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Household Wealth

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Key Findings

- This brief examines how Better Work workers' household wealth, debt payments and social security memberships compared to non-Better Work employees.
- Workers in both Vietnam and Indonesia were found to acquire more household assets and social security memberships over time.
- Over time, being a part of a Better Work factory seems to have weakly significant increases in borrowing. Better Work employees tend to borrow an average of \$116-\$136 more at the endline than at the baseline.
- In Indonesia, we find that Better Work employees in Indonesia pay \$26.73 more to their debt and borrow \$18.58 more per month than non-Better Work employees.
- Over time, employees in both Better Work and non-Better Work factories are more likely to have social insurance and less likely to have other types of social security memberships. Further investigation is recommended in order to discover the cause of these shifts from the baseline to the endline.
- In Indonesia, Better Work employees also appear to have more health incidence social security memberships at the endline than at the baseline.

Household wealth is measured by the amount of money workers borrow, save, and pay off to debt, the social security memberships that they are a part of, and the household assets they have. In general, we see workers acquiring more household assets and social security memberships over time. Additionally, an interesting phenomenon arises where Better Work workers tend to borrow significantly more money at endline.

At baseline in Vietnam, employees in Better Work factories were significantly more likely to have health incidence, work incidence, and social insurance social security memberships than their non-Better Work counterparts. Accordingly, they were significantly less likely to have no social security memberships. Better Work employees were also significantly less likely to have a private toilet. However, at baseline, 92.8% of Better Work respondents still indicated they had a private toilet. In addition, more than 90% of Better Work workers reported having running water, a permanent roof, and/or a motorbike.

In Indonesia at baseline, the majority of Better Work workers (greater than three quarters) tended to be members of both health and work incidence social security organizations. Better Work employees were less likely to have health insurance, but that is likely a result of the demographics of their factory given that the effect becomes insignificant when controlling for worker characteristics. On average, Better Work employees were paying more toward their debt, but they were also borrowing more than their non-Better Work counterparts, which may indicate that they were more confident in taking on debt because they believed they had jobs that were steady enough to allow them to pay it off over time. Moreover, Better Work employees were less likely to have running water, more likely to have a motorbike, and more likely to have internet. However, at baseline, 92.2% of Better Work employees still indicated that they had running water, and 90% of Better Work workers still reported having a permanent roof, a motor bike, TV, or a private toilet.

Variable Definitions:

- *Money_BorrowUSD*: Amount of money borrowed in past month, standardized to USD
- *Debt_PayUSD*: Amount of money saved or paid towards debt in past month, standardized to USD
- *borrow_save_diff*: Difference between amount of money borrowed and the amount of money saved/paid towards debt, standardized to USD
- *Social_health*: Member of health incidence /insurance social security (binary)
- *Social_work*: Member of work incidence /insurance social security (binary)
- *Social_social*: Member of social insurance social security (binary)
- *Social_other*: Member of other insurance social security (binary)
- *Social_none*: Not member of any social security organization (binary)
- *has_permroof*: Has permanent roof (binary)
- *has_motorbike*: Has motorbike (binary)
- *has_TV*: Has TV (binary)
- *has_privatetoilet*: Has private toilet (binary)
- *has_runningwater*: Has running water in home (binary)
- *Internet_onphone*: Do you access the internet on your phone? (binary)
- *has_cellphone*: Has cell phone (binary)
- *has_smartphone*: Has smart phone (binary)
- *has_radio*: Has radio (binary)
- *has_internet*: Has internet (binary)
- *has_dirtfloor*: Has dirt floor in home (binary)

