*Original Article*

# Antecedents of Promotion in MNC: Empirical Assessment from Demographic and Job-Related Factors of Employees

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*Abstract: What contributes to the decision of employee promotion is a focal point of succession planning and career development program in multinational corporations (MNCs). Human resource managers are concerned about identifying important factors that affect promotion. It is important for organization and human resource department to carefully examine and evaluate whether personality traits, demographic attributes or job-related factors contributes to employee promotion decision. The present study examines the relationships of employee demographics and job-related factors with promotion using logistic regression analysis. The study identifies important predictors that affect promotion of employees. The study has important implications for succession planning and HR decision about employee promotion and career development of employees. Employee wants to know that organization consider their promotion and career development with transparent and timely manner. In contrast, HR managers wants to ensure that right employee has been promoted at right position without procrastination. Hence, the study has significant contribution to the literature of succession planning and career development program. The future study can investigate the influence of emotional intelligence, personality traits and other contingent factors on employee promotion decision.*

## I. INTRODUCTION

Promotion is an important indicator of employees' career success and organizational measures to improve succession management (Delaney & Huselid, 1996). Promotion basically refers to move employee from lower position to higher position by assigning more challenging and creative tasks, increasing responsibilities, allocating authority, autonomy, and decision-making power to improve their job status. Zhang et al. (2020) mentioned that promoted employees recognize additional risk and liability in the higher position along with the opportunity for career advancement. Promotion gives employee higher job status and financial benefits. An effective succession planning maintains optimal human resources for organizational success.

There is an ongoing debate on identifying the important determinants for employee promotion. What are the appropriate promotion criteria for managerial employees in the organization? This is the area in which human resource management often face competitive challenges in finding and retaining efficient employees for their organization. Finding right employee at right time and for right place is the essence of succession management. Succession management is an important function of human resource management. HR department often interested to find effective promotion criteria to smoothen its promotion process for managers and employees without procrastination.

Procrastination occurs when firms wait for performance evaluation of their employees until end of each financial year. However, finding the potential employee for promotion ahead of time will help the organization to take initiatives to prepare their employees though training, education, and job rotation in advance to effectively place the employees at right position and at right time. Succession management will be successful when the organization find appropriate pool of employees within the organization for promotion on time. What factors and indicators can predict potential employees for the promotion is an important issue in organization to take prompt decision and help organization to retain their efficient employees.

There is always a question arise whether the demographic characteristics (e.g., age, gender, and education) and other job-related factors (e.g., number of trainings, training score, performance ratings, and awards won) affect employee promotion. It is important to constitute promotion policy and develop succession planning based on some holistic measures. Beehr, et al. (2004) mentioned that the perceived fairness of promotion system and factors considered in promotion are important determinants of employee motivation and career success. Employee may perceive promotion is process is not fair when it is based demographic attributes only and when the promotion is associated with different incentives for employees.

Thus, it is important to consider demographic as well as job related factors to promote employees. Employee promotion decision is an important part of succession management. An organization can obtain competitive advantage when they develop succession management based on the questions of when, who, where and how an employee will be promoted in the organization.

## II. RESEARCH OBJECTIVES

The primary objective of the study is to explore demographic and job-related factors that affect the probability of employee promotion in the organization. This study will present what demographic characteristics and job-related factors affect the likelihood of employee promotion in organization. This study will facilitate managers and researchers to understand the influential factors that affect employee performance and the likelihood of promotion.

Another objective is to contribute to the literature of employee succession management by giving important insights to researchers and practitioners to selecting appropriate factors to consider employee promotion and identify appropriate criteria to smoothen promotion process for employees and managers. It is important for organization to form efficient succession management process that will optimize the decision based on important demographic, performance and job-related characteristics and ensure employee motivation and retention to the organization.

## III. LITERATURE REVIEW

There is an increasing complexity arises in the management of human resources, specifically managing career and promotion due to the complex business phenomenon. The importance of identifying, screening, and preparing the potential leadership talent is paramount and has become critical business priorities for sustainable competitive position in the market. Most organizations scored succession management as focused and ineffective process. Succession management broadly influenced by external and internal factors (Busine & Watt, 2005).

