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**FOREIGN DIRECT INVESTMENT, FIRM-SPECIFIC RESOURCES,
AND FINANCIAL PERFORMANCE IN A HOST COUNTRY:
EVIDENCE FROM TAIWAN**

The primary objective of this article is to conduct a regression analysis to investigate the impact of foreign direct investment (FDI) and firm-specific resources upon firm performance in a host country such as Taiwan for the example. The findings show that FDI has a positive effect upon firm performance, while the performance of foreign-invested firms was superior to that of domestic firms. With regard to firm-specific resources, the findings showed that both the intensity of intangible assets and the intensity of marketing resulted in a positive influence upon firm performance respectively. However, the intensity of research and development was negatively related to firm performance. Theoretical and practical implications of these findings are discussed.

Keywords: foreign direct investment; firm-specific resources; firm performance; multinational firms; internationalization.

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**ПРЯМІ ІНОЗЕМНІ ІНВЕСТИЦІЇ, СПЕЦИФІЧНІ РЕСУРСИ
ФІРМИ І ФІНАНСОВІ ПОКАЗНИКИ В КРАЇНІ-РЕЦИПІЄНТІ
(ЗА ДАНИМИ ТАЙВАНЮ)**

У статті проведено регресійний аналіз впливу прямих іноземних інвестицій (ПІІ) і специфічних ресурсів фірми на продуктивність фірми в країні-реципієнті інвестицій, у даному випадку Тайвані. Дослідження показало, що ПІІ мають позитивний вплив на продуктивність компанії, тоді як продуктивність фірм з іноземними інвестиціями вища, ніж у вітчизняних фірм. Що стосується специфічних ресурсів фірм, результати показали, що розмір нематеріальних активів та інтенсивність маркетингу в результаті має позитивний вплив на фінансові показники компаній. Проте інтенсивність досліджень і розробок негативно позначається на результатах роботи фірми. Приведено теоретичні і практичні рекомендації з даного питання.

Ключові слова: прямі іноземні інвестиції, специфічні ресурси фірми, продуктивність компанії, транснаціональні компанії, інтернаціоналізація.

Таб. 4. Фор. 1. Літ. 30.

Кайе-Чинь Чунь

**ПРЯМЫЕ ИНОСТРАННЫЕ ИНВЕСТИЦИИ, СПЕЦИФИЧЕСКИЕ
РЕСУРСЫ ФИРМЫ И ФИНАНСОВЫЕ ПОКАЗАТЕЛИ
В СТРАНЕ-РЕЦИПИЕНТЕ (ПО ДАННЫМ ТАЙВАНЯ)**

В статье проведен регрессионный анализ влияния прямых иностранных инвестиций (ПИИ) и специфических ресурсов фирмы на производительность фирмы в стране-реципиенте инвестиций, в данном случае Тайваня. Исследование показало, что ПИИ оказывают положительное влияние на производительность компании, в то время как производительность фирм с иностранными инвестициями выше, чем у отечественных фирм. Что касается специфических ресурсов фирм, результаты показали, что размер нематериальных активов и интенсивность маркетинга в результате имеет положительное влияние на финансовые показатели компаний. Однако интенсивность исследований и разработок отрицательно сказывается на

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результатах работы фирмы. Приведены теоретические и практические рекомендации по данному вопросу.

Ключевые слова: прямые иностранные инвестиции, специфические ресурсы фирмы, производительность компании, транснациональные компании, интернационализация.

1. Introduction. Foreign direct investment (FDI) has become the most stable and most important capital flow in the world. Previous studies from different perspectives have shown that the inflows of FDI from multinational firms (MNFs) and their interaction with local firms can generate either positive, or negative externalities on a host country's economy and firm competitiveness (Buckley et al., 2002). Jiang et al. (2011) argued that in the current era of knowledge-based economy, if a firm is able to effectively develop, allocate, and deploy intangible resources would generate competitive advantage. The results of Juma and Payne (2004) indicated that intangible assets are related to firm performance, so that they have a positive influence on market performance but a negative effect upon operational performance. The present study uses the theory of resources-based views (RBV) to conceptualize firm-specific resources in terms of a firm's internal capabilities, including intangible assets, R&D capabilities, marketing capabilities, learning capabilities and knowledge development capabilities, as a firm's intangible resources and intellectual capital to stand for firm-specific resources.

