

USING OUTSOURCING TECHNOLOGY TO MANAGE ENTERPRISE BUSINESS PROCESSES**Darchia I.***Doctoral student at Georgian Technical University*<https://doi.org/10.5281/zenodo.20186433>**Abstract**

Today, the influence of market environmental factors on the development of business processes is not regulated; it is largely random, which inevitably leads to additional costs. In this regard, there is a growing need for a deep theoretical understanding of the role of management and improving enterprise management to ensure a new quality of economic growth. It is necessary not only to improve existing and used tools and methods, but also to increase their diversity, thereby providing the enterprise with the necessary competitive advantage. The chosen issue is especially interesting from the perspective of the methodology for regulating and developing business processes in industrial enterprises.

One of the challenges in effectively managing an industrial enterprise during Georgian economic reforms is creating a mechanism that flexibly and effectively ensures the interaction among the main elements of the logistics system: supply, production, warehousing, transportation, and distribution. The current development of economic processes urgently requires the creation of certain conditions for the unification of enterprises with different types of activity into integrated logistics chains. However, it is impossible to manage and control all processes occurring in an enterprise, especially in holding structures.

Keywords: performance management, outsourcing, logistics system.

Introduction

One of the challenges of effective management of an industrial enterprise in the process of Georgian economic reforms is the creation of a mechanism that flexibly and effectively ensures the interaction of the main elements of the logistics system, namely: supply, production, warehousing, transportation, and distribution.

The current development of economic processes urgently requires the creation of certain conditions for the unification of enterprises with different types of activities into integrated logistics chains. However, it is impossible to manage and control all processes occurring in an enterprise, especially in holding structures. Many large industrial enterprises have retained the functional structure established during the planned economy, which is focused on production, but unfortunately, such structures do not allow for market research, the formation of market niches, effective pricing policies, and financial market operations. Such enterprises find it difficult to compete with modern market-oriented companies.

To develop and improve management systems, many large industrial enterprises need to build market-oriented capabilities and implement new business models that enable them to achieve real competitive advantages. Among modern business models, outsourcing deserves special attention.

Outsourcing is the transfer of certain business or production functions that were previously performed within the enterprise to a third party. There are many definitions of outsourcing, but its essence can be reduced to a simple formula: focus all resources on activities that are important to the enterprise and transfer the remaining functions to a reliable, professional partner.

In an era of fierce competition, outsourcing can be an ideal solution that delivers cost savings, improves product quality, frees up resources to focus on the enterprise's core business, and, most importantly, ensures effective management.

Outsourcing services are popular worldwide and widely used across fields such as information technology, finance, legal support, and manufacturing. The global outsourcing market has already exceeded \$500 billion and continues to grow. Experts predict that by 2028, its volume will reach \$800 billion. This method of organizing business is most common in the United States, but in Europe and Asia, the outsourcing market's growth rate is several times higher.

According to analysts, Ford Motors currently outsources two-thirds of its components and services. As a result of outsourcing information technology at General Motors plants, information support costs have decreased from \$8 billion to \$3.5 billion, improving the quality of information services.

In today's environment, functions in which even innovation does not give the company a strategic advantage are considered suitable for outsourcing. In other words, companies outsource to focus on their core business, rather than managing cafeterias, cleaning facilities, contributing to various funds, or protecting against computer viruses. Several types of outsourcing should be distinguished: minimal, effective, and radical.

- **Minimal** outsourcing involves the elimination of purchasing, support, and service departments from the enterprise ("elimination of non-core activities"). The outsourcing services market in Georgia offers relatively simple, minimal outsourcing services (cleaning, employee catering, transportation, repair and construction work, and many others). Experience shows that the total income of a restructured enterprise quickly increases by tens of percent, while costs are significantly reduced. At the same time, output per employee increases sharply because the cost of finished products is now distributed only among the main production employees. Thus, production volume has not decreased, and the workforce has decreased by 23 times. Thus, minimal outsourcing allows you to use the

most obvious reserves and achieve almost instant results.

- **Effective** outsourcing not only eliminates non-core activities but also creates new functions. Outsourcing of accounting, auditing, consulting, and legal services has recently become increasingly popular. The so-called outsourcing (Toutsourcing - the development of information technologies for clients, as well as the creation and maintenance of reliable information systems) is very popular both in international markets and in Georgia. It is sufficient to note that more than 80% of publications on outsourcing (especially online) concern radical outsourcing - the largest segment of the outsourcing market.

