A completely new economic theory

Money whirling theory

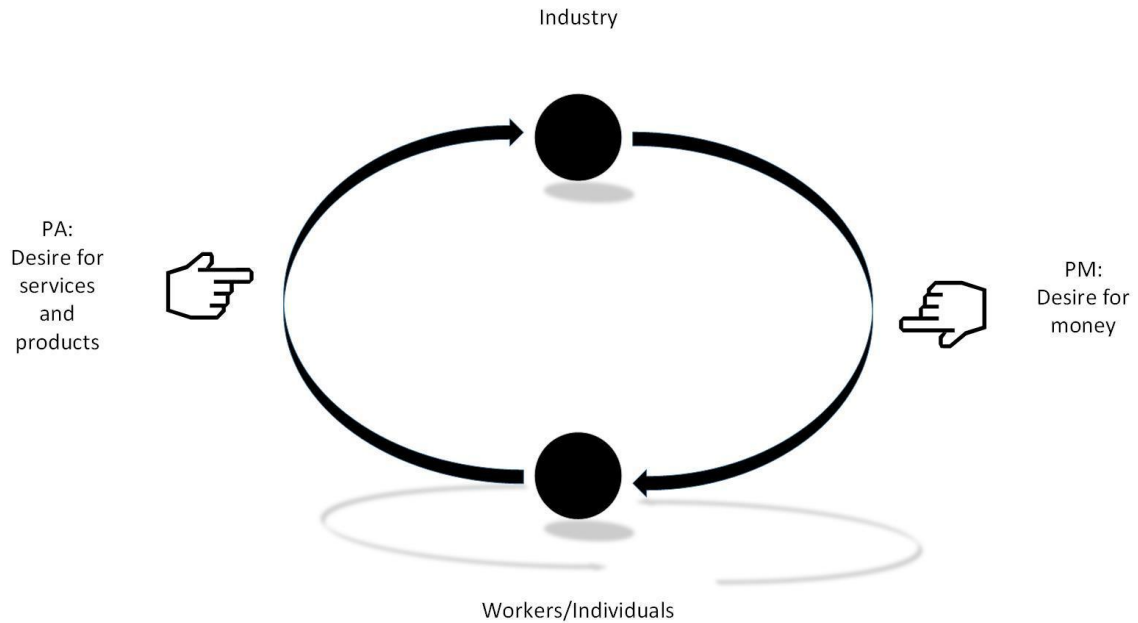**Author**

Chuanli Chen

Background

Currently Oracle employee

Master of Science in Data Informatics in USC

Chapter I

Why money is whirling in the market?

Invisible hand	≠	Price mechanism
Invisible hand	=	desire for money (Right hand) + desire for consumption (Left hand)

Industry

PA:
Desire for
services
and
products

PM:
Desire for
money

Workers/Individuals

Money is doing whirling movement in the market under the force of two invisible hands