Table 1 Vietnam Household Wealth Baseline Summary Statistics

VARIABLES	Better Work Factories					Non-Better Work Factories					Mean Difference
	N	mean	sd	min	max	N	mean	sd	min	max	
<i>Debt_PayUSD</i>	637	102.7	174.8	0	1,892	607	97.80	196.4	0	3,080	4.9
<i>Money_BorrowUSD</i>	645	34.67	225.1	0	4,400	596	28.57	139.6	0	2,200	6.1
<i>borrow_save_diff</i>	621	-67.10	274.0	-1,760	4,400	582	-66.08	211.5	-2,200	2,112	-1.02
<i>Social_health</i>	683	0.987	0.114	0	1	654	0.901	0.299	0	1	0.086***
<i>Social_work</i>	683	0.641	0.480	0	1	654	0.580	0.494	0	1	0.061**
<i>Social_social</i>	683	0.958	0.202	0	1	654	0.865	0.342	0	1	0.093***
<i>Social_other</i>	683	0.303	0.460	0	1	654	0.310	0.463	0	1	-0.007
<i>Social_none</i>	683	0.00293	0.0541	0	1	654	0.0398	0.196	0	1	-0.037***
<i>has_dirtfloor</i>	680	0.309	0.462	0	1	652	0.279	0.449	0	1	0.03
<i>has_runningwater</i>	680	0.941	0.235	0	1	652	0.934	0.248	0	1	0.007
<i>has_privatetoilet</i>	680	0.928	0.259	0	1	652	0.965	0.185	0	1	-0.037***
<i>has_permroof</i>	680	0.900	0.300	0	1	652	0.900	0.300	0	1	0
<i>has_motorbike</i>	680	0.947	0.224	0	1	652	0.962	0.192	0	1	-0.015
<i>has_TV</i>	680	0.891	0.312	0	1	652	0.906	0.291	0	1	-0.015
<i>has_radio</i>	680	0.176	0.382	0	1	652	0.166	0.372	0	1	0.01
<i>has_cellphone</i>	680	0.803	0.398	0	1	652	0.833	0.373	0	1	-0.03
<i>has_smartphone</i>	680	0.825	0.380	0	1	652	0.836	0.371	0	1	-0.011
<i>has_internet</i>	680	0.693	0.462	0	1	652	0.707	0.455	0	1	-0.014
<i>Internet_onphone</i>	680	0.809	0.394	0	1	652	0.787	0.410	0	1	0.022

*** p<0.01, ** p<0.05, * p<0.1

Table 2 Indonesia Household Wealth Baseline Summary Statistics

VARIABLES	Better Work Factories					Non-Better Work Factories					Mean Difference
	N	mean	sd	min	max	N	mean	sd	min	max	
<i>Debt_PayUSD</i>	176	30.89	83.40	0	781	163	8.013	16.65	0	88.75	22.877***
<i>Money_BorrowUSD</i>	178	25.19	59.21	0	426	164	5.299	20.37	0	213	19.891***
<i>borrow_save_diff</i>	175	-5.608	85.22	-710	284	162	-2.347	17.43	-88.75	170.4	-3.261
<i>Social_health</i>	205	0.746	0.436	0	1	204	0.877	0.329	0	1	-0.131***
<i>Social_work</i>	205	0.785	0.412	0	1	204	0.824	0.382	0	1	-0.039
<i>Social_social</i>	205	0.0488	0.216	0	1	204	0.0735	0.262	0	1	-0.025
<i>Social_other</i>	205	0	0	0	0	204	0.0882	0.284	0	1	-0.088***
<i>Social_none</i>	205	0.0439	0.205	0	1	204	0.0343	0.182	0	1	0.01
<i>has_dirtfloor</i>	205	0.317	0.466	0	1	204	0.314	0.465	0	1	0.003
<i>has_runningwater</i>	205	0.922	0.269	0	1	204	0.975	0.155	0	1	-0.053**
<i>has_privatetoilet</i>	205	0.932	0.253	0	1	204	0.966	0.182	0	1	-0.034
<i>has_permroof</i>	205	0.946	0.226	0	1	204	0.966	0.182	0	1	-0.02
<i>has_motorbike</i>	205	0.951	0.216	0	1	204	0.902	0.298	0	1	0.049*
<i>has_TV</i>	205	0.951	0.216	0	1	204	0.922	0.270	0	1	0.029
<i>has_radio</i>	205	0.341	0.475	0	1	204	0.289	0.455	0	1	0.052
<i>has_cellphone</i>	205	0.634	0.483	0	1	204	0.627	0.485	0	1	0.007
<i>has_smartphone</i>	205	0.693	0.463	0	1	204	0.627	0.485	0	1	0.066
<i>has_internet</i>	205	0.312	0.465	0	1	204	0.211	0.409	0	1	0.101**
<i>Internet_onphone</i>	202	0.718	0.451	0	1	195	0.641	0.481	0	1	0.077