- **Radical** outsourcing is the process of creating a fictitious company without production as a result of the restructuring of the enterprise. It is believed that in the future, only those companies will be considered outsourcers that: I develop new and existing products (carry out the so-called engineering), I am engaged in quality control,

- i. They seek financing and actively work in the market, including the development of market niches, the creation of brands, supervision of product promotion, etc.

- ii. They produce goods, works, and services by order and under the trademarks of companies of the first type; that is, they are outsourcers.

Thus, if a company has embarked on the path of radical outsourcing, it retains only intellectual activity; therefore, this model is fully consistent with the outsourcing principle: "I retain only what I can do better than others, and I will outsource what they do better than others."

This raises several questions:

- 1) Is it possible for an industrial enterprise to contract out and outsource the production of high-tech goods?

- 2) Is such an approach acceptable for products of high complexity?

The answers to these questions are positive. For example, the American television and tape recorder manufacturer Emerson Radio Corp. handles artistic design, technical specifications, and product promotion, while all production is outsourced to Asian subcontractors. Moreover, according to the company's president, working under a contract does not reduce efficiency. This approach is no less effective than the approach of vertically integrated companies such as Sony or Samsung, which directly control their manufacturers.

Another vivid example of a "figurative business" is the Swedish furniture company IKEA. It has

expanded its operations to unimaginable scales. Suffice it to say that in 2019, the company's turnover amounted to almost \$10 billion, and 200 million people visited its 157 giant stores worldwide. In addition to stores, the group includes 28 manufacturing plants in eight countries. However, the company itself produces only about 10% of its product range, purchasing the rest from suppliers. IKEA specialists work with manufacturers to develop product designs, identify opportunities to reduce costs and improve quality, and even ask the supplier factory's management to improve working conditions for workers or tighten safety requirements. Today, almost 50 Georgian furniture and textile factories are completely dependent on IKEA orders, even though not everyone in the Georgian market is familiar with the brand. IKEA is represented on the market only in the so-called. With "point" unitary production and full-scale intervention, it has not even begun.

With the advent of modern information technologies, new technical opportunities have emerged for the effective implementation of the "knowledge economy". Some economists argue that in the 21st century, the world will increasingly see organizations built "like the solar system": many external contractors connecting to a small native company. For example, Matthew Symonds, the editor of the technology section of the world-famous magazine *The Economist*, in his article "The Imperative Dot.com," cites Ford data. It seems that even such a large, vertically integrated company intends to focus exclusively on intellectual labor (the "knowledge economy" model).

Similar transformations are also inevitable in Georgian industrial enterprises. In the late 2000s, the transition from "survival" to "development" began. The demand for new equipment, machine tools, mechanisms, metal, and rolled products increased, as most of the equipment in our factories became obsolete.

According to "Forbes Georgia", the fixed assets of the Georgian energy sector have depreciated by more than 50%. In total, at the beginning of 2000, equipment depreciation was 60% (now it is 52%).

The experience of such companies as EMBAWOOD, GOODWILL, GeoSteel, "Sweet Country", "Kula", and many others indicates that outsourcing technologies are effective in large industrial enterprises. Therefore, the most optimal approaches are the creation of an industrial park at the enterprise, the development of clusters, the use of core competency models, and the shell structure model (Table 2).

Table 2.

Conditions for using different models of business organizational structure		
Business Structure Model	Main goals of restructuring	Conditions for using this model
Industrial Park	Eliminate the imbalance between the main and auxiliary production through business diversification. Increase revenues, strengthen sustainability.	1) Low and unstable demand for the main products of the factory and, as a result, a sharp decrease in production and sales volumes; Capacity imbalance
Cluster	Eliminate the imbalance between main and auxiliary production by minimizing the enterprise's size. Increase sustainability and reduce risks.	1) Low but stable demand for the main products of the factory and, as a result, a sharp decrease in production and sales volumes; Capacity imbalance
Dynamic Competence	Abolish auxiliary services and switch to outsourcing. Switch the business to contract or prefabricated production. Use of redundant personnel in the main production. Increase production volume, sales, and revenues.	1) High and stable demand for the main products of the factory and, as a result, a sharp increase in production and sales volumes; Shortage of personnel in the main production
Shell Structure	Eliminate production as such. Transfer of business to the "knowledge economy" based on the principles of 100% outsourcing	1) High but unstable demand and, as a result, sharp fluctuations in sales volumes; The presence of a large number of contract manufacturers (outsourcing) in the market

