Exam

Incentives in Organizations and Innovation

Uwe Jirjahn

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Choose **either** question Question I **or** Question II.

Question I

The risk neutral investor Rudi Reibach has the opportunity to finance an innovative project in the field of gene technology. Therefore he has to invest an amount of $I = 32$. As Rudi Reibach is not familiar with gene technology, he has to employ the manager Lutz Luschig. Rudi Reibach has full bargaining power when designing the employment contract. Lutz Luschig does not provide any additional capital. The utility function of Lutz Luschig is $U(w) = w$, where w is his wage. Both parties have a reservation utility equal to zero. If Lutz Luschig uses the invested funds as intended, the probability of success of the project is $p_H = 1/2$. If he uses the funds for private purposes such as buying a car for his wife, he will gain an additional private utility of $B = 20$. In this case, the probability of success of the project will be $p_L = 0$. Rudi Reibach cannot observe how his manager uses the funds. He can only observe the success or failure of the project. In case of success, the return on the project is $R = 100$. In case of failure, the return on the project is $R = 0$. The return on the project can be observed by both parties.

I.1 Will the investor conduct the project if the manager is not protected by limited liability?

I.2 Will the investor conduct the project if the manager is protected by limited liability ($w \geq 0$)?

Question II

Discuss possible solutions to the free rider problem associated with profit sharing.

Please note: If you answer both questions, we will only consider Question I.