

# **Empirical Evidence on Relationships between Ex Ante Innovation Pursuit and Post-M&A Performance in the Vietnamese M&A Industry, 2005-2012**

**Quan Hoang Vuong, Nancy K. Napier, Donaldine E. Samson and Hong Kong Nguyen**

This research aims to communicate new results of empirical investigations to learn about the relationship between determination of controlling an acquired firm's capital, assets and brand versus its capability of innovation and *ex post* performance of the rising Vietnamese M&A industry in the 2005-2012 period. The analysis employs a categorical data sample, consisting of 212 M&A cases reported by various information sources, and performs a number of logistic regressions with significant results as follows.

Firstly, the overall relationship between pre-M&A pursuit's determination on acquiring resources and performance of the post-M&A performance is found significant. There exist profound effects of a 'size matters' strategy in M&A *ex post* performance. When there is an overwhelming 'resources acquiring' strategy, the innovation factor's explanatory power becomes negligible.

Secondly, for negative performance of post-M&A operations, the emphasis on both capital base and asset size, and the brand value at the time of the M&A pursuit is the major explanation in the post-M&A period. So does the absence of innovation as a goal in the pre-M&A period. These two insights together are useful in careful M&A planning.

Lastly, expensive pre-M&A expenditures tend to adversely affect the post-M&A performance.

As a general conclusion, this study shows that innovation can be an important factor to pursue in M&A transitions, together with the need to emphasize and find capable and willing human capital, rather than a capital base (equity or debt) and existing values of the acquired brands.

**Keywords:** Mergers and Acquisitions, Innovation, Firm Performance, Economic Transition, Human Capital, Financial Markets, Vietnam

**JEL Classifications:** L25, O10, O30, P31, P34

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Quan Hoang Vuong, Ph.D.  
Centre Emile Bernheim, Université Libre de Bruxelles  
ULB CP 114/03, F.D. Roosevelt 50, Brussels-1050, Belgium  
[quong@ulb.ac.be](mailto:quong@ulb.ac.be)

Nancy K. Napier, Ph.D.  
CCI/COBE, Boise State University  
2360 W. University Drive, Boise, ID 83725, USA  
[nnapier@boisestate.edu](mailto:nnapier@boisestate.edu)

Donaldine E. Samson, Ph.D.  
Graduate School, Stamford International University  
16 Motorway Road-KM 2, Prawet, Bangkok 10250, Thailand  
[dolly.samson@gmail.com](mailto:dolly.samson@gmail.com)

Hong Kong Nguyen  
Toan Viet Info Service  
109 D5 Giang Vo, Ba Dinh, Hanoi, Vietnam  
[hongkongt.nguyen@gmail.com](mailto:hongkongt.nguyen@gmail.com)

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## **1. The M&A industry in Vietnam: Background**

This paper focuses on mergers and acquisitions (M&As) in Vietnam's emerging market economy from 2005-2012, the first six years after Vietnam joined the WTO. Vietnam's re-integration into the global world economy has not been without obstacles and difficult socio-economic consequences. All governments seek positive developmental outcomes, but making them happen in today's globalizing world is difficult and unclear, according to Nobel Laureate in Economics Joseph Stiglitz (2003, 2008). Since Vietnam's M&As began in earnest during the post-WTO globalization process, it may be a signal for the complexity of the economy's next period of transition.

Mergers and acquisitions are increasingly common in Asian economies, amid the trend of economic regionalization. Both acquiring and acquired firms seek economic benefits when entering such transactions, namely merging or purchasing/selling large portion of owners' equity of a target firm. Clearly, M&As involve change and the expectation of profit opportunities for the parties involved. Thus, it is quite logical for an observer to expect some level of innovation from a successful M&A, as Peter Drucker is when he says:

*"... A change in industry structure offers exceptional opportunities, highly visible and quite predictable to outsiders... The outsiders, who innovate, can thus become a major factor in an important industry or area quite fast and at a relatively low risk,"* (Drucker, 1986, pp. 81).

This is perhaps why both business and policy officials exhibited over-optimism when seeing a big jump in the level of Vietnam's M&A transaction value to approximately \$10 billion in the 1990-2009 period as reported in Vuong, Tran and Nguyen (2010).

