


Value Trade-Offs in Matching Functions: Evidence From Online Labor Markets

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ABSTRACT

Online labor markets (OLMs) face challenges in refining match functions to connect clients with suitable service providers. This study examines how platform-controlled factors (number of assigned providers, matching speed) and project-specific attributes (description length, requested hours) affect matching effectiveness across four outcomes: hiring probability, hiring time, billed hours, and profit per contracted project. Using data from a premium OLM platform, the study reveals important operational and financial trade-offs. Expanding the provider pool improves hiring probability and project profitability but lengthens hiring time. Faster matching boosts hiring likelihood without compromising quality. Larger requested workloads reduce hiring probability but raise profitability. These findings offer actionable insights into how calibrated matching strategies can improve OLM performance across the project lifecycle, contributing to platform governance and digital operations literature.

KEYWORDS

Online Labor Markets, Service Marketplace, Value Creation, Digital Platform Operations, Matching Functions, Matching Effectiveness, Platform Design, Hiring Outcomes

INTRODUCTION

Online labor markets (OLMs) are transforming how digital services are transacted by enabling remote collaboration between clients and freelance service providers (Agrawal et al., 2015; Horton, 2010). As intermediaries, these platforms manage key operational functions, including the matching of participants, as well as managing reputation systems. Among these, matching functions play a foundational role in aligning client needs with provider capabilities. Existing research underscores the vital role of matching functions in OLMs as essential mechanisms for efficiently connecting clients and providers in a digital, often global, marketplace (Kanat et al., 2018). Their effectiveness directly influences transaction outcomes, client and provider satisfaction, and platform profitability (Kokkodis & Ipeirotis, 2023; Z. Li & Qi, 2023). Matching functions are particularly critical in OLMs, where projects are typically short-term, task-specific, skill-dependent, and providers bring diverse

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skills and availability to meet varied client demands. Studies in both OLM-specific and broader online market contexts highlight the significance of matching functions in reducing market frictions, adapting to real-time changes, and improving transaction efficiency, ultimately driving user satisfaction and platform growth (Agrawal et al., 2015; Goldfarb & Tucker, 2019; Kroft & Pope, 2014). These insights emphasize the importance of adaptive matching functions, setting the stage for our empirical investigation into key matching factors within OLMs.

Matching effectiveness is pivotal in determining key project outcomes, such as hiring decisions and hiring time, as well as platform-level outcomes like profitability per contracted project. As OLM platforms facilitate thousands of projects, even incremental improvements in matching efficiency can lead to a significant impact. For instance, Zheng et al. (2016) showed that a 1% increase in hiring rates on an OLM platform would result in over \$500,000 in U.S. dollars increase in transaction volume, underscoring the significant financial implications of enhanced matching performance. Therefore, understanding the key factors influencing matching effectiveness is essential for optimizing OLM platforms and enhancing client and provider experiences.

In digital business ecosystems, matching functions not only serve as operational mechanisms but also as platform governance technologies such as managing participation, mediating interaction, and maintaining trust among the transacting parties (Kornyshova et al., 2023). Match functions have the potential to directly influence user adoption and platform stickiness by affecting client and provider perceptions of fairness, transparency, and reliability (A. Chen et al., 2022). In addition, the design of these functions forms a fundamental part of a digital business model on a platform level to coproduce and share value between the stakeholders. These perspectives place matching functions at the juncture of operational optimization and strategic platform governance, making them relevant not only in labor economics but also in more general digital business research.

This paper uses data from an OLM platform specializing in professional services to empirically assess both platform-controlled and project-specific factors that drive matching success. The studied platform connects clients with remote providers across diverse project areas, including web development, graphic design, customer service, digital marketing, and copywriting. To guide the empirical analysis, the paper develops a conceptual model that links platform-controlled and project-specific factors to key performance outcomes. By examining various matching factors and performance outcomes—such as hiring probability, hiring time, profit per contracted project, and billed hours—the aim is to uncover ways to improve matching functions and enhance project outcomes. The results offer insights into the trade-offs involved in the matching process and contribute to a better understanding of how matching factors impact value creation in OLM projects.

The contributions of this study to OLM research are threefold. First, it provides empirical evidence on how specific matching factors influence key performance outcomes—namely, hiring probability, hiring time, billed hours, and profit per contracted project. Second, by examining the interplay between platform-controlled and project-specified operational levers, the study highlights the importance of managing both types of factors within matching functions to achieve sustainable platform growth. Third, this research advances the understanding of value creation in OLM projects by demonstrating how matching strategies influence both operational and financial dimensions. These insights provide actionable guidelines for platforms seeking to improve matching functions and maximize threefold value creation for clients, providers, and the platform itself. Thus, this research situates matching functions as not only operationalized mechanisms but also as governance mechanisms that can be used to affect user trust, platform legitimacy, and long-term adoption in digital marketplaces.

The remainder of this paper is structured into six sections: Section 2 reviews the relevant literature and positions our study within the broader literature. Section 3 presents the conceptual model and hypothesis development, focusing on key platform-controlled and project-specific factors influencing matching effectiveness in OLM projects. Section 4 describes the data and methodology, detailing the data categories, variable definitions, and econometric model specifications used in the empirical analysis. Section 5 reports the results, analyzing the impact of each factor on hiring probability, hiring

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