salaries based on role requirements as distributed points within a range. The three-factor framework includes the following requirements across skill, responsibility, and effort as key point factors:

- **Skill:** This includes experience levels, qualifications, and ability determined through tests.
- **Responsibility:** This includes financial and strategic responsibilities, criticality level of role, safety levels as part of the role, degree of supervision, degree of independence in decision making, number of contacts or interaction skills required, size of the team, and degree of role risk.
- **Effort:** This includes levels of intellectual versus physical, locational hazards, limitations, and extremities of weather and environment.

The three factors of skills, responsibilities, and efforts can be classified under a base across five levels as explained in [Table 6.1](#). This can be further distributed across locations (as explained in [table 6.1](#)) or be created based on qualifications, experience, or skill ability. The table also highlights the base salary for a particular location versus the highest salary for a particular level of experience, highlighting the range for each level. This helps the Compensation Manager to understand the implication of hiring or the Talent cost of setting up a department or division in such locations.

[Pay structures](#)

Pay structures define the salary range for a defined job role or job class and help in formalizing role progression within organizational structures. Based

on the range, percentiles can be defined for the ranges such that pay structures can address various levels under the organization’s policy.

Narrow-grading versus broad grading

This is when the organization has multiple grades and the remuneration gap between two grades is hence much lower between two grades. Comparing between an organization having narrow-graded ranges versus broad-graded is exhibited in [Table 6.2](#) for understanding and reference:

| Narrow Grading | | | Broad Grading | | | |
|----------------|---------|---------|---------------|---------|---------|---------|
| GRADES | Base | High | GRADES | Base | Mid | High |
| M1 | 1100000 | 1200000 | M1 | 1000000 | 1100000 | 1200000 |
| M2 | 1000000 | 1100000 | | | | |
| M3 | 850000 | 900000 | M2 | 800000 | 850000 | 900000 |
| M4 | 800000 | 850000 | | | | |
| M5 | 700000 | 750000 | M3 | 650000 | 700000 | 750000 |
| M6 | 650000 | 700000 | | | | |
| M7 | 550000 | 600000 | M4 | 500000 | 550000 | 600000 |
| M8 | 500000 | 550000 | | | | |
| M9 | 500000 | 550000 | M5 | 450000 | 500000 | 550000 |
| M10 | 450000 | 500000 | | | | |

Table 6.2

As shown in [table 6.2](#), depending on the org structure, the remuneration can be divided over 5 or 10 grades to reflect the organization policy. While we discussed in detail the need for such gradations under the Compensation Framework in this chapter, the scale enables creating gaps between grades, reflecting the salary scales across multiple grades after having distributed them based on job structures. The grades provided in [table 6.2](#) also is often defined as the Pay Spine, denoting how the salary grows incrementally across the hierarchy.

Job families

Jobs families are created by Compensation Managers to denote both the importance of role and criticality based on classification across job roles. The use of job families allows you to cluster similar jobs (based on competencies as an example) to denote its weightage on the organization. This can be further used for helping with career progression in growing organizations and use the competency framework along with pay structures to demarcate roles and their fluidity for agile talent management as a structural base to create consistently transparent compensation linked to performance objectives.

The Job Family approach is not devoid of criticism due to its approach towards transparency in financial matters. Some criticize the fact that transparent approaches to pay scales mean that employees will be able to assume the pay scales of colleagues. But transparency also ensures that an organization attracts people who honor transparency and equity in their practice. The other important criticism is of silos getting created between job families. However, what it empowers as a counter logic is the creation of leadership with experience across multiple departments and functions to lead teams better and gain a higher level of acceptance due to previous exposures, compared to someone who is seen mostly as an outsider otherwise.

We can understand the importance of using the Job Families approach for clustering job families into a compensation framework as explained in [Table 6.3](#):

| | Technology | Finance | Sales | Operations |
|-----------|------------|---------|-------|------------|
| 12,00,000 | 4 | 4 | 5 | 5 |
| 10,00,000 | 3 | 3 | 4 | 4 |
| 9,00,000 | 2 | 2 | | 3 |
| 8,00,000 | | | 2 | 3 |
| 7,00,000 | 1 | 1 | 2 | 1 |
| 6,50,000 | | | 1 | |
| 4,50,000 | | | | |

Table 6.3

From the breakup in [Table 6.3](#), we can observe how certain functions demand higher movement of remuneration scales at the junior levels for retention while most have a fat middle range to cater to the middle management, denoting the organization being middle-heavy. Certain sectors like Technology might have a higher base level compared to other job families, denoting a higher minimum to begin with. These can be created using functional competencies into 15-20 job families for a single organization of any scale. Let us combine all of them to view the Job family structure as can be defined under a financial organization umbrella in [Table 6.4](#):

| Job Family | Department | Job Bands | Levels | Designation |
|------------|-------------|----------------|----------------------|--------------------|
| Technology | IT | Executive | M1 | Sr, Vice President |
| Finance | Treasury | Senior Band 5 | M2 | Vice President |
| Sales | Business | | M3 | Dy. Vice President |
| Operations | Operations | M4 | Asst. Vice President | |
| Risk | Credit Risk | Manager Band 4 | M5 | Senior Manager |
| Accounting | Finance | | M6 | Manager |
| | Accounts | Specialist | M7 | Dy. Manager |
| People | HR | Team Lead | M8 | Team Leader |
| | Admin | Junior | M9 | Senior Executive |

Table 6.4

In [Table 6.4](#), the organization is reflected to have five bands below the executive, starting with Senior at Band 5, Manager at Band 4, Specialist as Band 3, Team Lead as Band 2, and Junior as Band 1 for understanding its relationship with [Table 6.3](#). These can be further mapped back to [table 6.2](#) for levels within the bands and to [Table 6.1](#) for location-based market pricing for each role. As one may note, Job Bands and Levels have linear relationships for ease of application of the framework.

Imagine Sarah Sethi, a Senior Manager-Central Ops at M5 level working in the Credit Risk department and belonging to the Operations Job Family based on her functional skills and competencies as an operations specialist.

On the other hand, Mrinal Deshpande could be an M3 | Deputy Vice President-Communications and working in the Business Department under the People Job Family as he could have proven people function skills as an HR specialist and moved from HR to Business as a career progression, as his skills have a need under such departments.

While HR practitioners shy away from creating compensation benchmarks, these are one-time activities that can also be outsourced to ensure that remuneration factors are measurable, scalable, and available to access at the point of determining remuneration. Job Family-based organizations could also create further sub-groups for clustering certain mixed roles with a Role-based versus Team-based competency to denote the Job Family based on the hierarchy as explained in detail in [Chapter 5](#) under the sub-header Competency Framework.

[Creating a Compensation framework](#)

There is constant pressure to appear as a fair-paying organization, whether big or small. HR institutions like SHRM talk about *Compensation Philosophy* to express *the company's financial position, the size of the organization, the industry, business objectives, market salary information, the level of difficulty in finding qualified talent, and the unique circumstances of the business* as can be found by reading further here: **What is a compensation philosophy? What should be included in a compensation philosophy? (shrm.org)**

The core reasons for creating a compensation framework are to attract and retain talent. This also aligns with the organization's people strategy, as a long-term objective. This involves creating a framework for establishing pay equity as a facilitator of fair practices with respect to employee pay structures. So, one of the first questions to answer becomes the timeline to undertake and complete the exercise.

The objective should not be to reduce salaries or eliminate jobs. That will create a scare; keeping this in mind, the exercise should begin well before the annual salary revisions and appraisal cycles to ensure that no salaries

are decreased, but changes are absorbed within the new framework to deliver what we can call a **new slate** of pay practices with pay increases covered using the new framework. The second important factor to remember is not to force-fit roles in case they are unique in nature. Most organizations do have such unique roles practiced by a few odd employees where the objective should remain to pay market rates at par with such unique roles.

The objective hence must be to align the pay structures with performance metrics. Here comes the core question to answer as to how much must be increased and whether there needs to be differential or equated for each performance level, irrespective of job families. While this is a decision to be made by the organization, a good practice would always be to bring salaries at par for all job families at the top to remove the disproportion of salaries at executive levels, where the roles hold higher responsibility as equals. This can backfire by losing people not loyal to the org at the top, but loyalty is a better score at the top for organizations build to last. Tata Group is one example that practices this philosophy for executive compensation.

