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## OPERATIONAL LEVERAGE AS A SOURCE OF PROFITABILITY OF BUSINESS IN CROATIA

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**Abstract:** *Operational leverage measures the level of fixed costs in the company's total expense and has a significant impact on the profitability of a company, especially in activities where large initial investment is necessary, and long acclimatization timeframes and high levels of revenue are needed to reach the profitability threshold. Fixed costs do not grow linearly with revenue growth and thus negatively affect profit with an insufficient level of total revenue. The paper explores the possibilities of using an operational leverage in combination with commercial policy in order to create a profit multiplier. Research has been conducted in companies in the Republic of Croatia that operate in continuity with low levels of profitability, up to 5% of net profit. In the research, the main hypothesis of work is set, by which the operational leverage is defined as a profit multiplier under the conditions of even the smallest organic growth of the enterprise in case it also operates with a high level of fixed costs. The paper begins with the fact that the effect of the operational leverage is of particular importance in certain segments of the economy that are constrained by the impossibility of entering into part of fixed costs and that their increase in profitability depends solely on the level of healthy organic growth. Accordingly, a model is considered in which an operational leverage has the ability to progressively leverage profitability, which in combination with the adequate application of commercial policy measures determines the dynamic character or processes that generate a multiplication effect even in the case of very small revenue growth. In this and such context, we are talking about the significant effect of operational leverage on company's profitability even when neglected revenue growth affects the level of fixed cost reduction in relation to total revenue, thereby increasing profitability.*

**Keywords:** *operational leverage, profit, organic growth, propulsiveness, profit multiplier*

**JEL classification:** *G17, G32, G34.*

## INTRODUCTION

Recent experiences have shown the consequences of the financial sector crisis onto the global economy, particularly in the small transition consumer economies such as Croatia. It is easy to conclude that there is a need for a turning point in national economic policy geared towards a “management” of economic evolution. When it comes to this, we are actually talking about resource management that will enable greater social benefit through the accumulation of capital and thus facilitate survival in periods without accumulation. Croatia has spent part of its accumulation in the Homeland War, and the fact that it still finances the consequences of the defensive war, the need for a new economic paradigm is imposed.

The idea for the paper was based on an analysis (Financial stability, 2012) of the resistance of the Croatian real sector to the potential new shocks of the serious crisis, using as a base all registered companies in the Republic of Croatia, that are not in the position of insolvency and the current inability to pay. The fact is that in the overall structure of all registered companies in the Republic of Croatia there are predominantly micro and small companies, that besides being classified according to the Accounting Act, are also the companies with the lowest nominal revenues and the levels of their own capital within the total liabilities. This clearly points out the necessity of creating optimized management models that cannot and should not have a unified character, but they must and should have a unified approach that targets business standards that will bring stability and business progress.

The management and decision-making process itself is actually all about making decisions based on appropriate economic analysis, experience, practice, micro and macro environment, and the ability of an individual to create, based on all knowledge and experience, a symbiosis that will result in an adequate business decision. In this context, the operational leverage can serve as a tool, as a resource with the ultimate result of increasing the profitability and optimization of the management process, which would have the effect of creating a business platform that would in the strictest sense link the relationship and interdependence all mentioned, encompassing a framework that would make to the decision makers easier decision making using a unified and collective foundation, and nurturing an individual approach. For this reason, profitability is a word that suggests a tendency toward improvement based on the creation of resources from a theoretical defect rather than an optimum as a final solution that is actually more theoretical than the real derivative of a condition that is difficult or impossible to reach. Decision about the choice of investment projects can significantly affect the destiny of the company, its

competitive position in the market, market participation, the direction of further technological development, and even the survival of the company.

## **OPERATIONAL LEVERAGE AS AN AGGRAVATING CIRCUMSTANCE OF THE BUSINESS**

We have already stressed that in economic theory and practice, the operational leverage is generally a negative effect that makes it difficult for companies with high level of fixed costs in the overall structure of expenditures. All branches of the economy that require high initial investment in long-term assets are in some way are faced with this problem, especially in the early stages of the business. Precisely for that reason, precision is needed in projecting revenue for future periods, as these revenues must be the determinant of variable expenditures, creating a business climate acceptable to investors. Of course, projections of this kind must be the result of taking into account all the macroeconomic and microeconomic conditions that have a direct reflection on the market and are particularly relevant to the companies in the establishment with high fixed cost levels.

