Review Notes – Pay and Productivity

- The Basic Premise of the topic is that a worker's pay affects the worker's productivity.
  - Profit maximizing firms have a complicated job to hire, train, and motivate workers in order to increase productivity in a profit maximizing way. Issues we addressed include:
    1. Often difficult/costly to monitor productivity of workers both before and after hiring.
    2. While human capital does affect productivity variation in productivity still exists for other reasons (why does this matter? Hint: related to number 1.)
    3. Productivity = f(ability, human capital, level of effort, environment, etc.)
    4. Increased productivity by workers often result of initiative taken by workers => how do you induce them to take initiative rather than just "doing their job"?

- How does the firm motivate workers?
  - Definitions – know each one.
    1. Employment contracts
    2. Information asymmetry
    - Even though, contracts lay out terms, information asymmetry makes it possible for both parties to cheat on their agreement.
    - Cheating by firms on things like promotions, wages, training, etc.
    - Cheating by workers is shirking on their effort – reducing their productivity.
    - How to prevent cheating?
      - Signaling
        - Parties signal their intentions by their behavior. What are some examples for firms and workers?
      - Self Enforcement
        - This is a contractual issue. Construct built-in incentives in the contract to give incentives not to cheat. How?
        - What is the cooperative surplus?
  - Pay based upon individual output
    - What is the incentive given by tying pay to productivity?
    - Problems?
      - How closely is output affected by worker effort? Why does this matter?
      - How do we measure output? This is generally a quality vs. quantity issue with it common that a tradeoff exists between the two. Why does this matter?
  - Flat rate pay per unit of time with monitoring of worker effort
    - Incentive to work hard given by sanctions imposed if detected shirking.
    - Monitoring Costs. What are those and how do they affect the issue?
      - If high monitoring costs => unlikely to choose flat rate pay. Why?
      - If low monitoring costs => more likely to choose flat rate pay. Why?
  - Group Motivation

- A worker is concerned about own pay but also pay relative to other workers => equity issues. What happens if the worker feels pay is unfair?
- What is the solution?
- Loyalty to the Group. How is that built?

- What is the basis for yearly pay?
  - Again, piece rate vs. per unit of time pay.
  - Types of piece rate pay?
  - Employees prefer pay per unit of time. Why? What is risk aversion?
  - What do firms prefer?
    - Look at the tradeoff between the two methods (hint: focus on the tradeoff between monitoring costs and the costs of measuring output – which is associated with which method?)
    - Also look at who bears the risk of variation in costs/pay for the two methods. Also focus on who is the most risk averse – workers or firms.
    - Pay for output
      - Measurement problems again. That is, perhaps quality of output will drop.
      - What about lack of maintenance for capital?
    - Pay for Group output
      - Free-riding. How to solve?
    - Pay for time with merit increases
      - How does it work?
      - What are the advantages?
      - What are the problems?

- The level of Pay and Productivity
  - Does increasing pay increase productivity?
    - Why would it? Know the theoretical reasons.
  - What are efficiency wages?
    - Increasing wages have <u>both</u> costs and benefits (what are they?) => increase wages as long as doing so increases profits (MB > MC) => the wage that maximizes profits in this manner is the efficiency wage.
    - Efficiency wages explain the existence of persistent unemployment. How?
    - Efficiency wages may explain observed persistent differences in wages paid to similar workers in different industries. How?
    - Empirical evidence – what is the impact of efficiency wages on productivity.
      - We talked about two types of studies. Make sure you know both types and what the results of the empirical work is – do efficiency wages exist.

- The Sequencing of Pay and Productivity
  - Assumes a long-term career between worker and firm.

- Workers will only accept wages that meet the criteria of the present value of wages/promotions/benefits over time ≥ present value of the market wage. The firm would be willing to offer these wages as long as the compensation scheme increases productivity.
- One possibility is to underpay earlier in career and overpay later in career. Why does this delayed compensation plan make sense?
- Know the graph showing the two age-earnings profiles.
- What are the constraints upon delayed compensation?
  - Again present value of the delayed compensation plan to the worker must be ≥ the present value of the market wage for the worker to accept.
  - But also the firm will not offer delayed compensation unless the present value of career marginal productivity ≥ present value of career compensation.
- What are the risks to both parties?
  - Workers' risk is that the firm reneges on paying higher compensation later in career.
  - Firms' risk is that workers don't retire as agreed to but continue to work.
  - How can both problems be dealt with?
- Who adopts delayed compensation plans?

- Promotion Tournaments
  - Three key characteristics
    1. Uncertainty about the winner.
    2. Winner is based on relative productivity.
    3. Rewards for increased productivity largely go to the winner.
  - Why have promotion tournaments? That is, how do promotion tournaments reduce shirking and increase productivity?
  - What matters in constructing <u>successful</u> promotion tournaments?
    1. Is winning based upon luck or increased effort/productivity? If luck => not successful.
    2. How disparate are the returns if you win? As the disparity increases => the marginal benefit increases.
  - Problems to be solved
    - Participants have an incentive to sabotage rivals => reduce productivity.
    - How do you treat losers?

- Why do Earnings Rise with Job Tenure?
  - What does human capital theory say? Hint: increased productivity increases wages.
  - How about the delayed compensation plans that we discussed above?
  - Which of these two explanations is correct?
    - When we know workers are investing in human capital => do wages rise? => if so, then supports the human capital theory.
    - Suppose workers are paid on a piece rate basis => if wages <u>don't</u> rise with tenure then this supports delayed compensation (why?)