The next important objective remains to decide the timelines with respect to performance timelines, discuss the frequency of incentives or performance pay for eligibility, and the financial caps as direct or indirect compensation, differentiated at job families and levels. This must be factored in along with the organization's level of maturity. For example, a startup might require more 'scalers' who are prized for their ability to create markets and source business from undefined territories while a stable organization seeks 'innovators' and 'remixers' for creating new products or markets to distribute and reach newer markets. Now that we have understood the purpose of the framework, let us explore the framework as shown in [Table 6.5](#). The details have been explained right after the table for comprehension purposes:

| | Framework Principles | Compensation to Performance | | |
|-----------------------------|--|---|-------------------------|------------------------|
| Role Characteristics | <ul style="list-style-type: none"> • Create Job Bands and levels • Measure against goals • Measure Role contribution • Market salary benchmarks at 50th percentile minimum | High | Medium | Low |
| Role-Individual | | 30%-50% + Base Salary | 15% + Base Salary | 0% + Base Salary |
| Role-Team Player | | | | |
| Role-Learner | | Provide for incentives based on performance scale with/out caps. | | |
| Role-Leader | | | | |
| Job Competencies | | Frequency of Incentives | | |
| High individual | Begin incentive scale at 30%+ | Quarterly | | |
| Highly transactional | Incentive: Base = 30:70 | Goal-based + Half-yearly | | |
| Highly innovative | Incentive: Base = 60:40 | Quarterly or Goal-based | | |
| Highly Consultative | Incentive: Base = 20:80 | Annualized only | | |
| Performance | | Incentive Payouts | | |
| Highly predictable | <ul style="list-style-type: none"> • 2-3 incentive rates as per job families with lower incentive ranges for the first few goals • Accelerate the range based on individual contribution at the performance level • Decelerate incentives for consistent excellence, typically to ½ the highest rate, but maintain incentives above min rates | Scale up to 30%-50% range of incentives incrementally with sales or revenue-driven roles linked to goal-based quarterly incentive payout plans. | | |

| | | |
|----------------------|--------------------------------|---|
| Highly unpredictable | Large one-time incentives | Goal-based + Retention Bonus |
| Role-based Learning | | Additional Learning Incentives |
| Individual | Reward learning initiatives | <ul style="list-style-type: none"> • Additional incentives for taking learning initiatives. • Provide incentives on learning implementation for processes • Link performance to coaching |
| Managerial | Reward application of learning | |
| Leadership | Reward coaching effectiveness | |

Table 6.5

As one can notice, a framework helps establish the use of [Table 6.1](#) to [Table 6.4](#) based on the Compensation Framework as described in [Table 6.5](#) to establish an organizational compensation framework for rewarding performance based on role characteristics, job competencies, predictability of performance, and learning to link to objectives in a transparent manner.

The framework can be applied across Job families and roles classified and explained in earlier chapters for linking the metrics to the pay plus incentive breakups. Applying such frameworks will require buy-ins from business heads and the top management, availability of market rates of at least 2-3 competitor companies within the industry, and data gathering provisions. Compared to the standard practice, each job role contributes to the strategic objectives linked to performance and hence must be included based on an incentive scale with goal-linked payouts of direct and non-cash incentive rewards for both motivation and retention.

Compensation frameworks must also improve compliance to statutory factors like labor laws and governmental prescriptions for minimum wages and should not limit themselves to adherence, but rather to excellence. This is where the framework principles add weight to the cause of transparency and address the perspectives through a modulated approach. This sends a message of consistency and transparency, attracting and retaining the right talent as per org needs and concerns at different points in time.

[Compensation policy and analytics](#)

The role of a compensation policy should be to bring about changes based on insights from the previous year's exits and performance achievements, market pricing, changes in line with other policies of the organization, and changes in strategy to align with the compensation framework. Releasing them annually is a good practice, as it entails a new view and encouragement for the employees to begin the new fiscal with renewed vigor.

A good compensation policy must adhere to not only strategic but geared to address social and environmental changes, including changes in stakeholder distribution or change of management, as often is the reality every year. The compensation policy thus addresses any fears of compensatory changes which otherwise might lead to attrition. Creating a **Compensation Task Force (CTF)** becomes the first agenda in this process.

The role of the CTF is to:

- Underline the risks to be addressed from past learnings and previous year results.
- Address changing workforce dynamics and need for new roles and expansion, or consolidation and rotation plans as key objectives.
- Determine deferred compensation plans, if any, like ESOPs for distribution of profits in the long term.
- Determine base pay and revisit them to align with earnings and equity as annual salary raise.
- Initiate performance-based incentive plans and any rework needed to address or introduce new ones.
- Introduce clawback policies for setting ethical standards of business practices.
- Introduce or realign environmental, social, and governance (ESG) objectives within the policy.
- Initiate changes in the insurance agency, policy enlargements, or any such changes to be communicated.
- Address stakeholder concerns raised and posted for adherence with approval authorizations and disclosures.

While the role of the CTF might be in creating the policy, the Board would typically approve it for communication with all stakeholders.

Communication throughout the organization and at times training are required for certain employees who are placed with new roles and responsibilities or attained new eligibility criteria. This may be rolled down to HRBPs and Business or Location Heads with clear responsibility for communicating all in their teams.

While a policy document must be limited to addressing the organization as a whole, its governance objectives must be to address retaining and attracting new talent or encouraging performance. If it sounds like a document stating more of what changes it has done to motivate higher earnings and take-home salaries, it does the biggest justice to its role. One good way is to highlight the scope of earnings possible and full disclosure of the range within its ambit. An example has been provided in [Table 6.6](#) to highlight the same:

| | TOTAL Compensation | | | | |
|-----------|--------------------|---------------|-----------------------|--------------------------------|------------------|
| | CASH Compensation | | Variable Compensation | | |
| | | | Period | Non-cash | Deferred |
| Levels | Range | Cash Range | Incentives | Perks | ESOPS |
| M1 and M2 | Up to 30% | Up to 10 lacs | Annual | Car | Up to 500 shares |
| M3 and M4 | Up to 50% | Up to 7 lacs | Half yearly | Allowance | 100 shares |
| M5 | Up to 60% | Up to 10 lacs | Quarterly | Health and Maternity Insurance | |
| M6 and M7 | Up to 70% | Unlimited | Quarterly | | |
| M8 | Up to 80% | | Goal-based | | |
| M9 | Up to 120% | | | | |

Table 6.6

There is a lot of literature debating the role of equity and rewarding appropriately. The perception of appropriate is different for different segments and rather than justification, the best approach is the market pricing in a dynamic and ever-evolving workplace market. Undeniably, the one who disagrees can only be assured using market studies to provide data for the price market offers for select experiences in competencies. This is where the baseline of offering at the 50th percentile ensures that employees are ensured that justice is not only being done but can also be seen in action. And it is here that the role of analytics in determining compensation becomes a primary need.

Compensation analytics

Using data to understand the compensation matrix has been explained in the previous paragraphs in detail in this chapter. Collecting this data and organizing it is a tough one-time exercise for the first time. Without it, we would be paying lip service to compensation management or putting ourselves into uncharted waters with greater challenges as the organization expands and diversifies its workforce.

Using predictive analytics to ascertain whether the organization is paying higher or equivalent for segments like age, qualification, gender, experience, and performance are good indicators of pay parity for industry and locational market prices. Using analytical platforms helps analyze them on the click on a button nowadays and helps Compensation Managers access information and projections for factors that can impact budgets or prepare for future hirings for new positions. Certain products have seasonal selling cycles and hence understanding such industry metrics can help in developing targeted incentive plans for higher efforts during dull periods through analysis.

Certain other benefits like safety-related manpower hour losses when aligned with attendance and leave modules can provide further insights into stop-loss positioning for capital investments or re-aligning processes to reduce losses due to such incidents. Retirement benefits for senior executives and managers can be configured into the system to highlight total savings and earnings on retirement to assuage future worries and help employees save proportionately into superannuation funds. All these benefits accrue to the system as a whole; turning employees into happy and committed workers (motivation) for meeting deadlines and objectives (performance) key to the individual (earnings) goal as well as the organization (profits).

Creating plans and packages to empower managers for managing their incentive budgets based on predictive analysis of compensation costs and localizing reward plans are a further gain from the practice. Relocating job roles or moving into newer territories on promotion or as a relocation cost are often key worries for employees; knowing beforehand the costs of such risks can be faster addressed with the power of compensation analytics. Finally, the hindsight of how more one needs to perform to achieve incentive levels is greatly advanced using the power of analytical

dashboards. This is more pronounced for sales professionals, who maintain a keen eye on earnings above the base pay, as in roles linked to a higher incentive earning potential like drivers, pilots, or production staff and within industries like media, real estate, and pharma, where such information is a key question for attracting talent who are focused on their earning potential based on performance-based earnings metrics during salary discussions.

Conclusion

Sales employees typically are more conscious of incentive plans and are now almost a constant feature in compensation plans across organizations. Sales functions use behavior as a cloak to highlight efforts when numbers are low, while many pull away or push sales based on incentive achievement targets. Understanding such trends are important for the organization with respect to revenue-linked incentive plan designing. Consider the observation that higher-performing salespersons hold a preference for a portion of non-cash incentives. Or that raising targets of top performers post a good performance largely is demoralizing and can lead to attrition, which is the topic for the next and also the last chapter for this book. Understanding these phenomena requires analytical tools and capabilities.

- The compensation lies at the heart of people management practices and is a mandatory practice for large organizations.
- Application of the right mix of cash versus non-cash incentives is key to executive compensation strategies.
- It is important to follow salary practices as a culture to allow a smoother flow of resources across hierarchies and locations.
- Whatever is important or core must be additionally compensated through rewards to highlight its importance; safety, customer satisfaction, or innovation.
- It is wise to remember that money is a key concern at two ends of the working spectrum; both the young and the retirees worry a bit too much about finances.