The base of the entire Croatian economy through its constituents, the companies, is unstructured and has no integrative nature. The main reason is that the entire society was not prepared for the transition process in which conversion and privatization were done in an inadequate way and corporate standards of modern times were not reached. The Croatian economy long ago reached extremely high levels of macroeconomic imbalances that require strong government action measures due to high external debt, the inability to revitalize exports, the high level of real sector debt, the progressive growth of general government debt, and the extremely slow fiscal adjustment. The national economy has accumulated huge macroeconomic imbalances in the period of expansive consumer growth, and is currently undergoing a deep structural crisis that began to manifest itself at the onset of a major global crisis, but actually the main causes were created during the growth period, and reflection itself is ongoing through a whole set of internal and external risks. Inability to revitalize and create competitive production have played a major role in the reduced opportunities for Croatian economy's participation in regional and global trade flows, leaving us on the margins of global trade flows independent of EU membership.

For these reasons, it is important to analyze at which stage of the company's life cycle the company has a large impact on the overall level of fixed cost to total business, and whether this is a necessity stemming from the fact that the fixed-cost

resource is also the underlying creator of the company's income (e.g. a hotel in a tourist activity that generates the same level of amortization throughout the amortization period depending on the chosen rate) or as a result of the need to introduce and manage changes within the company at later stages of its life cycle. Taking into account the basic tendency of every company, which is aspiration towards the top, or the best form depending on the company's life cycle and the way of introducing and managing change, we will try to explain the underlying influence of the operational leverage on the negative and integrative factors in the phase of establishment and transformation of the company and in phase of growth and development. It is important to point out that large global companies are not seen as burden but as an indispensability of a particular phase of the cycle when entering new markets, or in some other phases of a company's development cycle or affiliated companies, while in domestic companies there is a completely different situation due to lower capitalization, shorter acclimatization deadlines, uneasiness of market activity, more expensive borrowing, or a much smaller maneuvering space in the business. If we add to this the surprise in terms of macroeconomic developments that are not nearly estimated, or even considered at all in the situations of GDP decline as a result of the financial sector, the crisis slumping into the real sector, and consequently the reduction in demand for all goods and services, this negative effect of operational leverage to business is higher.

## **OPERATIONAL LEVERAGE AT THE START AND DEVELOPMENT PHASE OF THE COMPANY**

Before the company is set up, the idea and potential that the prospective founder sees in the future, his exhilaration, optimism, and desire appear. An organization or company is born when founders and investors knowingly accept the risk. In the entrepreneurial venture, or as the forerunner of the formal establishment of the company, the founders begin their entrepreneurial venture by defining the vision and mission of the new company. After the founding of a company, the dedication of the founder is the greatest motive in overcoming the challenging development period that is called start phase in the literature. Characteristics of the vast majority of trading companies in the start phase, especially in the country, are the inadequacy and insufficient quality of economic forecasts and projections, or even lack of economic forecasting, which implies directly the inadequate set of expenditures that in the theoretical model become the determinant of the required level of income in the future. The high level of fixed cost in the total expenditure structure is almost always a burden with which it is difficult to bear and which consequently has a negative impact on the profitability.

For the purposes of this paper, an example of a company (Table 1) in Croatia was identified as an example of a clear direct reflection of high level of fixed cost (amortization) on the results of the company in the first two years after its establishment, where amortization as a fixed cost of approximately 2.8\$ million is a key non-profit generator with a share in the overall expenditures structure of 21-25% in 2014 and 2015. The disproportion between expected and real income levels is insufficient to achieve a positive result despite the conducted expenditure consolidation in the variable cost segment in 2015 and the extremely negative operational leverage is due to the high initial investment in long-term assets in the early stages of the business.

