Accounting and Analytical Procurement of Predictive Appraisal of Synergistic Effect in Small Business Construction Companies

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Abstract:

The need to form the synergy is observed in the event of circumstances related primarily to cost saving, increase in market prices, etc. Notably, the interested user groups exercise their own approach to the assessment of financial results. This study is aimed at the formation of accounting and analytical systems of predictive consolidated balance sheets, in accordance with certain trends of the synergistic effect. Based on this, the cluster analysis combined with the analysis of the portfolio of works performed by the development and construction companies was carried out, the business strategies and their relationship with the accounting processes were defined, the main trends of preparation and evaluation of the synergistic effect were formed, the value chains were analyzed.

The steps formed in the framework of assessment of the predictive synergistic effect predetermine the direction of the emergence of the synergistic effect and the speed of calculation of the predictive economic effect by the trends, and determine the impact of the planned operations on the financial condition of the development and construction company and the net asset value, allowing to make the right management decision.

The formation of the main trends of the synergistic effect is aimed primarily at harmonization of accounting and analytical information as the basis for the competent business management.

Keywords: synergistic, management, tax, costs, accounting and analytical procurement, business strategy, accounting system.

JEL Classification: M21, M41.

1. Introduction

The dynamic changes in the economic conditions necessitate the search for new business opportunities and additional profits. This takes into account both external and internal resources. While the large companies have already been receiving, the small businesses are just looking for the ways to receive the effect from the complementarity of the units and services, the use of participatory management style, the use of common resources, the development of new products and everything else that creates the synergistic effect.

A few years ago, the construction business was being developed actively in Russia, bringing effortlessly large profits, but today the situation changed. High competition, changes in approaches to the selection of contractors and credit policy of banks, lack of equity, reduction of real income and certain other factors had an impact on the issues related to a profit making in this field of industry. Therefore, the time has come when the generation of additional income became the essential problem for the development and construction companies.

The possibility of the emergence of synergy is expected at the confluence of certain circumstances; very often it is expressed in cost saving, growth in market prices, etc., and therefore the problem of the synergistic

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effect assessment against the general search of synergy is of particular relevance. At the same time, it should be noted that the shareholders, investors, founders, managers, economists and other interested groups have different approaches to the financial result assessment criteria. It can be the difference between revenues and expenditures, the capital gains, increase in the value of the company, the growth of net assets, the net inflow of funds, etc. Another problem lies in the differences between the companies by size, type of activity, management style and industry characteristics.

All this makes it necessary to develop modern approaches to accounting and analytical procurement of predictive appraisal of synergistic effect drawing.

2. Methods

Business processes modeling through the development of predictive financial statements is not a new area of expertise, and this process in the economics has been paid and is paid great attention. Joseph E. Stiglitz noted that "the competitive model essentially transformed the economic science into the engineering industry (do not consider it a diminishment of this noble profession) and all participants in the economic process into a little better or a little worse engineers" (Stiglitz 2005, 366).

The traditional consolidated balance sheets were taken as the basis of modeling, as a source of generalized information about the company focused on the possibility of obtaining of the additional profit at the expense of domestic reserves.

The development and construction companies, relating to small businesses, were taken as the subject of this study. The mathematical methods were used for appraisal of the prognosis for the synergistic effect drawing in certain trends. This allowed to justify the relationship between the size of the company and portfolio of services provided, with a view to the most appropriate determination of possible business strategies and strategic components, as well as more correct estimation of the predictive synergistic effect.

The obtained result was used as the basis for drawing up the predictive consolidated balance sheets, taking into account the time, the assessment and the breeding place of the said effect. Given this, the accounting modeling based on engineering approaches, asserting the enlarged reflection of the outcome of the planned operations, was used. The interpretation of possible business operations subject to the rules of accounting and reporting allows to evaluate more accurately the certain aspects of the predictive results of the construction companies.

Assuming that the capital increment factor is one of the most important elements of the company's value, and the residual cash flow is valuable for business owners, the hypothetical accounting records, asserting a fair evaluation of assets and liabilities and the ability to turn them into cash, were used for objective assessment of these factors.

