

**PROBLEMATIC ASPECTS OF CORPORATE INCOME TAX CALCULATION IN THE  
PRINTING INDUSTRY OF LATVIA**

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**Abstract.** A corporate income tax (CIT) calculation is one of the most complicated tax calculations in Latvia. The research aim is to examine the accounting process for the CIT in the printing industry and reveal problems in its calculation. The authors found that the CIT paid could not be forecasted for a long-term, as it was corrected by many financial accounting items and did not directly depend on turnover but was closely associated with the profit or loss account and the balance sheet. The authors came to a conclusion that the decision makers of the Republic of Latvia had to change the procedure of paying the corporate income tax – the tax has to be paid for the taxation period rather than, as now, in advance for the next accounting period. The authors analysed the accounting process for the CIT at “Jelgavas tipografija” Ltd, which, as a benchmark, represents accounting operations in the entire industry in general.

The following general research methods were employed to carry out the research: the monographic method, analysis and synthesis, induction and deduction, statistical analysis, comparative analysis, the logical and constructive methods, and the graphic method.

**Key words:** corporate income tax, printing industry, profit.

**JEL code:** H2, H3

## **Introduction**

Taxes affect such processes as investing, revenue distribution, and tackling social and economic problems. Tax evasion negatively reflects in the economy, the social sphere, and the government’s budget; thus, when making a tax policy, measures have to be taken cautiously in order not to create tensions in the society and economy, and a negative attitude to the tax policy. From the economic perspective, taxes are a tool for distributing economic resources, redistributing national income, and macroeconomic stabilisation, which reflects financial relations in the real economy (Pavlots D., 2013).

In accordance with the legislation of the Republic of Latvia, any enterprise performing economic activity has to pay various taxes. Often, the extent to which an enterprise exploits the rights granted to it as a taxpayer to get tax reliefs, allowances as well as reimbursements depends on the competence of accountants. A corporate income tax calculation is one of the most complicated tax calculations in Latvia. In financial accounting, filling in a tax declaration requires good knowledge on legal enactments and accounting process.

The authors believe that a corporate income tax calculation and preparatory work for filling in a CIT declaration is a lengthy and work-intensive process – beginning with a calculation of the depreciation of fixed assets for taxation purposes and ending with an extensive analysis of debtors, classifying them into doubtful and bad debtors. A corporate income tax declaration has to be assigned a large role in financial

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reports and in the accounting for tax expenses. An estimated corporate income tax is directly associated with the profit or loss account and the balance sheet.

The printing and publishing industry deals with typographic reproduction of printed materials and post-processing and publishing of these printed materials.

The development stage of printing industry and related industries in any country in the world indicates **not only the country's scientific and technological** but also, to a great extent, economic, social, cultural, and intellectual development level and its society's ability to accumulate the cultural and intellectual heritages of other countries and societies and to integrate in mutual developments. A very important prerequisite for normal development of publishing activities in such a small country, in terms of population, as Latvia is a reduced value added tax (VAT) rate on books, which represents both economic and political support.

The research aim is to examine the accounting process for the CIT in the printing industry and reveal problems in its calculation.

Research tasks to achieve the aim:

- 1) to examine and describe the printing industry;
- 2) to examine and analyse the corporate income tax paid by an enterprise of the printing industry and the accounting process for the tax and to reveal problems in its calculation (in the period of 2005-2012).

The following general research methods were employed to carry out the research: the monographic method, analysis and synthesis, induction and deduction, statistical analysis, comparative analysis, the logical and constructive methods, and the graphic method.

The present research is based on data of the Central Statistical Bureau, special theoretical and methodological literature, research papers by scientists, and newspaper articles.