Chapter II Relationship between demand and supply

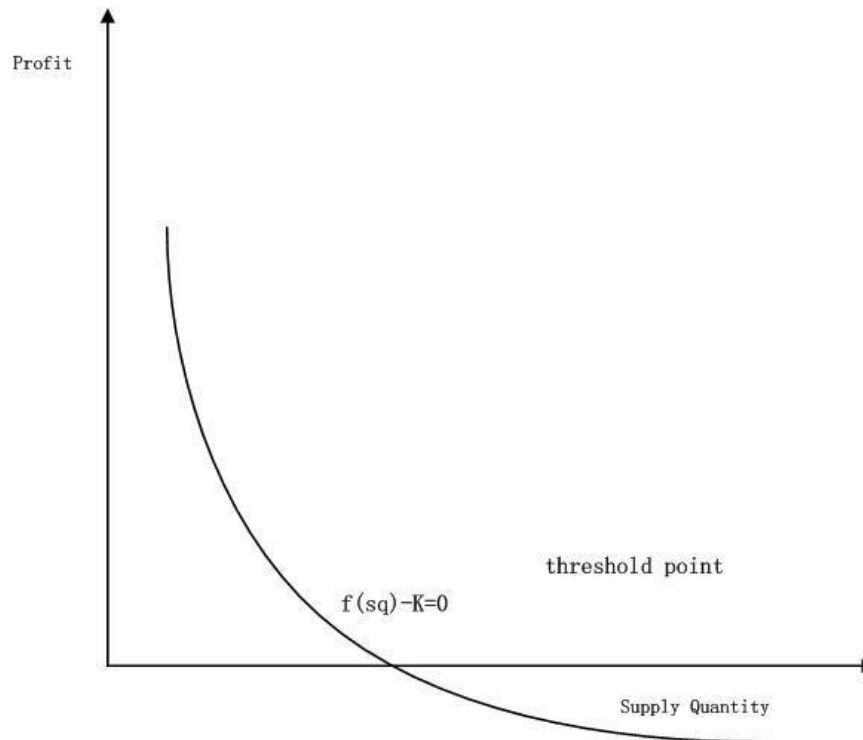| Say's Law: Supply determines demand, Correct?	Keynes' Law: Demand determines Supply Correct?
What money whirling theory thinks? Between supply and demand in the market, they are depended on each other, they affect each other. The one which is smaller will determine the other one. To represent as math, transaction volume=Min(supply quantity, demand quantity) $$TV=Min(S, D)$$	

Even if Say's law or Keynes' law is correct:

Say's Law: Supply determines demand	Keynes' Law: Demand determines Supply
S = D	S = D
Supply curve and Demand curve should be the same curve.	
partial equilibrium price theory is wrong	

Chapter III Price theory

profit p=f(sq)-K=g(sq)

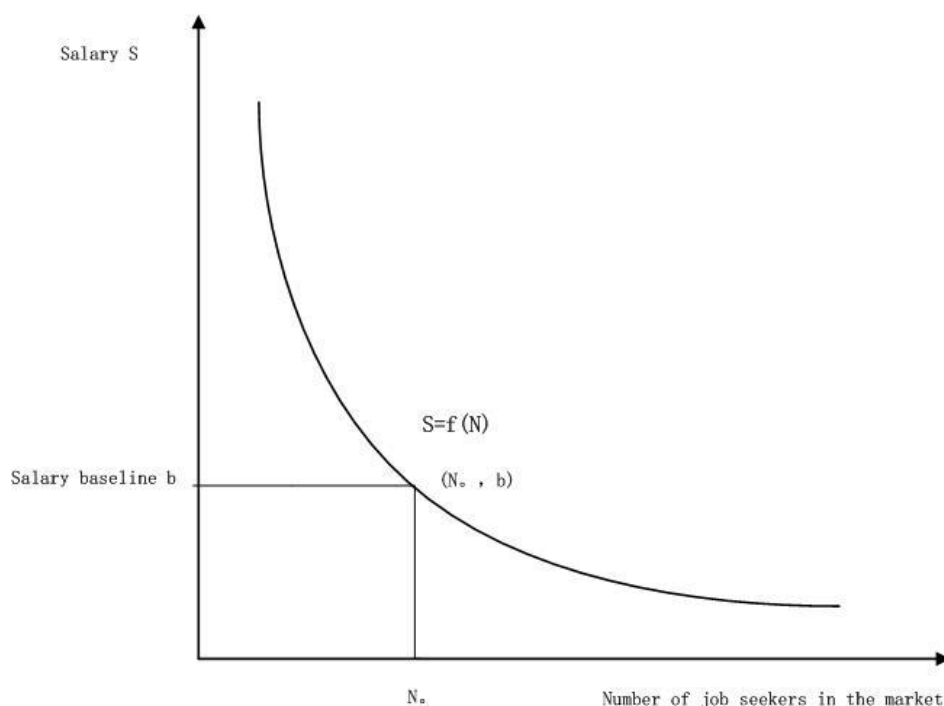f(sq) is the price-supply quantity curve and K is the average cost for one commdity

Basic assumption: If we increase the supply quantity, the price will go down because more competitors, if we decrease the supply quantity, the price will go up because less competitors.

