INVESTMENT'S EFFICIENCY HANDBOOK
- THEORY AND PRACTICE -

Note:

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INVESTMENT'S EFFICIENCY HANDBOOK
- THEORY AND PRACTICE -

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UNIT 1
INVESTMENTS - CONCEPT, TYPOLOGY, FUNCTIONS

1.1. General Theoretical Groundwork for the Concept of *Investment*

As an economic magnitude, an investment stands for:

- The groundwork of the forthcoming company upsurge, playing a chief role in the supplementing, diversifying and quality increasing of all production factors[1];
- The material support of the economic growth and the development.

If it is to set out a broad definition of the *investment* concept, it follows that:

- ***In general terms, investments delineate capital launching*** so as to obtain incomes that are to generate profits in the future. In this respect, we refer to *financial investments*, including the purchase of securities with the aim of obtaining dividends, the spending of large amounts of money to start businesses, etc.
- ***In a restricted sense, investments stand for the capital outlay*** made with a view to obtain sustainable goods through which profit will be achieved in the future[2]. This type of investment corresponds to *capital investments*, i.e. the expenses made to creating or purchasing productive and unproductive fixed capital items, and to modernizing, developing as well as technologically refitting the permanent assets extant at some point within the company.

In the field of the economic theory and practice, there can be encountered various approaches on defining investments, as for instance:

- From an **accounting** outlook – investments are the increases in the amounts allocated for fixed assets and net current assets, either created in-house or purchased, whether meant or not for the current activity;

[1] Ion Vasilescu, *Strategii investiționale*, în *Strategii manageriale de firmă*, Editura Economică, Bucureşti, 1998, p. 338.
[2] Daniela Zirra, Radu Despa, Alina Avrigeanu, Andreea-Clara Munteanu, *Eficiența economică a investițiilor. Teorie şi aplicații*, Ed. Universitară, 2007, pp. 7-12.

- From a **financial** viewpoint – investments can be regarded as an exchange between the currently available capital and the hope for an upcoming cash-in of money, i.e. of a larger and more significant capital volume;
- From an **economic** perspective - investments point out at renouncing the immediate use of available resources, with the purpose of obtaining future revenues that are larger or more significant as compared to undergone costs.

If we consider investments through a microeconomic perspective, these stand for:

- the operations by means of which the initial patrimony of a company is developed and/or modified;
- the activities through which "financial resources" held by a company or economic agent at a given time will convert into "economic tangible goods";
- any sort of expenditure used to buy valuable goods on the market;
- expenses for the purchase of lasting goods, which do not include those used in performing current activities (such as consumables, small office items, raw materials in the production department, packaging, etc.);
- expenses intended for the gross framing of economic capital, etc.

A general characterization of investments[3], by which they can be set apart as relative to the entire expenditure incurred in organizations, can be achieved if we highlight certain specific features, out of which the most illustrative are:

1. *Investments* are *concrete* expenses, that are made at the present time and mostly are irreversible;
2. *The income and benefits*, which are achieved after completing the investments, i.e. in the future, are *uncertain* and subject to risks;
3. *The investment effort* is most commonly very *complex*, involving material, financial and human resources which are materialized in investment objectives;
4. *Investment resources remain fixed* until completing investment, or until the investment objective achieved starts generating the expected benefits;
5. *The investment process* is hazardous all through the investment just as throughout its operation;

[3] Daniela Zirra, Radu Despa, Alina Avrigeanu, Andreea-Clara Munteanu, *Eficiența economică a investițiilor. Teorie şi aplicații*, Ed. Universitară, 2007, pp. 7-8.

6. *The decision on achieving the investment* requires a *cautious consideration* on the potential of the company and on the business environment;

7. *Achieving the investments* is *determinedly affected* by the influence of the *time factor*;

8. *The typology of investments is diverse*, depending on their purpose, their funding method, degree of risk, field of action, etc;

9. *The investment process* is closely consistent with all segments of *economic and social life*;

10. *The evaluation of investment efficiency is achieved through* a complex system of indicators, both general and specific, depending on their typology.

From a macroeconomic perspective, the economic development of a country is directly reliant on the volume, structure and pace of investments. According to the Keynesian Theory, the investment stands for the *"substantial economic act that determines the increase in the global* income*"*.

Investments have an income-multiplier effect, thus being initiated the premises for the further multiplication of investments that can be made from the revenue surplus generated by previous investments.

Therefore, the purpose of the investing process is to create additional revenues in the future, which should ensure both the full recovery of the expenditure acted upon, and the making of a profit.

