

6 Factor Market

Unit 2 : Labour & The Determination of Wage

- I Different forms of wages / contract
- II The supply curve of a labour
- III The determination of wage
- IV Wage differentials
- V Labour market with imperfect information

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I Different Forms of Wages / Contract

Piece Rate

- It is suitable to measure the standardized products with simple procedures in production. It lowers the monitoring costs on the workers incurred by the firm but it needs a higher degree of quality control and assessment on the products.
- In general, it can lower the possibility of shirking and helps to increase the number of outputs.

Time Rate Or Wage Contract

- It suits industries requiring team production & the provision of services like design & invention.
- It saves the pricing and measurement costs on output by the use of a wage rate - a proxy.
 However, shirking is more common with a high monitoring cost incurred by the firm.

Rental Contract

It can avoid the problem of shirking and maximizes the amount of income earned by the firm. The costs of maintenance and depreciation are usually high like the rent contract existed in the taxi industry in H.K.

Share Contract

- It is a device for the sharing of risk in production.
- The monitoring cost will be smaller than that of the piece-rate and rental contract; but the measurement cost is higher than that of wage contract.
- Examples are the stocks and shares given to directors and partners by a firm.

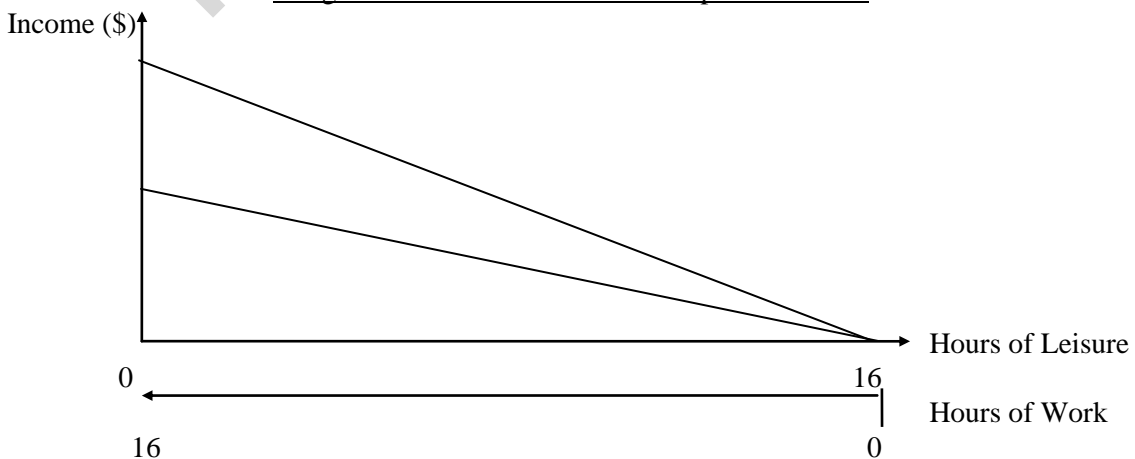
Tips Or Gratuity

- It provides incentive to the workers and may reduce the basic wage of them as the tips are treated as a part of their “ usual “ earning.
- It helps to reduce the information cost of assessing the performance of workers and lowers the monitoring cost because the consumers are indirectly monitoring their services.

II The Supply Curve of A Labour

Assume : Labour is choosing between work (i.e. income) and leisure (i.e. self enjoyment).
 It implies that both work and leisure provide utility to the labour in general.

Budget Line & The Indifference Map of A Labour



Given : The labour sleeps 8 hours a day and the initial wage rate is \$20 per hour.

The slope of the budget line gives the wage rate of the labour.

The Decomposition of The Wage Effect On The Working Hours Supplied By The Labour

The Substitution Effect

When a labour chooses more work, he had to sacrifice more leisure (hours) also, i.e. he is substituting between work and leisure. For each hour of leisure enjoyed, in other words, for each hour of work foregone, he gives up the wage rate of \$20 / hour. The wage rate becomes the “**price**” of leisure or the **opportunity cost** of an hour of leisure.

When the wage rate rises, he would substitute more leisure by work, i.e. less hours of leisure is “**purchased**” and more hours of work is chosen. Each hour of leisure becomes relatively more expensive than before.

Wage Rate (Price of leisure) ↑ ⇒ Less hours of leisure chosen or consumed.

The substitution effect between wage rate and leisure hours is always **negative** as a result.

The Income Effect

If hours of work and hours of leisure are both normal goods, i.e. their quantity (in terms of hours) demanded increases when (real) income increases ; a rise in wage rate would lead to a rise in real income of the labour. The income effect on leisure should be **positive** when leisure is a **normal** good.