3. Results

The problems of compilation of predictive financial statements were considered by many domestic and foreign authors. Since no uniform methodology for compilation of predictive financial statements was found, each author amends it, offers the hypotheses underlying its construction and approaches to the objective assessment of the factors. Based on the results already achieved, the model of accounting and analytical procurement of predictive appraisal of synergistic effect in small business development and construction companies, including a number of successive stages, was developed.

The proposed model combines the mathematical methods and principles of accounting. From a theoretical point of view, it is complementary to existing forecasting methodology, making the adjustments to the assessment of the potential drawing of the synergistic effect; from the practical point of view, it accelerates the decision-making process, allowing to assess objectively the predictive financial result.

4. Discussion

The main stages of the model of accounting and analytical procurement of predictive appraisal of synergistic effect in small business development and construction companies.

Definition of the initial operator

Any forecast shall be based on available capacity and resources, as well as rely on the selected financial policy. All this is reflected in the consolidated balance sheets. The consolidated balance sheets are the model drawn up according to the certain rules in order to assess the financial and property status of the company; that is why the standard consolidated balance sheets are recommended by many economists as the basis for

predicting. Kotler, Goedhart and Wessels (2005, 685) emphasized that, as in any assessment, it should be started with the preparation of the predictive profit and loss report and the balance sheets, moving from them to the cash flow forecasting.

The net assets and the capital increment are taken as the evaluation criteria. It should be noted that, according to Doyle's research (2001, 18) "the average company is not able to maintain the profitability above the capital value for more than 7-8 years".

Performance of the cluster analysis in conjunction with the analysis of the portfolio of works performed

In the course of the study and identification of possible trends of growth, taking into account all the factors affecting the operation of the company (Damodaran 2006, 309), it is necessary to identify the typical analytical factors of functioning for comparable companies. The study of development and construction companies was based on the varieties set of certain characteristic features: the number of employees (up to 100 people), the number of types of works performed, the availability of the proprietary special equipment, the proceeds (up to 800 mln. rub.), operating at the regional level (due to the knowledge in the specifics of the economic environment, customer requirements and business details).

The correctness and objectiveness of the selected features can be assessed based on the analysis of variance. The raw data are shown in the Table 1. The results are shown in the Table 2.

Table 1 - The varieties set of characteristics of the portfolio of works performed of the studied development and construction companies, units

Characteristic of the company	Number of the employees 1-15 pers. (individual civil construction)					Number of the employees 15-50 pers. (industrial construction)					Number of the employees 50-100 pers. (construction of apartment buildings)				
Performance of the civil works	9	8	7	11	8	11	12	11	12	11	16	15	17	16	12
Performance of the works complicated by the engineering services	12	13	11	11	12	17	19	18	17	18	21	19	21	22	20
Performance of the civil and engineering works with complicated elements	24	19	25	22	22	28	27	30	27	30	25	24	23	25	25
Performance of the works complicated by the engineering services with finishing	14	16	12	14	14	19	20	20	19	19	23	19	22	23	22
Performance of comprehensive multi-industry construction works	49	38	42	47	44	49	53	54	50	47	46	44	39	40	48

Table 2 - Assessment of the relationship between the number of the employees of small business development and construction companies and the number of services provided

STAGE	Formula for calculation	Calculation results	
1. Calculation of the average number of types of works performed by each activity type in the studied group of comparable development and construction companies ($\bar{Q}_{av.i}$) (based on a specific set of activities (n))	$$\bar{Q}_{av.i} = \frac{\sum_{j=1}^{n} Q_i}{n_i}$$ $$\sigma_i^2 = \frac{\sum (Q_i - \overline{Q_{cpi}})^2}{n_i}$$	$\bar{Q}_{av.1} = 110.8$	$\sigma_1^2 = 26.16$
		$\bar{Q}_{av.2} = 127.6$	$\sigma_1^2 = 13.44$
		$\bar{Q}_{av.1} = 125.4$	$\sigma_1^2 = 13.04$
2. Determination of the average number of the types of activities performed in the studied group of comparable construction companies (Q_{total})	$$\bar{Q}_{total} = \frac{\sum_{j=1}^{m} \bar{Q}_{av.i} \cdot n_i}{\sum_{j=1}^{m} n_i}$$	$\bar{Q}_{total} = 117.93$	
3. Calculation of the average intragroup variance ($\bar{\sigma}^2$)	$$\bar{\sigma}^2 = \frac{\sum \sigma_i^2 \cdot n_i}{\sum n_i}$$	$\bar{\sigma}^2 = 17.54$	
4. Calculation of the intragroup variance is performed (shows the variation of the characteristic, which is manifested under the influence of factors laid in the basis of	$$\bar{\delta}^2 = \frac{\sum (\bar{Q}_{av.i} - \bar{Q}_{total})^2 \cdot n_i}{\sum n_i}$$	$\bar{\delta}^2 = 147.58$	

