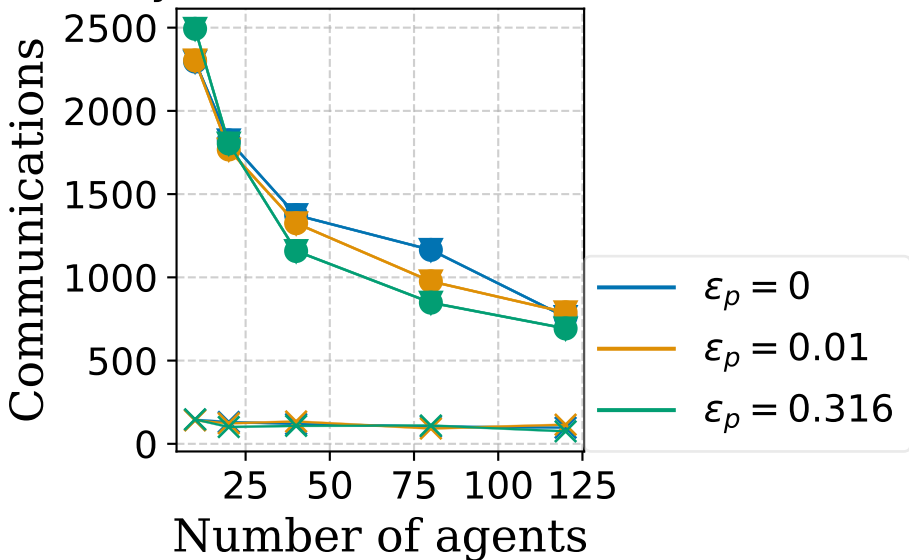**Synthetic environment**

Number of communication (lower is better) as a function of the number of agents for different hetereogenity levels: crosses represent Fed-UCBVI, circles represent FedQ-Bernstein and triangles represent FedQ-Advantage.