Key learnings

- Remuneration includes four key elements: fixed compensation, performance pay, benefits, and rewards. Rewards can be of various types.
- It is pertinent to consider market rates and job structures and pay structures to define the remuneration factors. Being at the minimum 50th percentile of market rates is suggested.
- Creating Job families help define the job role and its criticality within the organizational structure and acts as a wonderful Talent Management tool.
- Always roll out a Compensation Framework with a new fiscal to ensure a smoother and easier acceptance for employees.
- The use of analytical tools to predict future and allied costs can be a boon for financial and strategic planning using a structured Compensation Policy.

Questions

1. Define the ideal remuneration elements for an FMCG organization.
2. What are the key factors to remember while designing job structures?
3. What are the advantages and disadvantages of Narrow and Broad grading of compensation?
4. Explain with examples the key benefits of creating a 'job family' structure.
5. What are the key deliverances of a Compensation Task Force (CTF) committee?
6. How does one align the compensation framework with performance objectives?

Case Study - Compensation and Rewards for a Performance-Driven Outcome

Measuring and Benchmarking Compensation Using MS Excel - Business Problems, Solutions, and Insights

We will cover the following technical points:

- Compensation and Competency measurements

Please note that detailed solution has been provided in the Solution sheet in Excel for the case studies. Thus, please refer to the same.

Annual appraisals and market realities have to be balanced with internal hiring capabilities to decide on increments and additional compensation. Let us understand the thought process of the Compensation and Benefits team as it goes about deciding increments.

This is a young company and most of its employees are 1 – 2 years old in the company.

D - Define the Business Problem

The annual appraisal is over. The discussion and ratings have been decided after the annual appraisal process. Now, the revised compensations must be declared.

The company must decide on the compensation on the basis of performance appraisal as well as Market compensation.

To aid this, the HR manager had ensured that the Reporting manager has put a comment under *Critical and Replaceable*.

C - Collect & O : Organize

The data is present in the sheet called **data** in the file **Rewards_data**:

| Variable Name | Dictionary meaning |
|--|---|
| 1 S. no | Serial number |
| 2 Emp Code | Employee code |
| 3 Dept | Department |
| 4 Performance | Performance Rating |
| % increase in Pay | Increase in pay proposed in % . |
| 5 | This is dependent on the performance rating |
| 6 Critical and Replaceable | This is a comment from the reporting manager |
| 7 Level in organisation | Senior / Middle / Junior |
| 8 ReExp (yrs) | Relevant experience in years |
| 9 Last Increment Date | Within the organisation |
| 10 Date of Joining | Joining date |
| 11 Last Increment% | % increment in last appraisal |
| 12 Annual Fixed | Annual Fixed |
| 13 Annual Variable/Retention Bon | Annual Variable/Retention Bonus |
| 14 Total | Total Salary |
| 15 New Salary | After % increase in Pay |
| 16 Reference Salary | External Salary - as per Salary benchmark study |
| 17 Merit Increase | Change in salary |
| 18 Market Correction | Change in salary |
| 19 Market Correction Required y / calculated | |
| 20 Insurance_premium amount | Insurance_premium amount |
| 21 Training Budget | Training Budget |
| 22 CTC (Fixed + Insurance + Traini | CTC (Fixed + Insurance + Training budget) |
| 23 Special comment | Comments by HR manager |

Table 6.7: List of variables in the data

The data is clean with no Missing values, Outliers, Dummy variables, and Derived variables.

V - Visualize

Create a pivot on the sheet **data** called **pivot1**.

From the pivot1, create the summary tables and put them into sheet visualize:



Figure 6.1: Pie chart of Performance

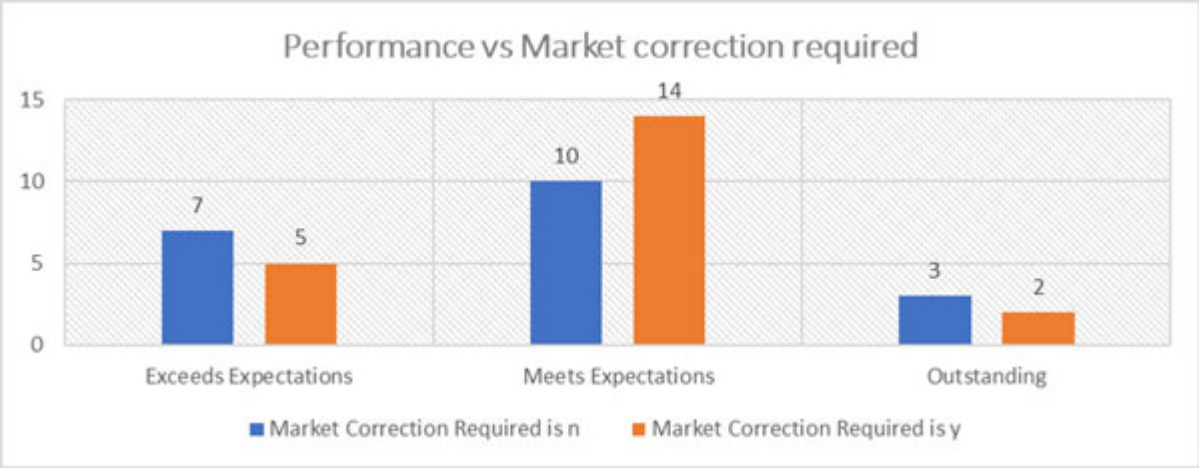


Figure 6.2: Column chart of Performance versus Market correction

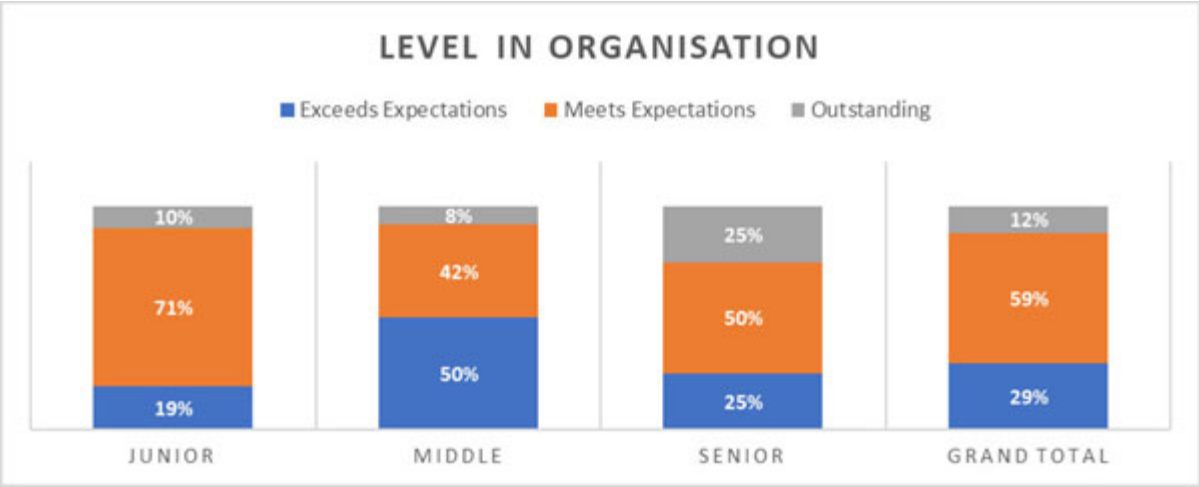


Figure 6.3: Level in Organization versus Performance

A - Analyze

In this problem, we can do a visualization heatmap:

| Sum of Market Correction | Market Correction Required y /n in INR | | | Market Correction Required y /n in count of employees | | |
|--------------------------------|--|------------------|-------------------|---|-----------|-------------|
| | n | y | Grand Total | n | y | Grand Total |
| Critical and irreplaceable | (12,16,000) | 3,55,000 | (8,61,000) | 9 | 6 | 15 |
| Critical but replaceable | (13,07,000) | 10,45,000 | (2,62,000) | 4 | 5 | 9 |
| Not Critical and replaceable | (2,00,000) | 4,09,600 | 2,09,600 | 5 | 7 | 12 |
| Not Critical but irreplaceable | (2,90,000) | 2,64,000 | (26,000) | 2 | 3 | 5 |
| Grand Total | (30,13,000) | 20,73,600 | (9,39,400) | 20 | 21 | 41 |

Table 6.8: Map of Market correction required

I - Insight

To factor in Performance-based incentive an increment of:

| Performance rating | % Merit increment |
|----------------------|-------------------|
| Meets Expectations | 20% |
| Exceeds Expectations | 25% |
| Outstanding | 30% |

Table 6.9: Standard Increment percentages

Additionally, the Market Correction is required for:

| Performance | # employees | INR |
|--------------------------------|-------------|----------|
| Critical and irreplaceable | 6 | 3,55,000 |
| Not Critical but irreplaceable | 3 | 2,64,000 |

Table 6.10: Irreplaceable employees requiring market correction

Thus, the additional budget allocation, over the Merit increase, will be INR 6.19 lacs per annum:

We are left with :

| Performance | # employees | INR |
|------------------------------|-------------|----------------|
| Critical but replaceable | 5 | 10,45,000 |
| Not Critical and replaceable | 7 | 4,09,600 |
| Grand Total | 12 | 1454600 |

Table 6.11: Replaceable employees and market correction

| Performance | Count of Market | Sum of Market Correction |
|----------------------|-----------------|--------------------------|
| Exceeds Expectations | 1 | 75000 |
| Meets Expectations | 11 | 1379600 |
| Grand Total | 12 | 1454600 |

Table 6.12: High Performing replaceable employees and market correction required

Thus, the additional budget allocation, over the Merit increase, will be INR 6.19 lacs per annum plus 75 k per annum.

