

Factors Influencing Private Equity Investments in Asian Countries

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Abstract

An overview of investment activities of the Asian private equity market is presented in this paper. The study began with a close examination of the movements in the Asian private equity market over the last few years and a comparison of Asian and other developed nations' private equity investing practices. The observation gave rise to a hypothesis that Asian and Western economies may not be directly comparable in terms of their influencing factors. As a result, investigating the variables impacting private equity investments in Asian economies has become the primary research question. The private investment activity of five Asian economies—China, Japan, South Korea, Singapore, and India—between 2010 and 2023 was examined in this study. The total private equity investment value across all five Asian economies' sectors was used to gauge the level of investment activity. The study was based on about three major dimensions: the investment environment, economic conditions and research & development. Eight explanatory variables, including GDP, inflation, interest rates, stock market capitalization, research and development expenditure as a percentage of GDP, and the Intellectual Property Rights Index (IPRI), were included in the dataset. The correlation study between each of the eight variables has been performed before more in-depth analysis. The study was conducted using the regression analysis approach. The analysis identified that IPO, GDP and Research & Development (R&D) have a strong and significant impact on private equity investments, being significant drivers in attracting investments. The inflation has shown least influence on private equity investments. The IPRI index, stock market capitalization and liquidation showed no influence on the private equity investments. Lastly the results are subjected to limited data available about the factors.

Keywords: *Asian economies, Private equity, Investments*

Introduction

Financial investors in developed countries have been diversifying their portfolios over the past few decades to increase returns on invested capital while expanding their exposure to various industries and geographical areas within the continuously shifting global financial landscape. This phenomenon was one of the primary forces behind the emergence of alternative asset classes like private equity.

The specific investing strategy that targets businesses that aren't listed on stock markets is known as private equity. In contrast to well-known publicly traded stocks, private equity investments are overseen by specialized firms that obtain funding from pension funds, insurance providers, and high net worth individuals. Subsequently, these corporations employ the combined capital to buy entire businesses or substantial shares in them, with the goal of enhancing their performance during a multi-year holding period.

Business dynamics and distinct markets are the driving forces behind PE investment in an economy. But when PE investors start making investments that are sector-focused, the importance of these investment drivers starts to shift. Both sector-focused and sector-agnostic PE funds place equal weight on variables such as economic growth, the regulatory environment, investor protection, political stability, the quality of governance, business confidence, stock market performance, taxation policy, and Foreign Institutional Investors (FIIs).

Every industry, however, offers a different set of opportunities for PE investors due to its differences in size, structure, regulations, capital needs, development emphasis, project life cycle, and expected growth and return.

Private equity investment has emerged as a significant driver of economic growth and development in many Asian countries. However, the factors influencing the level of private equity activity across these diverse economies remain under-investigated.

Understanding the key factors is important for many reasons:

- By understanding the key factors of investments decisions, investors can make better decisions which leads to enhanced returns and better risk management.
- It can help investors to identify potential investment opportunities and broaden their investment horizons.
- To understand how the factors are influenced by economic policies.
- To provide knowledge to develop strategies to attract and optimize private equity activity in the region.

- By examining a range of Asian countries with varying levels of development and different economic structures, this study can be helpful to understand the factors influencing private equity investment strategies

Objectives of the study

- To identify key factors influencing private equity investments in Asian economies.
- To identify the key investment environment factors that significantly influence private equity investments in the Asian economies.
- To identify the key economic factors that significantly influence private equity investments in the Asian economies.
- To identify the key Research & Development factors that significantly influence private equity investments in the Asian economies

Limitations of the Study

- Though the Asia region is one large, dynamic market, macroeconomic uncertainty affects each country differently.
- The study makes use of an already-existing dataset, which may restrict the ability to define variables and choose how to collect data.
- The data does not cover a wide range of countries, so the conclusions may not be applicable to the entire Asian region.
- Not every relevant factor impacting PE investment was not taken into consideration by the model.
- Although the analysis finds statistically significant associations, it may not prove that the variables are causally associated. More data or analysis might be needed to draw stronger conclusions about these effects.

