### Profit Maximizing Staffing for Scheduling

### Problem Statement:

Given a set of shipments that need to be scheduled, schedule the shipments in a way that minimizes the expected cost.

### Sets:

the set of shipments of size n

set of days

days on which can be processed

### Parameters:

the cost of a truck if is scheduled on day

: number of shipments a single person can process in one day

: daily wage of a single person

### Variables:

if shipment s is processed on day

of people we will schedule to work on day

### Objective function:

Minimize +

### Subject to:

(each shipment must be scheduled)

(daily capacity cannot be exceeded)

(each variable must be 0 or 1)