Some evidence suggests that direct investments from MNFs have a positive impact upon local firms, by introducing related professional expertise, typically those knowledge and skills in management, marketing, human resources, technological research and development, manufacturing process, and quality control. Each of these areas of professional expertise improves the local firm's operating and innovation capabilities, and enhances financial performance (Allen and Pantzalis, 1996; Lu and Beamish, 2004). Although previous research findings support the positive FDI spillovers on local firms, little research has examined the benefits of FDI intensity for local firms, especially within an emerging country context. Therefore, the primary objective of this study is to explore this further.

Two main research approaches are adopted to examine the behavior of foreign direct investments: macroeconomic and microeconomic (Froot and Stein, 1991; Grosse and Trevino, 1996). Although many works have used the macroeconomic one, few studies have used the firm-level data for the analysis. Contrary to the majority of previous studies, this paper uses the microeconomic approach in conducting its analyses upon firm-level data. Trevino and Grosse (2002) suggested that the use of the theory of RBV in combination with the traditional MNE theory in examining the effect of FDI and firm-specific resources on financial performance of local firms in a host country could be a useful approach. Thus, the present study uses the firm-level data to perform a regression analysis to explore the impact of FDI and firm-specific resources upon the firm performance of Taiwanese firms as the example. Such analyses may be fruitful both theoretically and practically to contribute the international literature on the impact of FDI and firm-specific resources upon firm performance.

2. Theory and hypotheses.

2.1. Foreign direct investment. International equity flows are the most essential feature of recent globalization of capital markets in the world. These equity flows basically take 2 major forms: foreign direct investment (FDI) and foreign portfolio

investment (FPI). FDIs and FPIs are differentiated on the basis of percentage of equity ownership (OECD, 1999; IMF, 2004). If an investment holds a threshold of more than 10% of equity ownership, it qualifies as the first, while if an investment holds a threshold of less than 10%, it qualifies as the latter. Thus, in order to acquire a substantial control and ownership of the invested firm in a host country, FDI is desirable. However, the aim of FDI is not to gain an immediate return on investment, such as stock dividend and interest income as in FPI, but rather to enable greater involvement in management activities of invested firms. FDI investors, who take both ownership and control position in local firms, can in effect put managers of invested firms under their control; whereas FPI investors, who gain ownership without control of domestic firms, are generally considered as "outsiders". Since FDI exhibits more control than FPI, it is expected to be liquidated less often (Goldstein and Assaf, 2006).

The extant research indicates that FDI can produce some positive impacts and benefits to a host country. Such benefits include the stimulation of economic development, an increase in financial resources, the growth of investment, an increase in tax revenue, transfer of technology and management skills, the surge of import and export, the creation of job opportunity, and the improvement of international balance of payment (UNCTAD, 2006). In addition to these macroeconomic effects, FDI also produces some impacts in microeconomic sector, particularly at the firm-level. For example, FDI has a positive effect upon firm management, by increasing a firm's competitiveness, as FDI contains the flow and transfer of technology and human resources, and produces some positive knowledge and technology spillovers to enhance the performance of an invested firm.

In contrast to the literature reviewed above in support of positive effects of FDI upon growth, some studies have demonstrated non-significant or negative effects. One plausible explanation for the inconsistent findings is that weaker firms may be forced out of a market by the competitive environment produced by FDI (Aitkin and Harrison, 1999). In sum, further research is required to examine whether and, if so, under what conditions FDI is significantly related to microeconomic growth. This will be a further important focus of this study. The present study also aims to investigate whether the performance of foreign-invested firms is superior to that of domestic firms in Taiwan. The following hypotheses are tested:

H1: FDI will be positively related to financial performance of Taiwanese firms.

H2: The performance of foreign-invested Taiwanese firms will be superior to the performance of Taiwanese domestic firms.

