

WHAT COPS N' ROBBERS CAN TELL US ABOUT MARKET HEGEMONIZATION?

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Cops N' Robbers is a popular game, which also plays a vital role in graph theory, where a policeman pursues the criminal. The game is cop-win if cop is able to catch the robber within allowed set of moves, and robber-win, if the robber is able to escape the law indefinitely. Recent advances in graph and game theory provide a toolbox to established whether given game, represented in a graph form, is cop-win or robber-win by scaling down the graph to a solvable form. In this novel approach, the researcher reinterprets the classic game setting, transforming the pursuit-evasion scenario into a strategic competition between a dominant entity, portrayed as the cop, aspiring to establish monopoly in a given market, and a smaller competitor (or rather an aggregation of number of smaller entities), represented as the robber, seeking to persevere, therefore maintaining market diversity. An allowable set of moves is then understood as possible competitive strategies that both players are able to choose. By utilizing the before mentioned tools, one can then determine whether a researched market is likely to be hegemonized by an aspiring monopolist and, if so, approximate the timeframe and counter-strategies. A cop number of such graph can be reinterpreted as minimal number of large players that need to cooperate in order to take over the market.

References

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