Georgia Tech Ernest Scheller Jr. College of Business

MGT 4195 STRATEGIC MANAGEMENT
EXAMINATION
APRIL 2, 2013
PROFESSOR JAY LEE

INSTRUCTION:
This exam consists of four parts, with a total of 100 points. You need to answer ALL questions. Points are assigned to each question, so allocate your time accordingly. Write or mark your answer with pen only. Do not attach additional pages to this exam. If you need more space, use the back of the pages, and indicate on the front of that page of the exam that you have done so. Good luck!

SECTION (Circle one) E (1:35-2:55p) F (3:05-4:25p)

NAME: ____________Suggested Answers_____________________

SIGNATURE: ____

SCORED (Do not write anything here):

Part I (30 points): ______30________

Part II (24 points): ______24________

Part III (15 points): ______15________

Part IV (28 points): ______28________

Section & Name: _______3________
(3 points)

Total (100 points): _____100________

PART I: MULTIPLE CHOICE QUESTIONS (30 POINTS TOTAL)

For each question, choose the most appropriate entry. Each question is worth 3 points.

1. Which one of the following cannot be a driver of cost advantage? ( )
   a. Reduced organizational slack
   b. Higher ratio of variable to fixed costs
   c. Greater production experience
   d. Stronger bargaining power over suppliers
   e. None of the above.

2. Which one of the following statements is most appropriate for differentiation strategy? ( )
   a. Differentiation implies segmentation since it seeks to appeal to what distinguishes between customer groups.
   b. Firms with a broad scope differentiation advantage enjoy higher profitability due to diminished rivalry.
   c. Differentiation means providing something unique even if it may not be appreciated by the customers.
   d. Differentiation advantage dictates that the cost of differentiation should be justified by a price premium that more than offsets such cost.
   e. None of the above.

3. Which one of the following cannot be an example of endogenous entry barriers? ( )
   a. Texas Instrument patents non-core technologies.
   b. Alcoa builds a plant with a capacity more than sufficient to cover the entire demand.
   c. DeBeers pre-empts a diamond mine.
   d. Anheuser-Busch introduces five new beers in the market.
   e. None of the above.

4. Which one of the following factors does not affect the size of PIE? ( )
   a. Market growth
   b. Technological innovation
   c. International trade liberalization
   d. Structure of rivalry
   e. None of the above.

5. Which one of the following statements is most appropriate about experience effects? ( )
   a. They refer to the relation between the unit cost and the current scale of production.
   b. The unit cost of production falls with production scale.
   c. For the effect to have strategic significance, it has to apply to individual firms or products.

d. Firms moving down the experience curve quickly in an industry have competitive advantage over firms in other industry that move slowly along the curve.
e. None of the above.

6. Which one of the following statements is <u>not</u> true about the cost-quality frontier? (   )
a. The cost-quality frontier suggests the possible coexistence of multiple viable positions.
b. Moving along the frontier is sometimes more challenging than moving from inside the frontier to the points on the frontier.
c. A business unit on the frontier has a competitive advantage over those inside the frontier.
d. Not every firm on the frontier is efficient.
e. None of the above.

7. Which of the following cannot be a source of positive feedback? (   )
a. Compatibility insurance
b. Average cost higher than marginal cost
c. Consumer utility increases with the number of users
d. Referral discount
e. None of the above.

8. Which of the following tactics does not necessarily give rise to customer lock-in? (   )
a. Customer training and learning
b. Repurchase agreement
c. Existence of complementary products
d. Network effects
e. None of the above.

9. Which one of the following is most appropriate for disruptive technologies? (   )
a. They are always initiated by entrants.
b. They tend to outperform established technologies from the early stage.
c. They target the mainstream customer needs since adoption is critical for success.
d. They may coexist with existing technologies for an extended period of time.
e. None of the above.

10. Which one of the following matches between the requirement of imitation and the corresponding isolating mechanism is not appropriate? (   )
a. Resource acquisition – Exploit all available investment opportunities
b. Identification – Obscure superior performance
c. Diagnosis – Rely on multiple sources of competitive advantage to create causal ambiguity
d. Incentives for imitation – Signal aggressive intentions to imitators
e. None of the above.

PART II: WAR OF TABLETS (24 POINTS TOTAL)

Imagine a tablet industry with only two buyers (each buyer can purchase one unit of product per period). For simplicity, all firms in this industry can make an unlimited number of units of their product at a cost of $199. There is no collusion or price discrimination. Now, Amazon introduces Kindle Fire HD. The table below summarizes the value of Kindle Fire to each buyer in Period 1:

	Kindle Fire HD
Buyer 1	$600
Buyer 2	$400

1. (3 points) What will be the price of Kindle Fire HD? **P_{Kindle} = $400 [b/c $400×2 > $600]**

2. (3 points) How much total value is created in the first period? **V = $602 [= $600 + $400 – $199×2]**

3. (4 points) How is this value distributed to Amazon, Buyer 1, and Buyer 2 (specify for each)?
Amazon = $402, B1 = $200, B2 = $0.

