

## Utility Analysis of API Economy Based on Multi-Sided Platform Markets Model

**Authors :** Mami Sugiura, Shinichi Arakawa, Masayuki Murata, Satoshi Imai, Toru Katagiri, Motoyoshi Sekiya

**Abstract :** API (Application Programming Interface) economy, where many participants join/interact and form the economy, is expected to increase collaboration between information services through API, and thereby, it is expected to increase market value from the service collaborations. In this paper, we introduce API evaluators, which are the activator of API economy by reviewing and/or evaluating APIs, and develop a multi-sided API economy model that formulates interactions among platform provider, API developers, consumers, and API evaluators. By obtaining the equilibrium that maximizes utility of all participants, the impact of API evaluators on the utility of participants in the API economy is revealed. Numerical results show that, with the existence of API evaluators, the number of developers and consumers increase by 1.5% and the utility of platformer increases by 2.3%. We also discuss the strategies of platform provider to maximize its utility under the existence of API evaluators.

**Keywords :** API economy, multi-sided markets, API evaluator, platform, platform provider

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