A Study on Factors Towards Recruitment of Strategic Positions in Indian Electronics Industry

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Abstract: Dynamics of employment is undergoing radical change. This is specifically true in domain of Electronics System Design and Manufacturing (ESDM). The industry is witnessing disruption through technology every now and then. Knowledge and skills needed to function in the present times with intervention of technology is sophisticated and complex. Finding right person for jobs, especially in hi-tech industry is a tough exercise. Multinational companies paying huge salaries are not helping the cause either. This study looks to understand the role of job boards like LinkedIn to source high quality profiles typically for higher executive positions. We also, highlight the process that can be followed and some expectations in salaries for making a decision on job changes in product development companies.

INTRODUCTION

Most of us are of the opinion that talent management has been a recent development. Talent management has been discussed and debated vociferously over the last many years (Maoyedi and Vaseghi, 2016). The advent of globalization during the early 1990's coupled with the rise of information technology created a huge demand for new skills and encouraged youngsters to enter in masse into the technology services sector. Hence, when it comes to managing talent from the perspective of globalization it becomes a lot more complex and sophisticated (Gardner, 2002). Similar to products, services and recruitment solutions are becoming glocal.

Electronics System Design and Manufacturing (ESDM): Electronics industry worldwide is estimated at US$2 trillion. Despite many factors that are a drag on the economy for instance China's economic slowdown, slash in prices of commodities and stringent monetary policy in western world, the growth is still buoyant and robust. The previous decade was for china where the production was at its peak. High volume economies of scale production strategies are giving way to quick turnaround products and solutions. At present many products in electronics is being produced in East Asian countries led by China. The "Make in India" strategy is slowly paving way for designing and manufacturing electronic products in India. In India, the electronics manufacturing companies are spread across Northern, Western and Southern India. Still the Eastern part of India must catch up to this electronics extravaganza.

Statement of problem: Companies in the space of product development in electronics system design and manufacturing are facing difficulty in churning out products. There are many reasons a few of them are listed as follows:

- Firms in electronics space are facing difficulty to cope with rapid pace of technological changes
- Regulations are forcing them to test their products where certifications and testing are forcing on them huge financial burden

Table 1: Definitions of talent management

Definition	Contribution
Talent management is all about forecasting of human resources needs and devising strategies to meet them	Conceicao and Bandura (2008)
Talent management is an integrated course of action particularly from the standpoint of workplace productivity	Lockwood (2006a, b)
Every organization strive to acquire knowledge while using multiple methods to acquire talent into the system	Lof *et al.* (2011)
Sourcing of profiles, screening and organization leading to selection of candidates, further motivating them and retaining them	Schweyer (2004)
A bouquet of human resource practices that exhibits culture of organization and organically leads to attracting candidates, retaining and developing them to achieve organizational objectives	Lewis and Heckman (2006)
While looking at outside talent, most companies are keen to identify, nurture and develop internally from the vast talent pool	Hartmann *et al.* (2010)
From the global perspective there has to be changes made in human resources practices leading to attracting, retaining and developemployees catering to not just local but global requirements	Stahl *et al.* (2012)

- Lack of reliable eco-system partners
- Fluctuating rupee US dollar exchange rates, creating price instability
- Requirement of sophisticated talent management practices to acquire, retain and develop talent suitable for hi-tech projects

Objectives of the study: The objective of the study is to examine and understanding the following aspects:

- Is there any connection between experience of the candidate and their abilities
- Are the candidates with more experience flexible for relocation if necessary
- To bench mark compensation for the position of "Technical program manager"
- To set a job description that aligns with technology of the day and exposes willingness of candidate to learn in future

Literature review: Talent management can be seen as an implementation of collective strategies that ensure every organization attracts, develops and retains right talent for strategic success (Armstrong, 2009). One of the most important aspects of organization's goal is to ensure they recruit and develop talented staff and make it a habit to do, so, every time. Talent attraction, development and retention are the important talent management practices and are also, the key drivers in nurturing talent management (Lockwood, 2006a, b). Every organization must strive with in its ability to attract right talent using variety of methods in selection which suitably represents organizations competence and culture. The key elements of talent attraction can be viewed as recruitment and selection, besides employer brand equit and employer choice (Armstrong, 2009) (Table 1).