But Vuong et al. (2010) also pointed out that the Vietnamese M&A market's reality is quite complex. Since many sellers consider M&As a way to exit from their industries, and gain satisfactory payoffs, they were less likely to initiate structural changes and innovations. This resulted in part from Vietnamese business culture (Vuong and Tran, 2009). This yet is another anomaly added to observed market anomalies that have occurred since the birth of the Vietnamese stock market in 2000 (Farber, Nguyen and Vuong, 2006).

In light of this, the current M&A trends may represent a shift in the economic function of local businesspeople from being pure entrepreneurs to being pure capitalists. These two roles are known in economics to be distinct in their aspects of capital requirement and level of risk-taking involved (Kirzner, 1973). In fact, motivated to exit the industry, the selling entrepreneur shows her declining commitment to both the future of the acquired firm and any future innovation process that may take place. As a consequence, future innovation by the acquired or merged firm would likely be in the hands of the acquiring one. And this, we can assume, has to be decided ex ante.

What makes an M&A transaction different from a normal portfolio investment is its post-merger integration process (PMI) and the source of profits that comes from the core business operations, not financial payoffs from capital gains. Further, foreign transnational corporations (TNC) may pursue a strategy of taking over resources -- capital and physical -- as well as market positioning, partly defined by the brand strength of the acquired firm in a local market, such as Vietnam. Access to resources and brand are critical in an emerging market economy, where competition is rising and resource scarcity is well-known. In fact, empirical data for the M&A industry in Vietnam during 1990-2010 indicates that 79.4 per cent of the M&A attempts (200 out of 252 cases) came from foreign firms acquiring domestic ones (Vuong et al., 2010).

In this situation, innovations are never obvious and never easy (Drucker, 1986, p. 149):

*“It thus takes special effort for the existing business to become entrepreneurial and innovative. The ‘normal’ reaction is to allocate productive resources to the existing business, to the daily crisis and to getting a little more out of what we already have. The temptation in the existing business is to feed yesterday and to starve tomorrow”.*

Also, Vietnam’s economic turmoil in the post-WTO period, from 2007 to 2012, caused in part by ‘clumsy monetary policy’ (Pham and Riedel, 2012) has also triggered further resources/assets acquiring strategies by domestic companies, aiming to take advantages of short-run economic rents from both financial markets and real economic activities.

## **2. Literature on post-M&A performance and why creative performance matters**

Calderón, Loayza and Servén (2004) pointed out that M&A activities have become a mainstream economic operation in today’s business world. The M&A industry has gone through six waves of development over the past century, with the most recent taking place in early 2000s (Katz, Simanek and Townsend, 1997; Kim, 2009) starting from the developed economies, namely the United States, European Union and Japan. Technological innovations have been behind the most recent M&A wave in the West.

In East Asia, the M&A trend appeared later, in the late 1980s, initially in more advanced economies like South Korea, Taiwan and Hong Kong. The 1997 Asian financial turmoil also contributed to the emergence of a regional M&A wave within distressed business communities (Mody and Negishi, 2000).

In Vietnam, the M&A industry has gradually been shaped largely by its natural connection to the FDI inflows and activities (Lall, 2002), and was increasingly important in the 2005-2010 period (Vuong et al., 2010). Since expecting short-term profits is unrealistic in the Vietnamese transition economy, it is more logical that acquiring firms seek longer-term value and benefits from acquisitions of Vietnamese firms. This aligns with an argument by Kim (2009) and others (Focarelli, Panetta, and Salleo, 2002; Öberg and Holtström, 2006), who say that creating a more favorable industrial environment and making strategic acquisitions may increase the acquiring firm’s power to control assets and market access, and further, help secure stable supplies of production materials.

In addition, a larger number of Vietnamese M&A transactions in the 2005-2010 period as reported by Vuong et al. (2010), as well as the increasing trend in 2011-12, suggest that banks' motivation to acquire capital assets and brand values in the local market, while empirical evidence appears to have indicated that immediate profits are not always the expectations from acquiring firms (e.g., Block, 1968; Shick, 1972; Focarelli et al., 2002, Pop, 2006). In this sense "business concentration" can be regarded as the "keyword" although Ijiri and Simon (1971) reported empirical results rejecting the hypothesis that M&A is a profound way to reduce competition through increasing domination of M&A players.

Bertrand and Zuniga (2005) found some significant differences impacts between cross-border M&A transactions in OECD member economies in the 1990s, versus national transactions. More recently, empirical evidence (Beena, 2007) in the more innovation-oriented industry of pharmaceutical manufacturing in India, shows that post-M&A firms are more efficient compared to their pre-M&A level of efficiency.

