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## Developing a Model for Machine Building Companies to Be Restructured in Russian Mono Company Towns as a Factor and a Condition of Well-Being

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### Abstract

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The model for restructuring machine building enterprises has been developed as to improve economic viability of mono company towns located around machine building enterprises. The paper includes the case study covering the experiences and results of its implementation with a certain mono company town in Russia.

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**Keywords:** Mono company town, machine building company, restructuring, model, efficiency, synergy, engineering.

### Introduction

Russian machine-building enterprises are declining as evidenced by the RIA Novosti agency. Manufactures of metallurgical equipment, machine tools, agricultural machinery designed for retail markets are in deep recession (RIA RATINGS, 2014). The poor demand for Russian engineering products in the global market, low competitiveness, reducing dynamics of consumer crediting on purchases in the domestic market, insufficient production automation, low rates of equipment renewal and irrational organizational structures - all of the said above have led to the crisis in the machine engineering industry.

The second problem arises from the fact that during the USSR existence there was a trend of building mono company towns across the country, which often located around machine-building enterprises. This caused a profound relationship of several consequences: a machine building enterprise



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is not able to operate effectively and this results in cutting salaries and living standards in mono company towns. Subsequently, one can state the rise in unemployment rates producing the development of social deviance.

According to the official statistics there are currently 313 municipalities in Russia being considered as mono company towns where almost 15% of the population lives. Mono company towns are located uneven over the territory of Russia. The largest number of the mono company towns is concentrated in the Ural (Sverdlovsk and Chelyabinsk oblasts) and Volga (Samara, Nizhniy Novgorod oblasts, Perm krai) districts.

The idea of founding mono company towns can not be taken unambiguously as negative because this idea has been and is still taken as a basis for building towns and cities over the world. The decline in the machinery industry is quite predictable; European countries and the USA faced similar problems (Garner, 1992; Green, 2011). However, modern mono company towns founded close to the sources of oil and gas will extend a list of problematic cities some day.

The situation is worsened by the fact that global integrating processes will inevitably reduce the competitiveness in various industries, for instance, Russia's accession to the WTO has caused a slump in mechanical engineering, light and pulp, and papermaking industries in Tyumen oblast, Siberia, the Urals (Trifonov, 2013).

There are a number of approaches to the management of mono company towns in the world. The USA administration implements the program "Shrink to survive" that may have the poorest neighborhoods demolished in order 'to give lands back to nature'. European countries have chosen the way of restructuring, with the approach accepted by the city of Ruhr in Germany and Helmond in Netherlands acting as an example (Manaeva, 2011).

In Russia the Federal Program has been accepted as to support mono company towns implying purposeful change in the economic structure of cities and promotion its diversification. The lack of ideas for restructuring mono company towns often is a problem. According to experts, the program for diversifying economies with difficult socio-economic situations is possible to be implemented only in half the Russian mono company towns; the remaining half needs alternative support measures. Today, about 20% of the mono company towns listed as problematic is in situations where a town forming enterprise has no prospects for future development and can be hold or closed.

However, a number of projects have been designed to address critical problems that the mono company towns are facing: the modernization of conservative industries, diversification of their economy, development of small and medium-sized enterprises, improvement of the town's image and quality of life. The mono company towns within the machine engineering industry are not exceptions: they need modernizing and diversifying as well.

It seems necessary to develop a model for restructuring enterprises, which will further help systematically address a number of problems related to the modernization of outdated industries and the overall economic diversification of the mono company towns.

## Results and discussion

Restructuring can be functional and systematic. The systemic restructuring as a form of refocusing engineering enterprise was successfully undertaken in such cities as Pullman (USA), Huddersfield (UK). When companies start to make new products or provide better quality of service this transition involves a phased restructuring, restructuring of business units and financial restructuring.

A machine building enterprise in the process of restructuring takes a range of problems into account and those problems have been formed in the context of enterprise's particular activities, but, in general, enterprises engaged in the same sector acting as a microscopic model of the national economy, have a similar list of problems. Thus, it is necessary to learn the proven experience in developing a successful model for restructuring in the existing conditions of the Russian economy.

The restructure of 'Yurginskiy machine engineering plant' undertaken in 2007 is a successful example among the Russian mono company towns. (Trifonov, 2013)

By the year 2007 the said company had been loss making and the town needed maximum support from the state and private investors. A decision to develop a new model for restructuring the machine-building enterprise was of high priority.

A basic model for restructuring a company comprises the following phases:

- Analyzing a company's activity and its environment;
- Developing a concept and restructuring program;
- Implementing the restructuring program and assessing its effectiveness.

