

Pay and Productivity¹ In-Class Problem²

Ritchie's Ribs has chosen to pay workers less than MRP_L so Ritchie can earn a profit. The longer someone works there the more they get paid and at some point Ritchie might start paying a worker more than they produce (perish the thought). A typical worker has an MRP_L of $125 + 5T + T^2$, where T equals the number of years the worker has been at Ritchie' and MRP_L is measured in \$100's per year. Workers at Ritchie's earn a wage equal to $5 + 15T + T^2$, the price of ribs is \$6 per pound, and Ritchie finds that he needs one worker for every 100 pounds he serves.

a) Graph the MRP_L and wage of workers.

This is easier if you think about MRP_L in competition being equal to the wage:

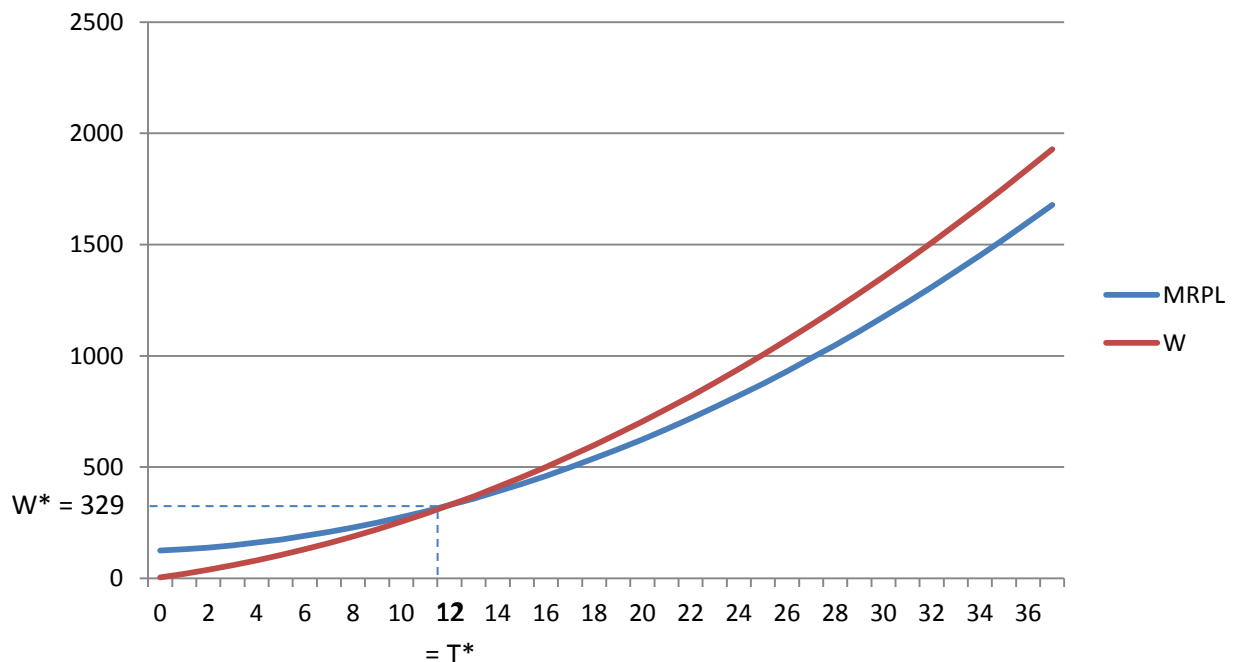
$$MRP_L = W$$

$$125 + 5T + T^2 = 5 + 15T + T^2$$

$$10T = 120$$

$$T^* = 12$$

$$W^* = 5 + 15(12) + 12^2 = 329$$



b) identify the number of years it takes for one of these workers to earn more than their MRP_L , as well as the wage earned at that number of years

$$T^* = 12$$

$$W^* = 5 + 15(12) + 12^2 = 329$$

¹ This In-Class Problem is intended to present an abbreviated discussion of the included economic concepts and is not intended to be a full or complete representation of them or the underlying economic foundations from which they are built.

² This problem was developed by Rick Haskell (rick.haskell@utah.edu), Ph.D. Student, Department of Economics, College of Social and Behavioral Sciences, The University of Utah, Salt Lake City, Utah (2014).

- c) How many years it might take before Ritchie starts losing money (in the aggregate) on a worker.**

This might be difficult to calculate expressly, but a visual examination would suggest that it should be about 24 years.

- d) Discuss why Ritchie might be willing to employ a worker for more than 15 years (be specific and talk to me in economic terms – this might include numbers)**

Answers will vary

- e) If I asked you to give me the wage elasticity of demand for this worker as wages change from \$300 to \$350 per week, could you do so? How much could you tell me about the worker.**

All you can reasonably offer here is that the own wage elasticity of demand is negative (-) and based on a presumption that producing or serving ribs is a relatively low skill job the elasticity is likely $> |-1|$ elastic.