

Model Thinking

Scott E Page

Public Project

Person 1: \$40

Person 2: \$50

Person 3: \$20

Cost: \$80

\$110

Hidden Information

Pivot Mechanism

Idea: Pay the minimal amount you'd have to contribute for the project to be viable.

\$60 \$70
\$20 \$10

Clarke-Groves-Vickery Pivot Mechanism:

Each person claims value:
 V_1, V_2, V_3

If $V_1 + V_2 + V_3 > \text{Cost}$

Do the project

Person 1 pays 0

~~Max~~ $\{\text{Cost} - V_2 - V_3, 0\}$

Person 1: \$40

Person 2: \$50

Person 3: ~~\$20~~

Cost: \$80

$$60 - 70 = \$10$$

\$110

Cost = \$80, Value = \$40

<u>Sum of Others</u>	<u>Claimed Value</u>	<u>Pay</u>	<u>Net</u>
30	40		
40	40	40	0
45	40	35	5
90	40	0	40

Cost = \$80, Value = \$40

Sum of <u>Others</u>	Claimed <u>Value</u>	<u>Pay</u>	<u>Net</u>
30	30	0	
40	30	0	
45	30		
90	30	0	40

\$75

Cost = \$80, Value = \$40

<u>Sum of Others</u>	<u>Claimed Value</u>	<u>Pay</u>	<u>Net</u>
30	50	50	-10
40	50	40	0
45	50	35	5
90	50	0	40

Incentive Compatible:

Each person has an
incentive to reveal her
true value.

Person 1: \$30

Person 2: \$30

Person 3: \$30

Cost: \$90

Revenue:

P1 30
P2 30
P3 30

60
90

Person 1: \$40

Person 2: \$50

Person 3: \$20

Cost: \$80

Revenue:

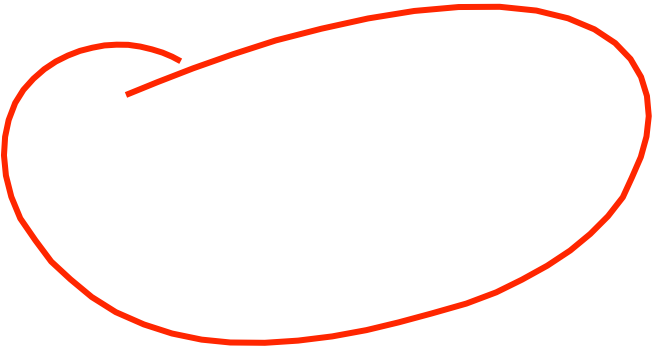
$\$30$
P1 \$10
P2 \$20
P3 0

Efficient ✓

Always Join ✓

Incentive Compatible ✓

Balanced ✓



Impossible!

Hidden Action

Hidden Information

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