*** p<0.01, ** p<0.05, * p<0.1

Regression Results

In both Better Work and non-Better Work factories in Vietnam, workers tend to pay off \$66-\$67 more than they are borrowing each month. Over time, being a part of a Better Work factory seems to have weakly significant increases in borrowing. Better Work employees tend to borrow an average of \$116-\$136 more at endline than at baseline, while there is no significance for their non-BW counterparts. There is seemingly no change to the amount of debt either type of factory worker pays off over time. Given that there are no significant differences in *Debt_PayUSD* and *Money_BorrowUSD* over time, we find that Better Work employees in Vietnam borrow more money while paying off the same amount of debt. One possible explanation is that Better Work employees feel more confident over time in their job and their ability to take on more debt. Our following analysis will show that Better Work employees do not acquire significantly more of any type of household asset than their non-Better Work counterparts, and thus it is unclear what this money is being spent on.

We found in the summary statistics that Better Work employees in Vietnam at baseline are significantly less likely to have a private toilet, which is supported by Column 5 of Table 4. However, *has_privatetoilet* becomes much less significant (from *** to *) when controlling for worker demographics, which signifies to us that this difference is largely due to demographic differences between factory types. Otherwise, we did not find any differences at baseline between groups for household assets. Columns 1-4 and 6-7 in Table 4 and columns 1-8 in Table 5 show that at endline, all workers are more likely to have dirt floors, running water, permanent roofs, radios, smartphones, internet, and internet on their phones, but less likely to have private

toilets. Given that the negative coefficient for *has_privatetoilet* only occurs in the fixed effects model, and is only significant at the 10% level, we can conclude that the difference over time is likely negligible. However, there remains the unfavorable result that workers at endline are more likely to have dirt floors, and the reasons for this are unknown. The favorable results are that workers at endline are more likely to have basic life-supporting assets as well as technological assets that connect them to their friends and the world.

Summary statistics in Table 1 showed us that Better Work employees in Vietnam at baseline were more likely to have health, work, and social incidence social security memberships, and less likely to have no social security memberships. Once demographic differences are controlled for, *Social_work* becomes insignificant, but *Social_health*, *Social_social*, and *Social_none* remain significant. Columns 1 and 2 in Table 6 show that over time, Better Work employees are significantly less likely to have health incidence social security memberships. Columns 3-6 of Table 6 show that over time, employees in both Better Work and non-Better Work factories are more likely to have social insurance and less likely to have other types of social security memberships. The magnitude of the coefficients on *Social_other* are more than double the magnitude of the coefficients on *Social_social*, signifying that the shift away from *Social_other* is not entirely explained by the shift to *Social_social*. It is unclear what is leading Better Work employees to shift away from health memberships, and leading all employees to shift away from other memberships and into social memberships. This should be further investigated to discover the cause of these shifts from baseline to endline.

