

Examen Economics of innovation and intellectual property juni 2022

Question 1: What's the difference between investing in innovation and investing in physical assets? -> risk of failure, uncertain outcome, can take a long time for outcome to be realized, appropriability issues

Question 2: What (dis)advantages are there for large firms investing in innovation compared to small firms investing in innovation?

-> large firms: externalities, indivisibilities, uncertainty

-> small firms: usually more financially constrained, more support policies specifically for small firms, they respond more to the support, some even don't want to grow in fear of losing the support

Question 3: Arrow model: compute the profit incentive a monopolist has when the inverse demand is P=150-Q, c0=30 and due to a non-drastic innovation mc drops to c1=20. -> monopolist: incentive was 312,5 (3x)

Question 4: what happens when this happens in a competitive market? Compute the profit incentive and compare with the PI of the monopolist and explain.

-> competitive: incentive was 600(2x)

-> incentive is larger in competitive market because monopoly has the replacement effect

Question 5: How do tax credits stimulate innovation?

-> empirical evidence: 10% drop in tax cost results in 10% increase in R&D investments

- -> already treated generously in tax regulation, a lot of countries add additional tax credits
- -> more tax credits lead to more jobs, patents and productivity

-> disadvantage: firms might relabel costs as r&d in order to get the credit & some firms relocate to areas where they are taxed less ⇔ studies found that even if firms didn't relocate, their r&d investments increased as well

Question 6: What's the difference between tax credits and subsidies? What are the (dis)advantages of tax credits?

-> subsidies can target specific projects in important fields, scientific research or in fields where the private incentive/investment is too low in

-> advantage: easy to implement in practise + evidence that is had significant impact ⇔ disadvantage: can't target specific projects

Question 7: Assume there's a startup created by uni professors & a MNC. They both apply for a grant and both get the exact same grant. Make assumptions about the firms and model what happens with their innovations when receiving the grant. + graph

-> assume that small firm is financially constrained and MNC is not, innovative capability of MNC is bigger



-> small firm can conduct more projects because of the subsidy, large firm conducts projects that would have happened anyway = crowding out

Question 8: Why is it necessary that patents are limited in time?

-> as long al firm has the patent, owner gains monopoly profits which is not beneficial for society

-> social value of patent decrease al patent length increases

Question 9: Explain the concept of patent breadth and how it is related to patent length.

-> consists of (1) horizontal competition: to what extent can the patent block out competition & (2) cumulative innovation: how new does the innovation need to be?

-> length and breadth are substitutes in policies, optimal patent is broad & short OR narrow & long