## **Research results and discussion**

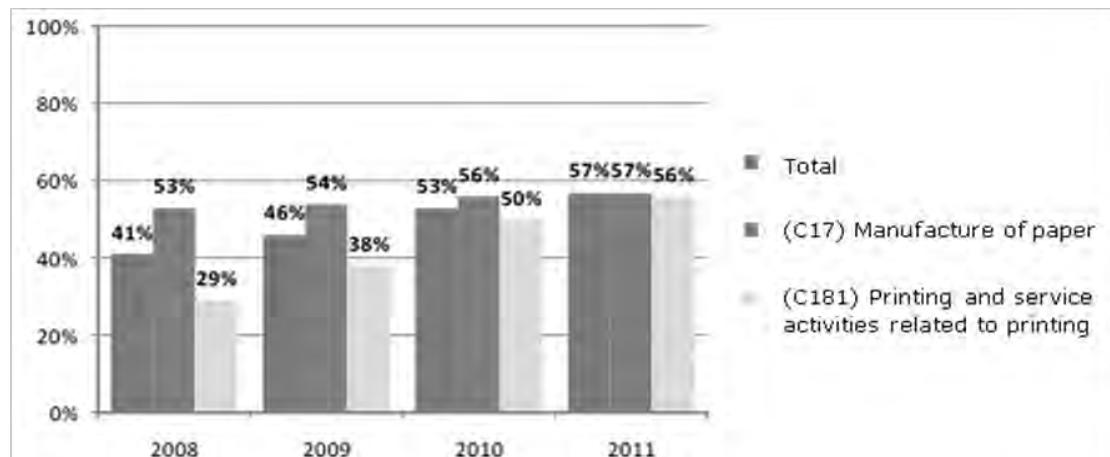
### **1. Economic characteristics of the printing industry**

In the 1990s after Latvia regained its independence, the country's polygraphic enterprises were privatised quite fast. The new owners invested a lot of funds to buy new and modern equipment and to reconstruct buildings useful for production and, later, to construct new ones. In the period from 2005 to the beginning of 2012, investments amounting to more **than LVL 90 million were made by the industry's enterprises**. These investments contributed to an increase in output – **the industry's turnover has risen four times since 1997**.

In the period of 2005-2007, total turnover of this industry considerably rose (*Statistical Yearbook...*, 2005-2011) mainly owing to an increase in the turnover of printing and service activities related with printing and publishing; a decrease was observed for related service activities of the industry. After analysing the sub-industries, one can find that a recovery from the economic recession relates only with **the industry of manufacture of paper and paper products, whereas, the publishing industry's turnover continued declining in 2010 as well**.

On the whole, the industry of printing and publishing, and manufacture of paper and paper products of Latvia may be characterised by high value added, modern equipment, a strong exports potential, prestigious products, and a qualified labour force.

The mentioned advantages determine the high exports potential of Latvia's publishing industry.



Source: authors' construction based on the Central Statistical Bureau data, 2011

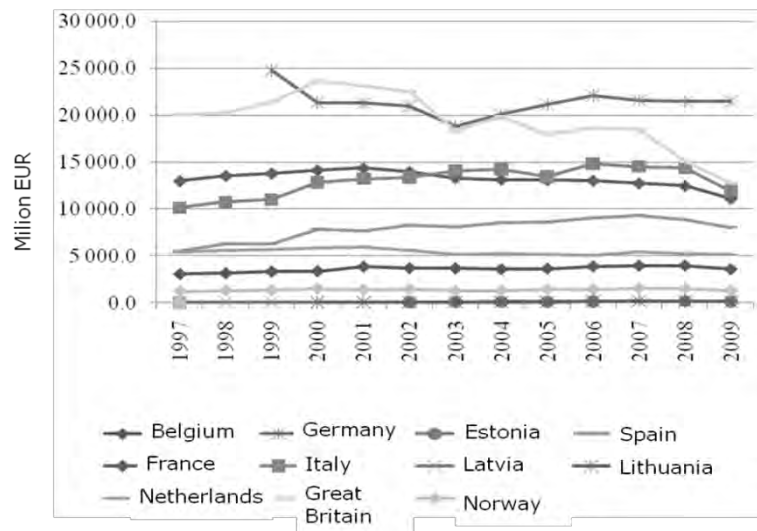
Fig.1. **Changes in the turnover of the industry of manufacture of paper and printing in Latvia in the period of 2008-2011, %**

Before the economic recession, the printing industry mainly focused on the domestic market, while its exports accounted for approximately 40% of its output. Yet, the industry's exports were mainly shipped to Lithuania and Estonia, where 60% of its exports were sold in 2008. The economic recession contributed to seeking new export markets and to an increase in the printing industry's exports. Consequently, Latvia exported 55% of this industry's products in 2010, and in 2011 it was 57% (Figure 1).

