Online Appendix

A Manager's Dilemma: Sow or Harvest

In this section, we describe the technical details of our methods. We first describe how we measure sowing and harvesting expenditures. We then develop measures of a firm's shifting strategy from sowing to harvesting. Finally, we measure the stock market's response

Decomposition of SG&A into Value-Creation and Value-Appropriation Components

To compute *MainSG&A*, we subtract R&D (Compustat XRD) and advertising expenses (Compustat XAD) from SG&A (Compustat XSGA) because Compustat includes them in the SG&A category even when they are separately reported.

We estimate the following model, by industry and year, to split *MainSG&A* into two components—*ValApprMainSG&A* (those that produce benefits in the current year) and *ValCreatMainSG&A* (those that are expected to produce future benefits)—in two steps following Enache and Srivastava (see note *i*). First, we estimate the portion of *MainSG&A* associated with current revenues after accounting for industry and time. Second, we extract the value-appropriation portion of SG&A from *MainSG&A* using the estimate.

(1) $MainSG\&A_{i,t} = \alpha_{Ind,t} + \beta_{1,Ind,t} \times Revenues_{i,t} + \beta_{2,Ind,t} \times Dummy\_Revenue\_Decrease_{i,t} + \beta_{3,Ind,t} \times Dummy\_Loss_{i,t} + \varepsilon_{i,t}$

and

(2) $\widehat{ValApprMainSG\&A}_{i,t} = \hat{\beta}_{1,Ind,t} \times Revenues_{i,t}$,

where i = firm, *Ind* = industry defined by two-digit Standard Industrial Classification (SIC) code, and t = year.

The models are estimated at the industry-year level. The industry is defined using the two-digit SIC classification. We exclude all finance firms, because the traditional classifications of cost

of goods sold (COGS) and SG&A do not apply to finance firms. We also exclude the industry category called "almost nothing" because of the difficulty in interpreting its results in an industry context. *MainSG&A* and *Revenue* (Compustat SALES) are scaled by the average of the beginning and ending total assets for the year (Compustat AT).

SG&A costs increase more rapidly when sales increase but decline less rapidly when sales decrease. We control for this stickiness of *MainSG&A* by adding a dummy variable (*Dummy_Revenue_Decrease*) that takes the value of one if revenues decline during the year and zero otherwise. Including or excluding this term makes no significant difference to the results. We do not include this stickiness dummy in equation (2) to allow for the possibility that the stickiness of the SG&A expenses partially results from the investments reported in the SG&A category that do not fluctuate with current revenues but are essential for a firm's long-term performance.

Because losses often accompany significant corporate events, we include a dummy variable (*Dummy_Loss*) to account for accounting losses. The dummy is not included in equation (2) to allow for the possibility that firms often change their cost patterns, particularly investments, following losses. Finally, we do not add the intercept to equation (2) to allow for the possibility that same-industry firms spend relatively constant intangible outlays that do not vary with current revenues. Intercept is a good approximation of an industry's average *MainSG&A* that is unrelated to current revenues, and it likely represents the average value-creation *MainSG&A* in that industry, an amount we use for our industry-based tests. The exclusion of these two terms from equation (1) or their inclusion in equation (2) makes no significant difference to the conclusions of the study (results not tabulated).

The value-appropriation component, by construction, produces immediate benefits. Thus, it represents value-appropriation activities. It can be interpreted in financial reporting terms as

follows. If firms were allowed to initially inventory all *MainSG&A* outlays and report only those matched with current revenues as expenses in the current period, then this category would represent the portion of *MainSG&A* outlays that were both incurred and expensed in the same year. The value-creation portion of outlays in *MainSG&A*, in that case, would have been capitalized and would be measured on a firm-year basis by subtracting the estimated *ValApprMainSG&A* from *MainSG&A*:

(3) $ValCreat\widehat{Main}SG\&A_{i,t} = MainSG\&A_{i,t} - ValAppr\widehat{Main}SG\&A_{i,t}.$

This category represents the portion of *MainSG&A* outlays that are expected to produce future benefits but do not create tangible assets in the current period. We follow prior literature to measure strategic emphasis (*SE*) as the relative allocation between value appropriation and value creation using reported expenses on advertising and R&D (scaled by average total assets), respectively.[i] The measure is computed as

(4) $SE_{i,t} = \text{Advertising}_{i,t} - \text{R\&D}_{i,t}.$

We define organizational focus (*OF*) as the relative allocation between value appropriation and value creation using estimates of the value-appropriation and value-creation portions of *MainSG&A* (scaled by average total assets).

(5) $OF_{i,t} = ValAppr\widehat{Main}SG\&A_{i,t} - ValCreat\widehat{Main}SG\&A_{i,t}$

The first measure (*SE*) limits the definition of value-creating and value-appropriating activities to R&D and advertising expenses. The second measure (*OF*) extends the definition to cover all activities reported in SG&A except those included in the first measure. The interpretation of both measures is similar. Positive values indicate that a firm has a higher focus on value-appropriation strategies than on value-creation strategies in a given year. A positive trend in either of these measures over time suggests an increasing focus on value appropriation (and vice versa).

