

UTILITY ANALYSIS OF SELECTION PROCEDURES

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Part A

1. $U = 250 * .35 * 12,400 * .64 - 250 * (25 / .33)$

$$U = 694,400 - 18,939$$

$$U = +\$675,461$$

Junk is beautiful will experience a 675,461 dollar gain in productivity from using this method.

2. $U = 250 * (.35 - .12) * 12,400 * .64 - 250 * ([25 - 10] / .33)$

$$U = 250 * .23 * 12,400 * .64 - 250 * 45.45$$

$$U = 456,320 - 11,362.50$$

$$U = +\$444,957.50$$

Junk is beautiful will experience a 444.957.50 dollar gain in productivity as a result of the math test and customer service work sample implementation.

3. $Ns (.23 * 12,400 * .64) = Ns ([25 - 10] / .33) + 2,500$

$$Ns 1,825.28 = Ns 45.45 + 2,500$$

$$Ns 1,825.28 - Ns 45.45 = Ns 45.45 - Ns 45.45 + 2,500$$

$$Ns 1,779.83 = 2,500 / 1,779.83$$

$$Ns = 1.40$$

The hiring of lead hands would have to drop to 1.4 hires per year before it no longer pays to implement the programe

4. $U = 250 * .55 * 12,400 * .64 = 100,000$

$$U = 1,091,200 - 100,000$$

$$U = +\$991,200$$

$$\text{Productivity gain} = 991,200 - 675,461 = 315,793$$

Junk is beautiful will experience a 315,793 dollar gain in productivity using the management firm's selection procedure

5. $250 / .33 = 757.60 \text{ applicants} + 350 = 1,107.60$

$$250 / 1,107.60 = .23$$

$$U = 250 * .23 * 12,400 * .90 - 250 * ([25 - 10] / .23) + 7,500$$

$$U = 641,700 - 23,804.35$$

$$U = +\$617,895.65$$

Junk is beautiful should spend the additional money on recruitment as it is worthwhile because it has a positive utility. Thee first equation was compared to the random selection method which is not realistic.

Part B

1. $U = 50 * .45 * 9,600 * 1.5 - 50 * (3,000 / .2)$

$$U = 324,000 - 750,000$$

$$U = -\$426,000$$

Junk is beautiful will experience a \$426,000 dollar loss if they use this method.

2. $U = (50 * 5) * .45 * 9,600 * 1.5 - (50 * [3,000 / .2])$

$$U = 1,620,000 - 750,000$$

$$U = +\$870,000$$

Junk is beautiful will experience a 870,000 dollar gain in productivity over 5 years using the implementation of the assessment centre

3. $T = C / B$

$$T = 750,000 / 324,000$$

$$T = 2.3$$

It will take 2.3 years to break even on assessment centre investment for the 50 employees.