

Technology, Changes in Skill Structure and Interactions in Labor Demand: Evidence from Five Naval Powers

Ryan R. Brady, Darrell J. Glaser and Ahmed S. Rahman
Department of Economics, U.S. Naval Academy

Abstract: This paper compares changes in the skill structure of labor in five major navies at a time of great technological change during the decades prior to World War I. We investigate whether and how direct measures of technological change affected growth in the demand of more highly skilled and trained engineers in the fleets of the United States, Great Britain, France, Germany and Italy. Evidence of significant relationships between skill upgrades and technological change are uncovered for most countries, especially during the years immediately preceding the Great War. Furthermore, we find evidence of spillovers across national boundaries, not only in the technology itself but in how skilled-labor is employed to implement new technology. These results provide evidence in support of the argument that skill-biased technological change was an international phenomenon that strongly influenced the demand for skilled labor within and across boundaries.