Research Methodology

The dataset constructed comprises a time series for a cross section of five Asian countries, India, China, Japan, Singapore and South Korea. A crucial consideration occurred while analyzing the longitudinal data. The literature does not provide a consensus about particular analysis, since the aim of the research is to study the relationship between the independent and dependent variables and to find the effect of the independent variable on the dependent variable, the regression analysis was adopted. The Y denotes the independent variable which is the PE value and the X_i denotes the explanatory variable that may vary across i . The β_0 denotes the intercept and the β_1 denotes the weight how much the independent variable X , contributes to the dependent variable Y .

$$Y_i = \beta_0 + \beta_1 X_i$$

The simple regression analysis is performed which includes t-statistic. The simple regression analysis is performed for each independent variable with PE investment activity which is a dependent variable. The hypothesis is tested on the basis of p value and the alpha. The coefficient of each variable shows the strength and direction of the relationship (positive or negative coefficient) between the independent and dependent variables.

Data

The below table comprises of the dataset which is used to perform the regression analysis. It consists timeseries data of independent variable which is PE value and the eight dependent variables. The longitudinal data of each variable of five countries is mentioned below.

Years	PE	IPO	SM_liq	SM_cap	GDP	INF	INT	RD	IPRI
2010	8.034	130.400	0.864	1.000	2.980	4.040	1.280	2.150	6.626
2011	14.164	105.000	0.860	0.800	3.424	4.680	2.340	2.282	6.660
2012	9.350	66.200	0.798	1.000	3.640	3.780	3.460	2.318	6.660
2013	11.832	50.400	0.804	0.800	3.662	3.320	3.760	2.372	6.180
2014	34.544	85.200	0.778	1.000	3.842	2.740	3.920	2.462	6.750
2015	39.706	108.600	0.790	1.000	3.874	1.460	2.720	2.450	6.514
2016	30.486	117.600	0.792	1.000	4.066	1.460	3.200	2.388	6.595
2017	52.188	152.000	0.784	1.000	4.370	1.580	2.000	2.430	6.891
2018	42.142	89.400	0.818	1.000	4.746	1.780	2.220	2.470	6.925
2019	30.126	81.600	0.778	1.000	4.852	1.620	3.940	2.508	7.052
2020	42.486	109.200	0.826	1.000	4.880	1.860	3.480	2.658	7.108
2021	67.836	193.200	0.826	1.000	5.648	2.140	-0.640	2.694	6.857
2022	45.902	156.000	0.826	1.000	5.648	4.480	1.080	2.690	6.553
2023	26.804	139.400	0.826	1.000	5.648	4.480	1.080	2.690	6.526

Data Analysis

The below table 3.1 provides the descriptive statistics of eight macroeconomic variables.

Independent Variable	n	Sum	Mean	Median	Standard Deviation	Minimum	Maximum	Skewness	Kurtosis
IPO	13	1444.80	111.14	108.60	39.37	50.40	193.20	0.56	0.17
SM_liq	13	10.54	0.81	0.80	0.03	0.78	0.86	0.69	-0.45
SM_cap	13	12.60	0.97	1.00	0.08	0.80	1.00	-2.18	3.22
GDP	13	55.63	4.28	4.07	0.83	2.98	5.65	0.37	-0.72
INF	13	34.94	2.69	2.14	1.22	1.46	4.68	0.54	-1.45
INT	13	32.76	2.52	2.72	1.35	-0.64	3.94	-1.09	1.02
RD	13	31.87	2.45	2.45	0.16	2.15	2.69	0.03	-0.22
IPRI	13	87.37	6.72	6.66	0.25	6.18	7.11	-0.41	0.58

Table: 3.1 Descriptive statistics

The Pearson's correlation coefficient analysis is performed to check the multicollinearity between the independent variables. As we can observe from the below table, few variables are correlated with each other. The Research & Development and GDP are highly correlated because the R&D expenditure is % of GDP. The inflation is moderately correlated with the stock market liquidity. The regression model cannot separate the effects of correlated variables. Hence the regression analysis is performed individually for each variable.

	<i>IPO</i>	<i>SM_liq</i>	<i>SM_cap</i>	<i>GDP</i>	<i>INF</i>	<i>INT</i>	<i>RD</i>	<i>IPRI</i>
<i>IPO</i>	1							
<i>SM_liq</i>	0.303	1						
<i>SM_cap</i>	0.377	-0.324	1					
<i>GDP</i>	0.527	-0.137	0.394	1				
<i>INF</i>	-0.064	0.628	-0.478	-0.308	1			
<i>INT</i>	-0.872	-0.535	-0.174	-0.412	-0.180	1		
<i>RD</i>	0.430	-0.216	0.344	0.938	-0.337	-0.259	1	
<i>IPRI</i>	0.244	-0.075	0.536	0.457	-0.459	-0.045	0.396	1

Table: 3.2 Correlation

i. IPO

Hypothesis:

H1₀: There is no significant relationship between Number of IPOs and the PE investment.

