Incentives, Learning and Processing of Information in a Market Environment: An Examination of the Base-Rate Fallacy

Rong Ruey Duh and Shyam Sunder

There are at least two traditions in analyzing how people process information. Psychologists start with the premise that the human capacity to store and process information is finite. Cognitive limitations lead people to use heuristics or rules of thumb to make decisions. Heuristics may serve as efficient decision tools, but they sometimes lead to decisions which deviate from the theoretical optimum defined for a world without cognitive limitations [Nisbett and Ross, 1980]. Several empirical studies support this proposition [e.g., Kahneman and Tversky, 1972, 1973; Tversky and Kahneman, 1974, 1980; Bar-Hillel, 1980].

Economists, on the other hand, focus their attention on motivations or incentives of people, both pecuniary and nonpecuniary. Individuals are postulated to be driven by incentives to achieve the optimum solution within the constraints of their environment. Cognitive constraints that receive so much attention from the psychologists are often omitted from economic analysis. Psychologists, in turn, tend to pay less attention to incentives.

Besides selective attention to incentives and cognitive limits, there is a second difference between the economic