

Abstract Submitted
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Statistical Mechanics of Japanese Labor Markets HE CHEN¹,
Hokkaido University — We introduce a probabilistic model to analyze job-matching processes of recent Japanese labor markets, in particular, for university graduates by means of statistical physics. To make a model of the market efficiently, we take into account several hypotheses. Namely, each company fixes the (business year independent) number of opening positions for newcomers. The ability of gathering newcomers depends on the result of job matching process in past business years. This fact means that the ability of the company is weakening if the company did not make their quota or the company gathered applicants too much over the quota. All university graduates who are looking for their jobs can access the public information about the ranking of companies. By assuming the above essential key points, we construct the local energy function of each company and describe the probability that an arbitrary company gets students at each business year by a Boltzmann-Gibbs distribution. We evaluate the relevant physical quantities such as the employment rate and Gini index. We discuss social inequalities in labor markets, and provide some ways to improve these situations, such as the informal job offer rate, the job-worker mismatch between students and companies.

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