Leisure : An Inferior Good

In general, the substitution effect between wage rate and leisure hours **reinforces** the income effect especially when the labour is at a relatively **low** wage rate, i.e. the substitution effect dominates over the income effect in this case.

Wage Rate ↑ ⇒ (Real) Income ↑ ⇒ Less hours of leisure chosen or consumed

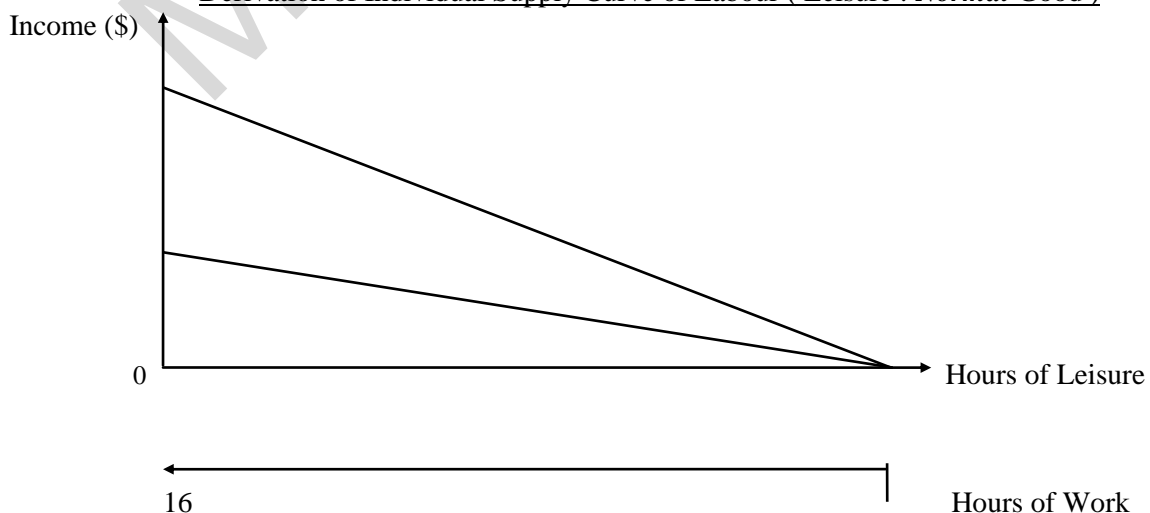
In other words, when the wage rate starts to rise at a low level, the stronger substitution effect will lead the labour to supply more hours of work. The supply curve of a labour is **upward-sloping** at the beginning.

Leisure : A Normal / Superior Good

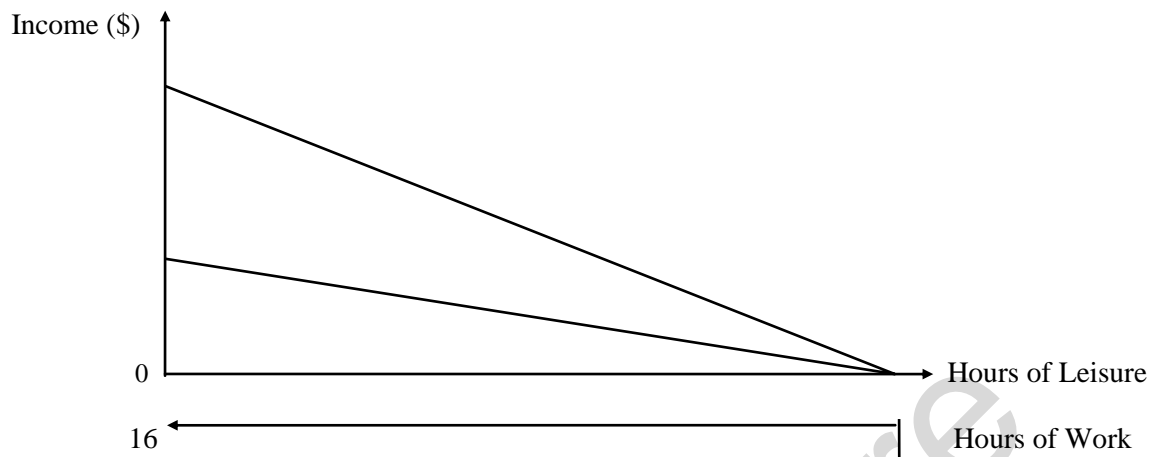
In general, the substitution effect between wage rate and leisure hours is **smaller** than the income effect especially when the labour is at a relatively **high** wage rate, i.e. the income effect outweighs the substitution effect in this case.

Wage Rate ↑ ⇒ (Real) Income ↑ ⇒ More hours of leisure chosen or consumed because income effect is more powerful.