Thus, the outsourcing strategy allows companies to maximize their competitive advantages. It promotes the rational allocation of company resources to those businesses that are competitive and in which the company has certain advantages (technology, know-how, specialized equipment, etc.).

The use of outsourcing technology as an effective tool for developing a management system requires

addressing challenges shaped by its advantages and disadvantages. The main advantages and disadvantages of outsourcing from the client company's perspective are presented in Table 3.

The main criteria for selecting outsourcing suppliers are: trust, reliability, service, cost savings, flexibility, human resources policy, contract (deal) rigidity or liberality, internal qualification, and control.

Table 3.

Advantages and disadvantages of outsourcing from the customer's perspective	
Advantages	Disadvantages
Reducing costs	Danger of information leakage
Focusing management and personnel on the core business	Danger of transferring important functions
Improving service quality and reliability	Danger of disconnecting management from business practice
Implementing advanced technologies	Training other specialists instead of internal practice
Using the positive experience of others	Reliance on a single source
Improving control	

In our opinion, the data given in Table 4 can be used to make decisions on the scale and depth of outsourcing during the restructuring of a particular industrial enterprise.

The scale of outsourcing during an enterprise's restructuring depends on the level of development of the outsourcing services market. Let us consider this issue in more detail.

Currently, in Georgian practice, there are three types of outsourcing firms operating in the outsourcing services market, which carry out the following:

- Outsourcing of non-core activities - work and services that are usually performed by auxiliary workshops and departments;
- Outsourcing of intellectual services (legal, information, computer, consulting, recruitment, accounting, research, marketing, investment, certification, etc.);
- Outsourcing of production processes - production of parts, components, assemblies, parts of

products, or even finished products ordered by the enterprise within the framework of a production cooperation.

Non-core and intellectual activities are relatively universal, meaning they are less dependent on the specialization and technological capabilities of the industrial enterprise that uses them. Therefore, the sales market of specialized service firms (outsourcing companies) is truly colossal.

This characteristic is the main condition for the effective functioning of these outsourcing companies. In Georgia, the activities of firms that provide intellectual services to enterprises are also widespread.

Accordingly, there is a huge demand in this market, which generates supply. This market is dynamically developing and being structured.

The role of outsourcing in improving enterprise efficiency

Efficiency Factor	The degree of use of the efficiency coefficient by type of outsourcing		
	Minimal outsourcing	Effective Outsourcing	Radical Outsourcing
Focus on core competencies.	Satisfactory use of factors	Satisfactory Use of Factors	Full Factor Utilization
Reducing costs	Full factor utilization	Full utilization of factors	Full factor utilization
Using outsourcer best practices, knowledge, and technologies	Satisfactory factor utilization	Full utilization of factors	Full factor utilization
Developing the company's marketing functions	"Zero" factor utilization	Full utilization of factors	Full factor utilization
Reducing risks	Minimal factor utilization	Minimum utilization of factors	Full factor utilization
More complete use of resources	Minimal factor utilization	Satisfactory utilization of factors	Full factor utilization
Optimizing the investment structure	Minimal factor utilization	Satisfactory utilization of factors	Full factor utilization
Increasing capitalization due to the increase in the value of intangible assets	Minimal factor utilization	Satisfactory utilization of factors	Full factor utilization

Associations and unions of similar specialized firms are emerging. New specialties are emerging, and personnel are being trained for them. Professional standards and traditions are being developed, and mergers and acquisitions are taking place.

It should be noted that we have developed an algorithm that, in certain cases, guides an enterprise in using classical outsourcing technologies (Fig. 1).