A very important prerequisite for the normal development of publishing activities in such a small country, in terms of population, as Latvia is a reduced value added tax (VAT) rate on books. Raising the VAT rate from 5 to 21% in 2009 led to the bankruptcy of several publishing houses, which reduced the supply of books to the domestic market by approximately 60%. The decision made in 2010 to reduce the VAT rate again (to 12%) considerably improved the situation, and the industry started stabilising, yet, it has not fully recovered even now. It convincingly proves that in order to maintain the publishing of books in the Latvian language without any support (funding of the State Culture Capital Fund, purchases by libraries etc.), the government support in terms of reduced tax rate is necessary. An essential prerequisite for normal competition and, thus, successful development of the industry in the future, according to this industry's enterprises, is the combating of the grey economy. For this reason, the Association of Latvian Printing Enterprises has signed a cooperation agreement with the State Revenue Service on promoting fair competition and the payment of taxes in the industry.

Based on the statistical information (Statistical Yearbook..., 2005-2011), the authors conclude that a decrease in the number of printed publications (including books) and the number of copies printed was observed in the publishing industry of Latvia, which reached 44% in 2009 compared with 2008; it was caused by two processes: mainly the economic recession in the country and the use of free-of-charge information due to the recession and the development of electronic technologies. The effects of the two processes on the number of printed publications (books, magazines, and newspapers) were observed to a lesser extent, as the value added of manufacture of paper and paper products, and printing and service

activities related with printing rose by 16% in the period of 2009-2011, while publishing activities declined at a rate of 9% on average, and continued declining in 2010 and 2011.



**Source: authors' construction based on the Eurostat data, 2013**

**Fig.2. Turnover of the largest enterprises of the industry of printing and service activities related with printing in the European Union Member States, Norway, and the Baltic States in the period of 1997-2009 (million EUR)**

After analysing the changes in the turnover of the printing industry (Figure 2), one can conclude that the greatest decrease in turnover was observed in Poland - 37%, followed by the Baltic States: 31% in Lithuania and 30% in Latvia. The printing industry in Latvia depends on the overall financial situation in the European Union. It leads to a conclusion that the printing industry in Latvia is poorly developed; thus, it ranks in lower positions among the EU Member States.

In 2011, the turnover of 10 largest printing enterprises of Latvia, including "Livonia Print" Ltd, "Poligrafijas grupa Mukusala" Ltd, "Prese nams Baltic" Ltd, "Jelgavas tipografija" Ltd, and "Liepajas papirs" Ltd, accounted for 38% of the printing industry's total turnover. "Jelgavas tipografija" Ltd ranked in the 9<sup>th</sup> position in the list of the largest printing enterprises of Latvia, and its turnover comprised 1.56% of total turnover in the printing industry. Its turnover was **not large but significant among Latvia's** printing enterprises in 2011.

The spare production capacity is large in the country, and there are 20 large printing enterprises in the printing industry, which intensively produce and export their products, maximally penetrating into new markets, whereas, small enterprises are not able to enter a new market, as the cost of penetrating into a new market is relatively high. The government has to contribute to the development of the printing **industry's enterprises** through providing both an educated labour force and investments for increasing their market share.

## 2. Accounting of income tax expenses and its analysis at a printing industry enterprise

The tax policy implemented by the government is and will be important for sustainable growth in the economy of Latvia. It not only shapes the business environment and climate but also affects the wellbeing of any individual in Latvia (Pavluts D., 2013).

The corporate income tax revenue accounts for only 6% of total tax revenue in the general government consolidated budget but on certain conditions it plays a considerable role in forming the government budget. The greatest share of revenues from direct taxes is made up of state social insurance contributions and personal income tax and corporate income tax revenues. Yet, of the indirect taxes, the greatest share was composed of the value added tax revenue (Summary on Tax Collection, 2013).

The total tax revenue collected by the government in 2011 was equal LVL 3881.1 million, which was LVL 438.9 million or 12.8% more than in 2010. The increase in tax revenues was mainly determined both by the rise in the economic activity of individuals and enterprises, and by the positive effects from changes in the tax policy and from administrative measures.