Still, the question about real economic efficiency in the Asian M&A market, which goes beyond successful transactions alone, has been left unanswered. While Kummer (2009) reported a rising trend of M&A in Asia in monetary value from 13.3 per cent of the global M&A transaction value in 1995 to 20 per cent in 2008, their impact on a general level of improvement still goes unreported. This causes some confusion among both economists and policy makers because structural reforms have been advocated for years since the beginning of the Asian currency crisis, with a major goal of improving the levels of productivity, economic efficiency and especially innovation capability of the manufacturing and construction sectors.

Also, despite the surge of M&A trends in Asia in general and Vietnam in particular, there is little "guiding light" on the relationship between real-world post-M&A performance and the initial pursuit of acquiring firms with regard to improving creative performance compared to the trend of M&As to acquire corporate assets in Vietnam (Calderón et al. 2004). Naturally, understanding this relationship is even more critical in a transition economy like Vietnam. In such economies, rent-seeking is rampant and both foreign and domestic market players usually look at corporate resources (e.g., capital, property, physical asset endowments) and brand positions to judge the potential value of an M&A deal. But the critical factors may vary by industry.

In addition, the rising trend in bank M&As is noteworthy because, firstly the restructuring of an economy should always involve capital resources from banks. Secondly, banks, with abundant cash, have successfully avoided the constraints of strict governance, and held a vast amount of corporate assets, as collateral or officially registered equity stakes (Ramlee and Said, 2009; Walter, Yawson and Yeung, 2008).

These trends were evident in Vietnam's transition turmoil in 2012, when various bank mergers took place, such as the Saigon Hanoi Bank and Hanoi Building Bank case (SHB-HBB) or the Southern Commercial Bank and the Saigon Thuong Tin Bank (SCB-Sacombank). The underlying rationale for these mergers is clear: (i) to build a large network of branches and transaction offices all over the country; (ii) to establish banking brands that could attract many depositors without huge marketing costs; and (iii) to capture and hold corporate assets of

acquired banks. Of course, the impact of “consolidation” should not be omitted, similar to what Castillo (2009) reported for the Philippine’s banking M&A trend.

Still, a lingering question about how to boost innovation in the manufacturing sector is how to use M&As to do so. Castillo (2009) argues that most M&A transactions were geared toward creating a somewhat oligopolistic structure and that would exacerbate the structural problem within the economy, not solve it. Sourcing strategic assets with hope for addressing competitive disadvantages of the acquiring firm is also a familiar phenomenon in the Chinese M&A industry (Deng 2009).

Given that most Vietnamese enterprises, even those on local stock exchanges, are small- and medium-sized enterprises (SMEs), the study by Yasumaru (2009) may shed some light on the previous discussion about the selling side’s motivation for M&A. Yasumaru’s option of liquidating firms appears to be prevailing in Vietnam, for better or worse. However, this option cannot be considered optimal for retaining the acquired firm’s core corporate values and sustainable employments, let alone improve creative performance.

In fact, cultural issues caused by inadequately prepared M&A solutions may trigger further corporate governance issues in the PMI phase (Nahavandi and Malekzadeh, 1988; Shimizu, Hitt, Vaidyanath and Pisano 2004), which is learned to be quite acute, with a resulting success rate of PMI typically standing around 25 per cent, as reported in Kummer (2009). In light of this, previous works (e.g., Chatterjee, Lubatkin, Schweiger and Weber, 1992; Wang and Wong, 2004) suggested that adequate preparation and resources for human capital accumulation would help in this regard; and this PMI matter clearly must involve strategic planning before the M&A occurs, but not after.

The situation in Vietnam’s M&A market may suggest something different. Many M&A transactions that aim to acquire strategic resources are similar to the strategies of Chinese firms (Deng 2009), which were driven by “special interest groups.” These interest groups, be it banking, real estate or manufacturing, seek economic rents and may by-pass financial and time-consuming true innovation processes, by trying to nullify policies that advocate effective competition. Innovation is the very thing a transition economy like Vietnam needs the most (Te Velde, 2001; Lall, 2002; Stiglitz, 2003).

