

THE COMPLEXITY OF DECISION AS CONCERN THE INVESTMENTS

Robert Gabriel Dragomir, Assist. Prof., PhD, "Spiru Haret" University

Abstract: In order to adopt any investment project, one has as the starting point the decision for investment. For reaching the premise of an investment action, the deciders fulfil a stage of documenting and analysis. The decision complexity consists in the great number of variables that have to be correctly dimensioned, taking into account the following aspects: law, commercial, fiscal, human resources, technology, means of financing. Only with a correct and concrete diagnosis of every above mentioned aspect, one can obtain a projection of future benefits and thus the decision of making or not the investment.

Keywords: diagnosis, investment project, analysis, decision adopting, decider

Literature review

The present economic and social context faces a huge development process; some of its predominant components are: technologic process, managerial competence and investments.

The concept of investment is a complex one, as it has to be approached from multiple perspectives. It is interesting to notice both the history of its defining and the vision of different researchers. Thus, Keynes [1] limited the investments as being the result of the collective behaviour of individual managers; in his vision savings equal investments.

Gheorghe Zaman and Grigore Vâlceanu [2] forecast investments as a continuous adaption to the uncertainty, modifying almost instantly the stock of capital, in concordance to the objective of maximizing the profit as a result of equalizing the marginal productivity with the real cost every time sequence.

Niță Dobrotă [3] defined the concept of investments taking into account the complementary rapport between the process of accumulation and investment.

Victor Dragotă [4] spoke about the process of investment after the diagnostic analysis of five aspects: law, commercial, human resources, technologic (operational) and financial; all these let us get SWOT matrix.

Factors influencing the decision process

Once the investment, we also face the structural changes of the initial heritage. The decision of investment requires the managers' effort and great capacity of analysis. There are many situations when the managers do not understand the functioning of the complex products. Precisely, the risks, costs and the forecast revenue are not evident or easy to be understood [5]. The effort and more than that the effect of an investment are based on elements that can be calculated and, some of them, foreseen. The simulations and initial determinations environment varies from certain to uncertain, from a high to a low probability; we cannot speak about a universal model that can be always applied successfully.

The complexity, as a factor associated to the action of investment, offers a certain level of relativity, because it depends on several elements, as one can see in the figure no. 1:

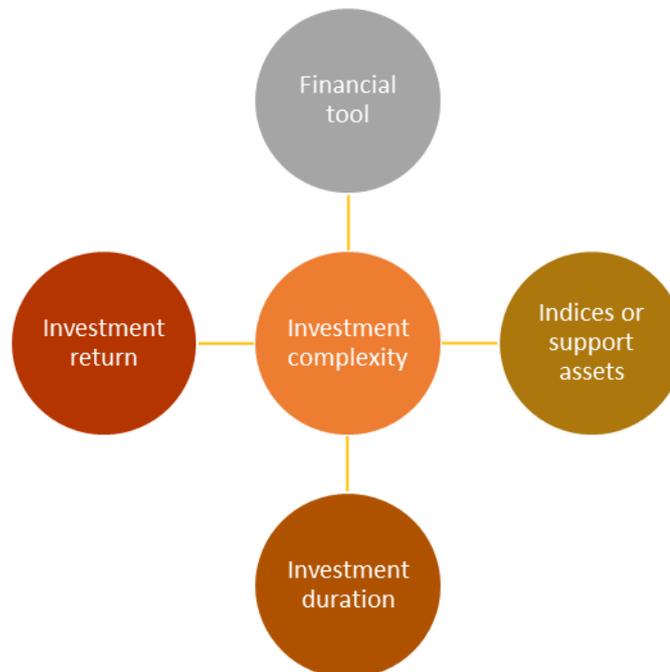


Figure no. 1 Structure of investments complexity

The modelling of the economic process forecasts the tendencies (propensities) or singularities (accidents) rather than numerical values.

The formal model of the economic process is seen as an instrument for calibrating the means [6].

Within the knowledge society, the role of the informatics systems, the informatics solutions, the virtual laboratories is to handle the managers more and more performing tools. Thus, the decisional process is more rigorous and simplified. These acts base on more or less complex decisional criteria; they also take into account the following aspects:

- Historical reality of a company, using accurate data registered before;
- Company structure and way of organisation, including the human resources quality and competences;
- Complexity of objectives fulfilment;
- Efficiency and effectiveness;
- Costs.

The decisions sustainability bases on researches on specific value categories, such as: *value, criteria, objectives, conditioning, focusing*; these are under rapports of complementarities and mutual influencing.

The decisional act belongs to the investors; they have to assure the capital from two sources: own or borrow them. Either one situation or the other, the capital consuming has to be oriented towards higher paid investment fields.

The open financial environment obliges the investors to pertinent analyses and exact dimensioning of the risks assumed.

Any investment project needs analyses of the forecast performances, in the function of the applied environment: certain, risky and uncertain, vague.

Within a partially certain environment, the criteria for evaluation investment projects speaks about [6]: net present value, profitability internal rate, modified profitability internal rate, recovery period, profitability index. When making decisions under certain conditions, every action offers known results. We can name a certain environment in the case when a specific action produces invariably a certain result. Decisions base on regular phenomena, so we can precisely forecast the consequences. If they action in safe conditions, they fulfil only a routine function. The elements implied are mostly controlled variables, with known characteristics and evolutions. The most frequent used methods are: global utility, Electre and Onicescu with its two variants.