Within the framework on restructuring machine building enterprises the authors have proposed a new model for effective assets management at a machine building enterprise; the model is called 'financial restructuring'.

The model of financial restructuring is aimed at achieving positive financial results in the long-term strategy. The proposed model is conditioned with the following:

- A machine building enterprise does not change its activity;
- A client base does not change in structure;
- Taxation is not subject to change, as tax revenues are budget-forming;
- Non-production assets such as social-and-recreational buildings and housing are discharged from the company's books.

Five key elements to include in the financial restructuring are the following (Figure 1):

1. Efficient management of current assets and short-term liabilities. It is recommended to control and monitor indicators in respect to inventory turnover, prices of raw materials, and analyze and structure sales of ready products.

2. Management of non-current assets that implies the possibility of reducing fixed costs of the enterprise by leasing the production facilities out and laying-out inefficient fixed assets.

3. Management of accounts receivable, including control of accounts receivable and payable and a register of accrued expenses. The sale of debts through debt centers is also possible.

4. Management of production costs that can be effective only if the automated system of accounting and reducing expenditure of resources is used.

5. Restructuring the debt to the budget and to major creditors.

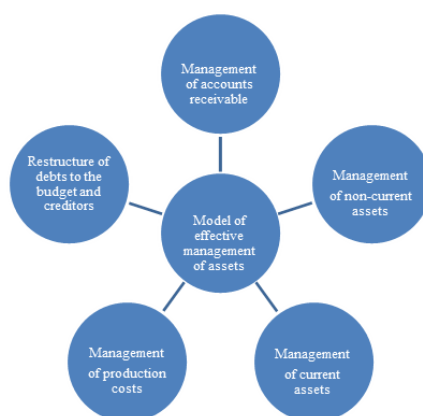


Fig.1. Management elements of financial restructuring at a machine-building enterprise

In the year 2007 the administration of ‘Yurginskiy machine engineering plant’ set a target by means of restructuring to solve the following problem:

- To reach the break-even point with the existing productions;
- To avoid bankruptcy proceedings and make creditors believe the restructuring is more beneficial than liquidation.

Finally, it was decided to increase the output of mining equipment and develop a set of marketing activities. The restructuring process also included the action plans on improving products features and quality control management. The re-planning of production facilities and re-routing of manufacturing lines led to the cutting of variable costs and effective use of working capital.

The restructuring plan implies new employments not to be permissible to support effective management of human resources at the enterprise as the workforce redistribution can help restore the company’s sound position (Lehn, 1988).

### Conclusions and recommendations

The restructuring plan of the machine engineering plant entailed a series of reorganization measures and can be considered effective for the period 2007 - 2013.

Sale of unused production equipment, inventories and cutting of accounts receivable made possible to receive cash fast enough.

Cash flow became strong as a result of the debt restructuring. Manufacturing facilities were re-planned to avoid using the excessive working space and this reduced production costs.

The results of restructuring in figures are shown in Table 1

Table 1. Restructuring of ‘Yurginskiy machine engineering plant

Parameter	2007 Thsd RUR	2013 Thsd RUR
Company’s assets	2136708	3256216
Non-current (fixed) assets	1574642	1241891
Non-current assets as a percentage of Company’s total assets, %	73.69	38.1
Current assets	562066	2014325

assets as a percentage of Company's total assets, %	26,31	61,86
Sales Proceeds	559324	3 341 030
Production costs	424365	2 606 477
A share of production costs in sales proceeds, %	75.,87	78.01
Sales Profit	-34268	247910
Net Income	-36764	73481

Thus, restructuring the company led to the decrease in non-current assets as a percentage of Company's total assets, % and increase in current assets. Receiving profits can indicate a positive trend and effectiveness after restructuring the company.

The enterprise value grew as a consequence of the restructure performed (Van Home, 2008).

The restructuring process involves the creation of operational and financial synergies which can appear in the following forms: greater market share, increase in sales, decrease in the probability of bankruptcy in the result of business diversification (Artur, 2014).

According to the results of the case study, the financial model for machine building enterprises restructuring in Russia has been built up that meets the today's needs, complying with the changing external environment including such factors as economic instability, accession to the WTO and crisis tendencies. The restructuring of the machine engineering plant under the case study led to the decrease in the share of non-current assets to total assets (from 73.69% to 38.1%) and increase in current assets (from 26.31% to 61.86%). Positive economic indicators suggest profit-making, a higher company's value and occurring operational and financial synergies to prove a restructuring plan for machine engineering enterprises be successful.

The resulting synergy allows us to come to a conclusion that restructuring of a machine building enterprise is possible only when a relevant model to be implemented is chosen, based on the proposed model for effective company asset management.

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