

# Preliminary Research Plan: Gendered Responses to Automation Risk?

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\*Note, the first 10 pages set out the main thrust of the research, but we have included a longer description and a (long!) list of potential survey items. Please do not feel compelled to read!

## 3 Introduction

By almost all conventional measures, women in the labor market are as exposed to automation pressures as men. Figure 1, using data from the European Social Survey (2002 - 2010) for sixteen countries, shows the weighted cross-national distribution of male and female workers across three measures of automation exposure (rescaled 0 - 100, with higher numbers representing more pressure). Whether using a variant of the classic Autor, Levy and Murnane (2003) measure of task routinization drawn from 1980 occupational descriptions, the more forward looking survey based estimates of occupational computerization from Frey and Osborne (2013), or the Arntz, Gregory and Zierahn (2016) nationally specific automation vulnerability measure drawn from OECD PIACC surveys, we see relatively equivalent distributions of risk across male and female workers.

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We exclude the Eastern European countries, restricting the sample to Austria, Belgium, Denmark, Finland, France, Greece, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the UK.

The 'routine task intensity' (RTI) measure used here draws on Goos and Manning (2007), based on the original work of Autor and Dorn (2009); Autor, Levy and Murnane (2003). This work develops a manual task score, routine task score, and abstract task score for occupations based on US Department of Labor classification of aspects of work, such as physical dexterity, hand eye coordination and 'Set Limits, Tolerances, or Standards' (a measure of cognitive routinization). The ensuing RTI index, is the difference between the log of the routine score and the difference of the sum of the logged manual and logged abstract task scores.









































