Asset Redeployability and Employee Performance

Brid Murphy
Dublin City University
brid.murphy@dcu.ie

Li Sun
The University of Tulsa
li-sun@utulsa.edu

Asset Redeployability and Employee Performance

Abstract

We examine the impact of holding more redeployable assets on employee performance, measured as employee productivity. Using a large panel sample, we find a significant positive relation between asset redeployablity and employee performance, suggesting that employees in firms with more redeployable assets demonstrate higher productivity. In addition, we decompose the employee productivity into two components, namely labor efficiency and cost components, and uncover that asset redeployability is significantly and positively related to both components.

Keywords: Asset redeployability; employee productivity; Employee performance
JEL Classification: G31 G32 M40 M41

Asset Redeployability and Employee Performance

Introduction

Asset redeployability describes how assets may be strategically reallocated by a business, normally from a less profitable area of use to a more profitable one, and largely in secondary markets where transactions take place with investors. This typically involves reassigning the use of idle or underutilized assets in order to increase ultimate profitability. It is widely accepted that firms whose assets may be more easily redeployed have a greater capacity to enhance operational efficiency and to sustain financial commitments. Such firms report a lower cost of capital and a lower firm risk (Ortiz-Molina and Phillips 2014), higher bond credit ratings (Benmelech and Bergman 2009) and more optimal capital allocation (Gavazza 2011). In addition, they are also better positioned to instigate and promote sustainable strategies over the longer term and to capitalize on available investment opportunities, even in times of economic and market uncertainty (Kim and Kung 2017). If firms with more redeployable assets demonstrate stronger operating performance, we posit that employees in such firms also demonstrate stronger performance because prior research links strong firm performance to superior employee performance (Dyer and Reeves 1995). Hence, the purpose of our study is to examine the relation between asset redeployability and employee performance, measured as employee productivity.

We obtain asset redeployability data from Professor Kim[1] and construct a ratio of net income before labor cost to the number of employees to proxy for employee productivity, consistent with prior research. Using a large panel sample with 20,549 firm-year observations (representing 3205 US publicly traded companies), we find a significant and positive relation between asset redeployability and employee productivity. This evidence suggests that firms with more redeployable assets show stronger employee performance, highlighting the importance and benefits of holding redeployable assets. We perform a battery of robustness checks such as using alternative measures of asset redeployability and employee productivity, a changes analysis and a two-stage regression analysis. We still obtain consistent results, supporting our hypothesis. We further decompose our employee productivity ratio into a labor efficiency component and a labor cost component, and find that asset redeployability is significantly and positively related to both components, which suggests that holding more redeployable assets can improve not only labor efficiency but also employee compensation (i.e., labor cost).

By indicating a positive impact of asset redeployability on employee performance, our study makes several important contributions. First, we contribute to a growing literature in accounting and finance that investigates the impact of asset redeployability on firm characteristics. To the best of our knowledge, we are among the first researchers to directly examine the influence of asset redeployability on employee performance. Second, our study joins the debate on whether holding more redeployable assets is beneficial or not to a corporation. Our findings highlight the advantages and benefits of holding more redeployable assets as doing so can greatly increase the operational flexibility and competitive advantages including superior employee productivity. Hence, our study should lead to a more comprehensive understanding of this debate on asset redeployability. Third, our findings may encourage investors to invest more in firms with more redeployable assets because we find that employees in such firms are more productive. Our findings may also encourage firms to maintain a high level of redeployable assets in order to maintain a high level of operating flexibility.

[1] https://blogs.cornell.edu/hyunseobkim/asset-redeployability/

The rest of this paper is organized as follows. Section Literature review and hypothesis development reviews the literature and develops the hypothesis. Section Research design shows the research design, and Sect. Primary findings discusses the primary results. Section Additional tests reports the results of additional tests. Section Conclusion concludes our study.

Literature Review and Hypothesis Development

Asset Redeployability

Asset redeployability describes how assets may be strategically reallocated by a business and sold to investors in secondary markets. Associated transaction costs may result in fluctuating levels of redeployability across firms and industries (Ramey and Shapiro 2001). Where transaction costs are high, companies may opt to defer redeployment activities (Caballero 1991; Bloom 2009). Kim and Kung's (2017) seminal work reports that, in times of rising uncertainty, firms with higher redeployability capacity expand investment. Where firms are financially constrained, assert redeployability is also a significant factor in relation to corporate investment and equity value (Rong et al. 2020). Redeployability capacity may also impact on decisions to engage in merger activity (Almeida et al. 2011) and in relation to capital reallocation (Gavazza 2011).

Higher asset redeployability also improves firms' operating flexibility and reduces both firm risk and cost of capital (Ortiz-Molina and Phillips 2014). The attributes of the assets may impact the financing of asset activities. For example, Williamson (1988) asserts that assets which are more redeployable could be debt-financed, while less redeployable assets could more appropriately be financed by equity, as more discretion is associated with such financing. Firms with greater redeployability capacity are therefore more likely to issue debt instruments rather than seeking loans from financial institutions. In the event of breaches of debt covenants, these firms generally sell more assets (Chen et al. 2020). Significant asset redeployment is reported in the aviation firms, where optimum decisions on redeployment can increase bond ratings and reduce the cost of external financing and credit spreads (Benmelech and Bergman 2009).

The impact of asset redeployability on financial reporting has also been examined, with particular focus on earnings management. Research reports earnings may be manipulated through the sale of noncurrent assets, resulting in overstatement of earning and/or earnings smoothing and affecting balance sheets positions, which form the basis of debt covenants (Bartov 1993; Herrmann et al. 2003). Financial statement auditors generally perceive this as a significant risk area, demonstrated by greater numbers of going concerns opinions and higher audit fees to firms with high levels of asset redeployability (Gul et al. 2021). Findings also report increased auditor resignations from such firms (Gul et al. 2021). Research with regard to tax avoidance, however, reports more positive findings. Research by Hasan et al. (2021) over a 30-year period reports a lower probability of tax avoidance attaching to firms with higher asset redeployability.

Employee Performance

Prior studies have examined determinants of employee performance. These have largely comprised quantitative studies using survey instruments. Filippo (1982) reports that employee motivation is a key contributor, while Holzer (1990) posits a wider array of contributing factors pertinent to the individual employees (e.g., gender, duration of training, experience, tenure and salary). Firm-level determinants that may positively correlate with employee performance are also

reported, including firm performance (Dyer and Reeves 1995) and human resource (HR) practices (Kick and McGrath 1996**). Other authors have focused on the ability of the firm to attract higher caliber employees, which can in turn lead to higher levels of employee performance (e.g., Stuebs and Sun 2010). Studies including Edmans (2011), Sanchez and Benito-Hernandez (2015) and Sun and Yu (2015) show that the response of the firm to prevailing societal issues is also pertinent (e.g., firm activities in relation to corporate social responsibility matters). Key industry characteristics are similarly described as key determinants, including growth, capital intensity and differentiation strategies (Datta et al. 2005). These overall findings suggest that employee-level factors (e.g., employee motivation, salary), firm-level factors (e.g., firm performance) and industry-level factors (e.g., growth) may impact on employee performance.

