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# The Influencial Factors and Economic Consequences of Corporate Investment Efficiency: A Literature Review

Jianyang Hu[1, a, *, †], Meixuan Kong[2, b, *, †], Keyun Wang[3, c, *, †]

[1]*Global Business Management, Coventry University London Campus, London, UK*
[2]*Financial Engineering, Nanjing Forestry University, Nanjing, China*
[3]*Finance, Macao University of Science and Technology, Macao, China*
**Corresponding author. Email:* [a]*huj24@culcuni.coventry.ac.uk;*[b]*lesliekkk@163.com;*
[c]*1809853jb011077@student.must.edu.mo*
[†]*These authors contributed equally.*

**ABSTRACT**

With the rapid economic development and fierce competition, the top priority of listed firms will be given to investment efficiency. This paper reviews the relevant literature on the factors affecting the efficiency of corporate investment and its economic consequences. First, this paper presents the definition of corporate investment efficiency and its measurement method. Taking NPV as an example, this research investigates the influencing factors of corporate investment decisions. Then, from the empirical literature and theoretical analysis, this research compiles the studies on the factors influencing corporate investment efficiency or inefficient investment. The factors affecting the efficiency of corporate investment are analyzed and organized at three levels: internal governance or board composition, external corporate governance factors, and external macroenvironmental factors. Finally, this paper also collates studies related to the economic consequences of corporate investment efficiency from the perspectives of corporate value and innovation. The collation of this paper has a very important role in the research related to the efficiency of corporate investment. Overall, we provide relevant suggestions and factors which should be considered when making investment decisions.

***Keywords:*** *Corporate Investment Efficiency; Corporate Governance; Firm Value*

## 1. INTRODUCTION

Enterprise investment efficiency is the result of comparing the effective results obtained by an enterprise through investment with the input consumed. It is the proportional relationship between enterprise investment output and input, which can be used to measure whether the enterprise project is worth investing in. The neoclassicists defined the marginal cost and marginal revenue when analyzing an investment. Under a perfect market mechanism, the prerequisite for rational investors to invest is that the marginal revenue of the project is estimated to be higher than the market interest rate. Later, someone made a definition of the relative standard of the concept of investment. If there is no friction in the market, the NPV of the investment project is the only factor that affects investment. When NPV is greater than zero, it can be regarded as an effective investment. Effective investment is an important way for companies to find new profit opportunities. Increasing corporate value fundamentally depends on whether the company has effective investment behavior and investment efficiency. Effective investment efficiency can help companies grow, and companies can increase cash flow through investment. They are the main source of value creation for companies and an important condition for the growth and development of modern companies. An Excellent investment makes companies better, and can also make the market more mature so that society will develop better.

Since the efficiency of corporate investment is so important, the relevant research on its influencing factors and economic consequences also appears to be more meaningful. For example, Adizes et al. analyzed the influencing factors of corporate investment efficiency from the perspectives of corporate internal governance factors, corporate external governance factors, and macro-environmental factors faced by the company [1, 2, 3]. Further, it has been some literature also analyzed the relevant economic consequences of corporate investment efficiency in terms of corporate value, corporate innovation investment, etc. [4, 5]. Different from existing studies, the main purpose of this article is to analyze the existing related factors and economic consequences. The research is conducted more systematically, so it can improve the understanding of enterprise investment efficiency.

Based on the existing literature, this paper analyzed the following aspects: First, based on the existing research, this paper introduces the definition of investment efficiency and its measurement method, and study the basic concept of investment efficiency and the impact and decision of investment efficiency from the perspective of enterprises. In the following, this paper introduces the origin, development, and application of NPV, mainly taking NPV as an example. By using NPV to analyze the trends of the project's pros and cons, this paper can advise managers and make decisions that will benefit the company more. Secondly, from the relevant empirical literature and theoretical analysis studies, the investment efficiency of firms can involve many aspects, and this research compiled the relevant studies on the factors affecting the investment efficiency or non-efficiency investment of firms. The factors that affect the efficiency of corporate investment are analyzed and organized at three levels: internal governance or board composition, external corporate governance factors, and external macro-environmental factors. Finally, the paper also collates studies related to the economic consequences of corporate investment efficiency from the perspectives of firm value and firm innovation.

The contributions of this article are: First, this article systematically refers to the literature on the enterprise investment efficiency influencing factors and economic consequences, which has very important enlightenment significance to promote understanding and perfecting research on investment efficiency; second, based on existing literature research, this article puts forward several feasible research directions for investment efficiency in the future, which has enlightening significance for future research.