2.2. Firm-specific resources. Firm-specific resources have been variously defined as proprietary assets, intangible assets, firm-specific assets, monopolistic advantages and firm ownership. These terms encompass the endowed operational resources of an enterprise, and are regarded as essential corporate operating assets. Further examples of firm-specific resources include patents, trademarks, copyrights, registered designs, trade secrets, scientific works, know-how, networks, organizational culture, and reputation of products and firms (Jiang, et al., 2011). The studies that have investigated the effect of firm-specific resources upon firm performance in developed countries in which the institution of intellectual property rights (IPR) is sound and mature, have demonstrated significant positive effects of firm-specific resources upon firm perform-

ance. Due to the lack of effective IPR protection environment, emerging firms always face a higher risk and pay higher transaction costs in developing their firm-specific resources. Moreover, investments in intangible resources do not tend to generate an immediate and instant contribution to firm operations. Some research indicates that the results and impacts from the investment of intangible resources do not emerge for at least 8 years (Biggadike, 1979; Edvinsson and Malone, 1997). Thus, a firm may need to invest considerable amounts of financial and human resources in order to obtain its longer-term goal of enhanced firm operations.

The implementation of marketing activities represents a firm's intention and efforts to outperform its competitors. Meanwhile, when a firm spends more in advertising in order to promote and market its products and services, its sales turnover and customer loyalty tend to rise accordingly. In turn, this produces more sales revenue. As a consequence, possessing more branding advantages sharpens firm's reputation and enables it to acquire more market share. If a firm focuses on engaging in large scale advertising and marketing activities, it can outperform the international markets. In addition, empirical studies also indicate there is a positive correlation between the intensity of R&D and firm performance (Allen and Pantzalis, 1996; Koteba et al., 2002; Lu and Beamish, 2004). If a firm endeavors to perform its innovative activities in the design and development of new products, upgrade the process of production and manufacturing, and strengthen its innovative capabilities, that firm's performance will be further enhanced. In the current age of internationalization and globalization, the capabilities in R&D have become essential and are pivotal in enabling firms to develop more innovative products, improve the process of production and manufacturing, reduce the costs of production and manufacturing, and obtain the benefit of economies of scale. Thus, enhancements in performance will be more pronounced among firms with higher innovative capabilities. When a firm spends more in R&D activities in order to improve and upgrade its production and manufacturing capabilities, and improve product quality and service, its product costs are reduced and innovative capabilities are strengthened, thereby enhancing firm performance (Hitt et al., 1994; Delios and Beamish, 1999; Kotabe et al., 2002).

Accordingly, a further aim of this study is to simultaneously draw upon the theories of MNF and RBV, to examine whether foreign equity ownership stimulate Taiwanese firms to invest more in building firm-specific resources of intangible assets, the capabilities of marketing, and the capabilities of R&D, thus increasing firm performance. Specifically, the present study tests the following 3 hypotheses:

H3: The investment of intangible asset created by inward FDI will be positively related to the performance of Taiwanese firms.

H4: The heightened intensity of marketing created by inward FDI will be positively related to the performance of Taiwanese firms.

H5: The increased expenditure on R&D activities in Taiwanese firms created by inward FDI will be positively related to the performance of Taiwanese firms.

3. Methodology.

3.1. Design and Sample Characteristics. The sample comprise of 215 Taiwanese firms publicly trading at Taiwan Stock Exchange between 2001 and 2008. For the purpose of analyses, the sample was subdivided into 2 groups: foreign-invested firms and domestic ones. The foreign invested firms comprised 52 firms with the foreign equity

ownership exceeding 10%, and the rest of 163 were domestic firms. The first group comprised 416 panel data, with latter group comprising 1,304. The total sample comprised 215 firms, with the total data set of 1,720. To proceed with the analysis, the study compares and analyzes 2 groups for the result. The study's research period is 8 years identifying as a longitudinal design. By means of a large data set, the result of the analysis can be expected to be reliable and creditable.

3.2 Variables. Variables included in the analyses incorporated the intensity of foreign direct investment, return on asset, net sales revenue, marketing expense, R&D expense, intangible assets, total assets, and total debt. Data pertaining to these variables were acquired from the Taiwan Economic Journal (TEJ) which is the most prestigious and well-known economic and financial database in Taiwan.