Hypothesis Development

Firms with more redeployable assets have more flexibility and options in selling their assets in the secondary markets, which increases the liquidity of such firms. The high level of liquidity can help firms cover their operational needs, satisfy their financial obligations and more importantly enhance their operational flexibility. Therefore, prior research finds that asset redeployability is related to positive firm outcomes including low cost of capital and optimal capital allocation, and those favorable outcomes are associated with stronger f irm performance (Kim and Kung 2017).

Prior research suggests that employee performance is often influenced by the characteristics of employees such as motivation, experience, training, compensation and gender (Flippo 1982; Holzer 1990) and the characteristics of f irms including corporate cultural, human resources practice and firm performance (Dyer and Reeves 1995; Koch and McGrath 1996; Datta et al. 2005). Conventional wisdom also holds that employee performance and a firm's operating performance are highly correlated. If firms with more redeployable assets have In terms of the working of the equation, theIa,j(use) indicator variable equals one if the given asset a is used by industry j. Redeployabilitya represents the redeployability score of the given asset a. Equation (1) therefore reports a greater redeployability score of a given asset where the asset is used by greater numbers of industries. Step 2 calculates asset redeployability at industry level. Using the Kim and Kung (2017) model, this step value weights the asset-level score determined in Eq. (1) across the total 180 assets, as follows:stronger operating performance, we expect that employees in such firms show higher productivity. We propose the following hypothesis.
H1: Asset redeployability is positively related to employee performance.

Research Design

Measuring Asset Redeployability

To measure asset redeployability, we use Kim and Kung's (2017) corporate asset redeployability data. Using a three-step approach, we develop firm-level redeployability scores which are then used as primary independent variable in our subsequent empirical analysis.

Step 1 comprises the calculation of redeployability at asset level. Using the US 1997 Bureau of Economic Analysis (BEA) capital flow table, which summarizes assets across 180 assets in 123 US industry sectors, we determine the ratio of the number of industries that use a given asset to the number of total industries (i.e., 123 industries), as follows:

$$Redeployability_a = \sum_{j=1}^{123} I_{a,j}(use)\ /123 \qquad \text{[Equation 1]}$$

In terms of the working of the equation, the $I_{a,j}$(use) indicator variable equals one if the given asset a is used by industry j. Redeployability represents the redeployability score of the given asset a. Equation (1) therefore reports a greater redeployability score of a given asset where the asset is used by greater numbers of industries. Step 2 calculates asset redeployability at industry level. Using the Kim and Kung (2017) model, this step value weights the asset-level score determined in Eq. (1) across the total 180 assets, as follows:

$$Redeployability_k = \sum_{a=1}^{180} W_{k,a}(Redeployability_a) \qquad \text{[Equation 2]}$$

Redeployability_a is the resulting asset-level redeployability score of a given asset a from Eq. (1). $W_{k,a}$ details the industry's expenditure, k, on asset a divided by its total capital expenditures (determined from the BEA table). The resultant Redeployability_k score represents the asset redeployability score for industry k. This facilitates an examination of the redeployability ranking of assets by industry. The final step, step 3, calculates redeployability scores at firm level. Following Kim and Kung's (2017) approach, we value weight the industry-level scores calculated in Eq. (2) across business segments, using the following equation:

$$Redeployability_j = \sum_{j=1}^{n_i} W_{i,j}(Redeployability_k) \qquad \text{[Equation 3]}$$

Redeployability*k* is the redeployability of industry k determined in Eq. (2). $W_{i,j}$ represents the sales divided by the total sales of firm *I* for industry segment *j*, while n_i describes the number of industry segments of firm *i*. The resulting Redeployability_j is the redeployability score at firm level. This Redeployability$_j$ score is a key component in our empirical analysis.

Measuring Employee Performance

To measure employee performance, we use a measure of employee productivity, comprising the ratio of net income before employee (labor) cost to the number of employees. This measure has been reported in a number of prior studies (e.g., Sanchez and Benito-Hernandez 2015; Stuebs and Sun 2010).

This measure is objective in capturing the level of employee performance.

$$Employee\ performance\ (EMP\_PRO) = \frac{Net\ Income\ (NI) + Labor\ Cost\ (XLR)}{Number\ of\ Employees\ (EMP)} \qquad \text{[Equation 4]}$$

Labor cost (XLR) includes all direct and indirect payments to all employees. Specifically, it includes salaries and wages, profit sharing, pension, incentive compensation, other benefit plans and payroll taxes. Not many US companies report the amount of XLR to Compustat database, resulting in a relatively small sample of firms in our study. In order to further investigate employee productivity, we use the Dupont technique to examine the labor cost component (LABOR_CST)2 and labor efficiency (LABOR_EFF). The former encapsulates average compensation per employee, while the latter details the net income generated by unit employee cost.

$$Labor\ Efficiency\ (LABOR\_EFF) = \frac{Net\ Income\ (NI) + Labor\ cost\ (XLR)}{Labor\ Cost\ (XLR)} \qquad \text{[Equation 5]}$$

$$Labor\ Cost\ (LABOR\_CST) = \frac{Labor\ Cost\ (XLR)}{Number\ of\ Employees\ (EMP)} \qquad \text{[Equation 6]}$$

Empirical Specification

We use the following regression equation to estimate the impact of asset redeployability on employee performance.

$$EMP\_PRO_{i,t} = \beta_0 + \beta_1 \boldsymbol{REDEPLOY_{i,t}} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 ROA_{i,t} + \beta_5 MTB_{i,t} + \beta_6 CASHFLOW_{i,t} + \beta_7 CASH_{i,t} + \beta_8 ASSETAGE_{i,t} + \beta_9 FIRMAGE_{i,t} + \beta_{10} LABORINT_{i,t} + \beta_{11} ADV_{i,t} + Industry\ \&\ Year\ Indicators + \varepsilon_{i,t} \quad \text{[Equation 7]}$$

The dependent variable in the above equation shows the level of employee productivity. As the primary independent variables of interest, REDEPLOY measures the level of redeployable assets. To test our hypothesis (H1), we analyze the coefficient of REDEPLOY in Eq. (7). If employees in firms with more redeployable assets demonstrate higher productivity, we expect a significant and positive coefficient (β1) of REDEPLOY.

Following prior research, we control for variables that may influence employee performance. We control for firm size (SIZE), the age of firms in the Compustat database (FIRMAGE), labor intensity (LABORINT), the age of long-term assets (ASSETAGE), market-to-book ratio (MTB), leverage ratio (LEV), level of corporate cash holdings (CASH), cash f lows from operating activities (CASHFLOW) and advertising expenses (ADV). Consistent with Sun and Yu (2015), we control for the age of long-term assets (ASSETAGE) in Eq. (7) because employees in firms with younger assets (e.g., more advanced machines) may show higher productivity. In a similar vein, we include FIRMAGE in our model because "older" firms may manage their employees better, relative to "younger" firms. We control for CASHFLOW and CASH because firms with a higher level of cash holdings can afford to pay their employees more, possibly leading to higher employee productivity. To account for the labor performance in different industries (labor-intensive industries vs. machine-intensive industries), we use the ratio of labor cost to sales as our variable of labor intensity (LABORINT) in Eq. (7). Consistent with many other studies, we winsorize continuous variables in the baseline regression model at the level 1 and 99% and include year and industry dummies in the regression analysis. Following Petersen (2009), we use clustered standard errors regression (by firm and by year) as the primary regression technique in our study. Appendix 1 provides detailed definitions of the above variables.