In Period 2, Apple introduces iPad Mini tailored to the needs of Buyer 1 (Buyer 2 doesn't value it much). The maximum willingness-to-pay of each buyer is now as follows:

	Kindle Fire HD	iPad Mini
Buyer 1	$600	$800
Buyer 2	$400	$300

4. (3 points) How much total value is created in this period? **V = $802 [Buyer 1 switches to iPad Mini and Buyer 2 still buys Kindle; the sum of production cost is $398]**

5. (4 points) If Amazon charges a price of $199, what will be the maximum price of iPad Mini that still ensures Buyer 1 switches to Apple?

$P_{iPadMini}$ = $398 (or $398.99) [need to give B1 a consumer surplus greater than $401]

In Period 3, Microsoft enters with Surface. It contains the best elements of the existing tablets, offering value to the two buyers as shown in the last column below:

	Kindle Fire HD	iPad Mini	Surface
Buyer 1	$600	$800	$800
Buyer 2	$400	$300	$400

6. (3 points) How much total value is created in this period? **V = $802 [Still both buyers consume the products and the sum of production cost is $398]**

7. (4 points) How much value goes to Buyer 1 and Buyer 2 (specify for each)?
B1 = $601, B2 = $201 [Competition between firms drives prices down to $199. Buyer 1 buys either iPad Mini or Surface; Buyer 2 buys either Kindle or Surface.]

PART III: WAR OF TABLETS – CONTINUED (15 POINTS TOTAL)

Briefly answer the following questions.[1]

1. (5 points) Industry observers believe that the unit cost of Kindle Fire HD is at or above the $199 retail price. What is this pricing strategy called and what is the logic behind it?

Pricing strategy: (**razor-blade**) model

Logic: **Selling Kindle Fire at a lower price will ease/increase the adoption of the e-reader/ tablet. That will increase the demand for other Amazon products such as e-books and streaming contents (movies, TV shows, etc.), on which Amazon can make profits that help recover the lost profit on the device.**

2. (5 points) iPad Mini is an example of brand proliferation. Explain the strategic benefit of this tactic, focusing on why it can be a profitable strategy.

> This is a type of endogenous entry barriers. By flooding the market with "too many" products, incumbent firms can diminish the incentives of potential entrants to enter the market. Entry incentives are reduced because 1) now there is less room for differentiation (from existing products) and 2) even if they enter, the new products can only command a smaller market share. All else equal, decreased entry threats are always good news for the incumbents as their shares of PIE likely remain intact.

3. (5 points) The base price of a 32GB Surface is $499 but the same model with the Touch Cover, which acts as a keyboard and hence allows Surface to work much more like a laptop, is priced at $599 (a Touch Cover is $120 if purchased separately). Industry observers estimate the cost of Touch Cover to be only $16. Relative to the case in which Touch Cover always comes with Surface for a total price of $599, explain why the above two-part pricing can be a more profitable strategy.

> This strategy is to exploit the fact that consumers are heterogeneous in their willingness-to-pay (WTP). If Microsoft bundles the two at $599, consumers whose WTP is lower than $599 will not purchase the bundled Surface. This will leave money on the table because there are at least some consumers whose WTP is at least above the cost of Surface itself (i.e., $499 that is without Touch Cover) but below $599. By unbundling the two, therefore, Microsoft can sell to these consumers with lower WTPs. Consumers with higher WTPs can (and will) still purchase Touch Cover, which generates a hefty margin to Microsoft. Hence, this two-part pricing is (unconditionally) more profitable than the bundling.

[1] This part's data are based on "What's in an iPad Mini?," *Wall Street Journal*, November 5, 2012.

PART IV: MINI CASE (28 POINTS TOTAL)
Read the following case carefully and answer the questions that follow. [Case skipped]

QUESTIONS (try to fit in the space provided; you may also use the back of pages if necessary)

Foreword: You may not agree with the points addressed below, which is fine. What I describe below is "one" way of thinking about this issue and isn't necessarily "the" answer. From your response, I mainly look for how well you understand the analysis frameworks and competently apply them to actual cases like this one. The focus lies also on how well you use the available information (though limited it may be) and argue logically to support your assessment.

1. (12 points) Using Porter's Five (Six) Forces framework (and recalling from our class discussion on the Apple, Inc. case), perform an analysis of the personal computer (PC) manufacturing (or "assembly" if you will) industry. Is this an attractive industry? What, if any, is the most critical force(s) that makes this industry particularly more (or less) attractive?

This is the same industry we saw from the Apple case in class, so only some bullet points.

