

The Inefficiency of Worker Time Use

on-line Appendix

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Table 1: The effect of task juggling on the hazard of closing a case. Effort standardized with the weekly average number of hearings to close the cases held by all judges in the same week

Dependent variable	$h(t X)$	Active cases	Standardized effort	$h(t X)$
Estimation method	ML	ML	OLS	ML-Control
Stage	Second	First	First	Second
Variables	(1)	(2)	(3)	(4)
Active cases	-0.006 (0.001)			-0.021 (0.006)
Standardized effort	0.138 (0.001)			0.346 (0.095)
Workload/10	-0.008 (0.001)	1.322 (0.023)	0.033 (0.0001)	0.005 (0.005)
Number of monthly red cases		0.415 (0.013)	0.037 (0.000)	
Number of monthly normal cases		0.518 (0.011)	0.032 (0.000)	
Cragg-Donald Wald F statistic				195.2
Judge fixed effects	YES	YES	YES	YES
Calendar fixed effects	YES	YES	YES	YES
Type of case fixed effects	YES	YES	YES	YES
Number of judges	21	21	21	21
Number of cases	50,412	50,412	50,412	50,412
Observations	2,032,449	2,032,449	2,032,449	2,032,449

Note: In columns 1 and 4 the dependent variable is the hazard that a case is closed in week t after filing, conditional on survival up to week t . *Active cases* are cases that have already seen a first hearing before the end of a given week but are not completed yet by the same date. *Standardized effort* is the number of hearings held by a judge in a given week divided by the average number of hearings needed to close all the cases held by all judges in the same week. *Total workload* is the cumulated sum of cases assigned to a judge up to the end of a given week. Columns 2 and 3 report the first stage regressions used to construct the third-order polynomials of residuals on which the control function estimates reported in column 4 are based. The instruments are respectively defined as the number of *red code* and *green code* cases assigned to a judge in the five weeks that precede and include a given week (or the number of cases assigned in the first month of life of a case, if the week is one of the first five of the life of the case). *Red code* cases are those that, according to a survey of judges and lawyers, are considered as urgent and/or complicated, thus requiring immediate action and/or greater effort. *Green code* cases are instead the remaining standard and simpler cases. The *Cragg-Donald Wald F statistic (Joint)* denotes the minimum eigenvalue of the joint first-stage F-statistic matrix. Standard errors in round parentheses are clustered at the case level.

Table 2: The effect of task juggling on the hazard of closing a case. Effort computed with the number of hearings per case.

Dependent variable	$h(t X)$	Active cases	Number of case hearings	$h(t X)$
Estimation method	ML	OLS-FE	OLS-FE	ML-Control
Stage	Second	First	First	Second
Variables	(1)	(2)	(3)	(4)
Active cases	-0.002 (0.000)			-0.034 (0.013)
Number of case hearings	0.529 (0.012)			-2.882 (1.762)
Workload/10	-0.012 (0.001)	1.322 (0.023)	-0.017 (0.001)	-0.027 (0.012)
Number of monthly red cases		0.415 (0.013)	-0.004 (0.001)	
Number of monthly normal cases		0.518 (0.011)	-0.004 (0.001)	
Cragg-Donald Wald F statistic				1.65
Judge fixed effects	YES	YES	YES	YES
Calendar fixed effects	YES	YES	YES	YES
Type of case fixed effects	YES	YES	YES	YES
Number of judges	21	21	21	21
Number of cases	50,412	50,412	50,412	50,412
Observations	2,032,449	2,032,449	2,032,449	2,032,449

Note: In columns 1 and 4 the dependent variable is the hazard that a case is closed in week t after filing, conditional on survival up to week t . *Active cases* are cases that have already seen a first hearing before the end of a given week but are not completed yet by the same date. *Number of case hearings* is the number of hearings held by a judge in a given week for a given case. *Total workload* is the cumulated sum of cases assigned to a judge up to the end of a given week. Columns 2 and 3 report the first stage regressions used to construct the third-order polynomials of residuals on which the control function estimates reported in column 4 are based. The instruments are respectively defined as the number of *red code* and *green code* cases assigned to a judge in the five weeks that precede and include a given week (or the number of cases assigned in the first month of life of a case, if the week is one of the first five of the life of the case). *Red code* cases are those that, according to a survey of judges and lawyers, are considered as urgent and/or complicated, thus requiring immediate action and/or greater effort. *Green code* cases are instead the remaining standard and simpler cases. The *Cragg-Donald Wald F statistic (Joint)* denotes the minimum eigenvalue of the joint first-stage F-statistic matrix. Standard errors in round parentheses are clustered at the case level.