## 2. ONE OF THE IMPORTANT METHODS TO DETERMINE THE INVESTMENT EFFICIENCY OF A COMPANY: NPV

With the rapid economic development and fierce competition, enterprises need to consider more factors when making investment decisions. Amhad has found that the time value of money can not be ignored when enterprises make investment decisions [6], which means companies are more likely to use measurement indicators that complement their decision. For example, if you were given 100 yuan today or 1,000 yuan ten years from now, which would you choose? The question is not necessarily between the former and the latter but has to do with each investor's return target. In this way, the measurement indicator (NPV) is inclined to help investors make a decision.

In terms of net present value (NPV) which focuses on measuring how much benefit the investment plan will bring to the more intuitive company. NPV as a valuation method dates back to the 19th century. In the financial industry today, NPV is applied to a series of cash flows that occur at different times. The present value of the cash flows depends on the time interval between now and the cash flows and better explains the time value of money [7].To be specific, when settling the NPV of a single project, as long as the NPV of the result is greater than 0, it means that the project is worth our investment.

When it comes to the formula of the NPV：

- $\mathrm{NPV} = \mathrm{CF}_0 + \mathrm{PV}$
- $\mathrm{NPV} = \mathrm{CF}_0 + \sum \frac{CF_t}{(1+r)^t}$

Formula 1. Calculation of NPV [8]

According to formula, is the net cash flow in year t. When calculating the input in the first phase,, and cash flow in the first year after investment. Specifically, if the discount rate is 10%, the discount rate (r) in the first year is (1+10%), and the discount coefficient in the second year is $(1+10\%)^2$, which is the square of 1.1, and so on.

On the one hand, NPV>0 means that after the implementation of the project, in addition to ensuring that the predetermined rate of return can be achieved, it is still possible to obtain higher returns. On the other hand, NPV<0 means that after the implementation of the project, it fails to reach the predetermined rate of return, and it is uncertain that the project has lost money.

Moreover, Magni argued that when we have many projects, and we must choose one to invest [9], NPV is quite important since when we calculate NPV, we could understand which project can generate the most cash flow, which brings us more value.

Overall, NPV provides a way to evaluate and compare capital items or financial products such as loans, investments, insurance, and other applications. It can be good enough to help companies make efficient decisions.

## 3. ANALYSIS ON THE INFLUENCING FACTORS OF ENTERPRISE INVESTMENT EFFICIENCY

The effective investment activities of enterprises can help enterprises realize their value and business goals. Obtaining investment income is the most fundamental purpose of enterprise investment. The criterion for judging whether the investment decision of the enterprise is correct and whether the investment behavior is efficient is whether it can maximize the value of the enterprise and maximize the interests of shareholders. Existing studies have mainly explored the influencing factors of corporate investment efficiency from three aspects: Managers with financial background, Life cycle, and external economic environment or policy factors. The inefficient investment phenomena of excessive investment and inadequate investment in modern corporations can be seen everywhere and enterprises' investment behaviour tends to be influenced by external elements. This part will provide new insights into enterprise cycle and external factors affect enterprise investment efficiency.

### *3.1 Internal factors*

For the analysis of the factors that affect the investment efficiency of enterprises, we can start from the internal perspective, and the influence of internal enterprises on investment activities can be explored from multiple levels. Dong and Zhang concluded that there is a negative correlation between management power and corporate investment efficiency [10]. The greater the power, the lower the corporate investment efficiency. To control the management rights, it is necessary to improve the corporate governance and supervision mechanism. Huang mentioned that due to the separation of ownership and management rights of modern enterprises, managers and shareholders will have differences due to related interests [11], and information asymmetry will cause management to make decisions that are beneficial to them, resulting in inefficient investment, over-investment or under-investment. Situations are possible. The board members of an enterprise have different ages, genders, educational backgrounds, etc. Similar members attract different members to each other, forming an atmosphere of "cooperation-conflict", breaking the unity and forming a fracture zone. In view of the impact of the board of directors fault zone on the investment efficiency of enterprises, Wang Xiaoliang and Wang Jin put forward two hypotheses [12]. One is that the increase of the fault zone can alleviate underinvestment, and the other is that it can alleviate overinvestment. Through sampling, calculation, and analysis, these two hypotheses have been verified, and it is concluded that the impact on excessive investment is greater. Edith first put forward the view that the development trajectory of the enterprise's life cycle is similar to the human growth trajectory. In different stages of life cycle, there are different development characteristics, and managers also have the characteristics of different operation modes. Enterprises face different problems in different periods, which will inevitably affect the investment efficiency of enterprises.

#### *3.1.1. Managers with financial background*

For the investment efficiency of a company, there are many factors that affect its performance. From the perspective of corporate management, managers with different backgrounds have very different investment behaviors. The proposition of whether corporate executives have a financial background and whether it is helpful for corporate investment has also been repeatedly discussed.