Stadler (2011) discussed succession management form the context of talent management. The study focused talent review process to explore, assess, develop, and retain potential employees for important job assignment in different organizational hierarchy. The findings of the study shows that current leadership capabilities are not incongruent with growth strategy of firms because leaders have deficiency in strategic thinking and leadership ability.

Sheridan et al. (1997) have examined influence of some demographic factors on promotion and found that formal education, on-the-job training, race and gender have significant influence on job performance and the probability of being promoted from different jobs during the work tenure of employees in the organization. The study found that incumbents with business or engineering bachelor's degree possess higher probability of being promoted.

There is an investigation conducted to identify important factors that have potentially influence on promotion decisions (e.g., decision process, attributes of decision makers, promotion policies, decision process, evaluation systems and other organizational and environmental factors. The decision process consists of formulating strategy, searching candidate, processing information, choice of evaluation, implementation. The study presented 16 propositions concerning to promotion decisions, appropriate for empirical analysis (Stumpf & London,1981).

Although high-tech employees' ranked success as important predictor to sought promotion which is followed by educational qualifications and cross disciplinary knowledge. However, public sector employees ranked organizational politics as the most important factor, followed by tenure and pressure on supervisor are considered useful and important antecedents for promotion (Sharabi et al. 2012). Based on the review of extensive prior literature, hypotheses are developed.

### A. Influence of demographic factors on promotion

It is widely recognized that different education levels have different influences on abilities, creativity and job performance of employees. Employees with high educational qualifications possess high learning and working abilities with potential to demonstrate their talents at work. Thus, if organization employ and promote highly educated employee, it will experience less information processing cost to screening and identifying efficient employees for promotion. The previous empirical results showed positive association between employee education level, employee performance and likelihood of promotion. Highly educated employees possess higher cognitive abilities and stronger sense of responsibilities that are conducive to higher employee and organizational performance (Ng & Feldman, 2010). Some scholars considered education level as a formative measure of human capital and suggests that education level has significant positive influence on employee job performance (Hayek, Thomas, Novicevic & Montalvo, 2016).

Research found evidence that employees with different educational qualifications contains varying degree of needs for promotion. Employees who obtain additional degree in post-employment term or during their continuance of work with company, place more demand for promotion. Employees possess higher degree expect frequent promotion during their stay.

Higher abilities and lower training needs are cost effective for organization that gives advantage for promotion (Zhang et al., 2020). Employee age and service tenure are equivalent to work experience that complement advance learning, increase skills and abilities. The combination of employee age and experience constitute social and human capital that firms can easily exploit to attain competitive advantage and profitability which in turn provide employee an opportunity for promotion (Zhang, Lv, Yuan, Ren, & Wang, 2020).

In many organizations, gender is often considered as a reference factor for promotion. Although it is anticipated that there will be no differences in salary and promotion based on equity theory. However, research found differences in probability in the promotion of men and women. The promotion probability of men is higher than the promotion probability of women (Blau & DeVaro, 2007). According to human capital theory, women invest less energy at work since they are engaged with more household activities. The influence of fertility, family division of labor, and other reasons, the productivity of women is lower than men. Hence, the probability of women to promote in higher position is lower than the men (Becker, 1985). Studies suggest that one of the important reasons of low promotion rate of women is that women are more likely to withdraw from the labor market due to family reasons. However, organizations require specific human capital before allocating benefits and resources to employees. This reduces rate of return on investment of women and lower the value of training to women at work (Pekkarinen & Vartiainen, 2006). Based on the analysis, I have developed following hypothesis as:

**Hypothesis1.** There is positive association between employees' demographic attributes (age, length of service, gender, and education) and promotion.

### B. *Influence of job-related factors on promotion*
Training is a process to increase skills, knowledge, and abilities of employees so that they can perform efficiently in their current job. Training is given to employee complete their assigned task more effectively and promptly (Ichsan, 2020). Training help to develop employee morale and behavior toward attainment of organizational goals. There are different on the job and off the job training methods used to improve workers ability. Training facilitates in improving job performance that also results high potential for promoted. Training increases motivation and job performance employees that lead to career success. Thus, the author suggests for improving training program to increase motivation and performance of employees (Niati et al., 2021).