1.2. Typology of Investments

Considering the particularly vast typology of investments**,** these can be categorized in line with several criteria, as for instance:

- **According to the capital's source of origin**:
  - *Investments acquired from exploiting own sources,* which can be made of profit, from the cashing effected from selling assets or from the redemption fund;
  - *Investments achieved from attracted sources*, i.e. bank credits, budget allocations, funds obtained from international financing programmes.

- **According to the object[4] of investments**:
  - *Investments for the replacement* of the obsolete and/or physically depreciated capital;
  - *Investments for modernizing* and increasing productivity*;*
  - *Investments for expansion* or for economic growth;
  - *Investments for innovation* and scientific research;
  - *Strategic Investments*:
    - Offensive for:
      - Securing the position on the market;
      - Increasing the market segment;
      - Entering new markets;
      - Staying on the technological forefront.
    - Defensive for:
      - Safeguarding the position on the market;
      - Shielding against the onset of new competitors, etc.

- **According to the destination of the investment objective:**
  - *Productive investments;*
  - *Unproductive investments.*

- **According to their founding[5]***:*
  - *Net investments*, based on funding originated in the net national product, aimed at the increase in the fixed capital and the raw materials and consumables;
  - *Gross investments*, made up of the net investments plus the paying off, which having as main purpose the replacement of the depreciated fixed capital and contributing to the absolute increasing in the fixed capital.

- **According the national belonging of the invested capital:**
  - *Autochthonous investments*;
  - *Foreign investments*;
  - *Joint investments.*

[4] D. Pârvu, *Eficienţa investiţiilor*, Editura Lumina Lex, Bucureşti, 2003, p. 20.
[5] Ion Vasilescu, Ion Românu, Claudiu Cicea, *Investiţii*, Editura Economică, Bucureşti, 2000, p. 17.

❖ **According to the nature of investments**[6]:

➢ *Tangible investments*, which materialize in fixed capital elements and other categories of assets, resulted from various types of activities or, depending on the funding used, made up of the following types:

- *Assimilated investments*:

✓ Geological and scientific research works;

✓ Planning for attaining investment objectives;

✓ Foresting, vineyard and orchard planting, land improvements etc;

✓ Expenses with remunerating and training/ improving the labour force necessary to achieving investments;

✓ Building site organizing works;

✓ Transport, assembly, disassembly, reassembly of fixed assets;

✓ Change in land destination;

✓ Working capital immediately necessary after enabling the investment objective;

✓ Maintenance of vineyards and orchards until harvesting the first crop;

✓ Breeding young livestock in view of introducing them in the main herd;

- *Proper investments* (prevalently fixed assets):

✓ Built fixed assets;

✓ Modernized fixed assets;

✓ Purchased fixed assets;

✓ Replaced fixed assets.

➢ *Intangible investments,* as for instance:

- The research activity - development for attracting customers (potential clients), who in five years at most are to ensure "the commercial success" of the company;
- Creating, maintaining and ensuring the logistics of commercial networking;
- Informatics programmes (created or purchased);
- Staff training and coaching;
- Performing economic-financial and management-marketing analyses, studies and diagnoses;

[6] Daniela Zirra, Radu Despa, Alina Avrigeanu, Andreea-Clara Munteanu, *Eficiența economică a investițiilor. Teorie şi aplicații*, Ed. Universitară, 2007, pp. 9-10.

- *Financial or portfolio investments* (long-term capital investments):
  - Purchase of receivables (claims, debts);
  - Purchase of securities (shares, bonds, government securities, etc.).

❖ **According to the risk degree**[7]:

- *Investments with minimum risk degree* (strategic investments made under state guarantee);
- *Investments with low risk degree* (short recovery period, replacement of depreciated plant stock, etc);
- *Investments with a moderate or average risk degree* (modernizing, development, revamping, without changing the sales market);
- *Investments with a high degree of risk* (investments that involve significant costs, an over 25-year lifetime of the product, can be intended to change the manufacturing profile or increase the capacity of production with over 50%);
- *Investments with a very high degree of risk* (new technical solutions, launching new products, etc).

❖ **According to the linkage with the main investment objective**[8]:

- *Direct investments*– aimed at the factual achievement of the chief objective;
- *Connected investments*– aimed at those branches or areas located upstream or downstream of the main objective (supplying with raw materials or creating the communication ways and distribution networks);
- *Collateral investments* – aimed at rising up annexed constructions, the networking of inner communication, etc.