Table 3 Vietnam Borrowing/Saving Results

VARIABLES	(1) <i>Debt_PayUSD</i>	(2) <i>Debt_PayUSD</i>	(3) <i>Money_BorrowUSD</i>	(4) <i>Money_BorrowUSD</i>
<i>bw_factory</i>	5.512 (12.43)	-	6.590 (13.56)	-
<i>endline</i>	5.963 (15.76)	1.674 (17.88)	10.77 (12.77)	23.46 (31.28)
<i>bw_endline</i>	-1.045 (17.19)	0.240 (18.19)	105.2*	113.0*
Constant	86.60*** (32.99)	129.4 (140.9)	-80.19 (62.91)	-347.7 (470.8)
Worker Time Effects	RE	FE	RE	FE
Observations	2,418	2,418	2,437	2,437
R-squared		0.011		0.029
Number of uniqueID	1,324	1,324	1,327	1,327

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4 Vietnam Household Assets Regression Results (1)

VARIABLES	(1) <i>has_dirt floor</i>	(2) <i>has_dirt floor</i>	(3) <i>has_running water</i>	(4) <i>has_running water</i>	(5) <i>has_private toilet</i>	(6) <i>has_private toilet</i>	(7) <i>has_perm roof</i>	(8) <i>has_perm roof</i>
<i>bw_factory</i>	0.0264 (0.0497)	-	0.00627 (0.0183)	-	-0.0379* (0.0218)	-	-0.000646 (0.0223)	-
<i>endline</i>	0.408*** (0.0572)	0.449*** (0.0599)	0.0411** (0.0172)	0.0526** (0.0223)	-0.000350 (0.0134)	-0.0281* (0.0148)	0.0468*** (0.0181)	0.0292 (0.0203)
<i>bw_endline</i>	-0.0703 (0.0737)	-0.0857 (0.0744)	-0.00720 (0.0221)	-0.0118 (0.0233)	0.0338 (0.0261)	0.0392 (0.0272)	0.00459 (0.0234)	8.93e-05 (0.0234)
Constant	0.0756 (0.169)	0.547 -0.527	0.972*** (0.0275)	1.363*** -0.262	0.983*** (0.0265)	0.651*** -0.183	0.962*** (0.0354)	0.582*** -0.183
Worker Time Effects	RE	FE	RE	FE	RE	FE	RE	FE
Observations	2,534	2534	2,534	2534	2,534	2534	2,534	2534
R-squared		0.294		0.038		0.03		0.032
Number of uniqueID	1,334	1,334	1,334	1,334	1,334	1,334	1,334	1,334

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5 Vietnam Household Assets Regression Results (2)

VARIABLES	(1) <i>has_radio</i>	(2) <i>has_radio</i>	(3) <i>has_ smartphone</i>	(4) <i>has_ smartphone</i>	(5) <i>has_ internet</i>	(6) <i>has_ internet</i>	(7) <i>Internet_ onphone</i>	(8) <i>Internet_ onphone</i>
<i>bw_factory</i>	0.00449 (0.0339)	-	-0.0214 (0.0301)	-	-0.0244 (0.0383)	-	0.00306 (0.0230)	-
<i>endline</i>	0.396*** (0.0371)	0.359*** (0.0416)	0.0541** (0.0215)	0.0618** (0.0261)	0.142*** (0.0314)	0.166*** (0.0387)	0.0793*** (0.0160)	0.0721*** (0.0180)
<i>bw_endline</i>	-0.0522 (0.0677)	-0.0464 (0.0682)	-0.0229 (0.0338)	-0.0263 (0.0335)	0.0267 (0.0370)	-0.00115 (0.0373)	-0.0103 (0.0235)	-0.00532 (0.0237)
Constant	-0.0551 (0.202)	-0.856* -0.446	0.798*** (0.177)	1.140*** -0.34	0.916*** (0.220)	0.878*** -0.336	1.263*** (0.147)	0.475* -0.281
Worker Time Effects	RE	FE	RE	FE	RE	FE	RE	FE
Observations	2,534	2534	2,534	2534	2,534	2534	2,529	2529
R-squared		0.283		0.021		0.092		0.041
Number of uniqueID	1,334	1,334	1,334	1,334	1,334	1,334	1,334	1,334

