

Technology-Skill Complementarity in the Royal Navy prior to the Great War

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Abstract: This paper explores if and how the Royal Navy addressed rapid technological change with skilled labor substitution while simultaneously building and expanding the most powerful fleet in the world. We explore how technological changes could be both skill using and skill substituting. This follows from Goldin and Katz (1998) and earlier research we conducted on the U.S. Navy (Glaser, D.J. and A. S. Rahman, *Naval Engineers and the Origins of Technology-Skill Complementarity*, 2011). To analyze the question, we construct a unique dataset that contains the names and characteristics of every serving Royal Navy officer and engineer from 1878 to 1914. Our findings suggest that more technically skilled engineers serve on larger and more technologically advanced vessels, while less technically-skilled officers work with more unskilled personnel on less technologically advanced vessels. Moreover our results are similar in size and scope to the aforementioned research presented on the U.S. Navy in Glaser and Rahman (2011). Both papers present results in support of an alternative hypothesis to Goldin and Katz (1998).