

UNIVERSITY OF MANNHEIM

MASTER'S THESIS

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**The Impact of Transitory Income  
Shocks on Labor Supply Decisions:  
A Machine Learning Approach**

**Supplementary Appendix**

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*A thesis submitted in fulfillment of the requirements  
for the degree of Master of Science*

*at the*

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# Supplementary Appendix

In this supplementary appendix, I provide more graphical illustrations of my estimations. I present Pearson and Spearman correlation matrices for the estimation features. Further, since I only show median absolute responses as partial dependence plots in the appendix of the main thesis file , I supplement these plots with median percentage and median marginal responses.

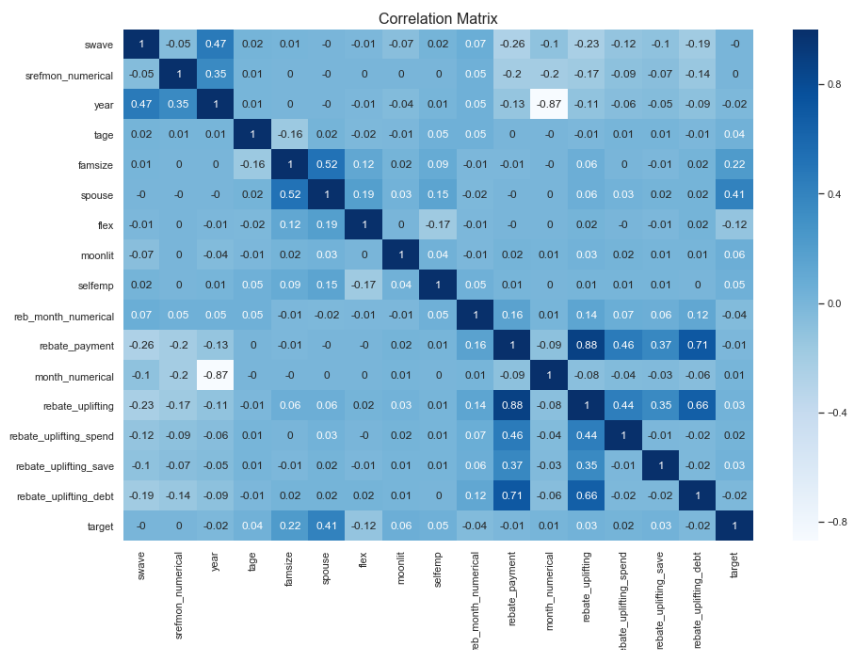


FIGURE 1: Pearson Correlation Matrix

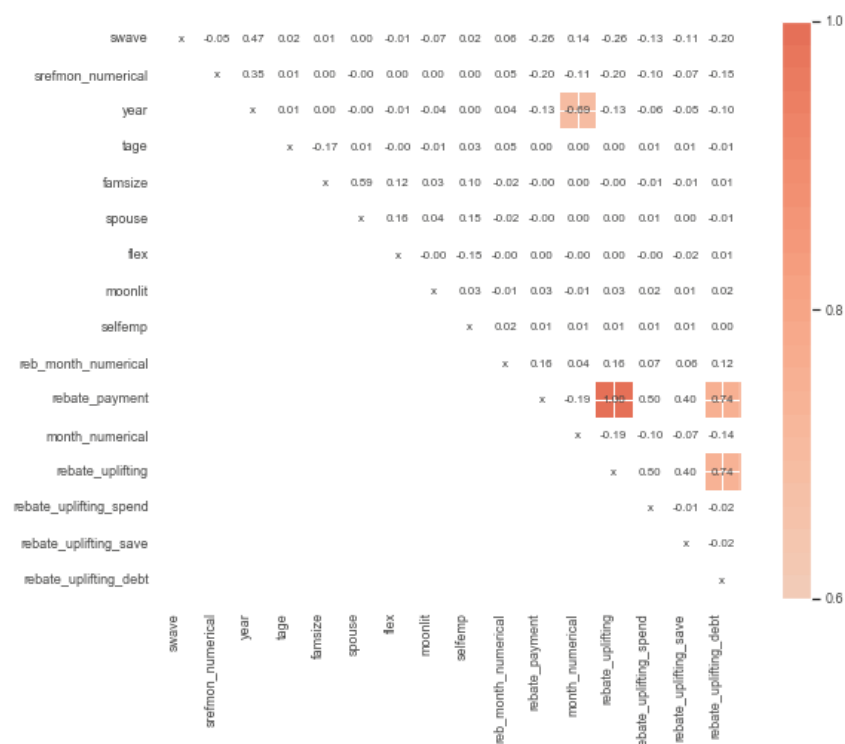


FIGURE 2: Spearman Correlation Matrix

Note: Correlations are transformed into ranks and then measured again. In comparison to the Pearson correlation, the Spearman correlation measures monotonic relationships between features rather than linear relationships.