The share of corporate income tax in the total tax revenue in the world's developed countries is significant. In some developed countries, this share even exceeds a third of all tax revenues. As mentioned before, the share of corporate income tax revenue in the total tax revenue in Latvia was only slightly greater than 6% over the recent years. It means that some specific hindering factors affect the development of enterprises in Latvia. The high tax burden, bureaucratic procedures in business, the complicated calculation and accounting of CIT can be mentioned as the key hindering factors.

As regards the calculation of the corporate income tax, several tax incentives for stimulating economic activity and opportunities for reducing the tax have been introduced in the country. For example, losses may be transferred to next taxation periods, which may be done in an eight-year period from 2010 onwards. Consequently, for example, businessmen may use the losses incurred in 2009 to reduce their future profits up to 2017 (On Enterprise Income Tax, 1995).

The authors analysed the accounting for the CIT at "Jelgavas tipografija" Ltd, which, as a benchmark, represents accounting operations in the entire industry in general.

Even though various changes could be observed in the markets of printing products both in Latvia and in Europe, the enterprise continued developing, reaching a turnover increase of 9.2% in 2011. The enterprise achieved a positive result by actively working in both the domestic and export markets where its exports rose by 42.4% compared with 2010. It successfully penetrated into the markets of both the European Union and Russia.

In 2011, "Jelgavas tipografija" Ltd paid in taxes LVL 436535, while it was LVL 372872 in 2010. The amount of paid taxes changes according to the enterprise's financial situation. The CIT paid by "Jelgavas tipografija" Ltd rose by 14% in 2011 compared with 2010. The share of corporate income tax in the total amount of taxes paid by this publisher comprises 3%, and the burden of this tax is not high in Latvia (in the percentage distribution of tax revenues in Latvia in 2011, the CIT accounted for 6% of total tax revenue). The highest tax burden for "Jelgavas tipografija" Ltd is caused by taxes on labour: mandatory state social insurance contributions and the personal income tax with a share of 59% and 34%, respectively.

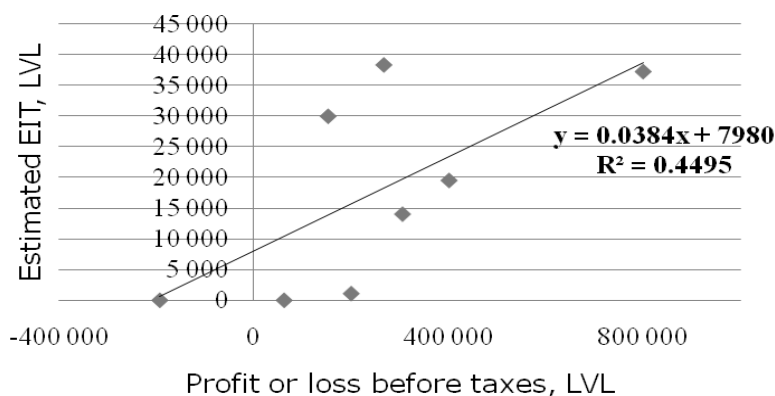
The corporate income tax paid by "Jelgavas tipografija" Ltd accounts for the greatest proportion of the tax paid by the enterprises belonging to the publisher's group. The estimated CIT paid by "Jelgavas tipografija" Ltd in 2008 was equal to 0, as the tax deductions were greater than the enterprise's profit before taxes and interest payments, while in 2009, the enterprise suffered losses, and its estimated tax was 0. In 2010, the economic situation in Latvia's economy stabilised and the enterprise's turnover rose, resulting in a profit to be taxed. In 2012, its turnover increased compared with 2011, yet, the CIT paid

decreased, as the enterprise purchased new equipment. In accordance with Section 13 of the Law on Enterprise Income Tax, the depreciation of its fixed assets might be increased twofold, which reduced the taxable income.

A corporate income tax econometric model for "Jelgavas tipografija" Ltd is presented in Figure 3 (Arhipova I., Balina S., 2006).

In the analysis of the estimated CIT, depending on the profit or loss, the authors employed a regression equation with the dependent variable Y – estimated CIT (LVL) – and the independent variable X – profit or loss before taxes (LVL).

