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Financial Consequences in Foreign Subsidiary Manager Performance Evaluations¹

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Abstract

This explorative study contributes to the limited body of knowledge on the financial impacts of using multiple forms of controls in managerial performance evaluations. The study explores (1) how short-term profitability is affected by headquarters' emphasis on financial, nonfinancial, and selected behavioral controls in the performance evaluation of overseas subsidiary managers, and (2) whether the effects of such evaluations vary with perceived environmental changes. Documentary and survey data for a sample of multinational companies headquartered in Finland propose that the emphasis of financial controls by top management improves short-term profitability more than an emphasis on nonfinancial or behavioral controls. Simultaneous emphasis of all three types of controls does not significantly increase short-term profitability over an emphasis on financial controls, because the positive effect of behavioral controls is mostly offset by a negative effect of nonfinancial controls. Perceived environmental changes appear to moderate the relationship between the headquarters' emphasis on nonfinancial controls and short-term profitability. These findings imply that in the short-term and regardless of the environmental contingencies analyzed, financial controls are more effective than nonfinancial or behavioral controls in improving profitability, but packages comprising financial and behavioral (action accountability) controls in particular can improve short-term profitability even more.

Key words: Managerial performance evaluation, Multiple controls, Environment, Profitability, Contingency theory, Multinational companies, Survey

1. Introduction

Empirical management accounting research suggests that organizations have increasingly adopted various forms and types of controls (e.g., Bromwich and Bhimani, 1989; Abernethy and Brownell, 1997; Ittner and Larcker, 2003a). The adoption of nonfinancial controls has been considered of great importance especially for firms faced with global competition, global operations and rapidly changing environments (Johnson and Kaplan, 1987, p. 3). Ultimately, it has been argued that a balanced use of carefully selected financial and nonfinancial indicators ensures top performance (e.g., Goold and Quinn, 1990; Lynch and Cross, 1991; Kaplan and Norton, 1992; Smith, 1995). The question as to how various controls should be weighted to improve performance has, however, been identified as a problematic issue for practicing managers using multiple controls (Ittner and Larcker, 1998); yet, relatively few academic studies have examined the issue in managerial performance evaluations. The growing importance of multiple controls, global competition, and global operations, including the increasing need to manage geographically dispersed foreign subsidiary managers, offers a setting to further our understanding of the financial outcomes of managerial evaluations in changing environments.

The objective of this study was to explore (1) the impact of managerial evaluations on short-term financial performance (short-term profitability) and (2) whether the effects of such evaluations vary with perceived environmental changes (PEC) in multinational companies (MNCs). In analyzing such direct and moderating effects, this paper takes the first step towards exploring the financial consequences of headquarters' (HQ') emphasis on financial, nonfinancial and selected behavioral controls in performance evaluations of foreign

subsidiary managers. With regard to the first objective, it explores the questions of whether top management in the sample investigated should (a) emphasize financial controls or (b) use a combination of controls to achieve higher short-term (here year-end) profitability. Performance evaluations of foreign subsidiary managers (who may include host country nationals and managers on foreign assignments) were analyzed at the business unit level in Finnish-based manufacturing MNCs. Data were collected from documentary sources and from mail surveys administered to top management.

The empirical results of this study contribute to the accounting literature on managerial performance evaluations in several ways. First, this study extends the analysis of controls from accounting performance measures (APMs) to multiple forms of controls as recommended in Hartmann (2000), Otley and Pollanen (2000), Chenhall (2003), and Sprinkle (2003). Following prior empirical studies by Kennedy and Widener (2005), Abernethy and Brownell (1997), and Abernethy and Stoelwinder (1995), the study makes a distinction between output controls and behavioral controls.² The examined financial and nonfinancial “output” and “behavioral” controls are used here synonymously with “results” and “action accountability” controls (Merchant, 1998; Merchant and Van der Stede, 2003). All these studies argue that the two aspects of people’s work that can be controlled are their output (results) and behavior (actions). Consequently, it is expected that managerial performance evaluations can be either outcome- or behavior-based.

Second, the results of this study increase our understanding of short-term financial performance consequences of managerial performance evaluations. According to Chenhall (2003), contingency-based management accounting research has usually separated performance outcomes into issues related to the use or usefulness of a given practice and behavioral and organizational outcomes. Another stream of research on control packages, such as balanced scorecards (Kaplan and Norton, 1992), has been motivated by a desire to protect long-term financial performance. It is, however, also important to assess the effect of controls on short-term profitability. If a company is not sufficiently profitable in the short-term, it may quickly go out of business. Third, the present study also contributes to the analysis of how the effectiveness of multiple types of controls varies across PEC.

Fourth, in terms of samples, several studies on the effectiveness of APMs have analyzed scores of subordinate managers and/or appear to have been conducted in domestic settings (Hirst, 1983; Govindarajan, 1984; Ross 1995). Analysis of top management scores, or the control relationship between HQ and foreign subsidiary managers has been rare - Brownell’s (1987) and Hassel’s (1991) surveys are exceptions. In enhancing analysis of the control relationship in a multinational setting, this study also increases empirical evidence on Finnish-based companies, which have been the focus of relatively few management accounting surveys to date. Note that in Finnish-based companies, direct foreign investments have been made fairly recently (mostly after 1986), and the companies had fairly modest, if any, bonus plans at the time of the research. For these reasons, the study addresses managerial performance evaluations in this sample. While the results of the study provide empirical evidence of a sample of Finnish MNCs, these should also further our understanding of managerial performance evaluations in general.

The remainder of the paper is organized as follows. Section 2 offers a theoretical review of the literature leading up to the development of the hypotheses. Section 3 reviews the sample

² See also Thomson (1967), Ouchi and Maguire (1975), and Ouchi (1977, 1979).

and method employed. Section 4 presents the statistical findings. Section 5 contains the conclusions and suggests possible future research topics.