In reality, a singular goal of acquiring brands and valuable assets, both capital and physical, may miss a key function of M&A: facilitating the course of trade liberalization and industrial restructuring. These are considered by the Vietnamese government to be critically important socio-economic goals in the transition period (Leproux and Brooks, 2004; Breinlich, 2008; Stiglitz, 2008). In such a transition, creative performance by enterprises must assume a pivotal role (Kirzner, 1973; Drucker, 1986).

In this regard, technical terms imposed on M&A to guarantee “minimal commitment” such as “lock-up” are simply too little and too weak, ineffective in a longer-term innovation pursuit (Coates and Subramanian 2000). In the spirit of Napier, Dang and Vuong (2012), creative performance and innovation are right at the heart of a “success formula” for any M&A pursuit, which has to a large extent exhibited some typical entrepreneurial characteristics. The absence of

an ex ante pursuit of innovation in an M&A process may present a source of risk for the PMI period, with questionable economic efficiency and commercial viability (Vuong et al., 2010).

From another view, the high rate of success (around 90%) for M&A attempts in the 2005-2010 period in Vietnam, may in part reflect the trend of local enterprises embracing temporary abundance of financial resources available to them. This abundance was due to bullish assessment by both financial advisory and acquiring companies, mostly foreign entities. This could be viewed as evidence of an over-reliance on corporate resources. Vuong and Napier (2012) presented empirical evidence that when firms emphasized resources, the value of the innovation factor become negligible or worse off, and the two appear to have been mutually exclusive.

To this end, an in-depth analysis of the relationship between ex ante intentional pursuits by acquiring firms, either on the resources or innovation capability of the acquired, and the ex post realization (i.e., post-M&A performance) should reveal whether M&A outcomes served to be a kind of “destructive creation” in the marketplace, which tends to worsen the structural problem of the economy through resource misallocation.

On the other hand, empirical evidence provided by Vuong, Napier and Tran (2013) indicated that a strong creative performance in both entrepreneurship and well-established stages of a business need the support of a set of relevant corporate cultural values; and these values have little to do with the amount of resources that a firm controls.

### **3. Research questions, method of analysis and empirical results**

This research paper focuses on the relationship between various factors involved in a decision process for M&A pursuit, most ex ante, and the performance of the post-M&A period observed from the market data.

#### **3.1. Research questions:**

Key research questions, which are subsequently presented in form of hypotheses, follow.

Question 1: What do we learn about success (or failure) of an M&A transaction, given the major focus on acquiring a firm’s capital/asset/brand versus its capability of innovation in terms of technology and management capabilities?

Question 2: Is the absence of a strong desire for acquiring the innovation capacity of the acquired firm likely to adversely affect the post-M&A performance?

Question 3: Would “large capital expenditure” help explain the failure of post-M&A performance if innovation is not the major pursuit of an M&A transaction right from the beginning?

#### **3.2. Data and method of analysis:**



A Hanoi-based applied research firm prepared the empirical data sample for this study. The data consisted of coded data points for 212 M&A transactions in Vietnam from 2005 to 2012. The data preparation team coded various preliminary structured data sets in tabular form with six distinct dichotomous categorical predictor variables, namely Expenditure, Technology Innovation, Management Innovation, Capital Resources, Physical Asset, and Valued Brand. The binary response variable used to examine the theoretical hypotheses is post-M&A performance, coded ‘Perf’ in the evaluation by the SAS software package, with Perf=1 when positive performance is recorded ‘Yes’ and Perf=0 when ‘No’.

Besides the quantitative information gathered by the research team, the data preparation also considered qualitative information and insights from a large number of published reports and official information releases by companies listed on the Ho Chi Minh City Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX), and Vietnamese business media sources for unlisted firms, such as *Dau Tu Chung Khoan*, *Vietnam Economic Times*, *Saigon Economic Times*.

The authors structured the data tables into the two matrices provided in Table 1 and Table 2, where predictor variables are grouped into count data cells in different ways to represent the nature of the empirical investigations, following specific hypotheses at hand.

Subsequent analyses perform various logistic regression estimations for dichotomous response variables and categorical predictor variables, and only those estimations with significant results are reported. The general specification for performing logistic regression analysis is as follows:

$$\ln\left(\frac{\pi}{1-\pi}\right) = \text{logit}(\pi) = \beta_0 + \beta_i X_i^K, i = 1, \dots, K,$$

In the above test specification,  $\pi$  represents the ‘success probability,’ that is when the performance of the post-M&A operation satisfies the expectation by the acquiring firm, i.e., Perf=1 (or, ‘Yes’) as explained above; and this event can be observed directly from the empirical data set.  $\beta_0$  is the intercept of the estimated equation, and the  $\beta_i$  coefficient associates with the  $i^{\text{th}}$  predictor variable,  $X_i$ .