1)　The initial supply quantity is 0. We can conclude that this commodity is very profitable, so the sellers will enlarge the supply quantity of this commodity, meaning the supply quantity will increase.
2)　The supply quantity is increasing. During the process, the point moves right along this curve, the profit for one unit of this commodity is decreasing. The price of this commodity is decreasing.
3)　After the supply quantity is above $f^{-1}(K)$, we have that the price is very low, the profit of this commodity is negative. Then sellers who produce this commodity will lose money. So sellers will reduce production of this commodity or some sellers will leave this industry. The supply quantity will go down.
4)　Then the supply quantity will decrease to some value below $f^{-1}(K)$.
5)　When the quantity decreases to some very low value, the profit for each commodity becomes very high again. Producing this commodity is very profitable. Then sellers will enlarge the supply quantity of this commodity.
6)　Price is fluactuated around the curve.

Why price rigidity?

It is easy for merchants to produce less to get higher profit, but it is difficult for merchants to produce more to lower the price or profit. So it is easy for the price to go up and difficult to go down. That is the reason for the price rigidity.
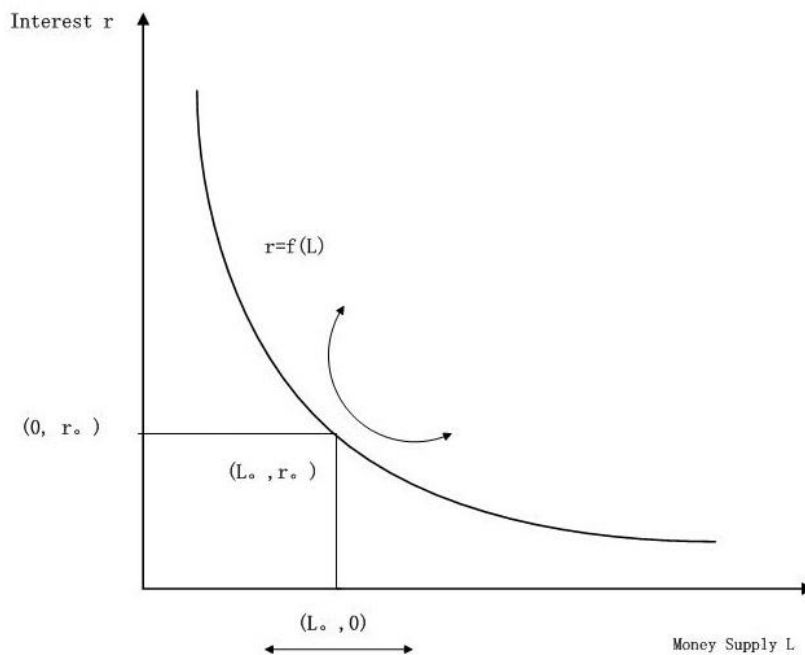
Chapter IV Salary theory

The chart shows: Salary S (vertical axis), Number of job seekers in the market (horizontal axis), with curve $S=f(N)$, Salary baseline b, and point (N_0, b) at N_0.

1) The initial supply quantity is 0, which means there is no job seeker in this industry. We could conclude that this position will offer very high salary to attract more people come here to get this job, then many job seekers will devote themselves into this industry, so the number of job seekers in this industry will increase, the competition becomes more and more severe.

2) The number of job seekers is increasing, during the process, the salary for each of this kind of job position is decreasing. The salary is decreasing.

3) After the number of job seekers quantity is above N_0, we have that the average salary of this kind of job is below b, the salary is very low for job seekers to make a living or the salary doesn't meet job seekers' requirement. So job seekers will not seek this kind of job position. They will jump to other industries. The supply quantity will go down.

4) Then the number of job seekers will decrease to some low value below N_0.

5) When the quantity decreases to some very low value, the salary for each position is very high. This job offers high salary again. Then job seekers will devote themselves into this industry again.

Why salary rigidity?