Finally, we mention that **investments may also be classified according to other criteria**, of which we point at: **the area of applying**, depending on which there may well be picked out investments in human resources, firm assets, company image, etc; **the branches in**

[7] Daniela Zirra, Radu Despa, Alina Avrigeanu, Andreea-Clara Munteanu, *Eficienţa economică a investiţiilor. Teorie şi aplicaţii*, Ed. Universitară, 2007, p. 11.
[8] Daniela Zirra, Radu Despa, Alina Avrigeanu, Andreea-Clara Munteanu, *Eficienţa economică a investiţiilor. Teorie şi aplicaţii*, Ed. Universitară, 2007, p. 12.

which they are operated, depending on which there can be distinguished investments in industry, transport, constructions etc.

1.3. The Financing of Investments and Their Role within the Economy

Achieving an investment implies the existence of financing sources and an unwavering economic environment, which stimulates the economic agents in this regard.

The financing of investments can be operated from using various sources, such as:

a) *Company's own capital*, whose level depends on the solvency of the economic agent, that influences the capacity of getting hold of credits and achieving an independence in the relations involving third parties;
b) *The borrowed sources (credits)* – can be the factual credits obtained from banks or other financial – banking institutes, specialised in investment activities, or can be obtained through issuing bonds;
c) *The warrant* – security issues, that offer the holder the right to buy shares of the issuer in a certain period of time;
d) *The leasing* – by which specialised financial institutions, or even banks, purchase goods (real estate or chattels) which are leased to the customer (at the end of the leasing contract, the client can buy the good at a previously settled price, which could be, for instance, the residual value of the product).

The economic and social development of a country chiefly depends upon the dynamics, volume and "quality" of the investments achieved. The effects of investments can be sorted in two main categories:

- Economic effects:
  - ✓ Stimulating the growth of the demand in goods and services;
  - ✓ Increasing and diversifying of the offer provided by economic agents;
  - ✓ Increasing the turnover, revenue and profit;
  - ✓ Favouring the movement of capitals;
  - ✓ Increasing the extent of country's participation in the economic international circuit;

- ✓ Boosting the promotion of technical progress, the development, revamping and renewing the extant production capacities;
- ✓ Stimulating the increase in efficiency within every domain;
- ✓ Improving the economic environment, etc.

❖ Social effects:

- ✓ Increasing the quality of life and the living standard;
- ✓ Increasing the number of jobs and the degree of employment;
- ✓ Reducing the unemployment;
- ✓ Developing culture and education;
- ✓ Increasing the labour force quality;
- ✓ Protecting health;
- ✓ Protecting the environment, etc.

In any society, the results of economic activities are turned up into goods and services. The living standard of population, the economic and social progress together with the welfare of the nation depend on the quantity and quality of the commodities obtained by economic agents.

These results are assessed with the help of two categories of indicators[9]:

- ➢ **Indicators used at a microeconomic level** for assessing the economic and financial performances at the company level;
- ➢ **Indicators calculated at macroeconomic or a mesoeconomic level,** in order to quantify the results achieved by the national economy in its entirety or at a branch level.

We point out that there are two main ways of rating economic performances at country level:

- ➢ **The model based on the production factor theory** as it derives from national banking account system (Gross Global Product - GGP, Gross Domestic Product - GDP, Net Domestic Product – NDP, Gross National Product - GNP and Net National Product - NNP, also called the National Income).
- ➢ **System of National Economies' Balance.**

[9] Daniela Zirra, *Macroeconomie. Teorie şi aplicaţii*, Ed. Universitară, 2009, pp. 6-8.

Macroeconomic indicators, which are calculated according to the first model, have a very simple calculation algorithm (as presented in the first table) for the reason they have a lot of elements in common.

The constituent elements of the indicators pointed up in the first table, which are typically calculated for long periods of time – usually one year – **have the following contents**:

- ***Ep*** = expenses with the personal consumption of goods and services or the consumption of population / households;

- ***Eg*** = expenses made by public institutions or government purchases of goods and services, which are also called government expenses;

- ***In*** = net investments, i.e. the new fixed capital items obtained in the year of estimation;

- ***AD*** = annual depreciation, calculated for the elements of fixed capital obtained within the previous periods, which is also called consumption of fixed capital from the period for which indicators are calculated;

- ***In*** + ***D*** = ***Ig*** - gross investments, resulted from summing up net investments and depreciation;

- ***Ci*** = intermediate consumption, i.e. the volume or value of goods and services which are used for creating other goods and services (for example, if a manufacturer produces a certain amount of sugar, *one part* goes directly to the market for the *final personal or government consumption*, being wrapped in 1 kg packets, boxes or bags, etc., while the other is delivered to manufacturers of sweets, preserves, pastry and confectionery, soft drinks, alcoholic beverages, etc., which stands for the production- meant i.e. intermediary consumption);

- $\underline{+}$***Rb*** = the result of external trade relations balance, which is also called *net export*, because it is calculated as a difference between exports and imports.