2. Literature Review and Hypothesis Development

The current study first examines the direct link between business unit HQ' foreign subsidiary manager evaluation and business unit short-term financial performance (Figure 1); i.e., the extent to which top management's emphasis of various types of controls in foreign subsidiary manager evaluations can increase short-term profitability. Managerial performance evaluations should be designed to motivate and direct managers and improve their goal achievement (Emmanuel et al., 1991). This in turn should improve managers' performance and, consequently, business unit performance. However, the effectiveness of various types of controls in enhancing business unit performance is likely to differ. All controls are not as effective, i.e., as reasonably precise, objective, timely, understandable, and cost-effective, in all settings (Merchant and Van der Stede, 2003).

[Insert Figure 1 about here].

Output controls have been considered effective when managers have knowledge of and the ability to affect desirable outputs and can measure controllable outputs effectively (Ouchi, 1979, Merchant, 1998). To the extent that European MNCs typically manage their foreign subsidiaries as relatively independent national businesses (Bartlett and Ghoshal, 1989), measurement of their outputs is likely to be more effective and a higher emphasis on output controls can be expected to enhance financial performance. This is because such a management style limits interdependencies, allows foreign operations to be relatively autonomous, and gives foreign subsidiary managers more ability to affect and measure outputs effectively. In addition, an emphasis on output controls, in particular financial controls, is highly cost-effective from the HQ' viewpoint. This is because financial information on foreign subsidiaries is already generated for legal purposes. Financial controls generated from a complete set of accounting records under given rules are also sufficiently hard, objective and verifiable, and can thus be used in the often competitive situations related to performance evaluation (Ijiri, 1975, p. 35). In MNCs, the precision of foreign subsidiary manager evaluations can be further improved by conducting them in local currencies. Existing studies have shown positive relationships between tight (budget) control and individual and firm performance, probably in part due to positive motivational effects and/or elimination of slack (Stedry, 1960; Hofstede, 1968; Brownell, 1982; Simons, 1988).

While some nonfinancial controls can also be relatively precise and reasonably objective, a critical weakness of nonfinancial and behavioral evaluations is that precise measurement can be difficult. According to Hopwood (1972, pp. 174-175):

“Nonaccounting evaluation, in particular, might be made on the basis of rather vague criteria: attitudes, the way the...head handles his men, and effort. While such criteria are important, they are surrounded by a great deal of uncertainty. It is difficult to clearly specify what constitutes good and bad performance, and a supervisor might find it difficult to determine when improvement occurs.”

Several other variables, ranging from technical to behavioral, have been identified in later studies as likely to impact the perceived success of nonfinancial performance measures. For example, all nonfinancial controls may not have a clear connection to profitability, and managers may thus be

encouraged to make decisions that are not economically based (Fisher 1992, p. 37). If multiple goals, such as manufacturing efficiency and customer responsiveness, are conflicting, controls by definition, cannot be effective (Lillis, 2002). Companies also often make some common mistakes when trying to measure nonfinancial performance, such as not linking measures to strategy, not validating links, not setting the right performance targets, or measuring incorrectly (Ittner and Larcker, 2003b).

The use of behavioral controls has been recommended when the ability to measure outputs is low, but knowledge of the transformation process is perfect (Ouchi, 1977). Merchant et al. (2003) expect action controls to be used when managers know what behaviors or actions are desirable (or undesirable) and have the ability to ensure that desirable actions occur (or that undesirable ones do not). While behavioral controls can take several forms, some of those most suitable for performance evaluation of foreign subsidiary managers are action accountability controls including holding employees accountable for the actions they take in accordance with predetermined rules and procedures, achieving standards, and proposing expenditure-cutting programs. A clear caveat concerning the effectiveness of behavioral controls in a multinational setting is, however, that given the high information asymmetry between HQ and foreign subsidiaries, the HQ is unlikely to have a particularly deep knowledge of the transformation process or of what behaviors are desirable or have the ability to ensure that desirable behaviors are taken. For the above reasons, HQ' emphasis on financial controls is expected to enhance financial performance more than an emphasis on nonfinancial or behavioral controls. The first hypothesis summarizes this theoretical expectation:

H₁: HQ' emphasis on financial controls in foreign subsidiary manager evaluation increases short-term profitability more than an emphasis on nonfinancial or behavioral controls.

The normative literature has often argued that the best results are achieved by combining financial and nonfinancial controls (e.g., Goold and Quinn, 1990; Lynch and Cross, 1991; Kaplan and Norton, 1992; Smith, 1995). Emphasis on a wider range of controls might be a strength in possibly covering a larger proportion of overall performance. For example, Kaplan and Norton (1992) suggest that a "Balanced Scorecard" of financial and nonfinancial performance indicators allows managers to view performance in several areas simultaneously and to focus on the most critical indicators of current and future performance. The use of a combination of controls may also be useful in providing more outward-looking, longer-term, and strategic perspectives. However, the evidence is not conclusive, because the results have been mixed (for reviews, see Ittner, Larcker and Randall 2003a, pp. 718-720; Davis and Albright, 2004, pp. 137-138).

The emphasis of multiple types of controls may also be a weakness. The study by Ittner et al. (2003a) found no evidence that a scorecard approach enhanced branch managers' understanding of business goals, plans for meeting goals, or connections between their job and business objectives. Selected goals and controls may not be coherent with various overall, sublevel and individual-level goals (Nørreklit, 2000, pp. 84-85). Moreover, the number of measures selected may be too large to be manageable (Kaplan et al., 1992). For the above reasons, top management's emphasis on financial controls might enhance financial performance more than a simultaneous emphasis on multiple forms of controls. If the first argument on possible joint effects is valid, then the following hypothesis holds:

H₂: HQ' simultaneous emphasis of financial, nonfinancial, and behavioral controls in foreign subsidiary manager evaluation increases short-term profitability more than an emphasis on financial controls.

The prior hypotheses do not take into consideration the effects that other factors may have on the emphasis of controls. Thus, they expect that the emphasis of controls is optimally designed to match the circumstances. Given the complexities of large MNCs, however, this may not always be the case. Where a mismatch exists, manager's performance may be worse. The relationships between HQ' emphasis on controls and short-term profitability may be contingent on other factors, such as the level of PEC. The studies summarized in Table 1 illustrate this. While previous empirical findings on environmental effects have been mixed, at least two alternative theories explain the possible outcomes of emphasizing controls (Chapman, 1998, 2005).

