

## **The Counterfeiting Decision and the Enforcement of IPRs**

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The only theoretical models of counterfeiting appear to be those of Grossman and Shapiro (1988a and 1988b). These were designed to relate to issues surrounding the impact of counterfeiting on the US economy. In addition, they make a number of assumptions that seem unlikely to hold in practice, such as that counterfeiting firms do not make more than normal profits. The present paper outlines a new mathematical model of a branded firm faced by a potential counterfeiter. The mathematics of the model are developed in three parts. First, it assumes a single incumbent, branded firm – a monopolist. This establishes the optimal price and quality choice of the brand owner. Second, it considers the expected returns to the potential counterfeiter, where there is a chance of being caught and a penalty imposed. This determines whether the counterfeiter will enter or not. Third, it examines the initial and longer term effects on the branded firm caused by the entry of a counterfeiter and whether the branded firm will take action against the counterfeiter. In the present model, the counterfeiter decides on the quality and quantity of the counterfeit goods, where both of these impact on the probability of being caught (e.g. quality closer to the branded good and smaller quantities lower the probability of detection). The results of the model are illustrated using some simple numerical simulations, which allow the sensitivity of the outcomes to key policy parameters to be assessed.