Sample Selection and Descriptive Statistics

Our sample selection process is straightforward, which begins with downloading the asset redeployability data (from 1985 to 2015) directly from Professor Kim's website. It consists of 291,965 firm year observations. We next merge this dataset with Compustat database and construct variables for our empirical analysis. In this process, we lose 271,416 observations, largely due to the data unavailability of labor cost (XLR) in Compustat database. Our final sample consists of 20,549 observations from 1987 to 2015, representing 3205 US publicly traded companies. Panel A of Table 1 details our sample selection process.

Panel B of Table 1 presents the sample distribution by year. There are 125 (885) observations in the year of 1987 (2015). The number of observations fluctuates from 598 to 790 per year from 1988 to 2010, from 885 to 982 per year from 2011 to 2015. Overall, the number of observations displays an increasing pattern from 1987 to 2001, a decreasing pattern from 2001 to 2010 and an increasing pattern form 2010 to 2014. Panel C of Table 1 reports the sample distribution by industry, based on the first two digits of the SIC code. The most represented industries include chemical with 1318 observations (SIC = 28; 6.41%), electric gas and sanitary

services with 1,223 observations (SIC = 49; 5.95%), eating and drinking places with 1,076 observations (SIC = 58; 5.24%), security and commodity brokers with 1,627 observations (SIC = 62; 7.92%) and business services with 1502 observations (SIC = 73; 7.31%).

[insert Table 1 about here]

Table 2 reports sample descriptive statistics. The mean and median values of employee performance (EMP_PRO) are 0.054 and 0.052, respectively. The mean values of labor efficiency (LABOR_EFF) and labor cost component (LABOR_CST) are 0.871 and 0.069, respectively. The average asset redeployability is 0.431. The median values of leverage (LEV), profitability (ROA) and growth (MTB) are 0.147, 0.031 and 1.762, respectively, implying that our sample firms have normal operating performance.

[insert Table 2 about here]

Correlations

Table 3 provides Pearson and Spearman correlation matrices for the variables used in the baseline regression model. As shown in Table 3, asset redeployability (REDEPLOY) is positively and significantly correlated with employee productivity (EMP_PRO) in both correlation matrices. This evidence suggests that holding more redeployable assets may be associated with a higher level of employee productivity, lending some initial support to our hypothesis. In addition, Table 3 displays that asset redeployability is also positively and significantly correlated with both labor efficiency component and labor cost component. In Table 3, most correlations among variables are statistically significant, which suggests that we need to test our hypothesis in a multivariate setting.

[insert Table 3 about here]

Primary Findings

To test the association between asset redeployability and employee productivity, we estimate the baseline regression model and report primary findings in Table 4. Specifically, in Column 1 of Table 4, we include only REDEPLOY and year/industry indicators. In Column 2, we include all variables in the baseline regression. As shown in both columns, the coefficients on REDEPLOY are significant positive. For instance, the coefficient on REDEPLOY is 0.129 with a t-value of 4.53 in Column 2. We next re-estimate the baseline model after removing firms in the highly regulated industries (SIC 4000–4999 & 6000–6999) and report findings in Column 3. As shown in Column 3, the coefficient on REDEPLOY is still significantly positive. Collectively, results of Table 4 support our hypothesis and suggest that firms with more redeployable assets have higher employee performance, strengthening the benefits of holding more redeployable assets.

Regarding the control variables, Column 2 of Table 4 displays that EMP_PRO is positively related to SIZE, ROA and FIRMAGE and negatively related to LEV, CASHFLOW, LABORINT and ADV. The findings are fairly consistent with general expectations. For example, the above positive relations suggest that larger firms, firms with higher profit or more experienced firms ("older" firms) demonstrate better employee productivity. These negative relations imply that

firms with more debt, firms with excessive operating cash flows, firms in labor-intensive industries or firms with excessive advertising expenses demonstrate lower employee productivity. In addition, we also check the variance inflation factor (VIF) values when estimating the baseline regression model and find that VIF values are all fairly small, suggesting that multicollinearity should not be a major concern in our regression analysis. Our findings are also economically meaningful. Based on Column 2 of Table 4, a one standard deviation increase in the level of asset redeployability is associated with an increase of 0.344 in employee productivity.

[insert Table 4 about here]

Additional Tests

Alternative Measures of Asset Redeployability

We use two alternative measures of asset reliability, namely REDEPLOY_ALT1 and REDEPLOY_ALT2, which are developed by Kim and Kung (2017) to test the strength of the key redeployability measures. These were then used to re-examine our model and to present the result in Table 5. REDEPLOY_ALT1 weights redeployability at firm level of Compustat firms, using market capitalization in each BEA industry year. REDEPLOY_ALT2 uses the equal weight, rather than market capitalization.

Columns 1 and 2 of Table 5 report that the coefficients on REDEPLOY_ALT1 and REDEPLOY_ALT2 are 0.288 with a t-value of 4.60 and 0.160 with a t-value of 4.23, respectively. These results show that our primary findings are robust to alternative measures of asset redeployability.

[insert Table 5 about here]

Alternative Measures of Employee Performance

In this additional test, we use two alternative measures of EMP_PRO. The first alternative measure, EMPPRO_ALT1, is measured as the ratio of sales to the number of employees. Although sales and net income are highly correlated, the variable of sales is influenced by fewer factors including tax considerations and interest payments, relative to the variable of net income. We believe that this would be a good alternative measure of employee productivity. The second alternative measure, EMPPRO_ALT2, is an indicator variable that equals one if the value of EMP_PRO is greater than the median and zero otherwise. We use logistic regression when using EMPPRO_ALT2 as the dependent variable.

Column 1 of Table 6 reports that the coefficient on REDEPLOY is 0.888 with a t-value of 2.62 where the dependent variable is EMPPRO_ALT1. Column 2 displays that the relation between REDEPLY and EMPPRO_ALT2 is significant and positive (coefficient = 0.128; Chi-square value = 23.38). Hence, results of Table 6 still strongly support our hypothesis and also strengthen our primary findings by showing that they are robust to alternative measures of employee productivity.

[insert Table 6 about here]

Changes Analysis

In our previous tests, we use a level analysis that regresses the level of employee productivity on the level of asset redeployability and control variables. To provide additional evidence to our primary findings and to curtail concerns about omitted correlated variables that may influence both employee productivity and asset redeployability simultaneously, we perform a changes analysis that regresses the change in employee productivity from year t−1 to year t (i.e., ΔEMP_PRO) and on the change in asset redeployability from year t − 1 to year t (i.e., ΔREDEPLOY) and in control variables. This test can provide additional evidence on whether the differences in employee productivity can be attributed to the differences in asset redeployability.

We re-estimate the baseline regression model using the changes in the variables and report results in Table 7. The coefficient on ΔREDEPLOY is 0.051 with a t-value of 2.39, suggesting a significant positive relation between ΔREDEPLOY and ΔEMP_PRO. This evidence implies that an increase (a decrease) in asset redeployability can lead to an increase (a decrease) in employee productivity, strengthening our primary findings and mitigating concerns about omitted correlated variables in our study.

