



- A. Woodward found that you could find clear differences in the structures of these types of firms. The more a firm in a particular category conforms to the structure, the better it performs.
 - 1. **Small batch firms** exhibited a low degree of formalization, low degree of complexity, and a low ratio of administrative to production employees.
 - 2. **Large batch firms** exhibited a high level of formalization, high level of complexity, and a moderate ratio of administrative to production employees.
 - 3. **Continuous production firms** exhibited a moderate degree of formalization, a moderate level of complexity, and a high ratio of administrative to production employees.
 - B. Her findings gave rise to the idea of **contingency effects**. This is the idea that the best structure depends on technology. Unlike management theory predicted, there is no one best way of production, but rather the most effective structure is contingent on technological factors.
 - C. The problem with her findings was that she was never very clear on what it was about technology that causes different optimal structures.
- II. An effort to clarify Woodward's work came from **James Thompson**, who argued that the key to understanding technological differences and their impact on structure was the level of interdependence among workers.
- A. **Interdependence** refers to how much individuals in an organization must coordinate their activities with the work of others, or how much integration and control is needed. Do you need many rules and regulation or should employees have more discretion?
 - B. He theorized that there are three interdependence and technological types:
 - 1. **Pooled interdependence** means workers are independent of one another, and there is very little coordination. Workers carry out a whole set of tasks and do not depend much on the work of others. For example, bank tellers and University professors perform their jobs independently of their coworkers. The type of technology in this case is known as **mediating technology** because the firms are only involved in mediating relations between workers.
 - 2. **Sequential interdependence** means that there is much tighter dependence among workers. The activities of worker A greatly affect that of worker B, which in turn affects worker C. This can be found in factories where there is a series of workers, each performing a specific task on an assembly line. Another example is an editor, whose work depends on the activities of the writer whose work he is reading. The type of technology associated with this type of **long-linked technology**, because there is a series of links in the production process.
 - 3. **Reciprocal interdependence** means that the tasks of workers depend greatly on those of other workers, but there is no predictable sequence. For example, in an advertising agency, the design team and copywriters work together and respond back and forth with ideas until the final product is decided. The type of technology in this case is **intensive technology** because the interaction process requires more intense technology.