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Entrepreneurs, moral hazard, and endogenous growth ☆

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Abstract

We analyze an endogenous growth model with agents differing in their endowments. Poor entrepreneurs with limited liability need to borrow in financial markets to participate in aggregate output production. We show that the first-best solution can either be achieved by decentralized financial contracting or by employing a project-specific subsidy policy.

If additional capital market imperfections are introduced into the model, a negative link between inequality and growth emerges. Then, the impact of inequality on growth increases for a higher degree of frictions.

JEL classification: D31; G14; O16; O41
Keywords: Endogenous growth; Inequality; Moral hazard; Limited liability; Capital market imperfections

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Nomenclature

θ	index of individuals
$\varepsilon_{\theta,t}$	random human capital endowment share
γ	start-up cost of an entrepreneurial project
λ	wealth level of the poorest entrepreneur
λ^{sdc}	wealth level of the poorest entrepreneur with a standard debt contract
μ	index of the poorest borrowing entrepreneur exerting e^*
π^*	expected project payoff with e^*
π_i	project payoff if outcome i realizes
$\pi^{\mathrm{sdc}}(e)$	expected project payoff with a standard debt contract
ρ	riskless rate of interest
$\hat{\rho}$	borrowers' net repayment rate
$\omega_{\theta,t}$	human capital endowment of individual θ in cohort t
Π	random return of an entrepreneurial project
$c(e)$	effort cost function
b_θ	amount of external finance
$d_{\theta,t}$	consumption of individual θ
e	entrepreneurial effort
$F(\varepsilon)$	economy's cdf of capital endowment shares
g	growth rate of aggregate output
i	index of project payoff states
k_θ	individual θ's endowment with physical capital ($\omega_\theta = k_\theta$)
n	number of possible project payoff realizations
$p_i(e)$	probability of project outcome i
s	subsidy ensuring e^*
t_i	repayment to the lender in payoff state i
y_t	aggregate output in period t
A_t	stock of knowledge available at the beginning of period t
R	expected repayment generated by any transfer system T
R^{FBmax}	largest repayment generated by a first-best contract
$R^{\max}$	largest repayment generated by any contract (possibly nonmonotonic)
T	any feasible repayment scheme
U_t^θ	utility of individual θ in cohort t

1. Introduction

The purpose of this paper is to analyze the conditions that lead to optimal economic growth in an agency-model of financial contracting. In this model, a risk-neutral entrepreneur chooses an unobservable level of effort. He may employ the investment funds of a risk-neutral investor while both, entrepreneur and investor, are constrained by limited liability. We show that the first-best solution can either