

Fact 3.2. *If a blockchain protocol $(\Pi, \text{extract})$ satisfies $(T_0(\cdot), \delta)$ -fairness in Γ environments, then it satisfies (T_0, μ) -chain quality, where $\mu(\kappa, n, \rho, \Delta) = (1 - \delta)(1 - \rho) \geq 1 - (1 + \delta)\rho$ when $\rho \leq \frac{1}{2}$.*