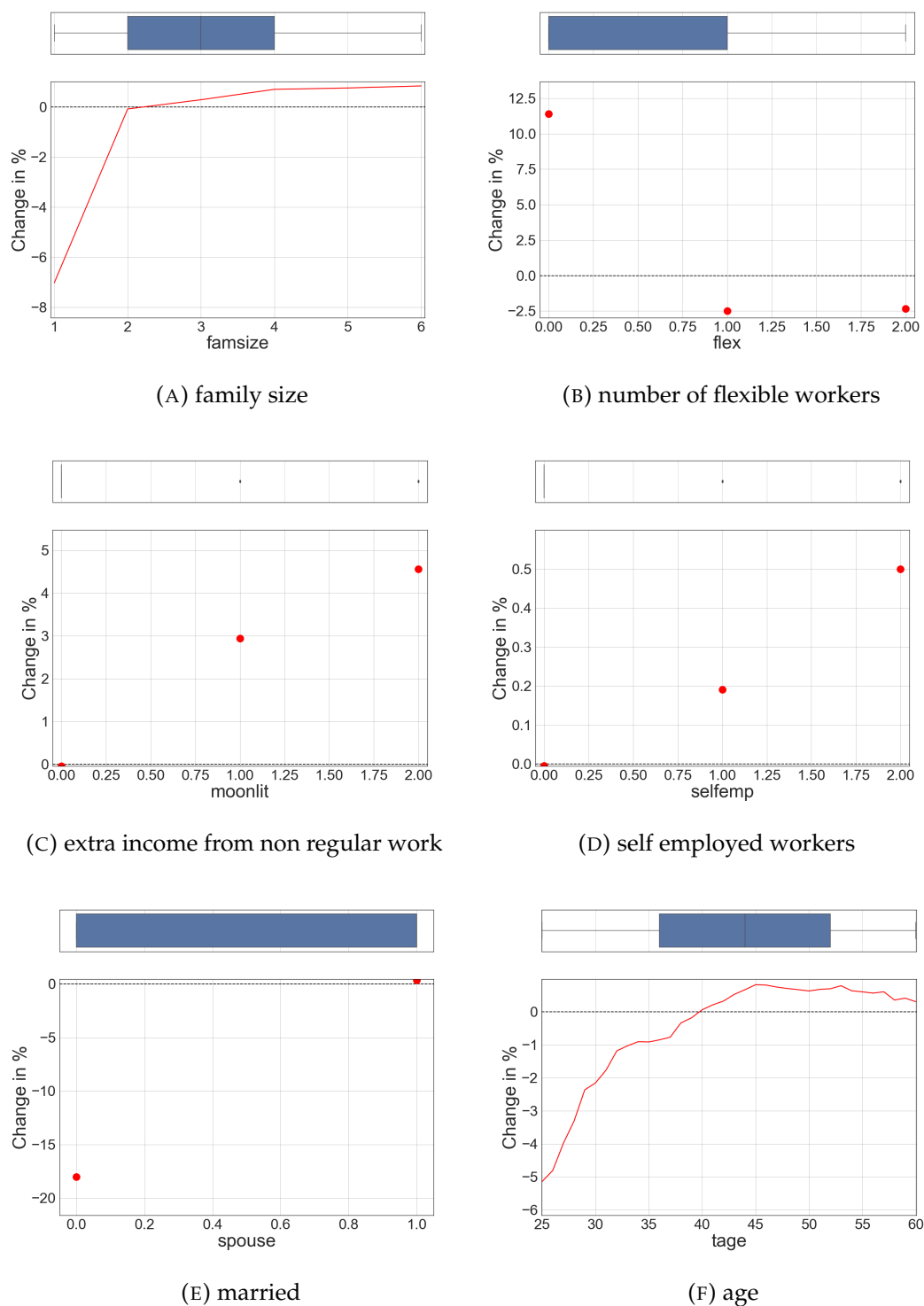


FIGURE 3: Median Percentage Responses for All Observation Months

Note: The shown boxplots refer to all observation months.