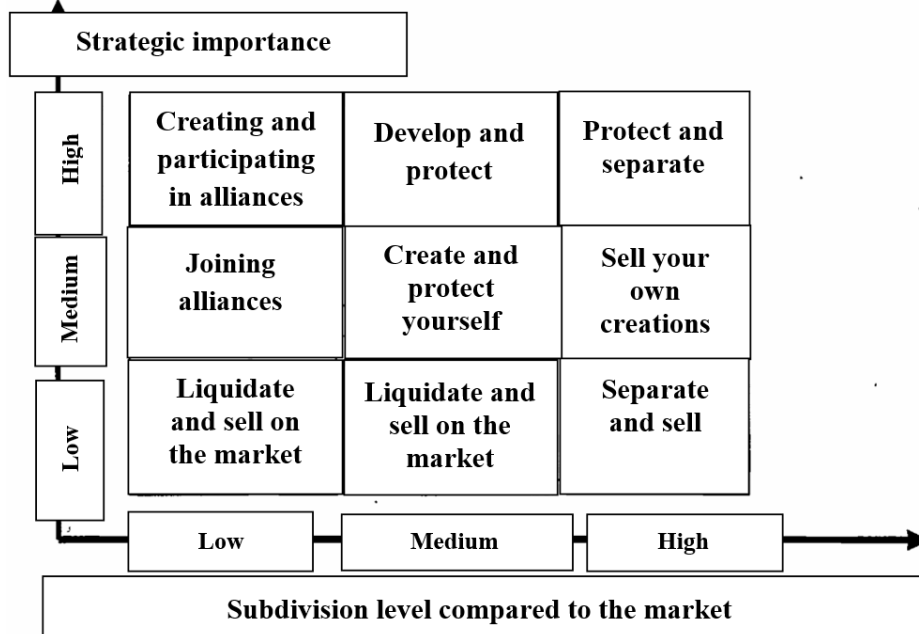


Fig. 1. Classic outsourcing matrix

Determining the need and form of outsourcing a function. A survey of heads of leading global corporations revealed the following results of IT outsourcing:

- Cost reduction by 79%;
- Focus on the core business by 75%;
- Improvement of service quality by 70%;
- Increasing competitiveness by 67%;
- Increasing shareholder returns by 62%;
- Optimizing business processes by 58%;
- Achieving global standards by 53%.

Currently, many tools are available in Georgia that enable the systematization and significant simplification of IT outsourcing work: one such tool is the ARIS

Process Cost Analyzer module, which is part of the software product family. It is used:

- for an improved and structured description of business processes;
- for analyzing business processes;
- for further improving business processes, the enterprise and its management;
- as well as for preparing for the implementation of complex information systems;
- Process cost accounting can be used as a management tool, as it can help in making general decisions in several situations, including mergers and acquisitions of enterprises.
- in testing the effectiveness of improvements;

- vii. in business processes;
- viii. In evaluating outsourcing decisions;
- ix. In evaluating alternatives when implementing standard information systems;
- x. In the implementation of business process reengineering projects;
- xi. In the management of overhead costs (in combination with total cost management).

The use of the “outsourcing matrix”. Practice has developed many methods for determining whether this

area of business should be developed within the enterprise and whether it makes sense to outsource. For this purpose, matrix analysis is most often used. The matrix can be built on any pair of indicators that characterize the enterprise's strategic position.

The most important criteria are the industry's growth rates, market share, long-term attractiveness, and competitiveness. As a result of the research, we present the author's outsourcing matrix in Figure 2.