[Insert Table 1 about here].

First, in light of the controllability principle, PEC increases uncertainty and may thus imply the absence of predictability of future conditions that are desirable for effective control systems. Under such circumstances, managers may perceive that they have less than full control over their output and behavior, and it becomes harder to measure controllable outputs (results) and behaviors (actions) precisely. If the results and actions that can be, and are, measured are largely uncontrollable, then the controls will not be effective and the desired behaviors cannot be evoked (Merchant, 1998, pp. 76-79) leading to lower levels of performance.

Alternatively, HQ' emphasis on formal controls might increase, or at least remain high, despite increasing environmental uncertainties. Merchant (1987) identifies several reasons why financial controls have been used in managerial performance evaluations, regardless of environmental contingencies. First, uncontrollable factors may be perceived to cancel each other out. Second, it may be difficult to adjust objectively for uncontrollable economic factors. Third, managers may be strongly averse to subjective performance evaluations. Fourth, consideration of external forces may be considered an excuse. Fifth, it may be considered desirable that managers try to react to uncontrollable conditions.

High reliance on formal controls may also result if controls are used by top management in an interactive way to direct the attention of subordinate managers to areas of strategic uncertainties, as illustrated by the frameworks of Simons' (1990, 1995). Strategic uncertainties represent uncertainties that could undermine the current basis of competitive advantage. In an interactive use of controls, HQ direct the attention of subsidiary managers to areas of strategic uncertainties and pay frequent and regular attention to monitoring of controls. This sends signals to organizational members to collect relevant information and engages them in face-to face dialogue and debate, which in turn leads to a focus on strategic uncertainties and may even facilitate and shape strategic change.

In MNCs, faced with great geographical and cultural distances, HQ might have no other alternatives than to place a high emphasis on financial controls to maintain tight enough control when faced with increasing environmental dynamism (Hassel, 1991). Environmental uncertainty can increase information processing through the use of a control system (Simons, 1987). To a certain extent, this might also be the case with other forms of formal controls.

The above studies suggest that managers can take an active role in using controls in highly uncertain environments. Other empirical studies have hypothesized and confirmed that managers generally increase the use of broad-based, subjective information systems, in particular nonfinancial controls, when there is a perceived increase in uncertainty (Govindarjan, 1984; Chenhall and Morris, 1986; Gordon and Narayan, 1984). If the second view is valid and also leads to higher profitability then the following hypothesis holds:

H₃: For higher perceived environmental changes, the effect of emphasizing financial, nonfinancial, and behavioral controls on short-term profitability is more positive.

3. Method

Sample

The study population comprised 154 business units of 83 manufacturing companies headquartered in Finland, each with at least one overseas manufacturing plant in which the Finnish parent company had a holding larger than 50%. A few companies were single-business firms. In such cases, the level of analysis is also corporate. This total population of manufacturing MNCs headquartered in Finland was identified using Mikkonen's (1991) study. Companies that no longer exist or had been merged with overseas companies were eliminated from the survey. The analyzed companies operate mainly in developed industrialized countries in Western Europe and North America. The ownership base of several of these firms is relatively broad, drawn from several nationalities.

The data were collected in two phases and from two sources: from surveys and from documentary sources such as annual reports. In the first phase, data for the independent variables of this study were collected with a mail survey. Since the total population of MNCs headquartered in Finland is not large, the whole population was included in the mail survey. Hence, the selected target sample was a convenience sample. After the wording of the questions and the questionnaire had been pretested three times,³ a total of 154 questionnaires were initially distributed by airmail to the manufacturing companies. The postal questionnaire was sent to each business unit, addressed to a senior manager in a key position for conducting performance evaluations of foreign subsidiary managers (i.e. to a business group or financial director in larger firms; or to a corporate director such as a financial director, vice-president, or president in smaller single-business firms). The respondents were identified by telephone calls and information derived from annual reports. The mail survey was administered in late spring. The initial questionnaire request and three follow-ups yielded 89 (58%) questionnaires from 50 (60%) industrial corporations.

In the second phase, data for the dependent variable of this study were collected using both documentary sources and surveys. Where possible, year-end financial performance data were collected from documentary sources such as annual reports. This resulted in nine return-on-investment (ROI) values. Since these measures are normally unavailable for conglomerate business units and for privately held firms (i.e., not listed in the stock exchange), additional

³ Pretesting was conducted among a sample of 13 practitioners and academic experts. All practitioners represented separate industries and companies and all were at senior management level (controllers, chief financial officers or consultants). The academic management accounting experts represented universities in several countries (Finland, Australia, and the U.S.A.).

performance data were collected with mail surveys and four follow-ups at the corporate level. Overall, all these attempts yielded data on several business units, which increased the total number of responses to 36. The absolute size of this sample, 36 data points, is not large, but it represents approximately 41% of the 89 initial survey respondents and about 23% of the total population of 154 business units. It is also large enough for the purposes of our statistical analysis, providing about 12 subjects per predictor for the selected tests. Reasons such as financial information not being available because of mergers or the information's confidential nature were identified as the cause of no response in 12 cases. These reasons do not indicate any systematic bias, nor did the results of independent t-tests.⁴

On average, the 36 participants were approximately 48 years old and had worked for their current company for about 15 years. Ten of the respondents reported that their foreign subsidiary managers are typically Finnish and 22 that their foreign subsidiary managers are typically local. According to the participants, the age of their overseas operations, measured as the age of the first foreign subsidiary, ranged from 5 to 89 years and averaged about 17 years (n=30). Based on annual statements, the average number of foreign subsidiaries of the participating business units was approximately 12, ranging from 1 to 58. Most of the foreign subsidiaries were usually located in Europe (mean 9.4), in North America (mean 2.1), or in Asia (mean 0.77). The remaining foreign subsidiaries were located in Australia (mean 0.17), South America (mean 0.11), or in Africa (mean 0.1). The average business unit sales were approximately €1997 m (range €52 m to €8785 m, n=31). The number of employees ranged from 28 to 5828, and averaged about 1923.

