

INFORMATION ASYMMETRY AND ECONOMIC GROWTH

Cristiana Matei¹

*Simple but honest is more valuable
than brilliant but dishonest.*

(Honoré de Balzac (1799 –1850, France, French novelist,
literary critic, essayist, journalist and writer)

Abstract:

The paper emphasizes the fact that most of the things we consider essential for our society are not fully based on information asymmetry, a concept highlighted by the theory developed by G. Akerlof, M. Spence, J. Stiglitz in the 70's. The effects of information asymmetry are visible everywhere; the current financial crisis is such an eloquent example - among its many causes may be an issue of information asymmetry where someone knew that crediting could not continue permanently, but that person preferred to speculate at the expense of those who made loans relying on the assurances given by the same persons who knew the system would not work forever.

Information asymmetry is complex; it is not a mere lie or about concealing the truth, but it is the result of a practical calculation made by the buyer, who does not want to be properly informed, as that would imply some costs he or she is not willing to pay. We can exemplify such an attitude when one wishes to buy a house, which would mean to look for information, know other buyers' experiences, discuss with the builders, the architects, the engineers, see many houses, know prices; these are activities that require time and money. Should one buy the house and should it not meet one's expectations, then it is mainly the buyer's fault due to the lack of information. Therefore, it is useful to investigate the relationship between information asymmetry and economic growth, especially as one of the perverse effects of information asymmetry is that there is not a clear obligation of the seller to voluntarily offer complete information, but on the other hand, he or she is obliged to correctly answer all questions.

Key words: asymmetric information; sustainable growth; degree of operational leverage;

Introduction

George Akerlof, Michael Spence, Joseph Stiglitz were the promoters of asymmetric information markets theory, which was developed in the 70's. George Akerlof wrote "The Market for Lemons"² in 1966, a research paper published four years later, in 1970: the literature had considered the subject unimportant up to that moment. This paper was the reason for which he was awarded the Nobel prize in 2001 altogether with other two authors for their work on the theory of asymmetric information markets. The aforementioned authors suggested a common explanation for a series of questions regarding various fields of economy: what is the explanation for the excessive interest rates on credit market; why those who wish to purchase a good second-hand car discuss the matter with a dealer and not with the private seller; what is the explanation of the fact that a company pays dividends to the shareholders even if it is subject to higher tax compared to the earnings; why insurance companies prefer to offer a list where higher deductibility is replaced by smaller reparation and so on.

The initiators of the theory of asymmetric information market have arguments are related to the definition of asymmetric information: some of the traders in the market have more information than the other party. Thus, lenders know more than borrowers about the timing of future payments, the seller knows more than the buyer about the car quality, the Chairman of the Board knows more about the company's profitability, and so on. The

¹ Ph.D.Student, Econ. crismatei2002@yahoo.com

² Akerlof is probably very famous because of his article, *The Market for Lemons: Quality Uncertainty and the Market Mechanism*, published in *Quarterly Journal of Economics* in 1970, where he identified the major issues which could have an effect on the markets characterized by information asymmetry.

presentation starts from the rather contradictory relationship between better informed economic operators (managers, bankers, etc.) and agents who are less informed than the first category (investors: shareholders and creditors). Asymmetrically spread information regards the performance of the company (or its investment projects) and its ability to withstand various manifestations of risk associated with this performance. Based on this information asymmetry, better informed agents can take advantage of the others' lack of information. Therefore, there should be signals allowing the net distinction between the good and bad companies; the signals should not be copied by underperforming companies:

a) *Sustainable growth*: a company with effective investment projects will be recognized by reinvesting profits and through major participation of managers in funding investments. Being better informed on the performance of the new projects, they will be the first to invest their money in such projects. The managers of distressed companies, who would mimic the behaviour of the former, see their own money at risk and will not endanger such an investment.

b) *The operating leverage*: a modern company would not hesitate to renew technology and management, thus recording an increase of the fixed costs and operating risk. The turnover increase will bring higher profits compared with a company technically and managerially less equipped.

c) *The financial leverage*: a solid company is one that can afford a high rate of indebtedness to finance ambitious investment projects. It can repay debt and pay interest and maintain the ability to pay. It is risky for a distressed company to copy this structure because it accelerates the company's entry into default and even bankruptcy.

