

Coordinating Activities: How Hard Is It?

An interesting area of study has arisen out of the question, “Can firms coordinate their activities?” Russell W. Cooper and his associates recently published the results of several experiments that address this topic. In the experiments, volunteers participated in market situations where they had a chance to earn substantial amounts of money. The choices made by each participant along with the other participants in their group determined their earnings. In these coordination experiments, two or more Nash equilibria existed. The experiments were designed to test whether people choose the dominant (“best”) equilibrium—the Nash equilibrium that has the highest payoff.

Cooper et al. conducted experiments with a payoff matrix like the one in Table 10-5. There are two pairs of Nash equilibrium strategies in this game: (1, 1) and (2, 2). Participants generally would prefer to find themselves at equilibrium (2, 2), since it has the highest level of earnings of the two Nash equilibria. However, out of 110 opportunities, participants chose the Nash equilibrium (1, 1) 83 times, the Nash equilibrium (2, 2) 26 times, and the nonequilibrium cell

(1, 3) once. The reason the Nash equilibrium with the higher payoff was selected so infrequently is that participants apparently placed a high probability that their opponent would choose the “cooperative strategy” of 3, which would lead to a payoff of 1,000 if they chose 1.

TABLE 10-5 A Coordination Game

		Player B		
		Strategy	1	2
Player A	1	350, 350	350, 250	1000, 0
	2	250, 350	550, 550	0, 0
	3	0, 1000	0, 0	600, 600

Source: Russell W. Cooper, Douglas V. DeJong, Robert Forsythe, and T. W. Ross, “Selection Criteria in Coordination Games: Some Experimental Results,” *American Economic Review* 80 (March 1990), pp. 218–33.