

The determination theory of supply and demand

Chuanli Chen/陈传礼*

JEL: E1 E2

*Contact Information:

chuanli@usc.edu

Home phone: 6265128818

Work Phone: 8184418167

Introduction:

Whether the supply creates its own demand or the demand determines the supply has been a debate for one hundred years. In this paper, I will write my own perspective. I will analyze how the demand and supply interact with each other.

1. Background

In 19th century, a French economist Say had a claim, he thought that the supply would create its own demand, so there would never be short of demand.

In the book *general theory of employment, interest and money*, Keynes disagreed with Say's conclusion and put forward another point of view, that was demand determined the supply[1]. Whether supply determines the demand or demand determines the supply has been quarreled for nearly a century. I will write down my own thoughts here in this paper.

2. The relationship between demand and supply

Demand can create supply

It is obvious that demand can create supply, when there is demand, when there is profit for suppliers, suppliers will produce this kind of product. We can find many cases here, like people have demand for light, the light bulb is produced and sold.

Supply can determine demand

We could also find that the supply can determine the demand, like in the Apple inc., when Steven designed the iPhone 4s, after which was published, it became popular all over the world. That could be the best example for the supplying creating the demand.

So how the relationship between the supply and demand should be? We all know that when a transaction happens, the transaction volume is the result of interaction between both the supply quantity and demand quantity. So we can refer that the demand and supply can determine each other.

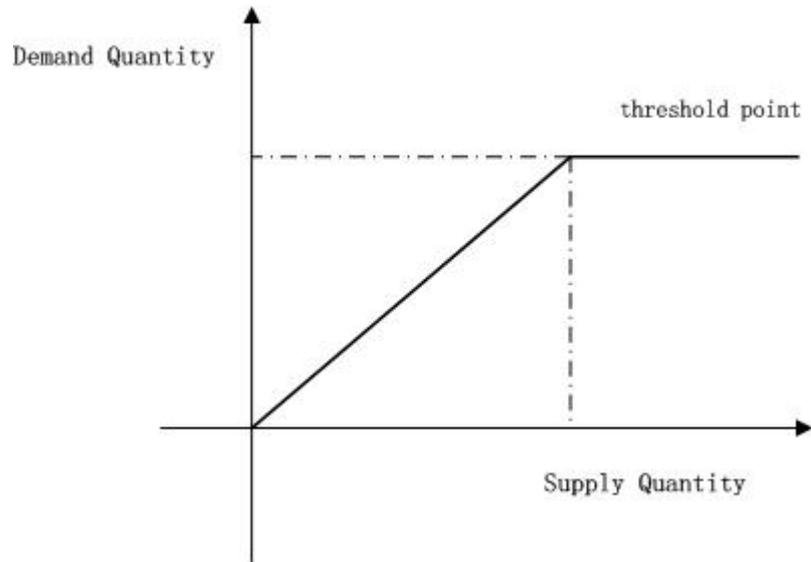
From my point of view, I think that the supply and demand can determine each other, lacking of demand, the commodities that are produced could not be sold, lacking of the supply, the demand could not be filled. So it should be like this:

if the supply volume is smaller than the demand volume, the supply will determine the demand; if the demand volume is smaller than the supply volume, the demand will determine the supply.

3. Graph toward the relationship between supply and demand

In my following discussion, we assume that no other factor will influence the demand quantity d , so it will remain the same during my discussion.

Given a demand quantity d ($d > 0$), we can have the following graph:

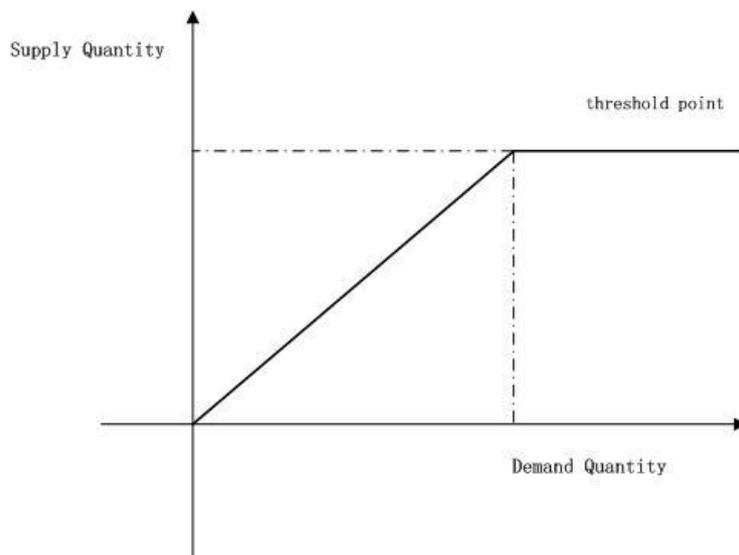


When there is demand d , we increase the supply quantity starting from zero. As the supply volume is the lower value, it will determine the transaction volume. The supply increases, transaction quantity will also increase. After the supply quantity surpass the value d , the demand will become the lower value, it will determine the transaction volume. So the transaction volume will remain to be d even if the supply quantity continues increasing.

Here part 1, before the supply quantity reaches the d , the supply will determine the demand. After the supply quantity exceeds d , the demand will determine the supply.

In my following discussion, we assume that no other factor will influence the supply quantity s .

Given a supply quantity s ($s > 0$), we can have the following graph:



When there is supply s , we increase the demand quantity starting from zero. As the demand volume is the lower value, it will determine the transaction volume. The demand increases, the transaction quantity will also increase. After the demand

quantity surpass the value s , the supply will become the lower value, it will determine the transaction volume. So the transaction volume will remain to be s even if the demand quantity continues increasing.

Here part 1, before the demand quantity reaches the d , the demand will determine the supply. After the demand quantity exceeds d , the supply will determine the demand.

4. Conclusion

Between supply and demand, they are depended on each other, they affect each other, which one is smaller, it will determine the other one.

Then we can understand why Say and Keynes would have different conclusion, it is because at the period of Say's life, the supply is the lower value, so the supply creates its own demand; but at Keynes's lifetime, production ability has been improved a lot then the demand became the lower value, then the demand could determine the supply.

[1] The general theory of employment, interest and money Keynes