Conclusion

The total additional budget required is INR 6,94,000.

For the Meets expectation employees, under replaceable, the organization can wait to see if they come back for an increment discussion.

Key Terms

- Annual appraisals and market realities have to be balanced with internal hiring capabilities to decide on increments and additional compensation.
- Charts and visualization are key elements of the project.

CHAPTER 7

Attrition and Retention

Despite our best efforts, it is only natural that employees move out, and retaining them in case of voluntary exits becomes a long-drawn process of aligning and assuaging ego and trust. Attrition becomes a problem only when it is at the twin ends of the spectrum; too little or too much. Average attrition is always considered healthy, as it allows for introducing new talent and adding innovation and creativity using new minds and practices using *buy* practices. Retention is practice and a culture of engagement. By now, studies have proved the benefits of engagement in reducing voluntary turnover, and we shall explore this subject in greater detail in this last chapter of this book.

Structure

In this chapter, we shall cover the following topics:

- Elements of attrition
- Elements of retention
- Correlation of coefficients

Objectives

The focus of this chapter is to learn about attrition and retention not only as outcomes in a linear perspective but also view deeper to understand the causes, how we can measure them, and how HR practitioners can keep a keen eye on the various influences, which increase attrition rates and makes retention a challenge. The chapter will cover the elements of attrition, the causes, and the challenges of retention, and finally, address the coefficients that make a difference while observing Exit Survey data points and insights on employee feedback as a measuring and analyzing medium.

Elements of attrition

Any news of an attriting employee brings forth three W's of information to digest; who is it, why are they quitting, and where they are headed. Although the last is difficult to find out unless you are a trusted colleague, it is not difficult to understand the first two if we keep a finger on the employee engagement pulse and keep our analytical engines running to load us with cascading data of employee behavior.

Although the technical standard for defining the term attrition stands for "leaving the organization with no replacement", we shall consider attrition the term to denote leaving only and not include the non-replacement clause for ease of understanding.

Voluntary versus involuntary attrition

As the title says, there are a few elements that need to be defined right at the start of this chapter for ease of understanding and reference. One of the finer distinctions to be drawn is that the factors that help in reducing attrition may not always be linked to retention. As we have observed with hygiene versus motivational factors, reducing attrition has more to do with improving hygiene factors related to work conditions, career prospects, and social acceptance:

- **Voluntary attrition:** Attrition is caused by the employee and is the cause of concern and analysis.
- **Involuntary attrition:** Result of layoffs, and thus, not a cause of concern if otherwise well thought out and addressed before initiating attrition.

Voluntary attrition highlights the need to re-hire, whereas involuntary may or may not need re-hiring. Voluntary hiring also brings forth the framework of Defend-Grow-Exit, where the understanding of whether the supervisor defends the action and is part of standard turnover or is a temporary exit for pursuing education in the first case; whether the employee is critical and needs to be informed about growth plans and retained at any cost in the second case and the third scenario, the exit was needed and anticipated without any further need to action the voluntary decision.

Voluntary attrition can be caused by a variety of needs gaps, notably the physical, psychological, and learning needs other than age. Physical needs could further be segregated into physical and social needs; purely physical could mean wealth or health, whereas social could involve self-respect, authority, and self-esteem arising out of the job role. Psychological factors include satisfaction, involvement, and motivation, to name a few. Learning needs would include growth prospects, knowledge, and career prospects.

Retirement is considered involuntary attrition, as the employee at times might still want to continue, but the termination of the individual contract is forced through the age policies of the organization. Although the benefits of most involuntary attritions give rise to other HR process factors such as succession planning, rotation of job role, hiring, and training, voluntary attrition provides insights to improve hygiene factors across org elements related to attrition or turnover.

How does one calculate attrition?

Attrition %age = No. of employees who separated /Average number of employees x 100

The numbers must be calculated within a defined timeframe. The average number of employees can be determined by:

(The number of employees at the beginning of a timeframe + the number of employees at the end of the same timeframe)/2

For example: Total count of employees separated in Dec 2021 = 20

Total employee count at the beginning of Dec 2021 = 2020

Total employee count at the end of Dec 2021 = 2022

Attrition % = 20 / ((2020+2022)/2) Paste this same value in Excel and click % tab = 1.0% (0.99% for up to two decimal places)

Impact of attrition

- **Costs:** One of the main areas of impact is the element of costs as the first and primary impact due to attrition. The cost of training, re-hiring, and loss of production and administrative expenses are among the host of costs as the first element of impact. Costs can be

understood from three key predictive cost calculations to assess impact:

- **Attrition productivity cost:** The period the position remains vacant and the average productivity of the employee based on Employee ROI numbers multiplied by time.
 - **Vacancy coverage cost:** The cost of manning the position by other employees and their salary costs, multiplied by the average amount of time dedicated by them to manage the position till the new hire is self-sufficient (till 60–90 days post onboarding).
 - **Acquisition cost:** The cost of hiring a new resource as a replacement, including sourcing and marketing, and advertising costs, along with onboarding and associated costs.
- **Team bonding:** The second impact can be observed as the bonding deficit among teams on the exit of a team member and the challenges of *fitting into the old shoes* of the new employee. It is natural to imagine and compare the new employee to the old one, with low hands-on induction by supervisors and Team leaders making the transition difficult and the expectations unknown for the new person.
 - **Employer branding:** Most voluntarily attrited employees report with pride the new organization they join, bringing questions of issues with the old employer. Also, often ex-employees are sought to provide feedback on the work culture and practices by interested new joinees, and the chances of receiving a fully positive view are close to nil, whereas certain objective past employees might hold a neutral position; however, never quite encouraging.
 - **Industry alienation:** The rapid turnover in BPO and Insurance industries makes it difficult to attract good talent for the industry in general and often alienates promising candidates from entering such industries as a rule. Further ahead, this makes the costs of new hiring go up substantially as companies engage in marketing and PR campaigns to extol and attract new talent.

Elements of retention

Retention is more of a strategic intervention and needs to be viewed in sync with turnover rates in general retention tactics for all critical roles. One key point from a strategic perspective here is to note that while it might be great to have zero attrition, it might not be advisable to aim for it.

Retention from a structural perspective denotes improving the stick-through ability of employees to the cultural variations of the **organization design (OD)**. While loyalty to the organization was a key social achievement prior to the 1980s, the rise of loyalty to one’s domain skills rather than to the organization has made OD specialists re-look at the concept of retention and develop strategies around it with a targeted process aimed only at critical roles and skills rather than the entire population.

To develop a retention strategy, it is important to collect data on key factors which can lower employee attractiveness. This can be observed for different levels and locations, as we have classified in [Chapter 6](#) related to compensation and described in [table 7.1](#) for ease of understanding by instilling an Exit Survey and studying it:

| Exit Survey | Exit Factor | Score | Total | Alignment |
|-----------------|------------------------|-------|-------|----------------|
| External | Better salary | 56% | 89% | Mission |
| | Career growth | 33% | | |
| Internal | Higher recognition | 46% | 78% | Culture |
| | Supervisor issues | 32% | | |
| | Role stagnation | 12% | 19% | Values |
| | Learning | 07% | | |
| | Personal/health issues | 12% | 12% | Others |

Table 7.1

A closer look at [table 7.1](#) provides us clues on how the mission and related policy and culture need immediate attention to fix the retention strategy, as they average 42% of the factors people mention during separation. This can be further segmented and observed for critical positions, locations, gender, and hierarchies to understand its impact on attrition and what needs addressal on an immediate basis. Let us also not ignore that a good number of choices of personal/health issues are employees sensitive to disclosure and not willing to burn bridges.

If we observe the life cycle, we can divide the time spent before the first disclosure of discontent by an employee to indicate the problem areas to a large extent. This can be validated by data, and it will remain correlated at over 80% efficiency, irrespective of the industry:

Employees who quit within a shorter time span, based on individual org time bands considered to be short or anything below 1 year can be majorly attributed to the last 4 issues; Supervisor issues to learning issues (including personal/health issues in rare cases as discussed above). This becomes obvious as rare would be the employee having issues with salary or career within 1 year of an employment contract.

The other important observation here is to honestly allow employees to select factors like “better salary” to reason the exit causality as clearly as possible. Using clear terminologies ensures we only assume what is the response while drawing insights from Exit Surveys.

