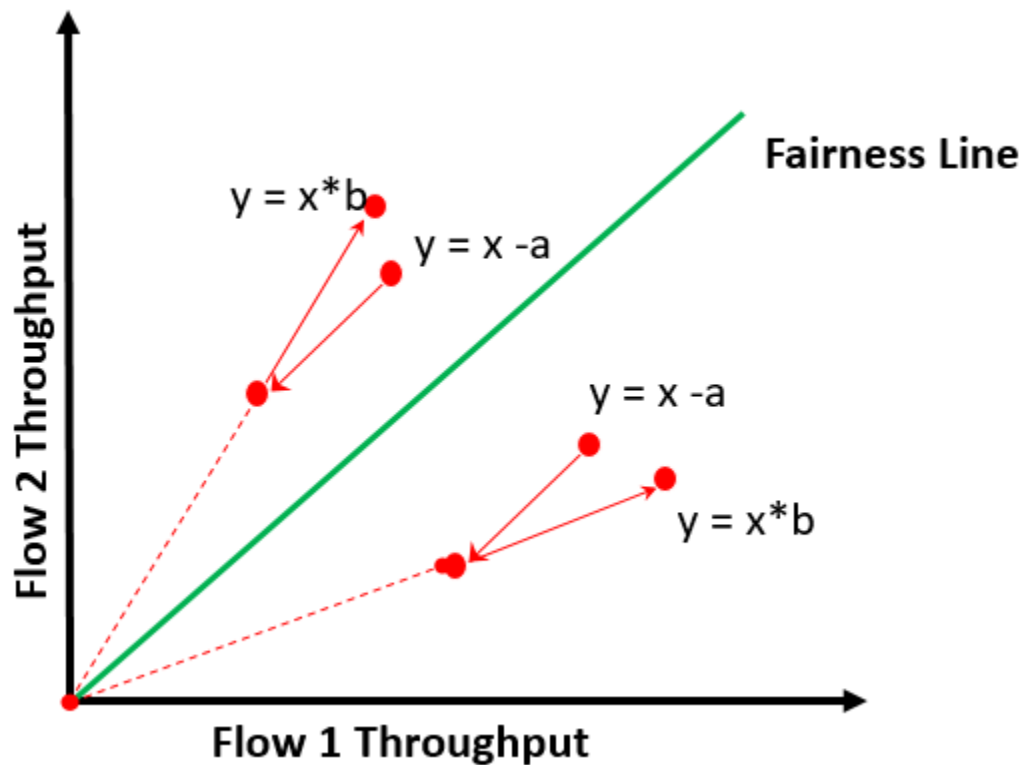


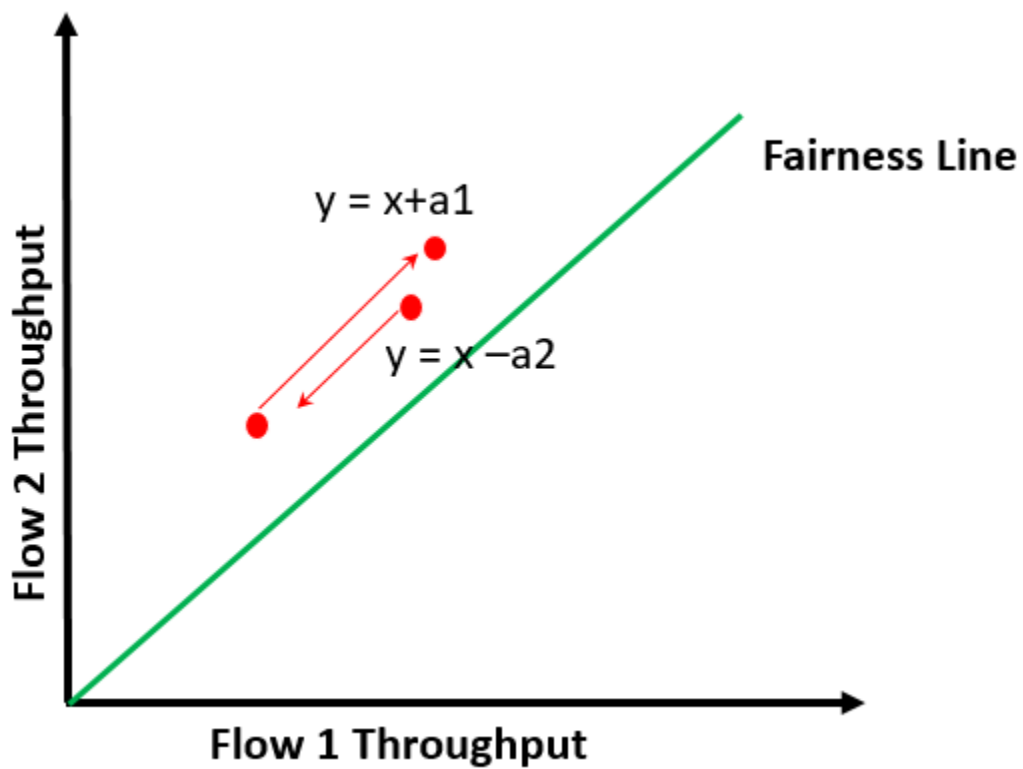
## Multiplicative Increase Additive Decrease

- Increase:  $x * b_i$
- Decrease:  $x - a_D$
- Does not converge to fairness
- This approach is not fair since at any point the points move away from the fairness line of any value of  $x$  and hence they will not converge on the fairness line making them biased towards one flow or the other.



## Additive Increase Additive Decrease

- Increase:  $x + a_i$
- Decrease:  $x - a_D$
- Does not converge to fairness
- This approach is not fair as the lines always remain parallel to fairness line of  $y = mx$  and hence they will never converge on to the fairness line.



## Multiplicative Increase Multiplicative Decrease

- Increase:  $x \cdot b_1$
- Decrease:  $x \cdot b_2$
- Does not converge to fairness
- This approach shows that the multiplicative increase and multiplicative decrease always makes the flow move away from the fairness line making it biased towards the flow on whose side it starts.