[insert Table 7 about here]

Lagged Measures of Asset Redeployability

Prior research suggests that firms with more redeployable assets demonstrate stronger performance. It is likely that firms with stronger performance (e.g., higher employee productivity) choose to hold more redeployable assets. To mitigate concerns about reverse causality, we re-estimate the baseline regression model using three lagged measures of asset redeployability, namely REDEPLOY_ LAG1, REDEPLOY_LAG2 and REDEPLOY_LAG3. REDEPLOY_LAG1 (REDEPLOY_LAG2) is the asset redeployability in year t − 1 (year t − 2), while REDEPLOY_LAG3 is the asset redeployability in year t − 3. Table 8 reports that coefficients on these three lagged measures are significant and positive, consistent with our primary findings.

[insert Table 8 about here]

Two-Stage Regression Analysis

We conduct a two-stage regression analysis (2SLS) to further curtail concerns about reverse causality. In the first stage of 2SLS, we estimate an instrumental variable of asset redeployability using the average asset redeployability of firms in the same industry, based on the first two digits of the SIC code. In the second stage, we estimate the relation between the instrumental variable and employee productivity building on the baseline regression model in our study. Both equations are listed below.

$$REDEPLOY\_Instrumental_{i,t} = \beta_0 + \beta_1 \boldsymbol{REDEPLOY\_Mean_{i,t}} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 ROA_{i,t} + \beta_5 MTB_{i,t} + \beta_6 CASHFLOW_{i,t} + \beta_7 CASH_{i,t} + \beta_8 ASSETAGE_{i,t} + \beta_9 FIRMAGE_{i,t} + \beta_{10} LABORINT_{i,t} + \beta_{11} ADV_{i,t} + Industry\ \&\ Year\ Indicators + \varepsilon_{i,t} \quad \text{[Equation 8]}$$

$$EMP\_PRO_{i,t} = \beta_0 + \beta_1 \boldsymbol{REDEPLOY\_Instrumental_{i,t}} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 ROA_{i,t} + \beta_5 MTB_{i,t} + \beta_6 CASHFLOW_{i,t} + \beta_7 CASH_{i,t} + \beta_8 ASSETAGE_{i,t} + \beta_9 FIRMAGE_{i,t} + \beta_{10} LABORINT_{i,t} + \beta_{11} ADV_{i,t} + Industry\ \&\ Year\ Indicators + \varepsilon_{i,t}$$ [Equation 9]

Column 1 (Column 2) of Table 9 reports the results of the first stage (the second stage) of 2SLS. In Column 1, the coefficient on REDEPLOY_Mean is 0.948 with a t-value of 85.24. The Cragg-Donald F-stat. is 71.27, far greater than the critical value of 16.38 in Stock and Yogo (2005), suggesting that our instrumental variable in 2SLS is relevant and strong. In Column 2, the coefficient on REDEPLOY_ Instrumental is 0.112 with a t-value of 5.65, indicating a significant positive relation between REDEPLOY_Instrumental and EMP_PRO. Collectively, results of Table 9 strengthen the validity of our empirical findings.

[insert Table 9 about here]

Labor Efficiency and Labor Cost Components

For completeness, we re-estimate the baseline regression model using the two components of employee productivity, namely the labor efficiency component (LABOR_EFF) and the labor cost component (LABOR_CST). The former shows the net income generated by unit employee cost, while the latter displays the average compensation per employee. Table 10 shows that the coefficient on REDEPLOY is 1.030 (0.028) with a t-value of 3.84 (4.09) where LABOR_EFF (LABOR_CST) is the dependent variable, implying a significant positive relation between asset redeployability and both components. The findings suggest that firms with more redeployable assets can not only increase the efficiency of labor cost but also maintain a high level of employee compensation.

[insert Table 10 about here]

Conclusion

In this study, we explore the impact of asset redeployability on employee performance. We use the ratio of net income before employee cost to the number of employees to proxy for employee performance and use the comprehensive asset redeployability measure developed by Kim and Kung (2017) to capture the level of redeployable corporate assets. We use more than 20,000 firm-year observations to examine the relation between asset redeployability and employee productivity. Our findings show that this relation is significant and positive, suggesting that employees in firms holding more redeployable assets demonstrate a higher level of productivity. This highlights the benefits of holding redeployable assets. Our primary results are robust to a battery of robustness checks.

Our study may be subject to a few shortcomings. For example, our sample firms are limited to public companies in the USA. It is unclear whether our findings still hold in countries including China where the government imposes certain regulations on selling corporate assets on the secondary markets. Hence, future research can explore the impact of asset redeployability on employee productivity in an international setting. In addition, many prior studies use survey to measure employee performance, suggesting the subjective nature of this measure. Future studies may use different measures to capture employee performance.

Appendix 1
Variable Definitions

Variable		Definition
EMP_PRO	=	net income (NI) before labor cost (XLR) divided by total number of employees (EMP);
LABOREFF	=	net income (NI) before labor cost (XLR) divided by total labor costs (XLR);
LABOR_CST	=	labor cost (XLR) divided by total number of employees (EMP);
REDEPLOY	=	the asset redeployability measure developed by Kim and Kung (2017);
SIZE	=	the natural log of total assets (AT);
LEV	=	long-term liabilities (DLTT) divided by total assets (AT);
ROA	=	income before extraordinary items (IB) scaled by total assets (AT);
MTB	=	market value of common shares (CSHO) × (PRCC_F) divided by total book value of common shares (CEQ);
CASHFLOW	=	net operating cash flows (OANCF), scaled by total assets (AT);
CASH	=	cash (CHE) scaled by total assets (AT);
ASSETAGE	=	net value of property, plant and equipment (PPENT) divided by the gross value of property, plant and equipment (PPEGT).
FIRMAGE	=	natural log of the number of years in Compustat database;
LABORINT	=	labor cost (XLR) scaled by total sales (SALE);
ADV	=	advertising expenses (XAD) scaled by total sales (SALE);
Other Variables		
REDEPLOY_ALT1	=	an alternative measure of REDEPLOY, which uses market capitalization of Compustat firms in each BEA industry-year as the weight in calculating the firm-level asset redeployability;
REDEPLOY_ALT2	=	an alternative measure of REDEPLOY, which uses the equal weight for each BEA industry-year in calculating the firm-level asset redeployability;
EMPPRO_ALT1	=	the ratio of sales to the number of employees;
EMPPRO_ALT2	=	an indicator variable that equals one if the value of EMP_PRO is greater than the median and zero otherwise;
ΔEMP_PRO	=	EMP_PRO in year t - EMP_PRO in year t-1;
ΔREDEPLOY	=	REDEPLOY in year t – REDEPLOY in year t-1;
ΔSIZE	=	SIZE in year t - SIZE in year t-1;
ΔLEV	=	LEV in year t - LEV in year t-1;
ΔROA	=	ROA in year t - ROA in year t-1;
ΔMTB	=	MTB in year t - MTB in year t-1;
ΔCASHFLOW	=	CASHFLOW in year t - CASHFLOW in year t-1;
ΔCASH	=	CASH in year t - CASH in year t-1;
ΔASSETAGE	=	ASSETAGE in year t - ASSETAGE in year t-1;
ΔFIRMAGE	=	FIRMAGE in year t - FIRMAGE in year t-1;
ΔLABORINT	=	LABORINT in year t - LABORINT in year t-1;

ΔADV	=	ADV in year t - ADV in year t-1;
REDEPLOY_LAG1	=	REDEPLOY in year t-1;
REDEPLOY_LAG2	=	REDEPLOY in year t-2;
REDEPLOY_LAG3	=	REDEPLOY in year t-3;

References

Almeida, H., M. Campello, and D. Hackbarth. 2011. Liquidity Mergers. *Journal of Financial Economics* 102: 526-558.