Derivation of Individual Supply Curve of Labour (Leisure : **Normal** Good)



Derivation of Individual Supply Curve of Labour (Leisure : *Inferior* Good)



The Labour Supply Curve

In general, at relatively lower wage rates, work or wage income is important than leisure to a labour in order to gain a minimum level of living first.

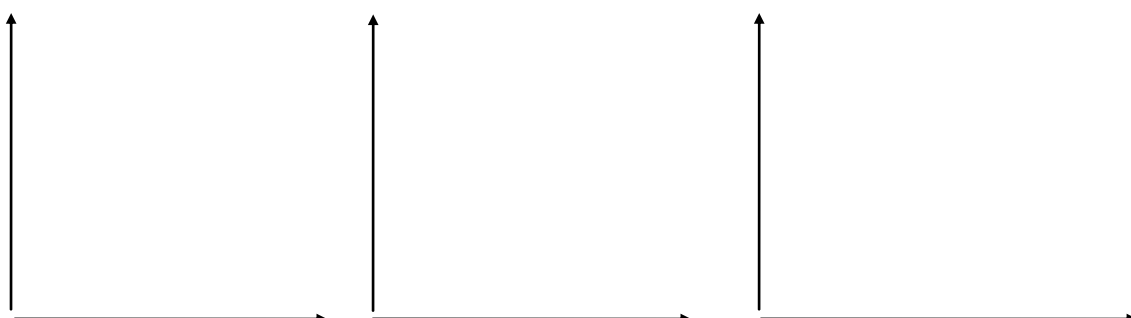
At relatively higher wage rates, a labour wants more leisure to enjoy and to spend his money earned. The income effect **overcomes** the substitution effect at this moment.

If a labour supply curve is drawn between wage rate (y-axis) and the working hours (x-axis), it slopes **upwards at first** but **bends backwards later** at a certain high level of wage rate.

The Labour Supply Curve At A Range of Wage Rates



Market Supply Curve Of Labour

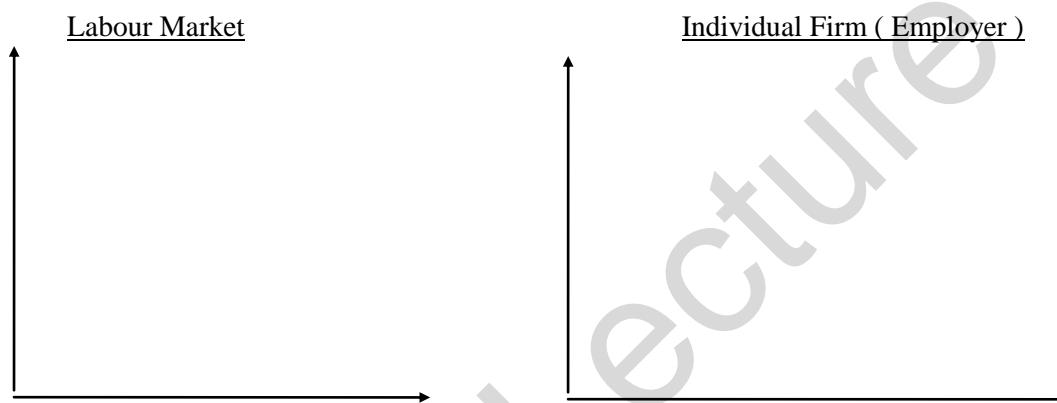


- Unlike the individual supply curve of labour, the market supply curve is not backward-bending because the backward-bending nature is offset by the upward-sloping portions of other individual supply curves.
- If the mobility of labour is high enough, a new entry of labour supply will compensate any decrease in the willingness to supply work at high wage rates, i.e. at high wage rates, the market supply curve of labour is still upward-sloping.

III The Determination of Wage Rate

In a price-taking factor (labour) market, the interaction of demand for and supply of factor (labour) jointly determines the equilibrium wage rate.

The Equilibrium Condition Of A Price-taking Market of Labour



IV Wage Differentials : Some Possible Reasons

- There are risk-adverters and risk-seekers. The former ones are usually salary-paid employees and the latter ones are the self-employed entrepreneur.
- There are various forms of compensation of non-monetary rewards affected by the working conditions, fringe benefits and allowances, background and prospects of the firm etc.
- There are also sexual consideration especially in Japan and Asian countries.

V Labour Market With Imperfect Information

In reality, imperfect information on the part of both employees and employers always exists. The information cost on the demand for and supply of labour to anyone could be great. A labour shortage as well as unemployment become usual in reality.

(More analysis will be mentioned in the topics of macroeconomics.)

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