Talent acquisition, development and retention are becoming a major challenge today (Drucker, 2001). While human resource job is becoming complicated, since, job specializations are on the increase. LinkedIn survey on recruitments (2017) discusses on the need to recruit people for the same position with in a span of 2 months. This attrition levels are disturbing company's regular activities. Hence, we are trying new methods in the form of online and social media recruitments (Strauss and Frost, 2001).

Table 2: Research hypothesis

Hypothesis	Statement of hypothesis
H_1	There is a significant difference between experience of the candidate and their exposure on Internet of Things (IoT)
H_2	There is a significant difference between experience of the candidate and their exposure to edge/cloud computing technologies
H_3	There is a significant difference between experience of the candidate and their exposure on the project management tools
H_4	There is a significant difference between experience of the candidate and their exposure to software management tools
H_5	There is a significant difference between experience of the candidate and their willingness to relocate
H_6	There is a significant difference between experience of the candidate and salary expectations
H_7	There is a significant difference between gender of the candidate and salary expectations

MATERIALS AND METHODS

Our objectives of assessing few questions that dominate the minds of employers are answered through a design procedure. In this study, we adopt a descriptive design where we are trying to deduce some insights from data captured. Data is captured through a survey based method on the job board LinkedIn. While other web platforms such as Naukri and Indeed were tried to understand these questions, yet, we concluded that best response rate was from LinkedIn. About 200 responses were complete in full respect and hence, we consider it as our sample size (Table 2).

A questionnaire requesting to solicit some basic information on name and choice of location was followed by other requests such as experience, exposure to internet of things and other project management tools. Finally, there was question their current compensation and expected compensation. We approached three companies to verify validity of our items and found that the expert group helped us converge on the questions. Since, the items are less, we never ventured into the reliability test.

RESULTS AND DISCUSSION

Analysis: For the purpose of data analysis, we have chosen to use chi-square test of independence in order to

Table 3: Cross tabulation between experience and expertise on Internet of Things (IoT)

Parameters	I'm aware	Carry hands on	Proficient	Total
Experience (1-3)	15	5	13	33
(3-5)	33	12	12	57
Above 5	58	39	13	110
Total	106	56	38	200

Table 4: Chi-square test results

Parameters	Values	Df	Asymp. Sig. (2-sided)
Pearson chi-square	16.061	4	0.003
Likelihood ratio	15.126	4	0.004
Linear-by-linear association	04.109	1	0.043
N of valid cases	200.000	**********	*********

[a] 0 cells(0%) have expected count <5. The minimum expected count is 6.27

Table 5: Cross tabulation between experience and expertise on edge/cloud

Parameters	I'm aware	Carry hands on	Proficient	Total
Experience (1-3)	21	12	0	33
(3-5)	33	12	12	57
Above 5	58	39	13	110
Total	106	56	38	200

Table 6: Chi-square test results

Parameters	Values	Df	Asymp.Sig. (2-sided)
Pearson chi-square	12.937	4	0.012
Likelihood ratio	15.807	4	0.003
Linear-by-linear association	04.238	1	0.040
N of valid cases	200.000	***********	**********

[a] 1 cells (11.1%) have expected count <5. The minimum expected count is 3.14

Table 7: Cross tabulation between eperience and eposure to poject tools

Parameters	I'm aware	Carry hands on	Proficient	Total
Experience (1-3)	6	6	21	33
(3-5)	18	21	18	57
Above 5	9	34	67	110
Total	33	61	106	200

Table 8: Chi-square results

Parameters	Values	Df	Asymp. Sig. (2-sided)
Pearson chi-square	21.861	4	0.000
Likelihood ratio	22.219	4	0.000
Linear-by-linear association	3.467	1	0.063
N of valid cases	200	*******	*******

[a] 0 cells (0.0%) have expected count <5. The minimum expected count is 5.45

Table 9: Cross tabulation between experience and exposure to software tools

Parameters	I'm aware	Carry hands on	Proficient	Total
Experience (1-3)	6	24	3	33
(3-5)	24	9	24	57
Above 5	29	46	35	110
Total	59	79	62	200

Table 10: Chi-square results

Parameters	Values	Df	Asymp. Sig. (2-sided)
Pearson chi-square	29.757	4	0.000
Likelihood Ratio	31.952	4	0.000
Linear-by-linear Association	0.893	1	0.345
N of Valid Cases	200	*******	********

[a] 0 cells (.0%) have expected count <5. The minimum expected count is 9.74

verify if the data supports our hypothesis. We have chosen chi-square in order to ascertain if there is any significant difference between the parameters we seek to gain insight.