Gao analyzes the impact of the financial background of executives on the efficiency of corporate investment from three perspectives [13]. The first is the "knowledge effect". Executives with a financial background will use professional knowledge and years of industry experience to help companies analyze and invest. Senior executives will also play a "resource effect" and use the network of contacts and public resources accumulated from previous work experience to help companies make better investment choices. Finally, senior executives with a background in finance will also have "over-investment effects" and "under-investment effects." For high-risk investment activities, their high level of preference will lead to excessive investment behavior, which reduces the efficiency of corporate investment. The existence of the problem of information asymmetry will make executives adjust the company's cash flow in order to protect relevant stakeholders, resulting in insufficient investment.

After making assumptions, selecting data, and establishing a model, it can be seen from the results that after excluding irrelevant factors, the coefficient of financial background and over-investment is greater than 1%, which shows that executives with financial background tend to favor high-risk investments. Brings excessive investment to enterprises and reduces investment efficiency.

#### *3.1.2.* Life cycle

Edith first put forward the enterprise life cycle theory, the research points out that the life cycle of enterprise is the dynamic trajectory of enterprise development and growth. The development stage of enterprise is similar to the human body, and it is divided into growth stage and aging stage[14].Subsequent research focused on how to divide the life cycle stage of an enterprise, and gradually formed a division based on the organizational and operational characteristics of the enterprise.

According to the enterprise life cycle theory, Adizes argued that enterprises have different organizational characteristics in different stages, and the agency problems they face are also different, which is bound to have an impact on the investment efficiency of enterprises [1].

The theory of enterprise life cycle suggests that there are great differences in production and operation and organizational characteristics of enterprises at different stages of life cycle. When enterprises in the growing main products began to slowly form, the competitive strength of the growing, generating a large number of free cash, enterprises began to enter the profit stage and the growth rate is faster, and then face a large number of investment opportunities. With the continuous expansion of enterprise scale, enterprises need to introduce professional managers, through the standardization of organizational structure and management specialization to promote the sustained and healthy development of enterprises, at this time the role of management began to appear. Narayanan argues that when companies are in the power to make decisions in the face of numerous investment opportunities, they will think more about their interests when making decisions[15].As older businesses face many opportunities and prospects for development, management is ambitious and eager to make a big deal of it.

Overinvestment may be motivated by management's possible motivation to build the Empire State Building. In the mature stage of rapid development of enterprises, market share is larger, product market position has been consolidated, and formed their differentiated characteristics, while the increase in sales revenue makes enterprises free cash accumulation. But with the development of enterprises, the internal management level is more complex, the management of professional managers will have more decision-making power. Because the enterprise funds have a stable source, management has more autonomy in investment decision-making, which will aggravate the problem of entrustment of enterprises. Jensen and others based on the free cash flow hypothesis suggest that when companies have more free cash management will use free cash as much as possible in investment projects to build a "personal empire" and maximize benefits [16]. In recessionary enterprises, market share began to shrink, operating performance began to decline, liquidity decreased, enterprises face threats from all sides. The problem of internal agency in recessions has intensified, and management has begun to pay more attention to their career development plans at this stage.

## 3.2. External factors

When it comes to the external factors. It has been suggested that the intervention of government policies, the roll-out of new policies and the degree of market perfection will bring immense changes to enterprise investment [17], which means government subsidies, preferential industrial policies, the preferential taxation and the degree of marketization as well as the level of economic & financial development will all influence the efficiency of enterprise investment.

### 3.2.1. Government intervention and new policies

Li and Lin have mentioned that government intervention and the roll-out of new policies will cause enormous losses to enterprises when they have different directions for their future development while it may also facilitate the development of enterprises [18]. For example, the government advocates the usage of renewable materials instead of materials that are hard to decompose in order to protect the environment, which will immensely promote the development of renewable materials firms, thereby enhancing the efficiency of enterprise investment, while those plastic materials manufacturing companies will be confronted with challenges. Moreover, enterprises will shoot for tax preferences rolled out by the government. For instance, enterprises can be exempted from some taxes if they choose to develop in special economic zones and can also advance investment efficiency for themselves under the circumstances of saving costs.

### 3.2.2. Market prefection

Chen has been suggested that the degree of market perfection influences enterprise operations in a large part [19]. Only when it is highly market-oriented, can the market play a better role in regulating resources. In this way, enterprises can better optimize resource allocation and reduce unnecessary and excessive investment.

### 3.2.3. Media

Cheng argued that media attention can also be a part of the efficiency of a company's investment [2]. The media will pay attention to the current situation and future trends in real-time, which will help companies to keep up with the trending information in real-time and maximize the benefits. However, there is often some asymmetric information in the media that can mislead companies to make investments and cause significant economic losses. In general, enterprises can get a lot of first-hand information through the media, but they also need to have accurate judgment to determine the future development trend and enhance the efficiency of their investment.