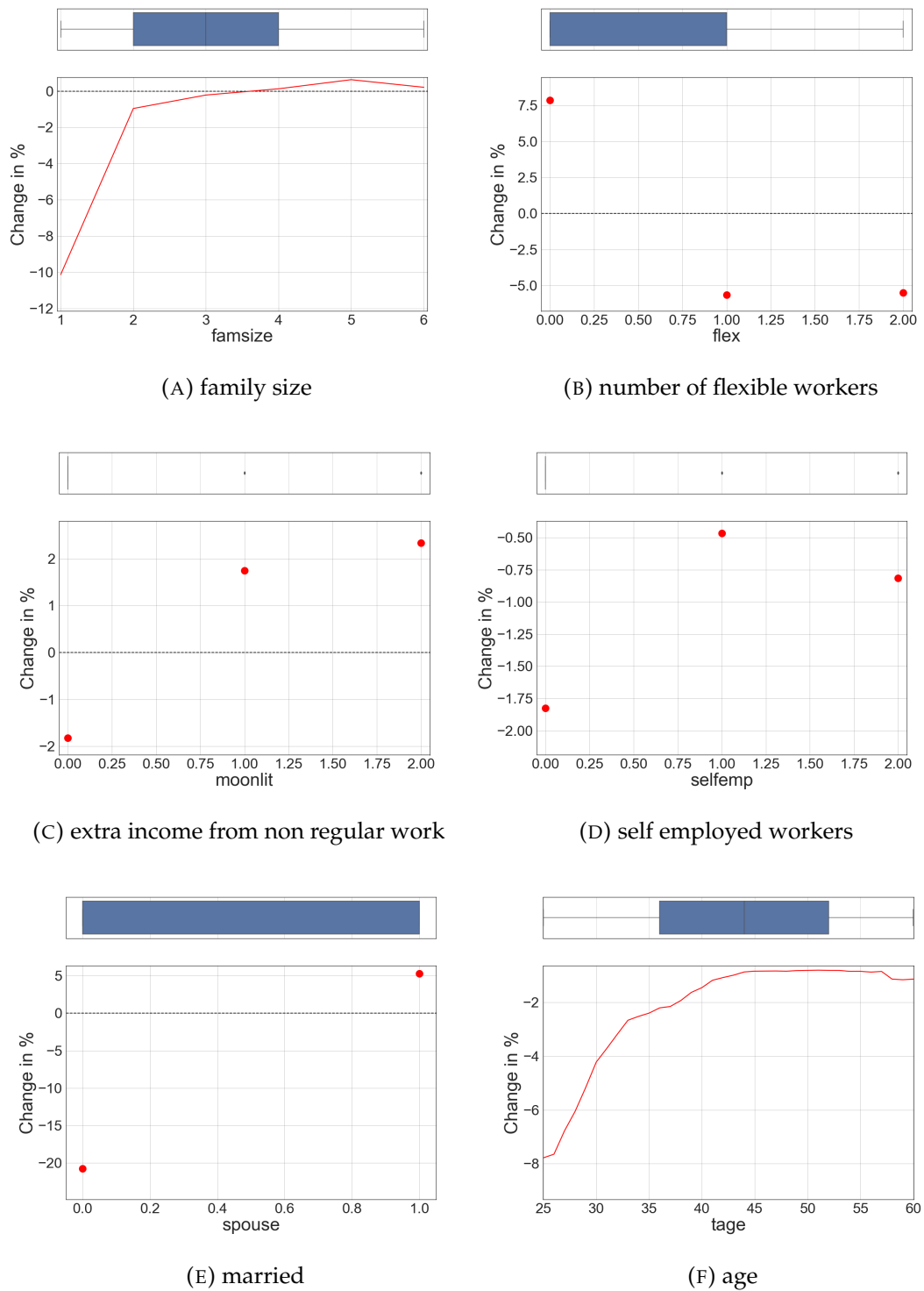


FIGURE 4: Median Percentage Responses for Rebate Months

Note: The shown boxplots refer to the first and second month after rebate payments.