Bartov, E. 1993. The timing of asset sales and earnings management. *The Accounting Review* 68 (4): 840-855.

Benmelech, E., and N. Bergman, 2009. Collateral Pricing. *Journal of Financial Economics* 91: 339-360.

Bloom, N., 2009. The Impact of Uncertainty Shocks. *Econometrica* 77: 623-685.

Caballero, R. J., 1991. On the Sign of the Investment-Uncertainty Relationship. *American Economic Review* 81: 279-288.

Chen, H., A. A. Maslar, and M. Serfling. 2020. Asset redeployability and the choice between bank debt and public debt. *Journal of Corporate Finance* 64: 65-91.

Datta, D. K., J. P. Guthrie, and P. M. Wright. 2005. Human resource management and labor productivity: Does industry matter? *Academy of Management Journal* 48 (1): 135-145.

Dutta, S. and S. Reichelstein. 2002. Controlling investment decisions: Depreciation and capital charges. *Review of Accounting Studies* 7 (2): 253-281.

Dyer, L., and T. Reeves. 1995. Human resource strategies and firm performance: What do we know and where do we need to go? *International Journal of Human Resource Management* 6: 656-670.

Edmans, A. 2011. Does the stock market fully value intangibles? Employee satisfaction and equity prices. *Journal of Financial Economics* 101 (3): 621-640.

Flippo, E. B. 1982. Personal Management 5th Edition. McGraw Hill.

Gavazza, A. 2011. The Role of Trading Frictions in Real Asset Markets. *American Economic Review* 101 (4): 1106-43.

Gul, F. A., K. M. Y. Lai, T. L. Li, and J. Pittman. 2021. Auditors' responses to asset redeployability. Deakin University, working paper.

Hasan, M. M., A. Habib, and N. Alam. 2021. Asset redeployability and corporate tax avoidance. *Abacus – A Journal of Accounting Finance and Business Study* 57 (2): 183-219.

Herrmann, D., T. Inoue, and W. B. Thomas. 2003. The sale of assets to manage earnings in Japan. *Journal of Accounting Research* 41 (1): 89-108.

Holzer, H. J. 1990. The determinants of employee productivity and earnings. *Industrial Relations: A Journal of Economy and Society* 29 (3): 403-422.

Kim, H., and Kung, H. 2017. The asset redeployability channel: How uncertainty affects corporate investment. *The Review of Financial Studies* 30 (1): 245-280.

Koch, M. J., and R. G. McGrath. 1996. Improving labor productivity: Human resource management policies do matter. *Strategic Management Journal* 7: 335-354.

Ortiz-Molina, H., and G. M. Phillips. 2014. Real asset illiquidity and the cost of capital. *Journal ofFinancial and Quantitative Analysis* 49 (1): 1-32.

Petersen, M. A. 2009. Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies* 22 (1): 435-480.

Pfeffer, J. 1994. Competitive advantage through people: Unleashing the power of the work force. Harvard Business School Press, Boston, MA.
Ramey, V. A., and M. D. Shapiro. 2001. Displaced Capital: A Study of AerospacePlant Closings. *Journal of Political Economy* 109: 958-992.
Rong, Y., C. Tian, L. Li., X. Zheng. 2020. Does asset redeployability affect corporate investment and equity value? *International Review of Economics & Finance* 70: 479-492.
Sanchez, P., and S. Benito-Hernandez. 2015. CSR policies: Effects on labor productivity in Spanish micro and small manufacturing companies. *Journal of Business Ethics* 128 (4): 705-724.
Stock, J., and M. Yogo. 2005. Testing for weak instruments in linear IV regression. Andrew DWK Identification and Inference for Econometric Models. New York: Cambridge University Press: 80-108.
Stuebs, M., and L. Sun. 2010. Business reputation and labor efficiency, productivity, and cost. *Journal of Business Ethics* 96 (2): 265-283.
Sun, L., and R. Yu. 2015. The impact of corporate social responsibility on employee performance. *Review of Accounting and Finance* 14 (3): 262-284.
Williamson, O. E. 1988. Corporate finance and corporate governance. *Journal of Finance* 43 (3): 567-591.

Table 1
Asset Redeployability and Employee Performance
Sample Selection and Distribution

Panel A: Sample Selection Process

Full Sample	Observations
Initial Asset Redeployability Dataset (1985-2015)	291,965
Less: Observations with insufficient data to construct dependent variable and control variables; A great number of observations is lost due to the lack of data on employee cost (XLR), as few companies report this data to Compustat	(271,416)
Number of Observations	20,549
Number of Unique Firms	3,205

Panel B: Sample Distribution by Fiscal Year

Year	Number of Observations	Percent	Cumulative Percent
1987	125	0.61%	0.61%
1988	598	2.91%	3.52%
1989	607	2.95%	6.47%
1990	611	2.97%	9.45%
1991	641	3.12%	12.57%
1992	666	3.24%	15.81%
1993	695	3.38%	19.19%
1994	695	3.38%	22.57%
1995	735	3.58%	26.15%
1996	790	3.84%	29.99%
1997	786	3.83%	33.82%
1998	751	3.65%	37.47%
1999	739	3.60%	41.07%
2000	752	3.66%	44.73%
2001	760	3.70%	48.43%
2002	673	3.28%	51.70%
2003	658	3.20%	54.91%
2004	657	3.20%	58.10%
2005	662	3.22%	61.32%
2006	656	3.19%	64.52%
2007	656	3.19%	67.71%
2008	646	3.14%	70.85%
2009	643	3.13%	73.98%
2010	662	3.22%	77.20%
2011	893	4.35%	81.55%
2012	958	4.66%	86.21%
2013	982	4.78%	90.99%
2014	966	4.70%	95.69%
2015	885	4.31%	100.00%
	20,548	100.00%	

Table 1
Asset Redeployability and Employee Performance
Sample Selection and Distribution