STAGE	Formula for calculation	Calculation results
classification) ($\overline{\delta^2}$)		
5. The correctness of the choice of the factor characteristic is verified based on the rules of addition of variances (σ^2)	$\sigma^2 = \overline{\delta}^2 + \overline{\sigma}^2$	$\sigma^2 = 130.04$
6. The empirical correlation ratio (η) is calculated	$\eta = \sqrt{\dfrac{\overline{\delta^2}}{\overline{\sigma^2}}}$	$\eta = 0.367$

The calculation results show that the relationship between the number of the employees of the small business development and construction companies and types of services rendered is rather strongly expressed. Therefore, within all subsequent stages this dependence should be considered.

The definition of the business strategies and their relationship with the accounting processes. At this stage, the coordination of the chosen business strategy and the available resource capacity of the development and construction company shall be performed for its implementation.

The information about the costs of the company is a trade secret, so in the framework of the study the collection of the detailed data on a separate contingent of construction companies, included in the sample performed in the 2nd stage, was carried out. Laden Aldin (2010) concludes the importance of empirical research and the possibility of re-use (multiple use) of previously developed business models. Therefore, the possibility of distribution of the results for the companies of the industry with similar characteristics is allowed.

The exposure to changes in the business structure involves the expansion of operations to cover the market entry strategies, processes, and assets of one or more companies. The performance of the predictive calculations requires the integration of analytical accounting characteristics for the entire company: the customers, the suppliers, the products, etc. and the separate accounting of assets, liabilities for each segment.

The studies performed by Kathleen A. Bentley, Thomas C. Omer, Nathan Y. Sharp prove that business strategies are associated with different risks, they have an impact on performance and distortion of the financial statements, a focus on individual factors and indicate the need for in-depth attention to the development of the strategies during the audit, classifying the companies and their business risks (Bentley *et al.* 2013). The business strategies influence all aspects of the activity, but let us highlight the most essential ones in the view of accounting and analytical procurement:

- strategic asset diversion and change in the trends of their use to obtain the additional effect from the sharing (these operations can be predicted with the reasonable accuracy, in case the flexible analytics, cross-cutting process transparency were applied within the accounting system);
- organic growth carried out by expanding the activities of the company (possibility of business strategy prediction is related to the information database scalability, availability of the advanced multi-level analytics capable of being supplemented, the linkage of the accounting system with the technology and business processes);
- innovation as a stimulus to growth (the creation of a virtual production within the accounting system, allowing to predict the results of this development trend, is expected).

The volume and quality of the information accumulated depend on the software product capacity, the accounting system used and the level of detail. The use of a modular billing plan in the framework of an integrated accounting system based on the multi-valued interconnected coding of the billing of the financial, management and tax accounting will in the optimum way provide the chosen strategy with the information, allowing to predict its impact on the financial results, the property and financial condition, the tax implications (Zimakova 2015).

Strategic components:

- Evaluation of the business structure. The obtainment of the synergistic effect is possible with a flexible system of organization of the activity of the company, through business process reengineering, diversification, capital evacuation, liquidation, etc. Tirole, J. (2000, 27-28), considering the company as a static synergy (in the framework of the theory of industrial organization), pointed out that one of the major determinants of firm size is the extent of its use of economies of the scale or the scope. Creation of large multi-function firms with unitary U-shaped form of organization (with a lot of units) and rearrangement of units according to their function can be regarded as an attempt to use the potential economies of scale. At this stage, the assessment of the business is

performed prior to any activities based on the factors: the swap ratio; the current liquidity ratio; the independence ratio; the revenue per asset.

