

Innovation and Growth under Private Information

Working Paper No. 845 Keep in mind

The series Working Papers on Economics is published by the Office for Economic Studies at the *Banco de la República* (Central Bank of *Colombia*). It contributes to the dissemination and promotion of the work by researchers from the institution. This series is indexed at Research Papers in Economics (RePEc).

On multiple occasions, these works have been the result of collaborative work with individuals from other national or international institutions. The works published are provisional, and their authors are fully responsible for the opinions expressed in them, as well as for possible mistakes. The opinions expressed herein are those of the authors and do not necessarily reflect the views of Banco de la República or its Board of Directors.

AUTHOR OR EDITOR Oscar Mauricio Valencia Jose E. Gomez AUTHORS AND/OR EDITORS Gómez-González, José Eduardo

We study endogenous growth within a model with occupational choice in which innovators produce ideas, within an asymmetric information framework. Each innovator has private knowledge of their production costs. Developers offer innovators non-linear contract schemes that affect both the number of innovators and the rate of economic growth. Two main results are obtained. First, the equilibrium contract under asymmetric information leads to the selection of highly-talented workers in R&D activities. Second, the growth rate is lower in the private information case when compared to the full-information benchmark due to the existence of an efficiency-rent extraction trade-off.

The opinions expressed here do not necessarily correspond neither to the Banco de la República nor its Board of Directors.

Update 05:05 p.m., 12/05/2016