Panel C: Sample Distribution by Industry

SIC	Description	Obs.	%	SIC	Description	Obs.	%
1	Agricultural Crops	21	0.10%	45	Transportation By Air	766	3.73%
2	Agricultural Livestock	12	0.06%	46	Pipelines	12	0.06%
8	Forestry	11	0.05%	47	Transportation Services	143	0.70%
10	Metal Mining	478	2.33%	48	Communications	693	3.37%
12	Coal Mining	34	0.17%	49	Electric Gas & Sanitary Services	1,223	5.95%
13	Oil & Gas Extraction	643	3.13%	50	Durable Goods Wholesale	269	1.31%
14	Mining	42	0.20%	51	Nondurable Goods Wholesale	166	0.81%
15	Building Construction	30	0.15%	52	Building Materials	32	0.16%
16	Heavy Construction	56	0.27%	53	General Merchandise Stores	22	0.11%
17	Special Construction	6	0.03%	54	Food Stores	122	0.59%
20	Food	511	2.49%	55	Automotive Dealers	54	0.26%
21	Tobacco	54	0.26%	56	Apparel Stores	32	0.16%
22	Textile Mill	21	0.10%	57	Furniture Stores	55	0.27%
23	Apparel	104	0.51%	58	Eating & Drinking Places	1,076	5.24%
24	Lumber	94	0.46%	59	Miscellaneous Retail	167	0.81%
25	Furniture	29	0.14%	60	Depository Institutions	262	1.28%
26	Paper	269	1.31%	61	Nondepository Credit Institutions	926	4.51%
27	Printing	265	1.29%	62	Security & Commodity Brokers	1,627	7.92%
28	Chemicals	1,318	6.41%	63	Insurance Carriers	421	2.05%
29	Petroleum Refining	350	1.70%	64	Insurance Agents Brokers	266	1.29%
30	Rubber	122	0.59%	65	Real Estate	232	1.13%
31	Leather	1	0.00%	67	Investment Offices	277	1.35%
32	Stone Clay Glass	109	0.53%	70	Hotels	61	0.30%
33	Primary Metal	280	1.36%	72	Personal Services	81	0.39%
34	Fabricated Metal	124	0.60%	73	Business Services	1,502	7.31%
35	Industrial Machinery	447	2.18%	75	Auto Repair Services	35	0.17%
36	Electronic Equipment	575	2.80%	76	Miscellaneous Repair	63	0.31%
37	Transportation Equipment	431	2.10%	79	Amusement	238	1.16%
38	Measuring Instruments	430	2.09%	80	Health Services	965	4.70%
39	Miscellaneous Manufacturing	76	0.37%	81	Legal Services	27	0.13%
40	Railroad Transportation	269	1.31%	82	Educational Services	70	0.34%
41	Local/Suburban Transit	47	0.23%	83	Social Services	46	0.22%
42	Motor Freight Transportation	795	3.87%	87	Engineering & Accounting	271	1.32%
44	Water Transportation	83	0.40%	99	Nonclassified Establishments	210	1.02%

In Panel A, we report the sample selection process. Our final sample consists of 20,548 firm-year observations from 1987 to 2015, representing 3,205 public companies in the United States. Panel B presents sample distribution by fiscal year. Panel C presents sample distribution by industry, based on the first two digits of the Standard Industrial Classification (SIC) code. Specifically, the number of observations and their relative percentages are provided Panel C.

Table 2
Asset Redeployability and Employee Performance
Sample Descriptive Statistics

Variable	Observations	Mean	Std Dev	25th Pctl	50th Pctl	75th Pctl
EMP_PRO	20,549	0.054	0.273	0.019	0.052	0.094
LABOR_EFF	20,549	0.871	2.931	0.919	1.168	1.496
LABOR_CST	20,549	0.069	0.084	0.028	0.048	0.077
REDEPLOY	20,549	0.431	0.144	0.356	0.426	0.529
SIZE	20,549	6.381	2.976	4.296	6.509	8.565
LEV	20,549	0.193	0.199	0.020	0.147	0.299
ROA	20,549	-0.090	0.621	-0.015	0.031	0.067
MTB	20,549	2.592	5.765	1.023	1.762	3.121
CASHFLOW	20,549	0.019	0.309	0.013	0.075	0.128
CASH	20,549	0.148	0.177	0.027	0.082	0.199
ASSETAGE	20,549	0.557	0.194	0.426	0.564	0.695
FIRMAGE	20,549	2.612	0.795	1.946	2.565	3.219
LABORINT	20,549	0.537	2.337	0.150	0.253	0.389
ADV	20,549	0.010	0.036	0.000	0.000	0.003

This table reports the number of observations, pooled means, standard deviations, 25th percentile, median, and 75th percentile of the dependent variable (i.e., employee productivity), independent variable of interest (i.e., asset redeployability), and various control variables. The sample consists of 20,549 firm-year observations from 1987 to 2015, representing 3,205 public firms in the U.S. All continuous variables are winsorized at the 1% and 99% percentiles. Please refer to Appendix 1 for detailed variable definitions.

Table 3
Asset Redeployability and Employee Performance
Correlation Matrix

	EMP_PRO	LABOR_EFF	LABOR_CST	REDEPLOY	SIZE	LEV	ROA	MTB	CASHFLOW	CASH	ASSETAGE	FIRMAGE	LABORINT	ADV
EMP_PRO		0.660	0.578	**0.125**	0.498	0.000	0.480	0.118	0.277	0.016	-0.141	0.305	-0.182	-0.170
		<.0001	<.0001	<.0001	<.0001	0.990	<.0001	<.0001	<.0001	0.023	<.0001	<.0001	<.0001	<.0001
LABOR_EFF	0.665		0.005	0.014	0.433	0.020	0.774	0.234	0.446	-0.040	0.070	0.200	-0.477	-0.043
	<.0001		0.445	0.049	<.0001	0.004	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
LABOR_CST	0.169	-0.036		0.132	0.235	-0.086	-0.090	-0.025	-0.103	0.130	-0.275	0.199	0.193	-0.213
	<.0001	<.0001		<.0001	<.0001	<.0001	<.0001	0.000	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
REDEPLOY	**0.118**	0.045	0.173		-0.073	-0.170	-0.002	0.056	-0.082	0.149	-0.234	-0.077	0.130	0.071
	<.0001	<.0001	<.0001		<.0001	<.0001	0.763	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
SIZE	0.238	0.278	0.082	-0.029		0.266	0.262	0.072	0.237	-0.161	-0.003	0.428	-0.334	-0.126
	<.0001	<.0001	<.0001	<.0001		<.0001	<.0001	<.0001	<.0001	<.0001	0.631	<.0001	<.0001	<.0001
LEV	-0.022	-0.011	-0.049	-0.115	0.109		-0.053	-0.093	0.052	-0.400	0.204	0.141	-0.130	-0.043
	0.001	0.122	<.0001	<.0001	<.0001		<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
ROA	0.302	0.393	-0.111	0.006	0.379	-0.023		0.359	0.654	0.005	0.024	0.166	-0.230	0.005
	<.0001	<.0001	<.0001	0.381	<.0001	0.001		<.0001	<.0001	0.479	0.001	<.0001	<.0001	0.466
MTB	0.034	0.033	-0.014	0.025	-0.010	-0.078	0.105		0.231	0.151	0.032	-0.038	0.005	0.077
	<.0001	<.0001	0.049	0.000	0.161	<.0001	<.0001		<.0001	<.0001	<.0001	<.0001	0.509	<.0001
CASHFLOW	0.230	0.328	-0.088	-0.026	0.389	-0.015	0.816	0.089		-0.060	0.005	0.169	-0.189	0.019
	<.0001	<.0001	<.0001	0.000	<.0001	0.036	<.0001	<.0001		<.0001	0.487	<.0001	<.0001	0.008
CASH	-0.016	-0.068	0.195	0.123	-0.252	-0.290	-0.084	0.103	-0.138		-0.197	-0.171	0.144	0.073
	0.021	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001		<.0001	<.0001	<.0001	<.0001
ASSETAGE	-0.012	0.033	-0.174	-0.254	0.040	0.133	0.096	0.025	0.078	-0.178		-0.162	-0.119	0.010
	0.088	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.000	<.0001	<.0001		<.0001	<.0001	0.147
FIRMAGE	0.122	0.128	0.073	-0.056	0.427	0.077	0.173	-0.046	0.199	-0.193	-0.160		-0.094	-0.054
	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001		<.0001	<.0001
LABORINT	-0.159	-0.146	0.140	-0.012	-0.183	-0.042	-0.291	-0.004	-0.316	0.195	-0.030	-0.079		0.013
	<.0001	<.0001	<.0001	0.095	<.0001	<.0001	<.0001	0.570	<.0001	<.0001	<.0001	<.0001		0.054
ADV	-0.076	-0.088	-0.055	0.046	-0.156	-0.047	-0.175	0.040	-0.198	0.070	0.025	-0.101	0.102	
	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.000	<.0001	<.0001	

This table reports the Pearson correlations (below the diagonal) and the Spearman correlations (above the diagonal) for key variables used in our study over the period of 1987-2015. For each pair of variables, the correlation coefficients and related (two-tailed) p-values are provided. All continuous variables are winsorized at the 1% and 99% percentiles before the correlation analysis. Please refer to Appendix 1 for detailed variable definitions.