H1_A: There is a significant relationship between Number of IPOs and the PE investment.

Regression Output:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	-2.85566038	11.706	-0.24394843	0.811760869
IPO	0.322480333	0.099710269	3.234173719	0.007955955

Table: 3.3

Analysis: The p value which is 0.007955 typically less than 0.05 shows that the coefficient is statistically significant, where the positive coefficient of represents that increase in IPO variable, the dependent variable which is PE value is expected to increase.

Result: Therefore, null hypothesis (H1₀) is rejected and the alternate hypothesis (H1_A) is accepted, which means there is a significant relationship between Number of IPOs and the PE investment.

ii. Stock Market liquidation (SM_liq)**Hypothesis:**

H2₀: There is no significant relationship between stock market turnover and the PE investment.

H2_A: There is a significant relationship between stock market turnover and the PE investment.

Regression Output:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	151.0492991	151.1000724	0.999663975	0.33895622
SM_liq	-145.5657139	186.1883011	-0.781819873	0.450821199

Table: 3.4

Analysis: The p value which is 0.4508211, is greater than 0.05 shows that the coefficient is not statistically significant.

Result: Therefore, null hypothesis (H1₀) is accepted, which means there is no significant relationship between stock market liquidation (SM_liq) and the PE investment.

iii. Stock market capitalization (SM_cap)**Hypothesis:**

H3₀: There is no significant relationship between stock market capitalization and the PE investment.

H3_A: There is a significant relationship between stock market capitalization raised and the PE investment.

Regression Output:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	-81.4827273	61.94778147	-1.31534537	0.215151527
SM_cap	118.1009091	63.73797337	1.852912837	0.090891503

Table: 3.5

Analysis: The p value which is 0.0908915, is greater than 0.05 shows that the coefficient is not statistically significant.

Result: Therefore, null hypothesis (H1₀) is accepted, which means there is no significant relationship between stock market capitalization (SM_cap) and the PE investment.

iv. GDP**Hypothesis:**

H₄₀: There is no significant relationship between GDP and the PE investment.

H_{4A}: There is a significant relationship between GDP and the PE investment.

Regression Output:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	-44.2413089	16.29707354	-2.71468	0.020121945
GDP	18.04596303	3.743789433	4.82024	0.000535674

Table: 3.6

Analysis: The p value which is 0.000535 typically less than 0.05 shows that the coefficient is statistically significant, where the positive coefficient of represents that increase in IPO variable, the dependent variable which is PE value is expected to increase.

Result: Therefore, null hypothesis (H₁₀) is rejected and the alternate hypothesis (H_{1A}) is accepted, which means there is a significant relationship between GDP and the PE investment.

v. Inflation (INF)**Hypothesis:**

H₅₀: There is no significant relationship between Inflation and the PE investment.

H_{5A}: There is a significant relationship between Inflation and the PE investment.

Regression Output:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	55.01312984	11.0338622	4.985845286	0.000411622
INF	-8.19618454	3.764125474	-2.17744721	0.052096523

Table: 3.7

Analysis: The p value which is 0.0520965 shows that the coefficient is statistically significant, where the negative coefficient of -8.196184 represents that increase in Inflation variable, the dependent variable which is PE value is expected to decrease.

Result: Therefore, null hypothesis (H₁₀) is rejected and the alternate hypothesis (H_{1A}) is accepted, which means there is a significant relationship between Inflation (INF) and the PE investment.

vi. Interest rate (INT)**Hypothesis:**

H₆₀: There is no significant relationship between Interest rate and the PE investment.

H_{6A}: There is a significant relationship between Interest rate and the PE investment.

Regression Output:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	50.16387437	9.944612223	5.044326843	0.000375405
INT	-6.81728836	3.509774203	-1.94237235	0.07812554

Table: 3.8

Analysis: The p value which is 0.07812554 which is little over 0.05, shows that the coefficient is marginally statistically significant, where the negative coefficient of -6.81728836 represents that increase in Interest rate variable, the dependent variable which is PE value is expected to decrease.

Result: Therefore, null hypothesis (H₁₀) is rejected and the alternate hypothesis (H_{1A}) is accepted, which means there is a relationship between Interest rate (INT) and the PE investment.

vii. Research & development (RD)**Hypothesis:**

H₇₀: There is no significant relationship between R&D and the PE investment.

