Moving existing establishment surveys from face to face, mail and telephone to the web can make data collection cheaper and more efficient and allow the use of techniques like dependent interviewing, plausibly checks and complex filters. However, there is little research into the effect of switching to web data collection on data quality and performance rates. We conducted a survey of establishments in Germany which experimentally varied three mode conditions: web only, mail only and a web/mail choice condition. By comparing responses to administrative records, we can report the measurement error in each condition. We also compare the unit and item nonresponse rates across the conditions. We also explore whether the best mode varies by establishment size and/or industry. Our results are relevant for establishment surveys that wish to move to the web, but are worried about measurement error and nonresponse effects on the data.