

Incentive System for Inventors

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Abstract

This paper evaluates sources of inventor motivation and their impact on inventor productivity using novel data from a survey of Japanese inventors on 5,278 patents conducted by Research Institute of Economy, Trade and Industry (RIETI) in 2007. Our study reveals that satisfaction from contributing to science and technology “taste for science”, and interests in solving challenging technical problems “taste for challenge” are major motivation drivers for inventors. A firm may benefit from hiring those with strong taste for science because (1) they are more motivated, (2) they might increase the absorptive capacity of the firm, and (3) taste for science is likely to be correlated with ability. Unlike conventional wisdom, there is some evidence that monetary rewards may be an effective motivation driver where they are introduced. Our analyses also show that taste for science and monetary compensation might be substitutes. Namely, (1) a successful introduction of monetary rewards is less likely when inventors have strong “taste for science”, and (2) the effect of “taste for science” on patent value is smaller in the presence of monetary rewards. One interpretation of the result is that inventors who otherwise pursue risky projects aimed at technological leap might shift to safer and predictable projects in the presence of monetary incentives.