This is because if the salary is too low, job seekers will leave this industry then the quantity supplied will become low then the salary will go up again. And the final phenomenon becomes that the salary is easily go up but difficult to go down.

Chapter V Interest theory

Interest r

r=f(L)

(0, r_0)
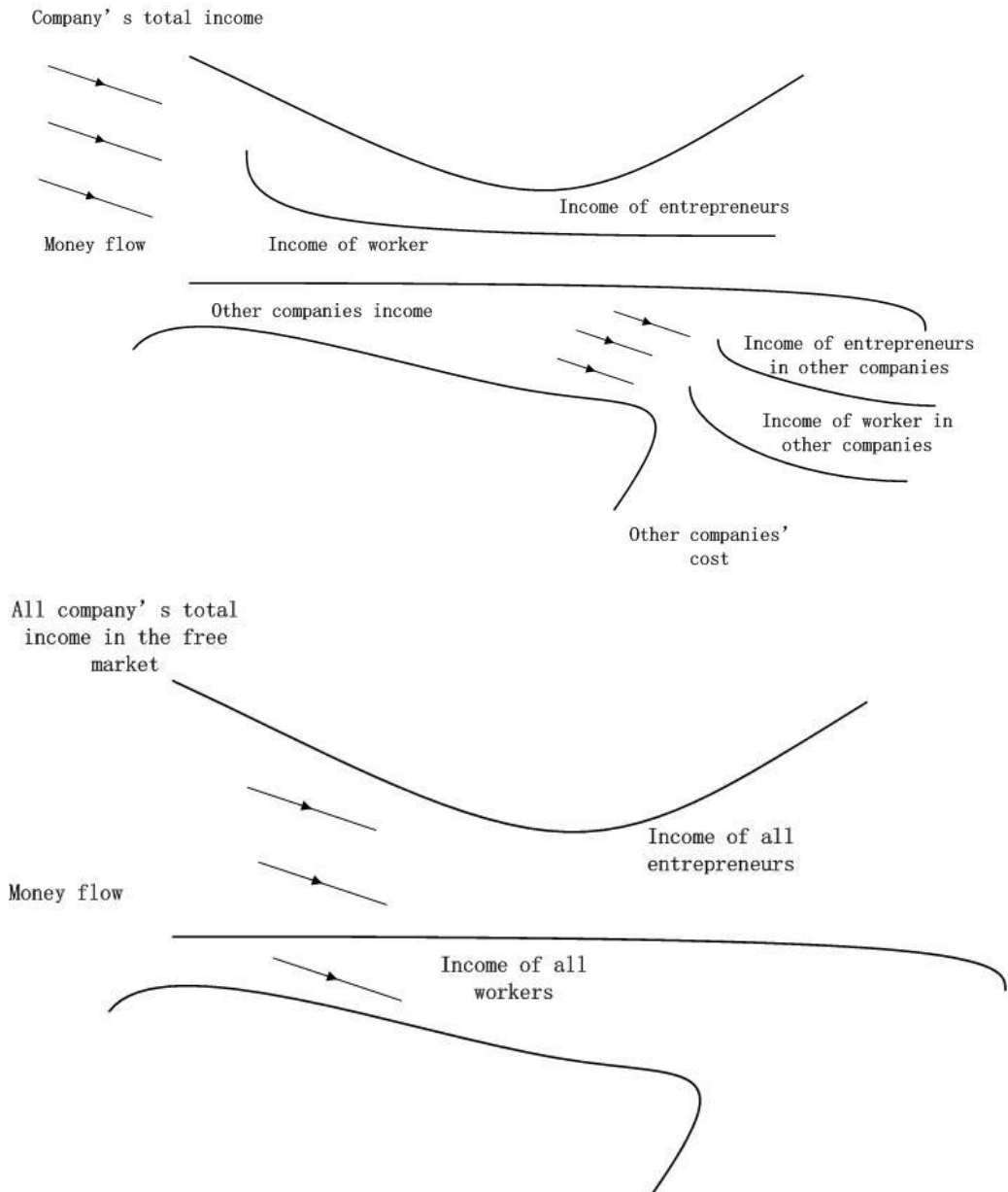
(L_0, r_0)