Moreover, our data is categorical and hence chi-square suits our study better. For the hypothesis 5 and 6 we have chosen to use one way ANOVA to check if there is any significant difference between two variables. For the hypothesis 7, we tried to measure if there is any difference in mean between current salary compensation and expected salary package (Table 3):

- H_1: there is a significant difference between experience of the candidate and their exposure on Internet of Things (IoT)

According to Table 4 and 5, the results are significant. We find there is significant difference between experience of candidate and their expertise on Internet of Things (IoT). Hence, we accept the hypothesis that there is a significant difference between experience of the candidate and their exposure to Internet of Things (IoT):

- H_2: there is a significant difference between experience of the candidate and their exposure to edge/cloud computing technologies

According to Table 6 the results are significant. We find there is significant difference of opinion between experience of candidate and their exposure to edge/cloud computing. Hence, we accept the hypothesis that there is a significant difference between experience of the candidate and their exposure to edge and cloud based computing technologies:

- H_3: there is a significant difference between experience of the candidate and their exposure on the project management tools

According to Table 7 and 8, the results are significant. We find there is significant difference of opinion between experience of candidate and their exposure to project management tools such as MS Office project tool etc. Hence, we accept the hypothesis that there is a significant difference between experience of the candidate and their exposure to project management tools:

- H$_4$: there is a significant difference between experience of the candidate and their exposure to software management tools

According to Table 9 and 10, the results are not significant. We find there is no significant difference of opinion between experience of candidate and their exposure to other software management tools. Hence, we reject the hypothesis that there is no significant difference between experience of the candidate and their exposure to software management tools:

- H$_5$: there is a significant difference between experience of the candidate and their willingness to relocate

According to Table 11 and 12 the results are significant. We find there is significant difference of opinion between experience of candidate and their willingness to relocate. Hence, we accept the hypothesis that there is significant difference between experience of the candidate and their willingness to relocate:

- H$_6$: there is a significant difference between experience of the candidate and their salary expectations

According to Table 13 the results are significant. We find there is significant difference of opinion between experience of candidate and their salary expectations. Hence, we accept the hypothesis that there is significant difference between experience of the candidate and their expectations on salary:

- H$_7$: there is a significant difference between gender of the candidate and their salary expectations

According to Table 14 and 15, the results are insignificant. We find there is no significant difference of opinion between experience of candidate and their salary expectations. Hence, we reject the hypothesis that there is significant difference between gender of the candidate and their expectations on salary.

From the above findings we can infer that recruitment in higher positions is challenging, especially when it comes to experience of the candidate pitched against skill sets. Companies are trying to confront challenges in recruitment of candidates, especially for strategic positions. And when they come, normally this skilled work force is pretty expensive. In our study,

Table 11: Cross tabulation between experience and relocation

Parameters	Yes	No	Total
Experience (1-3)	18	15	33
(3-5)	45	12	57
Above 5	73	37	110
Total	136	64	200

Table 12: Chi-square results

Parameters	Values	Df	Asymp. Sig. (2-sided)
Pearson χ^2	006.020	2	0.049
Likelihood ratio	006.112	2	0.047
Linear-by-linear association	000.281	1	0.596
N of valid cases	200.000	*******	********

[a]0 cells (.0%) have expected count <5. The minimum expected count is 10.56

Table 13: Experience of the candidate and salary expectations (ANOVA)

Variables	Sum of squares	df	Mean square	F-values	Sig.
Between groups	01597.178	2	798.589	7.944	0.000
Within groups	19803.177	197	100.524		
Total	21400.355	199			

Table 14: Gender of candidate and salary expectations (ANOVA)

Variables	Sum of squares	df	Mean square	F-values	Sig.
Between groups	00006.072	1	006.072	0.056	0.8l3
Within groups	21394.283	198	108.052		
Total	21400.355	199			

Table 15: Summary of hypothesis testing

Hypothesis	Remarks
There is a significant difference between experience of the candidate and their exposure on Internet of Things (IoT)	Supported
There is a significant difference between experience of the candidate and their exposure to edge/cloud computing technologies	Supported
There is a significant difference between experience of the candidate and their exposure on the project management tools	Supported
There is a significant difference between experience of the candidate and their exposure to software management tools	Supported
There is a significant difference between experience of the candidate and their willingness to relocate	Supported
There is a significant difference between experience of the candidate and salary expectations	Supported
There is a significant difference between gender of the candidate and salary expectations	Supported

we were able to confirm on few hypothesis. The question of experience is valid in this job as in any other jobs. Experience and exposure to new and emerging technologies are significant. Similarly more experience also, leads to better bargain and greater expectations when it comes to salary. However, in our study gender of the candidate and salary expectation was not found to be significant. Which meant, the gender has no basis for setting of salary. Both men and women are equally ambitious and would their services valued in that way.

