

PRINCIPLES OF ECONOMICS

Lecture 22 THREE STAGES OF PRODUCTION
September, 2015



TOPICS TO BE DISCUSSED

1. Three stages of production

- First Stage- TP, AP, MP
- Second Stage- TP, AP, MP
- Third Stage- TP, AP, MP

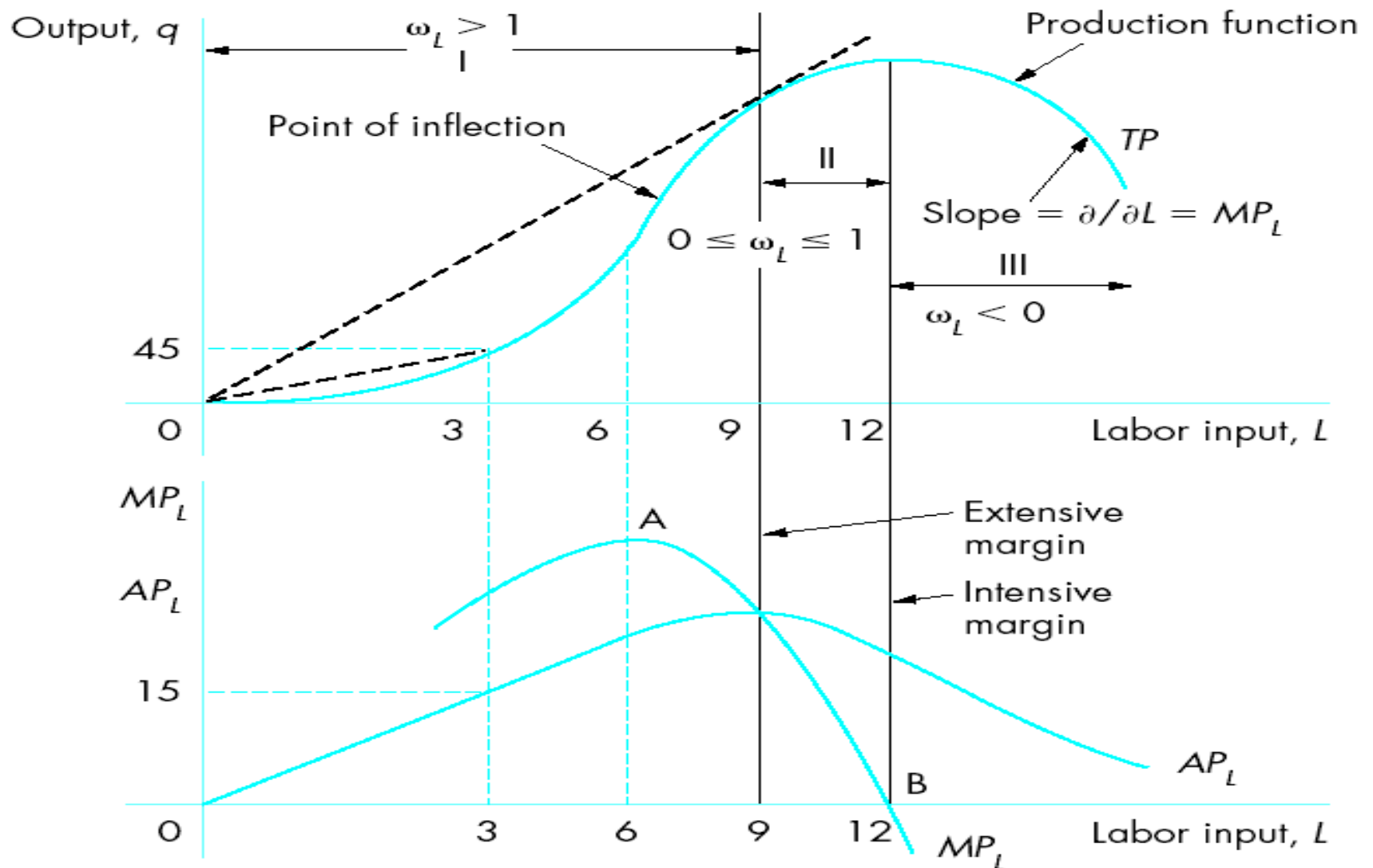
2. Rational Stage

THREE STAGES OF PRUDCUTION

PRODUCTION WITH ONE VARIABLE INPUT (LABOR)

Production with One Variable Input				
Amount of Labor (L)	Amount of Capital (K)	Total Output (Q)	Average Product (Q/L)	Marginal Product ($\Delta Q/\Delta L$)
0	10	0	—	—
1	10	10	10	10
2	10	30	15	20
3	10	60	20	30
4	10	80	20	20
5	10	95	19	15
6	10	108	18	13
7	10	112	16	4
8	10	112	14	0
9	10	108	12	-4
10	10	100	10	-8

STAGES OF PRODUCTION IN SHORT RUN



THREE STAGES OF PRODUCTION

TP	MP	AP
STAGE Increases at an increasing rate, then at diminishing rate	Increases, reaches its maximum & then declines till $MR = AP$	Increases & reaches its maximum
STAGE II Continues to increase at a diminishing rate till it reaches maximum	Is diminishing and becomes equal to zero	Starts diminishing
STAGE III Starts declining	Becomes negative	Continues to decline, will never be zero

WHICH STAGE WILL BE PREFERRED BY A FIRM?

- Stage-II is rational which means relevant range for a rational firm to operate
- Stage-I is profitable for the firm to keep on increasing the use of labour
- Stage-III is inadvisable to use additional labour as MP is negative and TP is falling

Thank You 😊