The decisions in risky conditions are characterized by more natural states; one can meet here their probability and the presence of some less controlled and insufficiently known variables. The deciders are not in safe when take decisions; they have to assume risks or act in uncertain conditions. Risks imply situations when the result is not known, but it does not represent a novelty. The action takes place in a random context, with more possible results, but knowing their probability coefficient. Depending on the risk, we can calculate the discount rate, referring to different factors, such as: opportunity cost and weighted average cost of capital [7]. The possible risks met during an investment process are: liquidity risk, leverage risk, market risk, credit risk etc. As specific methods, we name: the method of global utility, the method of maths hope and simulation.

In the field of investment, we confront with big and complex systems where reality is only vague known, so we can make predictions with the help of fuzzy functions.

A special case is that of investments using confronting decisions. Here the decider can control only some variables, the others are conditioned by competitions, diplomatic negotiations, commercial discussions, military conflicts and so on. The ways of reducing uncertainty are presented by the theory of games and its multiple variants. When connected to informatics, this approach allows use game models – in a company or at negotiations – offering scientific support to the decisions.

For the decisions in integrative universe, that is memberships in international, multilateral companies, with similar structure and regulations, they are based on iterative techniques, techniques of succession and aggregation.

Taking into account the different environment of the investment and also the complexity of factors influencing expenses and economics, social, ecologic and technologic results, it is necessary to establish the investment scenario. The economic efficiency of the investments represents a key factor in both company and general economic development. It also contributes to the complexity increasing [8].

The major aspects taken into consideration are [9]:

- *Law aspects*: the legislative frame has to offer stability, create a favourable fiscal regime, establish correctly the excise duty rate, rapidly eliminate and solve conflicts, stimulate investors to resolve the strategic activities, make financial agreements (for example, between 2008 and 2014, the Ministry of Public Finance made 66 Agreement for financing, with a total value of 2.79 milliard lei, approximate 636 million euro) [10].

- *Commercial aspects*: clients' quality and history, competition environment, providers' payment, auctions, solving appeals.
- *Human resources aspects*: the level of professional training, organisational culture, level of payment, training programmes, performance based career systems.
- *Technologic or operational aspects*: assets quality, ways of financing the new technologies, rapport price – quality, diminishing stocks of inferior raw materials, high quality of new products, increasing turnover.
- *Financial diagnostic*: solvency indicators, liquidity indicators, profit, means of generating cash-flow, leverage effects, capital expenditure, financing cost, economic profitability.

If we correctly dimension every parameter of the analyzed aspect, we can realize a global SWOT matrix, capable to show the investment image.

Conclusions

In conclusion, indifferent the nature of the investment and mostly because we assist at a rapid process of globalizing, every investor mainly follows these objectives:

- to value any chances or accept a bearable risk in order to update the technical base under the circumstances of reorganizing the whole production;
- to reduce the production costs by automation of the technological processes;
- to apply the most modern and performing techniques during the production process, based exclusively on the scientific and technologic research results;
- to maximize the degree of capitalization the resources owed by investors;
- to increase the quality level of the entire activity and extend the amount of selling;

Thus, identifying correctly the objective for investment let us know the complexity of the parameters and then adopt the proper decisions connected to necessities, resources, a series of instructions, future strategies of the company.

The main criteria for options during the investment process are

- recovery of the investment value and taking a post clearance profit;
- necessity to assure the technical and economic competitiveness of the company;
- technological requirements for assuring the safety of function;
- company sustainability;
- preventing pollution;
- existence of some financial resources waiting for a proper investment.

This work was supported by the project “Excellence academic routes in doctoral and postdoctoral research - READ” co-funded from the European Social Fund through the Development of Human Resources Operational Programme 2007-2013, contract no. POSDRU/159/1.5/S/137926.

Bibliography

1. John Maynard Keynes, *The General Theory of Employment, Interest and Money*, 1936
2. Gheorghe Zaman, Grigore Vâlceanu, *Investițiile în economia României*, Probleme economice, nr.25/1998
3. Niță Dobrotă, coord. și colectivul, *Dicționar de economie*, Editura Economică, București, 1999

4. Victor Dragotă, coord. și colectivul, *Abordări practice în finanțele firmei*, Editura Irecson, București, 2005
5. http://www.esma.europa.eu/system/files/investor_warning_-_complex_products_-_ro.pdf, on 07.10.2014
6. Emil Dinga, *Studii de economie. Contribuții de analiză logică, epistemologică și metodologică*, Editura Economică, București, 2009, pag.38
7. Victor Dragotă, Anamaria Ciobanu, Laura Obreja, Mihaela Dragotă, *Management financiar*, Editura Economică, București, 2003
8. Gheorghe Zaman, Marinela Geamănu, *Eficiență economia*, Editura Fundației România de mâine, București, 2006
9. Victor Dragotă, coord. și colectivul, *Abordări practice în finanțele firmei*, Editura Irecson, București, 2005, pag 255
10. <http://www.ccifer.ro/ro/actualitati/agenda/vue-detail/d/atelier-scheme-de-ajutor-de-stat-pentru-finantarea-investitiilor/> on 08.10.2014
11. Russu Corneliu, Albu Mădălina, *Diagnosticul și strategia firmei*, Editura Tribuna Economică, București, 2005
12. Peter Drucker, *Despre decizie și eficacitate*, Editura Meteor Press, București, 2007