▪ Analysis of the value chain. This analysis allows the identification of possible trends for obtaining the synergistic effect. The value chain is focused on the processes occurring outside the firm, and each of them is considered in the context of the overall chain of business activity, creating the value (Nikolaeva 2003, 53).The issues related to the necessity of the value chain analysis have been considered by many authors. Shank and Govindarajan (1992) recommended the methodology for conducting of this analysis with analogs in conjunction with the industry characteristics and the definition on this basis of the competitive advantage. Drury (2007, 848-851) complements this analysis, justifying the need for implementation of the cost management principles within the whole value chain). The use of a simulation model of the market as part of this analysis allows to predict the reaction of competitors and identify the more profitable type of integration – vertical or horizontal. The analysis is carried out by the following trends:

- the macro environment: the global economy, technology, policy, legislation, demography, natural environment, society, culture;
- the micro-environment: the customers, competitors, suppliers (Doyle 1999, 19);
- the internal environment: the analysis of the level of technological development, the determination of the level of specialization of the company, the calculation of the competitive growth index, the calculation of the current competitiveness index.

The performance of this analysis should be based on fundamental principles: the nonlinearity of the synergistic effect (the lack of proportion dependence onany factor), the coherence (the cooperation and interaction), the openness (inflow and outflow of cash flows, resources within the system and from the external environment), the prediction of performance in different economic situations.

▪ Identification of the trends for the obtainment and evaluation of the synergistic effect. The obtainment of the synergistic effect in various areas have been considered by many authors: Fleck, Boguslavskiy, Ugnich (2014), Savelyeva (2012), which highlight the necessity to take into account the industry-specific characteristics. Pekuri, A., Pekuri, L. and Haapasalo, H. (2013) consider the synergies problem especially in the construction industry and in creation of a business model, providing the specific customer segments, *i.e.* the customers and the users in specific areas, with the maximum value. Kaplan and Norton proposed the use of the balanced scorecard system for the purposes of appraisal of the synergistic effect (2006). Developing this trend, Khanova (2010) recommends to perform the appraisal based on the percentage of the factors, improving the efficiency of the integrated enterprise. Some authors consider the appraisal of the synergistic effect in terms of the impact on the financial statements.

We proceed from the necessity of mathematical evaluation of the predictive synergistic effect and determination of its impact on the increase in value of the company and improvement of the cash flow. Given this, the task of the analyst is to assess properly the interrelation and interdependence of the elements of the organization and types of activity, and to project them on the financial statements. To solve this problem, it is necessary to create a model of accounting, based on contingency planning, that is, a specific version of the projected situation is developed, and the results are reflected in the derivative consolidated balance sheets.

The cash flow assessment is important in terms of the calculation of the technical solvency, having the impact on the credit rating of the company, which is particularly important for the development and construction companies relating to small businesses. Higgins and Scholl (1975) attribute this effect to the mutual debt insurance. But, in their opinion, sometimes these benefits are obtained at the expense of the shareholders, bearing losses in the merger process, so the mutual insurance effect does not create any new value, but merely redistributes the benefits between the providers of the capital of the company. The studies have shown that all of the 15 studied companies carry on their business at the expense of the borrowed funds. Therefore, it is necessary for them to monitor the solvency factor. The diversification of the portfolio of services rendered in the construction industry may slow the turnover of funds and increase the need for capital, proving also the necessity of cash flow assessment.

Let us consider the different trends of obtaining the synergistic effect by the small business enterprises in the construction industry.

The synergetic of costs. This type of synergetic is formed by the joint use of the equipment and personnel for several products or types of activity, reduction of the duplicate departments and productions. Making the most of its capabilities (production facilities, personnel, administrative areas, etc.) the company at the same time in different trends gains the additional synergistic effect through the marginal costs lowering. This follows from the

subadditivity of the cost function. At this stage, the correlation of costs and capital is observed (see Figure 1), which implies that the cost saving results in the increase in the capital value.
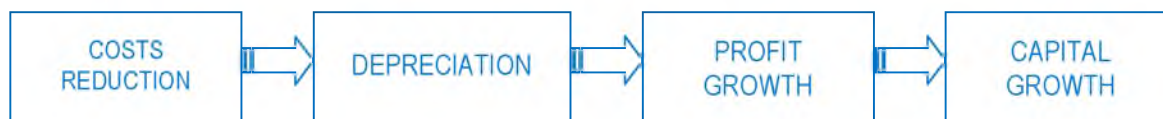