Table 3: The effect of task juggling on the hazard of closing a case. No 2005

Dependent variable	$h(t X)$	Active cases	Standardized effort	$h(t X)$
Estimation method	ML	OLS-FE	OLS-FE	ML-Control
Stage	Second	First	First	Second
Variables	(1)	(2)	(3)	(4)
Active cases	-0.0053 (0.000)			-0.0108 (0.004)
Standardized effort	0.1119 (0.001)			0.2118 (0.064)
Workload/10	-0.0069 (0.001)	1.4054 (0.031)	0.0216 (0.001)	-0.0016 (0.005)
Number of monthly red cases		0.3950 (0.013)	0.0393 (0.001)	
Number of monthly green cases		0.5645 (0.013)	0.0320 (0.000)	
Cragg-Donald Wald F statistic (Joint)				356.7
Judge fixed effects	YES	YES	YES	YES
Calendar fixed effects	YES	YES	YES	YES
Type of case fixed effects	YES	YES	YES	YES
Number of judges	21	21	21	21
Number of cases	43,418	43,418	43,418	43,418
Observations	1,742,840	1,742,840	1,742,840	1,742,840

Note: In columns 1 and 4 the dependent variable is the hazard that a case is closed in week t after filing, conditional on survival up to week t . *Active cases* are cases that have already seen a first hearing before the end of a given week but are not completed yet by the same date. *Standardized effort* is the number of hearings held by a judge in a given week divided by the average number of hearings needed to close the cases for which a hearing was held in the same week. *Total workload* is the cumulated sum of cases assigned to a judge up to the end of a given week. Columns 2 and 3 report the first stage regressions used to construct the third-order polynomials of residuals on which the control function estimates reported in column 4 are based. The instruments are respectively defined as the number of *red code* and *green code* cases assigned to a judge in the five weeks that precede and include a given week (or the number of cases assigned in the first month of life of a case, if the week is one of the first five of the life of the case). *Red code* cases are those that, according to a survey of judges and lawyers, are considered as urgent and/or complicated, thus requiring immediate action and/or greater effort. *Green code* cases are instead the remaining standard and simpler cases. The *Cragg-Donald Wald F statistic (Joint)* denotes the minimum eigenvalue of the joint first-stage F-statistic matrix. Standard errors in round parentheses are clustered at the case level.

Table 4: The effect of task juggling on the hazard of closing a case. No Case Fixed-effects

Dependent variable	$h(t X)$	Active cases	Standardized effort	$h(t X)$
Estimation method	ML	OLS-FE	OLS-FE	ML-Control
Stage	Second	First	First	Second
Variables	(1)	(2)	(3)	(4)
Active cases	-0.0053 (0.000)			-0.0126 (0.004)
Standardized effort	0.1126 (0.001)			0.2202 (0.057)
Workload/10	-0.0075 (0.001)	1.3218 (0.023)	0.0246 (0.001)	-0.0000 (0.004)
Number of monthly red cases		0.4145 (0.013)	0.0431 (0.001)	
Number of monthly green cases		0.5184 (0.011)	0.0305 (0.000)	
Cragg-Donald Wald F statistic (Joint)				356.7
Judge fixed effects	YES	YES	YES	YES
Calendar fixed effects	YES	YES	YES	YES
Type of case fixed effects	NO	NO	NO	NO
Number of judges	21	21	21	21
Number of cases	50,412	50,412	50,412	50,412
Observations	2,032,449	2,032,449	2,032,449	2,032,449

