

# MOT1435 Technology, Strategy, and Entrepreneurship

Session 11: exam preparation

Dr. Geerten van de Kaa

# General issues

- MOT1434 vs MOT1435
- Computer room online exam
- Comparable to maple TA
- Maximum number of lines per answer
- Press next / back after 15 minutes of idle time
- E-surveillants and normal surveillants are available

# Preparation to exam (Entrepreneurship)

## Lecture 5

- Schilling, M. A. 2010. Strategic Management of Technological Innovation. New York, USA. Chapter 10, → *except Managing innovation across borders*
- Schilling, M. A. 2010. Strategic Management of Technological Innovation. New York, USA. Chapter 11, → *except Quality Function Deployment and further to the end of chapter 11*
- Cheah, H-B. 1990. Schumpeterian and Austrian Entrepreneurship: Unity within duality. Journal of Business Venturing, Vol. 5, pp. 341-347 → *difference Kirzner and Schumpeter*
- Covin, J.G., and Slevin, D.P. 1989. Strategic management of small firms in hostile and benign environments. Strategic Management Journal, 10(1), pp.75-87, → *focus on organization structure scale and strategic posture scale*
- Sarasvathy, S.D. 2001. Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency. Academy of Management Review, 26(2): 243-263. → *up to page 254 'connections with existing theory and empirical evidence'*
- Stevenson, H.H., Gumpert, D. 1985. The heart of entrepreneurship. Harvard Business Review, 63(2): 85-94. → *complete*
- Chesbrough, H. - 2003 - The Era of Open Innovation MIT Sloan Management Review, 44(3): 34-41. → *complete*

# Preparation to exam (Entrepreneurship)

## Lecture 6

- Schilling, M. A. 2010. Strategic Management of Technological Innovation. New York, USA. Chapter 12 • complete
- Reagans, R., & Zuckerman, E.W. 2001. Networks, diversity, and productivity: The social capital of corporate R&D teams. Organizations Science, 12(4): 502-517 • pages 502-506
- Benner, M.J., & Tushman, M.L. (2003). Exploitation, exploration, and process management : The productivity dilemma revisited. Academy of Management Review, 28(2): 238-256. • complete
- O'Reilly, Charles .A. and Tushman, Michael L. (2004). The ambidextrous organization. Harvard Business Review, April: 74-83. • not needed to read if previous by Benner and Tushman is well understood
- Birkinshaw and Gibson (2004). Building ambidexterity into an organization. MIT Sloan Management Review, 45 (4), 47-55. • understand the differences between structural and contextual ambidexterity
- Burt, R. S. 2004. Structural Holes and Good Ideas. American Journal of Sociology, 110(2): 349 – 399. • up to page 356 when “evidence anecdotal ...” starts
- Hansen, M. (1999). The search transfer problem: The role of weak ties in sharing knowledge across organization subunits. Adm. Science Quarterly, 44: 82-111. • not needed

# Backbay battery game results thus far

1. Daniel Adrian, \$560.54M
2. hup, ben, \$486.60M
3. Sam Geers, \$479.73M
4. Smitesh Jain, \$476.32M
5. Bob Verdoes, \$470.41M

# Question 4a

**4a** Explain which aspects affect the value of a technology to users besides its technological standalone value in markets that are characterized by increasing returns to adoption.

Value from network effects; the more users adopt the technology (the higher the installed base) the higher the value of the technology to those users.

Value from complementary goods; the more complementary goods are available in which the technology is implemented, the higher the value of the core product in which the technology is implemented.

# Question 4b

**4b** Firms can take advantage of the fact that users rely on both objective and subjective information in assessing the combined value offered by a new technology. Explain by describing the two subjective components that determine the value offered by a new technology. Also, mention at least one strategy that can be applied by firms to affect these two subjective components.

These include perceived and anticipated installed base / complementary goods / technological utility. Strategies that may be used to influence this include marketing through eg product pre-announcements or communicating that 'the war is over' (as occurred in the case of Blu-ray vs HD-DVD).

# Question 5a

**5a** Explain what is meant by path dependency and explain how it can relate to the phenomenon of technological lock-in.

The phenomenon of path dependency occurs when small random idiosyncratic events lead to major changes in the future possibly leading to lock in of technologically insuperior standards (such as QWERTY vs DVORAK)



# Question 5b

**5b** Explain why in some markets, which are characterized by increasing returns, multiple technologies may co-exist and achieve market dominance. Make use of a sketch (5 points)

In these markets customers attain their desired level of network externality benefits at lower levels of market share.

# Question 6

**6** Explain what is meant by the concepts installed base, availability of complementary goods and network effects, and explain how these factors for standard dominance are related to each other and to the concept of standard dominance. Make use of a conceptual model. Extend the conceptual model by including three other factors for standard dominance and argue how they relate to the factors in the model.

Installed base is the number of users of the core product in which a standard is implemented. Availability of complementary goods is the amount of goods in which a standard is implemented. The goods are complementary to the core product. Network effects are the effects that may exist in markets characterized by increasing returns and that result from the physical interconnection of products in which standards are implemented. The products increase in value for consumers once more products are sold since more physical connections can be established. Therefore installed base affects standard dominance under the influence of network effects. Also, complementary goods affect standard dominance and complementary goods form a two way relationship with installed base. Network effects may also moderate the relation between complementary goods and standard dominance.

# Exam Question - Example

In the lectures, we discussed that New Product Development teams were considered strategically important to improve and implement further product development as well as to identify new developments. The diversity of these teams has a strong effect on the likelihood of success a team has towards either implementation of further product development and identification of new developments. Explain for each how diversity and why it is beneficial.

Further product development

---

---

---

---

Identify new developments

---

---

---

---