According to Fig. 1, we can clearly see a trend of compensation that is going up. This with pressure on profit margins can make recruitment an organization's
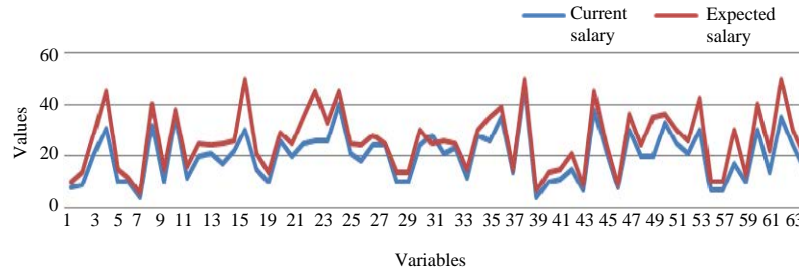
Fig. 1: Expected VS. current salary (in INR lakhs/annum)

nightmare. We might have to take more samples of people who could give a honest reply on their compensation and also, mix various other profiles to figure out if the trend is true.

CONCLUSION

Since, we cannot evaluate all of the above objectives within the scope of one paper. We are trying to fix hypothesis for one or two of the objectives for which the data we collected cooperate.

LIMITATIONS

In our study, as in any other study has been bound with few limitations. We have actually taken few roles such as technical program manager, senior application engineer and designer for power electronics for which the resumes and details were solicited.

RECOMMENDATIONS

We can check the present trend for other industries. Secondly, data can be captured on continuous scale in order to run advanced techniques such as structural equation modelling to estimate the causal relationships and other confirmations. Sampling can be increased in order to demonstrate the results are applicable for a larger and generalized data set.

REFERENCES

Armstrong, M., 2009. Armstrong's Handbook of Human Resource Management Practice. 11th Edn., Kogan Page Company, London, UK., ISBN:9780749457389, Pages: 1088.

Conceicao, P. and R. Bandura, 2008. Measuring subjective wellbeing: A summary review of the literature. UNDP-United Nations Development Programme, New York, USA. https://www.cpc.unc.edu/ projects/rlms-hse/publications/924.

Drucker, P.F., 2001. Management Challenges for the 21st Century. 1st Edn., Harper Business, New York, ISBN-13: 978-0887309991, Pages: 224.

Gardner, T.M., 2002. In the trenches at the talent wars: Competitive interaction for scarce human resources. Hum. Resour. Manage. Wiley Periodicals, 41: 225-237.

Hartmann, E., E. Feisel and H. Schober, 2010. Talent management of western MNCs in China: Balancing global integration and local responsiveness. J. World Bus., 45: 169-178.

Lewis, R.E. and R.J. Heckman, 2006. Talent management: A critical review. Hum. Resour. Manage. Rev., 16: 139-154.

Lockwood, N.R., 2006a. Talent management: Driver for organizational success. SHRM Research Quarterly. http://www.shrm.org/Research/Articles/Articles/Documents/0606RQuartpdf.pdf

Lockwood, N.R., 2006b. Talent management: Driver for organizational success. Soc. Hum. Resour. Manage., 51: 1-11.

Lof, M.B., D. Virta and G. Westpahl, 2011. Student's views on talent management. Master Thesis, US-AB Digitaltryckeri, Stockholm, Sweden.

Moayedi, Z. and M. Vaseghi, 2016. The effect of talent management on organizational success. Scinzer J. Accounting Manage., 2: 16-20.

Schweyer, A., 2004. Talent Management Systems: best Practices in Technology Solutions for Recruitment, Retention and Workforce Planning. John Wiley and Sons, New Jersey.

Stahl, G., I. Bjorkman, E. Farndale, S.S. Morris and J. Paauwe *et al*., 2012. Six principles of effective global talent management. Sloan Manage. Rev., 53: 25-42.

Strauss, J. and R. Frost, 2001. e-Marketing. 2nd Edn., Prentice Hall, Upper Saddle River, New Jersey, USA., ISBN:9780130322647, Pages: 519.