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Assignment - 1

1) Intel strategy is based on learning curve and volume driven strategies which says it requires less time and cost to produce the second item than it requires to produce the first item and so on.

I see the following threats that might cause them to change their strategy:

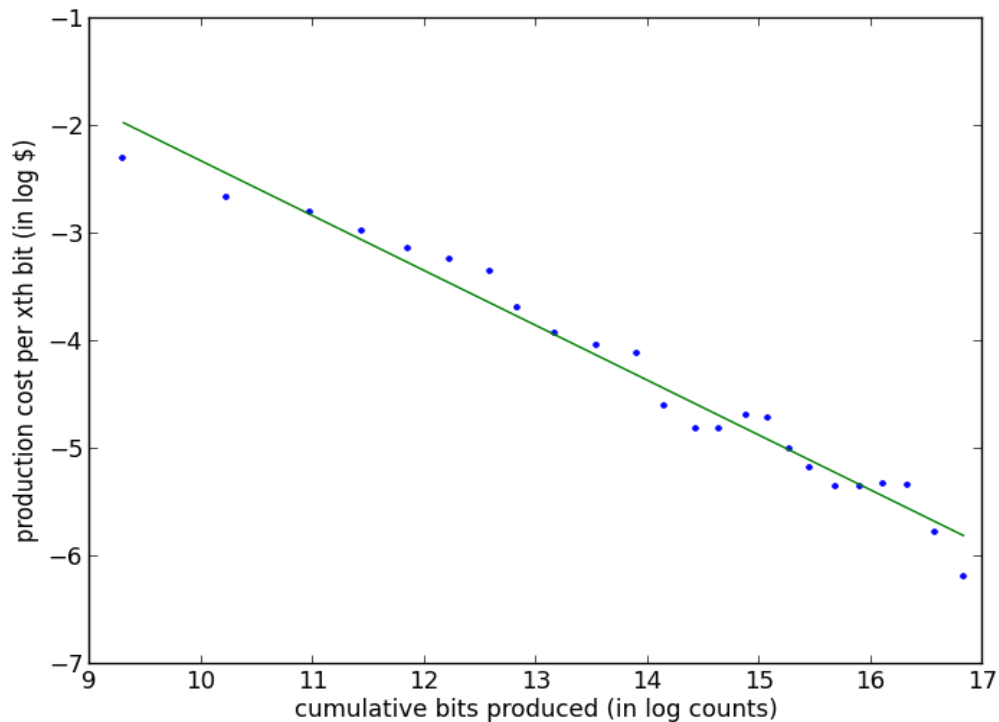
- a) Compromising on existing revenues to promote the newer designs.
- b) There might be a mismatch between market need and Intel's design. In that case, their newer designs might not be what their customers are looking for.
- c) They are indirectly pushing their customers to update themselves so that their products and Intel's designs are compatible which might put them on risk of losing them.

2) $n = [\log(30010120 * 10^9) - \log(2 * 10^9)] / \log(2)$
 $= 16.48 - 9.30 / 0.30 = 23.93$

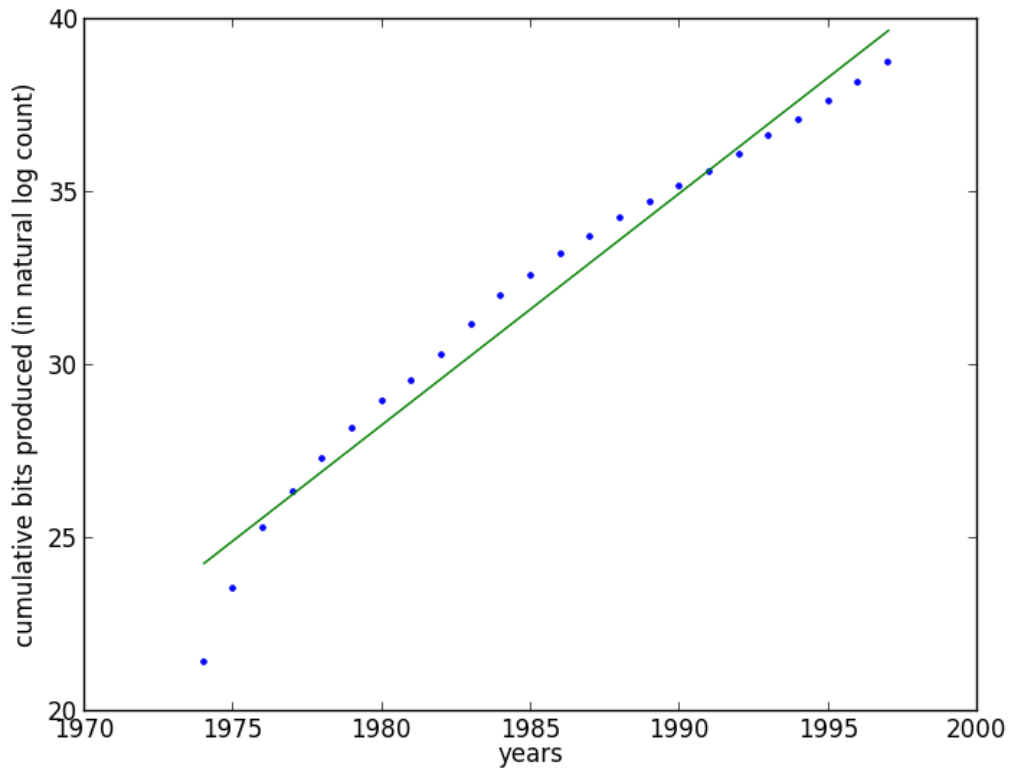
$$r = (6.48 * 10^{-7}) / 0.005 = 0.00013$$

$$\text{Learning rate} = n^{\sqrt{r}} = 0.69$$

The graph is as follows:



3) Slope = 0.669, Interest rate = 66.9%



4) Rule of 72 = $72/66.9 = 1.076$
Rule of 69.3 = $69.3/66.9 = 1.036$

5)
INTC



$$\text{Slope} = (33.90 - 33.80)/3 \text{ hours} = 0.033$$

S&P



$$\text{Slope} = (2039.33 - 2041)/1.5 \text{ hours} = -1.11$$

$$6) n = [\log(1576495000) - \log(19840)]/\log(2) = 6.31$$

$$r = 0.36/0.95 = 0.379$$

$$\text{Learning rate} = n\sqrt{r} = 0.86$$

7) The learning rate of computer and automobile industry is different because the computer industry has few parameters like voltage, current etc. to work on while making a chip or IC which results in fewer mistakes and hence lower learning rate where as in automobile industry where there are lots of parameters like mileage, space, speed, safety, tech features, maintenance etc. to work on while designing or manufacturing a car and hence chances of more mistakes and thus high learning rate. Because of comparatively simpler process, the computer industry has lower learning rate where as its high in automotive industry as the automotive products are more complex to build. I also think that the learning rate differs in both the industries because of fewer and smaller parts involved in manufacturing of ICs where as many parts are required to manufacture a car.

I see that computer industry products have achieved a good learning rate (low) and will continue to improve as the generations of people have always been attracted to sleeker and smaller products, which drives the growth and competition.

On the other hand, the learning rate of automotive industry products is slow because if a new environmental or safety rule is proposed then the designs of the products have to be changed which will increase the learning rate.