For each categorical predictor variable,  $X_i$ , the standard null hypothesis is:  $\beta_i = 0, i = 1, \dots, K$ . For examining interactions between variables, the null hypothesis becomes  $\beta_i \beta_j = 0, \forall i \neq j$ . The test statistic employed for hypothesis testing is the standard likelihood ratio measure, which is  $\chi^2$ -distributed:

$$G^2 = -2\ln\left(\frac{L_0}{L_1}\right) = -2\ln(L_0 - L_1),$$

where  $L_0$  is the numerical value of the likelihood function computed from the observed data under the null hypothesis estimate ( $\pi$ ), and  $L_1$  under the empirical data-evaluated estimate ( $\hat{\pi}$ ). This  $G^2$  test statistic follows a  $\chi^2$ -distribution with  $K$  degrees of freedom (Agresti 2002 presents a full account of technical treatments for this type of analysis and Azen & Walker 2011 provides for some typical SAS performance examples that are useful to social research studies).

All of these predictor variables are categorical, and since we identified only two values ‘Yes=1’ and ‘No=0’, this estimating model is dichotomous both with response and predictor variables. The treatment follows Azen and Walker’s (2011) dummy coding; Tables 1 and 2 show the structure for the empirical data that helps construct evaluations for several related hypotheses.

In both Table 1 and Table 2, Inno1 means ‘ex ante pursuit of innovation verified’ and Inno0 ‘not verified’. ‘Yes’ and ‘No’ are confirmation of efficient firm performance as observed with our empirical data. Brand1 means “determined that the M&A pursuit was dependent on brand value,” Brand0 “Independent” likewise Res1 and Res0 are “focused pursuit of physical asset endowments and capital assets” and “none,” respectively.

Table 1  
Categorical data representing relationships among performance, innovation, resources and brands.

| Yes   | Inno1 | Res1 | Brand1 | Brand0 |
|-------|-------|------|--------|--------|
|       |       | Res0 | 50     | 15     |
| Inno0 | Res1  | 23   | 45     |        |
|       | Res0  | 0    | 0      |        |
| No    | Inno1 | Res1 | Brand1 | Brand0 |
|       |       | Res0 | 15     | 11     |
| Inno0 | Res1  | 1    | 1      |        |
|       | Res0  | 11   | 31     |        |
| No    | Inno0 | Res1 | 3      | 2      |
|       |       | Res0 | 3      | 2      |

The table 2 below splits ‘Resources’ into Physical Asset Endowments (with categories As1 and As0) and Capital Assets (likewise, Cap1 and Cap0), while the remaining predictor variable is the binary valued ‘Expenditure’ which tells about whether the M&A deal is considered either substantial in financial value or expensive in term of costs involved in the transaction process.

Table 2  
Categorical data representing relationships among performance, expenditure, assets and capital resources.

| Yes  | Exp1 | As1 | Cap1 | Cap0 |
|------|------|-----|------|------|
|      |      | As0 | 52   | 52   |
| Exp0 | As1  | 5   | 10   |      |
|      | As0  | 0   | 0    |      |
| No   | Exp1 | As1 | Cap1 | Cap0 |
|      |      | As0 | 18   | 33   |
| Exp0 | As1  | 4   | 2    |      |
|      | As0  | 4   | 3    |      |
| No   | Exp0 | As1 | 6    | 5    |
|      |      | As0 | 6    | 5    |

In both table 1 and 2, the response variable ‘Performance’ takes value of either ‘Yes’ (i.e., 1) or ‘No’ (0), conditional upon other predictor variables values given in corresponding cells of these contingency tables.

### 3.3. Empirical results:

Estimations provided in the next discussion employ logistic regressions evaluated by SAS. The model for assessing the goodness of fit is the standard global null hypothesis  $H_0: \beta_1 = \beta_2 = \dots = 0$  for a typical logistic regression, yielding corresponding likelihood ratio test statistic values, which reject the  $H_0$ .