### 3.2.4. Ananlysts

Furthermore, analysts can analyze the external governance of enterprises from the current situation of enterprise investment efficiency to alleviate the inefficient investment of enterprises. In fact, there have been serious phenomena such as overheated investment, redundant construction, and overcapacity in recent years with the rapid investment growth. It is undeniable that investment has played an important role in China's economic growth, but some of the investment has also caused waste of resources and inefficiency. Therefore, analysts have an increasing influence on enterprise investment. Li showed that the research reports published by analysts (obtained through professional interpretation of public information and mining of private information), accelerates the depth and breadth of enterprise information dissemination [20], which is conducive to alleviating the information asymmetry between listed companies and the outside world, and accelerates the liquidity of enterprise stocks at the same time, which will definitely impact on the investment and financing behavior of enterprises.

### *3.3. The influence of the external macro environment or policy factors of the enterprise*

The impact of the macro environment on the efficiency of corporate investment cannot be ignored. Wan pointed out that strengthening the rule of law is conducive to the better implementation of the corporate supervision system [3], which will increase the cost of the illegal interests of corporate major shareholders, and at the same time make the company's information more transparent. The rule of law environment can also enable companies to obtain more financing from outside.Also, Hou et al. examine the impact of economic policy uncertainty on inefficient investment of energy and power firms [21]. Analyzing a sample of publicly listed energy and power firms in China, we show that uncertainty concerning economic policy negatively affects firms' inefficient investment. This influence is more prominent for firms headquartered in the regions with a low level of marketization.

## 4. ANALYSIS OF THE ECONOMIC CONSEQUENCES OF BUSINESS INVESTMENT (EFFICIENCY)

The investment efficiency of an enterprise is of great significance to the development of an enterprise. As we all know, the higher the investment efficiency of enterprises, the better the development of enterprises. On the contrary, the development of enterprises will be blocked. A good enterprise investment project is inseparable from the help of enterprise investment efficiency. Enterprises that pay attention to enterprise investment can obtain a good economic consequence to a certain extent.

Ehie and Olibe thought that there was a certain logical relationship between the investment and market performance [22].Through their research results, it can be seen that the investment has a positive contribution to the performance of enterprises in manufacturing and service industries, although there is significant economic damage at some levels. Their research also shows that the challenges faced by enterprise development seem to depend on the innovation of by-products of the investment. Xiao believed that corporate value is composed of three parts: standard value, customer value, and social value [11]. The relationship between the three can be expressed by the following formula: corporate value is the sum of standard value, customer value, and social value. And it is believed that only by improving customer value can we obtain value added. This kind of corporate value perception based on management perspective is similar to the corporate value connotation in the business model literature.Enterprise innovation is an important part of enterprise management. It is a key element that determines the company's development direction, development scale, and development speed. From the management of the entire company to the operation of specific businesses, the innovation of the enterprise runs through every department and every detail.

Jiang thought that enterprise innovation involves organizational innovation, technological innovation, management innovation, strategic innovation, and other aspects [5]. Moreover, all aspects of the problem are not to consider the innovation of a certain aspect in isolation, but to consider the development of the entire enterprise in a comprehensive manner, because all aspects of innovation There is a strong correlation.Investment is the main source of enterprise profits, which directly determines the success or failure of enterprise management. However, in reality, enterprises tend to over invest, which is also the main reason for the failure of many enterprises in China. Therefore, it is necessary to analyze the economic consequences of enterprise investment in detail as a reference for practical circles and relevant regulatory authorities. The research results of this paper have important policy implications: no matter how excellent an enterprise is, if it does not pay attention to investment efficiency, it will bring great losses to enterprise value.

## 5. CONCLUSION

This paper sorted out the relevant literature on the influencing factors of corporate investment efficiency and its economic consequences. First, based on existing research, this paper introduced the definition of corporate investment efficiency and its measurement methods. Second, starting from relevant empirical literature and theoretical analysis research, this paper have compiled relevant research on the factors affecting corporate investment efficiency or inefficiency investment. From the three levels of corporate internal governance or board composition, external corporate governance factors, and external macro-environmental factors, this paper analyze and organize the factors that affect corporate investment efficiency. Finally, this article also sorts out the relevant research on the economic consequences of corporate investment efficiency from the perspectives of corporate value and corporate innovation. The compilation of this article has a very important practical effect on related research on corporate investment efficiency.

In the future, further researchers are more likely to focus on exploring the relevant factors which include affect corporate investment efficiency from a more interesting and practical direction and analyzing the impact of corporate investment efficiency or different types of investment behavior on corporate value or corporate behavior.

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