Figure 1 - Interconnection of the costs and capital

The synergetic of costs leads to a reduction in the time for the construction of the individual objects, which implies a decrease of fixed costs within the relevance time range and of other expenses related to a specific building object. In construction, the relevance time range costs include the cost of operation of the special equipment, which can be represented by the formula:

$$FC_t = A_t + \sum_{i=1}^{n} ZC_i \tag{1}$$

where FC is the costs of machinery and equipment within the period *t*, A_t is the amount of depreciation within the period t, ZC_i is the operating costs for special equipment engaged in the service rendering, *n* is the number of services rendered using the special equipment within the period.

The amount of depreciation of the special equipment within the period t can be represented by the formula:

$$A_t = \frac{OC}{N} \tag{2}$$

where OC is the gross fixed assets, N is the period of operation of the gross fixed assets.

The costs of construction machines and mechanisms are related to the number of services rendered (n) and time spent for the service rendering (T); based on that the costs attributable to one service can be defined as follows:

$$FCq = \frac{At}{n} + \sum_{i=1}^{n} ZC_i \div t \times T \tag{3}$$

where *T* is the time spent for one service rendering, *t* is the possible operation time of the machines and mechanisms within the reporting period.

The calculations performed show that when assessing the costs of machinery and equipment per one service, the amount of them will be decreased with the increase in the number of services provided through the redistribution of the total amount of depreciation. The technological synergetic. It manifests itself in connection with the application of modern technologies in various fields, originally not intended for these areas. The technological synergetics will lead to the reduction of the variable costs per operation, both due to the price factor and reduction of the time spent for such operation. The variable costs amount can be represented by the formula:

$$VC_t = \sum_{i=1}^{n} (m_{it} \cdot P_{it} + Z_{it} \cdot Q_{it}) \tag{4}$$

where VC_t is the variable costs in the period, m_{it} is the material costs per operation to render the service in the period t, P_{mit} – the cost of the unit of the material used for the operation, Z_{it} – the price of a single operation, Q_{it} – the number of operations.

The technological synergetic will influence the reduction of material costs in physical volume (m_{it}) and the reduction of the number of operations (Q_{it}). Given the trends of innovation development of building technology and the possibility of modern construction materials use, there is a real opportunity to reduce the costs.

The management synergetic appears as a result of business combinations (business combinations are one of the varieties of the integrative transactions, manifesting in unification of the separate enterprises into one economic entity, obtaining the control over several types of businesses).The participants of investment and construction activity: the investors, the customers, the designers, the general contractors, the subcontractors, the manufacturers of the material and technical resources, the logistics companies, the owners of the special equipment, etc. The composition of the participants of the investment and construction activity is diverse and can be changed, mostly, due to the increase in the number of sub-contractors, as schematically shown in Figure 2.