Note: In columns 1 and 4 the dependent variable is the hazard that a case is closed in week t after filing, conditional on survival up to week t . *Active cases* are cases that have already seen a first hearing before the end of a given week but are not completed yet by the same date. *Standardized effort* is the number of hearings held by a judge in a given week divided by the average number of hearings needed to close the cases for which a hearing was held in the same week. *Total workload* is the cumulated sum of cases assigned to a judge up to the end of a given week. Columns 2 and 3 report the first stage regressions used to construct the third-order polynomials of residuals on which the control function estimates reported in column 4 are based. The instruments are respectively defined as the number of *red code* and *green code* cases assigned to a judge in the five weeks that precede and include a given week (or the number of cases assigned in the first month of life of a case, if the week is one of the first five of the life of the case). *Red code* cases are those that, according to a survey of judges and lawyers, are considered as urgent and/or complicated, thus requiring immediate action and/or greater effort. *Green code* cases are instead the remaining standard and simpler cases. The *Cragg-Donald Wald F statistic (Joint)* denotes the minimum eigenvalue of the joint first-stage F-statistic matrix. Standard errors in round parentheses are clustered at the case level.

Table 5: The effect of task juggling on the hazard of closing a case. Active cases with at least two hearings

Dependent variable	$h(t X)$	Active cases with at least two hearings	Standardized effort	$h(t X)$
Estimation method	ML	OLS-FE	OLS-FE	ML-Control
Stage	Second	First	First	Second
Variables	(1)	(2)	(3)	(4)
Active cases with at least two hearings	-0.0060 (0.000)			-0.0096 (0.004)
Standardized effort	0.1080 (0.001)			0.1302 (0.037)
Workload/10	-0.0102 (0.001)	0.7433 (0.017)	0.0246 (0.001)	-0.0070 (0.002)
Number of monthly red cases		0.2050 (0.009)	0.0431 (0.001)	
Number of monthly green cases		0.3892 (0.009)	0.0305 (0.000)	
Cragg-Donald Wald F statistic (Joint)				924.2
Judge fixed effects	YES	YES	YES	YES
Calendar fixed effects	YES	YES	YES	YES
Type of case fixed effects	NO	NO	NO	NO
Number of judges	21	21	21	21
Number of cases	50,412	50,412	50,412	50,412
Observations	2,032,449	2,032,449	2,032,449	2,032,449

Note: In columns 1 and 4 the dependent variable is the hazard that a case is closed in week t after filing, conditional on survival up to week t . *Active cases with at least two hearings* are cases that have already seen a second hearing before the end of a given week but are not completed yet by the same date. *Standardized effort* is the number of hearings held by a judge in a given week divided by the average number of hearings needed to close the cases for which a hearing was held in the same week. *Total workload* is the cumulated sum of cases assigned to a judge up to the end of a given week. Columns 2 and 3 report the first stage regressions used to construct the third-order polynomials of residuals on which the control function estimates reported in column 4 are based. The instruments are respectively defined as the number of *red code* and *green code* cases assigned to a judge in the five weeks that precede and include a given week (or the number of cases assigned in the first month of life of a case, if the week is one of the first five of the life of the case). *Red code* cases are those that, according to a survey of judges and lawyers, are considered as urgent and/or complicated, thus requiring immediate action and/or greater effort. *Green code* cases are instead the remaining standard and simpler cases. The *Cragg-Donald Wald F statistic (Joint)* denotes the minimum eigenvalue of the joint first-stage F-statistic matrix. Standard errors in round parentheses are clustered at the case level.