Measures

The dependent variable, *short-term profitability*, was assessed using absolute year-end return-on-investment (ROI) values. ROI values were used, because they are commonly used to measure business success (Ansoff, 1965, p. 42; Simons, 1988), are often accepted as the main or only indicator of success (Johnson et al., 1987, p. 3), and can be applied to various types of organizations. Furthermore, while the level of ROI obviously may be impacted by several factors, such as the industry in question, it allows comparisons between various types of industries because all organizations strive to obtain a share of the limited amount of capital in a society (Price and Mueller, 1986, p. 132). Where possible, year-end business unit-level ROI values were collected from annual reports. Otherwise, in line with Dess and Robinson (1984, p. 268), business unit-level ROI values were surveyed from respondents by asking them to provide the absolute ROI values at the year-end. While business unit-level ROI figures were requested from multibusiness firms, firm-level ROI figures had to be requested from smaller single-business firms. Note that in each case the names of the examined units were specified in the questionnaires. Next, the respondents were asked to compare the ROI and overall performance of their firm (/business group) to "other firms in your industry and region." Five-point scales for both items ranged from 5 (top 20%) to 1 (lowest 20%). Where possible, reported ROI values were checked against published financial statements and found to be extremely accurate ($r=0.99$, $n=9$, $p<0.000$). In line with Dess et al. (1984), the self-reported absolute ROI values also showed a high correlation with the self-rated relative ROI values (r

⁴ Independent-sample t-tests were used to compare the mean values for respondents who provided ROI values with the values for those who did not in terms of several key variables (emphasis of controls, PEC, nationality, length of employment at the current company, age of foreign operations, age of respondent, year-end sales, year-end employees, total number of foreign subsidiaries, and number of foreign subsidiaries in North America, Europe, Asia, Australia, South America, and Africa). No significant differences were found at the 0.05 level.

=0.68, $n=23$, $p<0.000$). These results suggest very high validity for the self-reported values. In line with Dess et al. (1984), very high correlations were detected between overall firm performance and the absolute and relative ROI values ($r_1=0.68$, $n=22$, $p<0.001$; $r_2=0.89$, $n=22$, $p<0.000$), suggesting a high degree of overlap between these measures.

HQ' emphasis on financial, nonfinancial, and behavioral controls concerns the extent to which senior managers at (business unit) HQ perceive that they use these types of controls in the performance evaluation of foreign subsidiary managers. The perceived use and emphasis of financial, nonfinancial, and behavioral controls was assessed with five-item five-point Likert scales using superiors' scores. Since all possible measures could not be included, examples of the three types of controls were provided. Applying Keating's (1997) questions on managerial performance evaluation, the respondents were asked to indicate the following patterns in their information usage: (1) the importance of controls in the performance evaluation of foreign subsidiary managers' performance, (2) the extent to which meetings are arranged with overseas managers to discuss their performance based on those controls, (3) the extent to which the controls reflect successful effort by the subordinate managers, (4) the amount of attention paid to each control type, and (5) the impact of the controls on managers' rated performance. Each item was rated on a scale ranging from (1) not at all important (/not at all) to (5) very important (/very much). The values obtained for the five questions for each of the three types of controls were averaged. Low average values on the 1–5 scale indicate a low emphasis placed on the particular controls in foreign subsidiary manager evaluation, and high average values indicate a high emphasis. The Cronbach (1951) alpha statistics for internal reliability was 0.83 for financial controls, 0.79 for nonfinancial controls, and 0.83 for behavioral controls. These statistical values were judged to be acceptable (Nunnally 1978).

Previous accounting studies have measured various environmental circumstances. In this study, *the rate of PEC* was measured using a 14-item five-point measurement instrument. This instrument asks the respondents to rate the experienced rate of change regarding customers, distributors, government relations, and technical developments; supplies from capital, raw material and labor markets; competitors' actions regarding product innovation, advertising, distribution and pricing; the impact of goals and strategies of the corporation, interdependence with other units within the corporation; and finally, overall environmental changes. The five-point scale ranges from (1) "never" to (5) "very often." The lower the average score for the first 13 items, the lower the perceived degree of environmental changes in overseas subsidiaries, and *vice versa*. This instrument is similar to that used by Hassel (1991), except that the respondents were not requested to rate the items as either critical or noncritical to their decision-making to simplify measurement. The Cronbach (1951) reliability estimate was 0.75.

Before testing the hypotheses, the study data were checked for multicollinearity, outliers, and influential data points. Multicollinearity was checked using variance inflation factors. Outliers for predictors were assessed with centered leverage values. Outliers for dependent variables were estimated with standardized residual values. The combined influence of a case being an outlier on the dependent variable and on a set of predictors was measured in terms of the Cook distance. All the statistical values were found to be acceptable with the exception of one subject with a standardized residual value of over 3.0 for ROI. This subject was deleted from further analysis, since, according to Sevens (2002) "we want the results of our statistical analysis to reflect most

of the data, and not to be highly influenced by just one or two errant data points.” Therefore the final results are based on 35 subjects.⁵

Table 2 presents descriptive statistics of the dependent and independent variables analyzed in this study. Table 3 presents a correlation matrix for the dependent and independent variables.

[Insert Tables 2 and 3 about here]

4. Results

Hypothesis 1

Hypothesis 1 expects that HQ’ emphasis on financial controls in foreign subsidiary manager evaluation increases short-term profitability more than an emphasis on nonfinancial or behavioral controls. To test this hypothesis, the following multiple regression was run:

$$Y = b_0 + b_1A_1 + b_2A_2 + b_3A_3 + e, \quad (1)$$

where

- Y = short-term profitability (ROI),
- A₁ = HQ’ emphasis on financial controls,
- A₂ = HQ’ emphasis on nonfinancial controls,
- A₃ = HQ’ emphasis on behavioral controls,
- b₀, b₁, b₂, b₃ = regression coefficients, and
- e = error

Table 4 reports the results. While the overall adjusted R² value of 0.338 needs to be interpreted carefully, it indicates that a significant amount of variance (about 34%) in short-term profitability can be accounted for by variability in the emphasis on financial, nonfinancial and behavioral controls in foreign subsidiary manager evaluations, whereas the other 66% is related to other factors in this sample. While 34% may seem a small amount, it is far from trivial, especially to those concerned about the profitability of the company. The overall F statistic was 6.786, which was significant at the 0.001 level with three degrees of freedom.