The econometric model's regression function is as follows:  $Y_i = 7980 + 0.0384 \cdot X_i + e_i$ . This function shows that in the period of 2005-2012, an increase of LVL 1 in the profit or loss of "Jelgavas tipografija" Ltd led, to an increase of LVL 0.0384 in the estimated CIT on average. The regression determination coefficient  $R^2 = 0.4495$ , which indicates that 44.95% of the changes in the estimated CIT for "Jelgavas tipografija" Ltd may be explained by a linear regression model which integrates profit or loss before taxes as a factor. It means that the model is sufficiently instable to be exploited for forecasting.



Source: authors' construction based on the annual reports of "Jelgavas tipografija" Ltd, 2012

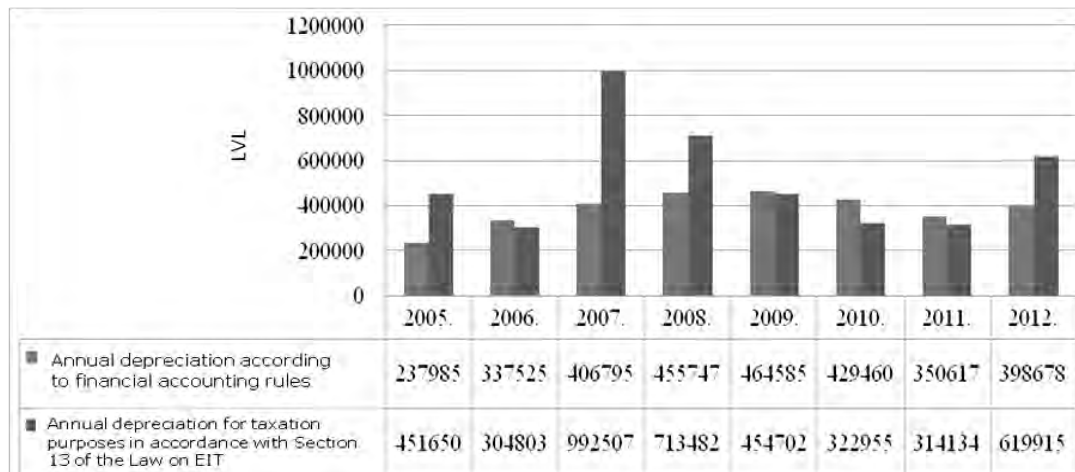
Fig.3. **The estimated CIT for "Jelgavas tipografija" Ltd, depending on the profit or loss before taxes for the period of 2005-2012, LVL**

The authors conclude that the corporate income tax paid cannot be forecasted for a long-term, as it is corrected by many financial accounting items and does not directly depend on turnover. In the calculation of corporate income tax for "Jelgavas tipografija" Ltd for 2011, the greatest proportion, 91%, contributing to an increase in taxable income, according to financial accounting rules, is composed of the depreciation of fixed assets; whereas, the greatest proportion, 88%, contributing to a decrease in taxable income is comprised of the depreciation of fixed assets for taxation purposes, in accordance with Section 13 of the Law on Enterprise Income Tax.

One can conclude that calculating the depreciation of the enterprise's fixed assets for taxation purposes is a long process, as a Microsoft Excel file has to be filled in, which is done manually. Accordingly, there is a risk of making an error or a formula may disappear as well as it is possible that the file could be deleted. The authors recommend the enterprise that distributes the accounting application Horizon to develop a new module for calculating fixed asset depreciation for taxation purposes.

The results of a calculation of the annual depreciation of fixed assets according to financial accounting rules and for taxation purposes are shown in Figure 4.

According to Figure 4, the depreciation of fixed assets calculated according to financial accounting rules gradually rises and, at the same rate, decreases relative to the purchase value of fixed assets. Yet, for taxation purposes, a great proportion of the initial value of fixed assets is written off already in the first year of their exploitation, for instance, in the case of production equipment, the proportion is 40%. In 2007, the enterprise moved to new premises and new equipment was purchased; thereby, the depreciation deduction of fixed assets for taxation purposes, rose by 226% or by 2.3 times compared with 2006 but then sharply decreased for the period until 2010. In 2007, the depreciation deduction calculated according to financial accounting rules rose by 21% compared with 2006 and continued gradually increasing until 2009. The same trend was observed after 2012, as the enterprise invested in new production equipment in that year, thus, expanding its business. The depreciation deduction for taxation purposes (CIT) both sharply increased and decreased, as it was calculated at a double depreciation rate, while the depreciation deduction calculated according to financial accounting rules increased and decreased smoothly. For this reason, a deferred tax liability is entered in accounts.