**Table 1.** Excerpt from the balance sheet and P/L report (period 2013 to 2015) established in the Republic of Croatia with high initial investment in long-term assets

The amount is shown in			
(HRK)	2015	2014	2013
BALANCE			
LONG TERM ASSETS	61.213.955,00	64.112.674,00	66.690.500,00
INTANGIBLE ASSETS	4.712,00	7.068,00	
MATERIAL ASSETS	60.979.399,00	63.875.762,00	66.690.500,00
PROFIT AND LOSS ACCOUNT	<b>2015</b>	<b>2016</b>	
BUSINESS REVENUES	10.642.360,00	9.635.447,00	
BUSINESS EXPENSES	8.813.913,00	11.519.465,00	
FINANCIAL REVENUE	3.924,00	21.084,00	
FINANCIAL EXPENSES	2.195.260,00	2.166.076,00	
EXTRAORDINARY-OTHER REVENUES		62.396,00	
EXTRAORDINARY-OTHER EXPENSES		93.411,00	
TOTAL REVENUES		10.646.284,00	9.718.927,00
TOTAL EXPENSES		11.009.173,00	13.778.952,00
PROFIT OR LOSS BEFORE TAXATION		-362.889,00	-4.060.025,00
PROFIT TAX			
PROFIT OR LOSS AFTER TAXATION		-362.889,00	-4.060.025,00

As a result of the organizational challenges in the newly founded society, the problem of management at all levels of business, and also in the part of cost management, appears to be neglected in the Croatian economy at times of continuous GDP growth.

In the company that ended the initial business start-up process and started into the second phase of the development cycle, in 2008, the peak of growth caused by inertia recorded a rapid growth in revenues compared to 2007, which ultimately resulted in a 150% increase in revenue, driven by the peak of the credit-potentiated demand in Croatia (the core business of the company is the sale of audio equipment), and by opening the wholesale channel (till then mostly retail activity) with a relatively neoliberal approach, mainly as a product of inexperience and ignorance. Based on the extremely rapid growth of high-income and high-value investments in 2008 in the amount of 9.0 million HRK, which was largely financed from short-term funds, thus increasing the liquidity risk, because short-term assets were not sufficient to finance debts to suppliers and liabilities to banks. Thus, cash funds are immobilized in long-term assets rather than working capital with an exceptionally high level of fixed interest expense and amortization. In the following year, there is a fall of about 13% of revenues, followed by a further aggravation of liquidity due to the impossibility of collecting wholesale receivables mainly from the previous year. Investment in long-term assets continued until 2010 when it reached the level of almost 20.0 million HRK, increasing the fixed amortization cost over 2007 by as much as 8 times, and the current liquidity coefficient (short-term assets and short-term liabilities ratio) has reached the level of 0.57 as a negative consequence of the operational leverage, i.e. the investment in long-term assets by short-term financing.

**Table 2.** Excerpt from the balance sheet and P/L report (period 2007 to 2010) established in the Republic of Croatia with high initial investment in long-term assets

The amount is shown in				
(HRK)	2010	2009	2008	2007
<b>BALANCE</b>				
<b>LONG TERM ASSETS</b>	19.995.062 +33.91%	14.931.455 +50.20%	11.467.948 +304.66%	2.833.999.00
INTANGIBLE ASSETS	418.461 -19.30%	518.545 +115.20%	240.961 +53.92%	156.550.00
MATERIAL ASSETS	19.400.081 +36.08%	14.256.390 +28.78%	11.070.467 +513.47%	2.677.449.00
<b>PROFIT AND LOSS ACCOUNT</b>				
BUSINESS REVENUES	32.456.138 +17.86%	27.537.645 -12.94%	31.629.172 +150.62%	12.620.533.00
BUSINESS EXPENSES	31.500.742 +17.67%	26.769.742 -11.38%	30.205.817 +144.24%	12.367.102.00
FINANCIAL REVENUE	212.024 +364.89%	45.607 -79.29%	220.220 +16.801.00%	1.303.00
FINANCIAL EXPENSES	1.427.374 +66.61%	856.707 -16.28%	1.023.328 +490.86%	173.194.00
EXTRAORDINARY-OTHER REVENUES	1.852.090 +387.76%	379.897 +35.977.59%	1.053 +245.25%	305.00
EXTRAORDINARY-OTHER EXPENSES	705.59 +2.319.98%	29.156 -84.97%	193.988 +1.802.59%	10.196.00