2. Long run economic growth eliminates information asymmetry

Sustainable growth is the ability of an enterprise to participate in its economic growth by investing part of the net profit and by increasing the number of shareholders and managers of capital.

It is important to pay more attention to risks arising from the effort of co-financing so as to ensure sustainable growth.

It is well known that the reinvestment of net profit is based on the shareholders' decision, who will take it only if reinvestment is made in effective investment projects, i.e. if the internal rate of return (IRR) is higher than the invested cost of capital (OCC - opportunity cost of capital). Thus, shareholders will be motivated to determine the full distribution of net profit as dividends which they will place on the financial markets to get higher returns to reinvest profits in the company. Managers will have to suggest the most effective development projects and convince shareholders to contribute to sustainable growth.

In order to maintain sustainable growth, it will be financed from external sources as well, from foreign lenders, but it is important that the leverage ratio should be one that does not endanger the continuous development of the company. If the company maintains an optimal leverage ratio, it could receive good treatment from banks / financiers and could preserve this rate by sustainable growth rate.

Such financing cannot be simply copied by managers or shareholders who suggest inefficient growth and major hazard projects. There are at least three reasons. The first one refers to the fact that they are the first to be informed about return and risk related to investment projects. The second reason relates to the fact that their company is not efficient enough if they suggest uncertain investment managements. The third reason is that managers will require banks to finance their development projects without using their own capitals.

Lenders will analyse the financing applications as well taking into account the concept of sustainable development but also in financial terms, and will refuse to grant such loans. The situation when a company wishes to develop in the future will be considered next.

The analysed company established a 25% development of turnover to capitalize on business opportunities expected for the next year. Additional capital requirements (CAR) caused by the aforementioned economic growth specified is 66,650 c.u. (currency units) while the analysed company's ability to finance itself is about 14,400 c.u. Hence the company will turn to bank loans to cover the funding gap, with the risk of increasing indebtedness from 45% to 55%.

The predicted growth is an information asymmetry:

- The managers suggesting it are aware of the higher risks involved in such development;
- The financier analyses the credit application for the development project without having all the information regarding the risks associated.

Effective TO	= 500.000 c.u.		
Plan TO	= 625.000 c.u.	Self-financing:	14.430 c.u.
TO%	= 25%	New credits:	52.220 c.u.
The growth is not sustainable		Leverage	55%

Supplementary capital needed: 66.650 c.u.

The concept of sustainable development gives us an opportunity to correct information asymmetry through a balanced scheme for financing additional capital requirements, as well as sharing development risks:

- Either by sustainable growth less than 15% from the turnover, with supplementary capital needed of about 30.000 c.u., which could be financed from the net profit available for reinvestment and from credits, but without affecting existing leverage of 45%:

Sustainable growth rate = SGR	15%
Sustainable CAR	30.000 c.u.
Self-financing	16.500 c.u.
New credits	13.500 c.u.
Sustainable growth rate	45%

- or by accepting the 25% projected growth, but with the participation of company managers and shareholders to finance development by increasing capital so that financing new loans does not affect the optimal debt ratio of 45%:

Sustainable growth rate = SGR □	25%
Sustainable CAR	66.650 c.u.
Self-financing	15.000 c.u.
Share capital increase	21.660 c.u.
New credits	29.990 c.u.
Sustainable growth rate	45%

Both solutions are part of sustainable development as they involve company shareholders and managers in financing their development projects and it also means taking the appropriate risks.

It is understandable that the 25% development with the increased risks it entails will be accepted by the company management only if it is effective at this level of risk, otherwise it will be abandoned or adjusted in terms of scale.

2. The operating leverage effect eliminates information asymmetry

Economic risk expresses the operation results variability in relation to the variation of the turnover of the company. Economic risk is caused by the inability of the company to adjust its cost structure to the variation of turnover. Change in turnover has a determination which is external to the analysis of operating risk, being the result of marketing research (Stancu, 2007 Vintilă, 2006). DOL, the degree of operating leverage, expresses the percentage of profit variation ($\Delta\text{Profit} = e\%$) at a percentage rate of turnover change ($\Delta\text{TO} = 1\%$); the variation is exogenously expressed in marketing research studies. Thus, starting from DOL, the degree of operating leverage, one can analyse the correlation between profit dispersion and the dispersion of its determinants.