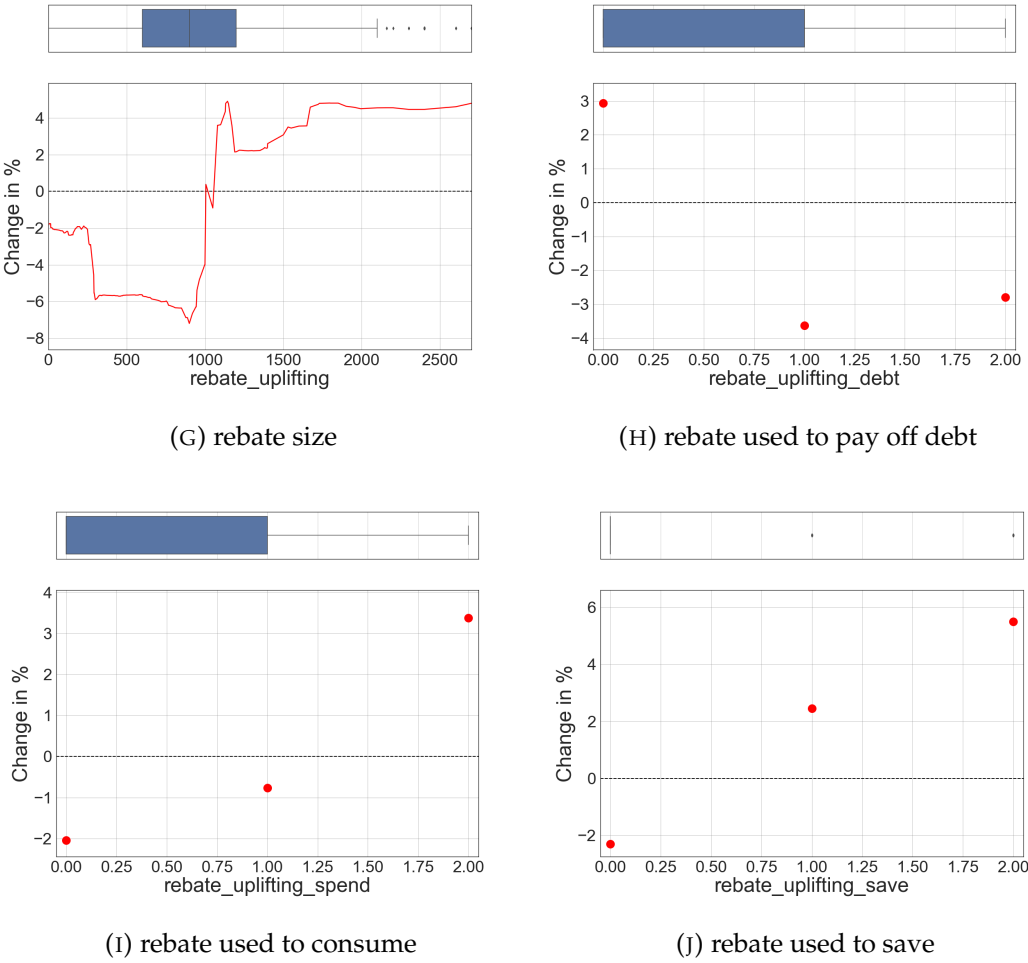


FIGURE 4: Median Percentage Responses for Rebate Months (cont.)

Note: For rebate months, I include partial dependence plots for features describing rebate characteristics, such as the rebate size and the reported use of the rebate payment. The shown boxplots refer to the first and second month after rebate payments.

