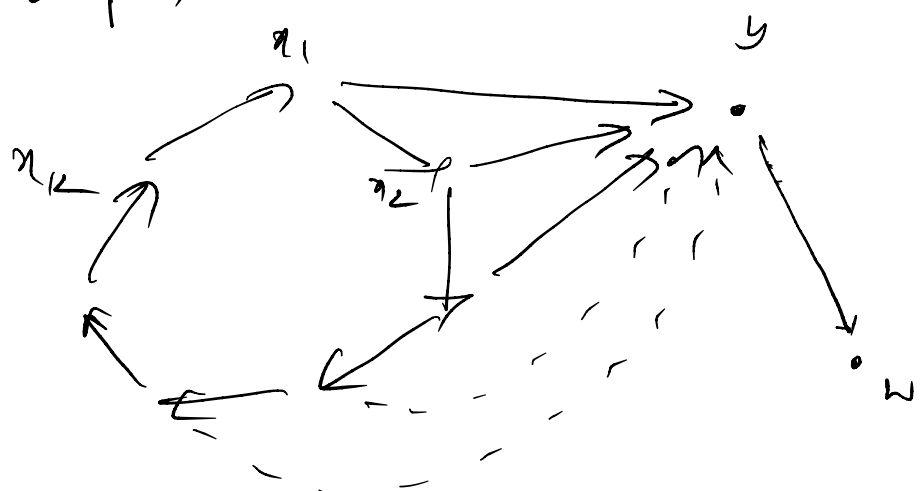
• Thm: A tournament has a H. cycle iff the tournament is strongly connected;

$\Longrightarrow$ Trivial

$\Longleftarrow$ Take the longest cycle in the graph;



$$Z = \{ v \in V \setminus C \mid v_i \to v \}.$$