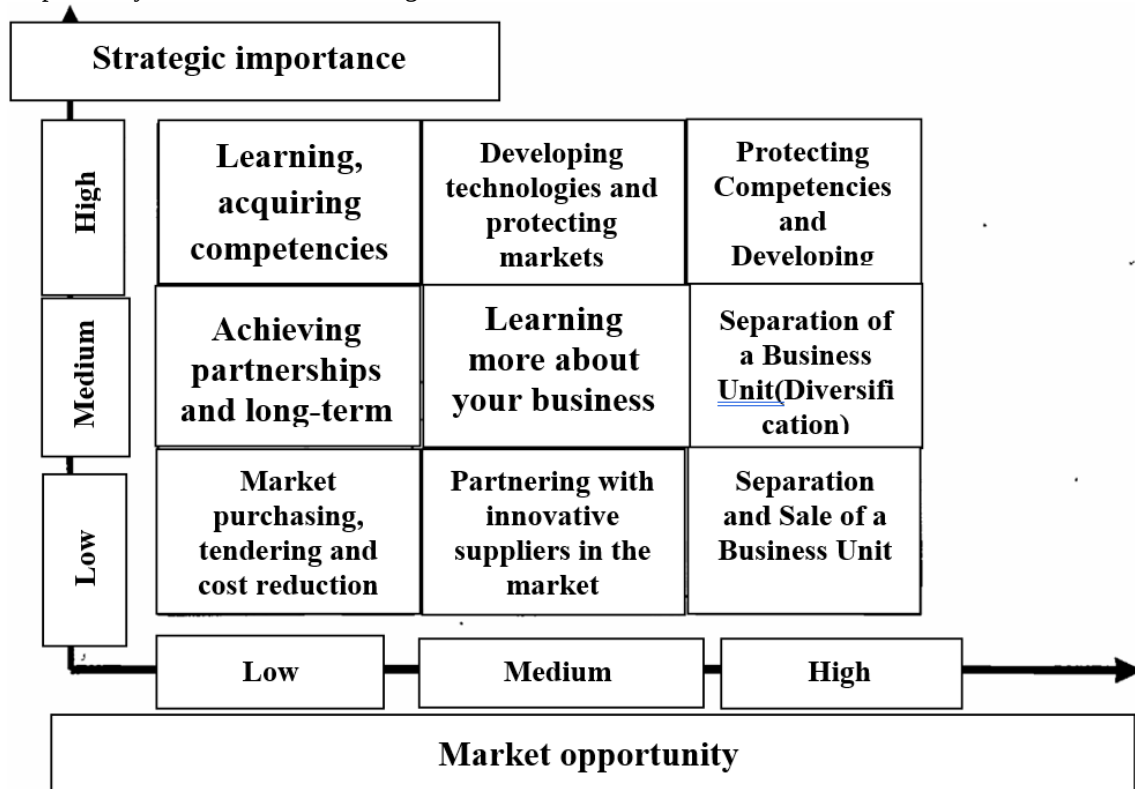


Fig. 2. Author's outsourcing matrix

The scores (high, medium and low) are calculated on two scales: the strategic importance of a given business element for the company and the assessment of the business element in relation to the external market (i.e., how well the company is performing compared to the market, how well a particular department corresponds to the current development of the industry, how qualified the employees are, etc.).

For holding structures, the “outsourcing matrix” is also built on two scales: strategic importance and market position (Figure 2). After determining the criteria for selecting outsourcing companies, it is advisable to assign weights to the criteria and select the outsourcing company using linear or multiplicative convolution.

Many large companies, to ensure sustainable development, divide non-core divisions into independent business units. This logical step allows them to reduce costs and concentrate efforts on core business areas.

As a rule, service units are separated from the main production units and subsequently become independent legal entities, while the parent companies retain ownership and operational control over their activities.

In the vast majority of cases, there is no attempt to radically transform the operational and organizational structures of service companies that continue to operate

according to traditional principles, maintaining closed monopoly relations with their main customer - the parent company.

When deciding on outsourcing the business functions of an industrial enterprise, the following sequence should be observed.

1. Internal business processes are classified as core, core/non-core, and auxiliary. Core processes are those that add value to the company's main final product. Core/non-core processes are those that create additional value for a non-core product that horizontally diversifies the business and does not correspond to the company's strategic plans to remain in the industry. Supporting processes include functions that provide support, such as maintenance, construction, transportation, office work, IT, and accounting.

2. **Assessing the feasibility of separating a division from the parent company.** At this stage, a market analysis is conducted for services comparable to those provided by the division that has been separated. The need for this analysis is related, first, to the risk of creating a monopoly and dependence on a vital supplier, and second, to developing a viable business plan for new companies. Tenders can be used as a tool for analyzing the service market for parent companies. The

second component of this stage is an analysis of the performance of the separated divisions and a forecast of their independent functioning.