Measuring Unanticipated Shifts in Strategic Emphasis and Organizational Focus

We calculate a firm's unanticipated shift in strategic emphasis in a given year as the residual from a first-order autoregressive time series model in the following regression:

(6) $SE_{i,t} = \alpha + \beta_1 \times SE_{i,t-1} + \sum_y \beta_y \times Dummy\_Year + \sum_s \beta_s \times Dummy\_Industry + \varepsilon_{i,t}$,

where i = firm, Ind = Industry, t = year, *Dummy_Year* is a dummy variable to account for year fixed effects, and *Dummy_Industry* is a dummy variable to account for industry fixed effects. This model assumes that the expected value of strategic emphasis in the current year is the same as that of the year before unless it changed because of economy-wide factors (captured by year fixed effects) or industry shocks (captured by industry fixed effects). The residual is considered an unanticipated shift in strategic emphasis.

Accordingly, we calculate the unanticipated shift in organizational focus (*OF*) as the residuals using the following equation:

(7) $OF_{i,t} = \alpha + \beta_1 \times OF_{i,t-1} + \sum_y \beta_y \times Dummy\_Year + \sum_s \beta_s \times Dummy\_Industry + \varepsilon_{i,t}$.

The two residuals from equations (6) and (7) are referred to as $\widetilde{\Delta SE}$ and $\widetilde{\Delta OF}$, respectively. Similar to Mizik and Jacobson (see note *iv*), we estimate the unanticipated change in a firm's operating performance [return on assets (*ROA*)] to control for its impact on the relationship among the three measures of trade-offs and market returns:

(8) $ROA_{i,t} = \alpha + \beta_1 \times ROA_{i,t-1} + \sum_y \beta_y \times Dummy\_Year + \sum_s \beta_s \times Dummy\_Industry + \varepsilon_{i,t}$.

The residual is called $\widetilde{\Delta ROA}$, and it represents a shock to current operating performance.

Market Response to Unanticipated Shifts in Strategic Emphasis and Organizational Focus

We assess the stock market's response to unanticipated shifts in strategic emphasis by regressing stock returns on the unanticipated change in *ROA* and strategic emphasis in the following equation:

(9) $StkRet_{i,t} = \alpha_0 + \alpha_1 \times \widehat{\Delta ROA}_{i,t} + \alpha_{20} \times \widetilde{\Delta SE}_{i,t} + \alpha_{21} \times \widehat{\Delta ROA}_{i,t} \times \widetilde{\Delta SE}_{i,t}$

$\qquad + \alpha_{22} \times SE_{i,t-1} \times \widetilde{\Delta SE}_{it} + \sum_c \beta_c \times Controls_{i,t} + \sum_s \beta_s \times Dummy\_Industry + \varepsilon_{i,t}.$

Controls are the natural logs of the annual (lagged) book-to-market ratio and (lagged) market value and industry and year fixed effects. The market response coefficient, α_1, represents the change in stock value arising from unanticipated improvements in *ROA*. Hence, α_1 is expected to be positive. The coefficient α_{20} represents the market's pricing of shifts in a firm's strategic emphasis in a given year. If the market views the shift from value creation to appropriation as favorable, then the coefficient should be positive. The coefficient α_{21} represents the amplification effect of the unanticipated change in *ROA* on market value because of a shift in strategic emphasis. A positive value would indicate that a firm experiencing a positive shock to *ROA* or unusually good performance is better off by shifting its emphasis from value creation to appropriation. Coefficient α_{22} represents the moderating effect of past strategic emphasis on the stock market response to the unanticipated shift in the current period. A negative value would indicate diminishing marginal returns from that strategy, and a positive value would indicate some sort of specialization (for example, benefits from economies of scope).

We next estimate equation (9) using *OF* as a measure of organizational focus:

(10) $\quad StkRet_{i,t} = \alpha_0 + \alpha_1 \times \widehat{\Delta ROA}_{i,t} + \alpha_{30} \times \widehat{\Delta OF}_{i,t} + \alpha_{31} \times \widehat{\Delta ROA}_{i,t} \times \widehat{\Delta OF}_{i,t}$

$\qquad + \alpha_{32} \times OF_{i,t-1} \times \widehat{\Delta OF}_{it} + \sum_c \beta_c \times Controls_{i,t} + \sum_s \beta_s \times Dummy\_Industry + \varepsilon_{i,t}.$

The coefficient on unexpected shifts in strategic emphasis and organizational focus is negative and significant, indicating that the market views shifts from value creation to appropriation unfavorably. The amplification effect of organizational shifts is positive and significant. It indicates that firms are better off harvesting value in periods of unusually good performance.

Analysis by Industry Categories

We classify firms into high-tech, low-tech, and stable-tech industries. We the estimate equations (10) and (11) separately for each category. Regardless of measure or industry category, the coefficient on unexpected shifts in organizational focus is never positive and is consistently negative for high-technology industries.

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[i] See N. Mizik and R. Jacobson (2003), "Trading Off between Value Creation and Value Appropriation: The Financial Implications of Shifts in Strategic Emphasis," *Journal of Marketing* 67 (January), 63–76.