*Source: authors' construction based on the corporate income tax declaration data of "Jelgavas tipografija" Ltd, 2012*

**Fig.4. Results of a calculation of the annual depreciation of fixed assets according to financial accounting rules and for taxation purposes for "Jelgavas tipografija" Ltd for the period of 2005-2012, LVL**

If no deferred corporate income tax liability is entered in annual reports, the profit that is intended for distribution among shareholders can be increased by the extent of deferred corporate income tax, which negatively affects the enterprise's financial stability (Annual Accounts Law, 2013).

The analysed enterprise has disclosed all its expected risky sums and losses incurred in the reporting year or in the previous years, calculating deferred tax liabilities and incomes; thus, the enterprise's profit and loss account reveals its correct net income.

## Conclusions

1. The economic activity of printing enterprises depends on exogenous economic and political factors as well as on the tax policy implemented in the country.

2. In general, the industry of publishing and manufacture of paper and paper products is characterised by high value-added, prestigious products, a strong exports potential, as 55% of the industry's products were exported from Latvia in 2010, while it was 57% in 2011.
3. The spare production capacity is large in the country, and there are 20 large printing enterprises in the printing industry, which intensively produce and export their products, maximally penetrating into new markets, whereas, small enterprises are not able to enter a new market.
4. The value added of the industry of printing and publishing, and paper and paper products fell by 44%, which was caused by the economic recession and the use of free-of-charge information due to the development of electronic technologies.
5. Selected as a benchmark, "Jelgavas tipografija" Ltd represents the accounting process in the printing industry, including the calculation of and accounting for the CIT, and reveals their problems.
6. A corporate income tax declaration has to be assigned a large role in financial reports and in the accounting for tax expenses. An estimated corporate income tax is directly associated with the profit or loss account and the balance sheet.
7. The corporate income tax has to be paid in advance before it is calculated, which results in the overpayment of the CIT, especially if the enterprise suffers losses in the next year; thereby, finances are allocated inefficiently.
8. The CIT paid cannot be forecasted for a long-term, as it is corrected by many financial accounting items and does not directly depend on turnover.
9. To improve the way of calculating the corporate income tax, the government has introduced several tax incentives for stimulating economic activity and profit tax reduction opportunities, for example, losses may be transferred to next taxation periods, which may be done in an eight-year period from 2010 onwards until 2017.
10. "Jelgavas tipografija" Ltd (which ranks among 10 largest enterprises of the printing industry) owns equipment, technologies, and buildings that account for 60% of its assets in the balance sheet. Accordingly, the depreciation of its fixed assets significantly affects the amount of its estimated corporate income tax.
11. The enterprise has disclosed all its expected risky sums and losses incurred in the reporting year or in the previous years, calculating deferred tax liabilities and incomes; thus, the enterprise's profit or loss account reveals its correct net income.

## **Proposals**

1. The enterprise's management has to plan its income as well as its purchases of equipment and other fixed assets needed for economic activity in those taxation periods when the enterprise expects a large net income, thus, reducing the corporate income tax to be paid.
2. The enterprise's Accounting Department should analyse its debts of debtors at the end of every month to facilitate an audit of debtors for the preparation of annual reports and to make sure the data filled in corporate income tax declarations are correct and credible.
3. The enterprise distributing the accounting application Horizon has to develop a new module "Calculating Fixed Asset Depreciation for Taxation Purposes". The module has to be associated



with fixed asset data cards (in which information on double depreciation rates, the type of fixed assets, and other necessary data when purchasing fixed assets is entered), which would make date for corporate income tax declarations to be obtained faster and the data would be of higher quality.

4. The decision makers of the Republic of Latvia have to change the procedure of paying the corporate income tax – the tax has to be paid for the taxation period rather than, as now, in advance for the next accounting period.
5. When calculating their deferred tax liabilities and incomes, printing enterprises have to disclose all their expected risky sums and losses incurred in the reporting year or in the previous years, so that their profit or loss accounts show (reveal) their correct net income.

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