Political economy

Politics

Political Economy Nash equilibrium In the first game, player s best response is in UL where he gets 3 pay offs. This is his best response since3> 2. At the same instance, player B has his best response of 4 payoffs (4> 3 and 3> 2). In the second game. At the same point (UL), both players have their best responses. For player 1, 3 payoffs (3> 2) while for player 2, 4 payoffs (4> 0). Nash equilibrium exists when player 1’s best response is the same as that of player 2. At (UL), both players have their best responses.

2. Condorcet winner and loser

Following these election results, candidate A is the Condorcet winner. This is because in the two instances that A is the preferred candidate (ABC and ACB), the head-to-head results show that 42% of the voters prefer the candidate. This is the highest of the three.

The Condorcet loser in the elections is candidate C. The results indicates that his percentage preference in orderings (CAB and CBA) are 25% (24% +1%). This is the lowest since that of candidate B is 33%.

3.

a. The game:

i= 1, 2

si= “ contributes to the public” or “ does not contribute”

The two possible strategies for each players are C and NC, in two different occasions A and B.

The payoffs for player 1, gives the utility for each combination of his own choice and that of the opponent. The possible pairs of combinations are (C, A) , (C, B) , (NC, A) and (NC, B).

For player 1, suppose the payoff functions are:

(C, A) = 1

(C, B) = 1

(NC, A)= 0

(NC, B).= 0

Those of player 2 would then be;

C, A) = 1

(C, B) = 1

(NC, A)= 0

(NC, B).= 0

Represented as:-

Player1/Player2

A

B

C

1, 1

1, 1

NC

0, 0

0, 0

b. Nash equilibrium in pure strategies.

In pure strategies, there is a complete definition of what choices the players will make. In this game, both (A, B) and (C, NC) are Nash equilibria. At point A, both players get 1 each by playing C, and 0 by playing NC. The same case happens at point B. in pure strategies, the Nash equilibrium is when both players have their best responses in the game.

4. Electoralsystems

a. In a plurality formula the candidates would get their votes as A (15000); B

(15500); C (14500); and D (5000). This is the sum of all the votes where each of the candidates is preferred over the rest. Candidate B would be favoured by the system and win with 15, 500 votes. As shown by the figures, candidate A would be the runner-up with 15, 000 votes.

b. Runoff system.

Total votes cast in the election are 50000. Therefore, none of the candidate makes it 40% of the votes (20, 000). In a runoff, candidates A and B will be considered. Dropping candidate C would give 3500 votes to A, and 2500 to B as the second ranked.

Dropping candidate D will then give 1500 votes to A, and none to B in the same way.

The system will therefore favour candidate A, who will be the winner with 15000+3500+ 1500 votes. A total of 20, 000 votes. Candidate B will be the loser and will get;

15500+ 2500= 18, 000 votes.

References

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