Fixing the retention deficits

- **Survey insights:** The insight on retention deficits comes to us first during engagement Survey insights and ongoing pulse surveys if related to measuring retention strategy effectiveness. Exit Surveys are an all-round affair, and the more serious management teams partake in understanding Exit Surveys, the faster they can fix the leaking talent pipelines.
- **Hiring right:** Retention is effortless when one does not need to exert pressure to conform. This answers why retention works best from the start; by hiring for culture. Whether it is goals, targets, or work culture, the right fit feels comfortable at work and not exhausted mentally and physically at the pressure of being an employee through aligning competencies with job roles.
- **Employee promoter:** One effective strategy would be to seek hiring through referrals. Referrals ensure understanding of the Net Promoter Scores while providing employees who have been known the organization from an insider standpoint. An employer refers to and promotes the organization when they see it as a fair place to work and recommend it to friends and ex-colleagues.

- **Facilitating communication:** Allowing communication one level up not only builds confidence to air one's opinion but also assures that transparency and openness are a key part of the culture as a practice. Sharing communication, rewarding, and putting feedback into action have also been discussed as part of performance management.
- **Insure to escalate:** Both rewarding and ensuring escalation bring transparency and accountability. Having the freedom and means to easily escalate what is not fair can be a great motivator for millennials and the younger generations to ask hard questions and seek equity and fairness in practice.
- **People scaling:** Leadership has been transforming for ages to mean different things in different decades. The latest trend of scaling employees to achieve personal and organizational goals seems the most apt role of leadership to attract and retain talent. The need for leadership teams to thus learn about People Scaling and build it into an objective is the need of the day for retaining potential talent.
- **Socio-dynamic needs:** We often observe wide gaps regarding socio-dynamic needs, which are rarely addressed in either policy or practice, as the former dictates the latter, and interesting practices are never put into motion. Five key socio-dynamic needs are expanded below for understanding and comprehension.
- **Seeking help:** There are rarely any **Standard Operating Procedures (SOPs)** maintained by HR managers to guide employees when they need any help beyond the standard. The standard then becomes to consult the friend, the local HR, the supervisor, or the Head, based on the level of help or information required while a clear protocol to access a skip-level Manager (One level above the supervisory Manager) and **Human Resource Business Partners (HRBP)** with a defined timeline to attend and respond to such requests brings confidence and assures employees of a humane and helpful attitude.
- **Seeking or offering feedback:** We have discussed this earlier in this chapter and [Chapter 5](#), and organizations are waking up to the need for listening posts lately, as we suggested toward making transparency and performance-driven approach a part of org culture.
- **Making a social connect:** Large conglomerates rarely share the social media handles of other employees or identities of employees across

diverse businesses for both social and business needs. Having experienced the TATA Group, I have first-hand experience when customers wanted to know how to connect with another business group, and there was no unified **Group Register for Identity Disclosure (GRID)** to suggest a fellow colleague from the same group unless I knew someone personally.

- **Participation in groups:** Employees have interests beyond work, and the whole fad about work-life balance is not just a fashion statement but a practical factor to bind people with varying tastes and interests. Certain organizations do have cultural and sports clubs, but it is rarely encouraged and often maintained as a benefits pointer.
- **Refusing a request or disagreement:** It is rare to find a policy that ensures a refusal or disagreement is not only part of the process but also kept on record for future purposes. While we find organizations care about the brand of tea the Board members prefer, there are not any such onboarding practices to record such data or put on record requests beyond the standard. Requests from colleagues for possible data fraud or unprivileged information, extra work requests from supervisors without accountability, or recording such requests from both ends when it is a request affects the culture and later becomes practice if not addressed within the policy and practice.

When retention is not a mandate

In the case of certain roles or individuals, it might be an EXIT approach, and hence, there might not be active eagerness to retain. This can more often be noticed in middle management, where the choice to elevate one among a group of four to five managers might be the only option, making the growth options improbable for the rest.

The other interesting mandate to not retain can often be found in opening-level roles where the skill is not difficult to access, and hence, active turnover ensures that the compensation band has never trespassed. For roles like receptionists, where skills are limited to communication capabilities, or in the case of lab assistants, where the specialization has low application in other industries, it is common practice to not push for active retention.

Change management and business transformation often seek employees to scale up or hire people with the latest skills; thus, letting go of existing employees with limited capability or intent to scale up or qualification deficiencies. Employees who cannot scale up or hunt outside and find employment with existing skills seek separation, and retaining them is not advisable.

Finally, there are unique situations for the organization to no longer have any incentive to retain an employee due to a mix of one or more of the situational factors explained previously. Technology and digitization have made a lot of roles redundant, and the same can be found true also of senior employees no longer being able to manage the cultural transformation of organizations on the superfast highway. They seek exit on such grounds, and the perfect politeness is to let go with grace and honors, allowing archaic norms and practices to be framed with grace in the picture frames.

[The learning outlier](#)

Learning is also found to be a common reason for exit, and retention in such cases is not mandated. This can be found as a high correlation coefficient for employees in the experience band of two to five years. In certain job roles like the Defense forces, where quality manpower might not be easy to access from the market, companies sponsor the learning costs or partner with learning institutions to impart qualifications and degrees parallel to role hierarchy. This can also be observed in highly specialized fields like aerospace engineering or nuclear medicine, which are rare, and hence, learning is an on-the-job mandate.

The four critical structural challenges which impact retention need a brief mention here. Structural challenges arise out of OD and can cause disruption if left unattended to fester and claw deeper into the individual psyche of employees:

- **Imperfections:** Organizations are dynamic entities that traverse their ideas, fundamentals, and dependencies on employee levels of knowledge, experience, and cognition. Such imperfections can cause frictions in both the physical and psychological pattern of offerings for employees to stick together as a team. It is important to address these imperfections with agile speed, and intention as consistency is often

seen as *good* practice by certain segments, rather than dynamic evolution and situational moorings.

- **Immaturity:** There are multiple levels of personal maturity and conflict within the varying levels of maturity, not only in speech and communication but also in practice. This makes organizations appear often immature to certain segments or from a certain perspective of their culture and practice. A young scientist from an Ivy-league college often finds older processes and practices immature and prefers more practical and real-time solutions. In the absence of a certain values-aligned culture, the other party will find it immature to contribute on an equity basis with confidence.
- **Inabilities:** An organization's ability to serve all requests might be truly impossible, but the inability to adhere to its own principles and ethical standards is a big cause for employee attrition, as more options to serve and earn are available nowadays. To also be able to stand up to imperfections, immaturity, and its inability to critic anyone who refuses to act irrespective of evidence is a sign of the organization's inability to retain talent. Today people view inability not as a sign of personal immaturity but rather as defiance. The clarity of such inabilities through policy documentation can be made evidently clear during onboarding itself. This ensures that the risk of retaining is lesser once discovered later as a practice and shocks the individual value system.
- **Intolerance:** Structures and leadership are often intolerant of change. So are systems and investments, painfully put into place over the years and rendered redundant due to modern processes and practices. Intolerance is an imperfection in achieving maturity, and employees are often intolerant of putting in a bit extra. The effects of intolerance have reduced acceptance of creative ideas, whereas the fact that human civilization itself has progressed due to creative ingenuity and innovative approaches as the transactional medium to scale and grow beyond comfort levels for human progress in the first place.

Structural challenges cannot be totally avoided or eliminated; like pathways on a rugged mountain trail, we can only negotiate our way up to avoid the pitfalls and ensure a stricter regime of adherence and discipline of properties of efficiency. To expand further, every element holds properties

where the positive and negative are inherited together in a bond. Just like we cannot avoid killing a plant to serve our hunger, organizational structures that hold the system together also hold the weak points to put it into instant disarray, and these are aspects of organizational design.

Correlation of coefficients

While Exit Surveys provide data when the turnover is no longer in control, smart measures to ensure that alignment happens on a proactive basis of listening and engaging employees can yield better results.

As we progress, we can find data to draw correlations between attrition and retention factors. It is primarily important to classify the data by moving away from voluntary versus involuntary factors for a moment and observe whether the employee is moving away from the industry and the market overall. This will mean that the market for such talent is shrinking and must be taken up by both the management and industry associations to arrest the talent drain, especially for critical roles.

As we proceed to analyze the data, drawing correlations to understand whether a particular factor or characteristic acts as a coefficient in attrition data can be both interesting and insightful. Other than demographic, qualification and experience, locational attributes, and language, there are some key characteristics to observe to draw early attrition signals:

- Employee performance evaluation standards and goal-setting processes
- Compensation framework and merit-based pay standards
- Specific policies aimed at measuring contributions and ignoring efforts
- Team size and management linkages to pay
- Record keeping of creative practices and linkages to rewards and recognition

We can draw conjectural insights to tune policies for making work not only productive but also interesting, meaningful, and adding to personal growth. Understanding their impact on roles, levels, and specific hotspots to identify leaks can help us in bringing down attrition rates as an objective.

Without these characteristics, work does not motivate, and one prefers to maintain the status quo for being a diligently attentive employee, but not an engaged one.