H_{7A}: There is a significant relationship between R&D and the PE investment.

Regression Output:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	-194.634940	47.8529743	-4.06735304	0.001859782
RD	92.84168632	19.47971157	4.766070892	0.000584364

Table: 3.9

Analysis: The p value which is 0.000843 typically less than 0.05 shows that the coefficient is statistically significant, where the positive coefficient of represents that increase in RD variable, the dependent variable which is PE value is expected to increase.

Result: Therefore, null hypothesis (H_{10}) is rejected and the alternate hypothesis (H_{1A}) is accepted, which means there is a significant relationship between Research & Development (RD) and the PE investment.

viii. Intellectual Property Rights Index (IPRI)

Hypothesis:

H₈₀: There is no significant relationship between IPRI and the PE investment.

H_{8A}: There is a significant relationship between IPRI and the PE investment.

Regression Output:

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	-199.798539	130.2474498	-1.53399195	0.15327633
IPRI	34.63594344	19.36733403	1.788369188	0.101260454

Table: 3.10

Analysis: The p value which is 0.1012604, is greater than 0.05 shows that the coefficient is not statistically significant.

Result: Therefore, null hypothesis (H_{10}) is accepted, which means there is no significant relationship between Intellectual Property Rights Index (IPRI) and the PE investment.

Discussion and Findings

This research investigated the factors influencing private equity (PE) investment in Asian countries by analyzing a dataset containing coefficients and p-values from a regression analysis.

GDP

The analysis revealed a statistically significant positive relationship between GDP (Gross Domestic Product) and PE value. This suggests that stronger economic growth is associated with higher PE investment, indicating that investors are willing to invest in companies operating in growing economies.

IPO

The analysis revealed a statistically significant positive relationship between IPO and PE value. This suggests that countries with high IPOs attract more PE investments as IPOs acts as successful exists for PE firms.

Research & Development

Another statistically significant positive relationship was found between RD (research and development expenditure) and PE value. This implies that companies investing in research and development tend to attract more PE investments, potentially reflecting investor confidence in their future growth prospects.

Inflation

The results showed a trend towards negative relationships between inflation (INF) with PE value. However, the relationship is moderately statistically significant at the 5% level ($p\text{-value} = 0.052097$ for INF). More data or analysis might be needed to draw stronger conclusions about this effect.

The analysis did not find statistically significant relationships between stock market liquidity (SM_Liq), stock market capitalization (SM_cap), Interest rate (INT) and Intellectual Property Rights Index (IPRI) and PE investment at the 5% significance level.

Conclusion

In many Asian nations, private equity investment has become an effective means of driving economic development and expansion. The macroeconomic landscape remains turbulent, and higher inflation and slower GDP growth will likely have a significant influence on investment choices and portfolio performance in the coming year.

Nevertheless, research into the precise variables affecting the degree of activity in these various economies is still underway. By examining an existing dataset that included the findings of a multiple regression analysis with PE investment value acting as the dependent variable, this study descended into this crucial subject.

The research produced insightful information about how different factors interact with private equity investment in Asia. The results emphasize how important a strong economic environment is. A robust positive association between GDP and PE value indicates that investors are inclined to fund businesses in economies that are seeing robust expansion. This shows that investors are optimistic about these markets' long-term prospects.

Additionally, the study found a statistically significant positive correlation between PE value and research and development (R&D) spending. Prioritizing R&D appears to increase a company's valuation, which is probably a reflection of investor confidence in the company's capacity for innovation and future growth. This emphasizes how crucial it is to promote an innovative and technologically advanced culture in order to draw private equity investment to the country.

The analysis not only found these evident drivers but also suggested areas that needed more research. Even though it was negative, the correlation between inflation (INF) and PE value was moderately statistically significant at the 5% level. This implies that a more sophisticated comprehension of its impact on private equity choices may be required.

Additionally, no statistically significant correlations were discovered between any of the other factors analysed. This does not, however, automatically rule out their possible impact. A more thorough investigation using a larger dataset or a focus on particular sectors or countries may produce more conclusive findings.

Subsequent research can enhance our understanding of the factors influencing private equity activity in Asia by exploring these opportunities. With this information available, policymakers can establish an environment that encourages innovation, attracts capital, and eventually encourages sustained economic growth across the region.

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