

There exist two **fundamental theorems of welfare economics**. The first states that any competitive equilibrium leads to an efficient allocation of resources. The second states the converse, that any efficient allocation can be sustainable by a competitive equilibrium. Despite the apparent symmetry of the two theorems, in fact the first theorem is much more general than the second, requiring far weaker assumptions.

The first theorem appears to make a case for non-intervention: let the markets do the work and the outcome will be desirable. The theorem is often taken to be an analytical confirmation of Adam Smith's "invisible hand" hypothesis, namely that competitive markets tend toward the efficient allocation of resources. However, the economic concept of efficiency is not the only thing that a society might care about. In particular, the theorem says nothing about the distributional equity of the outcome.

The second theorem states that out of all possible efficient outcomes (of which there may be many) one can achieve any particular efficient outcome by enacting a lump-sum wealth redistribution and then letting the market take over. This appears to make the case that intervention has a legitimate place in policy -- redistributions can allow us to select from among all efficient outcomes for one that has other desired features, such as distributional equity. However, it is unclear how any real-world government might enact such redistributions. Lump-sum transfers are difficult to enforce and virtually never used, and proportional taxes may have large distortionary effects. Additionally, the government would need to have perfect knowledge of consumers' preferences and firms' production functions in order to choose the transfers correctly.