TOTAL REVENUES	34.521.142 +23.45%	27.963.149 -12.20%	31.850.445 +152.34%	12.622.141.00
TOTAL EXPENSES	33.633.685 +21.62%	27.655.605 -11.99%	31.423.133 +150.37%	12.550.492.00
PROFIT OR LOSS BEFORE TAXATION	887.457 +188.56%	307.544 -28.08%	427.312 +496.40%	71.649.00
PROFIT TAX		66.949		14330
PROFIT OR LOSS AFTER TAXATION	887.457 +268.86%	240.595 -43.70%	427.312 +645.50%	57.319.00

## OPERATIONAL LEVERAGE AS A PROFIT MULTIPLIER

A successful response to a turbulent environment is performance forecasting and definition of all the elements and instruments that can deliver this performance, which, above all, implies a good appraisal of the activity.

Financing is a dynamic process and it is precisely in this sphere that it is necessary to look at the dynamics of change. The framework of the financing process is modeling relationships with resource sources. In the process of financing, the procedures for obtaining cash funds are constantly changing, often referred to as financing in the narrow sense. By acquiring money, financial relationships with sources are established. By the investing comes to the immobilization of funds and they cannot be used furthermore. When the money is released from the circular stream, the process of disinvestment or the return of funds to resources is established.

Taking into consideration the macroeconomic developments of a single phase of the development of the Croatian economy, which at the beginning of this century had exponential propulsion in the markets of almost all goods and services, all due to the surplus liquidity of the financial sector, which stimulated demand in all markets, especially in the capital market and the construction sector, in interdependence relation was the movement of total money through all monetary aggregates with demand for all types of construction objects. Particularly there were apartments that created the demand for goods used in the construction sector, for example for expanded polystyrene (Styrofoam). The following is an example of a Styrofoam production company that served as a profit multiplier in such a macroeconomic and microeconomic environment. The basic activity of the company is the production of expanded polystyrene which operates on the Croatian market.

Expanded polystyrene is a highly voluminous commodity of low cost compared to the volume whose transport is above the average high in the net price of the

product, making it almost infeasible to deliver at a distance of more than 300 km and thus placing it in the category of uninteresting export goods.

The company, which was in the former socialist organization of a group with an almost monopolistic position in the wholesale expanded polystyrene, when entering the market was faced with market challenges and competing with its production and in the early and mid-nineties, it came to the competition and acquisition of legal subjectivity through conversion and privatization. In these and such circumstances, still perceived as a giant and with the personnel and work ethic of the socialist-commanding economy, they increasingly faced with the fall in placements and the loss of a once fully controlled market. Insisting at a high price of a product that was often higher by up to 20% compared to the competition and a very conservative approach reduced overall revenue in 2005 to about the level of approx. 34.6 million HRK and increasing fixed cost relative to the overall revenue structure at exceptionally high rates has led to reaching a lower level of profitability below 1% in relation to the generated revenue. Since there was a collective agreement in the company that fully regulated the rights of the worker, it also fixed the cost of the nominal salary per employee in total, regardless of the level of production or sales, and thus greatly contributed to the increase in the fixed costs at such low levels of income although the cost of wages, in theory, is a mixed cost. It is apparent from the above that in the concrete case it was not possible to take the theoretical distribution of the type of costs precisely because of the fact that the fixed costs were prefixed as well as the fixed costs with the variable component, which in the growth of revenues grows nonlinear, less than the income-generating profit multiplier. Considering the exceptionally conservative approach in which brand's self-sufficiency predominates, pushing to the forefront the value of the brand of over 50 years old compared to the newly formed brands, it comes to a totally wrong evaluation of the product with an unrealistically high difference in price compared to the competition, which is resulted in a certain loss of market competition.