(L_0, 0)

Money Supply L

1)　The initial amount of money that could be loaned is 0. We could conclude that the money loan market has high interest rates. Then people who have extra money will devote themselves into this lending business, so the number of lenders in this market will increase, and the amount of money that could be borrowed will increase.
2)　The number of lenders is increasing while the amount of money that could be borrowed is also increasing, during the process, because the competition is becoming more and more fierce, the interest for money borrowing is decreasing.
3)　After the amount of money that could be lent in the market for one moment is above L_0, we have that the average interest r is below r_0, the interest is very low for lenders to get enough profit. So they will put their money in other usage. They will find other ways to make their money generate higher profit. The supply quantity of money loan will go down.
4)　Then the amount of money that could be lent in one moment will decrease to some low value below L_0.
5)　When the amount of money that could be borrowed decreases to some very low value, the interest will become high again. This business becomes attracting again. Then people who have extra money will devote themselves into this profitable market.

One important Conclusion (The whole process to get to this conclusion is inside the book):

Low interest -> More money is flowing inside the market

high interest -> Less money is flowing inside the market

Chapter VI Employment theory

Company's total income

Money flow

Income of worker

Income of entrepreneurs

Other companies income

Income of entrepreneurs
in other companies

Income of worker in
other companies

Other companies'
cost

All company's total
income in the free
market

Money flow

Income of all
entrepreneurs

Income of all
workers

$$N_{real}=TSW/ S_{average} =r*TS/ S_{average}$$

N_{real} is our estimate value for real employment quantity.

TS total salary will be divided into two parts, workers' total salaries and entrepreneurs' total salaries,

r is the ratio r=TSW/TS Total worker salary divide total salary

Chapter VII Times effect

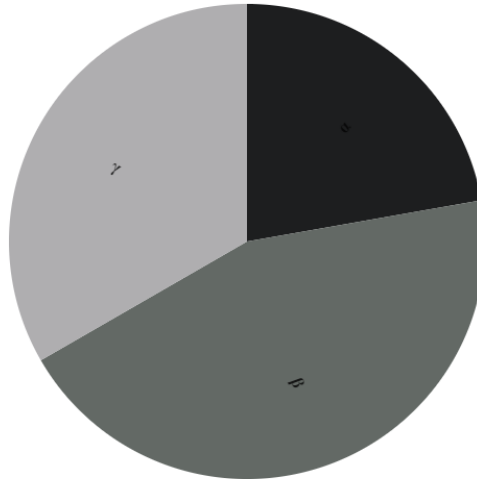## Times effect is introduced in the book <<Money whirling theory>>

Convential Multiplier effect	Times effect
Multiplier = 1/[1 － MPC] or 1/MPS Y = TC*1/(1-MPC)=TC*Multiplier	dY=m*dTC <=> Y = m*t*TC (TC is total consumption in unit time)

Conventinal Muplier effect	Times effect
No time duration considered	Including the time variable
Assume marginal propensity to consume to be 0.8, If a government spends $100 as investment to buy Jim's service, then the $100 is at Jim's hand, then the GDP is $100; after that, Jim spends money to buy food from restaurant, restaurant owner Katy gets the $80, and GDP is $180; Then Katy spends the money 64$ to buy clothes from a shopping mall, the clothes seller gets the $64, and the GDP increases to $244. During the process, we assume each person spends 0.8 amount of money he or she earns, we have multiplier to be 1/(1-0.8) = 5: GDP=100$*1/(1-0.8)=$500 (Here we don't how long it takes)	So if a government spends $100 as investment to buy Jim's service, then the $100 is at Jim's hand, then the GDP is $100; after that, Jim spends money to buy food from restaurant (Jim must spend all of the 100$ for some time, this is same for other people, assume he spends all at once), restaurant owner Katy gets the $100, and GDP is $200; Then Katy spends the money to buy clothes from a shopping mall, the clothes seller gets the $100, and the GDP increases to $300. During the process, we assume the time has passed 2 month, so we have the times effect is m which is 1.5 times/month, time t is 2 month, total consumption change at beginning here is +$100, so we can have the total GDP is like following: GDP=2month*1.5times/month*$100=$300 We could estimate 5 month of GDP GDP_{5month}=5month*1.5times/month*$100=750$

