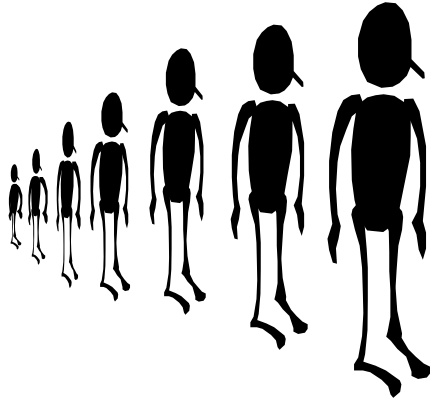# Equity vs Efficiency

Game Rules

❖ **Each person receives a small piece of paper.**

❖ **Write down either 1 or 5 on the paper.**

❖ **You will receive candies equal to the number you have written down only if 4 or less than 4 members of the class have written down 5.**

❖ **If there are more than 4 students have written down 5, the entire class will receive 0 candies.**

•Distribute a small piece of paper to each student.

•You can receive candies equal to the number you have written down only if four or less than four members of the class have written down 5. If there are more than four students have written down 5, the entire class will receive zero candies.

Game Rules

❖ There are 15 seconds for you to write down a number on the paper.

❖ No communication between students.

• I will give you 15 seconds to write down a number on the paper.

• You can't communicate with others.

Start writing number!

Time's up!

•After15 seconds, collect all the papers and count how many students have written down 5.

•Invariably, more than 4 students write down 5, so all students end up with 0 candies.

•There are two more possible situations:

> • 4 less than 4 students write down 5, so only those students have more candies than the others;

> •All students write down 1, so everyone has 1 candy.

Discussion

❖ **Can equity be achieved in this case?**

❖ **Is this condition Pareto efficient?**

❖ **What is the Pareto condition in this game?**

❖ **Can the Pareto efficient condition achieve equality in this game?**

•Can equality be achieved in this case?

•Is this condition Pareto efficient? (Introduce Pareto efficiency.)

•What is the Pareto efficient condition in this game?

> •It should be the situation where there are only 4 students writing down 5 on the papers, so the total candies the whole class have will be maximized.

•In this game, can the Pareto efficient condition achieve equality?

> •No. Under the Pareto efficient condition, 4 students have 5 candies and all the others have only 1. Tell students that Pareto efficiency does not ensure equality.

> •Sometimes, if we choose Pareto efficiency, we have to forgo equality, vice versa.

> •Also, let students know that equality in the distribution of goods and services may lead to Pareto inefficiency in the real world.

Definitions

❖ **Equity**

- it refers to economic justice or fairness.

❖ **Efficiency**

- it refers to efficiency in allocation; it is equated with the Pareto condition.

Definitions

❖ **Pareto-efficiency**
   - it exits in the condition in which it is no longer possible to reallocate the use of resources so that one individual will gain without loss to another.

❖ **Pareto-inefficiency**
   - it exits in the condition in which it is possible to reallocate the use of resources so that one individual will gain without loss to another.