

# Research on General System Theory and Enterprise's Assets Structure

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**Abstract**—The general system principle has an important enlightenment on how to arrange the enterprises' assets structure. The entirety principle requires that in distributing the enterprises' resources we should not only consider the function of individual assets but also analyze the interaction and influence among various assets in order to keep a rational proportion among various assets. The principle of related environment requires that the enterprise should pay attention to the impact of the living environment, of which, the external market environment, internal management environment and the enterprise's financing environment are included. The level of the assets structure has a direct link on the enterprise's operation performance.

**Keywords**—Assets; Structure; Distribution; Value Increase

## I. INTRODUCTION

General systems theory conclude entirety principle and environment relevance principle. Whether entirety principle or environment relevance principle has important enlightenment on the design of assets structure.

## II. ENTIRETY PRINCIPLE AND ITS ENLIGHTENMENT ON THE ARRANGEMENT OF ASSETS STRUCTURE

### A. The content of entirety principle

General system theory research on the general regulation and properties of systems, and it was originally proposed by Austrian biologist Ludwig Von Bertalanffy in 1945. Entirety principle is one of the basic principle of general system theory. The main component of it is that the whole system is composed of specific parts, and the function of the whole system is more than the sum of individual function. It means that you can't get the property and function of the whole system from the property and function of every element. Only consider it through the whole system which organize the elements into, can every element's function make the whole system reach the best situation. Bertalanffy didn't explain why this phenomenon appear. The author consider that when every single element makes it's effective, they prefer to focus on

their own goals and the way they move rather than considering their influence on the other elements. Under the control of this kind of consideration, every element shows the specific function performance under their own objective control. However, when the every single element become an entire system, their own objective is becoming the second reason and not the first contributor to control its motion any more. On the opposite, once the system set up with all of the single element has the common target, it will become the major factor to control the way of the system move. In this system, every single element can't motion with no consideration, must considerate the influence of their own motion on the other elements in this system and on the entire system achieve its objective. Otherwise, the system will not exist, and it must be broke down. In a word, the convergence of individual target with the corresponding change of the way they move brings the "leap" of the function of entire system.

### B. The enlightenment on the arrangement of the enterprise's assets structure

From the view of accounting, the assets structure as an entire system is consist of all kinds of assets which conform to the accounting recognition and measurement standards[1]. All kinds of financial resource which belong to the firm must be distributed into various accounting assets. The enterprise's assets structure is a system, it must implement the entirety principle to achieve the system's target. The distributing of financial resource should reflect the requirements of the entirety principle. It means that the motion way of every part of the entirety system should be standardized and restricted under the target of the whole system [2]. Then, every part of the system restrains personality and develops the common character to achieve overall target.

From the view of operation, the long-term assets can actually create value for the company among all kinds of assets, such as plant assets, intangible assets and all kind of investment assets. For current assets, such as cash and liquid investment, they almost can't create value. As for inventory and account receivable, they are only the method of value

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realization. However, all of the assets are needed in the firm's assets structure system [3].

From the view of value creation, the firm should provide majority resource to those long-term assets (e.g. plant assets and intangible assets). Because plant assets are the material foundation of value creation, the scale of operation can be expanded through improving the plant assets proportion in total assets to achieve economies of scale; Intangible assets are the technical support of the enterprise value creation, the technical quality of the products and services can be improved through increasing the investment on research and development to increase product added value. In addition, using the capital method to control the upstream firms and the downstream firms, the company can achieve the synergy income on strategy. It's more beneficial to improve the competitiveness on market for the company. Therefore, that the firms add the investment on plant assets, intangible assets and all kind of investment assets in resource allocation can greatly improve the value creation ability [4].

From the view of value realization, if firms broaden the credit terms, and expand the proportion of account receivable on total assets. The purpose of promotion can be achieved, and the firms can capture larger market share, then they can achieve the creative value.