In assessment of the prospects of the management synergetic development, the association of the elements can be distinguished into a single system as the business combination variant. Given this, the construction company acquires a significant importance in the industry (in the region); it becomes possible to use the corporate externality and transfer prices, etc.
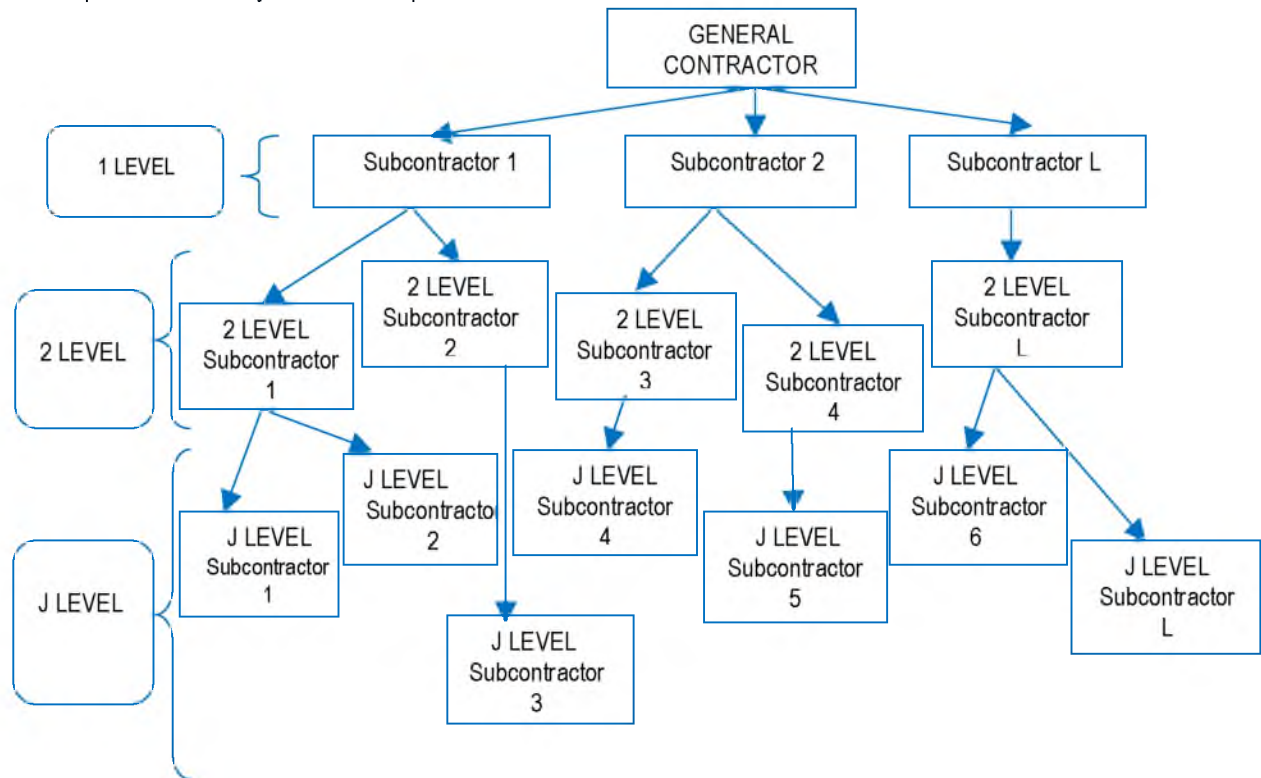

Figure 2 - The scheme of participants of the subcontracting companies in the performance of works

Given the large number of construction activity participants (Figure 2) and the fact that each subcontractor receives 20% of the profit of the cost amount, the formation of profits on each level can be described by the following formula:

$$\text{EBIT} = 0.2 \cdot \sum_{i=1}^{L} \text{TC1}_i \qquad (5)$$

where TC1_{1i} is the total cost for the service rendering, L is the number of participants (services) at each level, J is the number of sub-levels.

$$\text{EBIT}_j = 0.2 \cdot \sum_{i=1}^{L} \text{TC1}_{Ji} + \text{EBIT}_{j-1} \qquad (6)$$

where EBIT_J is the profit obtained at the level J.

By reducing the number of levels and the number of participants the costs are reduced in the form of savings from the profit of each participant. In case of performance of all types of work by one company, there is an additional opportunity to make a profit. The synergistic effect is possible due to reduction of the overhead costs.

The presence of management synergetic is confirmed by the studies carried out by many scientists. Kruehler, Pidun and Rubner (2012) developed the elements of corporate strategy, involving the interaction of the corporate center managers and business units, allowing to create an effective combination of activities to create the value. Weitzel and McCarthy (2011) proved in their research the possibility of the obtaining of the additional effect from the diversification of activities, as well as the mergers, relating specifically to small businesses Hoberg and Phillips (2010) performed the research on the issues of the obtaining of the synergistic effect from the complementarities in the merger and acquisition of enterprises and companies, evaluating the effectiveness by the stock returns, the predictive profitability and operating income.

In assessing the prospects of the management synergetic development, let us select the following business combinations: the unification of the elements into a single system, unbundling.

The company's growth beyond the industry (diversification) involves the creation of conglomerates. The studies, performed by Scherer and Raivenscraft (2004, 27) show that conglomerate mergers gave a higher gain relatively to non-conglomerate mergers, with significant gain registered by the shareholders of the companies-vendors and the moderate gain achieved by the shareholders of the buying companies. Such unification has several features: first, at the acquisition of a controlling stake in the firm, the buyer is obliged to pay a premium (due to the fact that the controlling stake implies the existence of control over the activities and the possibility of a synergistic effect), and secondly, the securities transactions involve some costs.