Table 4
Asset Redeployability and Employee Performance
Primary Results

	Clustered Standard Errors Regression			
	Dependent Variable = EMP_PRO			
	Column 1	Column 2		Column 3
	Full Sample	Full Sample		Excluding Firms in Highly Regulated Industries
Parameter	Estimate	Estimate	VIF	Estimate
Intercept	-0.116***	-0.202***		-0.219***
	(-3.89)	(-6.06)		(-5.69)
REDEPLOY	**0.137*** **	**0.129*** **	1.747	**0.176*** **
	(4.67)	(4.53)		(4.64)
SIZE		0.014***	1.782	0.013***
		(18.01)		(13.78)
LEV		-0.021*	1.225	-0.015
		(-1.68)		(-1.08)
ROA		0.127***	3.173	0.115***
		(8.40)		(7.22)
MTB		0.001	1.051	-0.0001
		(1.56)		(-0.56)
CASHFLOW		-0.084***	3.280	-0.072***
		(-3.53)		(-2.79)
CASH		0.028	1.400	0.020
		(1.62)		(1.19)
ASSETAGE		0.012	1.407	-0.011
		(0.84)		(-0.67)
FIRMAGE		0.007***	1.470	0.010***
		(2.61)		(3.41)
LABORINT		-0.009***	0.178	-0.008***
		(-4.67)		(-5.00)
ADV		-0.115**	0.133	-0.098
		(-1.99)		(-1.49)
Year Indicators	Yes	Yes		Yes
Industry Indicators	Yes	Yes		Yes
Observations	20,549	20,549		12,507
Adjusted R^2	0.0683	0.1723		0.1681

This table reports the results of our baseline regression model using clustered standard errors OLS regression. The baseline model is as follows.
EMPPRO = $\beta_0 + \beta_1 \times$REDEPLOY + $\beta_x \times$Control Variables + Year & Industry Dummies + ε
Highly-regulated industries refer to industries with the SIC codes in the following range, 4000-4999 or 6000-6999. The continuous variables in the baseline regression model are winsorized at the 1% and 99% percentiles each year before entering the regression analysis. T-values are reported in parentheses. *, **, and *** denote significance at the 10, 5 and 1 percent (two-tailed) confidence levels, respectively. Please refer to Appendix 1 for detailed variable definitions.

Table 5
Asset Redeployability and Employee Performance
Alternative Measures of Asset Redeployability

	Clustered Standard Errors Regression	
	Dependent Variable = EMP_PRO	
	Column 1	Column 2
Parameter	Estimate	Estimate
Intercept	-0.222***	-0.205***
	(-6.24)	(-6.03)
REDEPLOY_ALT1	**0.288*** **	
	(4.60)	
REDEPLOY_ALT2		**0.160*** **
		(4.23)
SIZE	0.014***	0.014***
	(17.92)	(18.02)
LEV	-0.019	-0.020*
	(-1.56)	(-1.66)
ROA	0.127***	0.127***
	(8.30)	(8.40)
MTB	0.001	0.001
	(1.61)	(1.56)
CASHFLOW	-0.084***	-0.084***
	(-3.46)	(-3.52)
CASH	0.028	0.028
	(1.62)	(1.61)
ASSETAGE	0.015	0.013
	(1.03)	(0.90)
FIRMAGE	0.007**	0.007***
	(2.56)	(2.67)
LABORINT	-0.009***	-0.009***
	(-4.64)	(-4.66)
ADV	-0.120*	-0.117**
	(-1.94)	(-2.01)
Year Indicators	Yes	Yes
Industry Indicators	Yes	Yes
Observations	20,549	20,549
Adjusted R^2	0.1731	0.1723

This table reports the results of our baseline regression model using two alternative measures of asset redeployability, namely REDEPLOY_ALT1 and REDEPLOY_ALT2. The baseline model is as follows.
EMP_PRO = $\beta_0 + \beta_1 \times$REDEPLOY + $\beta_x \times$Control Variables + Year & Industry Dummies + ε
The continuous variables in the baseline regression model are winsorized at the 1% and 99% percentiles each year before entering the regression analysis. T-values are reported in parentheses. *, **, and *** denote significance at the 10, 5 and 1 percent (two-tailed) confidence levels, respectively. Please refer to Appendix 1 for detailed variable definitions.

Table 6
Asset Redeployability and Employee Performance
Alternative Measures of Employee Performance

	Column 1	Column 2
	Clustered Standard Errors Regression	Logistic Regression
	Dep. Var. = EMPPRO_ALT1	Dep. Var. = EMPPRO_ALT2
Parameter	Estimate	Estimate
Intercept	-0.513***	-1.491***
	(-1.93)	(43.34)
REDEPLOY	**0.888*** **	**0.128*** **
	(2.62)	(23.38)
SIZE	0.033***	0.271***
	(7.04)	(813.44)
LEV	0.069	-0.513***
	(0.29)	(18.19)
ROA	0.037	9.587***
	(0.86)	(1049.87)
MTB	-0.004***	0.007*
	(-2.72)	(2.75)
CASHFLOW	-0.043	-1.029***
	(-0.32)	(24.45)
CASH	0.059	0.842***
	(0.29)	(35.52)
ASSETAGE	0.569*	-1.436***
	(1.81)	(132.40)
FIRMAGE	0.060	0.337***
	(1.10)	(136.18)
LABORINT	-0.028***	0.010
	(-5.70)	(0.32)
ADV	-0.067	-3.657***
	(-0.11)	(15.40)
Year Indicators	Yes	Yes
Industry Indicators	Yes	Yes
Observations	20,549	20,549
Adjusted R^2 / Pseudo R^2	0.0094	0.5758

This table reports the results of our baseline regression model using two alternative measures of employee productivity, namely EMPPRO_ALT1 and EMPPRO_ALT2. The baseline model is as follows.
EMPPRO_ALT1 or EMPPRO_ALT2 = $\beta_0 + \beta_1 \times$REDEPLOY + $\beta_x \times$Control Variables + Year & Industry Dummies + ε
The continuous variables in the baseline regression model are winsorized at the 1% and 99% percentiles each year before entering the regression analysis. T-values are reported in parentheses. *, **, and *** denote significance at the 10, 5 and 1 percent (two-tailed) confidence levels, respectively. Please refer to Appendix 1 for detailed variable definitions.

