

Analysis of job posting data from pharmaceutical companies

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Here I provided an analysis of the job posting data from top pharmaceutical companies to identify whether there is significant variation in the duration of job postings among companies and different types of jobs. The data was collected from company websites over the period of 2017-2018.

From Fig. 1 we can see that there is large variation between companies. The job posting durations of Merck are consistently shorter than those of other companies, reflecting its popularity or operational efficiency. This is consistent with the leading position of Merck. There are also differences between different types of jobs, with research and engineering jobs taking longer time to fill.

I further investigate the correlation between the job posting duration and a company's performance. I use the stock price as a measure of performance. Fig. 2 shows the Kendall's rank correlation between job posting duration and the annualized growth rate of the company's stock price. Sales, research and engineering jobs all have a significant correlation with the stock price. While the correlation with sales jobs is obvious, the correlation with research and engineering jobs is a little surprising, since the outcome of research and engineering hires usually take years to fulfill. Therefore, the correlation with research and engineering jobs likely reflects how the company is perceived in the job market.

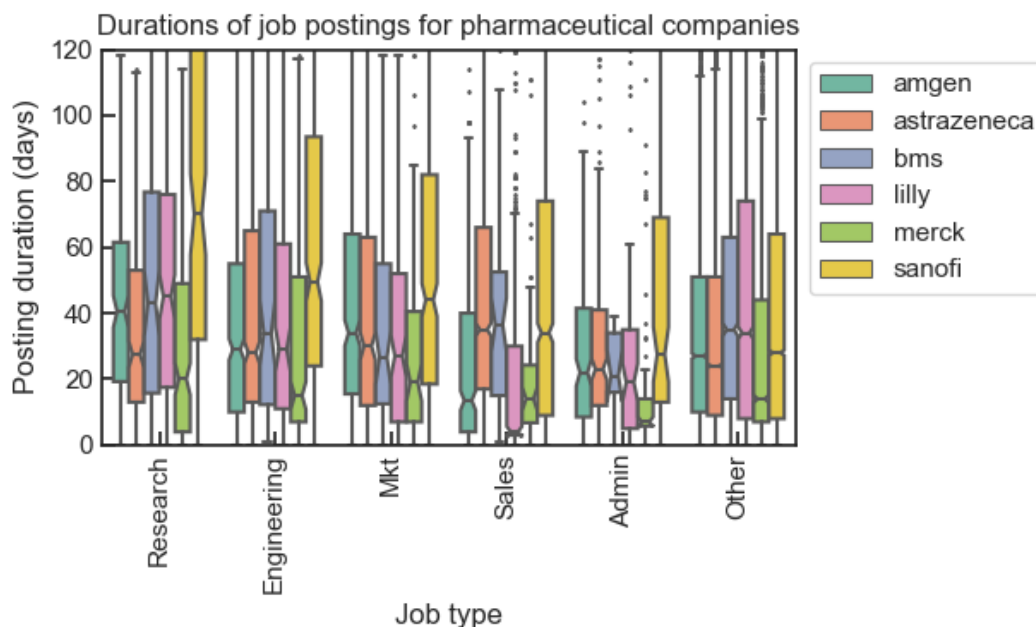


Figure 1. Distribution of job posting durations for different job types and companies.

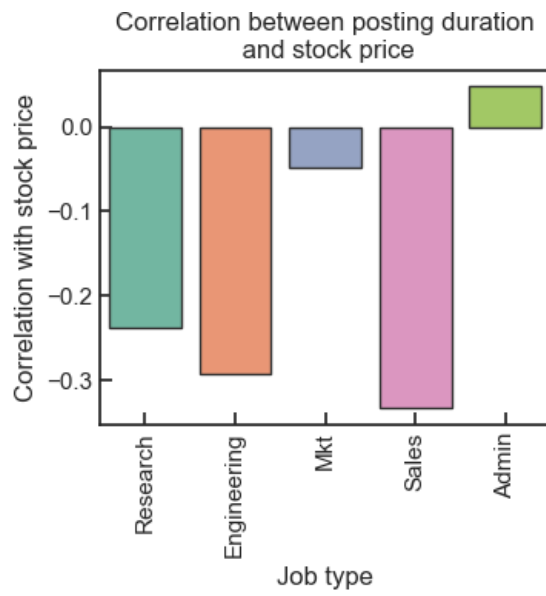


Figure 2. Correlation between job posting duration and annualized growth rate of company stock price.