A premium paid for the controlling stake is a payment for private benefits from the control described above. The spread of the premium can be fantastically high, but in most countries it is in the range of 10-20%. According to the study performed by L. Zingales, the premium for the right to make a decision is inversely proportional to the accounting rules quality index in each country (Finance, 1998, 67).

Another difficulty lies in the fact that all the costs of the merger (premium and costs) will be incurred in one period, and the benefits from the merger can be obtained much later, so it is necessary to take into account the changing of the value of money over time and to carry out the discounting in order to obtain the most truthful information about the size of the synergistic effect.

The unbundling suggests that the units, generating the least income and having no substantial impact on the other units of the company, *i.e.* not correlated (in the case of the relationship the analysis of the profitability of the production or the purchase of semi-finished products, hand tools, etc. shall be performed) are identified by the analysis. These units are sold and only those units that generate a sufficient profit margin are kept. As the result of the reduction of the less efficient units the profit leap appears.

The unbundling can be implemented:
- by division (one firm is divided into two new) A = B + C;
- by separation (one firm is separated from the main firm) A= A + B.

The financial synergetics is manifested in the increase in the value of investments through the use of financial instruments. At this stage, it is advisable to use the method of financial asset analysis proposed by Chirkova, Buhovets, Malitskaya (2014), including the descriptive analysis, component-by-component asset analysis, the calculation of values of pair correlation and regressive dependence of the receivables on the financial assets.

In the course of the analysis, it should be taken into account that in order to resolve the financial problems the development and construction companies use both traditional methods – obtaining credits, loans, prepayments from the customers and creation of subsidiaries in the field of housing and utilities infrastructure (HUI) and use their financial resources to increase the current capital.

The tax synergetics – the use of different tax schemes and participation in associations of companies with different tax systems – allows not only to save significantly on taxes, but also offers the customers more favorable conditions for cooperation. Table 3 shows the average data for the studied companies with the total income up to 100 mln. rubles. For the companies using a simplified taxation system, the difference between the revenues and the costs was chosen as the object. The small businesses in construction industry utilize a variety of schemes, allowing to increase the costs accounted for taxation purposes. The peculiarity of the Russian tax legislation is that in case the amount of tax payable under the simplified system of taxation, calculated by the formula "income minus costs", amounts to less than 1% of the income amount, the company shall pay the minimum tax equal to 1% of the revenue. This loophole in the legislation is used by the small businesses to reduce the tax burden.

Table 3 - The tax rates payable by the companies in due to the different taxation systems in Russia

Taxes and fees	General tax system		Simplified system of taxation	
	Tax/fee amount, %	Sum, thousand rubles	Tax/fee amount, %	Sum, thousand rubles
VAT	18%	2,160	-	
Contributions to non-budgetary funds	30% (of the amount of salary)	4,500	30% (of the amount of salary)	4,500
Additional contributions to the pension fund	2% and 4%(of the amount of salary)	300	2% and 4% (of the amount of salary)	300
Insurance contributions on occupational accidents	0.2-8% (of the amount of salary)	300	0.2-8% (of the amount of salary)	300
Property tax	2%	60		

			6% (of the amount of profit) or 15% (of the difference between profit and cost) or 1% (of the amount of profit)	
Tax on profit / single tax due to the use of a simplified tax system	20%	1,200		1,000
TOTAL		8,520		6,100

The data specified in the table show the opportunity to save on taxes due to the changes in the taxation system used.

Preparation of the predictive consolidated balance sheets for the general manager

The studies performed by Wolmarans and Meintjes (2015) demonstrate the importance for the managers of small and medium-sized companies of the enlarged assessment in terms of cash flow formation and correct assessment of the current capital, excluding small details. Mihai (2009) offers the approach to the preparation of the predictive financial statements based on the relationship of internal and sustainable growth, suggesting the presence of three hypotheses: constant capital structure, capital growth only due to retained profit, preservation of the current dividend policy.