Seppala & Smith (2020) found that awards as an important motivational factor for instructors as it measures the instrumentality of their career progress. Awards has positive affect on employee performance since it gives a signal of superior performance that can increase potential of promotion. Teaching awards motivate faculty members in their early to mid-career to build teaching excellence. They perceive the awards as a recognition of superior performance. Gupta (2005) defined promotion is an advancement of employee from lower job responsibilities to higher job responsibilities that increase their status, power, and financial benefits in the organization.

Salim (2020) mentioned that employee with high performance contribute more to the organization that also results in increased rewards and motivation level. There are other factors that also influence employee performance in the organization. The author found that promotion increase performance levels since employee get motivation as they have been recognized for better performance. Promotion is a measure to reward good performance, recognizes capabilities of employees (Pousa & Mathieu, 2010). Employee recognition has significant positive influence on employee performance which in turn increase opportunity for promotion. From the study on commercial banks in Kenya shoed that organization offers appreciation for high performance. The study found that employee performance recognition is accompanied with promotion and rewards (Kathina & Bula, 2021). Based on these analyses I have developed the following hypotheses:

**Hypothesis2.** There is positive association between job related factors (number of trainings, average training score, awards won and previous year rating) and promotion.

## IV. DATA AND RESEARCH METHODS
This study will conduct data analysis of a large multinational firm which has nine long verticals across the organization. The company want to explore a promotion criterion that will help the firm to identify appropriate measures in speeding and smoothening the promotion process for the managerial employees. Thus, the company wants to identify suitable candidates at a particular checkpoint to expedite the promotion cycle. The company provided several attributes around employee's past and current performance (key performance indicators) along with demographics. The task is to predict the probability whether a potential candidate at some checkpoint in the test will be promoted after the evaluation process. The data obtained from Cristian (2020).

### A. *Research Model*
The following logistic regression analysis will be conducted for this study.

$$EP=A+b1(TN)+b2(GN)+b3(ED)+b4(EY)+b5(AW)+b6(ATS)+b7(PPR)+e$$



Where, EP-Employee promotion (if promoted 1, otherwise 0), TN-Number of trainings, GN-Gender, ED-Education level, EY-Years of experience, AW-Awards won, ATS-Average training score and PPR-Previous year performance raring, and e-Error term.

This study will provide a useful framework to enhance promotion process without procrastinating because organization want to develop effective succession management plan that facilitate early preparation of their potential employees to be prepared and trained well ahead of time so that they can perform well in their higher position in the organization. This help organizations to be successful in competitive business environment where firms continuously strive to retain key managerial employees.

### B. Research Tools

The study utilized R software, version 4.2.1 to conduct different statistical analysis and estimation. The data has been tested for normality, identified outliers and normalized them, correlation, regression and ANOVA analysis have conducted to investigate the influence of employee demographic and job-related factors on promotion decision. Several hypotheses have been tested to justify the potential influence of employee demographics and job-related factors on promotion. The logistic regression analysis performed to estimate the probability of promotion (1-if employee is promotes, 0-if employee is not promoted) by predictor variables. Some visual graphs have been generated to show promotion pattern in the US firm. The independent variables listed as gender, umber of trainings, previous year rating, awards won and average training scores.

### C. Control Variables

Employee department, regions, education, recruitment channel, age and length of services will be controlled to estimate the model. All the control variables are encoded by using leave one out methods to conduct logistic regression analysis. The control variables selected from the study of Zhang et al. (2020).

### V. RESULTS AND DISCUSSION

Table 1 provides descriptive statistics for some numeric variables. The total sample size is 54,808 employees who were promoted or not based on number of trainings, age, previous year rating, length of service, awards won and average training score. The descriptive statistics shows the mean, standard deviation, median, skewness, kurtosis and standard error. The mean value for each of the above variables are 1.25, 34.80, 3.33, 5.87, 0.023 and 63.39 respectively. The standard deviations for all the variables are within the acceptable range except for age and length of services. The standard error is less than .05 which indicates the reliability of data in each variable. Table 1, 2 and 3 shows the comparative differences of descriptive statistics for total sample, train and test using random sampling. Their differences are not significant. This implies that the sample are representative to the population. Thus, the findings and results derived from statistical analysis based on these sample can be generalized.

