

# **Destruction in a Robinson Crusoe Economy**

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It should be obvious that physical destruction—whether caused by war, a terrorist attack or a natural disaster—is always a bad thing. However, one occasionally is exposed to the “broken window” fallacy. This is the **mistaken** idea that somehow destruction is “good for the economy.” This wrong idea comes partly from confusing a flow of economic activity, such as investment or production, with the level of social welfare (i.e. the well being of the community).

## ***Robinson Crusoe Economy***

Consider a simple model of the macro-economy that consists of Robinson Crusoe on an island. Robinson gets ‘utility’ or satisfaction from three things: consumption of food (e.g. fish and coconuts) leisure and his stock of housing. In other words, three things can make Robinson more satisfied: more food, more leisure and more housing.

What is real GDP in this simple economy? There is no government or foreign sector so output is just consumption plus investment:  $Y = C + I$ . Consumption is the number of fish and coconuts that Robinson eats, and investment is the amount of new housing and tools (e.g. fishing nets, fishing boats, ladders to reach coconuts) that he makes. Real GDP is a measure of the flow of production, not a direct measure of well being or utility. Policy wonks focus almost exclusively on statistics like real GDP, and forget about utility. Economists—or at least good economist—never forget that what ultimately matters is utility.

## ***Physical Destruction***

Now suppose a tropical storm or hurricane destroys part of Robinson’s house and some of his fishing equipment. It should be obvious that Robinson is worse off because of this storm. So what do people mean when they say that this is, ‘good for the economy?’ They basically mean that investment and real GDP will increase. First, this is not necessarily true. Secondly—and more importantly—even if it does increase the GDP statistic, it lowers utility. Physical destruction makes us worse off, regardless of what happens to real GDP.

Before the storm Robinson divided his time between working and leisure. His work time was further divided between producing consumption goods (fish and coconuts) and producing investment goods (making additions to his house and making tools). Suppose that before the storm most of his labor went to producing food. After the storm it’s reasonable to assume that

he reallocates some of his labor from consumption goods to investment goods because he wants to make rebuilding his house and replenishing his tools a priority.

If the level of destruction was not too great, then total investment will probably increase. (Keep in mind though, that it is possible that the storm destroyed so many of his tools that investment actually goes down.) So if investment increases does real GDP also increase? Not necessarily. Remember that consumption and investment are rivals: more of one means less of another. So investment increases but consumption decreases. If the drop in consumption is larger than the bump in investment, total output decreases. Otherwise, it increases. It largely depends on how much Robinson decides to work after the storm.<sup>1</sup> If he works more, than he enjoys less leisure which lowers his utility. If he doesn't work more, consumption decreases further which also lowers his utility. On top of that, his stock of housing is diminished which also contributes to a decrease in utility. Either way, his utility always decreases. Of course we are completely ignoring the injury and death caused by a destructive event.

Does investment increase? Possibly. Does real GDP increase? Maybe; maybe not. Is Robinson Crusoe worse off? Yes, always. Likewise, destruction is always bad for the economy.

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<sup>1</sup> Think of a PPF that shows the combinations of consumption and investment that can be produced by Robinson in a week. The storm shifts the PPF in towards the origin. However, he can partially offset this by working more, which will shift the PPF out away from the origin.