From the view of a certain asset, enterprises management is an integral whole. Those assets which have two types of function, achieving value creation and value, must be distributed based on the target of the whole assets structure. Creating value is just a part of operation. Every value carrier created must make a "thrilling leap" in order to reach the profit target. That is to say only the enterprise achieve the value smoothly can it reach the operation goal. Thus, the enterprise should ensure the normal operation of the production firstly, after that it also must keep the proportion of current asset reasonably. According to the entirety principle of system goals realization, the resources distribution on various assets should not only focus on the impacts that single assets quantity change on the achievement of operation goals, but also consider the interaction and influence among various assets, and balance every asset's contribution to the whole enterprise achievement operation goals to keep the assets in a reasonable percentage.

In conclusion, the basic guidance of general system theory is to control the entirety system by understanding every part of the whole system first [5]. The arrangement of assets structure of enterprises is to achieve the operating target by knowing individual asset property firstly as well. Every individual asset can't create value for the enterprise. The profitability of firms is based on all individual assets. The entirety principle requires that forest must be observed on the basis of observation of the trees. Otherwise, the assets structure of firms can't exert its function as a system.

### III. ENVIRONMENTAL RELEVANCE PRINCIPLE AND ITS ENLIGHTENMENT ON THE DESIGN OF ASSETS STRUCTURE.

#### A. The content of environment revelation principle

According to the relationship between the system and environment, any system has to exchange material and energy

information with the outside world. The communication between the system and the environment is a kind of symbiotic and interactive relationship. Any system exists in a certain external environment, then it can communicate with the external environment in many ways and be influenced by the environment in any time and accept the reform of environment continuously. That leads to the way of motion of system meet the requirement of environment. This is the environment revelation principle. If we think about any animal and plant alive as a system, the system which is not adapted to environment will be eliminated according to Darwin's theory of evolution. Thus, we can come to the conclusion: The environment determines the state of motion and the kind of the internal structure of the system, including the assets structure.

#### B. Environment relevance principle enlightenment on the design of assets structure.

Environment relevance principle requires that the managers pay more attention to the influence by environment in the process of the distribution of resources. In different environment the assets structure has the different state. The environment of the resources allocation is the one that the enterprise exists [6]. We can consider the development environment of the firm into three aspects: the external market environment, internal management environment and the firm's financing environment. Therefore, the firm's assets structure condition is influenced by those three aspects.

Firstly, we consider the impact of the external market environment. There are various aspects of external market environment as follows:

a) *The development situation of industry is the first one, including suppliers, customers, substitutes, potential competitors' threat and the current market competition situation.* For the suppliers, if the supplier is the monopoly, or the supply channel of the raw material is narrow, the enterprises tend to design the assets structure considering suppliers firstly; In the case of raw material supply shortages, the firms have to store a large amount of raw materials to keep sustainable development. Both of those conditions make the enterprises increase the proportion of current assets, and it will take many resources in the firm. On the contrary, if there are many suppliers and the supply of raw material is adequate, the assets structure of the firm will be in a different condition. For the relationship with customers, if the customers are in a more favorable position, the enterprises maybe change the assets structure and increase the proportion of current asset for sales in order to meet the specific requirements of market. Substitutes become great threat of the operation. It not only effects the product pricing decision but also influences the profit space of the enterprises. Both of potential competitors' threat and the competitive condition on the market can make the firms change the assets structure as well. The firm need to set up entry barrier by changing the assets structure to prevent the entry of potential competitors.

b) *Industry technology status is the second aspect of external environment.* If the firm wants to win in the market competition, it must have the core technology. Otherwise, the firm will stay at a disadvantaged position in the market competition. A lot of firms in our country have not set up

scientific and technological technical strategy, result in the lacking of competitiveness in the long-term. Thus, the firm should consider the industry requirements in the long-term and allocate resources reasonably, in order to make the technical status of the firm adapt the development trend of its industry [7]. Experience shows that the technical status of the firm's industry have significantly influence on the firm's resource allocation. However, Unreasonable assets structure is the negative factor on the firm to survive in the intense market competition.