3.2.1. Dependent variable. There are 2 main types of general firm performance: financial performance and operating performance. Financial performance relates to the accounting and financial value of a firm at the capital market, including return on assets (ROA), return on sales (ROS), return on equity (ROE), return on net worth (REW), profitability, and return on operating income (ROOI) (Contractor et al., 2003; Ruigrok and Wagner, 2003). The latter is not related to financial outcomes, but merely measures the efficiency of a firm's operations process, including cost efficiency, market share, and technological capabilities (Ruigrok and Wagner, 2003). The present study employs the financial performance to stand for the firm performance for the analysis. In line with previous studies on the relationship between FDI and firm performance (Thomas et al., 2004; Kotabe et al., 2002; Ruigrok and Wagner, 2003; Lu and Beamish, 2004) this study used ROA as a proxy measure of firm performance. In order to further examine whether the performance of foreign-invested firms is superior to that of domestic firms, the present study also utilized the extra return on asset (EROA) as a proxy measure of firm performance (Allen and Pantzalis, 1996). It is the dependent variable of the present study.

3.2.2. Independent variables. Intensity of inward FDI was measured using the ratio of foreign equity ownership. It is expected that it would produce a positive impact on the invested firm, with the expected symbol of "+". The study also conducts a t-test to measure the EROA of foreign-invested firms. 3 measures assessed firm-specific resources: the intensity of intangible asset, the intensity of marketing, and the intensity of R&D. These measures are the most representative measurements of firm-specific resources and have been employed in previous research of this nature (Allen and Pantzalis, 1996; Kotabe et al., 2002; Lu and Beamish, 2004). It was hypothesized that as marketing and R&D intensity increase, firm performance would also increase. Thus, a significant positive relationship was expected between marketing and R&D intensity and firm performance. The study applies the intensity of intangible asset (INA) as the first proxy of firm-specific resources. The intensity has the expected symbol of "+". In measuring the capabilities of firm-specific resources, previous studies (Allen and Pantzalis, 1996; Kotabe et al., 2002; Lu and Beamish, 2004) generally use the intensity of marketing (MI) and the intensity of R&D (RDI), as the 2 key proxies. This study anticipates that when the two intensities are going to be higher, they would be easier to produce positive impacts upon firm performance. They both have the expected symbol of "+" respectively.

3.2.3. Control variables. The study controls for firm characteristics that may affect firm performance. The firm characteristics of firm size and debt ratio have been shown to impact firm performance. With regard to the former, since large firms create and possess more firm resources and organizational advantages, than smaller firms, larger firms are more likely to perform better, as a result of being in a position to attract more foreign equity (Kotabe et al., 2002; Contractor et al., 2003). Scholars generally use total asset or net sales revenue as the proxy of the size of a firm (Contractor et al., 2003). Thus, the present study used total asset as a proxy of the size of a firm (SIZE) with the expected symbol of "+". With regard to debt ratio which is used to measure a firm's ability to take advantage of financial leverage when a firm engages in debt promotion activities to acquire capital fund for operational needs, these activities force its debt ratio to surge, thus leading to higher financial risks and greater financial burden. In turn, the firm's financial performance deteriorates (Allen and Pantzalis, 1996). Thus, the present study takes debt ratio into account in the analyses with the expected symbol of "-".

3.3. Statistical approach

Drawing upon the two main theories — the theory of FDI and the theory of RBV — the present study used the intensity of inward FDI to measure the impact on firm performance as the first independent variable. The study also used intangible asset, marketing expense and R&D expense to measure the capabilities of firm-specific resources. It is the second independent variable. The study also controls for independent effects of firm size and debt ratio in the analyses. In sum, the present study uses inward FDI, firm-specific resources, and firm characteristics as the 3 key domains for the investigation of variables that impact upon firm performance. The empirical equation is thus specified:

$$\text{EROA}_{it} = \beta_0 + \beta_1 \text{FDI}_{it} + \beta_2 \text{SQT}_{it} + \beta_3 \text{INA}_{it} + \beta_4 \text{MI}_{it} + \beta_5 \text{RDI}_{it} + \beta_6 \text{SIZE}_{it} + \beta_7 \text{DR}_{it} + \varepsilon_{it}$$