The possibility to obtain and reflect the synergistic effect of benchmarking in the accounting and derivative consolidated balance sheets was characterized by Kuznetsova (2011). The possibility to use the system of derivative of balance sheets to produce on their basis the aggregated and disaggregated indicators of the net assets and net liabilities ownership, allowing to create the effective system of accounting and the economic processes and resource potential of the company management as a source of synergistic effect was considered by Aksenova (2011). Bogataya (2008) stresses the need to use the derivative consolidated balance sheets in the framework of strategic management accounting, for the purposes of performance measurement of the process-oriented management.

Based on the studies conducted by the above economists, we consider it appropriate to assess the predictive effect in terms of the impact on the balance factors, so at this stage there is the need in the preparation of the predictive consolidated balance sheets, including the preparation of the hypothetical transactions.

It was noted earlier that in case one of the performance factors of the company is the increase in the capital value, then all transactions should be considered through the prism of decrease or increase of the capital. That is, if the profit is predicted as the result of the operation, it will lead to an increase in the capital, the converse is also true. The capital gains depend on three factors: the cash flow, provided by the strategy, the capital value, used to implement the strategy, and the market value of the liabilities, *i.e.* in the course of preparation of the consolidated balance sheets for assessment of the synergistic effect, it is necessary to comply with the following rules:

- the asset assessment should take into account the real ability to generate the cash flows (for this assessment it is permissible to use the discount or expert assessment);
- the liability assessment rules should be similar to the principles of asset assessment.

The problem is that the factors of the consolidated balance sheets prepared by the small businesses are very far from the market or the actual assessment. For example, the asset assessment is performed by the Russian development and construction companies at historical cost. The possibility of revaluation is permitted by the regulatory enactments, but the revaluation leads to an increase in the value of non-current assets, and this has a direct impact on the increase of the property tax. The revaluation in British companies leads to a decrease in the value of assets (Walton 2003, 169). The opinion of the credit institutions on the property, which is evaluated by their representatives at the liquidation cost, should be taken into account. Thus, the majority of the external users have the distorted information provided by the small businesses in their traditional consolidated balance sheets.

The derivative consolidated balance sheets assume the hypothetical revaluation in order to obtain the actual information on the assets and liabilities. It requires obtaining the additional external information on the market value of the assets (the actual value may correspond to the replacement value, ensuring the stability of the asset assessment).

The next step is the registration of the predictive synergistic effect. Table 4 shows the example of the hypothetical accounting transactions, reflecting the predictive synergistic effect.

Table 4 - The calculation of the synergistic effect on the basis of accounting transactions at the expense of the cost reduction

Balance sheets sections	Accounting transactions in normal terms		Hypothetical accounting transactions, reflecting the cost synergetic	
	Debit	Credit	Debit	Credit
Non-current assets				
Current assets	1)500 2)500 3)700	2)500 3)500	1)300 2)300 3)700	2)300 3)300
Capital		500 3)200		500 3)400
Long-term liabilities				
Short-term liabilities		1) 500		1)300
Net assets	200		400	
Capital gains		200		400

Note: 1) the acquisition of materials, 2) the use of materials in the production process and production of the product in the assessment at the actual cost, 3) the sale of the product to the buyer and the determination of the financial result).

The data, specified in the table, show that the cost reduction results in the reduction of the accounts payable, having the direct effect on the growth of the net assets, and, as a consequence, the release of funds and the growth of the capital value.

Conclusion

Preparation of the derivative consolidated balance sheets by the small businesses of the construction industry, given the above requirements, allows to perform the appraisal of the predictive synergistic effect from the point of view of the influence on the balance sheet factors and capital gains. The increase in asset turnover, the release of funds can be observed as the additional effect.

In the course of decision-making, the minimum amount of assets allowing the receipt of the maximum profit should be calculated; for this purpose, the parametric analysis of the assets used should be performed, the unused assets should be disposed, their structure should be updated. It is advisable to take into account the concept of financial leverage effect: the change of the value and the return of the assets results in the change in cash flow, which, in turn, allows to save on interest on borrowings and therefore leads to the capital growth.

The phased appraisal of the predictive synergistic effect allows to determine the trend of the synergistic effect, to calculate quickly the predictive economic impact by the trends and to determine the impact of the planned operations on the company's financial condition and the net asset value, which reflects positively in the results of the decisions made.

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