Table 7
Asset Redeployability and Employee Performance Changes Analysis

Clustered Standard Errors Regression			
Dependent Variable = ΔEMP_PRO			
Parameter	Estimate	t Value	Pr > |t|
Intercept	-0.105***	-4.20	<.0001
ΔREDEPLOY	**0.051****	2.39	0.017
ΔSIZE	-0.004	-0.35	0.724
ΔLEV	-0.070***	-2.72	0.007
ΔROA	0.137***	9.14	<.0001
ΔMTB	0.000	-0.07	0.941
ΔCASHFLOW	-0.086***	-4.24	<.0001
ΔCASH	-0.001	-0.05	0.963
ΔASSETAGE	0.087**	2.09	0.036
ΔFIRMAGE	0.022	0.75	0.453
ΔLABORINT	0.001	0.85	0.396
ΔADV	-0.200**	-2.56	0.011
Year Indicators	Yes		
Industry Indicators	Yes		
Observations	17,344		
Adjusted R^2	0.0647		

This table reports the results of changes analysis, which regress the changes in EMP_PRO (ΔEMP_PRO) on the changes in REDEPLOY (ΔREDEPLOY) and in control variables. The model is as follows.
$\Delta EMP\_PRO = \beta_0 + \beta_1 \times \Delta REDEPLOY + \beta_x \times \Delta Control\ Variables + Year\ \&\ Industry\ Dummies + \varepsilon$
The continuous variables in the baseline regression model are winsorized at the 1% and 99% percentiles each year before entering the regression analysis. *, **, and *** denote significance at the 10, 5 and 1 percent (two-tailed) confidence levels, respectively. Please refer to Appendix 1 for detailed variable definitions.

Table 8
Asset Redeployability and Employee Performance
Lagged Measures of Asset Redeployability

	Clustered Standard Errors Regression		
	Dependent Variable = EMP_PRO		
	Column 1	Column 2	Column 3
Parameter	Estimate	Estimate	Estimate
Intercept	-0.176***	-0.138***	-0.151***
	(-4.91)	(-3.68)	(-3.75)
REDEPLOY_LAG1	**0.114*** **		
	(3.58)		
REDEPLOY_LAG2		**0.096*** **	
		(2.73)	
REDEPLOY_LAG3			**0.130*** **
			(3.48)
SIZE	0.014***	0.013***	0.013***
	(16.57)	(14.20)	(12.72)
LEV	-0.033**	-0.042***	-0.037**
	(-2.50)	(-2.85)	(-2.39)
ROA	0.138***	0.161***	0.165***
	(7.85)	(6.78)	(5.43)
MTB	0.001***	0.001**	0.001**
	(2.63)	(2.01)	(2.12)
CASHFLOW	-0.099***	-0.121***	-0.114***
	(-3.76)	(-3.58)	(-2.83)
CASH	0.023	0.013	0.025
	(1.17)	(0.58)	(0.98)
ASSETAGE	0.005	-0.017	-0.027
	(0.28)	(-0.96)	(-1.32)
FIRMAGE	0.006**	0.004	0.006
	(2.10)	(1.27)	(1.57)
LABORINT	-0.010***	-0.011***	-0.015***
	(-4.49)	(-3.52)	(-3.61)
ADV	-0.184**	-0.139**	-0.091
	(-2.14)	(-2.23)	(-1.43)
Year Indicators	Yes	Yes	Yes
Industry Indicators	Yes	Yes	Yes
Observations	17,344	14,633	12,344
Adjusted R^2	0.1734	0.1685	0.1775

This table reports the results of our baseline regression model using clustered standard errors OLS regression using three lagged variables of asset redeployability, namely REDEPLOY_LAG1, REDEPLOY_LAG2, and REDEPLOY_LAG3. The continuous variables in the baseline regression model are winsorized at the 1% and 99% percentiles each year before entering the regression analysis. T-values are reported in parentheses. *, **, and *** denote significance at the 10, 5 and 1 percent (two-tailed) confidence levels, respectively. Please refer to Appendix 1 for detailed variable definitions.

Table 9
Asset Redeployability and Employee Performance
Two-Stage Regression Analysis

	Two Stage Regression Analysis			
	Column 1		Column 2	
	First Stage		Second Stage	
	Dep. Var. = REDEPLOY_Instrumental		Dep. Var. = EMP_PRO	
Variable	Parameter	t Value	Parameter	t Value
Intercept	0.076***	10.24	-0.140***	-7.60
REDEPLOY_Mean	0.948***	85.24		
REDEPLOY_Instrumental			**0.112*** **	5.65
SIZE	0.000	1.24	0.014***	18.94
LEV	-0.017***	-5.83	-0.020**	-2.10
ROA	0.006***	3.83	0.127***	25.53
MTB	0.000	-0.57	0.001*	1.68
CASHFLOW	-0.005	-1.58	-0.086***	-8.46
CASH	-0.022***	-6.31	0.033***	2.81
ASSETAGE	-0.046***	-14.37	0.001	0.07
FIRMAGE	-0.001	-1.18	0.008***	2.86
LABORINT	0.000	0.64	-0.008***	-10.49
ADV	0.068***	4.40	-0.123**	-2.42
Year Indicators	Yes		Yes	
Industry Indicators	Yes		Yes	
Observations	20,549		20,549	
Adjusted R^2	0.7302		0.1655	
Cragg-Donald F statistics	71.27			

This table reports the results of a two-stage regression analysis (2SLS). The continuous variables in both regression models are winsorized at the 1% and 99% percentiles each year before entering the regression analysis. *, **, and *** denote significance at the 10, 5 and 1 percent (two-tailed) confidence levels, respectively. Please refer to Appendix 1 for detailed variable definitions.

Table 10
Asset Redeployability and Employee Performance
Labor Efficiency and Cost Components

	Clustered Standard Errors Regression			
	Column 1		Column 2	
	Dep. Var. = LABOR_EFF		Dep. Var. = LABOR_CST	
Variable	Parameter	t Value	Parameter	t Value
Intercept	-1.192***	-3.39	0.059***	8.68
REDEPLOY	**1.030*** **	3.84	**0.028*** **	4.09
SIZE	0.173***	19.49	0.002***	10.28
LEV	-0.491***	-3.65	0.012***	3.45
ROA	1.554***	8.90	-0.020***	-6.73
MTB	-0.001	-0.16	0.000	-0.31
CASHFLOW	-0.238	-0.84	0.010**	1.98
CASH	0.207	1.20	0.041***	9.09
ASSETAGE	-0.140	-0.90	-0.009**	-2.47
FIRMAGE	0.009	0.35	0.002***	2.77
LABORINT	-0.019	-1.31	0.003***	5.32
ADV	-1.441*	-1.80	-0.092***	-5.54
Year Indicators	Yes		Yes	
Industry Indicators	Yes		Yes	
Observations	20,549		20,549	
Adjusted R^2	0.1960		0.3510	

This table reports the results of the baseline regression model using two components of EMP_PRO, namely LABOR_EFF and LABOR_CST. The continuous variables in the baseline regression model are winsorized at the 1% and 99% percentiles each year before entering the regression analysis. *, **, and *** denote significance at the 10, 5 and 1 percent (two-tailed) confidence levels, respectively. Please refer to Appendix 1 for detailed variable definitions.