Chapter VIII Economic Fluctuation

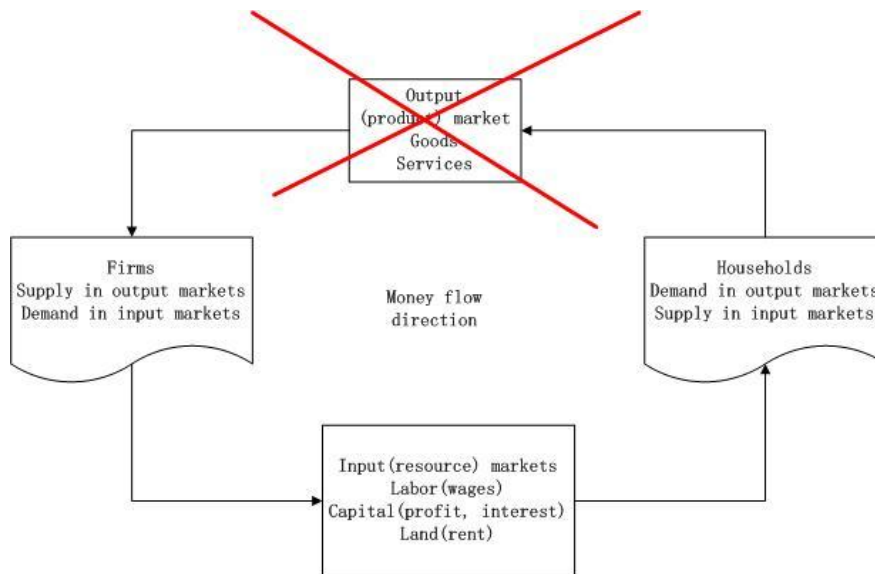| William Stanley Jevons	sunspot affects agricultural cycle
Schumpeter	innovation actions from entrepreneur
Keynes	Investment activity
Money whirling theory	Money distribution

there are many groups of people, α, β and γ…(alternatively α, β and γ could also be companies which spend money as their production costs).
α owns α% of total money, β owns β% of total money and γ owns γ% amount of total money α% + β% + γ% +... = 1
α will spend r*100% of all their money at hand (the rest will be saving), β will spend s*100% all their money and γ will spend o*100% all their money in unit time, we have: TC=α*r+β*s+γ*o…..
dGDP=(α*r*u+β*s*v+γ*o*w…..)*dt u, v and w are the consumption speed of α, β and γ r*u is the consumption habits of α, s*v is the consumption habit of β and o*w is the consumption habit of γ.
$$\text{GDP}=\frac{\int \alpha * r * u\,dt}{+}\frac{\int \beta * s * v\,dt}{+}\frac{\int \gamma * o * w\,dt}{…}$$ $$=\sum_i \frac{\int \alpha i * ri * ui\,dt}{,}$$ αi is the money volume of i, ri is the consuming ratio of i and ui is the consuming speed of i, i is one customer or organization in the market, i ranges from 1 to ∞, t is the time.

Chapter IX Economic crisis

The broken down of the money whirling flowing cycle causes the economic crisis

Why stagnation?
Why stagflation would happen? Or how inflation and unemployment happen at the same time is that: When the government uses government policy, it leads too much money in the market, so inflation occurs, P (average price) is increased. After taking the policy, because of the inflation, the price of commodities is extremely high, which impairs people's consuming ability, so T (Total trasaction volume) is decreased too much. So the Real Total Consumption will decrease. The income of the company will decrease, and there will be more unemployment. Finally, inflation and increase of unemployment happen at the same time. $$N_{real}=TSW/ S_{average} =r*TS/ S_{average} = r*P*T/S_{average}$$ P is the price and T is the total transaction volume in unit time