The multiple regression model provides a constant of -30.386 with regression coefficients of 10.140, -7.248 and 7.288 for financial, nonfinancial and behavioral controls, respectively. These results suggest that financial controls are the most important predictors of short-term profitability (t= 3.126, p=0.004), followed by behavioral (t=2.694, p=0.011), and nonfinancial controls (t=-2.162, p=0.038). As expected, financial and behavioral controls have positive effects, but nonfinancial controls have a negative effect on short-term profitability. All the results obtained are statistically significant. These results support the first hypothesis: HQ’ emphasis on financial controls in foreign subsidiary manager evaluation increases short-term profitability more than an emphasis on nonfinancial or certain behavioral controls.

⁵ Note that the results obtained are in the same direction as those with all 36 subjects.

Hypothesis 2

Hypothesis 2 expects that simultaneous HQ emphasis of financial, nonfinancial and behavioral controls in foreign subsidiary manager evaluations increases short-term profitability more than an emphasis on financial controls. That is, using the regression coefficients for financial, nonfinancial and behavioral controls obtained from Table 4:

$$\begin{aligned} b_1 + b_2 + b_3 &> b_1, \text{ or} \\ b_2 + b_3 &> 0 \end{aligned} \quad (2)$$

In this case, the positive effect ($r = 7.288$) of behavioral controls offsets the negative effect of nonfinancial controls ($r = -7.248$). The simultaneous effect obtained is positive, but close to zero and not significant ($r = 0.04$, $t = 0.15$, $p = 0.988$). In conclusion, HQ' simultaneous emphasis on financial, nonfinancial and behavioral controls in foreign subsidiary manager evaluations does not significantly increase short-term profitability compared to emphasis on financial controls. In conclusion, the study data does not support the second hypothesis.

Since the second hypothesis is not supported by the data, it is appropriate to ask whether HQ' simultaneous emphasis on financial and behavioral controls would increase short-term profitability compared to an emphasis on financial controls. That is:

$$\begin{aligned} b_1 + b_2 &> b_1, \text{ or} \\ b_2 &> 0 \end{aligned} \quad (3)$$

A positive and significant result ($r = 7.288$, $p < 0.05$) supports the view that higher levels of HQ' simultaneous emphasis on financial and behavioral controls increases short-term profitability more than an emphasis on financial controls alone.

Hypothesis 3

Hypothesis 3 expects that for higher PEC values, the effect of emphasizing financial, nonfinancial and behavioral controls on short-term profitability is more positive. The appropriate statistical test for analyzing this hypothesis is moderated regression analysis, in which the regression equation contains the main effects of two independent variables (i.e., PEC and emphasis on controls) and an interaction term (i.e., a product of the two independent variables) (Hartmann and Moers, 1999, pp. 293, 310). In particular, attention focused on the interaction term (b_{AB}), which represents the moderating effect of PEC (b_2B) on the relationship between emphasis on controls (b_1A) and performance (y). A significant positive coefficient b_3 indicates positive interactions between PEC and the emphasis on financial (nonfinancial or behavioral) controls. In the case of two independent variables, as here, the following equation is used:

$$Y = b_0 + b_1A + b_2B + b_3AB + e \quad (4)$$

where,

Y=short-term profitability,

A=the emphasis on financial (nonfinancial or behavioral) controls,

B=perceived environmental changes,

AB=interaction term,
 b_0, b_1, b_2, b_3 = regression coefficients, and
 e=error.

The statistical tests were run three times: first, for HQ' emphasis on financial controls (Table 5, Panel A), then for emphasis on nonfinancial controls (Table 5, Panel B), and finally for emphasis on behavioral controls (Table 5, Panel C). As the results in Panels A and C show, there are no significant interaction effects between emphasis on financial controls and PEC, or between emphasis on behavioral controls and PEC. However, the results in Panel B suggest a positive and significant interaction between emphasis on nonfinancial controls and PEC. The regression coefficient is 19.129, with a t-value of 2.293 ($p=0.029$).⁶ Furthermore, as predicted, this effect is positive, indicating that for higher PEC, the effect of emphasizing nonfinancial controls on short-term profitability is more positive. This prediction model accounts for approximately 18% of the variance ($R^2=0.184$, $F=3.56$, $p=0.025$).

The nature of the interaction between emphasis on nonfinancial controls and PEC was further analyzed by taking a partial derivative of the multiple regression equation with respect to nonfinancial controls (A_2), as follows:

$$\partial Y/\partial A_2 = b_1 + b_3 B_2 \quad (5)$$

Then the coefficients from Table 5, Panel B were inserted into the equation (5). This gave the following partial derivative equation:

$$\partial Y/\partial A_2 = -54.932 + 19.129 B_2 \quad (6)$$

The values obtained for the equation ranged from -9.32 to 15.70. The values for PEC ranged from 2.38 to 4.0. The zero point of the equation (6) is 2.872. This means that the equation is negative, when $B_2 < 2.872$, and positive when $B_2 > 2.872$. Given that the horizontal axis was crossed, a non-monotonic interaction was identified (Hartmann and Moers, 1999, p. 295). Hence, the data suggest that, for lower PEC values, emphasis on nonfinancial controls will negatively affect short-term profitability; for higher PEC values emphasis on nonfinancial controls will positively affect short-term profitability.

Taken together, the data partially support the third hypothesis. The findings indicate that PEC moderates the relationship between HQ' emphasis on nonfinancial controls and short-term profitability. The moderating effect is positive and non-monotonic. Business units that do not match emphasis on nonfinancial controls to PEC do not perform as well, at least in the short term.

[Insert Table 5 about here].