<u>Supplier Power</u>: HIGH

- **Wintel problem: Intel and MS exert enormous power, capturing a lion's share of industry profit (in 2011, Intel+MS's profit of $35B vs. PC industry's aggregate profit of $10-12B)**
- **Intel & MS enjoy competitive advantages from high entry barriers (technology, scale economies), brand equity (Intel®, Windows®), and customer lock-in (compatibility, network effects)**

<u>Buyer Power</u>: HIGH

- **Corporate buyers**
  - **IT or purchasing department**
  - **Purchase in large volumes**
  - **Sophisticated, knowledgeable about PC**
  - **Low willingness to pay for service**
  - **Price is a big factor of decision**
- **Consumer buyers**
  - **Very price sensitive**
  - **Generally knowledgeable and consider PC as commodity**
  - **Very low WTP for service; low brand loyalty (except perhaps for Apple)**

<u>Rivalry</u>: HIGH

- **Structure**
  - **Generally fragmented: several large players (HP, Dell, Lenovo & Acer: 53%) + lots of smaller players**
  - **Open standards**
  - **Very rapid technological obsolescence (steep learning curve) with short time window for recouping investment**

- **Conduct**
    - **Compete primarily on price: average selling price (ASP) declined 8-10% (1999-2005), 2% in last 5 yrs.**

<u>Threat of Entry</u>: HIGH

- **Components are standardized and widely available -> allows for "white-box" entries (esp. in Asia; 30% of the market)**
- **Customer loyalty virtually nonexistent -> no switching cost**
- **Assembly requires little scale**
- **Distribution is easy (over the web or classified ad; shipping is standard)**

<u>Threat of Substitutes</u>: MODERATE TO HIGH (more recent)

- **Many substitutes exist: smartphones, video game consoles, TV set-top boxes, etc. -> slows down demand growth**
- **Relatively low prices points of these substitutes (avg. $300) -> exerts further downward pressure on PC prices**

<u>Effectiveness of Complements</u> (if any): MODERATE TO HIGH

- **Several important complements: application software (OS, productivity, etc.), peripherals (printer, scanners, digital cameras), internet**
- **Internet poses both opportunities and threats: it adds functional values to PC but is increasingly becoming a substitute for PC (via internet-enabled consumer devices)**

<u>Overall Assessment (including the critical force(s))</u>:
In general, this is a terrible industry to be in (evidenced by market leaders' troubles). Few of the forces seem to be favorable for an average firm in this industry.

2. (4 points) The article talks about Dell's management buyout proposal that intends to take the company private. What are the strategic benefits of being a private company in general?

> Public firms are subject to various disclosure requirements. By being private, a company can not only avoid these nuisances but, more importantly, also reduce the risk of revealing private information that may help the competitors to identify and imitate the sources of its competitive advantages (an important element of isolating mechanisms).

3. (12 points) How do you assess Microsoft's investment in Dell? Is that a good course of action? Provide your answer in the following steps.

<u>Strategic motivation:</u>
Microsoft, along with Intel, has carefully built the PC ecosystem, which became the critical basis for their core business and thus their profitability. This ecosystem has been ailing recently, mainly due to a fast shift toward a mobile computing world, which is dominated by traditionally non-PC firms such as Google. Consequently, pretty much all PC firms are

struggling to survive through this transition period. Microsoft wants to support the suffering PC ecosystem by helping out Dell, which the third largest PC vendor in the world.

Pros:

- **Help Dell, #3 buyer of their OS, transform into a more viable PC player**
- **Maintain or increase Microsoft's influence on Dell**
- **Signal to other PC vendors its commitment to the ecosystem**
- **(thereby) help preserve or strengthen the PC ecosystem**

Cons:

- **Potentially alienate other PC vendors such as HP (#1) and Lenovo (#2) who are in direct competition with Dell**
- **May trigger or expedite other PC vendors' adoption of competing OS platforms such as Android (instead of Windows 8) for their mobile products**
- **Dell may fail to make a successful turnaround (due to backfires from other vendors or management incompetency)**

Overall assessment:

Answers may vary depending on the student's position but a few points to consider: Microsoft has long been making huge profits from the ecosystem it has carefully built. But the ever-increasing competition from the mobile platforms, armed with cutting edge smartphones and tablets, has become a real threat to Microsoft's core business. Its PC partners, on the other hand, have not been effective in coming up with hardware that can successfully compete with these mobile devices. Microsoft has been trying to address this problem by launching its own version of mobile devices (Windows Phone, Surface, etc.). The investment in Dell can also be understood as one of such strategic endeavors. The problem is that these moves can potentially create more problems than solving them. For one, they likely engender tensions between Microsoft and PC vendors (through tablets) and between PC vendors (through the Dell investment). So, Microsoft is walking on a very fine line between reinforcing their core ecosystem and potentially undermining the ecosystem by alienating valuable strategic partners. Either way, it may just be the time for Microsoft to start ceding a greater share of the PIE to their partners (or downstream players) who have long suffered from the "Wintel problem."