

# BA3320 Fundamentals of Production

EXAM 1 Fall, 2006

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Total **cost** of as a function of severity of storm and litigiousness of the populace

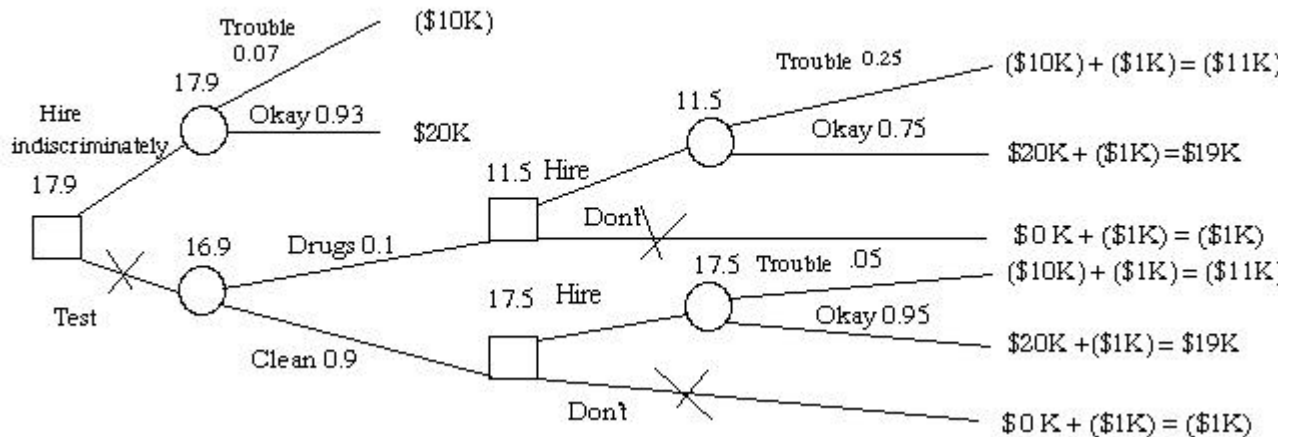
weather & attitudes	combined cost of salt and suits (\$K)			EMLoss
	mild	icy	bitter	
Probability	0.75	0.20	0.05	
little salt	10	20	2,000	111.5
bunches of salt	100	100	1,000	145
Heebiegobs of halides	1,000	1,000	1,000	1,000

Potential Regrets as a function of severity of storm and litigiousness of the populace

weather & attitudes	Regrets			Max regret
	mild	icy	bitter	
little salt	0	0	1,000	1,000
bunches of salt	90	80	0	90
Heebiegobs of halides	990	980	0	990

CYA expected costs are more than Max EMV = 145 - 111.5 = \$33.5 K

- |   |  |
|---|--|
| 1) warranty length = $10 + Z(0.2)^*$                  | 4) SEM = $sd/\sqrt{n}$ ; SEM=1; n=16     |
| 3 = $10 - 0.84 * 3 = 7.48$                            | 5) nobackup: R=.432, Pf=.568 Ecf=\$1136  |
| 2) $Q = (\$2000 - 100) / (0.5 - .25) = 7600$          | 1 backup: R=.576, Pf=.424, Ecf=\$848     |
| 3) $\$10K + 30K * Phot = \$30K - 20K Phot$ ; Phot=0.4 | Value of backup = $\$1136 - 848 = \$288$ |



Better to hire without testing as the test costs \$1000 and has no value--thus the profit with the test is reduced by the cost of the test. No matter what the test results, we do the same thing, hire. Thus the test makes no difference. The problem is that, although the drug test gives perfect information on drug use, it's a poor predictor of trouble-making employees.

(Historical note: Despite this result, most large companies in the 90's decided to test candidates because if they didn't and other companies did, they would get more than their share of pot- and coke-heads and drug use would be more of a problem.

***\$K Transaction Costs for paying invoices early vs. The OPM strategy.***

Humongo / Biggo	Allow terms	price increases	raise price and Monitoring system
Electronic immediately	50 / / 50	250 / / 40	130 / / 30
some float	25 / / 500	240 / / 400	125 / / 50
deliberately delay	10 / / 1300	50 / / 1250	120 / / 120

Not a zero sum game. Sum of wins and losses not equal to zero, the total pie changes with combinations. Electronic immediately /allow terms is the lowest total cost solution, 50 each, total 100. The one-round prisoner's dilemma stable result is deliberate delay / raise price and monitor. both parties spend a lot on senseless churning trying to get rich at each other's expense (OPM) cost =120+120=240. Better to find MBA's who went to a good school and do things right. The best way to enforce the efficient result is to consider the value of long-range relationship and refuse to do business with people who jerk you around.

- 1) P=1286, C=0, W=571, R=857, OV=13857
- 2) sell 6000-5600=400
- 3) sell 5000-2000=3000
- 4) -infinity. since we aren't making any, we don't care how low the profit goes.

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