⁶ Another regression, with main effects only, was also run (Hartmann and Moers, 1999, p. 294). The results confirmed a significant interaction effect, since the additional variance was explained by inclusion of the interaction term (i.e., the significance of the increase in R^2). Notably, the results for the regression run with main effects only were low and insignificant. (The following values were obtained: for nonfinancial controls $b_1=3.523$, $t=1.169$, $p=0.251$ and for PEC $b_2=-2.701$, $t=-0.615$, $p=0.543$. $\text{Adj. } R^2=-0.017$, $F=0.708$, $p=0.500$).

5. Discussion and Conclusions

The objective of this study was to explore (1) how short-term profitability is affected by HQ' emphasis on financial, nonfinancial, and selected behavioral controls in performance evaluations of foreign subsidiary managers, and (2) whether this relationship is moderated by PEC in MNCs. Following a limited number of empirical management accounting studies (Abernethy and Stoelwinder, 1995; Abernethy and Brownell, 1997; Kennedy and Widener, 2005), this study advanced empirical analysis of output (results) and behavioral (action accountability) controls. In contrast to previous studies on managerial evaluations (Table 1) and balanced scorecards, which mainly focused on either nonfinancial or long-term financial outcomes, this study increased our understanding of short-term profitability consequences. In doing so, the study also analyzed moderating effects of certain environmental contingencies (as suggested e.g., in Ittner & Larcker, 1998) and increased our understanding of Finnish-based MNCs.

As expected, the statistical results indicate that business unit HQ' emphasis on financial controls generally improved short-term profitability in the business units to a greater extent than an emphasis on nonfinancial or action accountability controls (such as *follow* rules & procedures, *achieve* cost budgets & production standards, and *present* expenditure cutting proposals). Compared to financial controls, behavioral controls had a smaller positive effect on short-term profitability and nonfinancial controls had a negative effect. Simultaneous emphasis on all three types of controls did not appear to significantly increase short-term profitability compared to an emphasis on financial controls alone. This was due to the negative effect of nonfinancial controls, which almost entirely offset the positive effect of behavioral controls. The study also found that the relationship between HQ' emphasis on nonfinancial controls and short-term profitability was contingent on PEC. In other words, PEC moderated the form of the relationship between HQ' emphasis on nonfinancial controls and short-term profitability. A positive and monotonic interaction was found to exist.

The theoretical implication of this study is that in the short-term and regardless of the environmental contingencies analyzed, financial controls seem to be more effective in managerial performance evaluations than nonfinancial or behavioral controls. However, control packages consisting of financial and behavioral controls appear to be even more effective in increasing short-term profitability. Hence, the study contributes to the accounting literature in at least two ways. First, the results of this study clearly contribute to contingency-based research in that the best organizational response to environmental contingencies seems to be to use financial (not nonfinancial) controls. In addition, previous results indicating that nonfinancial controls are increasingly used when faced with environmental uncertainty (Govindarjan, 1984; Chenhall & Morris, 1986; Gordon & Narayan, 1984) are extended here by empirically showing that the effect of an emphasis on nonfinancial controls on short-term profitability is more positive only for higher PEC.

Second, the results contribute to existing research on control packages such as the balanced scorecard (Kaplan and Norton, 1992). Such research was motivated by a desire to protect long-term (not short-term) financial performance from managers who are too eager to improve short-term performance. According to Kaplan and Norton (1996), the proper roles of balanced scorecards are not quite clear. Given that nonfinancial controls showed negative effects on short-term profitability, the results of this study raise further questions about their effectiveness in

managerial performance evaluations. However, the results do suggest that control packages consisting of financial and action accountability controls can be quite effective in improving short-term profitability.

The results of this study have two main managerial implications. First, the results clearly suggest that HQs of Finnish-based MNCs may generally be better off if they use financial and action accountability controls (rather than nonfinancial controls) in evaluating managerial performance. The second implication is that, if top management nevertheless decides to use nonfinancial controls in the performance evaluation of foreign subsidiary managers, the emphasis on nonfinancial controls should be adjusted towards PEC in order to enhance profitability. In essence, nonfinancial controls could be emphasized with higher PEC. The evidence suggests that business units that do not match an emphasis on nonfinancial controls to PEC do not perform as well, at least in the short term.

This study is subject to certain limitations. First, while several types of formal controls have been examined, these may not encompass all the possible controls currently used to evaluate foreign subsidiary managers in MNCs. Other types of formal and informal controls may also be used. Second, the empirical results do not attribute directionality to the effects examined. For example, another equally plausible explanation may be that managers working in successful firms perceive the emphasis on financial and behavioral controls to be high. Third, better year-end profitability has been considered positive in this study, but could sometimes be a sign of “harvesting”. Fourth, the results were obtained from top managers of Finnish-based MNCs. This limits the cultural context and sample size analyzed, given that there are not that many MNCs in Finland. Nevertheless, the sample represents a relatively large share of the population of Finnish-based MNCs (about 23% of all their business units). Despite these limitations, the study takes the first step towards analyzing an academically and managerially important topic. The fact that the study was conducted in a specific cultural context and is empirically oriented should have relevance for increasing our understanding of the financial consequences of managerial performance evaluations.

In terms of future research, additional studies in different settings and using different subject samples could be beneficial. For example, service sector companies with less tangible outputs to evaluate might provide alternative findings on the use of financial controls. The results of this study could also be extended to explore medium- and long-term profitability effects. Extensions could also be made to align the study with existing insights in contingency research in that other possible moderating effects; such as the industry, level of participation, autonomy, ability, and leadership style; could be tested on the use of multiple forms of controls. Future research on managerial performance evaluations could also advance the analysis of whether differential use of various types of controls enhance performance. Such research could build on findings on, for example, the flexible/inflexible (Morsicato and Diamond 1980), tight/loose (Simons, 1988), interactive/diagnostic (Simons 1990, 1995), or enabling/coercive use of control (Adler & Borys, 1996; Ahrens & Chapman, 2004; Naranjo-Gil & Hartmann, 2006; Chapman and Kihn, 2006).