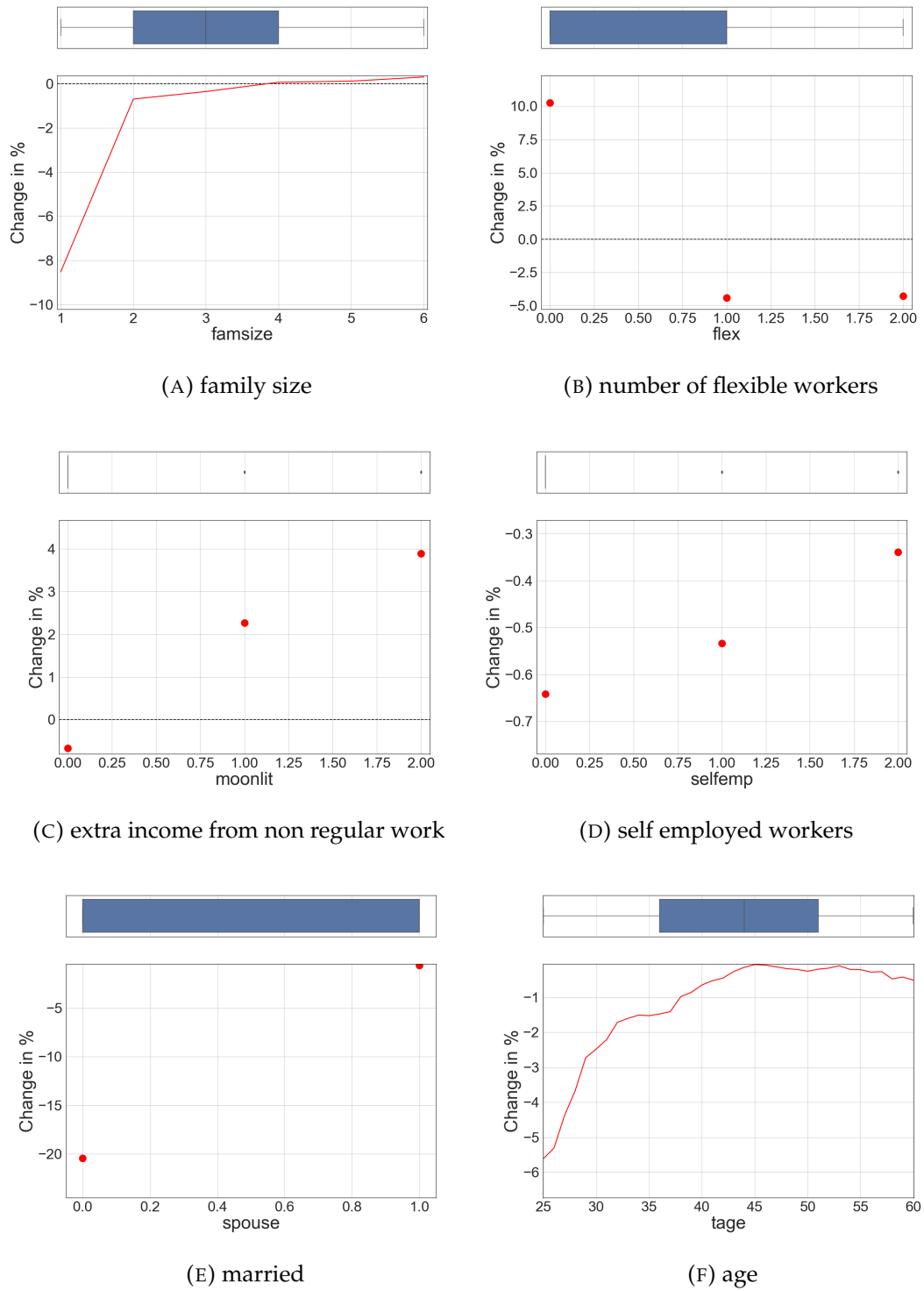


FIGURE 5: Median Percentage Responses for the First and Second Month after Rebate Payments

Note: The shown boxplots refer to the first and second month after rebate payments.