The first estimation equation has the following specification Eq.(1):

$$\text{Eq. (1)} \quad \text{logit}(\pi) = \ln\left(\frac{\pi}{1-\pi}\right) = \beta_0 + \beta_1 \text{Inno} + \beta_2 \text{Res} + \beta_3 \text{Brand},$$

where the event that is observed in this estimation is ‘positive post-M&A performance’ (i.e., Perf takes ‘Yes’ value), and our data set counts 137 entries in all cells, out of 212 in total. SAS reported the convergence criterion for this evaluation is satisfactory.

Results reported from this testing of the global null hypothesis show that  $H_0$  is rejected decisively at 5% significance level. Thus, this relationship has some significant explaining power.

| Test   | Chi-Square | Degrees of freedom (df) | Pr > ChiSq |
|--|------------|-------------------------|------------|
| Likelihood Ratio   | 9.88**     | 3                       | 0.0196     |
| Score  | 9.91**     | 3                       | 0.0193     |
| Wald   | 9.25**     | 3                       | 0.0261     |
| Note: (**) Significant at 5% level; Critical values for a $\chi^2$ -distributed (Chi-square) test statistic (with three degrees of freedom; df=3) at 5% significance is 7.82. This value can be obtained from Excel using function <code>chiinv(0.05,3)</code> . |            |                         |            |

The subsequent analysis of Maximum Likelihood Estimates (MLEs) (with one degree of freedom; df=1) is provided below:

| Parameter  | Estimate | Chi-square | Pr > ChiSq |
|--|----------|------------|------------|
| Intercept ( $\beta_0$ )  | -1.0484  | 2.47       | 0.11       |
| Inno ( $\beta_1$ )   | 0.3941   | 1.51       | 0.22       |
| Res ( $\beta_2$ )  | 1.3262** | 4.12       | 0.04       |
| Brand ( $\beta_3$ )  | 0.4802   | 2.29       | 0.13       |
| Note: (**) Significant at 5% level; Critical value for a Chi-square (df=1) at 5% significance is 3.84. |          |            |            |

The only significant coefficient in this estimated equation is ‘Resources’ at 5% significance level, and thus this is the only variable to give explanatory power to the overall relationship among various predictor variables and the response one.

The next estimation equation is Eq. (2):

$$\text{Eq. (2)} \quad \text{logit}(\pi) = \beta_0 + \beta_1 \text{Res} + \beta_2 \text{Brand},$$

where ‘Innovation’ is removed from Eq.(1). In this Eq. (2) evaluation, ‘negative post-M&A performance’ is the event to observe (i.e., Perf takes ‘No’), and there are a total 75 such events from the data sample.

For this estimation, testing global null hypothesis yields a Chi-square distributed likelihood ratio of 8.36 (with two degrees of freedom; df=2) and the Wald-test statistic of 7.84 – while the critical value for a Chi-square with df=1 at 5% level is 7.99 – thus rejecting  $H_0$  at 5% conventional significance level (corresponding p-Value for the Wald-statistic is reported at 0.0198).

| Parameter   | Estimate  | Chi-square | Pr > ChiSq |
|---|-----------|------------|------------|
| Intercept ( $\beta_0$ )                                     | 0.9126    | 1.93       | 0.165      |
| Res ( $\beta_1$ )   | -1.2923** | 3.92       | 0.048      |
| Brand ( $\beta_2$ )   | -0.6231** | 4.45       | 0.035      |
| Note: (**) Statistically significant at (df=1) at 5% level. |           |            |            |

We next consider a specification for the relationship between negative post-M&A performance and absence of ex ante determination on choosing value of innovation in the following Eq.(3):

$$\text{Eq. (3)} \quad \text{logit}(\pi) = \beta_0 + \beta_1 \text{Inno}.$$

The event that is observed in this estimation is Perf=’No’. For the only predictor variable Innovation in the estimation, its reference category is ‘Inno1’. The Wald-statistic for testing the standard null hypothesis for both intercept and beta1 attains value of 3.29 (with df=1), rejecting  $H_0$  at 10% conventional significance level (p-Value for the Wald test statistic obtained from empirical data is reported 0.0697).