4. Results and analysis.

4.1. Descriptive Statistics. Table 1 presents the descriptive statistics of foreign-invested firms. Table 1 shows that the mean value of EROA of the sample is 0.0417, with the maximum of 0.2330 and the minimum of -0.3232. These data show that the EROA of foreign-invested firms is apparently superior to that of domestic firms. The intensity of intangible asset (INA) for foreign-invested firms has the mean value of 0.0074 (0.74%) which is relatively low. The mean value of intensity of marketing (MI) is 0.0479 (4.79%) which is high in comparison to the US's 2.34% and Japan's 1.1% (Morck and Yeung, 1991; Delios and Beamish, 1999). It can be concluded that Taiwanese firms indeed pay much attention to their marketing activities in order to build their firm-specific resources. The mean firm size of the sample is 10.3492, with the averaged total asset of US\$62.477 mln. These data indicate that Taiwanese firms are generally small to medium sized (as compared with the larger firm sizes of American, European and Japanese MNFs). The mean debt ratio is 0.4329, with the maximum of 0.8450 and the minimum of 0.0914. These latter data suggest that the sample firms apply different corporate policies and strategies to utilize their financial leverage in order to achieve the optimization of firm performance.

Table 1. Descriptive statistics (samples of the foreign-invested firms; n = 416)

Variable	Mean	Std. Dev.	Minimum	Maximum	Observation
EROA	0.0417	0.0759	-0.3232	0.2330	416
ROA	0.0730	0.0760	-0.2919	0.2643	416
FDI	0.2241	0.1459	0.0000	0.7245	416
INA	0.0074	0.0164	0.0000	0.1287	416
MI	0.0479	0.0494	0.0000	0.4685	416
RDI	0.0268	0.0456	0.0000	0.4467	416
SIZE	10.3492	0.6528	9.0248	11.7690	416
DR	0.4329	0.1433	0.0914	0.8450	416

Table 2 shows the descriptive statistics relating to domestic firms. The mean value of ROA of foreign-invested firms (0.0730) is higher than that of domestic firms (0.0313). These data suggest that financial performance of foreign-invested firms is superior to that of domestic firms. However, the intensity of intangible asset (INA) of foreign-invested firms is 0.0074 which is lower than the INA of domestic firms (0.0083). Thus, the size of the total asset of the foreign-invested firms (mean = 10.3492) is greater than that of domestic firms (mean = 9.8087). Thus, the intensity of intangible assets of foreign-invested firms is lower than that of domestic firms. The mean intensity of R&D for foreign-invested firms is 0.0268. As this is higher than the mean intensity of R&D for domestic firms (0.0199), this shows that foreign-invested firms invest greater efforts in R&D activities. There is very little difference between foreign-invested and domestic firms with regard to the debt ratio, with means of 0.4329 and 0.4683, respectively.

Table 2. Descriptive statistics (the sample of domestic firms; n = 1,304)

Variable	Mean	Std. dev.	Minimum	Maximum	Observation
ROA	0.0313	0.0724	-0.9406	0.2547	1,304
INA	0.0083	0.0163	0.0000	0.1722	1,304
MI	0.0239	0.0235	0.0000	0.2655	1,304
RDI	0.0199	0.0271	0.0000	0.2053	1,304
SIZE	9.8087	0.4608	8.5823	11.3934	1,304
DR	0.4683	0.1667	0.0568	1.2418	1,304

Table 3 shows the intercorrelations between all study variables. In the multivariable analysis, either the Spearman or the Pearson correlation, all the variables maintain stable, in addition to the SQT and FDI with a higher correlation of 0.66. The variance inflation factors (VIF) of the variables resides between 1.21 and 1.88. Thus, multicollinearity is not a problem for these data (Neter and Kunter, 1990).

4.2. Inferential statistical analyses. A fixed effect model or a random effect model can be used to analyze the study data. The present study adopted the Hausman test (Hausman, 1978) in order to inform the correct model choice. A fixed effect model is appropriate for the analyses when the data fall into the rejection area - under these circumstances the nihilism assumption is rejected. However, if the data fall into the acceptance area, the nihilism assumption is accepted. Under these circumstances, a random effect model is the correct statistical choice. Greene (2000) also argues that both the fixed effect model and the random effect model are appropriate for analyzing the panel data using regression analysis. A Hausman test on the study data revealed the statistics of 336.7596 which fell into the rejection area ($X^2(6) = 12.59$, $P < 0.05$) (Table 5). Thus, the fixed effect model is appropriate for analyzing the study data.