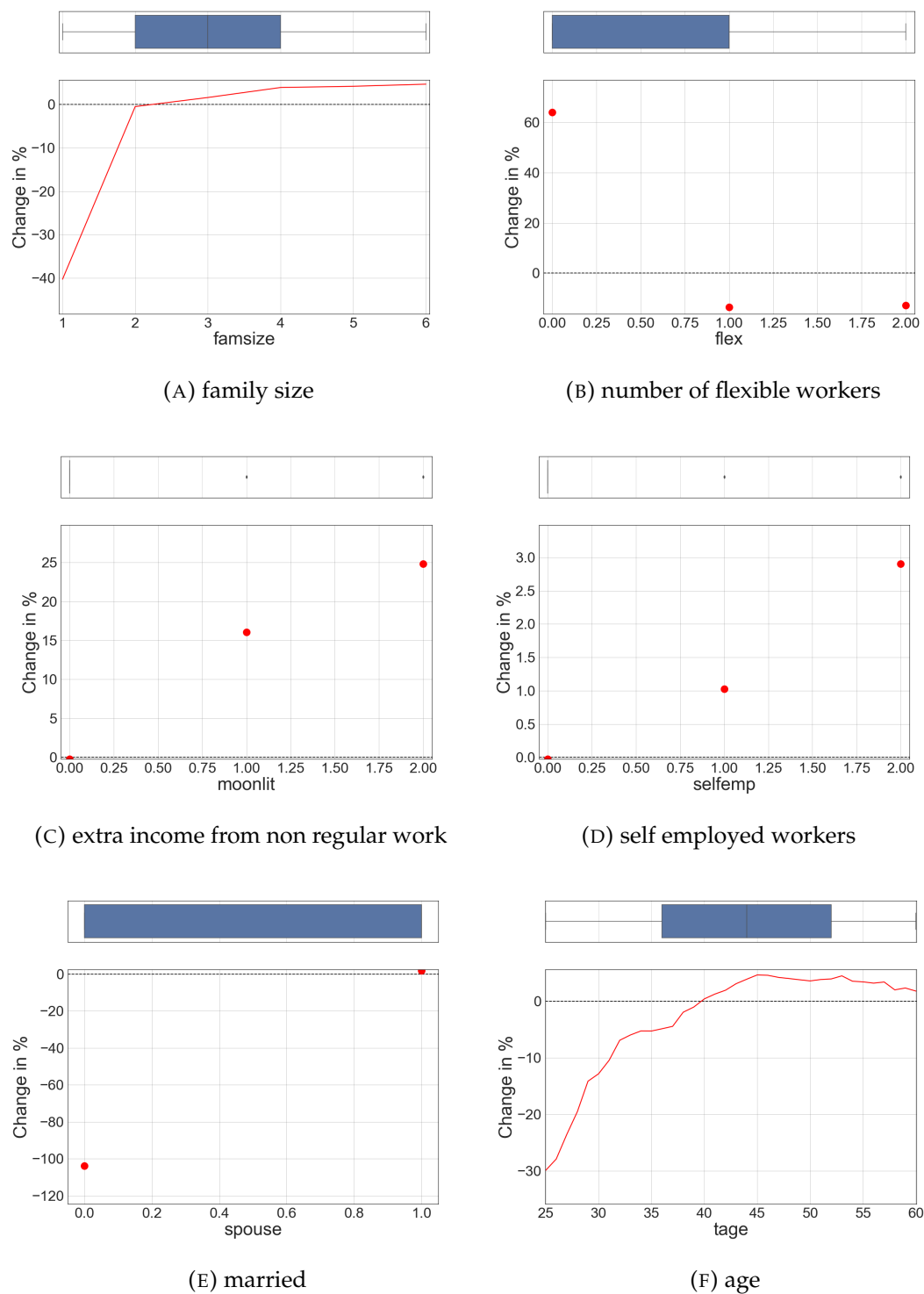


FIGURE 6: Median Marginal Responses for All Observation Months

Note: The shown boxplots refer to all observation months.