#### Table 1: Descriptive statistics

| Variables | N | Mean | SD | Median | Skew | Kurtosis | SE |
|---|---|---|---|---|---|---|---|
| trainings | 54808 | 1.253 | 0.609 | 1.000 | 3.445 | 18.737 | 0.003 |
| age | 54808 | 34.804 | 7.660 | 33.000 | 1.007 | 0.792 | 0.033 |
| Previous rating | 50684 | 3.329 | 1.260 | 3.000 | -0.311 | -0.729 | 0.006 |
| Length of service | 54808 | 5.866 | 4.265 | 5.000 | 1.738 | 4.413 | 0.018 |
| Awards won | 54808 | 0.023 | 0.150 | 0.000 | 6.339 | 38.178 | 0.001 |
| training score | 54808 | 63.387 | 13.372 | 60.000 | 0.452 | -1.050 | 0.057 |

Table 2 represents the descriptive statistics for major dependent and independent variables after random sample imputation. Random sample imputation is a statistical technique to input random value for missing number observations in each variable. After random sample imputation, the mean and standard deviation have changed slightly from the original data set. However, these changes of means and standard deviation and standard error are not significant because the missing values are few for all variables except previous year ratings where there were more missing values.

**Table 2: Descriptive statistics after random sample imputation**

| Variables | N | Mean | SD | Median | Skew | Kurtosis | SE |
|---|---|---|---|---|---|---|---|
| trainings | 54808 | 1.25 | 0.61 | 1.00 | 3.45 | 18.74 | 0.00 |
| age | 54808 | 34.80 | 7.66 | 33.00 | 1.01 | 0.79 | 0.03 |
| Previous rating | 54808 | 3.32 | 1.26 | 3.00 | -0.31 | -0.73 | 0.01 |
| Length of service | 54808 | 5.86 | 4.27 | 5.00 | 1.74 | 4.41 | 0.02 |
| Awards won | 54808 | 0.02 | 0.15 | 0.00 | 6.34 | 38.18 | 0.00 |
| training score | 54808 | 63.38 | 13.37 | 60.00 | 0.45 | -1.05 | 0.06 |

The following table shows the correlation among the independent and dependent variables. The table shows that promotion is positively correlated with previous years ratings, awards won and average training scores. In contrast, promotion is negatively associated with number of trainings employee received and length of service.

**Table 3: Correlation Matrix**

| | Promoted | No of trainings | Age | Previous rating | Awards won. | training score |
|---|---|---|---|---|---|---|
| Promoted | 1 | -0.025 | -0.017 | 0.147 | 0.196 | 0.181 |
| trainings | -0.025 | 1 | -0.081 | -0.057 | -0.008 | 0.043 |
| Age | -0.017 | -0.081 | 1 | 0.008 | -0.008 | -0.048 |
| Previous rating | 0.147 | -0.057 | 0.008 | 1 | 0.025 | 0.071 |
| Awards won | 0.196 | -0.008 | -0.008 | 0.025 | 1 | 0.072 |
| training score | 0.181 | 0.043 | -0.048 | 0.071 | 0.072 | 1 |

From the above table, we can see that number of trainings is negatively associated with employee likelihood of being promoted. There correlation coefficient between promotion and number of trainings is -0.0248 which indicates weak negative correlation. This relationship is negative because when employee participate in more training, they cannot complete regular work hours to perform all assigned jobs and responsibilities which reduces their overall productivity and performance in the short term. Thus, it may cause negative relationships between them.

The correlation coefficient between promotion and age is -0.0171 which is negative and weak. Similarly, the correlation coefficient between promotion and length of service is -0.0171. This implies that as the age of employees increase the chance of promotion will decrease, this is true because employees in the older age already work in the mid and higher-level position and have limited capacity to improve the performance, thus they have lower opportunity for career growth. In addition, there is positive and high correlation between promotion and previous year rating is 0.1473, promotion and awards won is 0.1958, and promotion and average training score is 0.1811.

I have conducted Pearson correlation test between promotion and number of trainings. The correlation coefficient between these two variables is -0.024895 and significant. The results shows that the relationship is negative but significant since p value is less than .05. We rejected the null hypothesis and the correlation between these two variables exists within the 95% confidence interval (-0.0332 to -0.0165) and correlation lies between these intervals, which is -0.0248. Thus, there is negative but significant correlation exists.

I have also tested whether the correlation between promotion and awards won is positive and significant. The correlation coefficient between these two variables is 0.19587. The results shows that the relationship is positive and significant since p value is less than .05. We rejected the null hypothesis and the correlation between these two variables exists within the 95% confidence interval (0.1878 to 0.2039) and correlation lies between these intervals, which is 0.1958. Thus, there is positive but significant correlation exists.