Table 1 *Macroeconomic indicators – significance and calculation manner*

Indicator	Components					Significance
GGP	***Ep***	***Eg***	***In***	***AD***	***Ci***	It include the results of the entire economic activity of a country, performed within a specific interval, usually one year
GDP	***Ep***	***Eg***	***In***	***AD***		It includes the goods and services aimed at the personal and public final consumption, produced by local economic agents within a certain period
NDP	***Ep***	***Eg***	***In***			It has the same meaning as the GDP, only it does no longer include the fixed capital consumption, and the depreciation of fixed capital items obtained in previous periods respectively.
GNP	***Ep***	***Eg***	***In***	***AD***	***±Rb***	It includes the value of goods and services produced and meant for a final consumption within a period of time, plus / minus the difference between the gross value added achieved by national firms outside state borders and the gross value added achieved by foreign companies within borders or inside the country.
NNP	***Ep***	***Eg***	***In***	***±Rb***		It has the same meaning as the GNP, yet without the fixed capital consumption and exclusive of depreciation, respectively.

We should bear in mind that if the foreign trade balance has a positive value, i.e. if exports, indicating the gross value added achieved by domestic firms outside the country, are greater than imports, explicitly than the gross value added achieved by foreign companies within borders or within the country, **then the value of GNP and NNP macroeconomic indicators increases.**

In case in which international economic performances are low, and economic goods made by local businesses are scantily competitive on international markets, **the value of macroeconomic indicators** also encompassing the foreign trade balance result **is negatively affected.**

We notice that within the make-up of indicators, **investments** play a highly significant role. On the one hand, the more consistent net investments are, the bigger the aggregated value of indicators becomes. On the other hand, investment depreciation influences the long term evolution of macroeconomic indicators. So that their value increases the more as there do grow the investments from previous financial periods, which depreciate throughout different periods of time, subsequent to their implementation.

We mention that the **extra-revenue**, which is kept hold of by economic agents after covering consumption necessities, **will turn to achieving investments only if the rate of return in areas in which investments are made has a higher value compared to the interest rate** applied on the money market. From the elements mentioned, we may conclude that **economic profitability in the areas under concern should be comfortably larger than the gain that can be achieved on the money market, as the risk factor interference turns up evident in the real economy.** We cannot overlook the fact that investments are current and certain expenses made with the purpose of obtaining some uncertain revenues in the future.

UNIT 2

THEORETICAL AND METHODOLOGICAL GROUNDWORK FOR THE EFFICIENCY OF INVESTMENTS[10]

2.1. The Concept of Economic Efficiency

A general definition of efficiency implies analysing the relation between the useful effects and the efforts made in the process of using resources. From this viewpoint, efficiency can be assessed in two ways:

A. As *an indicator for maximum*

$$\textbf{Efficiency} = Maximum\left(\frac{\textbf{Useful effects obtained}}{\textbf{Efforts made}}\right)$$

The meaning of such a type of indicator is that the result of using resources should be an as large as possible volume of useful effects obtained per unit of effort achieved;

B. As *an indicator for minimum*

$$\textbf{Efficiency} = Minimum\left(\frac{\textbf{Efforts achieved}}{\textbf{Useful effects obtained}}\right)$$

From this viewpoint, the result of using resources will be an as small as possible volume of efforts achieved, in order to obtain one unit of useful effect.

If efficiency is considered as a system, there can be identified 4 forms of approaching *efficiency*, such as follows:

- ✓ *Natural efficiency:* the characteristic of natural environment elements to favourably (positively) influence the life of people and of society;
- ✓ *Technical efficiency:* the characteristic of technical elements (equipments, installations, tools, machinery, etc) to generate useful "effects";

[10] Daniela Zirra, Radu Despa, Alina Avrigeanu, Andreea-Clara Munteanu, *Eficiența economică a investițiilor. Teorie şi aplicații*, Ed. Universitară, 2007, pp. 17-28.