Worker industry affiliation plays a crucial role in how trade policy affects wages in many trade models. Yet, most research has focused on how trade policy affects wages by altering the economy-wide returns to a specific worker characteristic (i.e., skill or education) rather than through worker industry affiliation. This paper exploits drastic trade liberalizations in Colombia in the 1980s and 1990s to investigate the relationship between protection and industry wages. Using the Colombian National Household Survey we first compute industry wage premiums, adjusting for a series of worker, job, and firm characteristics. We find that Colombian industry wage premiums exhibit remarkably less persistence over time than U.S. wage premiums. Similarly, tariffs are less correlated over time than in the U.S. data, indicating that trade liberalization has changed the structure of protection. We next relate wage premiums to trade policy in a framework that accounts for the political economy of trade protection. Accounting for time-invariant political economy factors is critical. When we do not control for unobserved time-invariant industry characteristics, we find that workers in protected sectors earn less than workers with similar observable characteristics in unprotected sectors. Allowing for industry fixed effects reverses the result: trade protection increases relative wages. This positive relationship persists when we instrument for tariff changes. Our results are in line with short- and medium-run models of trade where labor is immobile across sectors, or, alternatively, with the existence of industry rents that are reduced by trade liberalization. In the context of the current debate on the rising income inequality in developing countries, our findings point to a source of disparity beyond the well-documented rise in the economy-wide skill premium: because tariff reductions were proportionately larger in sectors employing a high fraction of less-skilled workers, the decrease in the wage premiums in these sectors affected such workers disproportionately.