Motivated by the emerging sharing economy, we study a market-making intermediary who crowdsources goods (or services) from independent suppliers (or agents) and sells them to consumers. The intermediary offers a wage to the supply side and charges a price to the demand side. We show that the optimal price has a U-shaped relationship with the wage. In other words, campaigns to improve wages for the independent agents can also benefit the demand side. This is in stark contrast with the traditional supply chain settings or the two-sided matching market in the economics literature, where any cost surge in the supply chain would always lead to a retail price increase. In addition, we study the widely practiced fixed commission rate, across-the-board commission contracts, under which the platform takes a fixed cut and the wage is equal to a pre-determined fraction of the price. For example, Uber takes a cut of 20%. With the pre-committed commission-rate, the intermediary has its hands tied in varying prices to match supply with demand, under supply and demand uncertainty. However, surprisingly, we show that the fixed commission rate contract can be optimal or near-optimal for the platform and suppliers. In particular, we show that as long as the supply curve is concave in the wage, by using the optimal fixed-rate commission contract, the platform achieves at least 75% of the optimal profit. We then make several extensions to piecewise commission rate contracts, to suppliers who set their own wages and to strategic suppliers who anticipate the chance of being matched with a customer.

(Copies of the paper are available in the AOIS Department offices)