In the need of a various restructuring, but not necessarily by reducing the number of people or total expenditures, a price reduction per unit of products has begun to position the products at a level of 1-3% higher than the competition with a vision of valorization of such value by the customers because of the better quality and richer product tradition compared to the competition. Bearing in mind the exceptional propulsion of the construction sector at that moment, predominantly determined by the demand of the financial sector liquidity surplus, the move of this kind was intended as a completely logical solution. Of course,



this move was intended to significantly increase sales volumes through marketable pricing and, accordingly, the leverage effect, knowing that the share of fixed costs would be reduced in the overall revenue structure and that there would be nonlinear growth in sales revenue and part of the variable component of fixed costs that have a variable component in some forms in total revenue from sales in favor of sales revenue accumulating additional profitability per unit of product sold. It exactly comes to that effect where total revenues almost doubled at the end of 2006, reaching a value of approx. 62 million HRK with a substantially reduced fixed-cost level and the variable part of the cost increases at a rate lower than the revenue growth. From the examples in the abbreviated form of the P/L report (some items are omitted) we see those costs that have a fixed character or fixed character with a variable component that ultimately grows at a lower rate than the revenue growth.

Joseph C. Kang and Ira Horowitz say that mutually contradictory empirical evidence of the relationship between ownership and financial leverage is not unusual as it looks at first glance. A claim about the reduction of the financial leverage would increase the value of human capital invested in the company by the investors.

Furthermore, Solverson Thatcher points out that the downturn of the operational leverage that produced the increase in financial leverage generally assumed to be due to the uncertainty of the demand volume or the constant elasticity demand.

It is exactly the effect of the operational leverage that resulted in the net profit growth in years of growth driven by a surplus of the liquidity and rising of the demand.

## **CONCLUSION**

According to the review of the historical economic facts on the global macroeconomic structure, the status of the Croatian economy within a macroeconomic puzzle, the economic doctrine and paradigms of the Croatian economy and similar transition countries are described with insights into external imbalances and sectoral positions, up to the company level as a micro-organization and the core leverage of the economy. The analysis of the operational leverage impact in the individual phases of the development cycle, the decision-making in the various macroeconomic conditions at the highest level of governance, places the effectiveness of the operational leverage in decision making, valorizing the eco-

conomic theory and the various macroeconomic circumstances. Without interfering in such a broad economic area, it is not possible to explain the hypothesis in a good way. Through a constructively critical approach, trying to extract from the economic doctrines those that confirm the interdependence of macro-movement and micro-decision, the effect of the operational leverage is explained by the correlation of macro and micro events in the national economy.

The basic component of the paper is an attempt to clarify the current economic paradigm, to determine the impact of relevant factors in the change of the macroeconomic environment, the behavior of international financial institutions and governments of countries that strongly influence the world economic order towards the behavior of the owners and management of the company and the ordinary man as the ultimate consumer.

The experience of the recent global financial crisis, as well as of the previous crises associated with cycles in property prices, showed that microeconomic subjects misperceive the systemic risk during the growth or fall in property prices and that their aggregate behavior creates the possibility of financial instability. Crises in the last years of the twentieth and beginning of the twenty-first century occurred under conditions of monetary stability and increasingly widespread financial liberalization. It is, therefore, necessary to look at ways in which the contemporary economies have changed the links between the macroeconomic environment and the perception of the systemic risk of market participants during the growth of stock prices and real estate. The key factors of this macroeconomic environment are long-term low inflation, financial liberalization and tax treatment and investment in assets (Rimac, 2012).

Apart from the correlation between macroeconomic factors and the decision-making process by using operational leverage in the company's development cycle, this paper warns of the need for partial change in economic doctrine. Situational factors that create changes in the macroeconomic environment are not measurable at the moment of creation of the problem, but only at the moment of escalation or the sum of the consequences. The aim of the paper is to create a theoretical model of effective use of the operational leverage that should be the basis for practical solutions.

Additionally, the use of specific indicators creates the conditions for a safer decision-making process using operational leverage with clearer detection and acceptance of macroeconomic changes that affect the effectiveness of operational leve-

rage at the business in the company's various cycle phases. Efficient management of the operational leverage is only possible in the conditions of a high-quality business risk assessment and opportunity utilization. Consequently, there is no unified workflow management process as it is strongly correlated with the macro and micro environment, business and development cycle of the company and its employees as the most important resource in the use of operational leverage in the decision-making process.

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