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**Health and work
in agricultural activity**

The distribution of physical effort across gender: Evidence from agricultural households in Malawi

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Abstract: *This disutility of work, often encapsulated as effort, is a primal component in standard economic models of worker and consumer behavior. However empirical applications that measure effort, especially those that assess the distribution of effort across known populations, are historically scarce. This paper explores intra-household differences in physical activity in a rural agrarian setting. Physical activity is captured via wearable accelerometers that provide a proxy for physical effort expended per unit of time. In the study setting of agricultural households in Malawi, men accumulate significantly more sedentary time than women (38 minutes per day) but also spend more time on moderate-to-vigorous activities (16 minutes). Using standardized energy expenditure as a summary measure for generalized physical effort, women exert marginally higher levels of effort than men over the full day in the overall sample. However, gender differences in effort among married partners are strongly associated with intra-household differences in bargaining power, with significantly larger husband-wife effort gaps alongside larger differences in age and individual land ownership as well as whether the couple lives as part of a polygamous union. With wearable technologies it is now possible to measure physical activity as proxy for physical effort, an understudied dimension of wellbeing with apparent gender inequality patterns in this population.*

Keywords: *Physical activity, accelerometers, effort, time use, gender, intra-household bargaining*