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6 Vietnam Social Security Regression Results

VARIABLES	(1) <i>Social_</i> <i>health</i>	(2) <i>Social_</i> <i>health</i>	(3) <i>Social_</i> <i>social</i>	(4) <i>Social_</i> <i>social</i>	(5) <i>Social_</i> <i>other</i>	(6) <i>Social_</i> <i>other</i>	(7) <i>Social_</i> <i>none</i>	(8) <i>Social_</i> <i>none</i>
<i>bw_factory</i>	0.0785*** (0.0194)	-	0.0825*** (0.0213)	-	-0.0164 (0.0596)	-	-0.0351*** (0.0111)	-
<i>endline</i>	0.0237 (0.0184)	0.0164 (0.0202)	0.0393** (0.0167)	0.0414** (0.0197)	-0.0892* (0.0465)	-0.0989** (0.0476)	-0.00697 (0.00794)	-0.00376 (0.0106)
<i>bw_endline</i>	-0.0446* (0.0230)	-0.0451* (0.0235)	-0.0269 (0.0230)	-0.0354 (0.0234)	0.0847 (0.0656)	0.0857 (0.0662)	0.0192 (0.0131)	0.0202 (0.0143)
Constant	0.671*** (0.184)	0.561* (0.330)	0.566*** (0.192)	0.593* (0.324)	0.258 (0.177)	0.150 (0.451)	0.203 (0.127)	0.335* (0.181)
Worker Time Effects	RE	FE	RE	FE	RE	FE	RE	FE
Observations	2,546	2,546	2,546	2,546	2,546	2,546	2,546	2,546
R-squared		0.044		0.027		0.035		0.027
Number of uniqueID	1,334	1,334	1,334	1,334	1,334	1,334	1,334	1,334

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

In Indonesia, both Better Work and non-Better Work workers borrow and save money at a nearly balanced rate. In Table 2, the *borrow_save_diff* variable tells us that Better Work employees pay off around \$6 more than they borrow, and non-Better Work employees pay off around \$2 more than they borrow. However, the Better Work employees both borrow and save/pay off significantly more money than their non-Better Work counterparts. As Columns 1 and 3 in Table 7 show, when controlling for demographics, we find that Better Work employees in Indonesia pay \$26.73 more to their debt and borrow \$18.58 more per month than non-Better Work employees. This supports the difference in means we observed in the summary statistics in Table 2. These values also suggest that Better Work employees still tend to pay off more than they borrow.

We find over time that non-Better Work workers begin both paying off and acquiring more debt. Weak significance in column 4 of Table 7 and no significance in column 3 of Table 7 for endline show, however, that non-Better Work worker increased borrowing over time may not be entirely significant. This tells us that these workers may be paying off more debt over time without borrowing more. Conversely, Better Work workers start reducing the amount they pay off, but do not change the amount they borrow, as shown by the statistically significant coefficients on *bw_endline* in columns 1 and 2. This suggests that while Better Work employees start off borrowing and paying off more than their non-Better Work counterparts, there may be convergence in that Better Work employees start paying off less, and non-Better Work employees start paying off and borrowing more.

In terms of household assets, results of which are shown in Table 8, the largest changes between the baseline and the endline is that workers tend to be less likely to have a cellphone and more likely to have smartphone that has internet. This is possibly due to workers trading their cellphones for more advanced and expensive technology. Better Work workers were also more likely to report having a motorbike at the baseline, but columns 1 and 2 of Table 8 show that these reports decreased over time.

Workers are about 9% more likely to have work insurance at the endline and less likely to be a member of unspecified social security organizations. In the case of other social security, it appears that the difference between BW and non-BW employees disappears over time. Better Work employees also appear to have more health incidence social security memberships at endline than at baseline. However, all coefficients for social security memberships are only of weak significance, showing that there were likely only slight movements over time.