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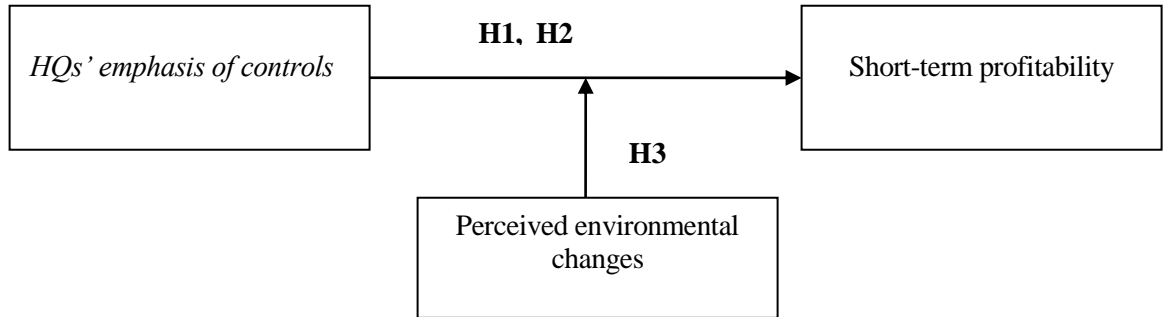


Figure 1. The research framework

Table 1. Summary of prior studies.

| <i>Study</i> | <i>Dependent variable(s)</i> | <i>Independent variable(s)</i> | <i>Moderating variable(s)</i> | <i>Sample</i> | <i>Result(s)</i> |
|---------------------|---|--|---|--|---|
| Hirst (1983) | Job-related tension. Superior-subordinate relationships | Reliance on APMS | Perceived task Uncertainty (PEU) | Part-time students at tertiary institutions | Negative effect supported Not supported |
| Govindarajan (1984) | Organizational performance | Reliance on formula-based or subjective performance evaluation/reward system | PEU | 58 business units managers of eight U.S. Fortune 500 firms | Negative effect supported |
| Brownell (1985) | Managerial performance | Meeting the budget and concern with costs or revenues | Environmental complexity and dynamism | Mostly marketing and R&D managers of a U.S. parent company of a large MNC | Negative effects supported |
| Brownell (1987) | Managerial performance Job satisfaction | Meeting the budget and concern with costs or revenues | Environmental complexity and dynamism | Mostly middle and upper level managerial personnel of an Australian subsidiary | Negative effects supported with environmental complexity |
| Imoisili (1989) | Stress Performance Attitude toward budget | Reliance on a budget constrained or profit conscious evaluation style | Perceived task uncertainty Interdependency | 120 managers. | Not supported Not supported Not supported |
| Hassel (1991) | Agreement on evaluation criteria Job satisfaction. Satisfaction with supervision Subunit performance | Meeting the budget and concern with costs or revenues | Environmental dynamism | 31 foreign subsidiary managers of a Finnish-based MNC 36 domestic managers of a Finnish-based MNC | Not supported Not supported Positive effects supported Positive effects supported Partial support Not supported Not supported |
| Ross (1995) | Job-related tension | Reliance on budget constrained and non-accounting evaluation styles | PEU | 215 responsibility centre managers from 18 Australian organizations | Partial support for positive effect at high degrees of PEU |

Table 2. Descriptive statistics for the dependent and independent variables.

| | <i>Mean</i> | <i>Std.Dev</i> | <i>Theoretical range</i> | <i>Actual range</i> | <i>Reliability n estimate</i> | |
|---------------------------------|-------------|----------------|--------------------------|---------------------|-------------------------------|----|
| Return on investment | 14.91 | 8.92 | | -4.0-35 | 35 | |
| HQs' emphasis of: | | | | | | |
| financial controls | 4.62 | 0.45 | 1-5 | 3.6-5.0 | 0.83 | 35 |
| nonfinancial controls | 4.25 | 0.55 | 1-5 | 3.2-5.0 | 0.79 | 35 |
| behavioral controls | 4.01 | 0.64 | 1-5 | 2.8-5.0 | 0.83 | 35 |
| Perceived environmental changes | 3.10 | 0.37 | 1-5 | 2.4-4.0 | 0.75 | 35 |

Table 3. Correlation matrix for the dependent and independent variables (n=35).

| | 1. | 2. | 3. | 4. |
|--------------------------------------|--------|---------|-------|-------|
| 1. Emphasis of financial controls | - | | | |
| 2. Emphasis of nonfinancial controls | 0.51** | - | | |
| 3. Emphasis of behavioral controls | 0.41* | 0.69*** | - | |
| 4. Return-on-investment (ROI) | 0.50** | 0.18 | 0.43* | - |
| 5. Perceived environmental changes | -0.05 | 0.34* | 0.38* | -0.04 |

* p<0.05, ** p<0.01, *** p<0.001 (two-tailed test)

Table 4. Summary statistics from a multiple regression of short-term profitability (ROI) on HQs' emphasis of financial controls, nonfinancial controls, and behavioral controls (n = 35).

$$Y = b_0 + b_1B_1 + b_2B_2 + b_3B_3 + e$$

| | <i>Unstandardized coef.</i> | | <i>t</i> | <i>p</i> |
|-----------------------------------|-----------------------------|------------------|----------|----------|
| | <i>B</i> | <i>Std.error</i> | | |
| Constant | -30.386 | 13.395 | -2.268 | 0.030 |
| Emphasis of financial controls | 10.140 | 3.243 | 3.126 | 0.004 |
| Emphasis of nonfinancial controls | -7.248 | 3.353 | -2.162 | 0.038 |
| Emphasis of behavioral controls | 7.288 | 2.704 | 2.695 | 0.011 |

R² (Adj) = 0.338
 F-value = 6.786
 P = 0.001 (two-tailed test)

Table 5. Regression coefficients of bivariate interaction terms for the short-term profitability (ROI) (n = 35).

