1. In explaining strike duration, one could estimate a multivariate regression model of the form:

\[ DU Ri = \alpha_0 + \sum_{j=1}^{K} \alpha_j X_{ji} + \varepsilon_i \]

where DU Ri is the duration of strike i and Xji, j = 1, ..., K, are a set of K control attributes of strike i. According to the theoretical model, anything which increases union resistance will lengthen the strike. Such things might include the local unemployment rate where the strike occurs, the level and availability of unemployment benefits to workers on strike, and the wage the workers were being paid prior to the strike (higher wages may imply greater personal savings to live on while on strike). Moreover, anything strengthening the firm’s resistance will also lengthen the strike. For example, lower firm profits prior to the strike, an elastic demand for the good being producing (implying higher prices will lead to large reductions in consumer demand), the availability of replacement workers, and product inventory. Thus, one’s ideal model might look something like:

\[ DU Ri = \alpha_0 + \alpha_1 U Ri + \alpha_2 U Ii + \alpha_3 wi + \alpha_4 P ROFi + \alpha_5 |ELAST |i + \alpha_6 IN Vi + \varepsilon_i \]

where U R is the local unemployment rate (predicted sign: \( \alpha_1 < 0 \)), U I is the level of unemployment benefits one qualifies for (predicted sign: \( \alpha_2 > 0 \)), w is the previous average wage of union members (predicted sign: \( \alpha_3 > 0 \)), P ROF is the pre-strike level of profits (predicted sign: \( \alpha_4 < 0 \)), |ELAST | is the (absolute value of) price elasticity of demand for the firm’s output (predicted sign: \( \alpha_5 > 0 \)), and IN V is the inventory of completed goods prior to the strike (predicted sign: \( \alpha_6 > 0 \)).

2. It is likely that \( \alpha_1 < 0 \), while \( \alpha_2, \alpha_3 > 0 \). Western (and Southern) states have right-to-work laws limiting the effectiveness of unions. In addition, since Western states had lower unionization rates even prior to the passage of such laws, it is likely that attitudes in general are less favorable to unions in the West. Conversely, Midwest and Northeast states tend to have higher unionization rates. Thus, a greater concentration of employment in these regions should be associated with greater unionization rates. Females historically tend to be less apt to join unions. It is theorized that this was due to the weaker ties that females have with the labor market. If this is true, then if one estimates the model using data going back decades, it is likely that \( \alpha_4 < 0 \). However, if the data used incorporates more recent data, it is likely that \( \alpha_4 \approx 0 \). Public sector jobs tend to be highly unionized. Thus, greater concentration of employment in the public sector should be associated with higher union membership; \( \alpha_5 > 0 \). Likewise, construction, mining, transportation, and public utilities employees tend to be highly unionized. Thus, one would expect \( \alpha_6 > 0 \). Finally, greater competition from overseas, as proxied by the ratio of imports to the total production of goods and services (GNP), is associated with lower unionization rates (\( \alpha_7 < 0 \)) since there is less room to extract additional wage gains due to the elastic demand for consumption goods. Since the potential for gains from union membership are smaller, so to is the incentive to join a union.