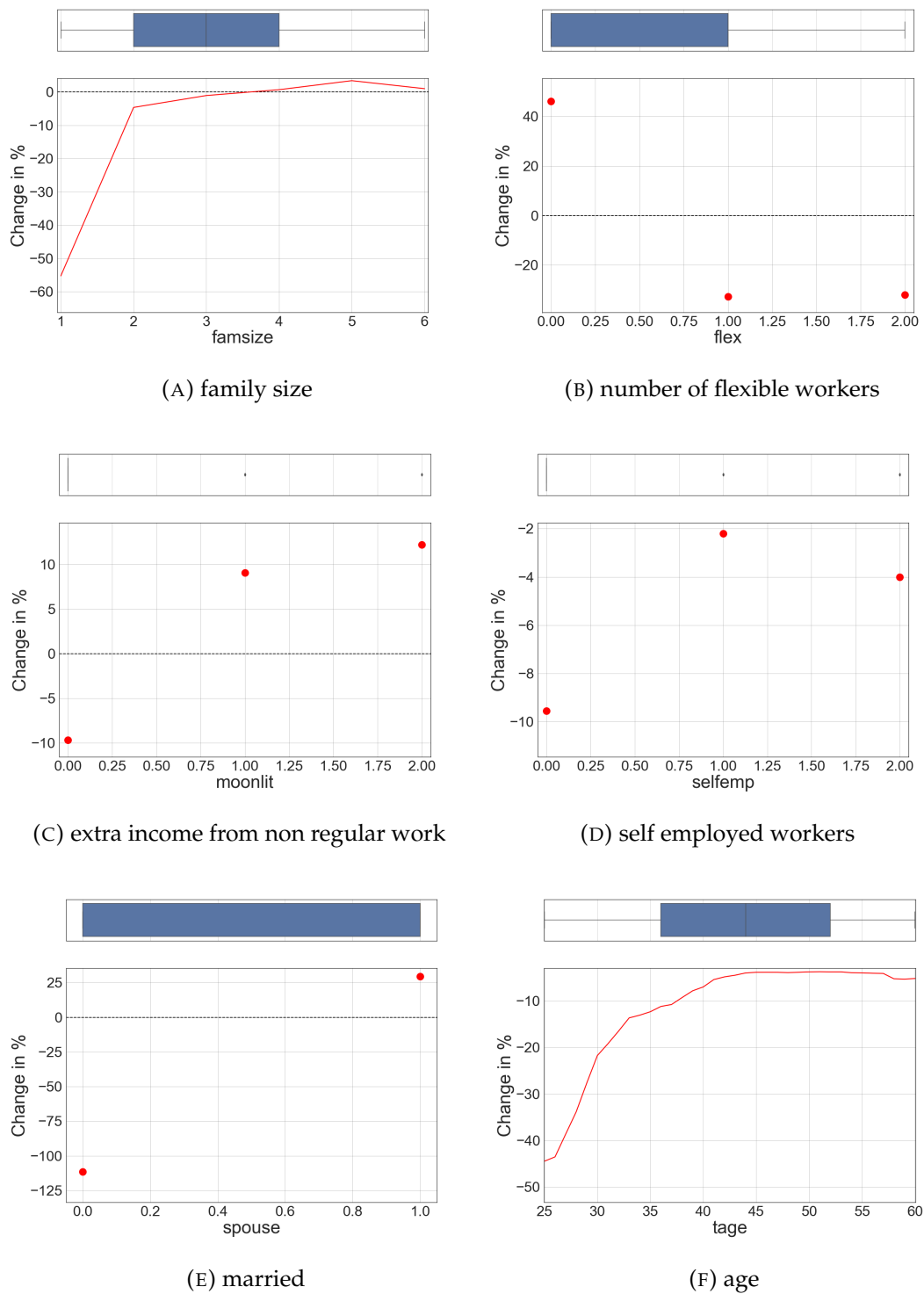


FIGURE 7: Median Marginal Responses for Rebate Months

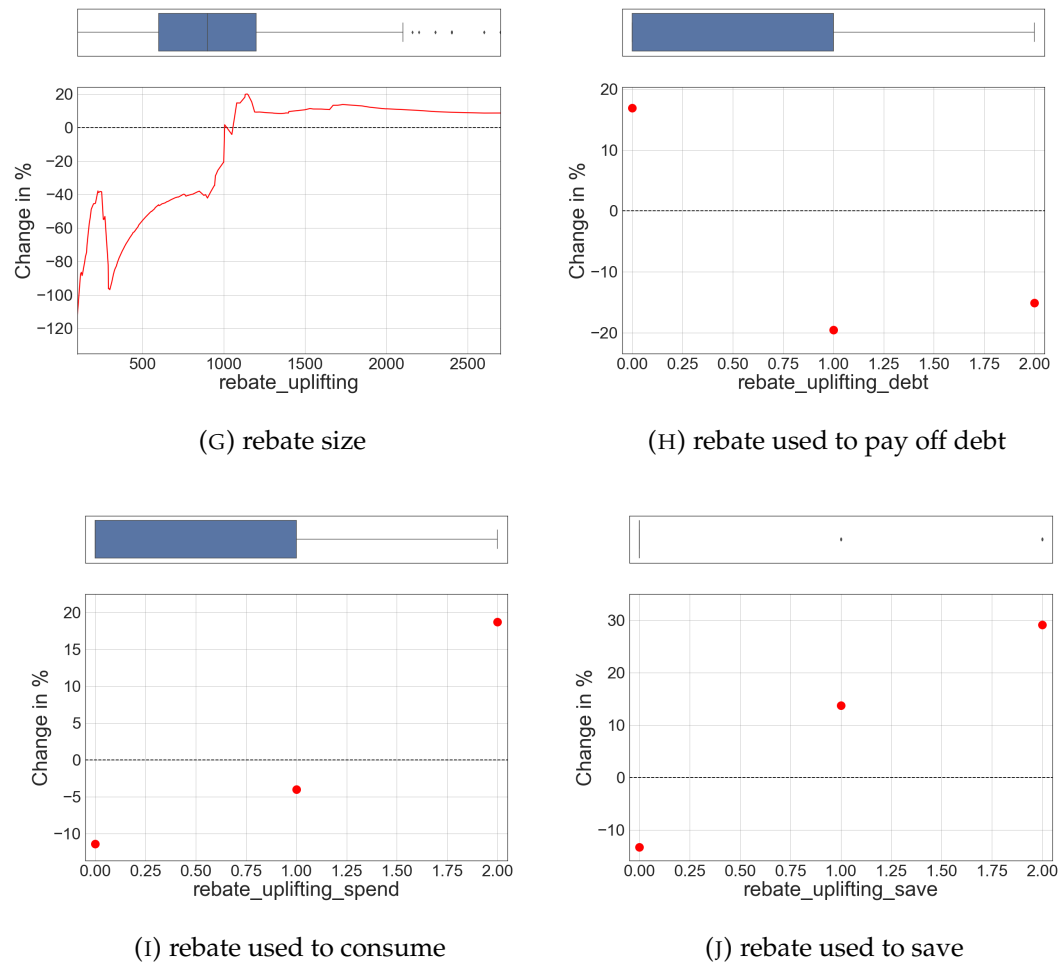


FIGURE 7: Median Marginal Responses for Rebate Months (cont.)