Table 3. Intercorrelations between all study variables

Variable	VIF	EROA	FDI	SQT	INA	MI	RDI	SIZE	DR
EROA		1.00	0.09 (0.10)	-0.01 (0.85)	-0.07 (0.21)	-0.11** (0.00)	-0.02 (0.72)	-0.20** (0.00)	-0.51** (0.00)
FDI	1.85	0.12* (0.03)	1.00	0.66** (0.00)	-0.19** (0.00)	-0.16** (0.00)	0.04 (0.49)	0.31** (0.00)	-0.01 (0.82)
SQT	1.88	-0.05 (0.32)	0.66** (0.00)	1.00	-0.27** (0.00)	-0.21** (0.00)	-0.07 (0.17)	0.33** (0.00)	0.01 (0.88)
INA	1.24	-0.19** (0.00)	-0.18** (0.00)	-0.20** (0.00)	1.00	-0.16** (0.00)	0.17** (0.00)	0.00 (0.99)	0.09 (0.11)
MI	1.30	-0.12** (0.00)	-0.24** (0.00)	-0.21** (0.00)	-0.23** (0.00)	1.00	0.21** (0.00)	0.11** (0.85)	0.07 (0.12)
RDI	1.26	-0.33** (0.00)	-0.03 (0.51)	0.00 (0.98)	0.35** (0.00)	0.22** (0.00)	1.00	-0.04 (0.51)	-0.37** (0.00)
SIZE	1.30	-0.13* (0.01)	0.32** (0.00)	0.34** (0.00)	0.00 (0.95)	-0.03 (0.18)	0.09 (0.09)	1.00	0.33** (0.00)
DR	1.21	-0.47** (0.00)	-0.01 (0.79)	0.04 (0.73)	0.09 (0.09)	-0.05 (0.15)	-0.20** (0.00)	0.28** (0.00)	1.00

Note: *t*-statistics in parentheses.

* Significant at the 5% level (two-tailed).

** Significant at the 1% level (two-tailed).

Table 4 shows the results of the regression analysis. The results show that FDI intensity of foreign-invested firms was positive related to firm performance ($\beta = 0.0530$, $P < 0.05$). This supports the hypothesis. Coupled with the finding that financial performance of foreign-invested firms is higher than that of domestic firms (mean ROA = 0.0730 and 0.0313 respectively), this finding strongly indicates that FDI produces a positive impact upon firm performance. Thus, Hypothesis 1 - FDI will be positively related to the financial performance of Taiwanese firms - is supported. To examine the superiority of financial performance of foreign-invested firms over domestic ones, the individual ROA of foreign-invested firms to minus the averaged ROA of domestic firms, to obtain the individual EROA of foreign-invested firms.

The present study conducted a *t*-test, and revealed the test value of 10.4830, with $p < 0.01$. This latter result shows that, in general, the EROA of foreign-invested firms is positive. Thus, in support of Hypothesis 2, the financial performance of foreign-invested firms is superior to that of domestic firms. With regard to the relationship between firm-specific resources and firm performance, the findings displayed in Table 4 show that the higher the intensity of intangible asset (INA), the better the financial performance of the foreign-invested firms ($\beta = 0.0650$, $p < 0.1$). The hypothesis that the investment of intangible asset created by inward FDI will be positively related to firm performance (Hypothesis 3) is supported.

The findings displayed in Table 4 show a significant positive relationship between intensity of marketing and firm performance ($\beta = 0.0523$, $p < 0.01$). The hypothesis that the heightened intensity of marketing created by FDI will be positively related to firm performance (Hypothesis 4) is supported. However, contrary to predictions, the intensity of R&D has a significant negative relationship with firm performance ($\beta = -0.9472$, $p < 0.01$); thus, the hypothesis that the increased expenditure on R&D activities created by inward FDI will be positively related to firm performance (Hypothesis 5) is rejected. This may be due to the fact that following the current accounting practices, the spending of R&D is recognized as an expense in the current accounting period, but its effect would be realized in the next (future) accounting

periods. Finally, both control variables (firm size and debt ratio) were significantly associated with firm performance in the expected directions: Specifically, firm size was positively related to firm performance ($\beta = 0.0581$, $p < 0.05$), whereas debt ratio was negatively related to firm performance ($\beta = -0.2876$, $p < 0.01$). These findings support both the notion that larger firms possess the operating resources required to attract FDIs more easily, and the notion that the higher debt ratios are linked with higher financial risk and adverse performance outcomes. Therefore, when endeavoring to attract more inflows of FDIs, a firm should pay more attention to the level of debt raised, in order to avoid negative impacts upon firm performance and investment willingness of foreign investors.