Table 7 Indonesia Borrowing/Saving Regression Results

VARIABLES	(1)	(2)	(3)	(4)
	<i>Debt_PayUSD</i>	<i>Debt_PayUSD</i>	<i>Money_BorrowUSD</i>	<i>Money_BorrowUSD</i>
<i>bw_factory</i>	26.73*** (9.997)	-	18.58** (7.223)	-
<i>endline</i>	9.640** (4.519)	13.07*** (4.429)	2.320 (7.222)	9.519* (5.371)
<i>bw_endline</i>	-18.15* (9.465)	-20.51** (8.427)	-4.292 (10.30)	-12.79 (10.33)
Constant	68.66* (38.91)	40.26 (43.53)	47.28 (43.35)	32.27 (36.41)
Worker Time Effects	RE	FE	RE	FE
Observations	694	694	696	696
R-squared		0.175		0.053
Number of uniqueID	395	395	395	395

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 8 Indonesia Household Assets Regression Results

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>has_ motorbike</i>	<i>has_ motorbike</i>	<i>has_ cellphone</i>	<i>has_ cellphone</i>	<i>has_ smartphone</i>	<i>has_ smartphone</i>	<i>has_ internet</i>	<i>has_ internet</i>
<i>bw_factory</i>	0.0675** (0.0338)	-	0.0121 (0.0774)	-	0.0482 (0.0720)	-	0.0726 (0.0769)	-
<i>endline</i>	0.0242 (0.0225)	0.0259 (0.0238)	-0.167** (0.0667)	-0.121 (0.0768)	0.205*** (0.0603)	0.166*** (0.0621)	0.442*** (0.0812)	0.430*** (0.0896)
<i>bw_endline</i>	-0.0704** (0.0338)	-0.0828** (0.0365)	0.0384 (0.0886)	-0.00198 (0.0887)	-0.0894 (0.0825)	-0.0753 (0.0798)	-0.189 (0.124)	-0.174 (0.132)
Constant	0.547*** (0.136)	1.024*** (0.263)	0.277 (0.289)	0.458 (0.442)	1.427*** (0.106)	0.927*** (0.324)	1.070*** (0.194)	0.931** (0.422)
Worker Time Effects	RE	FE	RE	FE	RE	FE	RE	FE
Observations	772	772	772	772	772	772	772	772
R-squared		0.068		0.115		0.094		0.273
Number of uniqueID	408	408	408	408	408	408	408	408

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 9 Indonesia Household Assets and Social Security Regression Results

VARIABLES	(1) <i>Internet_ onphone</i>	(2) <i>Internet_ onphone</i>	(3) <i>Social_ health</i>	(4) <i>Social_ health</i>	(5) <i>Social_ work</i>	(6) <i>Social_ work</i>	(7) <i>Social_ other</i>	(8) <i>Social_ other</i>
<i>bw_factory</i>	0.0611 (0.0680)	-	-0.0714 (0.0795)	-	-0.00881 (0.0780)	-	-0.0745 (0.0477)	-
<i>endline</i>	0.175***	0.161***	-0.0427 (0.0428)	-0.0842 (0.0511)	0.0711 (0.0433)	0.0902*	-0.0594 (0.0398)	-0.0513*
<i>bw_endline</i>	-0.0690 (0.0781)	-0.0607 (0.0722)	0.116 (0.0854)	0.137*	-0.0539 (0.0525)	-0.0429 (0.0535)	0.0678*	0.0517*
Constant	1.462*** (0.136)	1.283*** (0.317)	0.404 (0.299)	0.520 (0.336)	0.681** (0.290)	2.004*** (0.313)	-0.207 (0.170)	-1.145*** (0.140)
Worker Time Effects	RE	FE	RE	FE	RE	FE	RE	FE
Observations	757	757	772	772	772	772	772	772
R-squared		0.100		0.129		0.104		0.324
Number of uniqueID	406	406	408	408	408	408	408	408

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1