*c) The third aspect of external environment is the business cycle.* The resource allocation in the firm shows the different characteristic in different stage of business cycle. In the recovery stage and expansion stage, the firm should pay attention to the long-term assets. However, in the crisis stage and recession stage, the firm should increase the proportion of current assets. Macro-economics is a crucial factor as an exogenous variable to influence the firm's arrangement of resources allocation.

*d) The last one is the times environment.* It is an important macro factor for the enterprises to run the manufacturing and managing activities. The resources needed in different times are very different. Business environment that the firms faced in early stage of capitalism has a large difference with the present business environment. The personal production and operation mode like a handcraft workshop is uncomplicated. They don't have much equipment for operation. However, with the development of science and technology, the assets structure of firms has changed a lot. Therefore, times environment is the crucial external factor. The firm's managers have to keep a sharp eye on the influence of the times change leading to the change of the firm's resources allocation, then make the firm's assets structure adapt the change of times.

Secondly, we consider the influence of internal management environment on firm's assets structure. The quality of managers is one of the most important factors in the firm's internal management environment. In the large modern enterprises, the daily business activities are usually organized by senior managers. If the manager's quality and ability is at the high level, the firm's assets structure can be arranged reasonably. That means the proportion of current assets and long-term assets stay at a suitable range, and the conflicts in resources allocation can be avoided. On the contrary, the quality and ability of the managers stay at a low level maybe lead the firm go into a bad condition. It can lead to the low level of resource utilization efficiency and waste the rare resources, or let the stockholders undertake the bad results. In addition, the attitude of the managers treat the risk is one of the important factors to influence the assets structure arrangement of enterprises [8]. Generally speaking, the different type of managers have the different attitude to the risk. In the same scale of liabilities, the risk aversion managers tend to hold more current assets and keep the reasonable liquidity of assets structure in order to make sure their ability to meet the liabilities; The risk preference managers prefer to hold less current assets and keep the high profitability of assets structure to make sure their ability to

meet the liabilities. They try to cut the proportion of the non-profit or the low profitability assets and increase the proportion of the high profitability assets; Risk neutral managers have no preference on the type of assets structure to meet the liabilities. The assets structure of those firms are neutral.

I would analyze the impact of financing environment on firms' assets structure at last. There are two classes of the form of financing in all enterprises all over the world, the capital market financing represented by Britain and America and the indirect banking financing represented by Japan and Germany. For the firms from Britain and America, they usually raise money from capital market either the equity financing or the debt financing, and their money mainly from the capital market investors, the proportion of the money come from banks is extremely low in the enterprises' financing structure. The process of equity financing through issuing the stocks of the firm in the capital market, and the process of debt financing by issuing bonds. It's a kind of constraint for those firms to raise money from the capital market. Capital market involves the profit of many investors, and the government usually takes some measures to intervene for protecting the investors. Thus, the firm should consider various accidents and keep the reasonable liquidity of assets structure to make sure the firm could pay for the maturing debt. This kind of assets structure is conservative. It has high liquidity and low profitability. For the firms from Japan and Germany, they usually raise money from banks by debt, their assets structures are very different from the firms raising money by equity financing. On one hand, no matter the firm gets loan from how many banks or other institutions, the number of creditors is significantly less than the investors in the capital market. If the firm can't pay for the maturing debt, the cost of negotiation with creditors is low and the probability of success is high, and the probability of the risk facing is low for the firm. On the other hand, in the long-term financing relationship, the firms and the banks have built up an interest community. Debt financing is hard to constraint the firm's arrangement of assets structure. It requires that the enterprises have a spirit of adventure to raise money by debt. But, this kind of financing mode can make the firm's assets structure keep a high level of profitability, and the liquidity is at a low level.

#### IV. CONCLUSION

The essence of an enterprise is an organization that replaces the market for resource allocation, and an enterprise has limited resources. This requires enterprises to make reasonable and effective allocation of their own resources in the process of operation to realize the development of the enterprise. In conclusion, any system lives in a specific environment, and deeply impacted by it. Only the firms obey the rule of the environment and arrange the assets structure reasonably, can they develop well and make the enterprise value grow sustainably in any environment.

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