Any meta-analysis of data must be estimated for robustness along with analysis for correlation; just a correlation might mean nothing unless it is also a coefficient as a parameter, and this must be understood well. One of the biggest issues is the truth of the exiting employee and establishing the true cause. This is difficult to ascertain and might require more than possible resources to be devoted toward this realization. This, however, should not deter the process, and there are ways and means to assess correlations. What are the important coefficients for correlation henceforth?

As we have mentioned, finding the attrition tendencies versus the actual separations should have a correlation above 0.5 to determine the cause and effect. But what if the decision happens to post the Engagement Survey? The coefficients for the same can be spotted through three additional parameters to highlight separation tendencies:

- **Attendance:** This is the first sign of psychological impact or decision building. There is a disturbing delay pattern in the attendance trend, be it the time of entry and exit or in terms of a drop in Monday attendance.
- **Lowered feedback:** Feedback is found to hold no further rationale once an employee has decided to move out. At least, the human mind perceives holding back communication as one of the clear signals of discord. This can be noted even in children who make it clear to stop all communication with an upset friend.
- **Lack of interest:** The third level of the drop comes in showing any additional interest in the job role or throwing hints of separation in their communication with colleagues, with a lack of interest to pursue professional duties and learn new things.

For those who have highlighted their discomfort with continuing with the organization during the engagement survey, it would be the absolute score of exits to define the correlation between the two data points. Additionally, not everyone who expresses an intent to quit might have another job offer to move out. This is where the DEFEND-GROW-EXIT approach must be applied.

The other perspective to note is that it is of no harm in case we put in effectiveness beyond a certain level; it is important to have a higher level of effectiveness until we have sufficient data points and a multitude of variables to conduct analytical research to assume confidence on efficiency scores.

Certain data points like salary are easy to interpret for improving retention, but it must also bring with it coefficients such as qualifications or locational market pricing to justify the gap. These can be tricky, and hence, must be measured using variables such as age and gender to identify coefficients that correlate to the salary variable.

Finally, one of the oft-neglected factors to study is the *switchers* or those who stayed back after resigning and studying the factors which make them stay back. This could make retention much easier to manage if we have enough data of switchers' conjoint analysis of *push and pull* factors. It has been noticed that switchers do exit the organization at some point of time in over 80% of the cases as if some discord has still not been completed. It is important in such cases to use exit interview techniques to draw insights on whether the coefficients vary or are somewhat similar in both the points of resignation.

Conclusion

Organizational policies are never perfect, and leadership is not always mature. Although public/governmental jobs offer higher retention as it offers job security with no performance-linked compensation plans, the push for a meritocracy-based approach in private entities is not always acceptable deep down, especially when we fall short of the scale. Attriting is a face-saver in such situations, and the honesty to acknowledge our shortcomings is more challenging as we grow within the hierarchy. Retention thus becomes a primary purpose for pushing for a performance-driven culture in private organizations. Understanding the impact of cognizable feedback requires analytical tools and capabilities to interpret and develop processes to improve retention.

- Attrition is caused due to multiple failures within people management practices and can cause a lot of ancillary disruptions.

- Application of the right mix of corrective measures can bring about a drop in attrition rates, and retention strategies can be further linked to it.
- Not all retention is worrisome to require redressal; involuntary retention may not be as exciting and more worrisome compared to voluntary retention.
- Along with retention strategies, redesigning OD to align toward a performance-driven approach.
- All findings must be shared back, adding objective measures deployed to tackle the shortcomings; this assures existing teams and improves retention scores.

Key learnings

- Attrition comes with a cost; both voluntary and involuntary attrition can be classified under Attrition productivity costs, vacancy coverage costs, and acquisition costs.
- Beyond costs, attrition impacts team bonding, and attractiveness as an employer and at times alienate the industry, making attrition costs prohibitive as an operational process.
- Elements of retention strategy should include Survey insights, hiring first-time rights and using referral programs, facilitating communication, providing scope to escalate, people scaling as a Leadership objective, and addressing socio-dynamic needs.
- The four structural challenges that contribute to lowering retention scores are imperfections, immaturity, inabilities, and intolerance, eating away at precious retention efforts.
- It is advisable to include the three factors of attendance, lowered feedback, and low interest as coefficients to observe engagement data and survey insights.
- The use of data from switchers offers promising insights into analyzing pull and push factors of attrition analysis. However, not every employee has the mandate to be retained, and this should be decided using the Defend, Grow, and Exit approach.

Questions

1. Discuss the costs of attrition and its impact on people management.
2. What are the key factors to measure for attrition?
3. What are the common factors for lowering attrition and improving retention scores?
4. What are the benefits of a referral program for hiring new employees?
5. What are key determinants to refuse *retention* as a mandate?
6. Explain the importance of Exit Surveys and their key metrics.

Attrition Management Scorecard

Case study on attrition scorecard using MS Excel Stat: business problem, solution, and insights

We will cover the following technical points:

Attrition scorecard to segment employees and understand who is more likely to leave.

2021 has been the year of the Great Resignation, especially in American corporates. An American company has data about the resignations in 2021. Is The “Great Resignation” Actually A Mass Retirement? This is a theory that can be debated.

D—Define the business problem

2021 has been the year of the Great Resignation, especially in American corporates. An American company has data about the resignations in 2021. Is there any particular trend that is standing out?

Can we build an attrition scorecard to help businesses predict attrition?

C—Collect and O—Organize

The data is available in the sheet “data” in the file `Attrition_data`.

The variables in the file include:

| | Variable | Meaning |
|----|------------------------|------------------------|
| 1 | Emp ID | employee ID |
| 2 | Gender | |
| 3 | Age in Yrs. | |
| 4 | Age in Company (Years) | |
| 5 | Salary | |
| 6 | Last % Hike | |
| 7 | SSN | Social Security number |
| 8 | State | |
| 9 | Zip | |
| 10 | Region | |
| 11 | Attrition Yr 2021 | 1 = yes |

Table 7.2: Variables in Attrition_data

Some variables have each **Social Security Number (SSN)** is a unique field, so we can remove it from further analysis. The concept of variables means that there should be a reasonable variation in the options/attributes; however, if each option/attribute is unique, then the variables become a primary key. As you will remember, the primary key uniquely identifies a data point (for example, Employee ID, PAN number, mobile number, and so on.)

Copy the data into a new sheet `data2` for further processing:

- Drop SSN
- Change Gender into numerical ($M = 1, F = 0$)
- Drop variable state, which has too many attributes
- Convert region into numerical

| | |
|-----------|---|
| Northeast | 0 |
| West | 1 |
| South | 2 |
| | |

Table 7.3: Conversion table for creating numeric variables

V—Visualize

Create a pivot and run the summarizations:

| Count of Emp ID | Attrition Yr 2021 | | | | |
|--------------------|-------------------|---------------|-------------|-------------|----------------|
| Region | Attrition No | Attrition Yes | Attrition % | Total | % of employees |
| Northeast | 753 | 88 | 10% | 841 | 17% |
| West | 780 | 112 | 13% | 892 | 18% |
| South | 1667 | 203 | 11% | 1870 | 37% |
| Midwest | 1234 | 163 | 12% | 1397 | 28% |
| Grand Total | 4434 | 566 | 11% | 5000 | 100% |

Table 7.4: Summary of data

We can summarize that:

- Northeast has the lowest attrition
- South has the largest volume of employees and low attrition
- West is a problem area with the highest attrition

The question then is, what is acceptable attrition? And should the scorecards be made for all the regions?

The industry belief is that a healthy attrition level is 7% or thereabouts.

The senior management convened a meeting, and it was decided that the scorecard should first be built for the West region.

A—Analyze (statistical analysis)

Copy the data of region = West into sheet **west**.

Step 1: Run a correlation: **Data > Data analysis > Correlation:**

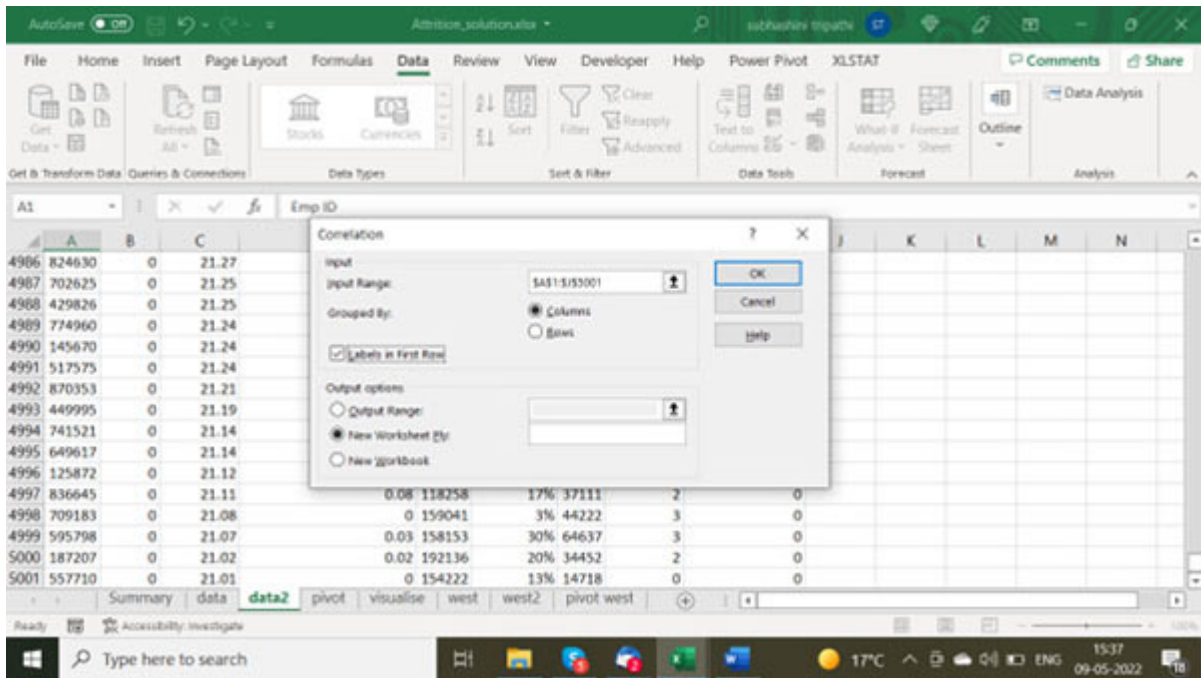


Figure 7.1: Run a correlation

Create the absolute values:

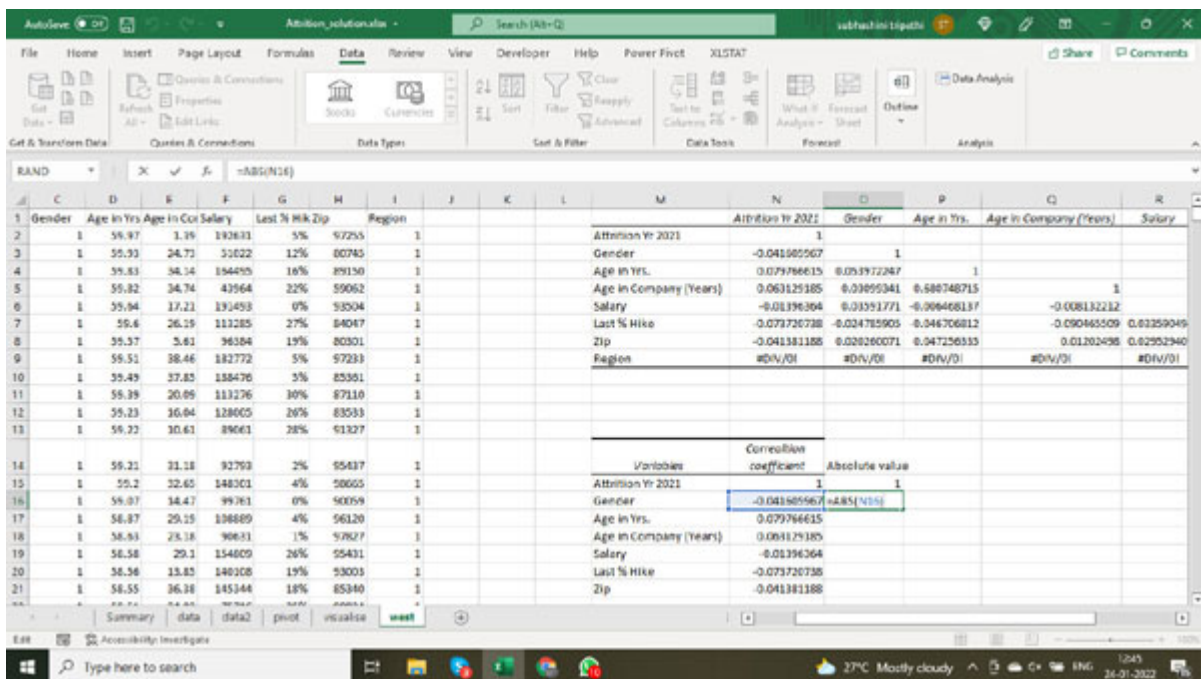


Figure 7.2: Processing the correlation

| <i>Variables</i> | <i>Correaltion coefficient</i> | <i>Absolute value</i> |
|------------------------|--------------------------------|-----------------------|
| Attrition Yr 2021 | 1.00 | 1.00 |
| Age in Yrs. | 0.08 | 0.08 |
| Last % Hike | -0.07 | 0.07 |
| Age in Company (Years) | 0.06 | 0.06 |
| Gender | -0.04 | 0.04 |
| Zip | -0.04 | 0.04 |
| Salary | -0.01 | 0.01 |

Table 7.5: Processing the correlation outcome to identify the drivers

We can summarize that:

- Higher age employees are more likely to quit—this makes sense in terms of the COVID scenario
- More the amount of the last hike less the attrition
- Newer employees are more likely to attrite

Let us visualize the above:

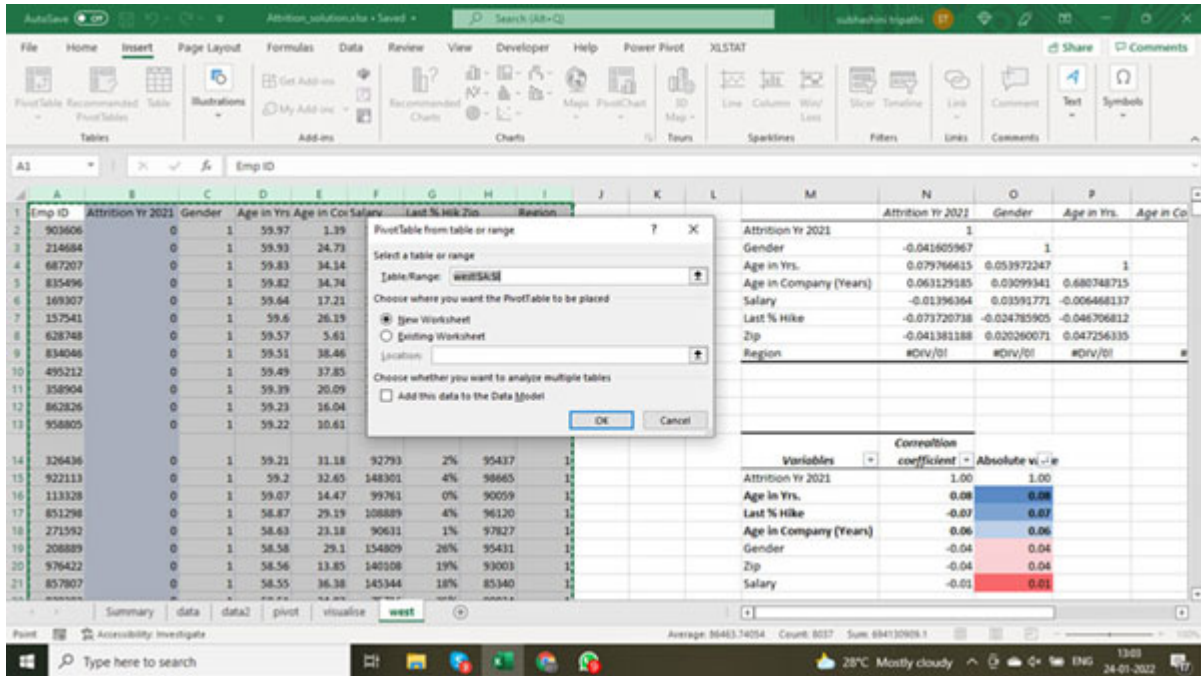


Figure 7.3: Running a pivot

The pivot is named: **pivot west**

Let us create three new variables for easy visualization:

| Age in Yrs._band | Age in Company_band | Last % Hike_band |
|------------------|---------------------|------------------|
| <30 | <1 year | 0 |
| 30–39 | 1–3 years | 1%–5% |
| 40–49 | 3–10 years | 6%–10% |
| 50–59 | >10 years | 11%–20% |
| | | >20% |