The *operating risk*, respectively the variability profit due to changes in the level of activity and as a result of the company's position to breakeven will be analysed next, according to analysts in the field of company's finances.

Profit variability at a variation of company activity change is generally called coefficient of elasticity, and in particular, operating leverage effect². As a measure of activity, we used the turnover (TO), characterized by a certain volume of variable costs (VC), of fixed costs (FC), including depreciation (DEPR) and of profits (P) and through breakeven (BEP).

Thus, gross profit is determined by the relationship:

$P = \text{TO} - \text{VC} - \text{FC} - \text{DEPR} = \text{EBIT}$, where, if "v" is the coefficient of variable expense in total turnover, $v = \text{CV}/\text{TO}$ (respectively $\text{VC} = \text{TO} \times v$) it results that:

$P = \text{TO} \times (1 - v) - \text{FC} - \text{DEPR}$, where the dispersion and standard deviation of profit can be deducted, as economic risk measures, in relation to the variation of turnover components:

$$\sigma^2(P) = \sigma^2(\text{TO}) \times (1 - v)$$

$$\sigma(P) = \sigma(\text{TO}) \times (1 - v)$$

Therefore, the economic risk is higher, the higher the variability of turnover is higher and the higher $(1 - v)$ the margin on variable costs.

DOL, the degree of operating leverage, is the ratio of the variation of operating profit (ΔP_{OP}) compared to turnover variation (ΔTO).

This report can highlight the influence of turnover position compared to breakeven point (BEP) on the profit

$$DOL = \frac{TO_0}{TO_0 - BEP}$$

which shows that as turnover is farther from the breakeven point, the company is less risky (the closer to breakeven the riskier the company is).

We know that the breakeven point (BEP) depends on the size of fixed costs, namely:

$$\text{Pr exp} = \frac{FC}{1 - v}$$

and then the degree of operating leverage (DOL) is directly proportional to the size of fixed costs and to the proximity of turnover to the the breakeven point.

¹ In physics, the leverage effect involves the use of a lever to lift a heavy object using minimal force. In politics, people receiving the "leverage effect" can achieve a lot, only by a mere word. In business terminology, a high operational leverage effect means - where all other factors are considered constant - that a relatively small change in turnover will lead to a significant change in the operating profit.

Here are some examples:

Sales		500.000 c.u.	DOL = 1,16
Variable costs	80%	400.000 c.u.	
Fix costs		10.000 c.u.	
Depreciation		4.000 c.u.	
Income tax 16%		13.760 c.u.	
Net income		72.240 c.u.	

A similar company, but with a higher fixed costs and lower variable costs, will have a higher operating leverage:

Sales		500.000 c.u.	DOL = 2,33
Variable costs	60%	300.000 c.u.	
Fix costs		110.000 c.u.	
Depreciation		4.000 c.u.	
Income tax 16%		13.760 c.u.	
Net income		72.240 c.u.	

The increase of fixed costs volume may be the consequence of superior technology and management. The requirement of such development is that the equipment is reflected in the increased turnover. Thus, each percentage of sales growth will cause a profit growth of 2.33%, which is above the company with the initial endowment of only 1.16%. The operating risk would be obvious when the decrease of the next turnover would occur, as profit will decrease 2.33 times.

By copying this management performance scheme, a distressed company is exposed to unfavourable risky operation. A similar technology and management not leading to an increased turnover will be fatally accompanied by the operating risk.

Therefore, the managers of distressed companies, being more informed in terms of consequences, will not approve such an investment.

Conclusion

Information asymmetry can be unfairly used by managers of distressed companies to copy development schemes, the structure of fixed and variable costs or indebtedness to highlight another picture of their activity. They are fully aware that the projected development is unsustainable, but they hope to gain an artificial appreciation of their performance and financing facilities from banks.

It is important that managers of performing companies always raise the performance level so as to keep away insincere persons from their development and financing plans. Financers as well must be particularly attentive and carefully analyse credit applications for investment projects and examine the sustainability of business development.

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