Note: For rebate months, I include partial dependence plots for features describing rebate characteristics, such as the rebate size and the reported use of the rebate payment. The shown boxplots refer to the first and second month after rebate payments.

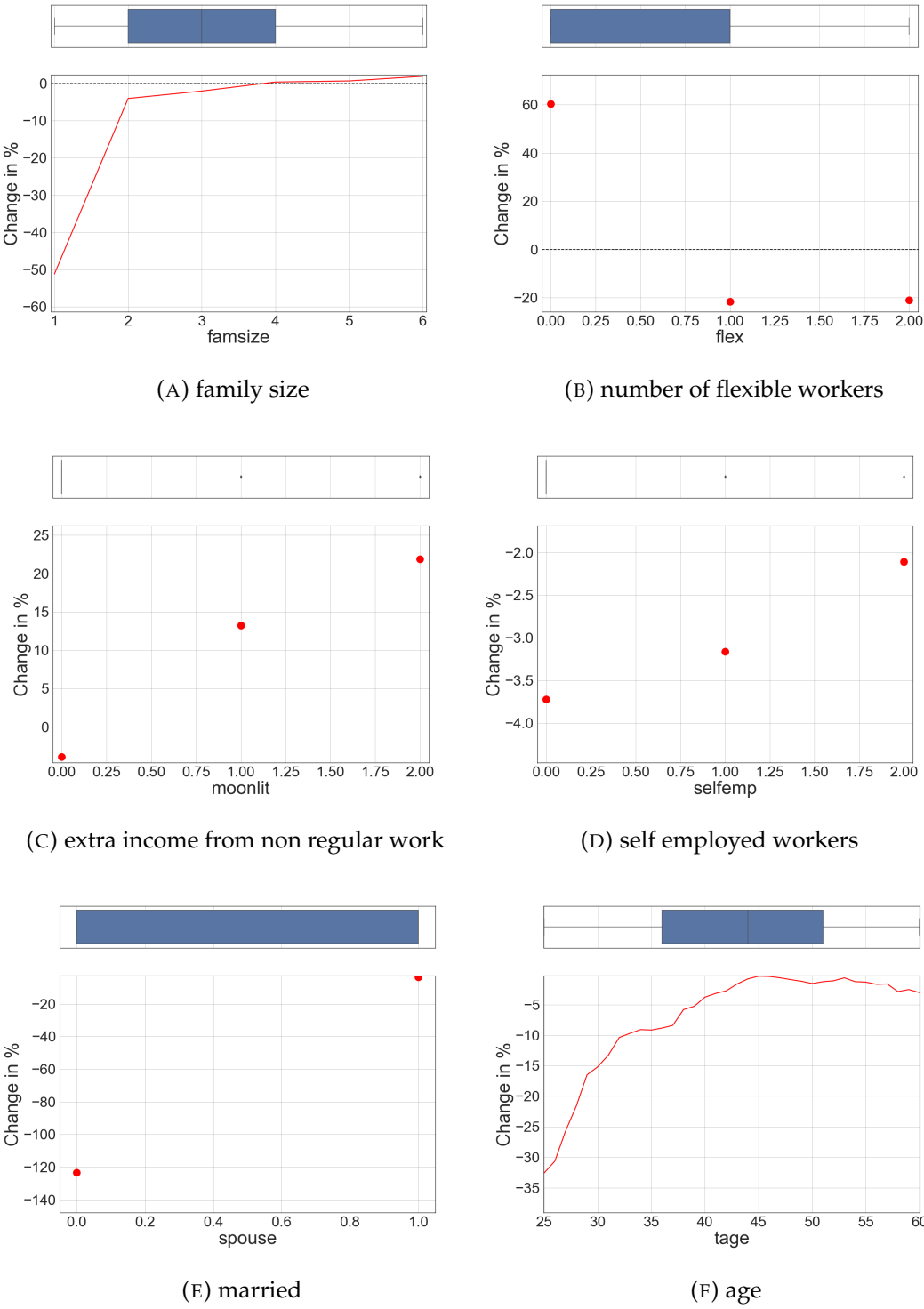


FIGURE 8: Median Marginal Responses for the First and Second Month after Rebate Payments

Note: The shown boxplots refer to the first and second month after rebate payments.