Estimates and their reported significance levels:

| Parameter  | Estimate  | Chi-square | Pr > ChiSq |
|--|-----------|------------|------------|
| Intercept ( $\beta_0$ )  | -0.9019*  | 16.20      | <0.0001    |
| Inno ( $\beta_1$ )   | 0.5325*** | 3.29       | 0.0697     |
| Note: (*, ***) Statistically significant at 1 and 10% levels, respectively. Critical values for a Chi-square statistic (df=1) at 1% and 10% significance levels are 6.64 and 2.71, respectively. |           |            |            |

By viewing Eq. (3) from the opposite perspective, another estimation of the preceding Eq.(3) specification changes the value of Perf to ‘Yes’ while turning Inno1 variable reference to ‘No’ and yields a consistent result.

The Wald-statistic for testing the standard null hypothesis for both intercept and beta1 attains value of 3.29 (with df=1), rejecting  $H_0$  at 10% conventional significance level (p-Value for the Wald test statistic obtained from empirical data is reported 0.0697).

Its analysis of maximum likelihood estimates is provided below:

| Parameter  | Estimate  | Chi-square | Pr > ChiSq |
|--|-----------|------------|------------|
| Intercept ( $\beta_0$ )  | 0.3694*** | 3.79       | 0.0515     |
| Inno ( $\beta_1$ )   | 0.5325*** | 3.29       | 0.0697     |
| Note: (***) Statistically significant with one degree of freedom at 10% conventional significance level is 2.71. |           |            |            |

From the table 2, with presence of substantial expenditure, the following Eq.(4) estimation is performed:

$$\text{Eq. (4)} \quad \text{logit}(\pi) = \beta_0 + \beta_1 \text{Exp} + \beta_2 \text{Cap} + \beta_3 \text{Asset}.$$

The event that is observed in this is ‘negative post-M&A performance’ (i.e., Performance = ‘No’), while there are signs of substantial and/or costly capital expenditure, strong *ex ante* pursuits of capital assets and physical assets (or as in Azen & Walker 2011 dummy coded values: Exp1=1; Cap1=1; As1=1).

Evaluation is performed satisfactorily with SAS. The Wald test statistic reported for the global null hypothesis is around 9.55 (df=3), rejecting  $H_0$  at 5% significance level (corresponding p-Value is reported at 0.0228).

This estimation shows that the only significant coefficient after evaluation performed on empirical data is  $\beta_1$ . The  $\beta_1$  has an evaluated value of -0.8196, with reported  $G^2$  being almost 4.3, significant at 5% conventional level and reported p-Value of 0.0382.

#### 4. Conclusions

Despite some limitation on the robustness of the statistical examination and the data sample, the reported significant results, although at different conventional levels, allow us to reach the following insights.

Generally speaking, the overall relationship between pre-M&A pursuit’s determination on acquiring resources (capital and physical assets) and performance of the post-M&A performance is, according to these results, statistically significantly. This is in line with previous discussions in the literature on the motivation of increasing size and capital base of enterprises. The empirical data of the Vietnamese M&A industry suggest some statistically significant, and profound, effects of successfully pursuing a ‘size matters’ strategy in M&A ex post performance.

So to speak, the ‘Innovation/Creative performance’ factor has not had significant meaning in an overwhelming ‘asset and capital acquiring pursuit’ strategy conducted by M&A players.

In contrast, the results show that for negative performance of post M&A operations, the emphasis on both capital base and asset size, and the brand value at the time of the M&A pursuit is the major explanation of negative performance in the post-M&A period. Simultaneously, the absence of innovation as a goal in the pre-M&A period appears to have significant explanatory power for poor *ex post* performance. These two insights together are useful in careful M&A planning. In addition, the previously reported statistics also confirm that the existence of a plan to pursue innovation in the pre-M&A period tends to strongly support positive post-M&A performance.

Last but not least, the previous observation leads to the following important understanding. When the M&A involves costly arrangement or expensive investments, in terms of size, price or running costs, no matter how large the resources, capital and physical assets the post-M&A firm may acquire, pre-M&A expenditures tend to adversely affect the post-M&A performance results according to statistically significant results. This last insight supports and gives more clarity to previously reported results on the phenomenon of “destructive creation” empirically documented in Vuong and Napier (2012).

As a general conclusion, this study shows that innovation (and creative performance) can be an important factor to pursue in M&A transitions, which suggests the need to emphasize and find capable and willing human capital, rather than a capital base (equity or debt) and existing values of salable corporate/goods brands. However, in a wave of M&A where there is an overwhelming emphasis on assets and brands, the innovation factor’s impact is limited, to a large extent.

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