Table 4. Regression of EROA on firm-specific resources and firm characteristics

Independent variable	Expected symbol	Dependent variable: EROA	
		Fixed effect Beta Coefficient (<i>P</i> Value)	Random effect Beat Coefficient (<i>P</i> Value)
Constant		-0.3879(0.2251)	0.0531(0.5594)
FDI	+	0.0530(0.0493)	0.0764(0.0015)
INA	+	0.0650(0.3824)	0.0831(0.3240)
MI	+	0.0523(0.3029)	0.0718(0.2112)
RDI	+	-0.9472(0.0000)	-0.8374(0.0000)
SIZE	+	0.0581(0.0385)	0.0146(0.0763)
DR	-	-0.2876(0.0001)	-0.3039(0.0000)
<i>F</i> value		10.9976	35.8093
<i>P</i> value		0.0000	0.0000
<i>R</i> ²		0.6720	0.3757
Adjusted <i>R</i> ²		0.6109	0.3652
Hausman test		336.7596	$\chi^2 (6) = 12.59$

5. Summary and conclusions. The findings of the present study suggest that inward FDI is indeed able to produce a positive impact upon firm performance in the long-term: Findings from correlation and regression analyses showed that FDI was positively associated with the financial performance of Taiwanese firms. These findings are in line with those obtained in previous research (Kokko, 1994; Borensztein et al. 1998; Wind and Mahajan, 1997; Konings, 1999; Beaudry and Breschi, 2003), but extend upon these findings by demonstrating that FDI enhances the performance specifically of Taiwanese firms. As far as the author is aware this is the first study to demonstrate the significant impact of FDI upon the performance of Taiwanese firms. Also in line with study predictions, the results of the t-test showed that the performance of foreign-invested firms was superior to that of domestic firms. This finding further intensifies the proposition of positive effect of inward FDI on firm performance.

With regard to firm-specific resources, the findings were in line with predictions in relation to 2 of 3 relationships examined: Specifically, both greater intensity of intangible asset and greater expenditure on marketing activities were positively and significantly associated with firm performance. In contrast, however, the findings did not support the hypothesis that the greater intensity of R&D produces a positive impact upon firm performance; rather, R&D intensity was negatively associated with firm performance. One plausible explanation for this unexpected finding is that emerging firms, such as Taiwanese firms in the present study, have endeavored to

engage in the activities of research and development, in order to upgrade and strengthen their technological capabilities but the outcomes of such efforts have yet to emerge. That is, benefits and contribution of R&D activities to firm performance may take several years to realize. Thus, investments in research and development are unlikely to produce immediate positive effects upon firm performance. Expenditures on R&D is recognized as a fully realized expense in the current accounting period; however, since its effect emerges in the medium to long-term future, the more immediate effect upon firm performance is likely to be negative.

In general, the formation of intangible resources requires input from a variety of resources, particularly financial and human resources, and a firm needs to invest a considerable amount of time to earning a good result. As a result of its ability to attract more foreign direct investment, a larger firm can more easily produce the effect of scale of economy upon firm operations, which will, in turn, enhance firm performance. However, when a firm possesses a higher debt ratio, it encounters higher financial risk and performance deteriorates as a result. Thus, when a firm is attempting to attract inward direct investment from foreign investors, it should carefully monitor the capital raising activities, in order to avoid obtaining negative impacts upon financial performance and discouragement from potential foreign investors.

The findings of the present study possess a number of implications for policy and management. First, the findings suggest that if a firm is able to attract high quality inward FDI that is of an appropriate quantity, stakeholder structure should be enhanced. In addition, positive contributions to firm performance are likely to be more evident where strategic relationships have been established with MNFs. In addition, surges in foreign equity ownership are likely to be accompanied by more efficient deployment of operating resources designed to achieve diversification of product offerings and the expansion of targeted markets. Therefore, it can integrate the high value-added operating activities into the entire value chain system, and create a better financial performance.

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Стаття надійшла до редакції 22.10.2012.