Table 7.6: New variables

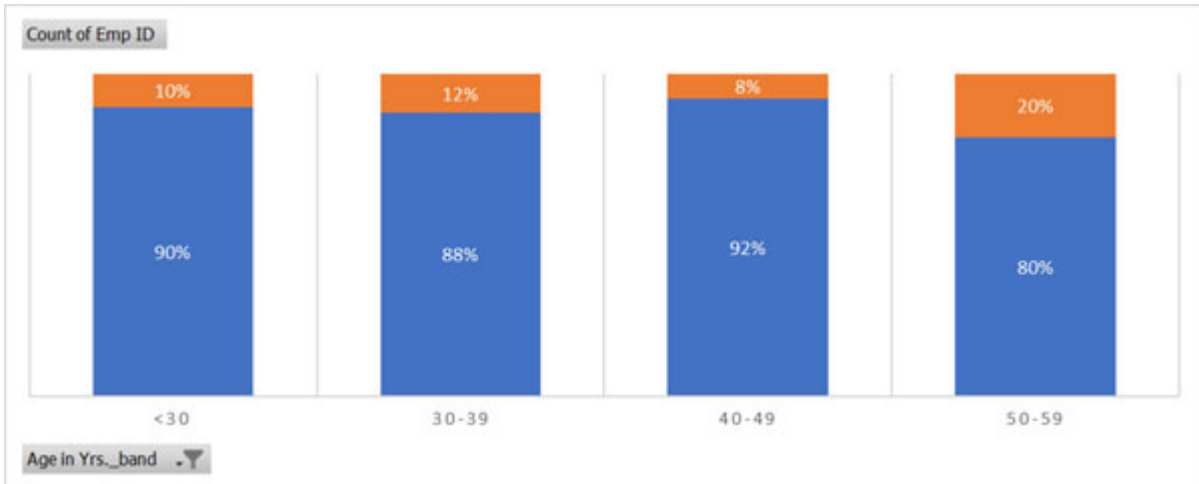


Figure 7.4: Attrition % versus age of the employee in years

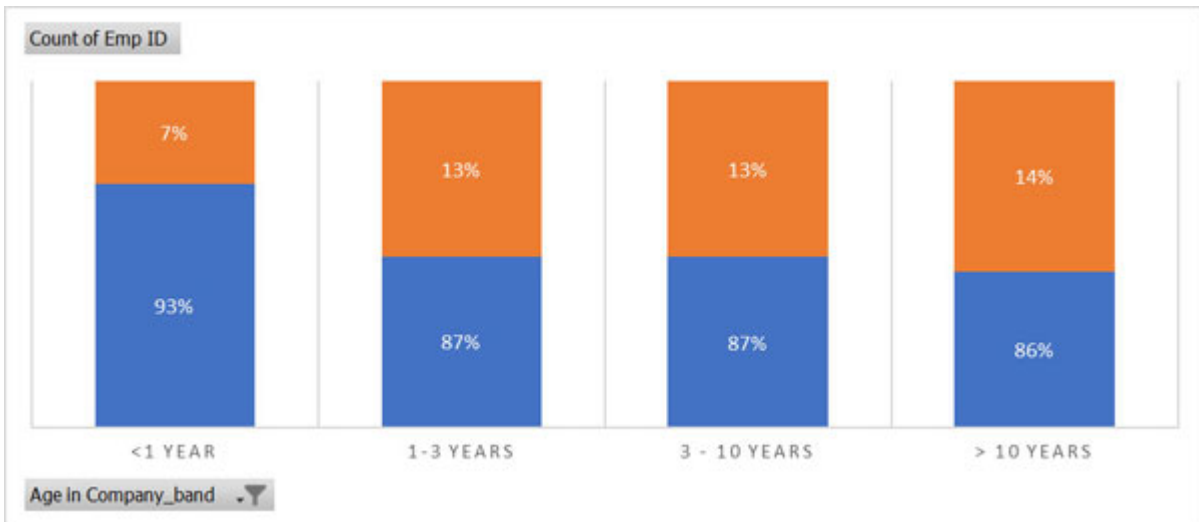


Figure 7.5: Attrition % versus age in the company in years

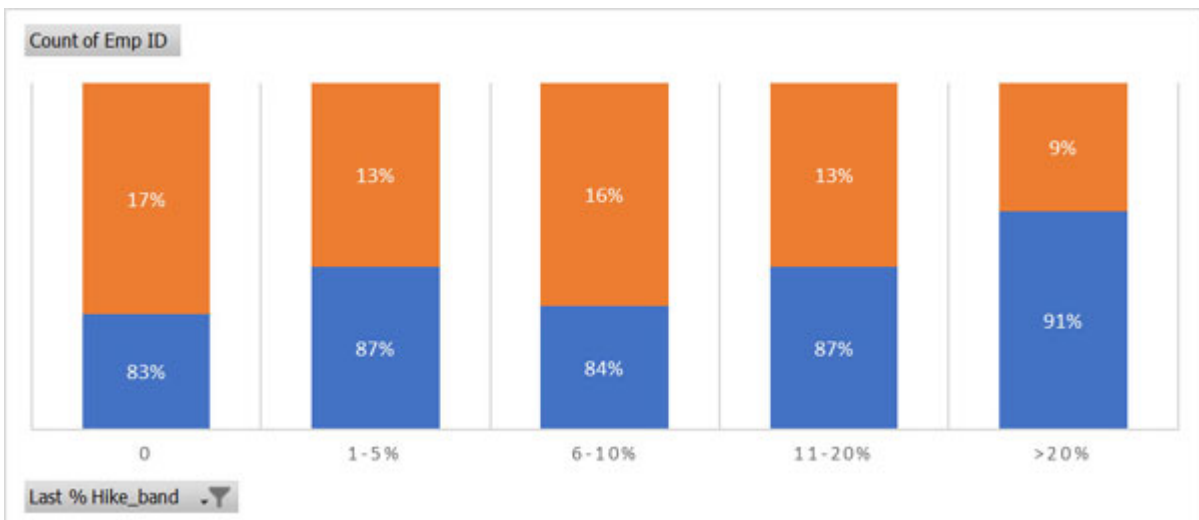


Figure 7.6: Attrition % versus Percent hike

Take the data out into a separate sheet **west2** and run a linear regression for these variables:

| Attrition Yr. 2021 | y variable |
|------------------------|------------|
| Age in Yrs. | x1 |
| Last % Hike | x2 |
| Age in Company (Years) | x3 |

Table 7.7: Variables and their classification

The process is simple: **Data > Data Analysis > Regression:**

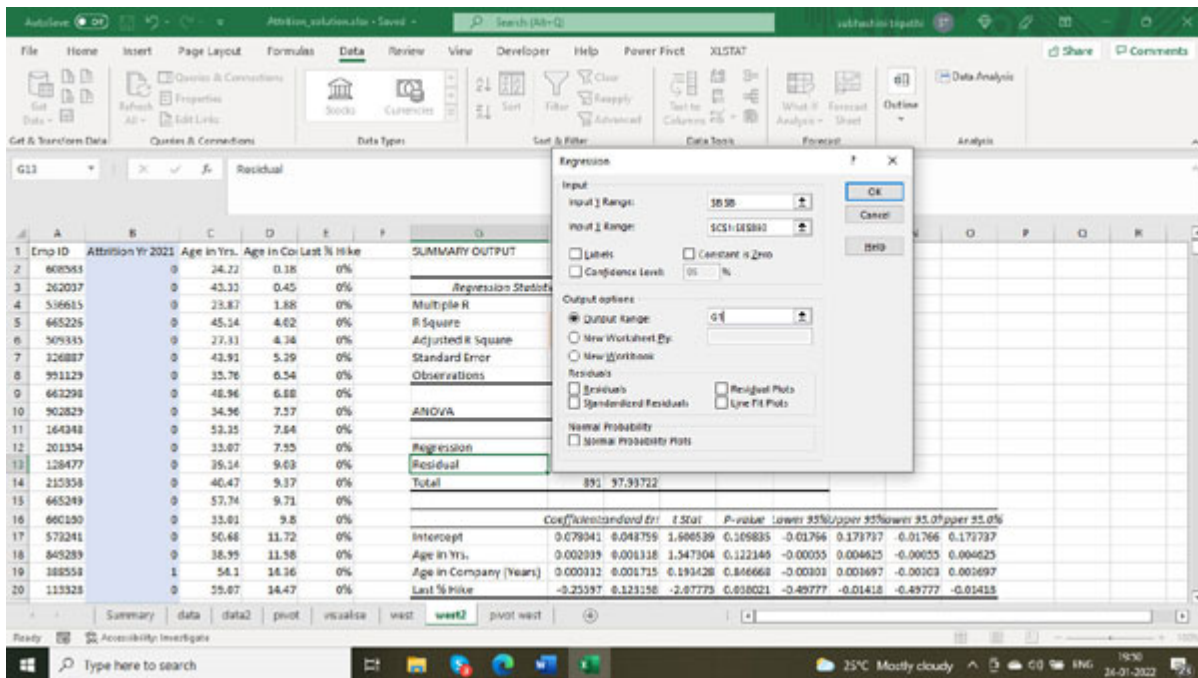


Figure 7.7: Running data regression

Again, as you know, we need to check the regression statistics to know if the linear regression model is acceptable:

| Regression statistics | |
|-----------------------|----------|
| Multiple R | 0.106369 |
| R Square | 0.011314 |
| Adjusted R Square | 0.007974 |
| Standard error | 0.330215 |
| Observations | 892 |

Table 7.8: Output statistics for linear regression

The R square and adjusted R square are very low, and a statistical score is not a good solution in this case:

| | |
|-------------------|-------|
| R Square | 0.011 |
| Adjusted R Square | 0.008 |

Table 7.9: R square and adjusted R square

I–Insight

The company managers should have a discussion with employees who are older (40 + years), have spent one year or more in the system, and got a hike of 10% or less to understand their career plans.

This segment will be the ones who are more likely to quit in the near future.

Conclusion

The company can create a policy and process to keep a watch on the people who have higher chances of leaving or attrite.

Key terms

- The industry belief is that a healthy attrition level is 7% or thereabouts.
- Visualization can help when the statistical correlation is low.

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