$$Y = b_0 + b_1A + b_2B + b_3AB + e$$

| | <i>Unstandardized coef</i> | | <i>t</i> | <i>p</i> |
|-------------------------------------|----------------------------|-------------------|----------|----------|
| | <i>B</i> | <i>Std. error</i> | | |
| Panel A | | | | |
| Constant | -102.295 | 174.010 | -0.588 | 0.561 |
| Emphasis of financial controls | 25.116 | 36.378 | 0.690 | 0.495 |
| Perceived environmental changes | 22.397 | 54.195 | 0.413 | 0.682 |
| Interaction: | | | | |
| Emphasis of financial controls * | -4.771 | 11.323 | -0.421 | 0.676 |
| Perceived environmental changes | | | | |
| <hr/> | | | | |
| R ² (Adj) = 0.179 | | | | |
| F-value = 3.465 | | | | |
| P = 0.028 | | | | |
| Panel B | | | | |
| Constant | 261.844 | 86.031 | 3.044 | 0.005 |
| Emphasis of nonfinancial controls | -54.932 | 19.765 | -2.779 | 0.009 |
| Perceived environmental changes | -86.065 | 28.200 | -3.052 | 0.005 |
| Interaction: | | | | |
| Emphasis of nonfinancial controls * | 19.129 | 6.407 | 2.985 | 0.005 |
| Perceived environmental changes | | | | |
| <hr/> | | | | |
| R ² (Adj) = 0.184 | | | | |
| F-value = 3.560 | | | | |
| P = 0.025 | | | | |
| Panel C | | | | |
| Constant | 85.271 | 75.272 | 1.133 | 0.266 |
| Emphasis of behavioral controls | -12.563 | 18.014 | -0.697 | 0.491 |
| Perceived environmental changes | -33.542 | 25.664 | -1.307 | 0.201 |
| Interaction: | | | | |
| Emphasis of behavioral controls * | 6.710 | 6.070 | 1.105 | 0.278 |
| Perceived environmental changes | | | | |
| <hr/> | | | | |
| R ² (Adj) = 0.184 | | | | |
| F-value = 3.557 | | | | |
| P = 0.025 | | | | |

SUPPORTING DOCUMENT
The English version of the survey questions

- 1a. How important do you perceive each of the following types of measures to be in the evaluation of overseas managers? (Please circle the appropriate number on the 5-point scale below.)

| | Not At All | Of Little | There | Quite | Very |
|--|------------|------------|---------|-----------|-----------|
| | Important | importance | between | important | important |
| FINANCIAL CONTROLS (e.g., profit, return-on-investment, and residual income)..... | 1 | 2 | 3 | 4 | 5 |
| NONFINANCIAL CONTROLS (market share, quality, production volume, etc.)..... | 1 | 2 | 3 | 4 | 5 |
| BEHAVIORAL CONTROLS..... (e.g., <i>achieve</i> cost budgets & production standards, <i>follow</i> rules & procedures, <i>present</i> expenditure cutting proposals, etc.) | 1 | 2 | 3 | 4 | 5 |

- 1b. How often do you arrange meetings with overseas managers to discuss their performance on the following types of measures? (1=never, 2=seldom, 3=only if the performance is significantly below expectations, 4=quite often, and 5=regularly).

| | | | | | |
|----------------------------|---|---|---|---|---|
| FINANCIAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |
| NONFINANCIAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |
| BEHAVIORAL..... | 1 | 2 | 3 | 4 | 5 |

- 1c. To what extent do the following types of measures reflect whether overseas managers are succeeding or failing with the business?

| | Not at all | A Little | Some | Quite | Very |
|----------------------------|------------|----------|------|-------|------|
| | much | what | much | much | much |
| FINANCIAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |
| NONFINANCIAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |
| BEHAVIORAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |

- 1d. How much attention do you pay to periodic (i.e., weekly or monthly) reports of results based on the following types of measures, when you evaluate the performance of overseas managers?

| | | | | | |
|----------------------------|---|---|---|---|---|
| FINANCIAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |
| NONFINANCIAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |
| BEHAVIORAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |

- 1e. How much impact do good or bad results measured in the following types of measures have on the rated performance of overseas managers?

| | | | | | |
|----------------------------|---|---|---|---|---|
| FINANCIAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |
| NONFINANCIAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |
| BEHAVIORAL CONTROLS..... | 1 | 2 | 3 | 4 | 5 |

2. To what extent do the following aspects change in your foreign subsidiaries?

| | Never | Very seldom | Sometimes | Often | Very often |
|---|-------|-------------|-----------|-------|------------|
| Customer buying patterns and requirements..... | 1 | 2 | 3 | 4 | 5 |
| Distributor attitudes and requirements..... | 1 | 2 | 3 | 4 | 5 |
| Government regulations and reporting regulations..... | 1 | 2 | 3 | 4 | 5 |
| Technical developments relevant to your business..... | 1 | 2 | 3 | 4 | 5 |
| Supply sources: | | | | | |
| Capital markets..... | 1 | 2 | 3 | 4 | 5 |
| Raw material markets..... | 1 | 2 | 3 | 4 | 5 |
| Labor markets..... | 1 | 2 | 3 | 4 | 5 |
| Competitor actions: | | | | | |
| Product innovation..... | 1 | 2 | 3 | 4 | 5 |
| Advertising..... | 1 | 2 | 3 | 4 | 5 |
| Distribution..... | 1 | 2 | 3 | 4 | 5 |
| Pricing..... | 1 | 2 | 3 | 4 | 5 |
| Impact of goals and strategies of the corporation..... | 1 | 2 | 3 | 4 | 5 |
| Interdependence with other units within the corporation.... | 1 | 2 | 3 | 4 | 5 |
| Overall change in business environment..... | 1 | 2 | 3 | 4 | 5 |

3. What was your firm's (/business group's) return-on-investment (ROI) on the basis of year-end annual reports? _____%

4. Please compare the performance of your firm (/business group) to other firms in your industry and region on the basis of the following measures (please circle the right answer on each line):

| | Performance compared to other firms in the same industry and region | | | | |
|----------------------------|---|---|---|---|----------------|
| | Lowest 20% | | | | Highest 20% |
| Return-on-investment | 1 | 2 | 3 | 4 | 5 |
| Overall performance | 1 | 2 | 3 | 4 | 5 |