Table 6: The effect of task juggling on the hazard of closing a case. Standard errors cluster at judge level

Dependent variable	$h(t X)$	Active cases	Standardized effort	$h(t X)$
Estimation method	ML	OLS-FE	OLS-FE	ML-Control
Stage	Second	First	First	Second
Variables	(1)	(2)	(3)	(4)
Active cases	-0.0054 (0.001)			-0.0112 (0.006)
Standardized effort	0.1119 (0.005)			0.2022 (0.095)
Workload/10	-0.0071 (0.002)	1.3222 (0.426)	0.0246 (0.008)	-0.0012 (0.007)
Number of monthly red cases		0.4147 (0.168)	0.0431 (0.009)	
Number of monthly green cases		0.5182 (0.167)	0.0305 (0.007)	
Cragg-Donald Wald F statistic (Joint)				425.6
Judge fixed effects	YES	YES	YES	YES
Calendar fixed effects	YES	YES	YES	YES
Type of case fixed effects	NO	NO	NO	NO
Number of judges	21	21	21	21
Number of cases	50,412	50,412	50,412	50,412
Observations	2,032,449	2,032,449	2,032,449	2,032,449

Note: In columns 1 and 4 the dependent variable is the hazard that a case is closed in week t after filing, conditional on survival up to week t . *Active cases* are cases that have already seen a first hearing before the end of a given week but are not completed yet by the same date. *Standardized effort* is the number of hearings held by a judge in a given week divided by the average number of hearings needed to close the cases for which a hearing was held in the same week. *Total workload* is the cumulated sum of cases assigned to a judge up to the end of a given week. Columns 2 and 3 report the first stage regressions used to construct the third-order polynomials of residuals on which the control function estimates reported in column 4 are based. The instruments are respectively defined as the number of *red code* and *green code* cases assigned to a judge in the five weeks that precede and include a given week (or the number of cases assigned in the first month of life of a case, if the week is one of the first five of the life of the case). *Red code* cases are those that, according to a survey of judges and lawyers, are considered as urgent and/or complicated, thus requiring immediate action and/or greater effort. *Green code* cases are instead the remaining standard and simpler cases. The *Cragg-Donald Wald F statistic (Joint)* denotes the minimum eigenvalue of the joint first-stage F-statistic matrix. Standard errors in round parentheses are clustered at the judge level.

Table 7: The effect of task juggling on the hazard of closing a case. Standard errors cluster at judge-week level

Dependent variable	$h(t X)$	Active cases	Standardized effort	$h(t X)$
Estimation method	ML	OLS-FE	OLS-FE	ML-Control
Stage	Second	First	First	Second
Variables	(1)	(2)	(3)	(4)
Active cases	-0.0054 (0.000)			-0.0112 (0.006)
Standardized effort	0.1119 (0.004)			0.2022 (0.084)
Workload/10	-0.0071 (0.001)	1.3222 (0.054)	0.0246 (0.004)	-0.0012 (0.006)
Number of monthly red cases		0.4147 (0.085)	0.0431 (0.009)	
Number of monthly green cases		0.5182 (0.049)	0.0305 (0.004)	
Cragg-Donald Wald F statistic (Joint)				425.6
Judge fixed effects	YES	YES	YES	YES
Calendar fixed effects	YES	YES	YES	YES
Type of case fixed effects	NO	NO	NO	NO
Number of judges	21	21	21	21
Number of cases	50,412	50,412	50,412	50,412
Observations	2,032,449	2,032,449	2,032,449	2,032,449

Note: In columns 1 and 4 the dependent variable is the hazard that a case is closed in week t after filing, conditional on survival up to week t . *Active cases* are cases that have already seen a first hearing before the end of a given week but are not completed yet by the same date. *Standardized effort* is the number of hearings held by a judge in a given week divided by the average number of hearings needed to close the cases for which a hearing was held in the same week. *Total workload* is the cumulated sum of cases assigned to a judge up to the end of a given week. Columns 2 and 3 report the first stage regressions used to construct the third-order polynomials of residuals on which the control function estimates reported in column 4 are based. The instruments are respectively defined as the number of *red code* and *green code* cases assigned to a judge in the five weeks that precede and include a given week (or the number of cases assigned in the first month of life of a case, if the week is one of the first five of the life of the case). *Red code* cases are those that, according to a survey of judges and lawyers, are considered as urgent and/or complicated, thus requiring immediate action and/or greater effort. *Green code* cases are instead the remaining standard and simpler cases. The *Cragg-Donald Wald F statistic (Joint)* denotes the minimum eigenvalue of the joint first-stage F-statistic matrix. Standard errors in round parentheses are clustered at the judge-week level.