The following table represents the coefficient of logistic regression. In the first situation the logistic regression showed the impacts of gender on the promotion. This explains whether gender has any effect on the employee's likelihood of promotion. The results show that gender has positive and significant effect om promotion. If employee is female, there is high probability that female will be promoted compared to male.

**Table 4: Logistic Regression analysis for gender**

|  | Estimate | Std. Error | z value | Pr(>\|z\|) |
|---|---|---|---|---|
| (Intercept) | -2.40028 | 0.018459 | -130.033 | 0*** |
| gender0 | 0.085834 | 0.033012 | 2.600136 | 0.009319** |

*Sig. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1*

The following table shows the analysis of variance to explain whether the male and female has any significant difference in explaining the promotion. The results shows that the difference of gender has significant influence on promotion. This difference is significant since p values (0.0093) is <.05. The difference of mean (.0899) implies that the likelihood of female to be promoted is higher than male (.0832).

**Table 5: Analysis of variance for gender**

|  | Df | Sum Sq | Mean Square | F value | Pr(>F) | Gender <fct> | GNP=mean <dbl> |
|---|---|---|---|---|---|---|---|
| Gender | 1 | 0.52 | 0.527 | 6.76 | 0.009 | 1 | 0.0832 |
| Residuals | 54806 | 4269.89 | 0.077 | NA | NA | 0 | 0.0899 |

In the following table, the logistic regression coefficients are explaines with number of predictors variables. Here, the likelihood of promotion is explained by the gender, number of trainings, age, previous years ratings, lengths of service, awards won and average training score. The logistic regression anlysis reveals that gender, previous years ratings, lengths of service, awards won and average training scores have positive and significant influce on promotion. The coefficients are 0.085, 0.466, 0.013, 2.109 and 0.044 respectively and they are statistically significant at 5 percent level. In contrast, number of tainings and age has negative and signficant influence on the likelihoof of being peomoted. The coefficients are -0.2127 and -0.0101 respectively and both are statistically significant at 5 percent level. Hence, form the analysis it can be said that all the variables except gender and length of service have very hight and significant effects on the likelihood of an employee being promoted.

**Table 6: Logistic Regression for major variables**

| Variables | Estimate | Std. Error | z value | Pr(>\|z\|) |
|---|---|---|---|---|
| (Intercept) | -6.606 | 0.142 | -46.666 | 0.000*** |
| Gender (0-Female, 1-Male) | 0.085 | 0.035 | 2.423 | 0.015* |
| No of trainings | -0.213 | 0.032 | -6.714 | 0.000*** |
| Age | -0.010 | 0.003 | -3.453 | 0.001*** |
| Previous year rating | 0.466 | 0.015 | 31.606 | 0.000*** |
| Length of service | 0.013 | 0.005 | 2.602 | 0.009** |
| Awards won | 2.109 | 0.065 | 32.419 | 0.000*** |
| Avg training score | 0.044 | 0.001 | 36.937 | 0.000*** |

*Sig. codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1*

Table 7 presents the regression coefficients for all principal and control variables. I have applied leave one out encoding method to convert categorial variables into numeric and random sample imputation used for mission value before performing logistic regression analysis for all variables. The control variables are education level, department, region, and recruitment channel of employees. Even after adding control variables in the logistic regression the coefficient of each variable remains significant except length of service and recruitment channel.

**Table 7: Logistic Regression using all variables**

| Variables | Estimate | Std. Error | z value | Pr(>\|z\|) |
|---|---|---|---|---|
| (Intercept) | -9.288 | 0.534 | -17.400 | < 2e-16 *** |
| no_of_trainings | -0.238 | 0.032 | -7.446 | 9.60e-14 *** |
| age | -0.009 | 0.003 | -3.027 | 0.00247 ** |
| previous_year_rating | 0.452 | 0.015 | 30.406 | < 2e-16 *** |
| length_of_service | 0.007 | 0.005 | 1.363 | 0.17294 |
| avg_training_score | 0.063 | 0.001 | 43.484 | < 2e-16 *** |
| department_encod | -26.000 | 1.334 | -19.487 | < 2e-16 *** |

| region_encod | 9.908 | 0.617 | 16.060 | < 2e-16 *** |
|---|---|---|---|---|
| education_encod | 8.706 | 1.761 | 4.945 | 7.62e-07 *** |
| gender_encod | 26.110 | 5.240 | 4.982 | 6.28e-07 *** |
| recruitment_channel_encod | 0.610 | 2.689 | 0.227 | 0.82037 |

*Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1*

The variables, number of trainings, age and department negatively affect employee promotion but significant at 1% level. On the other hand, previous year rating, average training score, department, region, education, and gender positively affect the likelihood of employee promotion and they are significant at 1% level. Length of service and recruitment channel has no significant influence on promotion.

We have found significant and positive relationships between gender and promotion, age and promotion and length of services and promotion. The relationships between promotion and gender are significant at 5% level where the relationships between promotion and age, and promotion and length of services are significant at 1% level. I have also measured the predicted probability of employee promotion based on key performance attributes and employee demographics. Graph 1 shows that the high-performance index will increase the probability of employee being promoted. It is apparent from the graph; the probability is lower when the index is low, and the probability increase rapidly when the performance index point increases above 40000. This implies that higher performance index is increase probability of employee promotion.

**Graph 1: Predicted probability of promotion based on job and demographic factors**
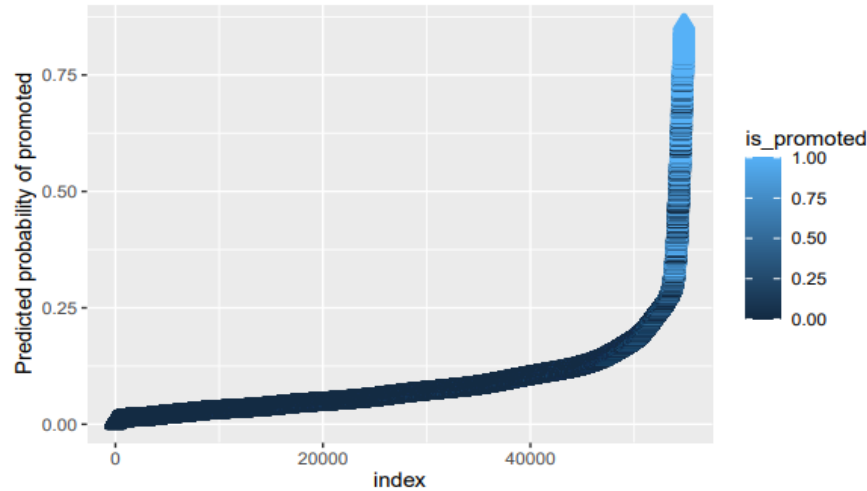


## VI. IMPLICATIONS AND FUTURE RESEARCH

This study has several implications. The study will help in designing effective succession management planning by exploring the determinants of managerial promotion, reducing employee turnover. This will help organization to organize appropriate training and development program for their potential employees ahead of time without procrastinating the process due to the performance evaluation feedback. This will help the organization to remain competitive and utilize their talented pool of human resources.

The study suggests for further investigation of the impacts of demographic and job factors on employee promotion in different context across industries and countries. It is important to address other factors such as: citizenship behavior, job performance, impression management issues on the promotion of employees. To improve talent screening process, firms require to consider additional measures to represent more comprehensive view of individual capability, spread talent review process, identify appropriate promotion criteria, and determine the risk of turnover and implement success management for managing employee performance and career development.

## VII. FINDINGS AND CONCLUSION

This study explores that some demographic and job-related factor have significant influence on the probability of employee promotion. Important demographics such as gender, age, education, and length of employee service have significant impacts on the likelihood of promotion. In contrast, some job-related factors such as: number of trainings, performance rating

in previous years, average training scores, awards won by employees, employee department, geographic region have significant influence on promotion. These factors have direct or indirect influence on employee motivation and performance. As a result, these increase the probability of an employee to be promoted in higher position. This study gives important insights to managers and researchers to focus on the factors when making succession planning and develop hiring and promotion policies. Effective management of human talents and giving them proper route to move through their career advancement and success, will help organization to retain their efficient employees and prepare a succession plan to fill the intellectual resource gap without procrastination. The study suggests investigating the influence of other emotional and intelligence factors in employee promotion across industry and country.

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