3. A detailed strategy is developed for each business unit. At this stage, the management system is improved, an effective financial structure is created, and operational activities are optimized. In some cases, the separated divisions require investments in their own capabilities. For a company to function in an open, competitive market, it is also necessary to establish development, marketing, and sales functions. After the auxiliary unit is outsourced, it will no longer be accountable to the production manager, chief engineer, or other employees of the parent enterprise. This unit will have its own goals and objectives. To minimize the risk of violations in the main business process, it is initially necessary to establish relationships based on the "customer-supplier" principle. The following processes should be strictly regulated on the main production side:

- Procurement planning and control: what and when to receive from the outsourcing company;
- Requirements documentation: consolidation of commercial conditions and technical requirements;
- Evaluation of outsourcing companies;
- Conclusion of contracts;
- Monitoring of contract performance: ensuring that performance indicators meet contractual requirements.

4. Procurement planning and control. Procurement planning activities should identify service needs and service delivery schedules. At this stage, the total cost of the purchased services is determined based on their characteristics, prices, and delivery times. Special attention should be paid to issues that are critical to the quality, timing, and cost of the company's final product. This means that work should be done to assess and minimize risks associated with the primary production facility's support functions.

All products and services for the primary company should be considered purchased, regardless of whether they are obtained from independent suppliers or from internal support business units. In both cases, the requirements should be the same: sufficient time should be allocated during the procurement process to evaluate service providers, study requirements, and review contracts. To ensure adequate control over procurement, delivery progress should be compared with the planned delivery schedule, and, if necessary, appropriate measures should be taken.

5. Document requirements. Documented requirements define the scope of delivery, service characteristics, relevant quality management requirements, and supporting documentation. They should also include service delivery timelines and access rights to the outsourcer's premises. In some cases, traceability and communication channel requirements are specified. The structure of the documents should facilitate the obtaining of accurate, comparable, and complete responses from potential suppliers.

6. Supplier evaluation. To evaluate suppliers, companies establish procedures for identifying poten-

tial suppliers, evaluating existing suppliers, and assessing their ability to deliver the required products. These procedures include:

- Analysis of service quality, pricing, and problem solving;
- Audit of outsourcer management systems, as well as an assessment of their potential ability to provide the required services effectively and on schedule;
- Verification of recommendations to assess customer satisfaction;
- Financial assessments to ensure the viability of the supplier;
- Proposals;
- Assessment of logistical capabilities.

The results of the supplier evaluation are presented in a scoring system that takes into account not only the indicators themselves, but also their importance (weight). The most important factors are compliance with established requirements, compliance with deadlines, and quality of service. When summing up the evaluation, the scores for each parameter are summed up, and one of three decisions is made:

- 1) The supplier can cooperate.
- 2) The supplier is conditionally able to cooperate and is subject to further evaluation.
- 3) The supplier is not able to cooperate.
- 4) Auditing is an important element in assessing the effectiveness of further interactions.

Contracting. When evaluating the tender results, all deviations from the requirements specified in the outsourcer's proposal should be identified and accounted for. The evaluation of the tender results should be based not only on price, but also on other cost indicators, such as inspection costs, quality audits, and deviation correction.

In addition, attention should be paid to the quality of technical performance and appropriate performance guarantees. To ensure an objective tender, measurable selection criteria have been developed: the impact of any compromises on quality should be fully considered before the contract is awarded. Contract documents should be reviewed to reflect any negotiations that may have occurred before the contract's conclusion.

7. Contract management. Contract management should involve establishing appropriate contractual relationships and integrating the data from these relationships into the company's overall management system. Regular verifications should be conducted to ensure that ancillary production performance meets the contract requirements. The results of these verifications should be communicated to all interested parties, and any agreed-upon action should be taken. To facilitate interaction with outsourcers in conflict situations, companies may find it appropriate to develop and adhere to regulations for each supplier category.

8. Quality management of ancillary production. Companies can ensure consistent quality in ancillary production services by implementing and certifying a Quality Management System (QMS) for ancillary production. Creating a QMS is a task that integrates the organization's overall management with the ideology of quality as its highest strategic goal. Although outsourcing is a relatively new type of service on the Georgian

market, this method of organizing business has significant development prospects. This is evidenced by the growth rate of outsourcing by the largest Georgian enterprises.

Conclusion

Thus, the active and widespread use of outsourcing technologies supports the implementation of economic strategies in an unstable market environment, improves the quality of industrial enterprises' products, enhances their active involvement in the international division of labor, and increases production efficiency, thereby helping to ensure economic stability.

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